

Meeting Notice and Agenda

Planning Commission

| Tuesday, May 16, 2023 | 6:00 PM | PD Auditorium |
|-----------------------|--------------------------------|---------------|
| | Commissioner James Rose | |
| | Commissioner William Nassikas | |
| | Commissioner Kristina Locke | |
| | Commissioner Pamela Georgelos | |
| | Commissioner Timothy Dickman | |
| | Commissioner Charles Covington | |
| | Chair Karen Liepmann | |

PLEASE NOTE THIS MEETING WILL BE HELD IN THE POLICE DEPARTMENT AUDITORIUM.

1. CALL TO ORDER/ROLL CALL

Notice is hereby given that members of the Planning Commission will attend either in person or by electronic conference system, pursuant to A.R.S. §38-431(4).

2. EXECUTIVE SESSION

The Planning Commission may go into executive session at one or more times during the meeting as needed to confer with the Town Attorney for legal advice regarding any of the items listed on the agenda as authorized by A.R.S. §38-431.03.A.3.

3. APPROVAL OR AMENDMENT OF MINUTES

| <u>23-150</u> | Approval of April 18, 2023 Planning Commission Minutes |
|---------------------|--|
| Staff Contact: | Cherise Fullbright, 480-348-3539 |
| <u>Attachments:</u> | 4.18.23 PC Draft Minutes |

4. PRESENTATIONS

| <u>23-178</u> | Presentation by Smoke Tree Resort Representatives & |
|---------------------|--|
| | Discussion with Planning Commission on Smoke Tree Resort |
| | Major Special Use Permit, 7101 E. Lincoln Drive |
| Staff Contact: | Paul Michaud, 480-348-3574 |
| <u>Attachments:</u> | A. Staff Report |
| | B. Applicant Presentation |

5. STUDY SESSION ITEMS

The Study Session is open to the public for viewing, and the following items are scheduled for discussion among the Planning Commission, Staff, and invited presenters. Votes will not be made on any of these items, but may be made when the item is scheduled for final action later in the meeting or at a future meeting. Public comment will not be invited at this time.

23-172 Discussion of Smoke Tree Resort Major Special Use Permit Amendment

- Staff Contact: Paul Michaud, 480-348-3574
- Attachments: A. Staff Report
 - B. Vicinity & Related Maps

C. SUP History

- D. Application
- E. Narrative & Plans Packet
- F. Sign Plan
- G. Noise & Lighting Studies
- H. Grading, Drainage, & Utilities
- I. Parking Statement
- J. Traffic Impact Analysis
- K. General Plan Policies
- L. Guideline Comparison
- M. Statement of Direction
- N. Public Comments
- O. Presentation

6. PUBLIC HEARINGS - LEGISLATIVE ACTIONS

Items for Public Hearings are Legislative Actions scheduled for action by the Planning Commission. Staff will present the item, the Planning Commission will have an opportunity to discuss and ask questions of staff and/or the applicant, the public hearing will open for public comment, after receiving public comment the public hearing is closed, the Planning Commission may have further discussion, and lastly, the Planning Commission will take action on the item by making a motion.

7. ACTION ITEMS

Items for Action are scheduled for action by the Planning Commission. Staff will present the item, the Planning Commission will have an opportunity to discuss and ask questions of staff and/or the applicant, and lastly, the Planning Commission will make a motion on the item. Public comment is not required.

8. STAFF REPORTS

9. PUBLIC BODY REPORTS

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

AGENDA IS SUBJECT TO CHANGE

*Notice is hereby given that pursuant to A.R.S. §1-602.A.9, subject to certain specified statutory exceptions, parents have a right to consent before the State or any of its political subdivisions make a video or audio recording of a minor child. Meetings of the Planning Commission are audio and/or video recorded, and, as a result, proceedings in which children are present may be subject to such recording. Parents in order to exercise their rights may either file written consent with the Town Clerk to such recording, or take personal action to ensure that their child or children are not present when a recording may be made. If a child is present at the time a recording is made, the Town will assume that the rights afforded parents pursuant to A.R.S. §1-602.A.9 have been waived.

The Town of Paradise Valley endeavors to make all public meetings accessible to persons with disabilities. With 72 hours advance notice, special assistance can also be provided for disabled persons at public meetings. Please call 480-948-7411 (voice) or 480-483-1811 (TDD) to request accommodation to participate in the Planning Commission meeting.

Action Report

File #: 23-150

AGENDA TITLE: Approval of April 18, 2023 Planning Commission Minutes

STAFF CONTACT:

4



Minutes – Draft

Planning Commission

| Chair Karen Liepmann | |
|--------------------------------|--|
| Commissioner Charles Covington | |
| Commissioner Timothy Dickman | |
| Commissioner Pamela Georgelos | |
| Commissioner Kristina Locke | |
| Commissioner William Nassikas | |
| Commissioner James Rose | |
| | |

| Tuesday, April 18, 2023 | 6:00 PM | Council Chambers |
|-------------------------|---------|------------------|
|-------------------------|---------|------------------|

1. CALL TO ORDER / ROLL CALL

Chair Liepmann called the meeting to order at 6:02 PM.

Present 7 – Chair Karen Liepmann Commissioner Charles Covington Commissioner Timothy Dickman Commissioner Pamela Georgelos Commissioner Kristina Locke Commissioner William Nassikas Commissioner James Rose

STAFF MEMBERS PRESENT

Senior Planner George Burton Community Development Director Lisa Collins Planning Manager Paul Michaud

2. EXECUTIVE SESSION

3. APPROVAL OR AMENDMENT OF MINUTES

A. 23-130 Approval of the April 4, 2023 Planning Commission Meeting Minutes

A motion was made by Commissioner Locke, seconded by Commissioner Covington, to approve the minutes. The motion carried with the following vote:

Aye: 7 – Chair Liepmann, Commissioner Covington, Commissioner Dickman, Commissioner Georgelos, Commissioner Locke, Commissioner Nassikas, Commissioner Rose

4. PRESENTATIONS

A. 23-124 Discussion Presentation by Scottsdale Plaza Resort Representatives & Discussion with Planning Commission on Scottsdale Plaza Resort Intermediate Special Use Permit, 7200 N Scottsdale Road

Mr. Michaud provided an overview of the item. He mentioned that the Commission requested the presentation on parking and architecture, and the applicant would be leading the discussion. Although a parking and traffic study are not required by the Zoning Ordinance, these are generally submitted and reviewed with an intermediate amendment. The Statement of Direction from the Council states that the Planning Commission has the traffic and parking studies as a resource to understand the scope of the project and if applicable provide general input should parking and circulation affect the design or impact to nearby residents. In terms of architecture, there were no specific directives, but the General Plan policies attached to the staff report highlighted the need for context-appropriate, high-quality design. The Commission was only required to request what was necessary in terms of plans and documents.

Paul Basha, a consulting traffic engineer, presented the findings of the traffic and parking studies for the Plaza Resort renovations. He introduced several people representing Highgate Hotels, including Dina Winder, the property owner; Michael Stromer, the architect with HKS in Los Angeles; and Tom Galvin, an attorney with Rose Law Group. Mr. Basha presented an aerial photograph of the existing property and noted the substantial difference between the available parking and the needed parking. He then focused on the details of the parking occupancy count and presented the parking rates needed for hotel guests and conference room users. He listed the assumptions made about how many parking spaces were needed for each property use and subtracted the parking spaces needed for people who were not hotel guests. The initial calculation was that the property needed 488 parking spaces, but after examining shared parking models, the recommendation was 571 parking spaces. The proposed renovation would remove 255 parking spaces, leaving 483 remaining parking spaces. To reach the required 571 parking spaces, they proposed adding 88 underground parking spaces and 85 additional valet parking.

Commissioner Nassikas asked about how the parking places for staff were calculated, given that the new restaurants could have more employees than the hotel.

Mr. Basha explained that the employee-parked vehicles were included in the parking occupancy count and that the same rate for future analysis included the employees. He also mentioned that there were no designated parking areas for employee parking, but there was sufficient parking for all users of the property, and the on-site manager would designate where employees should park. Commissioner Georgelos asked about the expectation of staff and traffic with the redevelopment.

Mr. Basha explained that the parking rate for the three new restaurants was 121 spaces, which was sufficient for diners and employees. The number of seats for the restaurants was not yet known, but they were high-end restaurants with spacious seats and tables designed for leisurely dining.

Commissioner Dickman expressed concern about the low number of parking spaces allocated for the restaurants. Mr. Basha clarified that this was in addition to the number of parking spaces occupied by hotel guests who were also using the restaurants.

Commissioner Locke asked about the percentage of conference room users who are hotel guests and expressed concern about the parking availability for local conference attendees who drive their own cars.

Mr. Basha explained that the plaza resort was intended for hotel guests to use the conference rooms and that the 20% of conference room users that they were suggesting as needing parking spaces was already a high number. He also clarified that the ballroom would still be used regularly, but the diners would be hotel guests.

Commissioner Rose questioned this reasoning and suggested that banquets could have outside attendees.

Mr. Basha reiterated that each hotel had its own intended audience, and the plaza resort was designed for hotel guests to stay in hotel rooms and use conference rooms.

Commissioner Rose asked if the resort would only book the banquet into their conference room if guests stayed at the resort.

Dina Winder, representing Highgate Hotel, explained that preference went to groups bringing in guest room and banquet revenue, but they would book non-hotel guests if the ballroom was available. However, this was rare since the business that was booked into the room was generally associated with a group staying at the resort.

Commissioner Rose suggested that 59 more parking spaces might not be enough for larger banquets with up to 500 people.

Mr. Basha clarified that the resort had agreements with two other properties for extra parking, and parking would be accommodated weeks and months in advance.

Commissioner Nassikas questioned if valet parking at other locations was the planned practice for big events, and Mr. Basha confirmed.

Ms. Winder explained that they would staff accordingly and had enough people going back and forth for these types of events.

Mr. Basha explained that events at the resort are planned in advance and that the resort has arrangements with nearby locations for extra parking. Commissioner Rose requested a breakdown of parking spaces needed for guests, restaurants, ballrooms, and the spa and also wanted to know how the number of employees.

Mr. Basha responded that offsite parking was not needed but was provided in response to a request from the Town of Paradise Valley. He also showed a slide that indicated 62% of parking spaces on the property were unused.

Commissioner Dickman asked if the yellow stacked bar showing parking for meeting rooms in the shared parking model was sufficient for Friday night events, and Ms. Basha confirmed it was for the meeting rooms.

Chair Liepmann asked if the green spaces showing parking for the spa in the shared parking model would be available in the evening, and Mr. Basha explained they would be because the spa would be closed.

Mr. Michaud reminded the Commissioners to keep in mind that space usage was not always straightforward, as someone in a restaurant or meeting room might use parking spaces designated for other areas.

Commissioner Georgelos understood that the resort's standard practice was to have most of its guests use the accommodations as guests of the hotel, with deviations for ballroom events. The Commission was looking at parking lot models and not exact usage. Commissioner Georgelos noted that the resort had a lot of unused parking spaces in the past.

Chair Liepmann asked about the restaurants and whether they would serve lunch or breakfast.

Ms. Winder responded that they had not yet identified the operators but anticipated one would serve both lunch and dinner while the other two would only serve dinner.

Michael Stromer, an architect for the project, introduced his firm to the Commissioners, highlighting their international presence and sectorbased practices. He presented some of their past projects, which included five-star resorts and urban projects worldwide, emphasizing their quality of work. Mr. Stromer then focused on specific areas of the project they were asked to provide. He showcased the proposed scale and size of the restaurants and how they would stand out to serve both the hotel guests and the local community. He also presented the 'Big Sister' lobby building, a new building that would provide a welcoming approach to guests. The building was inspired by mid-century modern architecture and intended to have a different character to provide clear wayfinding. Lastly, Mr. Stromer talked about the new guest room building, which was replacing the surface parking area. It was influenced by the existing architecture and used related materiality and architectural vocabulary to blend in but not replicate.

Commissioner Nassikas thanked Mr. Stromer for his presentation and asked about the red tile roofing materials on the existing buildings.

Mr. Stromer confirmed that the clay tile roofs on the guest room buildings would remain, except for the 'Little Sister' porte-cochere, which would be redesigned to provide a better welcome experience.

Commissioner Dickman asked for clarification on whether the old buildings would be painted to match the new ones.

Mr. Stromer replied that the plan was to freshen them up and bring in more natural light.

Commissioner Nassikas asked about the possibility of the restaurant operators adding their feel to the architecture.

Ms. Winder responded that each restaurant would have its own feel but would stay in the same style.

Commissioner Georgelos asked how the old buildings would blend with the new buildings in a resort renovation project.

Mr. Stromer explained that while some areas would have a more midcentury feel, there would be no major face-lifts of existing buildings to get them to match. Instead, different architectural styles would allow for unique guest experiences.

Commissioner Georgelos wanted a cohesive theme running through the resort.

Mr. Stromer suggested that materiality and wayfinding would tie everything together visually.

Commissioner Dickman asked if the resort would have one or two brands.

Ms. Winder explained that there would be two separate brands, but the same team would operate both.

Commissioner Rose asked if the three restaurants in the resort renovation project would be built at the same time or as they were leased.

Ms. Winder explained that they were still working through the phasing of the project, which was complicated and would be done in phases.

Because of the underground garage, all three restaurants were expected to be built at the same time.

Commissioner Nassikas welcomed the team to Paradise Valley and thanked them for taking the time to answer questions.

5. STUDY SESSION ITEMS

6. PUBLIC HEARINGS – LEGISLATIVE ACTIONS

7. ACTION ITEMS

A. 23-131 Discussion and Possible Action of Club Estates 7 Lot Split (LS-21-02). 5639 E Joshua Tree Lane (APN: 169-32-932)

Mr. Burton provided an overview of the item. This was a lot split proposal to the Commission for review and action. The applicant wanted to subdivide a two-acre parcel into two lots but was requesting two deviations from the Town Code. The Commission is acting as a recommending body and will forward a recommendation to the Town Council for review and action. Lot one maintained the existing home, but the Ramada must be removed to comply with the floor ratio requirements. New lot two will be one net acres and will be required the removal of part of the existing fence wall to comply with the code. The applicant requested two deviations of unorthodox shaped lots and the new lot line not perpendicular to the right-of-way, which staff did not support. The Commission expressed concerns about the modifications and the applicant provided two options in response. However, neither option eliminated the requested deviations. The Commission was given three potential actions: a recommendation of denial, recommendation of approval subject to stipulations, or continuation of the application for further review.

Commissioner Dickman asked if the stipulations in the recommendation for approval were compliant with one of the options.

Mr. Burton explained that the stipulations meant everything would be in compliance with the submitted plans and documents.

Ms. Collins added that the stipulations would mean recommending in favor of the deviation.

Commissioner Nassikas asked if the demolition of the house was part of the deviation, but Mr. Burton clarified that it was not and only the Ramada will be demolished to comply with the lot coverage requirements.

Commissioner Dickman clarified that the Commission was only asked to respond to the applicant's request and not evaluate alternatives.

Ms. Collins explained that the only thing the Commission was looking at was whether to support the deviation or not.

Chair Liepmann asked if the Town Council could overrule the Commission's recommendation of denial and Mr. Burton confirmed this. They also discussed the possibility of the applicant coming back with other options if the recommendation was denied.

Mr. Prodanov explained that the project had been in the making for two years and they had exhausted many options to come up with a solution for the owner to keep the house and make the necessary site improvements for the Town to dedicate the drainage. The owner did not plan on building anything on the lot soon but wanted the option for his family to build in the future. He explained that the two options were typical in the Town of Paradise Valley, acknowledging that lot lines did not strictly follow the code. He suggested that if the Commission considered the options, they would have the appearance of a straight line with the site wall, legal access to meet the intent of the code (even though it might not be visually apparent to other homeowners in the neighborhood).

A motion was made by Commissioner Dickman, seconded by Commissioner Covington, to have the applicant work with staff and come up with a proposal that will be supported by the staff. The motion carried with the following vote:

Aye: 7 – Chair Liepmann, Commissioner Covington, Commissioner Dickman, Commissioner Georgelos, Commissioner Locke, Commissioner Nassikas, Commissioner Rose

8. STAFF REPORTS

9. PUBLIC BODY REPORTS

10. FUTURE AGENDA ITEMS

Mr. Michaud stated that the next meeting would be held on May 2 and that one item would be discussed.

11. ADJOURNMENT

Motion for Adjournment made at 7:25 PM.

A motion was made by Commissioner Nassikas, seconded by Commissioner Georgelos, to adjourn the meeting. The motion carried with the following vote:

Aye: 7 – Chair Liepmann, Commissioner Covington, Commissioner Dickman, Commissioner Georgelos, Commissioner Locke, Commissioner Nassikas, Commissioner Rose

Paradise Valley Planning Commission

By:__

Cherise Fullbright, Secretary



Action Report

File #: 23-178

AGENDA TITLE: Presentation by Smoke Tree R

Presentation by Smoke Tree Resort Representatives & Discussion with Planning Commission on Smoke Tree Resort Major Special Use Permit, 7101 E. Lincoln Drive

STAFF CONTACT:





STAFF REPORT

| TO: | Chair and Planning Commission Members |
|---------------|--|
| FROM: | Lisa Collins, Community Development Director Paul Michaud, Planning Manager |
| DATE: | May 16, 2023 |
| DEPARTMENT: | Community Development Department – Planning Division Paul Michaud, 480-348-3574 |
| AGENDA TITLE: | Discussion Smoke Tree Resort Major Special Use Permit 7101 E Lincoln Drive |

SUMMARY STATEMENT:

Request

The applicant requests a Major Special Use Permit (SUP) amendment (SUP-23-01) of the Smoke Tree Resort. The proposed redevelopment of the existing 5.0 net acre site includes 82 total resort guest units ranging in size from approximately 533 square feet to 1,486 square feet (includes 5 single-story casitas with small plunge pools and a presidential suite on the 3rd floor), a detached fine dining restaurant/bar with cellar and patio dining, all-day market bistro with outdoor patios, meeting function building with outdoor event lawn, resort pool, guest fitness and spa facility, and underground parking. The resort is located at 7101 E Lincoln Drive (Maricopa County Assessor Number 174-64-003A) submitted by Withey Morris, PLC, on behalf of ST HOLDCO, LLC, a Delaware limited partnership (being the land asset management and global real estate company called Walton Global Holdings).

<u>Purpose</u>

The primary purpose of the May 16th work session is for the applicant to provide the Planning Commission with a presentation on the project. Staff will review the scope of the request focusing on areas of the proposal not meeting Special Use Permit (SUP) Guidelines and will cover the Statement of Direction (SOD) from the Town Council. The Planning Commission will have an opportunity to discuss and comment.

ATTACHMENT(S):

- A. Staff Report
- B. Applicant Presentation

SmokeTree

7101 E. Lincoln Drive Major SUP Amendment



Development Team



Walton

WITHEY MORRIS BAUGH

Allen + Philp Partners

architects · interiors







ROSE + ALLYN PR







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About the Site

- SEC Lincoln Drive & Quail Run Road
- 5.36 gross acres
- Zoned SUP-R
- Surrounding Land Uses:
 - North: Ritz Carlton Paradise Valley (SUP-R)
 - East: Lincoln Plaza Medical Center (SUP-M)
 - **South:** ANdAZ Scottsdale Resort & Bungalows (SUP-R)
 - West: Single-Family Residential (R-43)
- Surrounded on three sides by commercial land uses.





SmokeTree History

- Originally constructed in 1954 as the Diamond Lazy K guest ranch, consisting of 25 bungalows, a restaurant, and a beauty salon.
- Purchased by the Williams family in 1966.
- Rezoned SUP-R in 1969, establishing a new Special Use Permit for a resort hotel.
- SUP amended twice in early 1970s (SUP 71-6 and 72-12) for site improvements and renamed SmokeTree Resort.
- The SmokeTree Resort along with The Other Place restaurant, operated continuously before permanently closing in 2020.







Proposal





The Living Room of Paradise Valley













Overview

- 82-guestroom, culinary-centric boutique luxury resort.
 - 77 guestrooms in main building
 - 5 single-story casitas with private plunge pools
- 4,600 SF event space with adjacent event lawn.
- 5,300 SF resort spa facility.
- Standalone fine-dining restaurant The French Cowboy.
 - Speakeasy cocktail concept below restaurant.
- All-day restaurant, market, and bar attached to lobby with short-term surface parking and outdoor seating areas.
- Subterranean parking structure.
 - Restaurant back-of-house concealed underneath hotel.



















Conceptual P

Gross Site Area

Net Site Area:

Gross Area Level B1: First Floor: Second Floor: Third Floor:

Total Gross Ar

Total Gross Ar Grade:

Lot Coverage: Allowable: 255 Proposed: 27.

Open Space: Required Min Provided: 4

Impervious Sui Allowable: 60 Proposed: 58.

Room Count First Floor: Second Floor: Third Floor: Casitas:

Total Project K

Parking Level B1: First Floor:

Total Spaces I

1.74 s

Color Key

1

RESTROC FOOD & KITCHEN BOH CIRCULATION BOH LOBBY/FOH CIRCULATION GUEST ROOMS BALLROOM SPA / FITNESS

| roje | ect Data |
|--------------------|--|
| a: 2 | 5.363 ac 233,630 sf 5.007 ac 218,096 sf |
| | 51,010 sf 64,350 sf 26,120 sf 26,100 sf |
| ea: | 1 67.580 sf |
| ea | Above 116,570 sf |
| : (G % 5% | ross Area) 58,408 sf 64,350 sf |
| (Gr 40% 1.29 | oss Area) 6: 93,452 sf % 96,271sf |
| nfac 0% .8% | :es: 140,178sf 137,360sf |
| | 20 keys 32 keys 25 keys 5 keys |
| (eys | s : 82 keys |
| | 74 spaces 69 spaces |
| Prov 1 spa | rided: 43 spaces ces per key |
| OM | s |
| BEN | ERAGE |





Arrival Experience

- Primary entrance on Quail Run Road.
- Open, airy, palm tree-lined auto court flanked by The French Cowboy to the left (north) and event space to the right (south).
- Valet service for hotel guests, dining guests at French Cowboy, and event space visitors.
 - Subterranean parking area primarily for valet use.
- Limited surface parking available around west, north, and east perimeter.
- Secondary access/primary exit on Lincoln Drive utilizing shared access driveway with Lincoln Medical Plaza.













Lobby Restaurant, Market, and Bar

- All-day restaurant/café, market, and bar attached to lobby, oriented toward Lincoln Drive.
 - Three-meal restaurant
 - Cocktail bar/lounge
 - Market bistro with takeaway food options, wine, and café.
- North-facing patio and outdoor seating area and fireplace.
- Interior dining courtyard with outdoor bar seating.
- Convenient surface parking for shortduration visits.















The French Cowboy

- Fine dining, dinner-only restaurant concept developed by local chef/restauranteur Matt Carter (The Mission, Zinc Bistro, The Fat Ox).
- Prominently featured at the hard southeast corner of Lincoln Drive and Quail Run Road.
- Limited outdoor seating with patio oriented toward Lincoln Drive.
- Speakeasy cocktail bar concept underneath restaurant.







Main Building/Guest Accommodations

- Three-story main guestroom building with 77 keys, configured around guest pool area and outdoor event lawn.
- Five (5) single-story casitas with private plunge pools in southwest corner.
- Main guestroom building, resort spa, casitas, and event space encircle pool area and event lawn, screening the surrounding areas from resort activity and noise.



Parking

- Single-level subterranean parking structure underneath northern half of site.
 - Accessed via ramp adjacent to service bay on east end of site.
 - 74 total parking spaces, primarily for guest valet.
 - Back-of-house for restaurant operations.
- 69 surface parking • spaces distributed along west, north, and east perimeter.





Below Grade Location Plan Conceptual Level B1





Building Height

- Project conforms to SUP Guidelines resort height maximum of 36 feet.
- All structures on-site limited to one story in height (14' to 22') with exception of main guestroom building.
 - Three-story, 36-foot-tall elements located in southeast corner of site.
 - Away from streets/residential and adjacent to other commercial development.
- Three-story element adjacent to ANdAZ resort stepped back with deep, landscaped balconies.







Setbacks/Open Space Criteria

- SUP Guidelines intended for minimum 20-acre resort site.
- Strict application of setbacks and Open Space Criteria to 5.36-acre site renders site practically undevelopable.
- Targeted relief from setbacks and Open Space Criteria necessary for a viable development:
 - Accessory structure setback relief for the French Cowboy.
 - Open Space Criteria step-back relief for third story of guestroom building in southeast corner.













Setback Encroachment

31

Guestroom Density

- SUP Guideline of 1 guestroom/4,000 SF intended for minimum 20-acre site.
 - 10.89 guestrooms/acre.
- Strict application of SUP guidelines would limit site to 58 guestrooms.
 - Does not meet minimum viable keys for modern luxury resort/hotel operators.
- Proposed density consistent with other recent hotel development along Lincoln Corridor.
 - Appropriate level of density/intensity for site adjacent to other commercial/lodging development and in close proximity to Scottsdale Road.



| Property | Hotel Acreage | Hotel Keys | Keys/Acre |
|---------------------------|---------------|------------|-------------|
| Ritz-Carlton Hotel | 19.09 | 215 | 11.35 |
| SmokeTree (proposed) | 5.36 | 82 | 15.30 |
| Montelucia Hotel | 19 | 293 | 15.42 |
| Mountain Shadows Hotel | 6.82 | 183/217 | 26.83/31.81 |
| mountain shadows noter | 0.02 | 100/21/ | 20.00/01.01 |









Summary

- Redevelopment of SmokeTree resort site with 82-guestroom luxury boutique resort on 5.36 gross acres.
- Designed for visitors, guests, and residents alike – the Living Room of Paradise Valley
- Culinary-centric design with fine dining concept, all-day restaurant/bar, and market bistro/café.
- Subterranean parking structure to improve open space and maximize efficiency of site.
- Thoughtful, contextually appropriate, targeted relief from SUP Guidelines mitigated by design.



QUESTIONS





Action Report

File #: 23-172

AGENDA TITLE:

Discussion of Smoke Tree Resort Major Special Use Permit Amendment

STAFF CONTACT:





STAFF REPORT

| TO: | Chair and Planning Commission Members |
|---------------|--|
| FROM: | Lisa Collins, Community Development Director Paul Michaud, Planning Manager |
| DATE: | May 16, 2023 |
| DEPARTMENT: | Community Development Department – Planning Division Paul Michaud, 480-348-3574 |
| AGENDA TITLE: | Discussion Smoke Tree Resort Major Special Use Permit 7101 E Lincoln Drive |

SUMMARY STATEMENT:

Request

The applicant requests a Major Special Use Permit (SUP) amendment (SUP-23-01) of the Smoke Tree Resort. The proposed redevelopment of the existing 5.0 net acre site includes 82 total resort guest units ranging in size from approximately 533 square feet to 1,486 square feet (includes 5 single-story casitas with small plunge pools and a presidential suite on the 3rd floor), a detached fine dining restaurant/bar with cellar and patio dining, all-day market bistro with outdoor patios, meeting function building with outdoor event lawn, resort pool, guest fitness and spa facility, and underground parking. The resort is located at 7101 E Lincoln Drive (Maricopa County Assessor Number 174-64-003A) submitted by Withey Morris, PLC, on behalf of ST HOLDCO, LLC, a Delaware limited partnership (being the land asset management and global real estate company called Walton Global Holdings).

Location

The Smoke Tree resort is located at the southeast corner of Lincoln Drive and Quail Run Road/Palmeraie Boulevard. It lies approximately 200 feet west of the Town limits and the City of Scottsdale. It borders two public roads. These are Lincoln Drive, a major arterial, and Quail Run Road, a local road. To the north of the resort is the Five Star Development (specifically the proposed attached residences). To the east is a medical plaza. To the south is the Andaz resort. To the west across the street on Quail Run Road are single-family R-43-zoned lots.

History/Background

Use of the property as a resort began prior to its annexation into the Town in 1961. Refer to the SUP History of the property for more information (Attachment C).

Purpose

The primary purpose of the May 16th work session is for the applicant to provide the Planning Commission with a presentation on the project. Staff will review the scope of the request focusing on areas of the proposal not meeting Special Use Permit (SUP) Guidelines and will
cover the Statement of Direction (SOD) from the Town Council. The Planning Commission will have an opportunity to discuss and comment.

Additional Items

To move the SOD forward, the applicant as in other recent Intermediate/Major SUP requests provided applicable submittal items as outlined in Section 1102.3.C of the Zoning Ordinance. However, these submittals required additional detail at the time of SOD. The applicant plans to resubmit following the May 16th Planning Commission work session.

Project Data

Text in purple indicates existing conditions not within the SUP Guidelines. Text in red indicates proposed conditions not within the SUP Guidelines. The applicant's submittal uses net acres that excludes only the existing Lincoln Drive right-of-way at 33 feet in width in lieu of the typical 65 feet half width. The net numbers with the asterisk (*) excludes the above Lincoln Drive right-of-way and the typical 25-foot half-width Quail Run Road post dedication right-of-way as the SOD directs to calculate lot coverage and floor area ratio based on both gross and net area.

| | SUP Guidelines | Existing | Proposed |
|--------------------------|---|--|--|
| Lot Size | Minimum 20 acres | 233,630 gross square feet (sf) 218,096 net sf 5.4 gross acres/ 5.0 net acres | 233,630 sf 207,250 sf 5.4 gross acres/ 4.8 net* acres |
| Guest Units Density | 58 units (gross) or 55 (net) 1 unit per 4,000 sf 10.7 units per gross acre 11.0 units per net acre | 30 units 1 unit per 7,788 sf (gross) 5.6 units per gross acre 1 unit per 7,720 sf (net) 6.0 units per net acre | 82 units 1 unit per 2,849 sf (gross) 15.2 units per gross acre 1 unit per 2,660 sf (net) 16.4 units per net acre 1 unit per 2,527 sf (net) * 17.1 units per net * acre |
| Total Area Impervious | 60% all impervious area 953,616 sf | 29.8% gross, 32.0% net (Estimated 69,700 sf) | 58.8% gross, 63% net and 66.3% net * (137,360 sf) |
| Open Space | Minimum 40% | 65.0% gross, 70.0% net (Estimated 152,000 sf) | 41.2% gross, 44.1% net and 46.5% net * (96,271 sf) |
| Lot Coverage | Maximum 25% | 10.3% (24,100 sf – gross) 11.1% (24,100 sf – net) | 27.5% (64,350 sf – gross) 29.5% (64,350 sf – net) 31.0% (64,350 sf – net) * |
| Floor Area Ratio | None | 10.3% (24,100 sf – gross) 11.1% (24,100 sf – net) | 50.0% (116,570 sf – gross) 53.4% (116,570 sf – net) 56.2% (116,570 sf – net) * |

*Net includes Quail Run Road post dedication

Scope of the Request

The request is a Major SUP amendment as the proposal is to demolish all the existing structures and rebuild the entire site. Below is a summary of the proposed site improvements further outlined in the Guideline Comparison (Attachment L).

Arrival Building. The arrival building is the largest building in area proposed at the
resort. It is a principal building since it includes guest units. It houses the 3-meal
service market, lobby, event space, spa, fitness, and 77 of the 82 guest units. The
proposal is for three stories with a maximum height of 36 feet 3 inches (with the SUP
Guideline at 36 feet tall and no guideline on the number of stories), with the tallest

height visible at the southeast elevation as viewed from the rear of the adjoining medical plaza and within the pool courtyard. The second and third floors only have guest units and mechanical/housekeeping storage rooms. The other parts of the building range in height from 14 feet, 18 feet, and 22 feet. The building is setback 95 feet to Lincoln Drive (175 feet for the second and third stories), 55 feet to the post dedication of Quail Run Road (175 feet for the second and third stories), 50 feet to the east property line adjoining the medical plaza (all three stories), and 44 feet to the south property line with the Andaz Resort (75 feet for the third story). The SUP Guideline for height is 36 feet and 100 feet for setbacks on a principal building.

- Casitas. There are five casitas attached as one principal building. The building is onestory and at a height of 14 feet. The casitas complete the courtyard layout with the arrival building. The casitas are setback 365 feet to Lincoln Drive, 60 feet to the post dedication of Quail Run Road, 230 feet to the east property line adjoining the medical plaza, and 50 feet to the south property line with the Andaz Resort. The SUP Guideline for height is 36 feet and 100 feet for setbacks on a principal building.
- French Cowboy Restaurant Building. The detached restaurant building is an accessory building and pays homage to The Other Place restaurant that existed on the property for decades with a location near Lincoln Drive. The narrative identifies this restaurant as a dinner venue with cellar and patio dining options. It is one-story with a maximum height of 18 feet (although the Conceptual Site Sections in Attachment E identify this building at a height of 25 feet 5 ¼ inches). The SUP Guideline for height on an accessory structure is 24 feet. The restaurant is setback 25 feet to Lincoln Drive, 39 feet to the post dedication of Quail Run Road, 305 feet to the east property line adjoining the medical plaza, and 360 feet to the south property line with the Andaz Resort. The SUP Guideline for height on an accessory structure is 24 feet need to the post dedication of height on an accessory structure is 24 feet for height on an accessory structure is 24 feet need to the south property line with the Andaz Resort. The SUP Guideline for height on an accessory structure is 24 feet and 40 feet for setbacks.
- Event Lawn Gazebo. The event lawn gazebo is a small one-story accessory structure (expected to be less than 16 feet tall and 20 feet in width and length or approximately 400 square feet) located within the arrival building/casitas courtyard. The gazebo is setback 320 feet to Lincoln Drive, 160 feet to the post dedication of Quail Run Road, 270 feet to the east property line adjoining the medical plaza, and 135 feet to the south property line with the Andaz Resort. The SUP Guideline for height on an accessory structure is 24 feet and 40 feet for setbacks. There is additional detail needed, but this structure should only be visible within the courtyard and not visible offsite.
- Pool Bar/Restrooms. The pool bar/restroom structure is a small one-story accessory structure at 11 feet tall and 30 feet in width and 35 feet in length or approximately 1,050 square feet under roof) located within the arrival building/casitas courtyard at the resort pool. The majority of the square footage is covered patio with the bar enclosure at approximately 200 square feet and the restrooms at approximately 125 square feet. The bar only serves the resort pool area when it is open. This structure is setback 315 feet to Lincoln Drive, 200 feet to the post dedication of Quail Run Road, 220 feet to the east property line adjoining the medical plaza, and 125 feet to the south property line with the Andaz Resort. The SUP Guideline for height on an accessory structure is 24 feet and 40 feet for setbacks. There is additional detail needed, but this structure should only be visible within the courtyard and not visible offsite.

- Cabanas. The cabanas are small one-story accessory structures (expected to be less than 16 feet tall and cover an area 10 feet in width and 70 feet in length or approximately 700 square feet) located within the arrival building/casitas courtyard at the resort pool. The cabanas are setback 285 feet to Lincoln Drive, 225 feet to the post dedication of Quail Run Road, 165 feet to the east property line adjoining the medical plaza, and 165 feet to the south property line with the Andaz Resort. The SUP Guideline for height on an accessory structure is 24 feet and 40 feet for setbacks. There is additional detail needed, but these cabanas should only be visible within the courtyard and not visible offsite.
- *Pools.* The main resort pool available to all guests is within the arrival building/casitas courtyard. This pool is approximately 2,000 square feet in water area with a size similar to other resort pools (e.g., same water area as the main resort pool at the Andaz Resort). The resort pool is setback 315 feet to Lincoln Drive, 240 feet to the post dedication of Quail Run Road, 170 feet to the east property line adjoining the medical plaza, and 95 feet to the south property line with the Andaz Resort. The SUP Guideline for setbacks on pools that are generally available to all guests is 65 feet. This pool should only be visible within the courtyard and not visible offsite. There are also seven plunge pools that are not available to all guests and therefore there is no SUP Guideline on setback. These pools are located on the south side of the site (one at each casita and two at the spa behind a six-foot tall walled area). These pools are setback 350 feet to Lincoln Drive, 65 feet to the post dedication of Quail Run Road, 125 feet to the east property line adjoining the medical plaza, and 35 feet (casitas) and 30 feet (spa) to the south property line with the Andaz Resort. The size of these plunge pools are approximately 10 feet in width and 15 feet in length (150 square feet, four of the pools are at this size), 10 feet in width and 25 feet in length (250 square feet, one of the pools is at this size), and 7 feet in width and 10 feet in length (70 square feet, two of the pools are at this size).
- Context Appropriate Design. The policies from the General Plan broadly cover architecture and address context appropriate development (e.g., scale, massing, façade articulation) and a high-quality built environment that contribute to the Town's identity. The proposed elevations and renderings illustrate the building architecture and visual impact off-site. The site design mitigates the view of the three stories of the arrival building from Lincoln Drive by the placement of the approximate 18-foot tall market, ten-foot ceiling heights of the first and second floors compared to the 12-foot ceiling height of the third floor, and an approximate two-foot grade difference underneath the principal building. More review on the design will follow with additional renderings (e.g., more views from the street, view north from Andaz, more views inside the event lawn/resort pool area, view of the plunge pools at a casita).

Statement of Direction (SOD)

The Town Council approved the SOD to the Planning Commission at its April 27th meeting. Below is the SOD direction by topic and the analysis to date.

1. <u>Use.</u> The primary areas for the Planning Commission to study include, and are not limited to, the design/layout, impact of said uses to the surrounding area outside the site (specifically noise and light), as well as the specific operational factors (hours of operation, outdoor seating, etc.) and resort quality standards. For-sale product is not proposed nor desired at this location.

Analysis: The type of resort uses are compliant with Section 1102.2 of the Zoning Ordinance. The site is and has been since incorporation in 1961 used as a resort, with the resort not in operation for the last couple of years. The uses at the proposed resort will include additional resort amenities from the past resort. Besides additional guest units, the proposal offers two different food and beverage options instead of one restaurant facility, an indoor/outdoor meeting function space, and fitness/spa facilities. Improvements to the grounds include a large resort pool, enhanced landscaping, new signage, and underground parking.

2. <u>Noise Mitigation/Impact to Adjacent Uses</u>. The Planning Commission shall consider impacts including noise, light, traffic, and any other adverse impacts, particularly for those existing residential properties west of the site along Quail Run Road. In particular, outdoor employee areas and service uses such as maintenance, maid service/laundry, trash collection/storage, mechanical equipment (roof/ground), outdoor areas (e.g., restaurant dining, patios/balconies), and all other noise generating elements shall be studied. The review shall address site design, location, and orientation; along with the reasonable separation between incompatible uses and effective buffering of unwanted noise, light, traffic, views of the buildings offsite, and other adverse impacts. The Planning Commission take into account mitigation measures based upon design (e.g., courtyards, walls), technology (e.g., installation of a distributed audio system), and operational means through stipulations.

Analysis: The submittal includes a noise study. This study demonstrates that noise will comply with the daytime 56 decibel limits and require the consideration of stipulations such as the installation of noise mitigation equipment and/or design modifications to meet nighttime and holiday 45 decibel limits. Some items requested of the applicant for clarification includes the impact of the plunge pools/patios and some referenced decibel levels. Compliance with noise mitigation is under review and will be revisited.

3. <u>Density</u>. The Planning Commission shall evaluate how the proposed density impacts safety and quality of life. The site adjoins non-residential zoning on three sides, and the proposed site plan has reduced density on the west and south sides of the site.

Analysis: The site area is and has been five acres, which is a quarter of the SUP Guideline for resorts at a minimum of 20 acres. Smoke Tree is the smallest resort by size within the Town. The proposed density at 15.2 units per acre (gross) and 17.1 units per acre (net) falls within the density range for existing Town resorts of 3.9 units per acre (Camelback Inn located at 5201 E Lincoln Drive due to it being the largest resort by size at 117 total acres) and 20.1 units per acre (Doubletree Paradise Valley located at 5401 N Scottsdale Road). Based on the five acres, the maximum number of guest units in accordance with the SUP Guideline is 58 units (gross) or 52 and 55 (net) and the applicant proposes 82 units. The SOD directs the Planning Commission to evaluate how the proposed density impacts safety and quality of life.

4. Lot Coverage/Floor Area Ratio. The Planning Commission shall consider lot coverage and floor area ratio while taking into consideration the unique characteristics of the site located on five acres, its proximity to the City of Scottsdale, and that non-residential zoning adjoins three sides of the site with the fourth side adjoining Quail Run Road adjacent to residential R-43 zoning. The Planning Commission shall also evaluate the lot coverage and floor area ratio within the context of the immediately adjacent properties. The lot coverage and floor area ratio shall be calculated based on both net and gross area.

Analysis: The proposed lot coverage at 27.5% (gross) and 31.0% (net) compared to SUP Guideline of 25% falls near the lot coverage range for existing Town resorts of 7.8% (Camelback Inn located at 5201 E Lincoln Drive due to it being the largest resort by size at 117 total acres) and 28.7% (Omni Montelucia resort located at 4949 E Lincoln Drive). There are two Town resorts that allow for different lot coverage requirements. The Montelucia resort allows for the maximum building footprint (excluding roof overhangs or other projections) not greater than 25% of the gross area and the maximum lot coverage including building footprints, overhangs, projections, canopies, shade structures, trellis, pool cabanas and miscellaneous structures not greater than 31% of the gross area. The Camelback Inn allows for fully enclosed buildings at a maximum of 20% of the gross area, all other structures at a maximum of 10% of gross area, and public areas a maximum of 30% of the gross area. The applicant should provide more detail on lot coverage by footprint. overhang, and other accessory structures should there be consideration in allowing total lot coverage above the 25% SUP Guideline. The proposed floor area ratio of 50.0% (gross) and 56.2% (net) would result in the highest floor area ratio percentage compared to existing Town resorts. The highest being the 35.1% (Montelucia) and 34.6% (Sanctuary on Camelback Mountain located at 5700 E McDonald Drive). As the SOD directs the Planning Commission to evaluate lot coverage and floor area ratio within the context of the immediately adjacent properties the applicant may want to provide lot coverage and floor area data on nearby resorts within the City of Scottsdale. Also, the SOD allows for consideration of lot coverage and floor area ratio based on the unique characteristics of the site (e.g. five acre size, proximity to the City of Scottsdale, and the site adjoining nonresidential uses on three sides).

5. <u>Heights/Viewsheds</u>. The Planning Commission shall evaluate the proposed height and viewsheds based on its visibility of proposed buildings as seen from off-site which may require additional visuals (e.g. sight line representation, rendering, etc.). Lower height is encouraged on the west side of the site nearest to existing residential properties. Heights shall comply with the SUP Guidelines with mechanical screening and architectural elements included in the maximum height. This site is one quarter the suggested 20-acres per the SUP Guidelines and the location adjoins other non-residential uses. 36 feet or three-story resort development is the exception in the Town, and will only be considered where contextually appropriate and mitigated by design. The Planning Commission focus shall be that the overall mass of the structures are of an appropriate scale, with special consideration given to the views from the south side bordering the Andaz resort and the west side bordering Quail Run Road.

Analysis: The proposed structures are within the SUP Guidelines on height except for two buildings (French Cowboy building on height over 24 feet and penetrating the OSC and the arrival building on height over 36 feet and portions of the third floor penetrating the OSC). The SOD identifies that heights comply with the guidelines with mechanical screening and architectural elements included in the maximum height, adding that 36 feet/three story is the exception and only considered where contextually appropriate and mitigated by design. The applicant could redesign the French Cowboy building to comply with the SUP Guidelines as the amount and roof location of the encroachment on this building is minimal. There may be options for the applicant to evaluate the design of the third story of the arrival building.

6. <u>Setbacks</u>. The Planning Commission shall explore appropriate setbacks for structures and outdoor spaces, with particular attention to the setback along Quail Run Road for the residents west of the site, visitors to the medical plaza to the east of the site, and the Andaz resort guests south of the site related to privacy and noise levels. The Commission shall also identify any mitigating circumstances that may buffer the development (e.g. the use of vegetation, modified setbacks or heights, reorientation of the structures, etc.).

Analysis: Both the existing and proposed setbacks for the principal buildings are not within the SUP Guideline of 100 feet. Refer to the Guideline Comparison for more detail (Attachment L). The setback for the two story and three story elements of the arrival building exceed a setback of 100 feet from Lincoln Drive and Quail Run Road. The placement of the arrival building skewed eastwards results in a larger setback away from the single-family lots along the west side of Quail Run Road. Also, it places the guest unit balconies further away from the homes to the west and the Andaz Resort to the south due to the 'L' shape design with the open part of the 'L' facing south. The roof planters on the third floor are setback 15 feet to 25 feet from the roof edge that will limit the visibility of persons on the roof patio for the two southernmost third floor quest units. The greatest impact of the third story is to the east with the medical plaza and the balconies of the resort on this side. The casitas building at one-story, 14-foot tall may have a setback less than 100 feet to the property lines of Quail Run Road and Andaz Resort, but these are 60 feet and 50 feet respectfully that would be no more impactful than an accessory structure with a lessor 40-foot setback and 24-foot height. This building also completes the courtyard that helps in mitigating noise/light from the event lawn. The setbacks of the French Cowboy restaurant building (footprint/roof-patio overhang) at the northwest corner of the site are less than the SUP Guideline for an accessory structure of 40 feet from a public street. Town staff suggests that the setback from the post Quail Run Road dedication property line not be less than 40 feet. Also, the applicant consider a larger setback to the existing Lincoln Drive property line (33-foot half width right-of-way line) to account for any future right-ofway needs.

7. Landscaping/Buffers. The Planning Commission focus on landscaping/buffers shall be along the perimeter of the site. This includes, and is not limited to, appropriate screening or relocation of the utility cabinets along Lincoln Drive, locations and screening of loading zones and dumpsters, suggested guidelines along Lincoln Drive from the Town's Visually Significant Corridors Master Plan (e.g., Resort Living Character Zone), buffers along the rights-of-way adjoining the proposed restaurant (particularly the two outdoor patios) at the Lincoln Drive and Quail Run Road intersection, harmony of the proposed landscaping with the adjacent landscaping (e.g., Lincoln Drive medians), appropriate type of plant material for the location (e.g., drought tolerance, scale, seasonal color), review of plant impact (e.g., fire/fall hazard, pollen irritants), and appropriate stipulations (such as maintenance, early phasing of street frontage/perimeter landscaping, and replacing dead plant material).

Analysis: Neither the existing nor the proposed perimeter landscape and parking buffers meet the SUP Guidelines. Refer to the Guideline Comparison for more detail (Attachment L). The proposed plant quantities, hedge materials along the south and east property lines, and proposed screen/patio walls along the rightsof-way will buffer the resort as viewed from off the property with additional changes. These changes may include a greater setback of the French Cowboy as noted under Setbacks, a wider landscape buffer south of the access driveway along Quail Run Road, and plant material changes along Lincoln Drive and along the south and east property lines. Stipulations will be included regarding maintenance/replacement of plant material along with other applicable stipulations. Additional analysis is necessary as the applicant provides more information.

8. <u>Exterior Lighting</u>. The Planning Commission focus on exterior lighting shall be how it meets SUP Guidelines and that the fixtures are of a quality expected for a Town resort. In particular, some focus areas include lighting along the perimeter of the site, how illumination might wash building elevations, limits on the visual impact of string lights and palm tree lights, and impact of lighting at the second and third floor elevations.

Analysis: The proposed lighting appears to be within the Special Use Permit Guidelines with more information required on the hooding/shielding of fixtures CP1, M1, and N1. Also, the material needs to include the proposed light fixtures for the second and third floors.

9. <u>Grading/Drainage & Utilities.</u> The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should the drainage, grading, and utilities affect the design or impact to nearby properties.

Analysis: The site currently provides no onsite retention. The proposed improvements will utilize parking and drive corridors to drain stormwater east and north to match current drainage patterns through a series of catch basins and underground retention basins. Utility improvements are onsite with basic water and sewer connections in Lincoln Drive at the shared access with the medical plaza.

10. <u>Traffic, Parking, Access, and Circulation</u>. The proposed density and location within a heavily traveled and mixed-use density area near the City of Scottsdale creates a heightened need for ensuring the proposed redevelopment has a positive impact on traffic safety, parking, and circulation which is reviewed by the Town's professional staff to ensure compliance to safety and other standards which may require additional analysis. This analysis shall include, and is not limited to, necessary queuing areas (e.g., deceleration lanes) and driveway access functioning (e.g., allowed movements into and out from the driveway, favorable geometry, sight distance, Quail Run Road primary access considerations, and visibility). The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should these items affect the design or impact nearby residents.

Analysis: The professional staff reviewed the parking analysis and traffic analysis and staff awaits a response from the applicant. There were aspects of the traffic and parking analysis requiring clarification such as the categorization of certain uses related to internal capture rate, time of day reductions, modeling assumptions related to back of house/employees, any valet mode options, queue storage, and additional information on warrants for deceleration lane(s).

11. <u>Signage</u>. Planning Commission review shall focus on the impact of sign location, dimensions, and illumination on the streetscape and compliance with SUP Guidelines.

Analysis: Based on the conceptual plans the proposed signs should comply with SUP Guidelines. The applicant will provide a table summarizing the proposed exterior signs that includes maximum sign area, height from grade to the top of the sign, quantity, and the type of illumination. Also, the applicant will provide a typical detail with material identified and dimensions.

12. <u>Walls</u>. Planning Commission review shall evaluate the setback, height, and design of the proposed perimeter walls to ensure these walls are consistent with the quality and design of a Town resort. No walls shall be within the post-dedication rights-of-way.

Analysis: Many of the proposed walls do not meet the SUP Guidelines. Refer to the Guideline Comparison for more detail (Attachment L). The four proposed feature walls and the two French Cowboy patio walls are not within the guidelines on height for the setback proposed. Also, the proposed six-foot tall wall south of the Quail Run Road driveway is within the post-dedication right-ofway which may require a larger setback and redesign (e.g., material, meander, etc.). Additional information on the screening and/or relocation of the APS utility cabinet north of the proposed French Cowboy restaurant building is needed. Allowance for some taller walls at a setback closer than the guideline may or may not be warranted due to the resort site being a quarter of the recommended 20 acres and that walls help mitigate unwanted noise and other nuisances.

Process

The process for the SUP request is a pre-application review (completed), approval of the SOD (completed), Planning Commission review of the SUP (in process), a Citizen Review Session (neighborhood meeting) held by the applicant prior to the Planning Commission recommendation, a Planning Commission public hearing on the SUP for recommendation to Council, and Council study session(s) and Council public hearing for action on the SUP.

Public Comment

There is no required noticing or outreach with the SOD. However, Town staff received some comments on the proposed project (Attachment N).

Next Steps

The next scheduled Planning Commission discussion is tentatively set for June 20th.

ATTACHMENT(S):

- A. Staff Report
- B. Vicinity & Related Maps
- C. SUP History
- D. Application
- E. Narrative & Plans Packet
- F. Sign Plan
- G. Noise & Lighting Studies
- H. Grading, Drainage, & Utilities
- I. Parking Statement
- J. Traffic Impact Analysis
- K. General Plan Policies
- L. Guideline Comparison
- M. Statement of Direction
- N. Public Comments
- O. Presentation



VICINITY MAP



Smoke Tree Resort SUP ★

7101 E Lincoln Drive



AERIAL MAP



Smoke Tree Resort SUP ★

7101 E Lincoln Drive



AERIAL MAP







ZONING



Smoke Tree Resort SUP

7101 E Lincoln Drive

SURVEY NOTES

- This survey and the description used are based on a Commitment for Title Insurance issued by Fidelity National Title Insurance Company, Order No. Z2240874–001–MLG–MB2, dated January 25, 2022.
- BASIS OF BEARING: The monument line of Lincoln Drive, also being the North line of the Southeast quarter of Section 10, using a bearing of North 88 degrees 36 minutes 34 seconds East.
- The Boundary information shown on this survey is based on a prior survey prepared by Alliance Land Surveying, LLC, Job No. 120838, dated October 6, 2012, and recorded in Book 1127, Page, 5, M.C.R. The centerline and section 3. monuments were not re-measured and are shown based on the prior survey. The Property corners for the subject property have been verified and exist in the ground as shown on this survey. The bearings and distances depicted indicate actual field or computed measurements performed during the course of this survey. This information may vary from documents of record used for this survey.
- The building square footage shown is based on exterior measurements of the 4 building footprint at ground level and is not intended to reflect the interior or leaseable area of any building. The building footprint and dimensions depict the general configuration of the building(s).

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- The utility information shown is limited to visible above ground evidence. This 5. survey makes no attempt to depict any underground utilities and there is no guarantee or warranty to the exact location or presence of any underground utilities that may actually exist adjacent to or within the boundaries of the subject property. Prior to any excavation please call an underground utility locator or "BLUE STAKE" at (602)659–7500 for the precise location and extent of all utilities in the area.
- This Survey has been prepared exclusively for the parties stated in the certification for use in conjunction with the escrow referenced in Survey Note 6. No. 1. Reproduction or use of this survey by any other party for any other transaction or purpose is unauthorized without written authorization from Alliance Land Surveying, LLC. The use of the word "certify" or "certification" by a person or firm that is registered or certified by the board is an expression of professional opinion regarding facts or findings that are the subject of the certification and does not constitute an express or implied warranty or guarantee (A.R.S. 32–151).

SCHEDULE "B" ITEMS

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| | - 24 inch vertical Curb & Gutter | \$ | Sprinkler Hook–Up (fire department) | L | _ | | | |
| DRIVE | Indicates Driveway (means of access) | Δ | Telephone Riser | | _ | | | |
| | Concrete Surface | \bigcirc | Traffic Signal Pole | | | | | |
| | Dirt Road | T | Traffic Signal Box | | | | | |
| | - Fence | τv | TV Junction Box | | × 1 | | | |
| | s Wall | \boxtimes | Underground Vault | - • | // | | | |
| — О.Н.Е. — | - Overhead Electric Line | | Water Meter | | r | | | |
| \$ | Back Flow Preventer | 8 | Water Valve | | | | | |
| \ominus | Drywell Or Catch Basin | ATF | Physical Access To & | | | | | |
| E | Electric Box | (R) | rrom Aujoining Property See Reference Documento | | | | | |
| | Electric Cabinet | @ | Crosswalk Rutton | | | | | |
| | | ~ | SI SSEMAIN DULLON | | | | | |



REV. REV.



VICINITY MAP NOT TO SCALE

| MONUMENT TABLE | | | | |
|----------------|---|--|--|--|
| | CEN. OF SEC. 10 – FND BRASS CAP IN HANDHOLE | | | |
| 2 | E. 1/4 COR. SEC. 10 – FND BRASS CAP IN HANDHOLE | | | |
| 3 | SE. COR. SEC. 10 – FND BRASS CAP IN HANDHOLE | | | |
| 4 | S. 1/4 COR. SEC. 10 – FND BRASS CAP FLUSH | | | |
| 5 | FND PK NAIL & WASHER L.S. 34399 AS SHOWN ON (R1) | | | |
| 6 | FND 1/2" REBAR W/CAP L.S. 21780 AS SHOWN ON (R1) | | | |
| \bigcirc | FND 1" IRON PIPE W/TAG L.S. 31020 PER (R1) – ALSO FND 1/2" REBAR NO I.D. – N. 06' W., 0.41' AS SHOWN ON (R1) | | | |
| (8) | FND 1/2" REBAR NO I.D. 0.20' BELOW SURFACE AS SHOWN ON (R1) | | | |

PARCEL DESCRIPTION

<u>PARCEL NO. 1</u>: The North half of the Northwest quarter of the Northeast quarter of the Southeast quarter of Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. EXCEPT the East 200 feet, thereof.

<u>PARCEL NO. 2</u>:

The North half of the South half of the Northwest quarter of the Northeast quarter of the Southeast quarter of Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. EXCEPT the East 200 feet, thereof

SITE INFORMATION

ADDRESS: 7101 EAST LINCOLN DRIVE, PARADISE VALLEY, ARIZONA 85253

<u>A.P.N.:</u> 174–64–003A

 $\frac{LAND \quad AREA:}{GROSS \quad AREA = 5.363 \quad ACRES - 233,630 \quad SQ. \quad FT.$ NET AREA = 5.007 ACRES - 218,096 SQ. FT. NET AREA IS THE GROSS AREA LESS EASEMENT (6) FOR COUNTY ROAD

STRIPED PARKING SPACE TABULATION: Regular: 65 <u>Disabled:</u> Total:

REFERENCE DOCUMENTS

(R) R.O.S. PER BOOK 865, PAGE 15, M.C.R. (R1) R.O.S. PER BOOK 1127, PAGE 5, M.C.R.

CERTIFICATION

Walton Global Holdings, LLC, a Delaware limited liability Company; Gentree, LLC, an Arizona limited liability company; and Fidelity National Title Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 4, 7(a), 7(b)(1), 7(c), 8, 9, 13, and 14 of Table A thereof. The fieldwork was completed on March 7, 2022.

March 21, 2022 G. Bryan Goetzenberger R.L.S. 31020







Scale: 1/32" = 1'-0"

Aerial Photography: | Existing Conditions |

SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona



Allen + Philp Partners architects · interiors or Scottsdale, AZ 85251 480.990.2800 allenphilp.com













Allen + Philo Partners architects · interiors 7154 East Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

| SMOKETREE RESORT 7101 E LINCOLN DRIVE SPECIAL USE PERMIT HISTORY | | | | |
|--|--|--|--|--|
| | [Last Prepared 03-29-2022] | | | |
| January 15, 2020 | Major SUP Amendment (SUP-18-05) | | | |
| WITHDRAWN. Reque Permit - Resort zoning property was a comple new resort. The origin resort residential unit. coverage at 80,000 sq up to 45-foot tall and applicant later revised square feet total floor area along the east pr (including an interior | est of a major amendment to the site's existing Special Use g submitted in May 2018. The proposed redevelopment of this ete demolition of all existing structures and construction of a nal request was for 165 guest units (120 guest rooms and 30 s with 15 lock-offs), 145,000 square feet total floor area, lot uare feet, some 3-story components with architectural portions at a 20-foot setback to the south and east property lines. The d the proposed development for 122 guest rooms, 128,150 area, lot coverage at 58,832 square feet, a reduced 3-story operty line, and heights varying from 1-foot tall to 36-foot tall area near the pool at 38-foot tall). | | | |
| 2007 through 2008 | Substantial Compliance to Special Use Permit | | | |
| Building permits relat of the renovation of th restaurant tenant "RE along Lincoln Drive w the restaurant building were all in substantial opened. | The ded to mechanical screening on the restaurant building. As part the long-standing "The Other Place" restaurant for a new EM." Various improvements to the restaurant building fronting were made in 2007 and 2008. The mechanical roof screening on g was the most visible element completed. The improvements l compliance with the existing Special Use Permit. REM never | | | |
| July 13, 1972 | Special Use Permit Amendment | | | |
| Approval to change C connecting Cottage I for "The Other Place" with the recommendat to the June 6, 1972 mi constructed on the roc consideration for Fire | ottage I to a non-public use, and construct additional space by with "The Other Place" to provide additional kitchen facilities and a rest area for its employees. Approved in accordance tions of the Planning and Zoning Commission (which according inutes was a stipulation that all equipment that will be of area will be screened by effective means) and with special protection with fire hydrants. | | | |
| May 27, 1971 | Special Use Permit Amendment | | | |
| Approval to convert a additional public dinin specific stipulations w April 23, 1971 that ind buildings, 17,100 squa commercial.1 | living unit to a private dining room or meeting room and ng space in connection with "The Other Place" restaurant. [No vere noted in the minutes. However, there is a site plan dated dicates 30 units inclusion of the office and restaurant, 11 are feet for the 30 units, and 7,000 square feet for the | | | |

| 49 | | |
|----------|-------|---|
| 50 | March | 13, 1969New Special Use Permit |
| 51 | | |
| 52 | Ap | proval to modify and enlarge the existing resort including some changes in the |
| 53 | roe | oms, in front to place a new facade on the premises, to improve the parking by |
| 54 | pa | ving all the dirt areas, and increased landscaping. Mention of 7 feet of dedication |
| 55 | alc | ong Lincoln Drive for a total width of 80 feet (40-foot half-width) and possible |
| 56 | CO | ndemnation of 110 feet total (55-foot half width) by Maricopa County. Approval |
| 57 | wa | is subject to the following stipulations: |
| 58 | | |
| 59 | 1. | That a condition, approved by the Town Attorney and with the approval of the |
| 60 | | Applicant that in the event of condemnation, the condemner shall pay the actual |
| 61 | | cost to the then owners of the property as to that portion taken. [The minutes note |
| 62 | | that cost for condemnation is when an appraiser will break down a property to a |
| 63 | | square foot value based on the financial statement of the owner's cost of the land |
| 64 | | aside from the special use thereof; noting in the motion that this apply only in the |
| 65 | 2 | event that the condemner uses federal funds. |
| 66 | 2. | That any new leases of commercial space within the resort be approved by the |
| 67 | 2 | Council. |
| 68 | 3. | Representations made by the applicant as to the use of the property as |
| 69 70 | | recommended by the Planning & Zoning Commission be further approved and |
| /0 | | that any other new use would have to be approved by the Council. [1 his refers to |
| /1 | | Superior Lies Dermit and a manual dated January 10, 1068 as next of the January 16 |
| 72 | | Special Use Fermit and a memo dated January 10, 1908 as part of the January 10, 1608 Diamning & Zoning Minutes that stated the site has twenty eight rental units |
| 75 | | a restaurant public her private her heirdressing salen and two meeting rooms |
| 74 75 | | a restaurant, public bar, private bar, nandressing salon, and two meeting rooms |
| 76 | March | 12 1964 Annevation |
| 77 | | |
| 78 | An | nexation of the resort and other areas via Ordinance 28 |
| 79 | - 177 | |
| | | |

2/13/1972 CONNCIL

Gulf Leisure (Con'td.): property owners were present to object. They included Mr. and Mrs. John Kronenberg, Mrs. L. E. Zuhn, Mr. and Mrs. M. J. Wilton, Mr. and Mrs. Dave Manning and Mr. W. G. Mizell, Jr. Mrs. Kronenberg read a prepared statement citing the residents' objections, which were primarily devaluation of property and invasion of privacy. A protesting petition was also presented. No reply was forthcoming to the Mayor's question as to what the residents would consider an acceptable use of the land in question. Mayor Tribken pointed out that if the present petitioners were refused, construction over which the Town would have no control could take place in the future. Vice-Mayor Donegan mentioned current litigation with respect to the property which could result in the construction of a seven story office building on the site. In answer to the question "Why are we changing our Zoning Ordinance?", Councilwoman vonAmmon advised that the Town already has resort zoning. Nearby homeowners were concerned about drainage and flood control, and Mayor Tribken assured them that if plans for such were not adequate and approved by the Town Engineer and State Flood Control Authorities, a building permit would not be issued.

In answer to objections of balconies on the second story rooms, Mr. Pierce stated that all balconies would be removed. Vice-Mayor Donegan moved to grant a Special Use Permit for a resort hotel provided flood control drainage were approved by the Town Engineer and State Authorities. The question as to the final height of the buildings was raised. Mr. Pierce stated that this would depend on how much the site would have to be elevated in order to accomplish proper drainage, something which is not known at the present time.

Councilman Kleban suggested approval of final building height be incorporated into the motion, and Mr. Pierce wanted approval of landscaping also to be included. Mr. Harry Ekdahl, assistant to the Planning and Zoning Commission, suggested that the motion state that the flood control and drainage program take into consideration the nearby property owners.

Motion: The motion, as amended, was restated: "To grant a Special Use Permit for a resort hotel with site plan approval to include landscaping, final building height and proper flood control drainage taking into consideration the needs of the surrounding homes." Councilman Worthington seconded. Mr. John Kronenberg asked the Council by what authority it could ignore the recommendation for denial by the Planning and Zoning Commission. Mayor Tribken replied that the function of the Planning and Zoning Commission is advisory only, and that final authority lies with the Town Council. A roll call vote was taken, and the motion carried four to two with the negative votes being cast by Councilman Palmer and Councilwoman vonAmmon.

Scottsdale The hearing of Scottsdale Baptist Church was continued to the next Council Baptist meeting as the petitioner was not present. Church:

Smoke Tree
Resort:Mr. Curtis Williams, owner of Smoke Tree Resort requested an amendment to a
Special Use Permit to change Cottage I to a non-public use, and construct
additional space by connecting Cottage I with "The Other Place" to provide
additional kitchen facilities for "The Other Place" and a rest area for its
employees. Councilman Palmer moved to approve the amendment to the Special
Use Permit in accordance with the recommendations of the Planning and Zoning
Commission and with special consideration for Fire protection with fire
hydrants. Vice-Mayor Donegan seconded the motion, and it carried unanimously.



5 27 1971 COURCIL

is reached between the City of Phoenix and the Town regarding installation and maintenance of fire hydrants. Town Attorney Robertshaw stated that he had received copies of the proper bond. Councilman Donegan suggested a letter be written, dated May 18, 1971, stating that the Mirada Los Arcos developers agreed to install three fire hydrants, to be hooked to City of Phoenix water lines within a year provided agreement referred to above is reached between the City of Phoenix and the Town within that time. Mr. William Goodheart, representing Mirada Los Arcos, agreed to sign such a letter. Town Attorney Robertshaw composed the letter and Mayor Huntress read it. Mr. William Goodheart signed the letter as a representative of Mirada Los Arcos Subdivision. Councilman Donegan moved that the Final Plat for Mirada Los Arcos Subdivision be approved, subject to the provisions of the letter referred to above. Councilman Crook seconded the motion. The motion was carried unanimously.

Smoke Tree Resort-Application for Amended Special Use Permit - Mayor Huntress read from the Minutes of the Planning Commission recommended approval of the Application for an Amendment to the Special Use Permit by Smoke Tree Resort to permit conversion of a living unit to a private dining room or meeting room and additional public dining space in connection with "The Other Place" restaurant. After the Council's discussion of seating capacity and available parking space, Councilman Crook moved that the Application as submitted be approved. Councilman Donegan seconded the motion. The motion was carried unanimously.

Town Manager's Report

Motion

- Town Manager's Report:
 - a. The Arizona Public Service Power Pole move back along Scottsdale Road between Jackrabbit Road and Orange Blossom Lane as previously outlined was reported upon as being caused by the Town of Paradise Valley's granting a Special Use Permit to the Scottsdale Baptist Church and widening of Scottsdale Road. A permit, to expire at the end of ten years, had been granted to Arizona Public Service Company to build this line (69 Kv) overhead. After considerable discussion it was decided that APS would have to file an application for an amendment to this permit to move the affected poles approximately 25 feet to the west along this stretch of Scottsdale Road.
 - b. The list of articles to be auctioned off by the Town Marshal's Office, and the date set for the auction July 15, 1971 at 10:00 a.m. was also reported upon. Instructions to post a list of articles and notice of auction on all Town bulletin boards and have an article in the Scottsdale Daily Progress

MINUTES OF REGULAR MEETING OF THE TOWN COUNCIL OF THE TOWN OF PARADISE VALLEY, ARIZONA

March 13, 1969

A regular meeting of the Town Council for the Town of Paradise Valley, Arizona, was called to order by Mayor Jack B. Huntress at 7:30 P.M., Thursday, March 13, 1969, in the Council Chambers at the Town Hall, 6325 North Invergordon Road. Mayor Huntress led Council members and guests in the Lord's Prayer and Pledge of Allegiance to our Flag.

The following Council members were present:

Mayor Jack B. Huntress Vice-Mayor E. Robert Tribken Councilman A. Irving Scherer "Richard D. Fellars "Oscar C. Palmer, Sr. J. Stephen Simon

Also present were:

Town Manager Henry Penfield Town Attorney Fred Robertshaw Town Engineer Gerry Sudbeck Town Marshal Lester Naumann Lt. Richard Kaar

Vice Mayor Tribken moved, and Councilman Simon seconded the motion that the absence of Councilman Philip E. vonAmmon be approved as he is out of town on business. Motion passed unanimously.

Regarding the minutes of February 27, 1969, there being no corrections or additions, Councilman Fellars moved they be approved as submitted; seconded by Councilman Scherer and passed unanimously.

Smoketree Inn - The Mayor proceeded to read from the minutes of the Planing & Zoning Commission meeting of February 18, 1969, regarding the application of the Smoke Tree Inn, regarding a request for a Used Permit to modify and enlarge the present premises. Mr. Frank Haze Burch, Attorney for the principals of Smoke Tree Inn presented the new site plan and explained what is proposed to the Council. He stated that the purpose of the application was to allow them to rehabilitate what is now a use which has deteriorated because of problems of ownership. Western Savings and Loan was forced to foreclose and take possession. This application will allow some changes in the rooms; in front to place a new facade on the premises so it won't be as dismal as it is now. To improve the parking by paving all the dirt areas and increased landscaping across the front and make certain dedication as requested by the Town on Lincoln Drive, it will provide total off-street parking. It will have a Spanish style, patio effect. Als interior of the public building will be redone. Frime te: ants will be the Restaurant operated by Dale Andersen, and a beauty shop. There will be ample guest parking, it will be double what is there now, or about 70 spaces for the restaurant alone. Seven feet will be dedicated across the front on Lincoln Drive, since 80° is required for a full 4-lane road.

Town Engineer Sudbeck stated that the County is thinking about 55 feet on each side of Lincoln Road to provide a wide divider between the proposed 4-lane highway. A minimum of 110' would be required for such construction, if approved.

The Council requested Mr. Burch to ask his applicant to come back and check with them before leasing to other tenants on this proposed site. That the seating capacity inside would be 90-100 plus the patio, and the additional parking would permit 70 spaces around the restaurant. More discussions about proposed federal funding of a 4-lane highway, which would create expensive land for condemnation purposes, especially further up Lincoln.

- Councilman Simon moved that the Council approve the Use Permit subject to two conditions: (1) That a condition, approved by the Town Attorney and with approval of the Applicant that in the event of condemnation, the condemnor shall par the actual cost to the then owner of the property as to that portion taken; and (2) that any new leases of commercial space within the resort be approved by the Council ; motion was seconded by Councilman Fellars, Councilman Simon stated further that the representations made by the applicant as to the use of the property as recommended by Planning & Zoning Commission be further approved and that any other new use Vice Mayor Tribken would have to be approved by the Council. asked how one determines cost for condemnation, and Mr. Burch explained the procedure. That an appraiser will break down a property to a square foot value based on the financial statement of the owner's cost of the land aside from the special use thereof. Councilman Simon added to his motion that this apply only in the event that the condemnor uses federal funds. The motion passed unanimously.

- Final action on Traffic Control Lights. The Mayor indicated the amount of the bids again and that they were about \$3,000. over our estimate. Much discussion ensued. The Town Engineer recommended that we reject the bids and hope to do this work in combination with another project later in the year, in cooperation with Scottsdale. Councilman Fellars stated his position that since the need was there and just because it would cost \$2,800.-\$3,000. more than we estimated is not sufficient reason to reject the bids now. Councilman Simon proposed lowering the speed limit and posting a stop sign on Lincoln Drive. The Marshal gave a complete picture of the traffic situation, and stated the offending cars are not on Lincoln Drive, but on cross-traffic. Three

Motion

Traffic lights



COMMUNITY DEVELOPMENT DEPARTMENT SPECIAL USE PERMIT APPLICATION GUIDE

Town of Paradise Valley • 6401 East Lincoln Drive • Paradise Valley, Arizona 85253 • Phone: (480) 348-3693

| APPLICANT & CONTACT INFORMATION | | | | | |
|---|--------------------------------|--|--|--|--|
| Please check the appropriate box for the Type(s) of Application(s) you are requesting | | | | | |
| Special Use Permit | | | | | |
| Managerial Amendment | Intermediate Amendment | | | | |
| Minor Amendment | Major Amendment/New SUP | | | | |
| Project Name: | | | | | |
| Date: Existing Zoning | g: Proposed Zoning: Net Acres: | | | | |
| Property Address: | | | | | |
| Assessor's Parcel Number: | | | | | |
| | | | | | |
| Owner: | | | | | |
| Address: | | | | | |
| Phone number: | | | | | |

| APPLICANT | & CONTACT | INFORMATION |
|-----------|-----------|--------------------|
|-----------|-----------|--------------------|

| (Or provide a separate letter of authorization) | |
|---|--|
| Applicant/Representative: | |
| Company Name (if Applicable): | |
| Address: | |
| Phone number: | |
| E-mail address: | |
| Signature: | |

E-mail address:

Signature:

THE ABOVE APPLICANT HEREBY APPLIES FOR AN APPLICATION AS INDICATED IN THE SUBMITTED NARRATIVE, PLANS, AND DOCUMENTS IN ACCORDANCE WITH THE TOWN CODE AND TOWN POLICIES.

| FOR DEPARTMENTAL U | ISE ONLY | | | |
|---------------------|-------------------|------------|------------------|--|
| SUP-23-01 App.#: | Submittal Date: _ | 02-17-2023 | Expiration Date: | |

2

Unofficial ²⁰Document

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO:

16 Hoj

ST Holdco, LLC c/o Walton Global Holdings, LLC 8800 N. Gainey Center Dr., Suite 345 Scottsdale, Arizona 85258 Attention: Legal Department

22240 874

SPECIAL WARRANTY DEED

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **GENTREE**, **LLC**, an Arizona limited liability company ("<u>Grantor</u>"), hereby conveys to **ST HOLDCO**, **LLC**, a Delaware limited liability company ("<u>Grantee</u>"), the following described property located in Maricopa County, Arizona (the "<u>Property</u>"):

See **Exhibit "A"** attached hereto and by this reference made a part hereof;

TOGETHER WITH all of the right, title and interest of Grantor, if any, in and to all easements, rights of way, privileges, appurtenances, and rights to the same, belonging to and inuring to the benefit of the Property, together with any building, structures and improvements on the Property.

SUBJECT TO covenants, conditions and other instruments of record listed in <u>Exhibit "B"</u> attached hereto and by this reference made a part hereof (the "<u>Permitted Exceptions</u>").

AND THE GRANTOR hereby binds itself and its successors to warrant and defend the title against the acts of the Grantor and no other, subject to the Permitted Exceptions.

[Signature page to follow]

IN WITNESS WHEREOF, the Grantor has caused this Special Warranty Deed to be executed this $\frac{2999}{200}$ day of June, 2022.

GRANTOR:

GENTREE, LLC, an Arizona limited liability company

By: Name: Title:

STATE OF <u>Arizon</u>) COUNTY OF <u>Maricopa</u>) ss.

The foregoing instrument was acknowledged before me this <u>22</u> day of June, 2022, by <u>Scale T Abbinson</u>, the <u>Authorized Acar</u> of Gentree, LLC, an Arizona limited liability company, on behalf of the company.

Notary Public Unofficial Document

My Commission Expires:

9.15.2024



KELLI J. VOS Notary Public - Arizona Maricopa Co. / #586972 Expires 09/15/2024

Exhibit "A"

Legal Description

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF MARICOPA, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 1:

The North half of the Northwest quarter of the Northeast quarter of the Southeast quarter of Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona.

EXCEPT the East 200 feet, thereof.

PARCEL NO. 2:

The North half of the South half of the Northwest quarter of the Northeast quarter of the Southeast quarter of Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona.

EXCEPT the East 200 feet, thereof.

APN: 174-64-003A

Unofficial Document

Exhibit "B"

Permitted Exceptions

1. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the year 2022.

2. Reservations contained in the Patent

From: The United States of America Recording No.: Book 115 of Deeds, page 138

3. Water rights, claims or title to water, whether or not disclosed by the public records.

4. Rights of the public in and to that portion of the herein described Land as shown on the

Map/Plat: Book 5 of Road Maps, page 28

5. Rights of the public in and to that portion of the herein described Land as shown on the

Map/Plat: Book 6 of Road Maps, page 12

6. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Purpose: underground electric lines Recording No.: Docket 7328, page 755

As shown on the Survey dated March 21, 2022, last revised June 17, 2022, Job No. 220302, prepared by Alliance Land Surveying LLC.

7. Matters contained in that certain document

Entitled: Resolution No. 932 Recording No.: 98-0213661

8. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Purpose: utility Recording No.: 2006-0760319

As shown on the Survey dated March 21, 2022, last revised June 17, 2022, Job No. 220302, prepared by Alliance Land Surveying LLC.

9. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Purpose: sidewalk/utility Recording No.: 2021-06627971

10. Matters contained in that certain document

Entitled: Stipulated Final Partial Judgment in Condemnation

Recording No.: 2021-0627971

11. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Purpose: utility Recording No.: 2008-779388

As shown on the Survey dated March 21, 2022, last revised June 17, 2022, Job No. 220302, prepared by Alliance Land Surveying LLC.

Unofficial Document

66

SmokeTree



7101 E. Lincoln Drive Major SUP Amendment

Development Team

Walton®

Developer Walton Global 8800 N. Gainey Center Drive Suite 345 Scottsdale, AZ 85258



Attorneys/Representative Withey Morris, PLC 2525 E. Arizona Biltmore Circle Suite A-212 Phoenix, AZ 85016



Architect Allen + Philp Partners 7154 E. Stetson Drive Fourth Floor Scottsdale, AZ 85251



Public Relations Rose + Allyn PR 7144 E. Stetson Drive Suite 400 Scottsdale, AZ 85251



Development Consultant High Mountain Consulting 69730 High way 111 Suite 213 Rancho Mirage, CA 92270



Landscape Architect Floor Associates 1425 N. 1st Street Suite 200 Phoenix, AZ 85004



Lighting Design EXP 7450 Arroyo Crossing Parkway Suite180 Las Vegas, NV 89113



Engineer CVL Consultants 4550 N. 12th Street Phoenix, AZ 85014



Traffic Engineer CivTech 10605 N. Hayden Road Suite 140 Scottsdale, AZ 85260

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| Site Section Exhibit | Exhibit 7 |
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| Lighting Plan | Exhibit 10 |
| Wall Plan | Exhibit 11 |
| Landscape Plan | Exhibit 12 |

Introduction

This pre-application is being submitted on behalf of Walton Global Holdings, LLC ("Walton"), the owner and proposed developer of approximately 5.36 gross acres located at 7101 E. Lincoln Drive in Paradise Valley, Arizona (the "Property"), as illustrated by the Aerial Map attached as **Exhibit 1**. The Property is currently zoned SUP-R (Special Use Permit - Resort) as shown in the Zoning Map at **Exhibit 2** and identified on the 2022 General Plan with a land use designation of Resort/Country Club, as shown in the General Plan Map at **Exhibit 3**.

The Property is currently improved with a bungalow-style resort known as SmokeTree Resort, originally constructed in 1954. The existing resort is currently vacant and has not undergone a meaningful update or redevelopment since its original inception. Walton seeks to amend the existing SmokeTree Special Use Permit to redevelop the site with a 82-key boutique luxury resort that is worthy of its promient location at the eastern gateway to the Town of Paradise Valley, pays homage to the rich history of the site and the Town, and raises the bar for boutique luxury resort hospitality in the Valley.

General Site Information and SUP History

As noted above, SmokeTree Resort was originally constructed in 1954 - seven years prior to the Town of Paradise Valley's incorporation. The resort was originally conceived as the Diamond Lazy K, consisting of 25 apartment bungalows, a restaurant, and a beauty salon. After a period of financial difficulty, the Property was purchased by Melinda and Curtis Williams in 1966.

The Property was rezoned to SUP-R in 1969, establishing a new Special Use Permit to allow for a resort hotel. In the early 1970s the SUP was amended twice (SUP 71-6 and 72-12) to accommodate improvements on-site and the Property was renamed SmokeTree Resort. SmokeTree operated successfully for several decades in the Town of Paradise Valley, with The Other Place restaurant on the Property becoming a local staple.

In recent years, modern resorts have established heightened guest expectations for what the Paradise Valley resort experience should be. SmokeTree was simply unable to keep pace with these expectations without a major redevelopment. Walton recognized an opportunity to not only build a boutique luxury resort, but to create something truly special that captures the essence of the Paradise Valley experience and honors the long and unique history of the SmokeTree Resort.

Surrounding Land Uses

The Property is unique within the Town of Paradise Valley in the sense that it is a commercial land use almost entirely surrounded by commercial land uses. The established land use pattern in the immediate area and the location of the Property at the eastern gateway to the Town provide an ideal setting for a boutique luxury resort.

North: Paradise Valley Ritz Carlton Resort (SUP-R)

East: Lincoln Plaza Medical Center (SUP-M) South: ANdAZ Scottsdale Resort & Bungalows (SUP-R) West: Single-Family Residential (R-43)

Proposed Amendment to SUP

Walton seeks to amend the existing SmokeTree Resort SUP for the development of a brand new 82room boutique luxury resort on the Property. The foundational principle of this project is to create a unique, welcoming, and visually stunning resort environment that will have as much to offer the residents of Paradise Valley as it will visitors and guests. As the "Living Room of Paradise Valley", the proposed resort will serve as a place for visitors and residents alike to gather, mingle, dine, and relax in casual yet refined and upscale surroundings.

With a developable area of 5 acres, efficient use of the site is at a premium, and both subterranean and vertical elements are necessary to maximize the usable area of the Property. Each component of the resort has been thoughtfully designed to provide a visually stunning, comfortable environment at a scale that is harmonious with surrounding development. Consequently, as outlined in the Development Plan section below and illustrated by the conceptual drawings enclosed with this narrative, only a minimal amount of relief from the SUP Guidelines is necessary.

The SmokeTree Resort site presents an enormous opportunity to create both a local gathering space and a destination resort experience in singular, truly unique setting. The proposed project will capture the spirit and rich legacy of the Property in a modern, culinary-centric luxury boutique resort. Designed at an scale and intensity befitting its prominent location at the eastern gateway to the Town, The Living Room of Paradise Valley will be as welcoming to the international traveler as it will be to the family around the corner.

Development Plan

<u>Overview</u>

The proposed resort is anchored by an 82-guestroom boutique hotel and two culinary concepts that will serve as the social center of gravity for the project - an all-day market bistro and a dinner-only fine dining restaurant known as the French Cowboy. See Conceptual Site Plan at **Exhibit 4.** Prominently located near the main entrance off Quail Run Road and oriented toward Lincoln Drive, the Market Bistro and stand-alone French Cowboy are conveniently located to serve the both the local community and guests, with adjacent surface parking equally accommodating both a 15-minute coffee stop and a 3-hour fine dining experience. A large north-facing Market Patio provides a comfortable space for patrons and visitors to enjoy a sandwich, catch up with friends over a glass of wine, and even find a quick respite with their favorite four-legged companion.

Context and scale are fundamental to the design of the proposed resort, and each element has been carefully planned to be harmonious with neighboring development. As illustrated by the Conceptual Site
Plan, the vast majority of the proposed structures are single story. The primary guestroom building is the only three-story structure on the Property and has been oriented and configured to mitigate visual impact and preserve view corridors on Lincoln Drive. Guestrooms surround a centralized pool and amenity area, flanked by an event lawn and indoor event space to the west. Five guest casitas with private plunge pools occupy the southwest corner of the site.

To maximize efficient use the site and minimize visible parking areas, approximately half of the total parking is located below grade. Approximately 74 spaces will be located below grade, with the remaining 69 surface parking spaces distributed between three parking areas on the north, west, and east sides of the Property. Minimizing the parking at grade allows significantly more of the site to be utilized for active uses and the buildings to be more evenly dispersed throughout the site. The site layout and building configuration are intended to not only be attractive, intuitive, and welcoming for residents and visitors, but for adjacent neighbors as well.

| Site Standards | | | | | | | |
|---|--------------------------------|--|--|--|--|--|--|
| Lot Area | 5.36 acres (Gross) 5.007 (Net) | | | | | | |
| Bulk and Density Standards | | | | | | | |
| Maximum Building Height | | | | | | | |
| Principal Structures | 36 Feet | | | | | | |
| Accessory Structures | 24 Feet | | | | | | |
| Service Structures | 18 Feet | | | | | | |
| Lot Coverage | | | | | | | |
| Total of All Structures (Max) | 27.5%/64,350 SF (Gross) | | | | | | |
| Total of All Impervious Surfaces (Max) | 60% | | | | | | |
| Open Space (Min) | 40% | | | | | | |
| Guest Units (Max) | 82 | | | | | | |
| Perimeter Standards | | | | | | | |
| Principal Structure Minimum Building Setbacks | | | | | | | |
| North (Lincoln Drive) | 85 Feet | | | | | | |
| East (Lincoln Medical Center) | 50 Feet | | | | | | |
| • South (ANdAZ Resort) | 40 Feet | | | | | | |
| West (Quail Run Road) | 55 Feet | | | | | | |
| Accessory Structure Minimum Building Setbacks | | | | | | | |
| North (Lincoln Drive) | 25 Feet | | | | | | |
| East (Lincoln Medical Center) | 40 Feet | | | | | | |
| South (ANdAZ Resort) | 40 Feet | | | | | | |
| West (Quail Run Road) | 28 Feet | | | | | | |

| Guest Pool Minimum Setbacks | | | | |
|---|---|--|--|--|
| North (Lincoln Drive) | 310 Feet | | | |
| East (Lincoln Medical Center) | 150 Feet | | | |
| South (ANdAZ Resort) | 90 Feet | | | |
| West (Quail Run Road) | 220 Feet | | | |
| Parking Lots and Interior Drives | | | | |
| Adjacent to Public Streets and Non-Residential Uses | Lincoln Drive: Average 20' | | | |
| | Quail Run Road: 15' | | | |
| Landscape Buffers | | | | |
| Adjacent to Non-Residential Use | 30 Feet / 2' Adjacent Existing Non-Conforming Conditions | | | |
| Adjacent to Arterial Street | 18' Average | | | |
| Adjacent to Collector Street | 30' North of site Access | | | |
| | 15' South of Access | | | |
| Parking Standards | | | | |
| Total Parking Provided | 143 Spaces | | | |

Minimum Lot Area

The Resort Special Use Permit guidelines prescribe a minimum lot size of twenty (20) acre for resort development, with the exception of properties that have existing Special Use Permits for resort uses. As noted above, the original SmokeTree resort SUP was approved in 1969, decades before the current SUP guidelines were created. The applicant is simply requesting to maintain the existing lot size for this SUP and nothing less. Despite being undersized, the Property is an ideal location for a boutique resort in the context of the surrounding land uses and the Property's location at the eastern gateway to the Town of Paradise Valley. It is surrounded on three sides by commercial land uses - two of which are resorts also zoned SUP-R. The design guidelines and development standards detailed in this narrative are carefully tailored to provide the framework for an appropriately scaled boutique resort on the Property.

Lot Coverage

As indicated by the development standards table above, Walton is requesting minimal relief from the 25% lot coverage maximum noted in the SUP Guidelines for resorts. Despite the enormous constraints on the project due to the undersized site, Walton has been able to maintain a lot coverage percentage close to the SUP Guideline maximum by incorporating significant subterranean parking and a responsibly designed three-story guestroom building into the overall site design. The result is a site with ample open space and an open, unimposing feel despite its small size.

Building Height

The proposed resort will remain within the SUP-R height limitation of 36 feet.

Guest Unit Density

The guest unit density of 1 unit per 4,000 square feet of site area prescribed by the SUP guidelines contemplates a minimum site area of twenty (20) acres and would yield a maximum of 217 guest units. At five (5) acres, however, the Property would only yield 54 guest units if the SUP Guidelines are strictly adhered to. Quite simply, the fixed costs associated with this Property and its development cannot be sustained by a 54-unit resort. Although the Property could support significantly greater density - Walton has developed a site plan that balances the economic needs of the site with the Town's vision for the Lincoln Drive corridor and a sensitivity to the intensity of surrounding development. At 82 units, the proposed boutique hotel is significantly lower in intensity than previous proposals for the Property and is balanced by other accessory uses that collectively provide a substantial amenity to the residents of Paradise Valley.

As described above, Walton's vision is for SmokeTree to become the "living room" of Paradise Valley. The restaurants and market are envisioned as a social, communal place for residents, visitors, and guests to eat, drink, mingle, and relax. The proposed guest room density will support these operations while still remaining a balanced component of the overall development.

Building Setbacks and Open Space Criteria

The most challenging set of development standards for the Property are the building setbacks and Open Space Criteria. Because the SUP-R Guidelines were drafted and adopted with a minimum 20-acre site in mind, applying the setback requirements to a site a quarter of the size severely restricts the buildable area of the Property. See Setback Overlay Exhibit at **Exhibit 5**. As illustrated by the Setback Overlay Exhibit, the setbacks prescribed by the SUP Guidelines create a series of increasingly restrictive building envelopes that render the site effectively unbuildable if followed strictly.

These challenges are further compounded by the Open Space Criteria outlined in Section 3 of the SUP Guidelines, which require a 1-to-5 step-back from the property line, beginning from a building height of 16 feet and a building setback of 20 feet. Following these criteria would result in a requirement of a 150-foot setback for any 36-foot-tall structure on the Property. For a site that is only approximately 460 feet by 462 feet in total area, a strict application of the Open Space Criteria would push the tallest elements of the project exclusively into the center of the site – in conflict with the input received from staff and the community, as well as the intent of the criteria – and into an area too small for meaningful development.

To align with the intent of the Open Space Criteria and the SUP Guidelines - protecting view corridors and minimizing impacts on adjacent properties - the tallest elements of the proposed resort are pushed away from public rights-of-way and adjacent to areas of neighboring properties that are not frequented by visitors, guests, or customers where the visual impact will be minimal. As illustrated by the Height Exhibit at **Exhibit 6**, the three-story guest room building is largely reserved to the southeastern quarter of the Property and with a limited footprint as a percentage of the overall site.

As illustrated in the Site Section Exhibit at **Exhibit 7**, only a small portion of the three-story guest room building falls within the 1-to-5 step-back plane prescribed by the Open Space Criteria. The building was designed and configured to minimize both visual impact and the amount of necessary relief. Relative to the Lincoln Plaza Medical Center to the east, the guest room building was pushed as far south as possible

to align the massing with the medical office's surface parking area on the south side of the building, where the visual effect of the height is minimized.

In relation to the Andaz Scottsdale Resort & Spa to the south, the nearest portion of the guest room building is oriented with the long axis perpendicular to the resort, minimizing the massing of the building. Additionally, the southern end of the guest room building nearest to the ANdAZ property line will step back away from the property line. The first block of guest units on the south side of the building will only be two stories, with only patios for the third-story units above. See Third Floor Plan on the Conceptual Site Plan at **Exhibit 4**.

Permitted Uses

Primary and accessory uses shall be permitted in accordance with Section 1102.2.A of the Paradise Valley Zoning Ordinance.

Architectural Design

The design inspiration for the proposed resort was derived from French agrarian compounds. Historically, these courtyarded farmsteads consisted of utilitarian buildings housing various independent functions arranged around a central courtyard. This central space became an open workspace that provided protection from the elements and defended the nobility. In this context, SmokeTree is designed around a series of courtyards intended to activate the guest's experience, take advantage of microclimates, and screen activity, both visually and audibly from intruding into adjacent properties. See Elevations and Conceptual Renderings at **Exhibits 8** and **9**.

<u>Arrival</u>

Guests arrive on site from the west via Quail Run Road into the arrival court. This auto court is enclosed by the French Cowboy restaurant to the north, lobby to the east, and event space to the south. This space is further enclosed by an entry feature assembled from eight-foot-tall sandstone wall elements that act as a threshold to the project, monument signage, and a sound baffle to dampen any noise generated by arrival activity.

The arrival court is set with pavers similar in color and texture to the surrounding pedestrian paths, which continue through into the lobby and dining courtyard beyond. Delineation between pedestrian and vehicular traffic zones is provided by a flush stone gutter that encircles the auto court to reinforce the connection to its European influence. From arrival court, guests have four options: proceed east to be to the lobby, turn south into the event arrival space, turn north toward the French Cowboy, or proceed through the arrival court to the northern surface parking area serving the market bistro and lobby restaurant.

<u>Resort</u>

In general terms, the resort has three masses with complementary, but slightly different architectural expressions. The first is the amenity and support wing, which includes the lobby/arrival space, the hotel

restaurant, and the kitchen and supporting program. This section is dominated by a low, flat roof with deep overhangs to provide ample shade. The elevations of the amenity spaces are articulated with a composition of solid and void. The void is composed of large glass walls that allow views from the street and exterior through the restaurant and lobby into the dining courtyard beyond. The solid exhibits as sandstone-clad masses that break up the glass expanses. These masses enclose utilitarian programs like restrooms, stairs, and iconic eating experiences within the restaurant. These clad volumes are further articulated with slot windows and small punched openings to add depth.

The second mass is the hotel room wing, a three-story lightly-colored "L" shaped wing that rises from behind the restaurant and lobby. This volume is passively shaded from the Arizona sun by deep continuous balconies and a perimeter column arrangement meant to add verticality to the composition. This column configuration rings the pool area and is meant to reflect a cloistered abbey.

The last mass is an arrangement of four one-bedroom and one two-bedroom casitas to the southwest corner of the site. This group is a low residential scaled group of stucco-clad boxes with slightly pitched roofs. These structures have sandstone detailing to reinforce the character from the arrival. Living walls have also been added to soften the guest's arrival and provide passive cooling at the casita entrees. These upscale units open to the south to private yards each with its own splash pool.

Restaurant

The final component of the resort is the French Cowboy, the free-standing restaurant at the hard corner of Lincoln Drive and Quail Run Road. The French Cowboy will be a dinner-only experience that fuses a locally-sourced Southwestern menu elevated through French technique. This structure represents the most literal interpretation of the French agrarian design concept, acting as the "stable" of the compound. The building is organized as two low post and beam bays with exposed wood ceilings adjacent to a high bay with a cathedral ceiling of exposed beams terminating at the exhibition kitchen. The clerestory windows wrap the lower bays creating a romantic introspective space shielding guests from traffic noise while allowing the building to be a beacon from the exterior. The high bay space is more open with views to the west. Clad in brick, reclaimed wood, and board-formed concrete, the building speaks to its utilitarian inspiration.

Lighting

The lighting design for the proposed resort consists of four separate sub-areas tied together by a central theme. The four sub-areas are the Arrival Court/Parking/Site, French Cowboy/Lounge/Dining, Pool Deck/Event Lawn, and Guestrooms/Casitas as shown in the Lighting Plan at **Exhibit 10**:

Arrival Court/Parking/Site

Lighting throughout the site will adhere to Dark Sky requirements while evoking the atmosphere of a highend resort. The arrival court will be illuminated using landscape lighting, low-level pathway luminaries, and linear accents at sandstone benches. Throughout the site, pathways will be illuminated at a comfortable level using bollards, and pedestrian-scale poles with wood detailing will provide light at the parking areas.

French Cowboy/Lounge/Dining

The overall atmosphere of the lounge and dining spaces will be warm and inviting, with sophisticated lighting scenes to transition the areas from day into evening looks. Decorative pendants and sconces will be supplemented by architectural lighting that will highlight features of the buildings and provide task lighting for guests.

Pool Deck/Event Lawn

Shielded luminaries and landscape lighting will visually activate the pool deck and event lawn after sundown to provide a relaxing and enjoyable experience for guests. The pool bar will be illuminated with linear LED lighting and decorative pendants, while pathways throughout will be lit by bollards. The event lawn will feature catenary mounted string lights for general lighting and sparkle across the lawn.

Guestrooms/Casitas

The complement the high-end hospitality feel of the architecture and interior design, the guestrooms will be illuminated with decorative and architectural lights that enhance the design features and provide comfortable task lighting. The casitas will feature romantic lighting in the garden areas, including decorative exterior sconces, bollards, and linear lighting under the fire pits.

Screening, Fencing, and Walls

Parking areas, refuse enclosures, and equipment will be screened by materials and structures complementing the overall building form. All parking areas will be screened with a combination of decorative walls and landscape buffers along both Lincoln Drive and Quail Run Road. See Wall Plan at **Exhibit 11**.

Infrastructure, Grading & Drainage

The SmokeTree resort wastewater system will be a private system which will outlet to the Town of Paradise Valley system within Lincoln Drive. The system is maintained by the City of Scottsdale. The on-site system will consist of private gravity sewer lines which will convey wastewater to an on-site lift station. A force main will then be utilized to convey the wastewater to a public manhole which will then connect to the existing 8-inch sewer line in Lincoln Drive.

Domestic and fire protection water will be provided on-site through a 12-foot EPCOR water easement. An 8-inch water line will connect to the existing 16-inch water line in Lincoln Drive and an existing 12-inch water line stub in Quail Run Rd.

The site is designed to utilize underground storage tanks for storm water retention. These tanks are located along the perimeter of the site and will utilize drywells for ultimate dewatering of the site. Lincoln

Drive was previously improved by the Town and no alterations are anticipated beyond pavement cuts for utility connections. Half-street pavement improvements will be provided for Quail Run Road on the west edge of the property. Catch basins will be utilized to direct storm water to the underground retention tanks.

Roadway Standards & Circulation

At full build-out, the Property will have two access points - a primary entrance on Quail Run Road and a secondary shared access on Lincoln Drive. In its current form, the Property has two driveways on Lincoln Drive and no Quail Run Road access. Relocating the primary access from an arterial street (Lincoln Drive) to a collector roadway (Quail Run Road) allows SmokeTree guests and visitors to have a more intimate, enjoyable arrival experience that doesn't feel hurried or rushed. The Property's western Lincoln Drive access will be closed due to its proximity to Quail Run Road and conflict with the location of the French Cowboy restaurant.

Quail Run Road is currently a narrow local street that will be improved by both this project and adjacent residential development on the west side of the roadway. The developer will dedicate additional right-of way and construct half-street improvements to bring Quail Run Road up to its ultimate collector street cross-section. Although Lincoln Drive is already built out to its ultimate arterial street pavement section, new curb, gutter, sidewalk, and landscape improvements will be constructed consistent with the Visually Significant Corridors Master Plan.

On-site vehicular circulation will be provided by a drive aisle that traverses the west, north, and east sides of the site, with access to the underground parking structure at the northeast corner of the Property. To provide full emergency access to all corners of the Property, an emergency access-only driveway will be provided along the south and east sides of the Property connecting the southwest corner of the main drive aisle and surface parking area to the eastern terminus of the drive aisle near the service area. The emergency access lane will be paved with decomposed granite matched to the landscape palette.

Parking

The proposed resort will provide a total of 143 parking spaces to serve the 82 guest rooms, market, restaurants, spa, and event space. As noted above, parking for the site is provided a series of surface lots on the north, east, and west sides of the Property along with a subterranean parking structure that accommodates just over half the total on-site parking.

Because of the interrelated nature of the land uses on site, the differences in peak demand among those uses, and the site's ability to take advantage of valet service and ridesharing, the anticipated parking demand is significantly lower than the number of parking spaces that would otherwise be required by the Zoning Ordinance. A full analysis of these factors was performed in the Parking Study prepared by CivTech that is enclosed with this application. The Parking Study concludes that the in-season peak

parking demand for the proposed resort is 140 spaces. The proposed site plan offers a total of 143 spaces, accommodating the peak anticipated parking demand for the site.

Landscaping

The landscape design for the proposed resort is intended to create shaded pedestrian-focused spaces that provide opportunities for gathering. The Lincoln Drive streetscape includes new native shade trees within a massing of deer grass and sculptural accents such as Agave and Desert Spoon to create a lush green environment. Large sculptural trees placed within raised steel planters serve as landmarks, highlighting entries and other points of interest. Low walls draped with bougainvillea to screen parking as well as provide a burst of color. The entry plaza is highlighted with stone walls and pavers creating a sense of arrival as well as serving to slow vehicles down as they enter this pedestrian focused space.

The various courtyard spaces provide opportunities for outdoor dining, gathering and small events. Each of these spaces will be crafted to provide shade, vertical green and color and year-round interest. Large shade trees line the property edges to knit into the existing palette of adjacent properties. The palette will be composed of low-maintenance and low-water-use desert plants and accents supported by drip irrigation to reflect local context and provide interpretive opportunities for visitors. See Landscape Plan at **Exhibit 12**.

Aerial Map



SEC Lincoln Drive & Quail Run Road – Paradise Valley, AZ

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Zoning Map



SEC Lincoln Drive & Quail Run Road – Paradise Valley, AZ

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General Plan Map



SEC Lincoln Drive & Quail Run Road – Paradise Valley, AZ







S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley , Arizona

Conceptual Project Data

| Gross Site Area: | 5.363 ac |
|------------------|------------|
| | 233,630 sf |
| Net Site Area: | 5.007 ac |
| | 218,096 sf |

Gross Area

Level B1: 51,010 sf First Floor: 64,350 sf 26,120 sf Second Floor: Third Floor: 26,100 sf

Total Gross Area:

167,580 sf

Total Gross Area Above 116,570 sf Grade:

Lot Coverage: (Gross Area) Allowable: 25% 58,408 sf Proposed: 27.5% 64,350 sf

Open Space: (Gross Area) Required Min 40%: 93,452 sf Provided: 41.2% 96,271sf

Impervious Surfaces:

Allowable: 60% 140,178sf Proposed: 58.8% 137,360sf

Room Count

| First Floor: | 20 keys |
|---------------|---------|
| Second Floor: | 32 keys |
| Third Floor: | 25 keys |
| Casitas: | 5 keys |
| | |

Total Project Keys : 82 keys

Parking Level B1: 74 spaces First Floor: 69 spaces

Total Spaces Provided: 143 spaces 1.74 spaces per key

Color Key



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Resort Zoning: SUP-R

|llustrated Site Plan



Special Use Permit: Date: Amendment Application

Conceptual Project Data

| Gross Site Area: | 5.363 ac |
|------------------|------------|
| | 233,630 sf |
| Net Site Area: | 5.007 ac |
| | 218,096 sf |

Gross Area

| Level B1: | 51,010 sf |
|---------------|-----------|
| First Floor: | 64,350 sf |
| Second Floor: | 26,120 sf |
| Third Floor: | 26,100 sf |
| | |

Total Gross Area:

167,580 sf

Total Gross Area Above

Grade: 116,570 sf

Lot Coverage: (Gross Area) Allowable: 25% 58,408 sf Proposed: 27.5% 64,350 sf

Open Space: (Gross Area) Required Min 40%: 93,452 sf Provided: 41.2% 96,271sf

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| Casitas: | 5 keys |
| Casitas: | 5 key |

Total Project Keys : 82 keys

| Parking | |
|--------------|----------|
| Level B1: | 74 space |
| First Floor: | 69 space |
| | |

Total Spaces Provided: 143 spaces 1.74 spaces per key

Color Key



Commercial Zoning: SUP-O

Date : 2023.02.15



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| Guestrooms. | BOH | + | Circu | lation |
|-------------|-----|-----|-------|--------|
| ouconoomo, | DOI | ÷., | Oncu | lation |

| | Guestroom | ns, BOH + Cir | culation | | | | | | | | Hotel Progr | am | | | | | | MEP | | | Food + E | Beverage P | rogram | Parking | Totals | RESTROOMS |
|--|------------|---------------|------------|-----------------------|------------|-------------|------------|---------------|------------------|-----------|-------------|---------|--------------|------------|----------|-----------------|----------------|------------|----------|-----------|-----------|------------|-----------|-----------|------------|-----------------------|
| level # flr / flr bldg ft | Standard | Suite | 1Bd | Presidential | Casita 1Bd | Casita 2Bd | total keys | Guestroom nsf | BOH & sf | Total sf | Lobby / sf | Spa s | f Meeting sf | Meeting sf | Admin sf | Hotel sf | Circulation sf | est. 5% sf | Bldg | Total sf | F+B sf | f F+B sf | Total sf | Total sf | | FOOD & BEVERAGE |
| ht ht | +- 533 nsf | +- 807 nsf | +- 1066 ns | sf +- 1486 nsf | +- 815 nsf | +- 1345 nsf | | Total | Circulation | | Public | | Space | BOH / | Offices | BOH / | | of floor | Services | | Public | BOH / | | | | KITCHEN |
| | | | | | | | | | | | Space | | | Support | | Storage | | area | | | Areas | Support | | | | |
| Roof 0.00 35.50 | | | | | | | | | | | | | | | | | | | | 0 | | | | | 0 | BOH CIRCULATION |
| Guestrooms 3 14.50 21.00 | 14 | 3 | 7 | 1 | 0 | 0 | 25 | 18,831 | 5,386 | 24,217 | | | | | | | | 530 | | 530 | | | | | 24,747 | BOH |
| Guestrooms 2 10.00 11.00 | 27 | 5 | 0 | 0 | 0 | 0 | 32 | 18,426 | 5,786 | 24,212 | | | | | | | | 800 | | 800 | | | | | 25,012 | LOBBY/FOH CIRCULATION |
| Arrival, Amenities & 1 12.00 -1.00 Guestrooms | 19 | 1 | 0 | 0 | 4 | 1 | 25 | 15,539 | 4,113 | 19,652 | 4,798 | 5,361 | 4,654 | 1,635 | 4,830 | 537 | | 450 | 1,264 | 23,529 | 8,112 | 6,592 | 14,704 | | 57,885 | GUEST ROOMS |
| Garage Level B1 -14.00 0.00 | | | | | | | | | 1,600 | 1,600 | 160 | | | 2,970 | | 4,805 | 2,970 | 890 | 368 | 16,801 | 3,548 | 2,366 | 5,914 | 31,301 | 55,616 | BALLROOM |
| 3 Ivis 35.50 ft | 60 keys | s 9 key | rs 7 ke | eys 1 key | rs 4 keys | s 1 keys | 82 keys | 52,796 nsf | 16,885 <i>sf</i> | 69,681 sf | 4,958 sf | 5,361 s | f 4,654 sf | 4,605 sf | 4,830 sf | 5,342 sf | 2,970 sf | 2,670 sf | 1,632 sf | 41,660 sf | 11,660 st | f 8,958 sf | 20,618 sf | 31,301 sf | 163,260 sf | SPA / FITNESS |





Lincoln Drive

Net Area Property Line

Preliminary Area Calculations

SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

Special Use Permit: Date: Amendment Application

2023.02.15



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Special Use Permit: Amendment Application

SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

Commercial Zoning: SUP-O

Color Key



2023.02.15



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| | | | Gross Area Property Line |
|-----|---------|-------|-----------------------------|
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| | Suite | | |
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| | Patio | | Planter |
| | Planter | | |
| | | | |



Special Use Permit: Date: 2023.02.15
Amendment Application

Color Key





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Below Grade Location Plan Conceptual Level B1

Conceptual Level B1 & Location Plan



Special Use Permit: Date: Amendment Application

Level B1 Gross Area: 50,950 sf Parking Spaces: 74 spaces

2023.02.15



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Residential Zoning: R-43

Residential Zoning: R-43







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Lincoln Drive

Resort Zoning: SUP-R



Special Use Permit: Date: Amendment Application

Commercial Zoning: SUP-O

Setback Encroachment

2023.02.15



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Site Plan Analysis: | Site Setbacks from Net Property Lines |





Lincoln Drive

| | Gross Property Line | | | | |
|-------------------------|--|-----------|-----------------------|----------|---------|
| | Net Property Line | | | | |
| | 20' Open Space Setback (from Net PL) | | | | |
| etback from se | 40' Setback for Accessory Buildings from Publ Street (from Net PL) | | | | |
| | 50' Landscape Setback from Arterial (from Ne | et PL) | | | |
| | | | | | |
| | 100' Setback for Principal Buildings from Public Street (from Net PL) | Φ | | | |
| | | ential Us | e from | | |
| c | | on-Resid | structure | | |
| ack from | | from No | cessory S Use | e Setbaa | y Line |
| ool Setb. | | setback | ack Acc sidential | en Space | Propert |
| 200' Pc | | 5. Pool 9 | 40' Setb Non-Res | 20' Ope | Gross |
| | | | | | |
| | | | | | |
| | | | щ | | |
| | | | e e | | |
| | | | Drive Se Icent Us | | |
| | | | Interior tial Adjo | | |
| | 100' Setback Principal Structure from | | arking & Residen | | |
| | Non-Residential Use | | 40' Pc Non-I | | |
| | 65' Pool Setback from Non Residential | | | | |
| e Setback from I Use | 40' Setback Accessory Structure from Non-Residential Use | |] | | |
| | 20' Open Space Setback | | | | |
| | Gross Property Line | | | | |

Resort Zoning: SUP-R



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Commercial Zoning: SUP-O



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Scale: 1/32" = 1'-0"



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Setback Encroachment



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| | | Gross Area Property Line |
|------------------------------|-----------------------------|-----------------------------|
| | Lincoln Drive | Net Area Property Line |
| ory +/- | | |
| | 1 Story | |
| | 18'+/- 1 Story 14'+/- | |
| 1 Story 18'+/- 1 Story | 3 Story 36' or Below | |
| 22.+/- | | |
| | | |
| 1 Story 14'+/- | 1 Story 14'+/- | |
| | | |



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2 Story 26'+/-





















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West Elevation

South Elevation



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Scale: N.T.S.

Enlarged West Elevation: Lobby Entry

Enlarged North Elevation: Restaurant Street-side Patio

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Scale: 1/4" = 1'-0"

Conceptual Building Elevations: | Typical Hotel Bay |



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Concept Rendering Arrival



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Site Entry At Quail Run Arrival Court

Arrival Court Lounge Street Front

Concept Renderings | Arrival |



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Pool From Above Fitness Pool Looking East



Pool and Fitness Pool Bar



Special Use Permit: Amendment Application











Conceptual Design | Imagery |

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Conceptual Courtyard Bar



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THE SMOKETREE RESORT

7101 E Lincoln Drive Paradise Valley , Arizona

Special Use Permit: Major Amendment Application

Submittal Date: 3.17.2023

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EXHIBIT 10

Pexp.

SMOKETREE RESORT

FEBRUARY 13, 2023 22018820-00

Conceptual Lighting Design |



Special Use Permit: Date: Amendment Application

LIGHTING BASIS OF DESIGN

t: ^{Date : 2023.02.15}



Allen + Philp Partners

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- Executive Summary 1.
 - 1.1. The project is a hotel tower with a mix of guestroom types. The building includes a lobby with retail, restaurant, fitness room, meeting room, and exterior amenities including an event lawn. Lighting will meet all local codes and standards and will have a quality lighting design that is warm and inviting.
 - 1.2. Significant project features include:
 - Lobby, Elevator Lobby
 - Guest Accessible Common Areas Restaurant and Bar
 - Guestrooms, including Suites
 - Fitness Meeting Room

Event Lawn

- Outdoor Pool Decks & Cabanas
- Applicable Codes, Guidelines & Standards 2.
 - 2.1. Design will be in accordance with all applicable codes, guidelines, and standards as noted below. Where differences arise between any Code, Standard or Guideline, Codes shall prevail. In all cases, where an edition number is not indicated, the current accepted edition will be used.
 - 2.1.1. 2021 International Building Code
 - 2.1.2. Applicable NFPA codes
 - 2.1.3. IESNA The Lighting Library
 - 2.1.4. Maricopa County Environmental Health Code (Chapter 6, Section 6, Regulation 4 Lighting for Public Swimming Pools)
 - 2.2. Equipment selections will be from manufacturers whose products comply will current industry accepted design and testing standards.
 - 2.3. Equipment selection, specification and installation practices will reflect a commitment to long-term longevity of system, ease of maintenance and energy efficiency.
 - 2.4. The intended level of quality of all wiring devices will be specification grade.
 - 2.5. The intended level of quality of all luminaires will be specification grade.

| Proposed manufacturers of major equipm | nent will be as indicated below. | |
|--|----------------------------------|--|
| Equipment | Manufacturer(s) | |

| Lighting Control – Public Spaces | Lutron, ETC |
|----------------------------------|-------------|
| Lighting Control - Guestrooms | Lutron |
| | |

3. Lighting System

2.6.



FRONT OF HOUSE LIGHTING BOD

| | | occupancy sensing switches are used, the occupant will be given the ability to turn the lights off upon exiting the room. | | | 4.1.1. | The general illumin (2700K) LED rece dim (2400K-2700k |
|--------|------------|---|----|-------|------------|---|
| | 3.8.2. | Exterior lighting will be phased; landscape lighting will come on at dusk. Landscape lighting will turn off at a predetermined time. Photosensors shall be used to reduce or eliminate artificial lighting when daylight is available. | | | 4.1.2. | Decorative sconce soft indirect illumir |
| | 3.8.3. | Lighting control equipment will be comparable to a Lutron or ETC distributed system, with an integrated digital controller. | | | 4.1.3. | Adjustable accents as exposed wood |
| | 3.8.4. | For emergency lighting controlled by a wall switch, an ELCU will be provided to automatically turn emergency lighting on in the event of loss of normal power. | | | 4.1.4. | Warm white linear shelving may be u be mounted under |
| 3.9. | Lighting | and Room Device Control for Guestrooms | | | | |
| | 3.9.1. | The control system will be intuitive, simple, and easy to use for all levels of guests. Several types of lighting control devices may be used include: | | | 4.1.5. | Special artwork ar art lights. |
| | | Standard switches and circuits. | | | 4.1.6. | Warm white linear provide indirect co |
| | | • Smart switches with built-in dimmer. Each light switch shall be capable to have up to 8 customized touch buttons in a single backbox installation. | | | 4.1.7. | Decorative sconce face level, specifie |
| | | Advanced lighting control systems based on intelligent programmable control panels to microprocessor units, which is turn control panels | | 4.2. | Interior | Guest Units |
| 0.40 | _ | modules. | | | 4.2.1. | The general illumine decorative sconce |
| 3.10. | Emerge | ncy Lighting | | | | utilize warm white |
| | 3.10.1. | Under normal conditions, lighting will be provided by the normal lighting luminaires. Upon loss of normal power, the emergency generator will start and restore power to the normal luminaires. | | | 4.2.2. | Bathroom illumina recessed downligh |
| 3.11. | Lighting | Fixtures (Luminaires) | | | 4.2.3. | Decorative sconce level, specified by |
| | 3.11.1. | Luminaires located exterior to the building and/or in unconditioned damp spaces, in direct contact with the weather or washdown areas, or under cover from direct weather exposure aball be the listed on "Switchle for Weth costione" unless pated at arwing | | | 4.2.4. | Decorative pendar |
| | | shall be OL listed as Suitable for wet Locations unless noted otherwise. | 5. | Exter | ior Public | Spaces |
| | 3.11.2. | Luminaires installed with direct contact with insulation shall have an "IC" rating for direct contact with insulation. | | 5.1. | Genera | Exterior Approach |
| | 3.11.3. | All front of house luminaires shall be integral LED wherever possible and shall be a minimum of 90 CRI and a standard CCT of 2700K. Some specialty areas may include | | | 5.1.1. | All exterior light so unless they meet t |
| | | warm-dim or color changing LEDs. Where integral LED is not possible, retrofit LED lamps shall be used. | | | 5.1.2. | Porte Cochere are vary by condition. |
| D | 3.11.4. | Refer to Section 4, <i>Building Lighting</i> , for descriptions of proposed light luminaires for all front of house areas and their respective considerations. | | | 5.1.3. | Low level pathway egress levels as w varying based on o |
| Buildi | ng Lighti | ing and a second se | | | 514 | I FD sten lights m |
| 4.1. | Interior I | Public Spaces | | | 5.1.4. | |
| | | | l | | | |

°EXD.

4.

DISCIPLINE BOD

| 3.1. 3.2. 3.3. | Lighting : design co electrical Emerger IESNA g Front-of- least 90 Lobby, Elevat (Front of Hou Restaurant, L Guest Access Fitness Cente Guestrooms, Outdoor Pool Lawn | system is comprised of luminain overs front-of-house lighting on l engineer. hcy and exit/egress lighting will uidelines. house luminaires will be as indi (unless otherwise noted), and li Area tor Lobby, Meeting Rooms se) counge/Bar, Kitchen sible Common Areas er/Spa including Casitas Decks, Cabanas, and Event | res, controls and emergency lighting equipment. This ly. All back-of-house lighting will be as selected by the be provided in accordance with NFPA 101, local code icated below with a common CCT of 2700K and a CRI sting per Underwriter's Laboratory (UL) or equivalent. Luminaire Type Recessed LED downlights, decorative sconces & pendants, Linear LED Recessed LED downlights, linear LED product displays, decorative sconces & pendants, linear LED cove lights Recessed LED downlights, decorative sconces & pendants, linear LED cove lights Recessed LED downlights, decorative sconces & pendants, linear LED cove lights Recessed LED downlights, decorative sconces & pendants, linear LED cove lights Recessed LED downlights, decorative sconces & pendants, linear LED cove lights Recessed LED downlights, decorative sconces & pendants, linear LED cove lights, decorative sconces & pendants, linear LED coves Recessed LED downlights, decorative sconces & pendants, linear LED coves Recessed LED downlights, decorative sconces & pendants Recessed LED downlights, linear LED coves Fully shielded luminaires, pole lights | basis of e es, and RI of at t. | | Guestr Guest Guest Exterio Parkin Exterio Pool D Outdoo 3.4.1. 3.4.2. | rooms 2-40 fc General & Entry 2 fc Kitchenette 40 fc Casual chair & Headboard 15-20 fc Baths 5-20 fc Lavatory 5-10 fc Shower & Bath 10-15 fc Vanity 15-20 fc or Paths & Walkways 0.5-1 fc g Lots max of 1.6 fc or Driveways 0.8-1.5 fc, max of 5fc beck Areas & Outdoor Function Areas max of 5 fc or Dining Areas max of 10 fc Continuous, even illumination is neither required nor desirable. Shadow is as important in defining the quality of space as light. From a safety standpoint, in areas where illumination is lower, the following requirements shall be met: • All walking areas should have no obstructions that could cause tripping. |
|----------------------|---|---|---|--|------|--|---|
| L L | Site Lighting, pathways, an | Including building facades, d landscape lighting | Eully shielded, low mounted light sources, LED step lights, landscape lighting | | | | All changes of elevation including beginning and end of ramps are illuminated to a minimum of 1 footcandle. |
| 3.4. | Lighting | Illumination Levels: | | | | | All changes of elevation including stairs are illuminated to a minimum of 10 footcandles. |
| | Illuminati Society (Guideline minimum emergen | ion levels shall be in accordanc IES), and the minimum levels a es of the Town of Paradise Vall n of 1 footcandle of illumination acy protocol. | e with recommendations of the Illuminating Engineering as specified herein, along with the Special Use Permit ey. Per the NFPA 101, all paths of egress should have during normal power and 0.1 footcandle of illumination | ing t /e a on during | | | • All obstructions are either illuminated to define their shape or have some type of restraining device to prevent direct approach. Defining a shape by illumination does not necessarily mean that it needs to be lit directly. For example, a lit area behind a unit obstruction could define the edges of the obstruction enough to provide a safe level of illumination. |
| | Recomm | nended Ranges of Illumination in | n Foot Candles: | | 3.5. | Light C | Quality |
| | Public A Porte-Co Front De Lounges Guest El Food and • Meeting Fitness O Locker R Restroon Guest Co | areas ochere sk evator & Foyer d Beverage Outlet Restaurant Room Center Room ns porridors | 15 fc 20 fc 5-15 fc 10-20 fc 1.5-10 fc 3-30 fc 15-40 fc 10-20 fc 5-20 fc 1-10 fc | | | 3.5.1. | Quality of light is as important, if not more so, than quantity. Our eyes are stimulated not only by the amount of light, but also by the color. Generally, we feel safer in environments lit by warm, bright light where colors are vibrant and easily identifiable. Recent advances in lamp technology now offer light sources with long life, dim ability, and high color rendering ability. LEDs will be the principle start of this project. Wherever possible, this source will be used. Quality Level Definitions ranging from the highest expected quality level down to cost competitive quality levels: Commercial – High level of quality for equipment and materials, reflecting heavy daytime use and light nighttime use. This quality level reflects the expectation of the contractors to provide competitively priced equipment and systems which meet the intent of the specifications. The installation approach should be focused on balancing cost-competitiveness with ease of maintenance. |
| IG B(| OD | | | PAGE 1 | | | |
| | 4.1.1. | The general illumination will b | e achieved by using small aperture, dimmable, warm | n white | | 5.1.5. | Linear handrail LED lights may be used to provide egress illumination on stairs or ramps, |
| | 4.1.2 | dim (2400K-2700K) LEDs will | be used | deitional | | 5.1.6. | LED wall sconces may be used to illuminate secondary building entrances and BOH |
| | 4.1.2. | soft indirect illumination, spec | ified by the interior designer. | aditional | | 5.1.7. | Entries. |
| | 4.1.3. | Adjustable accents may be in as exposed wood beams on t | corporated to highlight any areas of architectural inter- he ceiling. | rest such | | | LED luminaires will highlight trees, plants, and design features for pathway and ambience lighting. Luminaires may be ground mounted or tree strap mounted. |
| | 4.1.4. | Warm white linear LED tape li shelving may be used to prov | ight incorporated into millwork under cabinets or unde ide light to counters and retail displays. Luminaires ma | er nay also | | 5.1.8. | Area lighting will be provided for event areas as required by ownership. |
| | 4.1.5. | Special artwork and featured art lights. | is to wash face of cabinetry beneath. displays will be highlighted by adjustable accents or ir | ndividual | | 5.1.9. | Non-egress paths will be illuminated for safety, comfort, and aesthetic appeal. Obstructions will be illuminated to define their shape. For example, a lit area behind an unlit obstruction could define the edges of the obstruction enough to provide a safe level of illumination. In a similar way, planters could be defined by providing LED tree uplights to define the space instead of additional lamp posts or bollards. |

r LED luminaires incorporated into ceiling cove pockets may be used to ove lighting.

es may be used between mirrors over restroom sinks to provide lighting at ed by interior designer.

ination in the space will be achieved by varying sources including es, floor lamps, table lamps and recessed downlights. All sources shall e (2700K) LED.

ation will be achieved by using small aperture, warm white (2700K) LED hts, beam optics vary by condition.

es may be used between mirrors over sinks to provide lighting at face / interior designer.

ints may be incorporated in living areas, specified by the interior designer.

ources shall be shielded and have BUG ratings compliant with Dark Sky, the Special Use Permit guidelines for up lighting (300 lumens or less). eas may be lit by fixed or adjustable downlights – beam optics and output

y or bollards may be used to provide lighting on sidewalks for proper well as general aesthetic appeal. Luminaire heights may be 16" - 39", conditions.

ay be used to provide illumination on stairs or ramps.

exp.

Conceptual Lighting Design Design Specification Structure Paradise Valley, Arizona

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than the height of the device above natural ground level.

underwater illumination is as uniform as possible.

instead of additional lamp posts or bollards.

provide bar height task lighting for bartenders.

cabinetry beneath.

soft indirect illumination.

downlights or accent lights, beam optics vary by condition.

5.2. Pool Deck & Bar

- Light Commercial Cost competitiveness of equipment and materials is encouraged by the Owner since the duty of the systems will be light. The expectation of installation quality and workmanship shall be high. Cost competitive equipment and material substitutions will be entertained as long as minimum code standards are maintained.
- Hospitality Guestroom spaces may include some residential grade equipment, but common spaces shall reflect Commercial grade.
- 3.5.3. The intended level of quality of all lighting luminaires will be commercial grade.
- 3.6. Concept and Design Approach
 - 3.6.1. The overall approach will be warm and inviting hospitality lighting. To compliment the architectural and interior design of natural elegance, we will highlight selected areas and expose shadows in others. As the user progresses through the property, the lighting will provide balance while activating certain elevations.

3.7. Lighting control will be as indicated below.

| Area | Control Type |
|--|--|
| General Circulation, Lobby, Elevator Lobby | Local dimming, automated dimming control with central tie in. |
| Restaurant, Bar, Cafe, Retail | Local dimming, automated dimming control with central tie in. |
| Meeting Room | Local dimming, automated dimming control with central tie in. |
| Fitness Center | Local dimming, automated dimming control with central tie in. |
| Restrooms | Ceiling mounted occupancy sensors |
| Guest rooms | Master switch with individual switches/dimmers |
| Exterior Lighting | Lighting control relay panel |

3.8. Lighting Control – Project Wide

It is desirable to integrate new lighting controls into the project-wide, distributed lighting control system of controlled dimming devices. The control system should be of a type that allows subdivision into control zones that can operate autonomously. Localized dimming and switching racks shall be linked through a project wide communications loop that offers centralized control with local access as needed. This would apply to all lighting within scope and may include all remaining general lighting project-wide. This system would also have an internal astronomical time clock to allow automatic changes due to variations in events keyed to rising or setting of the sun. A system such as this has the following advantages:

Maintenance of design aesthetic

- Energy conversation / energy code compliance Conservation of maintenance personnel resources
- Repeatability
- Flexibility in providing global changes for special events or season variations in operations
- 3.8.1. Occupancy sensors are used in locations where occupancy is deemed intermittent. Occupancy sensors will dim or turn lights off at a predetermined amount of time. Where

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on stairs or ramps, nces and BOH djustable warm white hway and ambience appeal. Obstructions an unlit obstruction vel of illumination. In a to define the space 5.1.10. Parking areas will be lit with pedestrian scale light poles that do not exceed 16'-0" in height. Such poles will be set back from the nearest property line a distance equal to or greater 5.2.1. Pool deck areas shall be illuminated by a mix of illumination sources, which may include pedestrian height decorative posts, flush mounted ingrade fixtures or decorative fixtures. 5.2.2. Submersible-grade LED floodlights specified by the pool designer may be used to provide underwater lighting. The location of the underwater luminaires shall be such that the 5.2.3. Non-egress paths will be illuminated for safety, comfort, and aesthetic appeal. Obstructions will be illuminated to define their shape. For example, a lit area behind an unlit obstruction could define the edges of the obstruction enough to provide a safe level of illumination. In a similar way, planters could be defined by providing LED tree uplights to define the space 5.2.4. LED step lights or illuminated handrails will provide illumination on stairs or ramps. 5.2.5. The general pool bar illumination will be achieved by using small, warm white (2700K) LED 5.2.6. Warm white linear LED tape light located under the bar top will provide vertical illumination for the bar face. Luminaires may also be mounted under countertops to wash face of 5.2.7. Warm white linear LED tape light located under the counter of the back of the bar will 5.2.8. Decorative sconces and pendants may be added throughout to add sparkle and additional

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FIXTURE AND APPLICATION CONCEPT IMAGERY - POOL DECK/EVENT LAWN

Shielded luminaires and landscape lighting will visually activate the pool deck and event lawn after sundown to provide a relaxing and enjoyable experience for guests. The pool bar will be illuminated with linear LED lighting and decorative pendants, while pathways throughout will be lit with bollards. The event lawn will feature catenary mounted string lights for general lighting and sparkle across the lawn.

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*exp.

exp.









SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

exp.

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FIXTURE AND APPLICATION CONCEPT IMAGERY -GUESTROOMS/ CASITAS

To compliment the high-end hospitality, feel of the architecture and interior design, the guestrooms will be illuminated with decorative and architectural lights that enhance the design features and provide comfortable task lighting. The Casitas will feature romantic lighting in the garden areas, including decorative exterior sconces, bollards, and linear lighting under the fire pits.

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Photometric Site | Lighting Plan |

Scale: 1/32" = 1'-0"

Special Use Permit: Amendment Application

S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley , Arizona







2023.02.15

Walton



| <form></form> | ENS uminaire () | rials maine housing and face en free (≤0.3% coope r safety glass ne applied robotically sion temperature silicone g hanically captive staint less steel screw clam; poste installation frout Listed to North Aringe action class IP 65 (ht; 3,1 lbs trical rating voltage mum start temperature module wattage em wattage em wattage rollability rendering index inaire lumens service life (L70) color temperature 100K - Product number 100K - State 100K - Reduct number 100K - Broduct number |
|---------------|--------------------|--|
| | netteri kuni | epiate constructed of die-cast marine grade. r content) A360.0 aluminum alloy th casting, plasma treated for increased gasket ess steel fasteners os sing ican Standards, suitable for wet locations 120-277VAC 4.30°C 4.8W 7.8W 0-10V diminable Ra > 80 581 lumene (4000k) 50.000 hours r + K4 r + K35 r + K3 r + K27 r suitable LED replacement modules for up to a of LED luminaires - see website for details are matte, textured powder coat with minimum dure® finish, a fluoropolymer technology, tection in Black, Bronze, and Silver, BEGA cotionally available RAL and custom colors, ar (BLK) II White (WHT) II BAL a (BHZ) II Silver (SLV) III CUS: |
| | | Project: Modified: |
| | | |

| <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | Application An LED bollard with shielded asyn | mmetric metric light distribution. Designed for | Type: REGA Product: | BEGA |
|---|---|---|---|--|
| <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | An tective lighting of landscapes, participation of the state of the s | triways, and open spaces. The fully mfort while illuminating ground surfaces at allows the luminaine to be adjusted tion. die-cast and extruded manne grade, it) A360.0 alluminum alloy luminum if lasteners vy cast alluminum indards, suitable. for wort locations 120-27 /VAC -30° C 00° C 11.6W 14.5W 14.5W 14.5W 14.5W 14.5W 14.5W 14.5W 14.5W 14.5W | BEGA Product: Project: Modified: | |
| <text><text><text><text><text></text></text></text></text></text> | LED service life (L70) LED color temperature © 4000K - Product number + K4 © 3500K - Product number + K3 © 3000K - Product number + K3 © 2700K - Product number + K3 © 2700K - Product number + K27 Wildlife friendly amber LED - Op Luminaire is optionally available wi source (585-600nm) approved by for use within close proximity to a Electrical and control information / LED module wartage System wattage Luminaire lumens | EXPRESS) EXPRESS) tional th a narrow bandwidth, amber LED the FWC. This light output is suggested a furthe neating and haldning habitats, nay very tiom standard luminaire. 17.6W (Amber) 22.0W (Amber) 574 haroena (Amber) | Mounting Accessories 979817 Anchorage Kit 970895 Direct buriel enchorage Available options 9 FSC Fusing AMB Amber LED. 9 FPRO Factory Programmed Reduced output 9 EMPK Integral Emergency Battery Pabk 9 Asymmetric Wide Beam See Individual accessory ages sheet for details. | |
| Shielded LED bollard i improveding IED A B Andresse 99058 11.6W 7/n 39 79817 BEGA 1000 BEGA Way, Carpinteris, CA 93013 (805) 684-0533 info@bega-iss.com Die forte dynamic relates of spring products and the secondard pactmosper, Lineaue cold an the enter 8 subject to charge at the boostion of EEGA Norte America. For the moor current hicknice colds, place effect is bogs-iss, com Dig both dynamic relates of spring products and the secondard pactmosper, Lineaue cold an the enter 8 subject to charge at the boostion of EEGA Norte America. For the moor current hicknice colds, place effect is bogs-iss, com Dig both dynamic relates of spring products and the secondard pactmosper, Lineaue cold an the enter 8 subject to charge at the boostion of EEGA Norte America. For the moor current hicknice colds, place effect is bogs-iss, com Dig both dynamic relates of spring products and the secondard pactmosper, Lineaue cold an the enter 8 subject to charge at the boostion of EEGA Norte America. For the moor current hicknice colds, place effect is bogs-iss, com Dig both dynamic relates of spring products and the secondard pactmosper, lineaue cold an the enter 8 subject to charge at the boostion of EEGA Norte America. For the moor current hicknice colds, place of the dynamic relates of the | BEGA can supply you with suitable 20 years after the purchase of LET Finish All BEGA standard finishes are main indimum 3 mill fhickness. Available colors D Black (BLK) D Bronze (BRZ) A standard finishes are main indimum 3 mill fhickness. Available colors D Black (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BLK) D Bronze (BRZ) A standard finishes are main indimum 4 million (BRC) D Bronze (BRZ) A standard finishes are main indimum 4 million (BRC) D Bronze (BRZ) A standard finishes are main indimum 4 million (BRC) D Bronze (BRZ) A standard finishes are main indimum 4 million (BRC) B Bronze (BRZ) A standard finishes are main indimum 4 million (BRC) A standard finishes are main indimum 4 mi | a LED replacement modules for up to luminaires - see website for details the, lextured polyemeer polyeder cost with White (WHT) BAL Silver (SLV) CUS: | ľ | |
| | Shielded LED bollard - symmetric LED 99.058 11.6W BECA 1000 BEGA Way, Carpintena, Due to the dynamic ruture of spinning products and th 0-copyright BEBA 2018 | A B Andressge 7 % 39 % 79817 CA 93013 (805)684-0533 Info®bega-Us.com escolated technologies, Linisue cast as this mean 8 subject to a | narge at the document of EBGA North America. For the most current hicknice calls, please ref | r Ite Degar-yes, born Ligdered 10/20/20 |

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| Application LED recessed w for superior lifum height. The optin grade, Materials Luminaire housin grade, copper lifum Clear safety glar Reflector made Silicone applied adhesion High temperatu Mechanically ca Stainlass steel s Composite Insti NRTL lated to 1 Protection class Weight: 4.4 fbs Electrical Operating volta, | all luminaire with asymmetrical torward throw distribution ination of ground surfaces from an extremely low mounting hall mounting height between 1° and 1.5° above finished and constructed of die-cast aluminum marine ee (s.0.3% copper content) ASSO.C aluminum alky is of pure anodized aluminum robotically to casting, plasma treated for increased e silicone gasket pive stantious steel fastement crew clamps liation housing liation housing liation housing liation housing liation acting 120-277VAC imporature 30° C | Type: BEGA Product: Project: Modified: | | |
|---|---|--|---|----------------------|
| Killendor Start B LED indulie wa System wattage Controldability Color rendering Limitnaire lumer Lifetime at Ta-3 LED color temp 2700K - Prod 3000K - Prod 3000K - Prod 3000K - Prod 4000K - Prod BEGA con supp 20 years after th Finish All BECIA stands minimum 3 mit Available colors 848 LUN 2700K 80CRI | Intege 1.30° C Itage 1.5.0 W Intege 1.5.0 W So 848 hamsens (3000K) SrC 57.000 h (L70) SrC 56.000 h (L70) Parature Uct number + K35 Uct number + K35 Uct number + K35 Uct number + K4 Hy you with suitable LED replacement modules for up to e purchase of LED luminaries - see website for details Ind finiathas are matter, textured polyeates powrtier coat with technese. Black (BLK) White (WHT) Brom/e (BR2) Silver (SLV) CUS | Transcent or using image of the second secon | | |
| LED recessed w LED recessed w 24060 12. BEGA 1000 BEG Due to 24 dynamic red S coopyright BEGA 2018 | A Way, Carpinteirs, CA 93013 (805)684-0533 info@bega-us.com A Way, Carpinteirs, CA 93013 (805)684-0533 info@bega-us.com and apting products and the assumed informacions, unnever obtican the search is classed to descrete | The processes of EESSA North Assesses. For the m | at powert teristeina data, televa infer ta bage -st accor Ludaded 01/21/19 | |
| ovn | Smoke | roo | | Т |
| FLOS Bon Jour Unplugged, by Philippe Starck, 201 | Paradise Valley and Blvd, Suite 1290 , CA 91203 1110 1 of 1 ET FOR AFFERINGE COMPANY REFERENCE STURE SCHOOL | , Arizona | Rei Rev ID ADDITIONAL INFORMATION | ease: 13 F ision: |
| FLOS Bon Jour Unplugged, by Philippe Starck, 201 Mounting Lamp (Bulb) Deacription Environment Finish Technical and Product Desc | Paradise Valley and Blvd, Suite 1290 CA 91203 110 1 of 1 FINE ANTIFORMATION REFERENCE STURE SCARED COpper - Specification Sheet Table Top EDGE LIGHTING 2700K 136im CRIBO 2.5% Indoor - Dry Location Copper Finition The smaller table version of the Bon Jour table lamp, th fully moves with the user and can be used in any e function to be the store of the Bon Jour table lamp, th fully moves with the user and can be used in any e functions. Like the other m fully moves with the user and can be used in any e functions. Like the other m fully moves with the user and can be used in any e functions. Like the other m fully moves with the user and can be used in any e functions. Like the other m fully this model combines maximum performance an comfort Lusers are able to effortlessly control the intensi just one click. This sleek and pure light can be customized according typis by 'dressing' it with a transparent, yellow, and fully the schoreme, matte chrome and copper. Inspiration bettind the design: "Bon Jour is a consistent collection of light, exploring th fully-technology dem abrigation combined with the fully the pody stark | The Bon Jour Unplugged invironment. The base there is no sour Unplugged invironment. The base thery in three hours and embers of the Bon Jour d efficiency with visual by of the direct light with to personal tastes and r, turnee, natural rattan vallable in four unique | Rel Rev DE ADDITIONAL INFORMATION | ease: 13 F |
| Surr SHE Sing Shift Sing Shift Shift Shift Shift Shift Shift Shift Shift Shift Shift Shift | Paradise Valley and Bivd, Suite 1290 , CA 91203 1110 1 of 1 TOREALEMENT OF AN ALL STATES OF ALL STATES COPPER - Specification Sheet 5 Table Top EDCE LICHTING 2700K 136im CR180 2.5W Indoor - Dry Location Copper FINIT The sheet rable version of the Bon Jour table lamp, th fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully movies with the user and can be used in any of fully dises and pure light can be customized incording and pleated fabric crown. Additionally, the body is a function behind the design: "Bon Jour is a consistent collection of light, exploring th high-technology dematrialization combined with the your own creativity." Philippe Starck | The Bon Jour Unplugged moving the direct light with to personal tastes and r, timee, natural ratian vallable in tour unique the timeless elegance of theedom of expressing | E FIO37015 Copper Imensional Image | ease: 13 F |
| Electrical Voltage Switching Physical Construction Material Weight 136 LUMENS 2700K 900CR1 | Paradise Valley and Bivd, Suite 1290 CA 91203 1110 101 EFFORMEMENT OF AN ALL STATES STATES STATES COpper - Specification Sheet 5 Table Top EDGE LIGHTING 2700K 158im CRIBO 2.5W Indoor . Dry Location Copper right The smaller table version of the Bon Jour table iamp, the futures a micro-USB connector which recharges the ba then the light lasts for up to 7.5 hours. Like the other matures a micro-USB connector which recharges the other matures a micro-USB connector which recharges the base then the light lasts for up to 7.5 hours. Like the other matures a micro-USB connector which recharges the base then the light lasts for up to 7.5 hours. Like the other matures a micro-USB connector which recharges the base then the light lasts for up to 7.5 hours. Like the other matures a micro-USB connector which recharges the base then the light lasts for up to 7.5 hours. Like the other matures a micro-USB connector which recharges the base interference and copper. Inspiration bettind the design: 100-240V Discal switch sensor on the base that provide 4-step data fugh-technology dematerialization combined with the iour own creativity." Philippe Starck ABS, Aluminun, PMMA 1.2 lbs | The Bon Jour Unplugged more Bon Jour Unplugged morronment. The base they in three hours and embers of the Bon Jour d efficiency with visual by of the direct light with to personal tastes and r, tumee, natural ratian valiable in four unique the timeless elegance of treedom of expressing | E FIO37015 Copper Immensional Image | ease: 13 F |
| Electrical Voltage Switching Physical Construction Material Weight 136 LUMENS 2700K 90CRI | International provided in the second of t | Tree , Arizona | Ref Ref | |

| nex remainder camps contrato mila / 1015 | The second se |
|---|---|
| Typology: Pendant lamp Tipologia: Suspensión | |
| Environment: Outdoor Ambiente: Exterior | i form / 6.20 to the state of |
| Technical description / Descripción técnica; | • 27 cm / 10.65" 40 cm / 15.75" Lamps description / Descripción lámpara: |
| Net Weight: 3.42 lbs Peso Neto: 3,42 lbs | ⊥ 120V 60Hz WET IP-66 S O 8.4 W LED / CRI: 90 / 2700K 1122 Im light source / fivenie de fuz |
| B-0 U-2 G-0 246 LUMENS 2700K 90CRI | |
| | |
| | |
| | |

| *e | XD. | Smoke Tr Paradise Valley, | 'ee Arizona | TYPE |
|----|---|---|--|---|
| | BEGA 1000 BEGA Way, Carpinferta, Due to the dynamic relater of lighting products and th 6 coopinght BEGA 2021 | un sourta (600)664-0533 info@bega-us.com | ingens The document of BOGA Norm America, For the most carriert born | kar dala, pînsee refer ta begar uz, com Updated 03/17/21 |
| | $\begin{array}{c c} & & & \\ & & & \\ & & & \\ & & & & \\ \hline \hline & & \\ \hline \hline & & \\ \hline & & \\ \hline & & \\ \hline & & \\ \hline \hline & & \\ \hline & & \\ \hline \hline \\ \hline & & \\ \hline \hline \hline \\ \hline \hline \hline \\ \hline \hline \hline \hline \\ \hline \hline \hline \hline \hline \hline \\ \hline \hline$ | <u>9 0 </u> | | |
| | B-0 U-3 G-0 192 LUMENS 2700K 80CRI | | | |
| | All BEGA atandard finishes are ma 3 mil thickness. BEGA Unidurg® f provides superior fade protection standard White, us well ar options a polyester powder. Available colors. D Black (BLK) IB Bronze (BR2) | Ifte, textured powder coat with minimum inten, a fluoropolymer technology, in Black, Bronze, and Silver, BECA ally available RAL and castom coors, ant White (WHT) BRAL Silver (SLV) CUS | | |
| | Designed for accent lighting of wa light produce a striking pattern on Materials Luminaire housing constructed of (s 0.3% copper content) A360.0 a Olear safety glass with optical teal Silicone optics Silicone applied robotically to cast achesion High temperature silicone gasket Mechanically captive stainless ste NRTL listed to North American St Protection class IP 85 Weight: 3.1 bis Electrical Operating voltage Minimum start temperature LED module wattage System wattagu Controlability Color rendering index Luminaire lumines LED service life (L70) LED color temperature 0.4000K - Product number + K4 0.3500K - Product number + K3 0.2700K - Product number + K3 0.2700K - Product number + K3 | lis and facades. Two narrow beams of the installation surface in any orientation die-cast marine grade, copper free luminum alloy ure ing, plasma treated for increased el fasteners motords, surfable for wet locations 120-2777VAC -30° C 4.0W 8.0W 0.10V, Triac, ELV dimmable Fla.=80 192 lumens (±000k) 60.000 hours | BEGA Product: Project Modified: | |
| | Application Designed for accent lighting of wa | lis and facades. Two narrow beams of | Type: | bear |
| | | | | |







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CW2

13 FEB 23

Release: Revision:

B-0 U-3 G-0

330 N Brand Blvd, Suite 1290 Glendale, CA 91203 818.539.1110

DUT SHEET FOR REFERENCE

*exp.

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SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

Smoke Tree Paradise Valley, Arizona

1 of 1

| 24Z0001K Learn mon sonnemanlight.com/cubix ption: Cubix LED Chande In space. Arrayed in precisi ded cubes are joined to ach cube set at one of fou uction allows for expansiv and height of a space. If a expands the | delier Spee e at: <u>cled-chandelier</u> flier brings volume sach other by a st u vertical positions e horizontal and vi i minimal height is he utility and sesth | c Sheet and constructive interest to d reliationships, these ared leg on each frame, a to the next, the efficial arrays across the desired, learn how low heric application of the Cubix | | Ð | |
|---|---|---|--|--|---|
| ensions y/Backplate/Base Width, y/Backplate/Base Depth, y/Backplate/Base Depth, y/Backplate/Base Depth, y/Backplate/Base Height ctrical Specs () Included?: Type: uantity: y/ottage: ge: urents: red Lumens: Supply Yupa: Supply Quantity: Supply Quantity: Supply Location: ng Type: lax Wattage: 0 LUMENS 0K RI | 28.5° 48.5° 36.5° 4-Light 4.5 0.5 Ves Integral LED 4 100 277VAC 50 4600 2000 3000K 90 Driver 1 Remote TRIAC/ELV/ 0-10V 50 | Installation Installation: Sloped Celling Compatible? Minimum Hanging Height: Shade Shade 1 Material: Available Finishes: Satin Blac | Licensed electricatan required Adapter Available 29.5° 149.5° Aluminum w/LED Flat Panel * (25) | General Listings Features: Color/Finish: Dark Sky Friendly: | Damp Rated, On Sale C-ETL-US Satin Red Shade N |
| aspar | , Suite 1290 203 | Smoke Paradise Vall 1 of | e Tree ey, Arizona 1 | | <text><text><text><text></text></text></text></text> |
| ENS | Gin unyta | ger 20A IP65 | | | |
| | _ | Smoke | Tree | | |



| Our Minimalist range of low g combine miniaturized lumina performance in an incredibly kept extremely low by recess | glare, micro downlights lires with superior / small, sleek package. Glare is sing the LED 1° deep. | 00000 |
|--|---|--|
| LISTINGS Damp Location Uocation | California Title 24 JA8 (Pending) | (9] LUMEN SERIES 9002 90 CRI, 180Im |
| 2700K 90CRI | | |
| | | |
| | | |
| | | |

| Surface mounted downligh | nt - wide beam | | BEGA |
|--|--|--|--|
| Application Compact cailing mounted downlig canopies, passages and other inte Materials Marine grade, copper free (≤0.3% Class A toughered safety glass | hts designed for down lighting attiums, rior and exterior locations. copper content) A360.0 aurminum alloy | Type: BEGA Product: Project: Modified: | |
| Pure anodized aluminum reflector Silicone optic with excellent high tr Silicone applied robotically to cast adhesion NRTL listed to North American Siz | surface emperature and UV stability ing, plasma treated for increased andards, suitable for well locations | | |
| Protection class IP 65 Weight: 1.65 lbs Electrical | | | |
| Operating voltage Minimum start temperature LED module wattage System wattage Controllability Color rendering index Luminars temper | 120-277V AC -30° C 8.0W 12.0W D-10V dimmable Fita > 80 978 Lenses (20050) | | |
| LED service life (L70) LED color temperature 4000K - Product number + K4 5500K - Product number + K35 3000K - Product number + K35 | B0.000 hours | | |
| 2700K - Product number + K27 BEGA can supply you with autable 20 years after the purchase of LEC | e LED replacement incluives for up to 0 luminaines - see website for details | | |
| Finish All BEGA standard finishes are me 3 mil thickness. BEGA Unidure® h provides superior fade protection i standard White, as well as optiona is polyester powder. | tta, fextured bowder coat with minimum nish, a fluoropolymer technology n Black, Bronze, and Silver. BEGA Illy available RAL and castom colors, and | | |
| Available colors D Black (BLX) D Bronze (BRZ) | D White (WHT) D RAL: D Silver (SLV) D CLS: | Available options | |
| 880 LUMENS 2700K 80CRI | | | |
| | | | |
| Surface mounted downlight wide I | A B Www.cox | | |
| 24404 8.0 W 31 = β = Beam angle | 3 m 43 m 19538 | | |
| BEGA 1000 BEGA Way, Carpinteria, C Due to the dynamic nature of lighting products and th of copyright BEGA 2022 | CA 93013 (805) 684-0533 info@bega-usi.com # associated lochrologies, Universe citiz an this small it subject its of | ange at the blackwiser of BESA North America. For the most current fac | micar data, pluase refer to boga-us, com Updated 03/17/22 |
| | | | |
| ND | Smo | oke Tree | 21 |
| | raiause | valoy, mizona | |



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| Product description Housing: stainless steel installation sierve with isame met. Connection cable 2x 0.75mm LED module. Mgh. power LED Reflector polymer, alaumituu teel, silver, highly specual. Cover eng with protective gli less steel. Protective glass. En Load SkN. ERCO installation unit requir order separately? Protection rating IP68 3m: pi against the consequences of ous immension in water to a max. 3m. Photecton Diass II Weight 0.20kg Version with 3000K CRI 92 availab request. |
|---|
| a |

| | | Output //m/ft) | LEDs/ft | Consump. | Efficacy | CRI | Voltage | Max run | Cut |
|---|---|---|-------------------------------|---------------------------------|----------------------------------|---------------------------|---|---|---|
| | 2700K | 174 | 36 | 1.68 | 102 | >90 | 24 | 55' | 1.96" |
| | 3000K | 180 | 36 | 1.68 | 110 | >90 | 24 | 55' | 1.96" |
| L200 | 3500K | 188 | 36 | 1.68 | 112 | >90 | 24 | 55' | 1.96" |
| | 4000K | 204 | 36 | 1.68 | 120 | >90 | 24 | 55' | 1.96" |
| | 2700K | 307 | 36 | 3.12 | 100 | >90 | 24 | 42' | 1.96" |
| | 3000K | 342 | 36 | 3.12 | 111 | >90 | 24 | 42' | 1.96" |
| .360 | 3500K | 350 | 36 | 3.12 | 111 | >90 | 24 | 42' | 1.96" |
| | 4000K | 361 | 36 | 3.12 | 117 | >90 | 24 | 42' | 1.96" |
| | 2700K | 431 | 36 | 4.32 | 97 | >90 | 24 | 32' | 1.96" |
| | 3000K | 486 | 36 | 4.32 | 110 | >90 | 24 | 32' | 1.96" |
| 1500 | 3500K | 500 | 36 | 4.32 | 111 | >00 | 24 | | 1.000 |
| | 1.2.2.2.2.2. | | | | | 290 | 24 | 32' | 1.96 |
| his hydro vithout th n conden: | 4000K phobic, plasses problems sation meth | 505 sma-enhan that Silico od. | 36 ced and ne or Pol | 4.32 super-thin yurethane | 114 coating en coatings be | >90 hances ear. App | 24 24 the dural olied under Moistur and ma substar this coa No ligh output No shif | 32' 32' bility of th er vacuum re resistant iny other of these have ating t loss: san as the IPO t in color | 1.96" 1.96" is tape light condition nce: water organic no effect of me lumen 0 tape |
| his hydro vithout th n condens | 4000K phobic, plasses problems sation meth | 505 sma-enhan that Silico od. | 36 Inced and Inc or Pol | 4.32 super-thin yurethane | 114 coating en coatings be | >90 hances ear. App | 24 24 the dural olied under Moistur and ma substar this coa No ligh output No shift temper same a No tem no hear encaps guaran and qu 174, 30° 2700 K | 32' 32' bility of the re resistant iny other of the resistant on the resistant on the resistant on the resistant on the resistant on the resistant of the resistant as the IPO the resistant of the resistant of t | 1.96" 1.96" is tape light condition mce: water organic no effect of me lumen 0 tape Ts stay the 0 tape increase: as in oducts r lifetime ity ENS |
| his hydro vithout th condens (P54) | 4000K phobic, plass the problems sation meth | 505 Ima-enhan that Silicol od. | 36 ced and ne or Pol | 4.32 super-thin yurethane | 114 coating en coatings be | >90 hances ear. App | 24 24 the dural olied under Moistur and ma substar this coa No ligh output No shift temper same a No tem no hear encaps guaran and qu 174, 30' 2700 K 90CRI | 32' 32' bility of the revacuum | 1.96" 1.96" is tape light condition mee: water organic no effect of me lumen 0 tape Ts stay the 0 tape increase: as in oducts er lifetime ity ENS |



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| | LED pole-top luminaires - symmetrical light distribution | BEGA |
|-----|--|--|
| | Application Type: Be pole-top luminaines with symmetrical light distribution ideal for filurininating squares, plazas and other open spaces. Provided with slip filter to the top pole-top pole-t | zi |
| | Finish All BEGA standard finishes are mattal, textured polyestar powder coat with minimum 3 mill thickness. Available colors Black (BL/Q) White (WHT) BAL Bronze (BRZ) Silver (SLV) CUS B-2 U-0 G-1 3695 LUMENS 2700K 80CR1 Silver (SLV) Silver (SLV) | |
| | Pole-top : Symmetrical Pole-top : Symmetrical <u>LEC</u> <u>A</u> <u>B4402</u> <u>67.4W</u> 28 <u>14.1</u>) Becammended for Leewith 16 to 20 poles. BEGA 1000 BEGA Way, Campinnena, CA 93615 (805)/854-0555 wholesege values. Declar to the dynamic redue of lighting simblets and the isoscialid from egge. In many redue of the second is many redue of the second | Presecu. Por the more accurut Hectmica calu, please robit to tega-ut. car Lipidand Official |
| *ex | Smoke Tree Paradise Valley, Arizona | TYPE P5 |
| | Glendale, CA 91203 818.539.1110 1 of 1 | Release: 13 FEB 23 Revision: |





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Allen Philo Partners architects · interiors 54 East Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

EXHIBIT 11





Lincoln Drive

New Stuccoed Block

Existing Landscape Hedge w New 5' Painted Stuco Block Wall



Allen + Philo Partners architects · interiors Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

EXHIBIT 12





Scale: 1/32" = 1'-0"

Landscape Design Overall Site Plan

S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley , Arizona

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2023.02.15

Walton

SITE PLAN - NORTH





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2023.02.15

SITE PLAN - SOUTH









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Scale: 1/16" = 1'-0"

LANDSCAPE PERIMETER STREETSCAPE & BUFFER PLAN - NORTH

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LINCOLN DRIVE STREETSCAPE CHARACTER TREES



HERITAFE LIVE OAK TREE

SHRUBS, ACCENTS, GROUNDCOVER, & VINES



INDIAN FIG PRICKLY PEAR



BOUGAINVILLEA



SANDIA GLOW RED YUCCA Landscape Design | Conceptual Streetscape Palette



NATIVE MESQUITE



DUBIA DEERGRASS SMOKE TREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

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DESERT BROWN TOPDRESS



Walton

Allen + Philp Partners Scottsdale, AZ 85251 480.990.2800 allenphilp.com

QUAIL RUN STREETSCAPE CHARACTER TREES



NATIVE MESQUITE

SHRUBS, ACCENTS, & GROUNDCOVER



CREOSOTE





DESERT MILKWEED Conceptual Streetscape Palette

DUBIA DEERGRASS



WEBER'S AGAVE

Landscape Design |

SANDIA GLOW RED YUCCA SMOKE TREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

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INDIAN FIG PRICKLY PEAR



SOUTH & EAST BUFFER CHARACTER TREES



GHOST GUM EUCALYPTUS

SHRUBS, ACCENTS, GROUNDCOVER, & VINES



HOPBUSH





WEBER'S AGAVE

RIO BRAVO SAGE





Landscape Design |

S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley, Arizona

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DESERT BROWN TOPDRESS





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Hotel Signage Feature: Building Mounted Β

-

Hotel Monument Signage Wall: 42" Tall

Building Mounted Branding Signage

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Project#:2023.02.15
AP2207Amendment ApplicationDate :
Project#:2023.02.15
AP220721

SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona



Conceptual Detail @ Decorative Arrival Feature Wall w/ Hotel Monumental Signage: 8' Tall 🛕





AZ Office 4960 S. Gilbert Road, Ste 1-461 Chandler, AZ 85249 p. (602) 774-1950

CA Office 1197 Los Angeles Avenue, Ste C-256 Simi Valley, CA 93065 p. (805) 426-4477

February 8, 2023

Mr. Matthew J. Kosednar, Partner Allen + Philp Partners Architects 7154 East Stetson Drive, 4th Floor Scottsdale, AZ 85251

Subject: The Smoke Tree Resort– Noise Study and Recommendations – Town of Paradise Valley, AZ

Dear Mr. Kosednar:

MD Acoustics, LLC (MD) is pleased to provide this noise study and recommendations report as it relates to proposed operations and events at the Smoke Tree Resort located at 7101 E Lincoln Drive, Paradise Valley, AZ. The project was assessed with regard to potential operations and event noise, such as weddings, and other gatherings. For your reference, Appendix A contains a glossary of acoustical terms.

1.0 Assessment Overview

This assessment evaluates the Project Noise Levels from the pool areas, event space/event lawn, grab and go services, and the patios of the French Cowboy and Market and compares the projected noise levels to the Town's noise ordinance. Exhibit A below shows the site plan.



Conceptual Site Plan

Exhibit A: Site Plan

Recommendations are provided to ensure that the project operations meet the Town's noise ordinance. MD traveled to the project site and performed several baseline measurements to gather the existing condition at or near the site. Measurements were performed at the property boundaries which were used to define the existing noise condition at the site. MD utilized Type 1 sound level meters that meet ANSI S.4 engineering standards to record minute-by-minute baseline data.

2.0 Local Acoustical Requirements

MD compared the results of the noise assessment to Section 10-7-3 of the Town of Paradise Valley, Town Code. The Town Code states: "Table 1 sets forth the noise level limits for stationary sources, and it is unlawful to project a sound or noise, except those caused by motor vehicles, from one property into another in excess of the stated limits".

Table 1: Limiting Noise Levels for Stationary Sources

| | MAXIMUM ALLOWABLE |
|--------------------------------------|--------------------|
| TIME | NOISE LEVEL dB (A) |
| 7:00 a.m. to 10:00 p.m. | 56 |
| 10:00 p.m. to 7:00 a.m. and on all | |
| Sundays and specified legal holidays | 45 |

Therefore, project operations must comply with the Town's noise limit of 56 dBA during daytime (7AM to 10PM) hours and 45 dBA during nighttime (10PM to 7AM) hours and on all Sundays and specified legal holidays.

3.0 Study Method and Procedure

Existing Noise Condition/Baseline

On July 7, 2020 four (4) 10-minute baseline noise measurements were conducted at the project site from 9:10 AM to 10:01 AM. The project site is adjacent to Lincoln Drive (a major arterial roadway) to the north and resort property beyond Lincoln Drive continuing north, special use medical on the east, resort to the south, and residential to the west. Noise data indicate that the ambient noise level ranges from 47.0 dBA Leq near the residence on the west to 63.9 dBA Leq near E Lincoln Drive on the north. Additional field notes and photographs are provided in Appendix B. While on site, MD noted that the primary source of noise was traffic and construction on E Lincoln Drive.

Current noise levels along Lincoln Drive exceed the Town's 56 dBA noise ordinance. Per the Town's noise ordinance, traffic noise is exempt; however, it should be noted that the baseline conditions were monitored for reporting purposes. The noise level of 63.9 dBA was recorded within 40 feet of the centerline of the roadway. The noise would be approximately 60 dBA at 100 feet. This information is relevant because it demonstrates that the project site operational noise level (e.g. patios) are impacted by existing traffic conditions.

Stationary Noise Level Prediction Modeling

SoundPlan Acoustic Modeling Software (SP) was utilized to model the operational noise levels from the project site. SP acoustical modeling software is capable of evaluating stationary noise sources (e.g., loudspeakers for live events, parking lots, crowds, loading/unloading, patios, etc.) and much more. SP's software utilizes algorithms (based on inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement,

topography, and sensitive receptor locations. In addition, SP can model the noise sources as point sources, line sources, and area sources. Noise level output data is located in Appendix C.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site noise sources. The model assumes noise projections at 5-feet above the ground level. Table 2 below outlines the referenced noise levels used to calibrate the models.

| Source | Source Type | Reference Level (dBA) | Distance (ft) |
|---|--------------|-----------------------|---------------|
| Outdoor Pools | Area Source | 65 | 1 |
| Outdoor Dining | Area Source | 65 | 1 |
| Loading/Unloading Area | Point Source | 75 | 10 |
| Event Lawn/Audience (200 people) ¹ | Area Source | 63 | 50 |
| Event Lawn/Audience (35 people) ¹ | Area Source | 55 | 50 |
| Loudspeakers | Point Source | 84 | 5 |

Table 2: Reference Sound Level Measurements for SoundPlan Model

 See reference levels from Bollard Acoustics, (Winery and Farm Brewing Zoning Acoustical Study, 2019), Appendix D. Bollard Acoustics measured 60 dBA for 100 people however doubling or halving the number of audience would result in a 3 dBA increase or reduction per logarithmic addition following acoustical principles.

SoundPlan modeling software was used to show to the noise impact from the French Cowboy outdoor dining areas, the outdoor market area, grab and go services, the loading dock, the outdoor pool, and the event lawn. Four (4) scenarios were used to evaluate the noise impact from the event lawn based on different usage scenarios. Recommendations are provided to ensure noise from the event lawn does not exceed the Town's noise ordinance.

The resort pool was modeled as an area source with reference levels of 65 dBA at 1 feet. This represents low level music and patrons utilizing the pool area based on measurements performed at a similar amenity located in Paradise Valley.

The outdoor patios and grab and go services were modeled as area sources with a reference noise level of 65 dBA at 1 feet. This represents noise levels associated with patron conversation and low-level music. This level was used for outdoor dining at the French Cowboy, at the market courtyard, and at the grab and go service areas.

The loading/unloading area (delivery location) was modeled as a point source with a reference level of 75 dBA at 10 feet. This is to represent the average noise level of an idling truck and would be a temporary increase. MD has provided reference sound level cut sheet from measurements performed at MD's facility.

Event Lawn Assumptions

Scenario 1: 200 People, No Amplified Sound Monday – Saturday – 7AM to 10PM

Scenario 1 assumes the event lawn hosts a gathering of 200 people with light music (acoustic instruments, e.g., violins, harps, acoustic guitars, etc.) or speech. The event lawn/audience was modeled as an area source with a reference noise level of 63 dBA at 50 feet.

Scenario 2: Typical Audio System Monday – Saturday – 7AM to 10PM

MD has completed noise studies at several resorts in Paradise Valley, including The Sanctuary, Andaz, Scottsdale Plaza Resort, El Chorro, and others. The most common sound system used at outdoor events consists of two speakers mounted at about 5' high with a microphone for speech. Scenario 2 assumes the event lawn hosts an event where such an audio system is in use, with the levels limited to 84 dBA at a distance of 5 ft so as not to exceed the Town's noise limit. For speech, it is assumed that the amplified system would be used for wedding vows or speeches.

Scenario 3: Distributed Audio System

Monday – Saturday – 7AM to 10PM

Scenario 3 shows the effect of using a distributed audio system with several loudspeakers set at a lower volume to better distribute the sound around the event lawn area. This scenario shows that more speakers set at lower levels can provide better sound coverage within the event lawn while maintaining the same noise levels at the property lines.

Scenario 4: 35 People, No Amplified Sound

Sundays and Holidays – 7AM to 10PM

Scenario 4 assumes the event lawn hosts a maximum of 35 people with light music (acoustic instruments) or speech. The event lawn/audience was modeled as an area source with a reference noise level of 55 dBA at 50 feet.

The SP model assumes that all noise sources are operating simultaneously (worst-case scenario), when in actuality the noise will be intermittent and lower in noise level.

4.0 Findings and Recommendations

Scenario 1: 200 People, No Amplified Sound Monday through Saturday – 7AM to 10PM <u>Scenario 1 - Description</u>

Scenario 1 - Description

Scenario 1 assumes 200 people with no amplified sound. This represents the background noise level due to people mingling in the event lawn area, presumably during the dinner portion of an event or cocktail hour. Light ambient music from acoustical instruments and the sound of people talking and laughing characterize this scenario. It is assumed that gatherings of this size are only allowed Monday through Saturday between 7 AM and 10 PM.

Scenario 1 - Project Operational Noise Levels

Appendix C shows the operational Project Noise Levels at the property lines. Operational Project Noise Levels at the adjacent uses are anticipated to range between 43 dBA to 50 dBA Leq (depending on the location), which complies with the Town's noise limit of 56 dBA.

Scenario 1 - Project Plus Ambient Operational Noise Levels

Table 3 demonstrates the operational Project Noise Levels plus the ambient noise levels which is provided to demonstrate the change in noise level as a result of the event lawn, resort pool, outdoor dining patios, and delivery location. Project plus ambient noise level projections are anticipated to range between 48 to 54 dBA Leq at receptors (R1 - R3).

| Receptor ¹ | Floor | Existing Ambient Noise Level (dBA, Leq) ² | Project Noise Level (dBA, Leq) ³ | Total Combined Noise Level (dBA, Leq) | Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq) | Exceeds Standard Yes/No |
|---|--------------------------|---|---|--|---|-------------------------------|
| 1 | 1 | 47 | 50 | 52 | | No |
| 2 | 1 | 51 | 50 | 54 | 56.0 | No |
| 3 | 1 | 47 | 43 | 48 | | No |
| Notes: ^{1.} Receptors 1-3 ^{2.} See Appendix ^{3.} See Appendix | B represent B for amb | the adjacent property line ient noise data. | s. ections at said rec | entors | | |

| Table 3: Event Lawn Scenario 1 – Worst-case Predicted Operational Leg Noise Lev | /el¹ |
|---|------|
|---|------|

As shown in Table 3, the project does not exceed the Town's noise ordinance at the property lines.

Scenario 2: Typical Audio System Monday through Saturday – 7AM to 10PM Scenario 2 - Description

Scenario 2 - Description

Scenario 2 models the portion of an event where an audio system with two (2) loudspeakers is in use. The loudspeakers are placed at the east end of the event lawn with the levels limited to 84 dBA at a distance of 5 ft so as not to exceed the Town's noise limit. It is assumed that this type of audio system is only allowed Monday through Saturday between 7 AM and 10 PM.

Scenario 2 - Project Operational Noise Levels

Appendix C shows the operational Project Noise Levels at the property lines for this scenario. Operational Project Noise Levels at the adjacent uses are anticipated to range between 44 dBA to 53 dBA Leq at the property lines (depending on the location), which complies with the Town's noise limit of 56 dBA.

Scenario 2 - Project Plus Ambient Operational Noise Levels

Table 4 demonstrates the operational Project Noise Levels plus the ambient noise levels which is provided to demonstrate the change in noise level as a result of the event lawn, resort pool, outdoor dining patios, and delivery location. Project plus ambient noise level projections are anticipated to range between 49 to 55 dBA Leq at receptors (R1 - R3), which complies with the Town's noise ordinance.

Receptor 4 is provided to show the noise limit applied to the audio system at a distance of 5 ft. Receptor 5 is provided to show the noise level at the back of the event lawn for illustrative purposes.

<Table 4, next page>

| Receptor ¹ | Floor | Existing Ambient Noise Level (dBA, Leq) ² | Project Noise Level (dBA, Leq) ³ | Total Combined Noise Level (dBA, Leq) | Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq) | Exceeds Standard? Yes/No |
|-----------------------|-------|--|---|--|---|--------------------------------|
| 1 | 1 | 47 | 53 | 54 | | No |
| 2 | 1 | 51 | 53 | 55 | 56.0 | No |
| 3 | 1 | 47 | 44 | 49 | | No |
| 4 | 1 | NA | 84 | NA | NA | NA |
| 5 | 1 | NA | 70 | NA | NA | NA |

Table 4: Event Lawn Scenario 2 – Worst-case Predicted Operational Leq Noise Level¹

Notes:

¹ Receptors 1-3 represent the adjacent property lines. Receptor 4 is the maximum allowable limit 5' from the speakers to not exceed the Town limit. Receptor 5 is provided to illustrate noise level at a point in the event lawn furthest from the typical speakers.

^{2.} See Appendix B for ambient noise data.

^{3.} See Appendix C for the operational noise level projections at said receptors.

As shown in Table 4, the project does not exceed the Town's noise ordinance at the property lines.

Scenario 3: Distributed Audio System

Monday through Saturday – 7AM to 10PM

Scenario 3 - Description

Scenario 3 models the portion of an event where a distributed audio system with several loudspeakers is in use. The loudspeakers are placed throughout the event lawn with the levels limited to 79 dBA at a distance of 5 ft so as not to exceed the Town's noise limit. It is assumed that this type of audio system is only allowed Monday through Saturday between 7 AM and 10 PM.

Scenario 3 - Project Operational Noise Levels

Appendix C shows the operational Project Noise Levels at the property lines for this scenario. Operational Project Noise Levels at the adjacent uses are anticipated to range between 44 dBA to 53 dBA Leq at the property lines (depending on the location), which complies with the Town's noise limit of 56 dBA.

Scenario 3 - Project Plus Ambient Operational Noise Levels

Table 5 demonstrates the operational Project Noise Levels plus the ambient noise levels which is provided to demonstrate the change in noise level as a result of the event lawn, resort pool, outdoor dining patios, and delivery location. Project plus ambient noise level projections are anticipated to range between 49 to 55 dBA Leq at receptors (R1 - R3), which complies with the Town's noise ordinance.

Receptor 4 is provided to show the noise limit applied to the audio system at a distance of 5 ft. Receptor 5 is provided to show the noise level at the back of the event lawn for illustrative purposes.

<Table 5, next page>

| Receptor ¹ | Floor | Existing Ambient Noise Level (dBA, Leq) ² | Project Noise Level (dBA, Leq) ³ | Total Combined Noise Level (dBA, Leq) | Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq) | Exceeds Standard Yes/No |
|-----------------------|-------|--|---|--|---|-------------------------------|
| 1 | 1 | 47 | 52 | 53 | | No |
| 2 | 1 | 51 | 52 | 55 | 56.0 | No |
| 3 | 1 | 47 | 44 | 49 | | No |
| 4 | 1 | NA | 79 | NA | NA | NA |
| 5 | 1 | NA | 74 | NA | NA | NA |

Table 5: Event Lawn Scenario 3 – Worst-case Predicted Operational Leq Noise Level¹

Notes:

^{1.} Receptors 1-3 represent the adjacent property lines. Receptor 4 is the maximum allowable limit 5' from the speakers to not exceed the Town limit. Receptor 5 is provided to illustrate noise level at a point in the event lawn furthest from the typical speakers.

². See Appendix B for ambient noise data.

^{3.} See Appendix C for the operational noise level projections at said receptors.

As shown in Table 5, the project does not exceed the Town's noise ordinance at the property lines. The distributed audio system provides better sound coverage within the event lawn space while preventing the resort from exceeding the noise limits at the property lines.

Sundays/Holiday

<u>Scenario 4:</u>

Scenario 1 assumes a maximum of 35 people with no amplified sound. This represents the background noise level due to people mingling in the event lawn area, presumably during the dinner portion of an event or cocktail hour. Light ambient music from acoustical instruments and/or the sound of people talking and laughing characterize this scenario. It is assumed that gatherings are limited to this size on all Sundays and specified holidays in order to comply with the Town's noise limit.

Scenario 4 - Project Operational Noise Levels

Appendix C shows the operational Project Noise Levels at the property lines. Operational Project Noise Levels at the adjacent uses are anticipated to range between 43 dBA to 45 dBA Leq (depending on the location), which complies with the Town's noise ordinance.

Scenario 4 - Project Plus Ambient Operational Noise Levels

Table 6 demonstrates the operational Project Noise Levels plus the ambient noise levels, which is provided to demonstrate the change in noise level as a result of the event lawn, resort pool, outdoor dining patios, and delivery location. Project plus ambient noise level projections are anticipated to range between 48 to 52 dBA Leq at receptors (R1 - R3).

<Table 6, next page>

| Receptor ¹ | Floor | Existing Ambient Noise Level (dBA, Leq) ² | Project Noise Level (dBA, Leq) ³ | Total Combined Noise Level (dBA, Leq) | Stationary Noise Limit Sundays and Holidays (dBA, Leq) | Exceeds Standard Yes/No |
|-----------------------|-------------|---|---|--|--|-------------------------------|
| 1 | 1 | 47 | 42 | 49 | | No |
| 2 | 1 | 51 | 45 ⁴ | 52 | 45.0 | No |
| 3 | 1 | 47 | 43 | 48 | | No |
| Notes: | 3 represent | the adjacent property line | 5 | | | |

Table 6: Scenario 4 - Worst-case Predicted Operational Leq Noise Level¹

¹ Receptors 1-3 represent the adjacent property lin

^{2.} See Appendix B for ambient noise data.

 $^{\scriptscriptstyle 3.}$ See Appendix C for the operational noise level projections at said receptors.

⁴. Receptor 3 reads 48 dBA at the property line wall; however, the contours show that the levels are less than 45 dBA at all points south of the property line wall; therefore, the value on the opposite side of the wall is used.

As shown in Table 6, the project does not exceed the Town's noise ordinance at the property lines.

Mitigation Measures

To meet the Town's Daytime 56 dBA limit the analyzed portion of the project must implement the following mitigation measures.

- Loudspeaker/PA system must not exceed 84 dBA at 5-feet from the speakers for Scenario 2 configuration. These limits will be built into the contract and levels will be set by computer to reduce user error.
- Loudspeaker/PA system must not exceed 79 dBA at 5-feet from the speakers for Scenario 3 configuration. These limits will be built into the contract or a limiter will be built into the house sound system and levels will be set by computer to reduce user error.
- All live music or events (e.g., live performers, string quartets) must be concluded and be moved indoors at or before 10:00 PM per the Town's noise ordinance on Monday through Saturday.
- Any background or directional speakers at the pool area and/or patios must not be perceptible at the property line. This can be achieved via the volume adjusted through the volume control knob.
- The project must implement 6' tall CMU (or equivalent) walls at the west edge of the property to block noise to the adjacent properties.

To meet the Town's Sunday/Holiday 45 dBA limit the analyzed portion of the project must implement the following mitigation measures.

- Only non-amplified events with a maximum of 35 people on the lawn area provided the said event noise level does not exceed the Town's 45 dBA limit at the property line. Levels will be measured using on-site sound level meter.
- Loudspeaker/PA system must not be perceptible at the property lines.

5.0 Conclusions

MD is pleased to provide this noise study and recommendations for The Smoke Tree Resort. No sound levels would exceed the Town's standard if the required mitigation measures are followed. If you have any questions regarding this analysis or need further review, please call our office at (602) 774-1950.

Sincerely, MD Acoustics, LLC

Samuel Hord, INCE Acoustical Consultant

Mile Didaran

Mike Dickerson, INCE Principal

Appendix A Glossary of Acoustical Terms

Glossary of Terms

<u>A-Weighted Sound Level</u>: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

<u>Ambient Noise Level</u>: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

<u>C-Weighted Sound Level</u>: The sound pressure level in decibels as measured on a sound level meter using the C-weighted filter network. The C-weighting filter greatly de-emphasizes very high frequency components of the sound and slightly de-emphasizes the very low frequency components. A numerical method of rating human judgment of loudness.

<u>Community Noise Equivalent Level (CNEL)</u>: The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

<u>dB(A)</u>: A-weighted sound level (see definition above).

<u>dB(C)</u>: C-weighted sound level (see definition above).

<u>dB(Z)</u>: Z-weighted sound level (see definition of dB above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

<u>Habitable Room</u>: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.
Human Sensitivity to Sound: In general, the healthy human ear can hear between 20 Hz to 20,000 Hz. Frequencies below 125 Hz are typically associated with low frequencies or bass. Frequencies between 125 Hz and 5,000 Hz are typically associated with mid-range tones. Finally, frequencies between 5,000 and 20,000Hz are typically associated with higher range tones.

The human ear is sensitive to changes in noise levels, depending on the frequency. Generally speaking, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (Aweighted scale) and perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. At lower and higher frequencies, the ear can become less sensitive depending on a number of factors. Table 1 provides a brief summary of how humans perceive changes in noise levels.

| Changes in Intensity Level, dBA | Changes in Apparent Loudness |
|--|---|
| 1 | Not perceptible |
| 3 | Just perceptible |
| 5 | Clearly noticeable |
| 10 | Twice (or half) as loud |
| https://www.fbwa.dot.gov/onvironMont/poico/rog | rulations, and guidance/polguide/polguide02.cfm |

Table 1: Change in Noise Level Characteristics¹

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90 and L99, etc.

Noise: Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

Appendix B Short Term Noise Measurement



AZ Office 4960 S. Gilbert Rd, Ste 1-461 Chandler, AZ 85249

www.mdacoustics.com

10-Minute Continuous Noise Measurement Datasheet

| Project: | Smoke Tree Resort / Baseline | Site Observations: | Clear sky, measurement was performed within 5-feet of existing property |
|------------------------|---|--------------------|--|
| Site Address/Location: | 7101 E Lincoln Drive, Psrsdise City, AZ | | line. Ambient noise consisted of traffic along and construction on Lincoln |
| Date: | 7/7/2020 | _ | Drive. |
| Field Tech/Engineer: | Robert Pearson | _ | |
| | | | |

General Location:

| Sound Meter: | LD | SN: 10569 |
|----------------------|--------------|---------------------------------------|
| Settings: | A-weighted, | slow, 1-sec, 10-minute interval |
| Meteorological Con.: | 92 degrees I | F, 2 to 5 mph wind, eastern direction |
| Site ID: | ST-1 thru ST | -4 |

Figure 1: Monitoring Locations

Site Topo: Flat Ground Type: Hard site conditions, reflective

Noise Source(s) w/ Distance:

1 - C/L of Lincoln Drive is approx. 40ft from meter

2 - 5 feet from West Property line

3 - 5ft from South Property line

4 -5ft from East property line





Figure 3: ST-2 Photo







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10-Minute Continuous Noise Measurement Datasheet - Cont.

| Project: | Smoke Tree Resort / Baseline | |
|------------------------|---|--|
| Site Address/Location: | 7101 E Lincoln Drive, Psrsdise City, AZ | |
| Site ID: | ST-1 thru ST-4 | |

Figure 4: ST-3 Photo





Table 1: Morning - Baseline Noise Measurement Summary

| | | | 0 | | | | - | | | |
|----------|---------|----------|------|------|------|------|------|------|------|------|
| Location | Start | Stop | Leq | Lmax | Lmin | L2 | L8 | L25 | L50 | L90 |
| 1 | 9:10 AM | 9:20 AM | 63.9 | 75.2 | 49.7 | 66.9 | 636 | 62.1 | 60.6 | 56.0 |
| 2 | 9:27 AM | 9:37 AM | 47.4 | 62.2 | 41.1 | 51.5 | 49.6 | 46.8 | 45.5 | 42.5 |
| 3 | 9:39 AM | 9:49 AM | 51.3 | 60.0 | 42.8 | 56.1 | 55.4 | 51.7 | 47.7 | 44.8 |
| 4 | 9:51 AM | 10:01 AM | 47.0 | 63.7 | 43.2 | 49.3 | 47.8 | 46.3 | 45.7 | 44.6 |

Figure 5: ST-4 Photo

Appendix C Operational Worst Case Noise Level and Contours









Appendix D Reference Data

Event Noise Methodology

Typical sound levels for a range of activities comparable to what might occur at Special Events of sizes similar to those allowed by the proposed Zoning Text Amendment are shown below in Table 9-10. Such data includes a combination of noise measurement results conducted by Bollard Acoustical Consultants, Inc. in recent years, as well as published sound level data for persons conversing at various levels.⁶

| Table 9-10 | |
|--|-----------------------------------|
| Typical Sound Levels for Special Events | |
| | Typical Noise Level |
| Event or Activity | at 50 feet (dBA L _{eq}) |
| Amplified speech/music at louder event (i.e. 200 person wedding reception) | 75 |
| Amplified speech/music at smaller event (i.e. 100 person reception) | 72 |
| Amplified speech only (no amplified music) | 65 |
| Non-amplified music (i.e. acoustic ensemble) | 60 |
| Non-amplified music (single acoustic guitar) | 56 |
| Raised conversations (100 people) | 60 |
| Raised conversations (50 people) | 57 |
| Source: Bollard Acoustical Consultants, Inc., 2019. | |

Noise levels generated during special events occurring at three existing Placer County wineries were monitored in September and October of 2017, and March of 2018. Although the numbers of attendees at the events varied throughout the course of each event, event attendance reportedly exceeded 50 people and amplified music was present during each of the events. The measured average noise level during the events was 55 dB L_{eq} at the reference measurement distance of 200 feet from the approximate acoustic center of the event areas. Measured instantaneous maximum noise levels during the same events were 10 to 15 dB higher than the measured average noise levels, but the distances to the source of the maximum noise levels is more uncertain because the location of instantaneous maximum noise level sources cannot be exactly pinpointed.

The measured special event noise levels, which were all within compliance with the County Noise Ordinance standards at the nearest noise-sensitive property lines, correspond to approximately 67 dB L_{eq} at a reference distance of 50 feet. The test results indicate that the measured special event noise levels were approximately 5 to 8 dB lower than the reference sound levels shown in Table 9-10 for amplified music. This difference may have been caused in part by additional sound absorption by intervening vineyards or variations in amplifier settings. To provide reasonably conservative estimates of the potential noise generation of special events, the reference noise level data contained in Table 9-10 was applied to this analysis.

Sound radiating away from a fixed location decreases at a rate of approximately 6 dB for each doubling of distance from the noise source. Thus, for a sound source (i.e. amplified music), that generates a median noise level of 75 dB at a distance of 50 feet from the speakers, the sound level at a distance of 100 feet from that same source would be 6 dB lower, or 69 dB. At a distance of

⁶ Harris, Cyril M. Handbook of Acoustical Measurements and Noise Control. 1998.

200 feet from the speakers (a doubling of distance from the 100-foot location), the expected sound level would be 12 dB lower, or approximately 63 dB. This 6 dB per doubling of distance attenuation rate assumes a direct line of sight between the noise source and receiver (i.e. no shielding by intervening buildings, topography, or vegetation), and does not include further decreases in sound which occur over distance with atmospheric absorption of sound. The 6 dB per doubling of distance attenuation rate was used to provide a conservative estimate of the distances to the critical noise contours for the various types of sound sources identified in Table 9-10. In addition, an offset of -1.5 dB per thousand feet from the noise sources is required to account for atmospheric absorption.

According to the ambient noise level data contained in Table 9-4, daytime average ambient conditions in the rural areas of Placer County averaged approximately 50 dB L_{eq} . Thus, satisfaction with the County's 55 dB L_{eq} Noise Ordinance daytime threshold, and 50 dB L_{eq} daytime threshold for events within the Auburn/Bowman Community Plan area, would ensure that the noise level increase associated with winery and farm brewery events would be approximately 5 dB or less, which is consistent with the Noise Ordinance threshold. However, because the noise source in question consists of speech and/or music, a -5 dB penalty is applied to the County noise standard. As a result, the critical daytime noise threshold for speech or music generated during events would be 50 dB L_{eq} during daytime hours (45 dB L_{eq} for the Auburn/Bowman Community Plan area).

During evening hours (7:00 PM to 10:00 PM), average measured ambient conditions were approximately 45 dB L_{eq} . After upward adjustment by 5 dB for the allowable increase and downward adjustment by 5 dB because the noise source consists of speech or music, this analysis concludes that the appropriate evening sound level threshold for special events would be 45 dB L_{eq} at nearby sensitive areas, including uses within the Auburn/Bowman Community Plan area. The 5 dB threshold is identified as the limit for non-transportation noise level increases in the Section 9.36.060.A.1 of the Placer County Code. The distances to the 45 and 50 dB L_{eq} noise contours are identified in Table 9-11 below.

| Table 9-11 Distances Required to Attenuate Event | t Noise | |
|---|-----------------------|-----------------------|
| | Distance to C | Contour (feet) |
| Event/Activity | 50 dB L _{eq} | 45 dB L _{eq} |
| Amplified speech/music at louder event (i.e. wedding reception) | 750 | 1,225 |
| Amplified speech/music at quieter event (i.e. wine industry dinner) | 550 | 925 |
| Amplified speech only (no amplified music) | 275 | 450 |
| Non-amplified music (i.e. acoustic ensemble) | 150 | 275 |
| Non-amplified music (single acoustic guitar) | 100 | 175 |
| Raised conversations (100 people) | 150 | 275 |
| Raised conversations (50 people) | 125 | 200 |
| Note: The distances presented above do not include any additional attenuatio by intervening topography, structures, or vegetation. | n which would resu | ılt from shielding |
| Source: Bollard Acoustical Consultants, Inc., 2019. | | |

| Project: | Scottsdale Plaza Resort | | Site O | bserva | ation | s: | | | | | | | | |
|------------------------|---------------------------------|------------------------|--------------------|-----------------------|---------------------|--------------|---------|------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| Job Number: | 0982-2022-02 | | Meter | · was p | blaced | d in the poo | area to | measure th | ie ambiei | nt con | dition | | | |
| Site Address/Location: | 7200 N. Scottsdale Road, Scotts | dale, AZ 85253 | | | | | | | | | | | | |
| Date: | 07/08/2022 | | | | | | | | | | | | | |
| Field Tech/Engineer: | Samuel Hord | | | | | | | | | | | | | |
| Source/System: | Pool Area | | | | | | | | | | | | | |
| General Location: | 1 foot from the pool area | | | | | | | | | | | | | |
| Sound Meter: | Piccolo-II, SoftdB | SN: PO221031807 | | | | | | | | | | | | |
| Settings: | A-weighted, slow, 1-min, 24-hou | ur duration | | | | | | | | | | | | |
| Meteorological Cond.: | Clear skies | | Leq 64.9 | Lmin l 59.1 | Lmax 72.6 | | | | Ln 2 70.7 | Ln 8 68.4 | Ln 25 65.8 | Ln 50 63.3 | Ln 90 60.7 | Ln 99 59.4 |

Table 1: Summary Measurement Data

| Source/System | Overall Source | Overall | | | | | | | | | | | | | 3 | Brd O | ctave | e Ban | d Data | dB | 4) | | | | | | | | | | | |
|---------------|-----------------------|---------|-----|------|------|------|------|------|------|------|------|------|------|------|------|-------|--------|--------|--------|------|------|------|------|-----------|------|------|------|------|------|------|-----|-----|
| | | dB(A) | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 0 630 | 800 | 1k | 12.5 | 1.6k | 2k | 2.5k 3.15 | l 4k | 5k | 6.3k | 8k | 10k | 12.5 | 16k | 20k |
| Pool Area | Pool Area | 64.9 | 0.0 | 20.5 | 20.5 | 20.5 | 36.9 | 36.9 | 36.9 | 49.9 | 49.9 | 49.9 | 48.1 | 48.1 | 48.2 | 51.3 | 3 51.3 | 3 51.3 | 3 60.2 | 60.2 | 60.2 | 60.3 | 60.3 | 60.3 57.4 | 57.4 | 57.4 | 51.7 | 51.7 | 51.7 | 0.0 | 0.0 | 0.0 |

<caption>



| Project: | Nance and Arrow Warehouse | | Site Observ | ation | s: | | | | | | | |
|------------------------|------------------------------------|-------------------------|--|---------------------|-------------------------|--------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| Job Number: | 0551-2020-16 | | SLM was pl | aced 1 | LO-ft from idiling semi | -truck | | | | | | |
| Site Address/Location: | 170 S William Dillard Dr, Ste A105 | 5, Gilbert, AZ 85233 | | | | | | | | | | |
| Date: | 08/11/2020 | | | | | | | | | | | |
| Field Tech/Engineer: | Shon Baldwin | | | | | | | | | | | |
| Source/System: | Idling Semi-Truck | | | | | | | | | | | |
| General Location: | Loading Docks - 10ft from source | | | | | | | | | | | |
| Sound Meter: | NTi XL2 | SN: A2A-05967-E0 | | | | | | | | | | |
| Settings: | A-weighted, slow, 1-sec, 30-sec d | uration | | • | | | 1 | l 0 | 1 25 | 1 | | 1 00 |
| Meteorological Cond.: | 95 degrees F, no wind | | Leq Lmin 73.8 73.0 | Lmax 74.9 | | | Ln 2 74.2 | LN 8 74.1 | Ln 25 73.9 | LN 50 73.8 | LN 90 73.5 | Ch 99 73.4 |

Table 1: Summary Measurement Data

| Source/System | Overall Source | Overall | | | | | | | | | | | | | 3 | rd Oc | tave | Band | Data | (dB/ | 4) | | | | | | | | | | | | |
|-------------------|-----------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | dB(A) | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1k | 12.5 | 1.6k | 2k | 2.5k | 3.15 | l 4k | 5k | 6.3k | 8k | 10k | 12.5 | 16k | 20k |
| Idling Semi-Truck | Semi-Truck | 73.8 | 16.0 | 21.0 | 25.0 | 30.0 | 32.0 | 36.0 | 44.0 | 46.0 | 61.0 | 50.0 | 53.0 | 54.0 | 57.0 | 60.0 | 61.0 | 62.0 | 63.0 | 68.0 | 63.0 | 63.0 | 63.0 | 61.0 | 58.0 | 57.0 | 55.0 | 52.0 | 48.0 | 44.0 | 41.0 | 36.0 | 32.0 |

Figure 1: Idling Semi-Truck



К СХС.

SMOKETREE RESORT

FEBRUARY 13, 2023 22018820-00

Conceptual Lighting Design |



LIGHTING BASIS OF DESIGN



Allen + Philp Partners architects · interiors Scottsdale, AZ 85251 480.990.2800 allenphilp.com

- Executive Summary 1.
 - 1.1. The project is a hotel tower with a mix of guestroom types. The building includes a lobby with retail, restaurant, fitness room, meeting room, and exterior amenities including an event lawn. Lighting will meet all local codes and standards and will have a quality lighting design that is warm and inviting.
 - 1.2. Significant project features include:
 - Lobby, Elevator Lobby
 - Guest Accessible Common Areas Restaurant and Bar
 - Guestrooms, including Suites
 - Fitness Meeting Room

Event Lawn

- Outdoor Pool Decks & Cabanas
- Applicable Codes, Guidelines & Standards 2.
 - 2.1. Design will be in accordance with all applicable codes, guidelines, and standards as noted below. Where differences arise between any Code, Standard or Guideline, Codes shall prevail. In all cases, where an edition number is not indicated, the current accepted edition will be used.
 - 2.1.1. 2021 International Building Code
 - 2.1.2. Applicable NFPA codes
 - 2.1.3. IESNA The Lighting Library
 - 2.1.4. Maricopa County Environmental Health Code (Chapter 6, Section 6, Regulation 4 Lighting for Public Swimming Pools)
 - 2.2. Equipment selections will be from manufacturers whose products comply will current industry accepted design and testing standards.
 - 2.3. Equipment selection, specification and installation practices will reflect a commitment to long-term longevity of system, ease of maintenance and energy efficiency.
 - 2.4. The intended level of quality of all wiring devices will be specification grade.
 - 2.5. The intended level of quality of all luminaires will be specification grade.

| Equipmont | Manufacturor(s) |
|-----------------------------------|--------------------------------------|
| Proposed manufacturers of major e | quipment will be as indicated below. |
| Dropood manufacturors of major o | winment will be as indicated below |

| Equipment | Manufacturer(s) |
|----------------------------------|-----------------|
| Lighting Control – Public Spaces | Lutron, ETC |
| Lighting Control - Guestrooms | Lutron |

Lighting System 3.

2.6.



FRONT OF HOUSE LIGHTING BOD

| | | occupancy sensing switches are used, the occupant will be given the ability to turn the lights off upon exiting the room. | | | 4.1.1. | The general illumination will b (2700K) LED recessed downl dim (2400K-2700K) LEDs will |
|-----------------------|----------|---|----|-------|------------|--|
| | 3.8.2. | Exterior lighting will be phased; landscape lighting will come on at dusk. Landscape lighting will turn off at a predetermined time. Photosensors shall be used to reduce or eliminate artificial lighting when daylight is available. | | | 4.1.2. | Decorative sconces and pend soft indirect illumination, spec |
| | 3.8.3. | Lighting control equipment will be comparable to a Lutron or ETC distributed system, with an integrated digital controller. | | | 4.1.3. | Adjustable accents may be in as exposed wood beams on t |
| | 3.8.4. | For emergency lighting controlled by a wall switch, an ELCU will be provided to automatically turn emergency lighting on in the event of loss of normal power. | | | 4.1.4. | Warm white linear LED tape li shelving may be used to prov be mounted under countertop |
| 3.9. | Lighting | and Room Device Control for Guestrooms | | | | · · · · · · · · · · |
| | 3.9.1. | The control system will be intuitive, simple, and easy to use for all levels of guests. Several types of lighting control devices may be used include: | | | 4.1.5. | Special artwork and featured art lights. |
| | | Standard switches and circuits. | | | 4.1.6. | Warm white linear LED lumina provide indirect cove lighting. |
| | | Smart switches with built-in dimmer. Each light switch shall be capable to have up to 8 customized touch buttons in a single backbox installation. | | | 4.1.7. | Decorative sconces may be u face level, specified by interio |
| | | Advanced lighting control systems based on intelligent programmable control panels to microprocessor units, which in turn control associated lighting relays and dimmer | | 4.2. | Interior | Guest Units |
| 3 10 | Emerce | modules. | | | 4.2.1. | The general illumination in the decorative sconces, floor lam |
| 5.10. | Lillerge | | | | | utilize warm white (2700K) LE |
| | 3.10.1. | Under normal conditions, lighting will be provided by the normal lighting luminaires. Upon loss of normal power, the emergency generator will start and restore power to the normal luminaires. | | | 4.2.2. | Bathroom illumination will be a recessed downlights, beam o |
| 3.11. | Lighting | Fixtures (Luminaires) | | | 4.2.3. | Decorative sconces may be u level, specified by interior des |
| | 3.11.1. | Luminaires located exterior to the building and/or in unconditioned damp spaces, in direct contact with the weather or washdown areas, or under cover from direct weather exposure abalt to LLL listed as "Suitable for Wath costions" unless pated otherwise | | | 4.2.4. | Decorative pendants may be |
| | | shall be OL listed as Suitable for wet Locations unless noted otherwise. | 5. | Exter | ior Public | Spaces |
| | 3.11.2. | Luminaires installed with direct contact with insulation shall have an "IC" rating for direct contact with insulation. | | 5.1. | Genera | I Exterior Approach |
| | 3.11.3. | All front of house luminaires shall be integral LED wherever possible and shall be a minimum of 90 CRI and a standard CCT of 2700K. Some specialty areas may include | | | 5.1.1. | All exterior light sources shall unless they meet the Special |
| | | warm-dim or color changing LEDs. Where integral LED is not possible, retrofit LED lamps shall be used. | | | 5.1.2. | Porte Cochere areas may be vary by condition. |
| Duildi | 3.11.4. | Refer to Section 4, <i>Building Lighting</i> , for descriptions of proposed light luminaires for all front of house areas and their respective considerations. | | | 5.1.3. | Low level pathway or bollards egress levels as well as gene varying based on conditions. |
| 501101 4.1. | Interior | Public Spaces | | | 5.1.4. | LED step lights may be used |
| | | | | | | |

4.

DISCIPLINE BOD

| 3.1. | Lighting | system is comprised of luminair | es, controls and emergency lighting equipment. This ba | asis of | | | |
|-------|--|--|--|------------------|------|------------------------------|--|
| | design co electrical | overs front-of-house lighting onl l engineer. | y. All back-of-house lighting will be as selected by the | | | Guestro | poms 2-40 fc |
| 3.2. | Emerger IESNA a | ncy and exit/egress lighting will l uuidelines. | pe provided in accordance with NFPA 101, local codes | , and | | • | General & Entry2 fcKitchenette40 fcConvel about \$ Maadbaard15 20 fa |
| 3.3. | Front-of- least 90 | , house luminaires will be as indi (unless otherwise noted), and li | cated below with a common CCT of 2700K and a CRI of sting per Underwriter's Laboratory (UL) or equivalent. | of at | | Guest I | Castal chain & Headboard 15-20 fc Baths 5-20 fc Lavatory 5-10 fc Classical Dath 12-15 fc |
| | | • | · · · · · | | | • | Shower & Bath 10-15 fc Vanity 15-20 fc |
| - | obby Eleva | Area tor Lobby Meeting Rooms | Luminaire Type | | | Exterio | r Paths & Walkways 0.5-1 fc |
| (| Front of Hou | ise) | sconces & pendants, Linear LED | | | Parking | g Lots max of 1.6 fc |
| F | Restaurant, L | _ounge/Bar, Kitchen | Recessed LED downlights, linear LED product displays, decorative sconces & | | | Exterio Pool De Outdoo | r Driveways 0.8-1.5 fc, max of 5fc eck Areas & Outdoor Function Areas max of 5 fc or Dining Areas max of 10 fc |
| | | sible Common Areas | Recessed LED downlights, decorative | | | Outdoo | |
| Ľ | | | sconces & pendants, linear LED cove lights | | | 3.4.1. | Continuous, even illumination is neither required nor desirable. Shadow is as important in defining the quality of space as light |
| F | Fitness Cente | er/Spa | linears, linear LED cove lights, decorative | | | | |
| | | | sconces & pendants | | | 3.4.2. | From a safety standpoint, in areas where illumination is lower, the following requirements shall |
| 0 | Guestrooms, | including Casitas | sconces & pendants, linear LED coves | | | | be met: |
| (| Outdoor Pool | I Decks, Cabanas, and Event | Fully shielded luminaires, pole lights, low | | | | • All walking areas should have no obstructions that could cause tripping. |
| L | _awn Site Lighting | including building facades | mounted light sources, LED step lights | | | | |
| _F | oathways, an | nd landscape lighting | LED step lights, landscape lighting | | | | All changes of elevation including beginning and end of ramps are illuminated to a minimum of 1 footcandle. |
| 3.4. | Lighting | Illumination Levels: | | | | | All changes of elevation including stairs are illuminated to a minimum of 10 footcandles. |
| | Illuminati Society (Guideline minimum emergen | ion levels shall be in accordance (IES), and the minimum levels a es of the Town of Paradise Valle n of 1 footcandle of illumination ncy protocol. | e with recommendations of the Illuminating Engineering s specified herein, along with the Special Use Permit ey. Per the NFPA 101, all paths of egress should have during normal power and 0.1 footcandle of illumination | g a during | | | • All obstructions are either illuminated to define their shape or have some type of restraining device to prevent direct approach. Defining a shape by illumination does not necessarily mean that it needs to be lit directly. For example, a lit area behind a unit obstruction could define the edges of the obstruction enough to provide a safe level of illumination. |
| | Recomm | nended Ranges of Illumination i | n Foot Candles: | | 3.5. | Light Q | uality |
| | Public A | Areas | | | | 3.5.1. | Quality of light is as important, if not more so, than quantity. Our eyes are stimulated not only by the amount of light, but also by the color. Generally, we feel safer in environments lit by |
| | Porte-Co | ochere | 15 fc | | | | warm, bright light where colors are vibrant and easily identifiable. Recent advances in lamp |
| | Front De | esk | 20 fc 5-15 fc | | | | LEDs will be the principle start of this project. Wherever possible, this source will be used. |
| | Guest El | , levator & Foyer | 10-20 fc | | | | |
| | Food and | d Beverage Outlet | | | | 3.5.2. | Quality Level Definitions ranging from the highest expected quality level down to cost competitive quality levels: |
| | • Meetina | Restaurant | 1.5-10 fc 3-30 fc | | | | |
| | Fitness (| Center | 15-40 fc | | | | Commercial – High level of quality for equipment and materials, reflecting heavy daytime use and light nighttime use. This quality level reflects the expectation of the |
| | Locker R | Room | 10-20 fc | | | | contractors to provide competitively priced equipment and systems which meet the |
| | Restroor Guest Co | ms orridors | 5-20 fc 1-10 fc | | | | intent of the specifications. The installation approach should be focused on balancing cost-competitiveness with ease of maintenance. |
| | | | | | | | |
| IG B(| OD | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | 4.1.1. | The general illumination will b (2700K) LED recessed downli | e achieved by using small aperture, dimmable, warm w ghts. In specialty areas, such as bars and restaurants, | /hite warm | | 5.1.5. | Linear handrail LED lights may be used to provide egress illumination on stairs or ramps, beam optics vary by condition. |
| | 4.1.2. | dim (2400K-2700K) LEDs will Decorative sconces and pend | be used ants may be added throughout to add sparkle and addi | itional | | 5.1.6. | LED wall sconces may be used to illuminate secondary building entrances and BOH entries. |
| | | soft indirect illumination, spec | ified by the interior designer. | | | F 4 7 | |
| | 4.1.3. | Adjustable accents may be ind as exposed wood beams on t | corporated to highlight any areas of architectural interest ne ceiling. | st such | | 5.1.7. | Landscape lighting will be coordinated with the landscape designer. Adjustable warm white LED luminaires will highlight trees, plants, and design features for pathway and ambience lighting. Luminaires may be ground mounted or tree strap mounted. |
| | 4.1.4. | Warm white linear LED tape li | ght incorporated into millwork under cabinets or under | | | 5.1.8. | Area lighting will be provided for event areas as required by ownership. |
| | | shelving may be used to provi be mounted under countertop | de light to counters and retail displays. Luminaires may s to wash face of cabinetry beneath. | / also | | 5.1.9. | Non-egress paths will be illuminated for safety, comfort, and aesthetic appeal. Obstructions |
| | 4.1.5. | Special artwork and featured art lights. | displays will be highlighted by adjustable accents or ind | lividual | | | could define the edges of the obstruction enough to provide a safe level of illumination. In a similar way, planters could be defined by providing LED tree uplights to define the space instead of additional lamp posts or bollards. |
| | 4.1.6. | Warm white linear LED lumina | aires incorporated into ceiling cove pockets may be use | ed to | | Г 4 4 0 | Derking proponyill be lity it mediate and the lity that have the second se |
| | 417 | Decorative sconces may be u | sed between mirrors over restroom sinks to provide ligh | nting at | | 5.1.10. | Parking areas will be lit with pedestrian scale light poles that do not exceed 16'-0" in height. Such poles will be set back from the nearest property line a distance equal to or greater than the height of the device above natural ground level. |

on stairs or ramps, nces and BOH djustable warm white way and ambience appeal. Obstructions an unlit obstruction el of illumination. In a o define the space ceed 16'-0" in height. equal to or greater es may be used between mirrors over restroom sinks to provide lighting at eigin argic ed by interior designer. 5.2. Pool Deck & Bar 5.2.1. Pool deck areas shall be illuminated by a mix of illumination sources, which may include pedestrian height decorative posts, flush mounted ingrade fixtures or decorative fixtures. ination in the space will be achieved by varying sources including es, floor lamps, table lamps and recessed downlights. All sources shall e (2700K) LED. 5.2.2. Submersible-grade LED floodlights specified by the pool designer may be used to provide underwater lighting. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. ation will be achieved by using small aperture, warm white (2700K) LED hts, beam optics vary by condition. 5.2.3. Non-egress paths will be illuminated for safety, comfort, and aesthetic appeal. Obstructions will be illuminated to define their shape. For example, a lit area behind an unlit obstruction es may be used between mirrors over sinks to provide lighting at face could define the edges of the obstruction enough to provide a safe level of illumination. In a / interior designer. similar way, planters could be defined by providing LED tree uplights to define the space instead of additional lamp posts or bollards. ints may be incorporated in living areas, specified by the interior designer. 5.2.4. LED step lights or illuminated handrails will provide illumination on stairs or ramps. 5.2.5. The general pool bar illumination will be achieved by using small, warm white (2700K) LED downlights or accent lights, beam optics vary by condition. ources shall be shielded and have BUG ratings compliant with Dark Sky, 5.2.6. Warm white linear LED tape light located under the bar top will provide vertical illumination the Special Use Permit guidelines for up lighting (300 lumens or less). for the bar face. Luminaires may also be mounted under countertops to wash face of cabinetry beneath. eas may be lit by fixed or adjustable downlights – beam optics and output 5.2.7. Warm white linear LED tape light located under the counter of the back of the bar will provide bar height task lighting for bartenders. y or bollards may be used to provide lighting on sidewalks for proper well as general aesthetic appeal. Luminaire heights may be 16" – 39",

ay be used to provide illumination on stairs or ramps.

exp.

SMOKETREE RESORT | 7101 E Lincoln Drive Paradise Valley , Arizona

soft indirect illumination.

- Light Commercial Cost competitiveness of equipment and materials is encouraged by the Owner since the duty of the systems will be light. The expectation of installation quality and workmanship shall be high. Cost competitive equipment and material substitutions will be entertained as long as minimum code standards are maintained.
- Hospitality Guestroom spaces may include some residential grade equipment, but common spaces shall reflect Commercial grade.
- 3.5.3. The intended level of quality of all lighting luminaires will be commercial grade.
- 3.6. Concept and Design Approach
 - 3.6.1. The overall approach will be warm and inviting hospitality lighting. To compliment the architectural and interior design of natural elegance, we will highlight selected areas and expose shadows in others. As the user progresses through the property, the lighting will provide balance while activating certain elevations.

3.7. Lighting control will be as indicated below.

| Area | Control Type |
|--|---|
| General Circulation, Lobby, Elevator Lobby | Local dimming, automated dimming control with central tie in. |
| Restaurant, Bar, Cafe, Retail | Local dimming, automated dimming control with central tie in. |
| Meeting Room | Local dimming, automated dimming control with central tie in. |
| Fitness Center | Local dimming, automated dimming control with central tie in. |
| Restrooms | Ceiling mounted occupancy sensors |
| Guest rooms | Master switch with individual switches/dimmers |
| Exterior Lighting | Lighting control relay panel |

3.8. Lighting Control – Project Wide

It is desirable to integrate new lighting controls into the project-wide, distributed lighting control system of controlled dimming devices. The control system should be of a type that allows subdivision into control zones that can operate autonomously. Localized dimming and switching racks shall be linked through a project wide communications loop that offers centralized control with local access as needed. This would apply to all lighting within scope and may include all remaining general lighting project-wide. This system would also have an internal astronomical time clock to allow automatic changes due to variations in events keyed to rising or setting of the sun. A system such as this has the following advantages:

- Maintenance of design aesthetic
- Energy conversation / energy code compliance • Conservation of maintenance personnel resources
- Repeatability
- Flexibility in providing global changes for special events or season variations in operations
- 3.8.1. Occupancy sensors are used in locations where occupancy is deemed intermittent. Occupancy sensors will dim or turn lights off at a predetermined amount of time. Where

DISCIPLINE BOD

5.2.8. Decorative sconces and pendants may be added throughout to add sparkle and additional

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DISCIPLINE BOD



FIXTURE AND APPLICATION CONCEPT IMAGERY – POOL DECK/EVENT LAWN

Shielded luminaires and landscape lighting will visually activate the pool deck and event lawn after sundown to provide a relaxing and enjoyable experience for guests. The pool bar will be illuminated with linear LED lighting and decorative pendants, while pathways throughout will be lit with bollards. The event lawn will feature catenary mounted string lights for general lighting and sparkle across the lawn.

DISCIPLINE BOD

*exp.

exp.









SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley, Arizona

DISCIPLINE BOD



FIXTURE AND APPLICATION CONCEPT IMAGERY -GUESTROOMS/ CASITAS

To compliment the high-end hospitality, feel of the architecture and interior design, the guestrooms will be illuminated with decorative and architectural lights that enhance the design features and provide comfortable task lighting. The Casitas will feature romantic lighting in the garden areas, including decorative exterior sconces, bollards, and linear lighting under the fire pits.

DISCIPLINE BOD







S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley , Arizona

128'



Photometric Site | Lighting Plan |

Special Use Permit:Date :
Project#:2023.02.15
AP2207Amendment Application45







Allen + Philp Partners

Scottsdale, AZ 85251 480.990.2800 allenphilp.com

| Recessed wall luminaire - di | rected light | | BEGA |
|--|---|--|---|
| Application Recessed wall luminaire with forware illumination of ground surfaces, stain Materials Luminaire housing and faceplate cor copper free (\$0.3% copper content) Clear safety glass Silicone applied robotically to casting adhesion High temperature silicone gasket Mechanically captive stainless steel Stainless steel screw clamps Composite installation housing NRTL listed to North American Stan Protection class IP65 Weight: 3.1 lbs Electrical Operating voltage Minimum start temperature LED module wattage System wattage Controllability Color rendering index LED service life (L70) LED color temperature LED service life (L70) | t throw light distribution for the s and pathways. Instructed of die-cast marine grade, A360.0 aluminum alloy g, plasma treated for increased fasteners dards, suitable for wet locations 120-277VAC -30°C 4.8W 7.0W 0-10V dimmable Ra > 80 581 lumens (4000K) 50,000 hours | Type: BEGA Product: Project: Modified: | |
| 3500K - Product number + K35 3000K - Product number + K3 2700K - Product number + K27 BEGA can supply you with suitable 20 years after the purchase of LED I Finish All BEGA standard finishes are matter 3 mil thickness. BEGA Unidure@ finis provides superior fade protection in standard White, as well as optionally a polyester powder. Available colors Black (BLK) Bronze (BRZ) | LED replacement modules for up to uminaires - see website for details a, textured powder coat with minimum sh, a fluoropolymer technology, Black, Bronze, and Silver. BEGA available RAL and custom colors, are White (WHT) BRAL: Silver (SLV) CUS: | | |
| 546 LUMENS 2700K 80CRI | | | * |
| Recessed wall luminaire - directed ligh | $\frac{B}{\gamma_2} = \frac{C}{7\gamma_2} = 5\gamma_4$ | | |
| BEGA 1000 BEGA Way, Carpinteria, CA Due to the dynamic nature of lighting products and the a 6 copyright BEGA 2020 | 93013 (805) 684-0533 info@bega-us.com associated technologies, luminaire data on this sheet is subject to | change at the discretion of BEGA North America. For the most current techn | kal' data, please refer to bega-us, com Updated 11/21/20 |
| [%] exp. | Smoke Paradise Val | e Tree ley, Arizona | TYPE B1 |
| 330 N Brand Blvd, Suite 12 Glendale, CA 91203 818.539.1110 CUT SHEET FOR REFERENCE | 290 1 ol CE ONLY, REFER TO FIXTURE SCHI | 1 EDULE FOR PART NUMBER AND ADDITIC | Release: 13 FEB 23 Revision: |

| Shielded LED bollard - asyr | nmetric | | BEGA |
|--|--|--|---|
| Application An LED bollard with shielded asymm effective lighting of landscapes, pat shielded design provides visual con Provided with mounting system tha independent of anchor bolt orientat Materials Luminaire housing constructed of d copper free (\$0.3% copper content Clear safety glass Reflector made of pure anodized al High temperature silicone gasket | netric light distribution. Designed for nways, and open spaces. The fully nort while illuminating ground surfaces. r allows the luminaire to be adjusted ion. ie-cast and extruded marine grade,) A360.0 aluminum alloy uminum | Type: BEGA Product: Project: Modified: | |
| Mechanically captive stainless steel Mounting plate constructed of heav NRTL listed to North American Star Protection class IP 65 | fasteners y cast aluminum idards, suitable for wet locations | | |
| Weight: 14.5 lbs Electrical Operating voltage Minimum start temperature Maximum ambient temperature LED module wattage System wattage Controllability Color rendering index Luminaire lumens | 120-277VAC -30° C 90° C 11.6W 14.5W 0-10V Ra > 80 1475 lumens (4000K) | | |
| LED service life (L70) LED color temperature A000K - Product number + K4 (1 3500K - Product number + K36 3000K - Product number + K3 (1) | 60,000 hours EXPRESS) EXPRESS) | Mounting Accessories 79817 Anchorage Kit 70895 Direct burial anchorage | |
| 2700K - Product number + K27 Wildlife friendly amber LED - Opt Luminaire is optionally available with source (S85-600rm) approved by th for use within close proximity to see Electrical and control information m LED module wattage System wattage | ional a narrow bandwidth, amber LED e FWC. This light output is suggested turtle nesting and hatching habitats. ay vary from standard luminaire. 17.6W (Amber) 22.0W (Amber) | Available options FSC Fusing AmB Amber LED FPRO Factory Programmed Reduced EMPK Integral Emergency Battery Pac AWB Asymmetric Wide Beam | output k |
| Luminaire lumens BEGA can supply you with suitable 20 years after the purchase of LED Finish All BEGA standard finishes are mat | 574 lumens (Amber) LED replacement modules for up to luminaires - see website for details e, textured polyester poywder coat with | See individual accessory spec sheet for deta | ils. |
| Available colors D Black (BLK) Bronze (BPZ) | B White (WHT) B RAL: Silver (SLV) CUS: | | |
| | | | |
| LED LED 99058 11.6 W | A <u>B</u> Anchorage 7 ½ 39 % 79817 | | |
| BEGA 1000 BEGA Way, Carpinteria, C Due to the dynamic rature of signing products and the th copyright BEGA 2018 | A 93013 (805) 684-0533 Info@bega-us.com associated technologies, luminative data on this sheet is subject to ch | ange at the discretion of BEGA North America. For the most current technical o | iata, please refer to bega-us.com Updated 10/20/20 |
| | Smoke - | | |
| avn | Paradise Valley | , Arizona | T |

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Switching Physical Construc Weight

136 LU 2700K 90CRI



Special Use Permit:Date :
Project#:2023.02.15
AP2207Amendment ApplicationDate :
Project#:2023.02.15
AP220746

| ED recessed wa | Il luminaires - asymmetrical forward throw | | | |
|--|--|--|--|----------------------------|
| pplication ED recessed wall lum r superior illuminatior sight. The optimal me rade. laterials urminaire housing con rade, copper free (≤ 0 lear safety glass effector made of pure liicone applied robotid thesion igh temperature silicot lechanically captive si tainless steel screw c omposite installation RTL listed to North A rotection class IP65 feight: 4.4 lbs lectrical perating voltage inimum start temperi ED module wattage ontrolability olor rendering index | inaire with asymmetrical forward throw distribution n of ground surfaces from an extremely low mounting sunting height between 1' and 1.5' above finished istructed of die-cast aluminum marine 0.3% copper content) A360.0 aluminum alloy a anodized aluminum cally to casting, plasma treated for increased one gasket tainless steel fasteners lamps housing thousing ature 120-277VAC 12.2W 15.0W TRIAC, ELV and 0-10V dimmable Ra > 80 | Type: BEGA Product: Project: Modified: | | |
| minaire lumeins etime at Ta=15°C etime at Ta=35°C ED color temperatur 2700K - Product nur 3000K - Product nur 4000K - Product nur EGA can supply you years after the purc hish BEGA standard finite nimum a mit thickne | 848 lumens (3000K) 67,000 h (L70) 55,000 h (L70) re mber + K27 mber + K35 mber + K4 with suitable LED replacement modules for up to hase of LED luminaires - see website for details shes are matte, textured polyester powder coat with ss. | uly enclosed luminaire with relatation housing ensures exertises integration and exertises integration and exertises integration and | | |
| 848 LUMENS 2700K 80CRI | onze (BRZ) Silver (SLV) CUS: | - 22 | | |
| A | insings - 2007 forward throws | | | |
| LED 1060 12.2W EGA 1000 BEGA Way, le to the dynamic nature of lighter copyright BEGA 2018 | A B C 13 5 5 ½ CarpInteria, CA 93013 (805) 684-0533 Info®bega-us.com Ig products and the associated technologies, luminare data on this sheet is subject to change at the | discretion of BEGA North America. For t | he most current technical data, please refer to bega-uscom Updated 01/21/19 | |
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| p. | Paradise Valley, | Arizona | | TYP B |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FO | Bivd, Suite 1290 91203 1 of 1 DR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL | E FOR PART NUMBER | Re Re | lease: 13 FEB 2 vision: |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FC | 3ivd, Suite 1290 91203 1 of 1 OR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL | E FOR PART NUMBER | Re Re | lease: 13 FEB 2 vision: |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FC OUT SHEET FC OUT SHEET FC Name of the state | Bivd, Suite 1290 91203 1 of 1 DR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 136im CRI90 2.5W Indoor - Dry Location Copper a The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en features a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other mer family, this model combines maximum performance and | E FOR PART NUMBER | | lease: 13 FEB 2 vision: |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FC OS Inplugged, Cop Starck, 2015 Description Product Description | Bivd, Suite 1290 91203 1 of 1 DR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 136im CRI90 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en features a micro-USB connector which recharges the batti then the light lasts for up to 7.5 hours. Like the other mer family, this model combines maximum performance and comfort. Users are able to effortlessly control the intensity just one click. This sleek and pure light can be customized according to styles by "dressing" it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is availinishes: white, chrome, matte chrome and copper. | E FOR PART NUMBER Bon Jour Unplugged vironment. The base ery in three hours and nbers of the Bon Jour efficiency with visual of the direct light with o personal tastes and fumee, natural rattan ilable in four unique | Re Re AND ADDITIONAL INFORMATION | lease: 13 FEB 2 vision: |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FC OS Inplugged, Cop Starck, 2015 Pescription Product Description | Alvd, Suite 1290 91203 1 of 1 CR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 136Im CRI90 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en features a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other mer family, this model combines maximum performance and comfort. Users are able to effortlessly control the intensity just one click. This sleek and pure light can be customized according to styles by "dressing" it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is ava finishes: white, chrome, matte chrome and copper. Inspiration behind the design: "Bon Jour is a consistent collection of light, exploring the high-technology dematerialization combined with the fra- your own creativity." Philippe Starck | E FOR PART NUMBER | Re Re AND ADDITIONAL INFORMATION | lease: 13 FEB 2 |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FC OS Inplugged, Cop Starck, 2015 Pescription Product Description | Blvd, Suite 1290 91203 1 of 1 DR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 136im CRI90 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en features a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other meritamily, this model combines maximum performance and comfort. Users are able to effortlessly control the intensity just one click. This sleek and pure light can be customized according to styles by "dressing" it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is avaininshes: white, chrome, matte chrome and copper. Inspiration behind the design: "Bon Jour is a consistent collection of light, exploring the high-technology dematerialization combined with the for your own creativity." Philippe Starck 100-240V Optical switch sensor on the base that provide 4-step dimentional starts and the sensor on the base that provide 4-step dimentional starts and star | E FOR PART NUMBER | Re Re AND ADDITIONAL INFORMATION | lease: 13 FEB 2 |
| Atterial | Bivd, Suite 1290 91203 1 of 1 PR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 136Im CRI90 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en teatures a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other merifamily, this model combines maximum performance and comfort. Users are able to effortlessly control the intensity just one click. This sleek and pure light can be customized according to styles by "dressing" it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is avaid finishes: white, chrome, matte chrome and copper. Inspiration behind the design: "Bon Jour is a consistent collection of light, exploring the high-technology dematerialization combined with the fir your own creativity." Philippe Starck 100-240V Optical switch sensor on the base that provide 4-step dimared ABS, Aluminun, PMMA 1.2 lbs | E FOR PART NUMBER | Regention AND ADDITIONAL INFORMATION | lease: 13 FEB 2 |
| A stand E Glendale, CA standed Glendale, CA standed to the standard standar | Blvd, Suite 1290 91203 1 of 1 PR REFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDCE LIGHTING 2700K 136im CRiso 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truly moves with the user and can be used in any en features a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other mer family, this model combines maximum performance and comort. Users are able to effortlessly control the intensity just one click. This sleek and pure light can be customized according to styles by "dressing" it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is avait finishes: white, chrome, matte chrome and copper. Inspiration behind the design: "Bon Jour is a consistent collection of light, exploring the high-technology dematerialization combined with the fin your own creativity." Philippe Starck 100-240V Optical switch sensor on the base that provide 4-step dimer ABS, Aluminun, PMMA 1.2 lbs | E FOR PART NUMBER | Re Re AND ADDITIONAL INFORMATION | lease: 13 FEB 2 |
| 330 N Brand E Glendale, CA 818.539.1110 CUT SHEET FO | Abd, Suite 1290 91203 1 of 1 RREFERENCE ONLY. REFER TO FIXTURE SCHEDUL per - Specification Sheet Table Top EDGE LIGHTING 2700K 198im CR100 2.5W Indoor - Dry Location Copper The smaller table version of the Bon Jour table lamp, the truty moves with the user and can be used in any en features a micro-USB connector which recharges the batt then the light lasts for up to 7.5 hours. Like the other mer family, this model combines maximum performance and comfort. Users are able to effortiessly control the intensity just one click. This sleek and pure light can be customized according to styles by 'dressing'' it with a transparent, yellow, amber, and pleated fabric crown. Additionally, the body is avai- tingheter thouse and copper. Inspiration behind the design: "Bon Jour is a consistent collection of light, exploring the high-technology dematerialization combined with the fr your own creativity." Philippe Starck 100-240V Optical switch sensor on the base that provide 4-step dimm ABS, Aluminun, PMMA 1.2 lbs | E FOR PART NUMBER | Re Re AND ADDITIONAL INFORMATION | lease: 13 FEB 2 |





Allen + Philo Partners

i4 East Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

| Alex Fernández Camps Gonzalo Milà / 2015 | |
|---|---|
| Typology: Pendant lamp Tipología: Suspensión | |
| Environment: Outdoor Ambiente: Exterior | I when 137,80 |
| | 16 cm / 6.30 |
| | ■ 27 cm / 10.63* 40 cm / 15.75* |
| Technical description / Descripción técnica: | Lamps description / Descripción lámpara: |
| Net Weight: 3.42 lbs Peso Neto: 3.42 lbs | Image: Line of the source o |
| B-0 U-2 G-0 246 LUMENS 2700K 90CRI | |
| JUCKI | |
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|---|---|-------------------------------|---|--|---|---|
| <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | Aj Di lig M | pplication esigned for accent lighting of walls iht produce a striking pattern on th laterials | and facades. Two narrow beams of the installation surface in any orientation. | Type: BEGA Product: Project: | |
| <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | Lu (≤ Ci Si Si | iminaire housing constructed of di 0.3% copper content) A360.0 alur lear safety glass with optical textur licone optics licone applied robotically to castin | e-cast marine grade, copper free minum alloy e g, plasma treated for increased | Modified: | |
| <text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text> | | ac Hi M N Pr W | thesion igh temperature silicone gasket lechanically captive stainless steel RTL listed to North American Stan rotection class IP 65 /eight: 3.1 lbs | fasteners idards, suitable for wet locations | | |
| <text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text> | <form><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></form> | EI Oj M LE Sj | ectrical perating voltage inimum start temperature ED module wattage ystem wattage perceliability | 120-277VAC -30°C 4.0W 8.0W | | |
| | <text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text> | | olor rendering index iminaire lumens ED service life (L70) ED color temperature | Ra > 80 192 Jumens (4000K) 60,000 hours | | |
| <text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text> | <text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text> | | 4000K - Product number + K4 3500K - Product number + K35 3000K - Product number + K3 2700K - Product number + K27 EGA can supply you with suitable | LED replacement modules for up to | | |
| <text></text> | <text><text><text><text><text><text></text></text></text></text></text></text> | Fi Al 3 pr | I years after the purchase of LED I II BEGA standard finishes are matte mil thickness. BEGA Unidure® fini rovidas superior fade protection in randrard White an unit an exclanation | e, textured powder coat with minimum sh, a fluoropolymer technology, Black, Bronze, and Silver, BEGA uvailable 241, and a stram colors, and | | |
| Bro Our 3 Gro 192 LUMENS 2700K 80CRI \square <tr< td=""><td><text><text></text></text></td><td>a Av</td><td>andard vinite, is wen as optionally polyester powder. vallable colors Black (BLK) Bronze (BRZ)</td><td>© White (WHT) © RAL: © Silver (SLV) © CUS:</td><td></td><td></td></tr<> | <text><text></text></text> | a Av | andard vinite, is wen as optionally polyester powder. vallable colors Black (BLK) Bronze (BRZ) | © White (WHT) © RAL: © Silver (SLV) © CUS: | | |
| BCLKI Image: Source in the second s | Image: Stock is a start of the second and stock and the second an | 1 1 2 | B-0 U-3 G-0 192 LUMENS 2700K | | | |
| Image: Start Star | <image/> | c | SUCKI | | | |
| B L · A · · ·C· Wall Luminaire · Two 15° ports <u>LED A B C</u> 24127 Imm 4.0W 43% 7 23% BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com De to the dynamic relates of lighting products and the associated technologies. Lumineze data as this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 03/17/21 | B B A + + + + + + + + + + + + + + + + + + + | - | | | | |
| LED A B C 24127 Intelligent and the associated technologies. Luminame data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us. com BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com Due to the dynamic nature of lighting products and the associated technologies. Luminame data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us. com Updated 03/17/21 | LED A B C 24127 LOW 4.0W 4% 7 2% BECA 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 info@bega-us.com De to be dynamic values of ighting products and the associated technologies. Lumeare data on this sheet is subject to change at the discretion of EGA North America. For the most current technical data, please refer to bega-us.com Decomposition of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 03/17/21 Smoke Tree Paradise Valley: Arizona | L | B A · ·C· Well Luminaire · Two 15° ports | _ | | |
| BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 info@bega-us.com Due to the dynamic nature of lighting products and the associated technologies, luminare data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us, com 6 copyright BEGA 2021 | BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 info@bega-us.com Due to the dynamic rature of lighting products and the associated technologes. Luminarie data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 03/17/21 | 24 | LED A 1127 (2000) 4.0W 4 % 7 | B C 2% | | |
| | Smoke Tree Paradise Valley, Arizona | 24 | EGA 1000 BEGA Way, Carpinteria, CA | 193013 (805)684-0533 info@bega-us.com | range at the discretion of BEGA North America. For the most current techn | cal data, please refer to bega-us.com Updated 03/17/21 |



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Project#:2023.02.15
AP2207Amendment Application2023.02.15
Project#:AP22074747

S M O K E T R E E R E S O R T 7101 E Lincoln Drive Paradise Valley , Arizona

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| | | | | AIN GHT | | | |
| | Project: Cubix LED Chanc | delier Spec | Sheet | | - | | |
| | SKU: 24Z0001K Learn more https://sonnemanlight.com/cubix | e at: x-led-chandelier | | | | | |
| | Modern space. Arrayed in precis suspended cubes are joined to (With each cube set at one of for construction allows for expansiv | each other by a shar each other by a shar ur vertical positions to ve horizontal and ver | relationships, these relationships, these red leg on each frame. to the next, the rtical arrays across the | | I | | |
| | plane and height of a space. If a profile <u>Cubix Surface</u> expands the family. Type #: | a minimal height is d the utility and aesthe | esired, learn how low tic application of the Cubix | HÌL | 1 | | |
| | | | | | | | |
| | | | | | 1 | | |
| | Dimensions | | Installation | | General Listings | | |
| | Height: Width: Length: | 28.5" 48.5" 36.5" | Installation: | Licensed electrician required | Features: Certification: | Damp Rated, On Sale C-ETL-US | |
| | Size: Canopy/Backplate/Base Width: Canopy/Backplate/Base Depth: Canopy/Backplate/Base Height: | 4-Light 4.5 4.5 : 0.5 | Minimum Hanging Height: Maximum Hanging Height: | Available 29.5" 149.5" | Dark Sky Friendly: | Shade N | |
| | Electrical Specs | | Shade | Aluminum | | | |
| | Bulb(s) Included?: Bulb 1 Type: Bulb Quantity: Input Voltage: | Yes Integral LED 4 100-277VAC | Available Finishes | w/LED Flat Panel | | | |
| | wattage: Initial Lumens: Delivered Lumens: Color Temperature: | 50 4600 2000 3000K | Available Finishes: Satin Black | (.25) | | | |
| | Power Supply Type: Power Supply Quantity: Power Supply Location: Dimming Type: | Driver 1 Remote TBIAC/ELV/ | | | | | |
| | Bulb Max Wattage: | 0-10V 50 | | | | | |
| | 2000 LUMENS | | | | | | |
| | 3000K 90CRI | | | | | | |
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| °e | exp. | | Paradise Valle | ey, Arizona | | | CP3 |
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| Ginge Ginge Ginge 463 13 2'9 | r Joan Gaspar | | 1 of Y. REFER TO FIXTURE SCHER | | | | 13 FEB 23 |
| Ginge Ginge Ginge 46.1 13 2.5 90 | r Joan Gaspar | | 1 of Y. REFER TO FIXTURE SCHER | | | | 13 FEB 23 |
| Ginge Ginge Ginge 46.3 11 2.7 90 | r Joan Gaspar | | 1 of Y. REFER TO FIXTURE SCHER | | | | 13 FEB 23 |
| Ginge Ginge Ginger 463 13 29 | r Joan Gaspar | | 1 of Y. REFER TO FIXTURE SCHER | | | | |
| Ginge Ginge Ginger 46.3 13 2 90 | r Joan Gaspar | | 1 of Y. REFER TO FIXTURE SCHER | Tree by, Arizona | | | TYPE CW4 |



CUT SHEET FOR REFERENCE ONLY. REFER TO FIXTURE SCHEDULE FOR PART NUMBER AND ADDITIONAL INFORMATION.

Allen + Philp Partners architects · interiors 54 East Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

| Our Minimalist range of combine miniaturized le performance in an incre kept extremely low by a | f low glare, micro downlights uminaires with superior edibly small, sleek package. Glare i recessing the LED 1" deep. | 5 |
|--|--|--|
| Damp Location L | Wet California .ocation Title 24 JA8 (Pending) | (9) LUMEN SERIES 9002 90 CRI, 180Im |
| 888 LUMENS 2700K 90CRI | | |
| | | |
| | | |
| | | |

| Surrace mounted downlight | - wide beam | | BEGA |
|--|--|--|---|
| Application Compact ceiling mounted downlight: canopies, passages and other interio | s designed for down lighting atriums, or and exterior locations. | Type: BEGA Product: | |
| Materials Marine grade, copper free (≤0.3% cc Class A toughened safety glass Pure anodized aluminum reflector su Silicone optic with excellent high tem Silicone applied robotically to casting | opper content) A360.0 aluminum alloy rface operature and UV stability , plasma treated for increased | Project: Modified: | |
| adhesion NRTL listed to North American Stand Protection class IP 65 Weight: 1.65 lbs | dards, suitable for wet locations | | |
| Electrical Operating voltage | 120-277V AC | | |
| Minimum start temperature LED module wattage | -30°C 8.0W | | |
| System wattage Controllability | 12.0W 0-10V dimmable | | |
| Color rendering index Luminaire lumens | Ra > 80 978 lumens (4000K) | | |
| LED service life (L70) | 60,000 hours | | |
| 4000K - Product number + K4 3500K - Product number + K35 3000K - Product number + K3 | | | |
| BEGA can supply you with suitable to 20 years after the purchase of LED is | LED replacement modules for up to uminaires - see website for details | | |
| Finish All BEGA standard finishes are matte 3 mil thickness. BEGA Unidure@ finis provides superior fade protection in I standard White, as well as optionally a polyester powder. | textured powder coat with minimum sh, a fluoropolymer technology, Black, Bronze, and Silver, BEGA available RAL and custom colors, are | | |
| Available colors Black (BLK) Bronze (BRZ) | © White (WHT) © RAL: © Silver (SLV) © CUS: | Available options FSC Fusing | |
| 880 LUMENS 2700K 80CRI | | | |
| | | | |
| · A · | | | |
| Surface mounted downlight - wide bea | M B Withold | | |
| 24404 8.0 W 31* | A B Wring box 31% 4% 19538 | | |
| $\beta=\text{Beam angle}$ | | | |
| BEGA 1000 BEGA Way, Carpinteria, CA Due to the dynamic nature of lighting products and the at | 93013 (805) 684-0533 info@bega-us.com sociated technologies, luminative data on this sheet is subject to ch | ance at the decration of BEGA North America. For the most current tech | ical data, please refer to bega-us, com |
| © copyright BEGA 2022 | | | Updated 03/17/22 |
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| | | | |
| • • • • • | Smo | oke Tree | |
| exp | Smo Paradise | oke Tree Valley, Arizona | ТҮР |
| exp. | Sm Paradise | oke Tree Valley, Arizona | TYP D4 |

| BeveLED Mini® Basic - B3SD-L2 3″ Square Downlight | USAI [®] Lighting | |
|--|---|--|
| Universal and Field Convertible - Trim Trim | less Millwork | |
| (Above Showe with Bayeled Trin Ontion) | | |
| | | |
| CORRELATED COLOR TEMPERATURE MULTIPLIER 2700K 2500K 2500K | | |
| Zrook Souck Ssouk Color Rendering Index: 80+ 90+ 80+ 90+ 80+ | 90+ 80+ 90+ | |
| 950 LUMENS 2700K 80CRI | | |
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| EXD. Smoke Tree Paradise Valley, Arizona | TYPE | |
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| | | |
| Bevel FD Mini* Basic - B3SA-12 | HOAP | |
| Develle Milling Basic - BOOA-12 | USAI | |
| 3" Square Adjustable Field changeable between Trimmed / Trimle | Lighting ss / Millwork | |
| 3" Square Adjustable Field changeable between Trimmed / Trimle | ss / Millwork | |
| 3" Square Adjustable Field changeable between Trimmed / Trimle | ss / Millwork | |
| 3" Square Adjustable Field changeable between Trimmed / Trimle Trimmed - B3SAF Usalighting.com/minibasic usalighting.com/minibasic Introducing BeveLED Mini Basic, our newest LED downlight to deliver consistently classic white light with | ss / Millwork Millwork - B3SAM With a same below ceiling appearance as our BeveLED | |
| 3" Square Adjustable Field changeable between Trimmed / Trimle Timmed - B3SAF Usall - B3SAF | ss / Milwork Willwork - B3SM Difference of the same below ceiling appearance as our BeveLED | |
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SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley , Arizona

Special Use Permit:Date :
Project#:2023.02.15
AP2207Amendment ApplicationDate :
Project#:2023.02.15
AP220748

eLED Mini® Infinite Color+® - B3SD-FC1 Square Downlight



USAI

Lighting





Allen + Philp Partners architects · interiors 7154 East Stetson Drive | 4th Floor | Scottsdale, AZ 85251 | 480.990.2800 | allenphilp.com

| MINI-M | IICRO LED | IP66 RATED |
|---------------------------------------|--|---|
| DATE | PROJECT | TYPE |
| CATALOG NUM | ABER LOGIC: | |
| 2 | | CATALOG NUMBER LOGIC |
| | | Example: B - MM - LED - e70 - SP - BLP - 12 - 11 - C - 360SL |
| | | MATERIAL |
| | | (Blank) - Aluminum B - Brass S - Stainless Steel |
| | | MM - Mini-Micro |
| | | SOURCE |
| | | LED - with Non-Dimming Integral Driver* |
| | | LED TYPE |
| 0 | | e70 - 3W LED/2700K e72 - 3W LED/4000k |
| | | e71 - 3W LED/3000K e73 - 3W LED/Amber |
| | | OPTICS NSD - Narrow Snot (179) MEL - Medium Flood (289) |
| | | SP - Spot (21") ASY - Asymmetrical (17x31") |
| | | FINISH (See page 2 for full-color swatches) |
| | | Standard Finishes (BZP, BZW, BLP, BLW, WHP, WHW, SAP, VER) |
| *Designed for us | e with LED transformer | Premium Finish (ABP, AMG, AQW, BCM, BGE, BPP, CAP, CMG, CRI, CRM, HUG, MDS, NBP, OCP, |
| **The 360SL cos | t is already included in the price of | Also available in RAL Finishes |
| UPM, UPM dual, | and Power Canopy. | Brass Finishes (MAC, POL, MIT) |
| | | Stainless Steel Finishes (MAC, POL) |
| B-0 U-0 | G-0 | LENS TYPE |
| 201 LUN | AENS | 12 - Soft Focus 13 - Rectilinear |
| 4000K | | SHIELDING |
| 80CRI | | 11 - Honeycomb Baffle |
| | | A - 45° |
| | | B - 90* |
| | | C - Flush |
| | | D - 45" Less Weephole (Interior use only) |
| | | E - 90" Less Weephole (Interior use only) |
| | | OPTIONS |
| | | 360SL - Rotational Knuckle Mounting System** |
| | | |
| THIS DOCUMENT DO MANUFACTURE USE I | ITANS PROPRETARY INFORMATION OF BIK LIGHT In Sell annthing it may describe. Reproduct | NS. INC. AND ITS RECEIPT OR POSSESSION DOES NOT CONVEY ANY RIGHTS TO REPRODUCE, DISCLOSE ITS CONTENTS ON TO 01/15/2020 SKU-619 SUBBOOD331 |



| ERCO | Tesis In-ground luminaire | 2 |
|---|---|---|
| 29974.000 ED module: 29W 310lm 3000K warm wite Switchable Wrsion 9 Size 2 Covered mounting detail Waliwash E-0 U-3 G-0 127 LUMENS 3000 K 92CRI | Formet construction Image: Statistics step: Restore constructive glass: statistics step: Image: Statistics step: | |
| Technical data Luminous flux of the luminaire Connected load Luminaire efficacy Colour deviation Colour rendition index Lumen maintenance (LED manufacturer specifications) LED failure rate Dimming method LMF Standby power per control gear Luminaires per circuit breaker B16 | 127im 3.0W 42Im/W 1.5 SDC0M CRI 92 L90/B10 <50000h L90 < 10000h 0.1% = 550000h | |
| For your regional contact in the ERCO Sales network click here www.erco.com/contact © ERCO GmbH 2023 | | Technical Region: 220-240V 50/60Hz We reserve the right to make technical and design changes. Edition: 16.11.2022 Current version under www.erco.com/39974.000 |
| *exp. | Smoke Tree Paradise Valley, Arizona | TYPE G1 |
| 330 N Brand Blvd, Suite 1290 Glendale, CA 91203 818.539.1110 CUT SHEET FOR REFERENCE O | 1 of 1 NLY. REFER TO FIXTURE SCHEDULE FOR PART NUMBER A | Release: 13 FEB 23 Revision: ND ADDITIONAL INFORMATION. |

| ecnnica | l Informati | on | | | | | | | |
|-----------|--|-------------------|---------|-----------------------|------------------------------|---------|--|---|---|
| Product | сст | Output (Im/ft) | LEDs/ft | Consump. (watt/ft) | Efficacy (Im/watt) | CRI | Voltage | Max run length | Cut incremen |
| | 2700K | 174 | 36 | 1.68 | 102 | >90 | 24 | 55' | 1.96" |
| | 3000K | 180 | 36 | 1.68 | 110 | >90 | 24 | 55' | 1.96" |
| L200 | 3500K | 188 | 36 | 1.68 | 112 | >90 | 24 | 55' | 1.96" |
| | 4000K | 204 | 36 | 1.68 | 120 | >90 | 24 | 55' | 1.96" |
| | 2700K | 307 | 36 | 3.12 | 100 | >90 | 24 | 42' | 1.96" |
| | 3000K | 342 | 36 | 3.12 | 111 | >90 | 24 | 42' | 1.96" |
| L360 | 3500K | 350 | 36 | 3.12 | 111 | >90 | 24 | 42' | 1.96" |
| | 4000K | 361 | 36 | 3.12 | 117 | >90 | 24 | 42' | 1.96" |
| | 2700K | 431 | 36 | 4.32 | 97 | >90 | 24 | 32' | 1.96" |
| | 3000K | 486 | 36 | 4.32 | 110 | >90 | 24 | 32' | 1.96" |
| L500 | 3500K | 500 | 36 | 4.32 | 111 | >90 | 24 | 32' | 1.96" |
| | 4000K | 505 | 36 | 4.32 | 114 | >90 | 24 | 32' | 1.96" |
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7101 E Lincoln Drive Paradise Valley , Arizona









Special Use Permit:Date :
Project#:2023.02.15
AP2207Amendment ApplicationDate :
Project#:2023.02.15
AP220749



 $d_2 -$ Wooden pole · Round tapered Pole wind load rating
 H
 a
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 Anchorage

 98 502
 160%
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 43¼
 15
 3
 5½
 79 826
 EPA
 31.0
 23.7
 18.3
 14.5
 9.4
 • c • BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com Smoke Tree TYPE Paradise Valley, Arizona P1,P2,P3 330 N Brand Blvd, Suite 1290 Release: 13 FEB 23 Revision: Glendale, CA 91203 1 of 1 818.539.1110 CUT SHEET FOR REFERENCE ONLY. REFER TO FIXTURE SCHEDULE FOR PART NUMBER AND ADDITIONAL INFORMATION.



Allen + Philp Partners

East Stetson Drive 4th Floor Scottsdale, AZ 85251 480.990.2800 allenphilp.com

| LED pole-top luminaires - : | symmetrical light distribution | | BEGA |
|---|---|--|---|
| Application LED pole-top luminaires with symm Illuminating squares, plazas and ot to fit 3" O.D. poles. Materials Luminaire housing and constructer copper free (≤ 0.3% copper conter Clear safety glass Reflector made of pure anodized a High temperature silicone gasket Mechanically captive stainless stee NRTL listed to North American Sta Protection class IP 65 Effective projection area: 1.5 sp. ft Weinth: 32 clins | netrical light distribution ideal for her open spaces. Provided with slip fitter d of die-cast and spun marine grade, tt) A360.0 aluminum alloy luminum I fasteners indards, suitable for wet locations | Type: BEGA Product: Project: Modified: | |
| Electrical Operating voltage Minimum start temperature LED module wattage System wattage System valtage Controllability Color rendering index Luminaire lumens Lifetime at Ta = 15° C Lifetime at Ta = 15° C LED color temperature 4000K - Product number + K4 3500K - Product number + K35 3000K - Product number + K35 3000K - Product number + K35 3000K - Product number + K27 | 120-277VAC -30°C 47.4 W 56.0 W 0-10V dimmable Ra> 80 3,895 lumens (3000K) > 500,000 h (L70) 108,000 h (L70) | | |
| BEGA can supply you with suitable 20 years after the purchase of LED Finish All BEGA standard finishes are mai | LED replacement modules for up to luminaires - see website for details te, textured polyester powder coat with | | |
| minimum 3 mil thickness. Available colors Black (BLK) Bronze (BRZ) | White (WHT) RAL: Silver (SLV) CUS: | | |
| B-2 U-0 G-1 3695 LUMENS 2700K 80CRI | | | |
| Pole-top - Symmetrical LED 84402 47.4 W | A B 28 14 1/4 | | |
| Recommended for use with 16' to 20' poles. BEGA 1000 BEGA Way, Carpinteria, O Due to the dynamic nature of lighting products and th © copyright BEGA 2018 | A 93013 (805) 684-0533 info@bega-us.com associated technologies, luminatie data on this sheet is subject to chi | ange at the discription of BEGA North America. For the most current technical data | please refer to bega-us.com Updated 01/18/19 |
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February 13, 2023

SMOKE TREE RESORT

Town of Paradise Valley, AZ

Prepared for:

Walton Global Holdings 8800 N. Gainey Center Drive

Suite 345

Scottsdale, AZ 85258

Contact: Price Nosky Prepared by:

CVL Consultants, Inc.

4550 N 12th Street Phoenix, AZ 85014 (602) 264-6831



Job #:1-01-03153-01



Preliminary Drainage Report

For

SMOKE TREE RESORT

Paradise Valley, Arizona

February 13, 2023

Prepared for:

Gentree, LLC

3620 E Campbell Ave, Suite B

Phoenix, AZ 85018

(602) 952-8811

Prepared by:

Coe & Van Loo Consultants, Inc.

4550 N. 12th Street

Phoenix, AZ 85014

(602) 264-6831

CVL Job Number: 1-01-03153-01

Preliminary Drainage Report for

Smoke Tree Resort

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1.0 INTRODUCTION

1.1 Scope

Coe & Van Loo Consultants, Inc. (CVL) has been contracted by Gentree, LLC to provide engineering services in support of the proposed improvements to Smoke Tree Resort, herein referred to as the site. The purpose of this report is to provide on-site and off-site hydrologic and hydraulic analysis for the proposed development.

This report is focused on providing design information, evaluation, and analysis for statistical flood events up to and including the 100-year storm. The scope of this assessment does not include, neither did CVL's client request that, evaluation of storm-water runoff resulting from storm events exceeding the 100-year frequency event. Hence, it should be noted that a storm event exceeding the 100-year frequency may cause or create the risk of greater flood impact than is addressed and presented in this assessment.

The procedures used herein are derived from, and performed with, currently accepted engineering methodologies and practices.

1.2 REGULATORY JURISDICTION

The development is designed to meet the drainage requirements as stated in the Town of Paradise Valley's *Storm Drain Design Manual (2018)* [1] and Flood Control District of Maricopa County (FCDMC), *Drainage Design Manuals for Maricopa County, Arizona, Volume I, Hydrology* [2], *Volume II, Hydraulics* [3], and *Drainage Policies and Standards Manual for Maricopa County, Arizona* [4].

2.0 SITE CONDITIONS

2.1 LOCATION

The site is located within the Town of Paradise Valley, Maricopa County, Arizona. The site is bordered on the north by Lincoln Drive, on the east by commercial property, on the south by the Andaz Resort Hotel and on the west by Quail Run Road and custom residences. Furthermore, the site is located within Section 10, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Arizona.

2.2 EXISTING CONDITIONS

A field reconnaissance of the existing resort complex on approximately 4.61 acres of existing special use permit land and its surroundings was performed on February 5th, 2019. It was observed that the site and surrounding properties are flat and generally drain to east then to the north towards Lincoln Drive. The resort's landscaping is characterized by hedges around all but the north perimeter, mature trees throughout the site and open space consisting of lawn and dirt drive lanes and parking.

2.3 PROPOSED CONDITIONS

The resort was originally opened in 1966 and has yet to undergo any significant renovations beyond general maintenance measures. The resort is notably dated and in need of renovations and refurbishment of amenities. The vision for the transformation of the Smoke Tree Resort is to welcome guests to a four-star "local-centric" hospitality experience in both form and substance. This is to be achieved through active forward-facing components and lifestyle programmatic aspects. The existing resort often goes unnoticed in its unassuming character along Lincoln Drive, with only 23 of its 32 guest rooms currently in use. The revitalization of the site will retain its charming essence while providing the scale and quality of amenities sought by today's traveler; the specifics of which include 122 total keys, a restaurant, and a special events pavilion.

3.0 FLOOD ZONE INFORMATION

The Maricopa County, Arizona and Incorporated Areas Flood Insurance Rate Map (FIRM), panel numbers 04013C1770L, Map Revised October 16, 2013 [5], indicates the site falls within Zone D.

Zone D is defined by FEMA as:

"The Zone D designation is used for areas where there are possible but undetermined flood hazards, as no analysis of flood hazards has been conducted. The Zone D designation is also used when a community incorporates portions of another community's area where no map has been prepared."

Refer to **Figure 2** for a copy of the Flood Insurance Rate Map (FIRM).

CVL

3

4.0 OFFSITE AND ONSITE RUNOFF

4.1 OFFSITE RUNOFF MANAGEMENT PLAN

The offsite watershed affecting the site is urbanized by mainly low density custom residential lots to the west. These residential lots are flat with no concentrated flow paths. During the field reconnaissance, it was observed that some of the custom residences with perimeter block walls have weepholes that may keep flow moving through their sites while others residences do not allow flow to pass through. Based on the review of general topography, the upstream watershed and street slopes, it has been determined that there will be no significant off-site flow to the project site.

Quail Run Road slopes generally to the north and south from the project. The road will be improved with ribbon curb from Lincoln Drive to the south boundary of the site. Off-site flows will direct any minimal amount of flows from reaching Quail Run Road to the north and south similar to the existing condition, so that flows will not reach the project site. Additionally, in the case where some minor flows will reach the project site, a small sump condition is proposed for Quail Run Road to that will include a small storm drain inlet to convey flows into the onsite storage which will be oversized to accommodate extra volume of stored runoff.

4.2 ONSITE RUNOFF MANAGEMENT PLAN

The resort was developed in 1966 when drainage regulations were non-existent. The site has a single small drain located just south of the abandoned restaurant building for localized flow which is to be removed as part of this project. The remainder of the site is graded to drain to the east. The site currently provides no onsite retention. The proposed improvements to the resort will utilize parking and drive corridors as drainage pathways to drain flow to the east and north where runoff will be captured by grated catch basins. The flow from the catch basins will be retained by 10-ft diameter underground tanks. Stormwater runoff from rooftops will drain into roof drains then by a storm sewer system out falling to the underground storages. The site will be graded so that stormwater runoff that falls between buildings will drain towards the parking lots.

Underground storages will be designed to dispose of the storm water within 36 hours through drywells. During construction, percolation rate tests will be performed to verify the infiltration rate per drywell. Constant head percolation tests may be submitted to Town of Paradise Valley for consideration of the reduction in the number of required drywells based on the test results.

CVL

4

The rainfall data is based on NOAA Atlas 14 values with 2.19 inches of precipitation depth for the 100-year, 2-hour storm event (see **Appendix A**). The runoff coefficients used for this site is 0.95, as indicated on Table 3.2 of the *Drainage Design Manual for Maricopa County*. Retention and drywell calculations can be found in **Appendix B**. Refer to **Appendix B** for runoff coefficients.

5.0 STORM WATER POLLUTION PREVENTION PLAN

During final engineering design, the Storm Water Pollution Prevention Plan (SWPPP) will be prepared and submitted for approval.

6.0 SUMMARY AND CONCLUSIONS

- 1. Underground storages are provided for the 100-year, 2-hour storm.
- 2. Underground storages are designed to drain within 36 hours.
- 3. According to the FIRM panel number 04013C1770L, Map Revised: October 16, 2013, the site is located in Zone D.
- 4. All finished floor elevations (FFE) will be at least 14 inches above the lowest drainage outfall for the site.

7.0 REFERENCES

- [1] Town of Paradise Valley, "Storm Drain Design Manual," June 2018.
- [2] Flood Control District of Maricopa County, "Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology," December 14, 2018.
- [3] Flood Control District of Maricopa County, Arizona, "Drainage Design Manual for Maricopa County, Volume II, Hydraulics," December 14, 2018.
- [4] Flood Control District of Maricopa County, "Drainage Policies and Standards," Revised August 22, 2018.
- [5] Federal Emergency Management Agency (FEMA), "National Flood Insurance Program, Flood Insurance Rate Map, Maricopa County, Arizona and Incorporated Areas, Panel Number 04013C1770L," Revised October 16, 2013.

FIGURES





APPENDICES

APPENDIX A

NOAA Atlas 14 Rainfall Data

Precipitation Frequency Data Server



NOAA Atlas 14, Volume 1, Version 5 Location name: Paradise Valley, Arizona, USA* Latitude: 33.5306°, Longitude: -111.9293° Elevation: 1310.38 ft** * source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹ | | | | | | | | | | |
|--|-------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| Duration | Average recurrence interval (years) | | | | | | | | | |
| Duration | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.186 | 0.243 | 0.331 | 0.397 | 0.487 | 0.556 | 0.627 | 0.700 | 0.796 | 0.870 |
| | (0.156-0.228) | (0.204-0.298) | (0.275-0.403) | (0.329-0.482) | (0.397-0.589) | (0.447-0.668) | (0.495-0.752) | (0.543-0.837) | (0.602-0.954) | (0.645-1.04) |
| 10-min | 0.284 | 0.371 | 0.503 | 0.605 | 0.742 | 0.847 | 0.955 | 1.07 | 1.21 | 1.32 |
| | (0.237-0.347) | (0.311-0.454) | (0.419-0.613) | (0.500-0.734) | (0.604-0.896) | (0.681-1.02) | (0.754-1.15) | (0.827-1.27) | (0.916-1.45) | (0.981-1.59) |
| 15-min | 0.352 | 0.459 | 0.624 | 0.750 | 0.919 | 1.05 | 1.18 | 1.32 | 1.50 | 1.64 |
| | (0.294-0.430) | (0.386-0.562) | (0.519-0.760) | (0.620-0.910) | (0.749-1.11) | (0.844-1.26) | (0.935-1.42) | (1.02-1.58) | (1.14-1.80) | (1.22-1.97) |
| 30-min | 0.473 | 0.619 | 0.840 | 1.01 | 1.24 | 1.41 | 1.60 | 1.78 | 2.02 | 2.21 |
| | (0.396-0.579) | (0.520-0.757) | (0.699-1.02) | (0.835-1.23) | (1.01-1.50) | (1.14-1.70) | (1.26-1.91) | (1.38-2.13) | (1.53-2.42) | (1.64-2.65) |
| 60-min | 0.586 | 0.766 | 1.04 | 1.25 | 1.53 | 1.75 | 1.97 | 2.20 | 2.50 | 2.74 |
| | (0.490-0.717) | (0.643-0.937) | (0.865-1.27) | (1.03-1.52) | (1.25-1.85) | (1.41-2.10) | (1.56-2.37) | (1.71-2.63) | (1.89-3.00) | (2.03-3.29) |
| 2-hr | 0.680 | 0.881 | 1.18 | 1.40 | 1.71 | 1.95 | 2.19 | 2.44 | 2.77 | 3.03 |
| | (0.577-0.814) | (0.748-1.06) | (0.995-1.41) | (1.17-1.67) | (1.42-2.03) | (1.59-2.30) | (1.76-2.59) | (1.92-2.88) | (2.13-3.27) | (2.28-3.60) |
| 3-hr | 0.748 | 0.959 | 1.26 | 1.49 | 1.83 | 2.09 | 2.37 | 2.65 | 3.05 | 3.37 |
| | (0.632-0.906) | (0.814-1.17) | (1.06-1.52) | (1.25-1.80) | (1.50-2.18) | (1.70-2.49) | (1.89-2.82) | (2.08-3.15) | (2.32-3.62) | (2.50-4.01) |
| 6-hr | 0.900 | 1.14 | 1.46 | 1.71 | 2.06 | 2.33 | 2.62 | 2.91 | 3.30 | 3.61 |
| | (0.777-1.07) | (0.985-1.35) | (1.25-1.72) | (1.46-2.01) | (1.73-2.40) | (1.93-2.71) | (2.13-3.04) | (2.33-3.38) | (2.58-3.84) | (2.75-4.21) |
| 12-hr | 1.00 | 1.27 | 1.61 | 1.87 | 2.23 | 2.50 | 2.78 | 3.07 | 3.45 | 3.75 |
| | (0.875-1.17) | (1.10-1.48) | (1.39-1.87) | (1.61-2.17) | (1.90-2.58) | (2.10-2.89) | (2.31-3.21) | (2.51-3.54) | (2.75-4.01) | (2.94-4.38) |
| 24-hr | 1.19 | 1.52 | 1.96 | 2.32 | 2.81 | 3.20 | 3.60 | 4.02 | 4.60 | 5.06 |
| | (1.05-1.38) | (1.33-1.75) | (1.72-2.27) | (2.02-2.68) | (2.44-3.24) | (2.75-3.68) | (3.08-4.15) | (3.41-4.63) | (3.85-5.30) | (4.20-5.84) |
| 2-day | 1.29 | 1.65 | 2.16 | 2.58 | 3.15 | 3.61 | 4.10 | 4.60 | 5.31 | 5.87 |
| | (1.13-1.48) | (1.45-1.90) | (1.90-2.49) | (2.25-2.96) | (2.74-3.62) | (3.11-4.14) | (3.51-4.70) | (3.91-5.28) | (4.46-6.10) | (4.88-6.77) |
| 3-day | 1.37 | 1.75 | 2.31 | 2.76 | 3.38 | 3.89 | 4.43 | 4.99 | 5.79 | 6.43 |
| | (1.20-1.57) | (1.54-2.01) | (2.02-2.65) | (2.40-3.16) | (2.94-3.87) | (3.35-4.45) | (3.79-5.07) | (4.24-5.72) | (4.86-6.63) | (5.34-7.39) |
| 4-day | 1.45 | 1.86 | 2.45 | 2.93 | 3.62 | 4.17 | 4.76 | 5.39 | 6.27 | 6.99 |
| | (1.27-1.66) | (1.63-2.13) | (2.15-2.80) | (2.56-3.35) | (3.14-4.13) | (3.59-4.76) | (4.07-5.43) | (4.57-6.16) | (5.26-7.16) | (5.80-8.01) |
| 7-day | 1.63 | 2.08 | 2.76 | 3.30 | 4.08 | 4.70 | 5.36 | 6.07 | 7.07 | 7.87 |
| | (1.43-1.87) | (1.82-2.39) | (2.40-3.17) | (2.87-3.79) | (3.52-4.67) | (4.04-5.37) | (4.57-6.14) | (5.13-6.96) | (5.90-8.10) | (6.51-9.04) |
| 10-day | 1.76 | 2.25 | 2.98 | 3.56 | 4.38 | 5.04 | 5.74 | 6.47 | 7.50 | 8.33 |
| | (1.54-2.02) | (1.98-2.58) | (2.60-3.40) | (3.10-4.07) | (3.80-4.99) | (4.34-5.72) | (4.91-6.53) | (5.50-7.37) | (6.29-8.54) | (6.92-9.50) |
| 20-day | 2.17 | 2.79 | 3.69 | 4.37 | 5.29 | 6.00 | 6.72 | 7.45 | 8.44 | 9.20 |
| | (1.91-2.47) | (2.46-3.18) | (3.25-4.20) | (3.83-4.96) | (4.62-6.00) | (5.21-6.80) | (5.81-7.63) | (6.41-8.47) | (7.20-9.61) | (7.79-10.5) |
| 30-day | 2.54 (2.23-2.89) | 3.27 (2.87-3.72) | 4.31 (3.78-4.90) | 5.11 (4.47-5.79) | 6.17 (5.37-7.00) | 7.00 (6.07-7.92) | 7.84 (6.77-8.87) | 8.70 (7.47-9.83) | 9.86 (8.40-11.2) | 10.7 (9.10-12.2) |
| 45-day | 2.93 (2.59-3.32) | 3.78 (3.33-4.28) | 4.98 (4.39-5.64) | 5.87 (5.17-6.64) | 7.05 (6.18-7.97) | 7.94 (6.93-8.98) | 8.84 (7.68-10.00) | 9.74 (8.43-11.0) | 10.9 (9.39-12.4) | 11.8 (10.1-13.5) |
| 60-day | 3.23 (2.86-3.64) | 4.17 (3.70-4.71) | 5.49 (4.86-6.19) | 6.45 (5.70-7.28) | 7.71 (6.79-8.68) | 8.64 (7.57-9.73) | 9.57 (8.36-10.8) | 10.5 (9.12-11.8) | 11.7 (10.1-13.2) | 12.6 (10.8-14.3) |

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical








NOAA Atlas 14, Volume 1, Version 5

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Maps & aerials

Small scale terrain

Precipitation Frequency Data Server



Large scale terrain





Large scale aerial

APPENDIX B

Runoff Coefficients, Retention and Drywell Calculations, VortSentry(R) HS Stormwater Treatment Detail

CVL

| | | Runoff Coefficients by Storm Frequency ^{1, 2} | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| Land Use | | 2-10 | Year | ר 25 | (ear | 50 Year | | 100 Year | |
| Code | Land Use Category | min | max | min | max | min | max | min | max |
| VLDR | Very Low Density Residential ^{3, 4} | 0.33 | 0.42 | 0.36 | 0.50 | 0.40 | 0.60 | 0.45 | 0.65 |
| LDR | Low Density Residential ^{3, 4} | 0.42 | 0.48 | 0.46 | 0.55 | 0.50 | 0.64 | 0.53 | 0.70 |
| MDR | Medium Density Residential ^{3, 4} | 0.48 | 0.65 | 0.53 | 0.72 | 0.58 | 0.78 | 0.60 | 0.80 |
| MFR | Multiple Family Residential ^{3, 4} | 0.65 | 0.75 | 0.72 | 0.83 | 0.78 | 0.90 | 0.82 | 0.94 |
| 11 | Industrial 1 ³ | 0.60 | 0.70 | 0.66 | 0.77 | 0.72 | 0.84 | 0.75 | 0.88 |
| 12 | Industrial 2 ³ | 0.70 | 0.80 | 0.77 | 0.88 | 0.84 | 0.95 | 0.88 | 0.95 |
| C1 | Commercial 1 ³ | 0.55 | 0.65 | 0.61 | 0.72 | 0.66 | 0.78 | 0.69 | 0.81 |
| C2 | Commercial 2 ³ | 0.75 | 0.85 | 0.83 | 0.94 | 0.90 | 0.95 | 0 94 | 0.95 |
| | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.04 | 0.00 |
| Р | Pavement and Rooftops | 0.75 | 0.85 | 0.83 | 0.94 | 0.90 | 0.95 | 0.94 | 0.95 |
| P GR | Pavement and Rooftops Gravel Roadways & Shoulders | 0.75 0.60 | 0.85 0.70 | 0.83 0.66 | 0.94 | 0.90 0.72 | 0.95 0.84 | 0.94 0.75 | 0.95 0.88 |
| P GR AG | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural | 0.75 0.60 0.10 | 0.85 0.70 0.20 | 0.83 0.66 0.11 | 0.94 0.77 0.22 | 0.90 0.72 0.12 | 0.95 0.84 0.24 | 0.94 0.75 0.13 | 0.95 0.88 0.25 |
| P GR AG LPC | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural Lawns/Parks/Cemeteries | 0.75 0.60 0.10 0.10 | 0.85 0.70 0.20 0.25 | 0.83 0.66 0.11 0.11 | 0.94 0.77 0.22 0.28 | 0.90 0.72 0.12 0.12 | 0.95 0.84 0.24 0.30 | 0.94 0.75 0.13 0.13 | 0.95 0.88 0.25 0.31 |
| P GR AG LPC DL1 | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural Lawns/Parks/Cemeteries Desert Landscaping 1 | 0.75 0.60 0.10 0.10 0.55 | 0.85 0.70 0.20 0.25 0.85 | 0.83 0.66 0.11 0.11 0.61 | 0.94 0.77 0.22 0.28 0.94 | 0.90 0.72 0.12 0.12 0.66 | 0.95 0.84 0.24 0.30 0.95 | 0.94 0.75 0.13 0.13 0.69 | 0.95 0.88 0.25 0.31 0.95 |
| P GR AG LPC DL1 DL2 | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural Lawns/Parks/Cemeteries Desert Landscaping 1 Desert Landscaping 2 | 0.75 0.60 0.10 0.10 0.55 0.30 | 0.85 0.70 0.20 0.25 0.85 0.40 | 0.83 0.66 0.11 0.11 0.61 0.33 | 0.94 0.77 0.22 0.28 0.94 0.44 | 0.90 0.72 0.12 0.12 0.66 0.36 | 0.95 0.84 0.24 0.30 0.95 0.48 | 0.94 0.75 0.13 0.13 0.69 0.38 | 0.95 0.88 0.25 0.31 0.95 0.50 |
| P GR AG LPC DL1 DL2 NDR | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural Lawns/Parks/Cemeteries Desert Landscaping 1 Desert Landscaping 2 Undeveloped Desert Rangeland | 0.75 0.60 0.10 0.10 0.55 0.30 0.30 | 0.85 0.70 0.20 0.25 0.85 0.40 0.40 | 0.83 0.66 0.11 0.11 0.61 0.33 0.33 | 0.94 0.77 0.22 0.28 0.94 0.44 0.44 | 0.90 0.72 0.12 0.12 0.66 0.36 | 0.95 0.84 0.24 0.30 0.95 0.48 0.48 | 0.94 0.75 0.13 0.13 0.69 0.38 0.38 | 0.95 0.88 0.25 0.31 0.95 0.50 0.50 |
| P GR AG LPC DL1 DL2 NDR NHS | Pavement and Rooftops Gravel Roadways & Shoulders Agricultural Lawns/Parks/Cemeteries Desert Landscaping 1 Desert Landscaping 2 Undeveloped Desert Rangeland Hillslopes, Sonoran Desert | 0.75 0.60 0.10 0.10 0.55 0.30 0.30 0.40 | 0.85 0.70 0.20 0.25 0.85 0.40 0.40 0.55 | 0.83 0.66 0.11 0.11 0.61 0.33 0.33 0.45 | 0.94 0.77 0.22 0.28 0.94 0.44 0.44 0.60 | 0.90 0.72 0.12 0.66 0.36 0.36 0.38 | 0.95 0.84 0.24 0.30 0.95 0.48 0.48 0.66 | 0.94 0.75 0.13 0.13 0.69 0.38 0.38 0.50 | 0.95 0.88 0.25 0.31 0.95 0.50 0.50 0.70 |

 Table 3.2

 RUNOFF COEFFICIENTS FOR MARICOPA COUNTY

Notes:

- 1. Runoff coefficients for 25-, 50- and 100-Year storm frequencies were derived using adjustment factors of 1.10, 1.20 and 1.25, respectively, applied to the 2-10 Year values with an upper limit of 0.95.
- 2. The ranges of runoff coefficients shown for urban land uses were derived from lot coverage standards specified in the zoning ordinances for Maricopa County.
- 3. Runoff coefficients for urban land uses are for lot coverage only and do not include the adjacent street and right-of-way, or alleys.
- 4, Values are based on the NDR terrain class. Values should be increased for NHS and NMT terrain classes by the difference between NHS (or NMT) and the NDR C values, up to a maximum of 0.95. Engineering judgement should be used.
- 5. Maricopa County has adopted specific values of C for each land use and storm frequency in the Drainage Policies and Standards for Maricopa County, Arizona (Maricopa County, 2007). These are the standard default values. The engineer/hydrologist may develop a computed composite value of C based on actual land uses, but must fully document the computations and assumptions and submit them to Maricopa County for approval. Many jurisdictions in Maricopa County may have adopted specific C coefficient values and procedures. The user should check with the appropriate agency before proceeding.

SMOKE TREE RESORT Underground Storage Volume Calculations

| Development Condition | Drainage ⁽¹⁾ Area A (acres) | Drainage ⁽¹⁾ Area A (feet ²) | Runoff ⁽²⁾ Coefficient C | Precipitation ⁽³⁾ Depth P (inches) | Volume ⁽⁴⁾ Required V _{req} (acre-ft) | Volume ⁽⁴⁾ Required V _{req} (cubic feet) | Retention Basin/Tank ID | Volume per lf of 10.00 ft dia pipe (ft ²) | Linear feet Provided 10.00 ft dia pipe | Volume ⁽⁵⁾ Provided V _{prov} (acre-ft) | Volume ⁽⁵⁾ Provided V _{prov} (cubic feet) |
|--------------------------|---|--|---|--|--|---|--|--|---|---|--|
| 1 | 5.09 | 221567 | 0.95 | 2.19 | 0.88 | 38,414 | UG1 UG2 UG3 UG4 UG5 UG6 | 78.54 78.54 78.54 78.54 78.54 78.54 78.54 | 85 89 59 77 244 62 | 0.15 0.16 0.11 0.14 0.44 0.11 | 6,676 6,990 4,634 6,048 19,164 4 869 |
| TOTAL | 4.47 | | | | 0.80 | 35,064 | | | 616 | 1.11 | 48,381 |

Reference: Drainage Design Manual for Maricopa County (2018)

Notes:

- 1. Drainage sub-basin delineated per Drainage Map (Plate 1).
- 2. Runoff coefficient values of 0.95 for resorts per Drainage Design Manual for Maricopa County (see Appendix B).
- 3. Precipitation depth per NOAA Atlas 14 rainfall data (see Appendix A).
- 4. $V_{req} = A \times C \times (P/12) = Volume required$
- 5. $V_{\text{prov}} = 10^{\circ}$ Diameter Pipe LF x π (5')²

SMOKE TREE RESORT Drywell Calculations

| Uunderground | Volume | Flowrate Required to | Drywell | Number Of | Number Of |
|--------------|----------------------------------|------------------------------------|--------------------------|-------------------------|-----------------------|
| Storage | Required to Drain ⁽¹⁾ | Drain Within 36 hrs ⁽²⁾ | Flow Rate ⁽³⁾ | Drywells | Drywells |
| ID | (ft^3) | (cfs) | (cfs) | Required ⁽⁴⁾ | Provided [*] |
| UG1 | 6,676 | 0.05 | 0.1 | 1 | 1 |
| UG1 | 6,990 | 0.05 | 0.1 | 1 | 1 |
| UG3 | 4,634 | 0.04 | 0.1 | 1 | 1 |
| UG4 | 6,048 | 0.05 | 0.1 | 1 | 1 |
| UG5 | 19,164 | 0.15 | 0.1 | 2 | 2 |
| UG6 | 4,869 | 0.04 | 0.1 | 1 | 1 |
| Total | 48,381 | | | 7 | 7 |

Notes:

(1) Volume required to drain = Volume provided for retention basins.

(2) Flowrate Required to Drain Basin Within $36 \text{ hrs} = (\text{Volume Required to Drain})/(36 \times 3600)$

(3) Drywell flow rate assumed to be minimum required per DPSM Std 6.10.13. Field test should be performed to calculate actual dry well flow rate.

(4) (Number Of Dry Well(s) Required)=(Flowrate Required to Drain Basin Within 36 hrs)/(Dry Well Flowrate Capacity)

Note to contractor:

*Initially one drywell will be installed and field tests performed per the DPSM Standard 6.10.12 to check the actual flow rate of drywell. Drywells will be provided and tested until the percolation requirement is achieved per DPSM Standard 6.10.12. The amount of drywells needed shall be changed in accordance to the newly calculated flow rate.

PLATE

CVL



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LEGEND

| # |
|-------|
| |
| → |

SUB-BASIN ID SUB-BASIN DELINEATION

OFF-SITE FLOW DIRECTION

ON-SITE FLOW DIRECTION

--- FLOW PATH DRYWELL

DRYWELLCB CATCH BASIN

SCALE: 1" = 40'

February 10, 2023

Prepared for:

Smoketree Resort

7101 East Lincoln Drive Paradise Valley, Arizona 85253

Water Service Impact Study

Walton Global Holdings 8800 N. Gainey Center Drive Suite 345 Scottsdale, AZ 85258 Contact: Price Nosky

67062 CASSANDRA

ALEJANDRO

Prepared by: Coe & Van Loo Consultants, Inc. 4550 N. 12th Street Phoenix, AZ 85014 Contact: Cassandra Alejandro, P.E. 602.285.4763

Job # 1.01.0315301



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Appendices

Appendix A: September 26, 2019 EPCOR Water "Will-Serve" Letter

- Appendix B: Water Quarter Section Map
- Appendix C: Fire Flow Test Results
- Appendix D: WaterCAD Results (Domestic)
- Appendix E: WaterCAD Results (Fire Flow)
- Appendix F: Water Quality Report

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EXECUTIVE SUMMARY

The proposed Smoketree Resort is the redevelopment of an existing resort complex. The proposed development will be constructed on approximately 5 acres of existing special use permit resort land on the southeast corner of Lincoln Drive and Quail Run Road. The property lies within the Town of Paradise Valley. Water service to the property is provided by EPCOR Water. EPCOR has stubbed out a 12-inch waterline in Quail Run Road from the existing 16-inch waterline on the north side of Lincoln Drive as part of the Town's Roadway and Utility Improvement Project No. 2016-1. Smoketree Resort will reimburse EPCOR the amount of \$58,397.23 for the 12-inch stub as part of the Lincoln Road Improvement Project No. 2016-14 installed by EPCOR. An 8-inch water loop within Smoketree Resort is proposed to serve the project. Connections to the 12-inch stub and existing 16-inch waterline are proposed.

Demand calculations were prepared based on the design requirements for the Town of Paradise Valley and EPCOR Water. Fire flow demands are per the 2018 International Fire Code with City of Phoenix Amendments. The calculated demands are as follow.

| • | Average Day Demand: | 43,202 gpd (30 gpm) |
|---|---------------------------------|----------------------|
| • | Maximum Day Demand: | 77,764 gpd (54 gpm) |
| • | Peak Hour Demand: | 129,606 gpd (90 gpm) |
| • | Maximum Day + Fire Flow Demand: | 2,090 gpm |

Modeling of the system was conducted utilizing WaterCAD software. Pressures in the proposed development were found to range between 92 and 95 psi for the ADD, MDD, and PHD scenarios. Velocities during Fire Flow for all fire flow scenarios were below 10 fps. The proposed water system is designed to meet the Town of Paradise Valley design standards and EPCOR Water's *Developer and Engineering Guide*, dated January 2015.

The September 26, 2019, updated "Will-Serve" letter from EPCOR Water is provided in Appendix A.

1.0 INTRODUCTION

1.1 General Description

Smoketree Resort is a proposed redevelopment of an existing resort complex on approximately 5 acres of existing special use permit resort land located in the Town of Paradise Valley, Arizona. A total of 82 rooms are proposed. The site will also include two restaurants, a pool, and a spa/fitness.

This study addresses the water service connections and fire protection requirements for the proposed development. EPCOR Water will provide water service to the development. EPCOR Water design standards in the *Developer and Engineering Guide*, Dated May 2020 will be used to determine domestic water demands. The Town of Paradise Valley will provide fire protection service to the site. Fire flow standards will be based on the Town of Paradise Valley design standards and EPCOR Water's *Developer and Engineering Guide*, dated May 2020. See Figure 1 for the Vicinity Map.

1.2 Project Location

Smoketree Resort is located in Section 10 of Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian. The development is bordered by Lincoln Drive to the north and Quail Run Road to the west. See Figure 2 for the Site Layout.



N:\01\0315301\Enviro\Parcel\cad\Smoketree Resort Figures.dwg Hunters February 10, 2023



2.0 WATER SYSTEM DESIGN CRITERIA

The following criteria was be used in developing the water study.

2.1 Design Criteria

This water study is based on criteria from the Town of Paradise Valley and EPCOR Water's *Developer & Engineering Guide*, dated May 2020. The following criteria were used in developing this plan:

- Demand factors
 - Resort Average Day Demand = 446 gpd/room
 Includes site amenities.
 - Commercial = 1,700 gpd/acre
 - Max day factor = $1.8 \times \text{Average Day Demand}$
 - Peak hour factor = $3.0 \times \text{Average Day Demand}$
- o Pressure requirements
 - Minimum
 - 20 psi at the meter
 - Maximum = 120 psi
- o Velocity
 - Maximum
 - 5 fps for maximum day demand
 - 7 fps for peak hour demand
 - 10 fps for maximum day demand plus fire flow
- o Unit friction head loss
 - Maximum = 10ft/1,000 ft of distribution lines
- Hazen-Williams Coefficient = 130
- Fire Flows = 2,000 gpm

3.0 EXISTING INFRASTRUCTURE

3.1 Existing Waterlines

Existing adjacent waterlines to Smoketree Resort consist of a 16-inch waterline on the north side of Lincoln Drive. The nearest existing fire hydrants are located directly east on Lincoln Drive. See Appendix B for an EPCOR Water quarter section for this area.

3.2 Water Quality

Appendix F contains a copy of the 2018 Water Quality Report. No violations were reported.

4.0 PROPOSED INFRASTRUCTURE

4.1 Water Demands

The water demands for Smoketree Resort may be seen below in Table 1.

| Description | Rooms | Gross Area (Square Feet) | Unit Factor | Unit | Average Day Demand (gpd) | Peak Hour Factor | Peak Hour Demand (gpd) |
|-------------------|-------|-----------------------------------|-------------------|----------|-----------------------------------|------------------------|---------------------------------|
| Resort Hotel Room | 82 | 63,698 | 380 | gpd/Room | 31,160 | 4.5 | 140,220 |
| Pool Backwash | | | 60 (Peak Hour) | gpd/Pool | | | 60 |
| Spa/Fitness | | 2,950 | 0.5 | gpd/sqft | 1,475 | 3.0 | 4,425 |
| Restaurant 1 | | 6,860 | 1.2 | gpd/sqft | 8,232 | 6.0 | 49,392 |
| Restaurant 2 | | 7,620 | 1.2 | gpd/sqft | 9,144 | 6.0 | 54,864 |
| Total | 82 | 81,128 | | | 50,011 | | 248,961 |

 Table 1 – Smoketree Resort Water Demands

Fire flow demands of 2,000 gpm will be modeled.

4.2 Proposed On-Site Water Infrastructure

An public 8-inch water loop within an easement within Smoketree Resort is proposed to serve the project. Connections to the 12-inch stub and existing 16-inch waterline are proposed. A 3-inch domestic water meter is proposed for the restaurant and will be located on the north side of the building along Lincoln Road. A 4-inch domestic water meter is proposed for the hotel and will be located at the northeast corner of the building. See Appendix B: Paradise Valley Water Company Block Map PV – 407 for a detailed map of existing conditions for this connection.



5.0 WATER SYSTEM MODELING

5.1 Network Analysis Domestic Demands

The network analysis for the proposed development's distribution system was completed using WaterCAD. A model was created and modified as necessary to demonstrate that the existing and proposed water infrastructure meets the water system design criteria. All networks were analyzed for average day, maximum day, and peak hour demand conditions. The existing conditions were determined by a fire flow test completed on October 11, 2018. Results from this fire flow test may be seen in Appendix C.

The pipes were sized based on pressure requirements for average day, max day, and peak hour as described in Section 2.0.

Input parameters of the water distribution system modeling include:

- Pipe Diameters (inches)
- Elevations of Nodes/Junctions (feet)
- System Water Demands (gpm)
- Hazen-Williams, C=130

Output parameters include but are not limited to:

- o Velocities (fps)
- o Pressure (psi)
- o Head Loss (feet)
- o Flow Rates (gpm)

5.2 Modeling Results Domestic Demands

The detailed results of the WaterCAD analysis for the domestic demands are presented in Appendix D. Table 2 summarize the results.

| Sconario | Flow | | Pressu | Maximum Velocity | Pipe | | |
|-------------|--------|---------|--------|---------------------|------|-------|------|
| Scenario | (gpm) | Minimum | Node | Maximum | Node | (fps) | ID |
| Average Day | 30 | 91.91 | J-41 | 94.94 | J-9 | 0.10 | P-72 |
| Max Day | 54 | 91.90 | J-41 | 94.93 | J-9 | 0.18 | P-72 |
| Peak Hour | 114.09 | 91.87 | J-41 | 94.90 | J-9 | 0.30 | P-72 |

Table 2 – Water Model Results Summary for Domestic Demands

5.3 Network Analysis Fire Flows

The network analysis was performed as described in subsection 5.1 above. The detailed results of the Water CAD analysis for the fire flow scenario are shown in Appendix E. Table 3 summarizes the results.

| Table 3 – | Water | Model | Results | Summarv | for I | Fire Flow | Demands |
|-----------|----------|---------|---------|------------|-------|-----------|----------------|
| I asie e | · · acci | 1110401 | | S annual J | | | Demands |

| Maximum Day | | Pressure | Maximum Velocity | Pipe | | |
|--------------|---------|----------|---------------------|------|-------|------|
| Needed (gpm) | Minimum | Node | Maximum | Node | (fps) | ID |
| 2,090 | 73.60 | J-37 | 79.81 | J-9 | 8.05 | P-72 |

6.0 SUMMARY

This Water Service Impact Study presents the proposed water system connections, and an overview of existing infrastructure surrounding the project site. The following summarizes CVL's findings of the proposed water system to serve Smoketree Resort.

- The water service connections will be made to the existing EPCOR Water system.
- Existing adjacent infrastructure to Smoketree Resort consist of a 16-inch waterline on the north side of Lincoln Drive.
- An 8-inch water loop within Smoketree Resort is proposed to serve the project. Connections to the 12-inch stub and existing 16-inch waterline are proposed.
- EPCOR has stubbed out the 12-inch waterline on Quail Run Road from the existing 16-inch waterline on the north side of Lincoln Drive as part of the Town's Roadway and Utility Improvement Project No. 2016-14.
- Smoketree Resort will reimburse EPCOR the amount of \$58,397.23 for the 12-inch stub as part of the Lincoln Road Improvement Project No. 2016-14 installed by EPCOR.
- o Demands from the Smoketree Resort are:

| • | Average Day Demand: | 43,202 gpd (30 gpm) |
|---|---------------------------------|----------------------|
| • | Maximum Day Demand: | 77,764 gpd (54 gpm) |
| • | Peak Hour Demand: | 129,606 gpd (90 gpm) |
| • | Maximum Day + Fire Flow Demand: | 2,090 gpm |
| • | Maximum Day + Fire Flow Demand: | 2,090 gpm |

- Pressures within the proposed development are approximately 92-95 psi for all domestic demand scenarios which is within the Town of Paradise Valley's pressure requirements. Individual PRVs are required after the meter where pressures are greater than 80 psi.
- The nearest fire hydrants to the proposed development are to the east of Smoketree Resort along Lincoln Drive.
- Velocities in the existing system are less than the 10 fps maximum requirement. The maximum velocity that occurs when a fire flow of 2,090 gpm is modeled at the site is 8.05 fps within P-72.

APPENDIX A

September 26, 2019, EPCOR Water "Will-Serve" Letter



2355 West Pinnacle Peak Road, Suite 300 Phoenix, AZ 85027 USA **epcor.com**

September 26, 2019

Coe & Van Loo Consultants, Inc. Attn: Fred Fleet, P.E. 4550 N. 12th Street Phoenix, AZ 85014

Sent via e-mail to: fef_@cvlci.com

Re: Will-Serve Letter for Water Service 7101 E. Lincoln Drive, Paradise Valley APN 174-64-003A

Dear Mr. Fleet;

This letter is in response to your request to EPCOR Water Arizona Inc. ("EPCOR") regarding EPCOR's willingness to provide water service to a proposed resort hotel to be located at 7101 E. Lincoln Drive in Paradise Valley (the "Development") as shown in **Exhibit A**. EPCOR provides the following information for your consideration:

- 1. EPCOR has confirmed that the Development is located within the area encompassed by EPCOR's Certificate of Convenience & Necessity ("CC&N") for water service as issued by the Arizona Corporation Commission.
- 2. Water service to the Development by EPCOR will be conditioned upon developer entering into a Main Extension Agreement (an "MXA") with EPCOR in a form acceptable to EPCOR, and upon EPCOR and developer fully performing its respective obligations under the MXA. The MXA will provide, among other things, that developer will be responsible for constructing at its cost all water main extensions necessary to distribute water from EPCOR's water system to the individual service line connections in the Development. The design and construction of all such main extensions will be subject to EPCOR's approval, and ownership of the main extensions, together with related real property easement rights, must be transferred to EPCOR prior to the initiation of water service in the Development.
- 3. Based on the water service currently provided by EPCOR in the CC&N, EPCOR will have adequate water capacity for normal use in the Development upon EPCOR's and developer's fulfillment of its respective obligations under the MXA. Please note that EPCOR does not guarantee the adequacy of its water capacity for fire protection.
- 4. Developer will also be required, as a condition to EPCOR providing water service to the Development, to pay all required fees pursuant to EPCOR's tariffs and as may be provided in the MXA.

This letter assumes that construction of the main extensions within the Development will begin within one (1) year after the date of this letter.

If developer begins construction of any water mains in the Development or any other water service infrastructure intended to serve the Development without, in each instance, the prior written approval of such construction by EPCOR, developer will be proceeding with such construction at its own risk.

This letter does not independently create any rights or obligations in either developer or EPCOR, and is provided for information only. Any agreement between developer and EPCOR for water service in the Development must be memorialized in a written agreement executed and delivered by their respective authorized representatives.

For additional information, please contact me at (623) 445-2402 or at bfinke@epcor.com.

Sincerely,

Brad Linte

Brad Finke, P.E. Engineering Manager

Enclosure: Exhibit A – Location Description of Development

EXHIBIT A

Location of Development



WASTEWATER CAPACITY STUDY

February 10, 2023

Smoketree Resort

7101 East Lincoln Drive Paradise Valley, Arizona 85253

Wastewater Capacity Study

ssion.

67062 CASSANDRA

ALEJANDRO

Prepared for: **Gentree LLC** 3620 East Campbell Avenue Suite B Phoenix, AZ 85018 Contact: Sam Robinson

Prepared by: Coe & Van Loo Consultants, Inc. 4550 N. 12th Street Phoenix, AZ 85014 Contact: Cassandra Alejandro, P.E. 602.285.4763

Job # 1.01.0315301



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| 1.2 | PROJECT LOCATION | 1 |
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Appendices

- Appendix A: City of Scottsdale "Will-Serve" Letter
- Appendix B: Applicable Pages from the Town of Paradise Valley Wastewater Master Plan (Arcadis, May 2015)

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- Appendix C: Sewer Quarter Section Maps
- Appendix D: Sewer Analysis Results



1.0 INTRODUCTION

1.1 General Description

Smoketree Resort is a proposed redevelopment of an existing resort complex on approximately 5 acres of existing special use permit resort land located in the Town of Paradise Valley, Arizona. A total of 82 rooms are proposed. The site will also include two restaurants, a pool, and a spa/fitness.

This report addresses sewer capacity requirements for the proposed development. The sewer system will outfall to the City of Scottsdale Sewer System. The system's design will adhere to the *City of Scottsdale Design Standards and Policies Manual, January 2018* and the *International Plumbing Code*. See Figure 1 for the Vicinity Map.

1.2 Project Location

Smoketree Resort is located in Section 10 of Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian. The development is bordered by East Lincoln Drive to the north and Quail Run Road to the west. See Figure 2 for the Site Layout.

1.3 Topographic Conditions

Smoketree Resort ranges in elevation from approximately 1,318 feet above mean sea level (MSL) on the southwest corner of the property to approximately 1,313 feet MSL on the northeast corner of the property. Overall, the property generally slopes to the north northeast toward Lincoln Drive.

1.4 Existing Sewer Capacity

The Town of Paradise Valley has two wastewater providers, the City of Phoenix and the Town of Paradise Valley. The Town of Paradise Valley's wastewater system is operated, maintained, and treated by the City of Scottsdale through an intergovernmental agreement. Appendix A contains the City of Scottsdale "Will-Serve" letter. Smoketree Resort will be served by the City of Scottsdale per the *Town of Paradise Valley Wastewater Master Plan (Arcadis, May 2015)*. Appendix B includes applicable Pages from the *Town of Paradise Valley Wastewater Master Plan (Arcadis, May 2015)* depicting the direction of flow into the City of Scottsdale's wastewater system. Appendix C includes City of Scottsdale Wastewater Quarter Section Maps depicting the location and flow direction of the existing gravity sewer network servicing the Smoketree Resort.



N:\01\0315301\Enviro\Parcel\cad\Smoketree Resort Figures.dwg Hunters February 10, 2023



2.0 WASTEWATER SYSTEM DESIGN CRITERIA

The following criteria was be used in developing the sewer capacity study.

2.1 Design Criteria

This sewer study is based on criteria from the *City of Scottsdale Design Standards & Policies Manual, January 2018* and *Integrated Wastewater Master Plan, March 2008*. Design flow criteria are presented in Table 1 and hydraulic design criteria are presented in Table 2.

| Description | Unit | Average Day Flow (gpd/unit) | Peak Day Flow (gpm/pool) | Peak Day Flow (gpd/unit) | Peaking Factor | |
|--------------------------------|-------------|-----------------------------------|--------------------------------|--------------------------------|-------------------|--|
| Resort Hotel Room ¹ | Room | 380 | - | 1,710 | 4.5 | |
| Pool Backwash ² | Pool | N/A | 60 | - | - | |
| Commercial/Retail | Square Foot | 0.5 | - | - | 3.0 | |
| Restaurant | Square Foot | 1.2 | - | - | 6.0 | |

Table 1 - Design Flow Criteria

¹Includes site amenities

²Assumes backwash rate of 60 gpm/small pool for a 10 minute duration.

| Description | Criteria |
|--------------------------------------|--|
| Minimum Sewer Diameter | 8-inch |
| Minimum Full Pipe Velocity | 2.5 fps |
| Minimum Slope | |
| 8-inch Sewer | 0.0052 ft/ft |
| Manning's "n" | 0.013 |
| Maximum Pipe Velocity | 10 fps |
| d/D (\leq 12-inch) at Peak Flow | 0.65 |
| d/D (> 12-inch) at Peak Flow | 0.70 |
| Manhole Spacing (8 to 15-inch) | 500 ft |
| Minimum Drop Across Manhole | 0.1 ft |
| Change in Sewer Diameter | Top invert of upstream pipe ≥ top invert of downstream |
| Minimum Depth of Cover | 4 ft |

Table 2 – Hydraulic Design Criteria

2.2 Design Calculations

Table 3 contains the wastewater flow generation calculations for flows for the Smoketree Resort.

| Description | Rooms | Gross Area (Square Feet) | Unit Factor | Unit | Average Day Demand (gpd) | Peak Hour Factor | Peak Hour Demand (gpd) |
|----------------------------|-------|--------------------------------|----------------|----------|-----------------------------------|------------------------|---------------------------------|
| Resort Hotel Room | 82 | 63,698 | 380 | gpd/Room | 31,160 | 4.50 | 140,220 |
| Pool Backwash ¹ | | | 60 (Peak Hour) | gpd/Pool | | | 60 |
| Spa/Fitness | | 2,950 | 0.5 | gpd/sqft | 1,475 | 3.00 | 4,425 |
| Restaurant 1 | | 6,860 | 1.2 | gpd/sqft | 8,232 | 6.00 | 49,392 |
| Restaurant 2 | | 7,620 | 1.2 | gpd/sqft | 9,144 | 6.00 | 54,864 |
| Total | 82 | 81,128 | | | 50,011 | | 248,961 |

Table 3 – Wastewater Flow Generation

¹Assumes backwash rate of 60 gpm/small pool for a 10 minute duration.

As shown, the peak flow calculations include peak flows calculated per the City of Scottsdale design criteria.

3.0 EXISTING AND PROPOSED INFRASTRUCTURE

3.1 Existing Sewer Lines

An existing 8-inch gravity sewer is adjacent to the site in Lincoln Drive and accepts flows from the existing 6-inch VCP gravity sewer serving the Smoketree Resort. Wastewater flows east within the existing 8-inch sewer line in Lincoln Drive to Scottsdale Road. From here the wastewater flows south along Scottsdale Road to McDonald Drive flowing east. (See Figure 3 and Appendix C for the Sewer Layout and the existing sewer layout.) Flow is ultimately treated at the 91st Avenue Regional Wastewater Treatment Plant in west Phoenix, which is owned and operated by the Sub-Regional Operating Group (SROG).

3.2 Proposed Infrastructure

The existing 6-inch VCP gravity sewer serving the Smoketree Resort will be replaced by 21.02feet of 8-inch gravity sewer as designed by T.Y. Lin at a slope of 0.0052 ft/ft per the Town of Paradise Valley Arizona Roadway and Utility Improvements – Lincoln Drive Project No. 2016-14. Smoketree Resort will reimburse the Town of Paradise Valley for the replacement off the 6inch VCP gravity sewer with the 8-inch gravity sewer and manhole as part of the Lincoln Road Improvement Project No. 2016-14.

The on-site collection system will consist of 8-inch sewer service lines and is designed to convey wastewater from the west to the east of the site where it will collect into a proposed private lift station. The sizing of the lift station will be completed during final design. The A force main will connect to the 8-inch gravity sewer service designed by T.Y. Lin and flow into the existing 8-inch gravity sewer line in Lincoln Drive.

All sewer lines will be located in major streets or in easements dedicated for that use. Project No. 2016-14 is going to stub out an 8-inch gravity sewer line in Quail Run Road which will not be utilized by the development of the Smoketree Resort.

A sewer capacity analysis was completed to design the wastewater line for Smoketree Resort. The analysis may be seen in Appendix D. The sewer mains will be sized according to the anticipated cumulative flows as the lines are routed to the existing 8-inch gravity sewer within Lincoln Dive. The pipe size and minimum and maximum slope required will be determined based on the criteria established in Section 2.1. Manholes within the development are assumed to have 6 feet of depth to verify cover depth and allow for slope design.



4.0 SUMMARY

This wastewater system analysis presents the collection system design criteria and proposed wastewater infrastructure for the Smoketree Resort. This wastewater system will be owned by the Town of Paradise Valley and operated by the City of Scottsdale. The sewer infrastructure conforms to the City of Scottsdale's minimum standards and is consistent with the City's current *Design Standards and Policies Manual, January 2018*.

The results of this analysis are summarized as follows:

- The proposed collection system is designed to meet the *City of Scottsdale Design Standards and Policies Manual, January 2018.*
- The proposed collection system will discharge to the proposed lift station. A force main will convey the wastewater to the 8-inch gravity sewer service designed by T.Y. Lin connecting the Smoketree Resort to the existing 8-inch gravity sewer line in Lincoln Drive.
- The sizing of the lift station will be completed during final design.
- Smoketree Resort will reimburse the Town of Paradise Valley for the replacement off the 6inch VCP gravity sewer with the 8-inch gravity sewer and manhole as part of the Lincoln Road Improvement Project No. 2016-14.
- Minimum and maximum pipe velocities were met for all proposed sewer lines.
- The average day flow for Smoketree Resort is estimated at 50,011 gpd.
- The peak flow for Smoketree Resort including pool backwash is estimated at 248,961 gpd.
APPENDIX A

City of Scottsdale "Will-Serve" Letter



Water Resources

9379 E. San Salvador Scottsdale, AZ 85258 PHONE 480-312-5685 FAX 480-312-5615 www.ScottsdaleAZ.gov

February 11, 2020

Maricopa County Environmental Services Department 1001 North Central Avenue, Suite 150 Phoenix, AZ 85004

Re: Sanitary Sewer Connection Smoke Tree Resort Town of Paradise Valley

Gentlemen:

This letter is provided to satisfy those submittal requirements under General Aquifer Protection Permit 4.01 for extension of a sanitary sewer collection system as indicated below:

The City of Scottsdale's sanitary sewer collection system has sufficient capacity to accept the flows generated from this project and convey those flows into the City of Scottsdale's sewer collection system.

The City of Scottsdale's sanitary sewer collection system which discharges to the Princess metering station has sufficient capacity to accept the residual waste stream resulting from the treatment of flows generated from this project. Downstream of the Princess metering station, these residual flows enter into the Sub-regional Operating Group (SROG) Salt River Outfall (SRO) trunk line.

The City of Scottsdale has established operational requirements and maintenance procedures to assure efficient conveyance of sanitary sewer flows throughout its collection system.

If you have any questions regarding this information, please contact our office at 480-312-5685.

Sincerely,

Richard Sacks, P.E. Scottsdale Water



ASTEWATER CAPACITY STUDY

Suite B

Job # 1.01.0315301

APPENDIX B

Applicable Pages from the *Town of Paradise Valley Wastewater Master Plan (Arcadis, May* 2015)



INPART OF ST

FINAL REPORT

WASTEWATER MASTER PLAN

MAY 2015

Welcome Town of Paradise Valley



22684 TIMOTHY FRANCIS

Expires 12/31/17

rancis

00776004.0001







APPENDIX C

Sewer Quarter Section Maps





| ENERAL NOTES: THIS IS A COMPUTER GENERATED DRAWING REVISIONS PLEASE CONTACT THE CITY OF | 3. FOR ANY SCOTTSDALE |
|---|---|
| 3IS DEPARTMENT AT (480) 312-7792. THE SECTION LINE BEARING AND DISTANCE ON THE CITY OF SCOTTSDALE GPS SURVEY 1911. BEARINGS ARE NAD 3G GRID AND DIST "LATTENED TO GROUND. WHERE NO CORN THE DIMENSIONS ADE GUVEN TO CAL CUI AT | S ARE BASED OF SEPTEMBER, ANCES ARE ER WAS FOUND ED SECTION |
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| Non-potable Water Valve | |
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APPENDIX D

Sewer Analysis Results

| | | | | | | | | Table A-1: | Smoketree | Resort Se | ewer Calc | ulations | | | | | | | | | | |
|------------------------|---|----------------|-----------------------------------|---------------------------|-------------------|-----------------------------------|--------------------------------|----------------------------------|--|---|----------------------------|------------------------------|-----------------------------|--|--|--------------------------------------|---|---------------------------------|------------------|-----------------------------------|-----------------------------------|----------|
| Upstream MH | Downstream MH | Square Feet | Average Day Flow (gpd/sqft) | Average Day Flow (gpd) | Peaking Factor | Peak Flow Dry Weather (gpd) | Upstream Peak Flow (gpd) | Cumulative Peak Flow (gpd) | Total Estimated Peak Flow (gpd) | Estimated Ground Elevation ¹ (feet) | Estimated Length (feet) | Line Diameter (inches) | Sewer Line Slope (ft/ft) | Estimated Upstream MH Depth (feet) | Estimated Upstream Invert Elevation (feet) | Drop Through Manhole (feet) | Estimated Downstream Invert Elevation (feet) | Sewer Line Capacity (gpd) | % Full (Q/Qf) | Velocity Flowing Full (fps) | Velocity at Peak Flow (fps) | d/D |
| Restaurant 1 | 7 | 6860 | 1.2 | 8,232 | 6.00 | 49,392 | 0 | 49,392 | 49,392.00 | 1312 | 10 | 8 | 0.0052 | 18.41 | 1292.53 | 0.10 | 1292.48 | 563,106 | 9% | 2.5 | 1.54 | 0.20 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 6 | 0 | 1.2 | 0 | 6.00 | 0 | 49,392 | 49,392 | 49,392.00 | 1312 | 260 | 8 | 0.0052 | 2 18.55 | 1292.38 | 0.10 | 1291.03 | 563,106 | 9% | 2.5 | 1.54 | 0.20 |
| | | | | | | | | | | | | | | 1 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Pool | 6 | 0 | 100 | 0 | 2.00 | 60 | 0 | 60 | 60.00 | 1211 | 146 | | 0.0052 | 19.25 | 1201 79 | 0.10 | 1201.02 | 563 106 | 0% | 2.5 | 0.20 | 0.01 |
| FUUI | 0 | 0 | 100 | 0 | 3.00 | 00 | 0 | 00 | 00.00 | 1311 | 140 | | 0.0032 | . 10.25 | 1291.70 | 0.10 | 1291.03 | 5 505,100 | 078 | 2.0 | 0.20 | 0.01 |
| | | | | | | | | | | ł | | | | | ł | | | | | | ├ ────′ | I |
| | | | | | | | 10.150 | | | | | | | | | | | | | | <u> </u> | <u> </u> |
| 6 | 5 | 0 | 100 | 0 | 3.00 | 0 | 49,452 | 49,452 | 49,452.00 | 1311 | 146 | 8 | 3 0.0052 | 2 19.11 | 1290.93 | 0.10 | 1290.17 | 563,106 | 9% | 2.5 | 1.54 | 0.20 |
| | | | | | | | | | | ļ | | | | | | | | | | | ' | ── |
| | | | | | | | | | | | | | | | | | | | | | <u> </u> | ─── |
| Restaurant 2 | 5 | 7620 | 1.2 | 9,144 | 6.00 | 54,864 | 0 | 54,864 | 54,864.00 | 1311 | 47 | 8 | 0.0052 | 2 19.82 | 1290.42 | 0.10 | 1290.17 | 563,106 | 10% | 2.5 | 1.59 | 0.21 |
| | | | | | | | | | | | | | | | | | | | | | | L |
| | | | | | | | | | | | | | | | | | | | | | <u> </u> | |
| 5 | 1 | 0 | 1.2 | 0 | 6.00 | 0 | 104,316 | 104,316 | 104,316.00 | 1311 | 47 | 8 | 0.0052 | 20.16 | 1290.07 | 0.10 | 1289.82 | 563,106 | 19% | 2.5 | 1.91 | 0.29 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Casitas (Resort Rooms) | 4 | 5 | 380 | 1,900 | 4.50 | 8,550 | 0 | 8,550 | 8,550.00 | 1311 | 22 | 8 | 0.0052 | 2 19.08 | 1291.25 | 0.10 | 1291.14 | 563,106 | 2% | 2.5 | , 0.91 | 0.09 |
| | | | | | | | | | | | | | | 1 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 3 | 0 | 380 | 0 | 4 50 | 0 | 8 550 | 8 550 | 8 550 00 | 1311 | 22 | 8 | 0 0052 | y 19.30 | 1291.04 | 0.10 | 1290.92 | 563 106 | 2% | 2.5 | 0.91 | 0.09 |
| | 0 | | 000 | | 1.00 | <u> </u> | 0,000 | 0,000 | 0,000.00 | | | | 0.0002 | 10.00 | 1201.01 | 0.10 | 1200.02 | 000,100 | 270 | 2.0 | 0.01 | 0.00 |
| | | | | | | | | | | | | | | | | | | | | | ⁻ | I |
| Spa/Eitpaga | 2 | 2050 | 0.5 | 1 475 | 2.00 | 4 425 | 0 | 4 425 | 4 425 00 | 1011 | 146 | | 0.0052 | 19 55 | 1201.69 | 0.10 | 1200.02 | E62 106 | 10/ | 2.5 | 0.75 | 0.06 |
| Spa/Fillness | 3 | 2950 | 0.5 | 1,475 | 3.00 | 4,425 | 0 | 4,425 | 4,425.00 | 1311 | 140 | | 0.0052 | 18.55 | 1291.00 | 0.10 | 1290.92 | 563,106 | 1% | 2.0 | 0.75 | 0.06 |
| | | | | | | | | | | | | | | | | | | | | | ' | ┣─── |
| | | | | | | | | | | | | | | | | | | | | | ├ ───' | |
| 3 | 2 | 0 | 0.5 | 0 | 3.00 | 0 | 12,975 | 12,975 | 12,975.00 | 1311 | 146 | 8 | 0.0052 | 2 19.41 | 1290.82 | 0.10 | 1290.07 | 563,106 | 2% | 2.5 | 1.03 | 0.10 |
| | | l | | ļ | | | | | | | | | | | | | | | | | ' | ┝─── |
| | | | | | | | | | | | | | | | | | | | | | ' | └─── |
| 2 | 1 | 0 | 380 | 0 | 4.50 | 0 | 12,975 | 12,975 | 12,975.00 | 1311 | 27 | 8 | 0.0052 | 19.97 | 1289.97 | 0.10 | 1289.82 | 563,106 | 2% | 2.5 | 1.03 | 0.10 |
| | | | | | | | | | | | | | | | | | | | | | <u> </u> | |
| | | | | | | | | | | | | | | | | | | | | | <u> </u> | L |
| Resort Rooms | 1 | 77 | 380 | 29,260 | 4.50 | 131,670 | 0 | 131,670 | 131,670.00 | 1311 | 22 | 8 | 0.0052 | 20.00 | 1289.94 | 0.10 | 1289.82 | 563,106 | 23% | 2.5 | 2.04 | 0.33 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Lift Station | 0 | 100 | 0 | 3.00 | 0 | 248,961 | 248,961 | 248,961.00 | 1311 | 16 | 8 | 0.0052 | 20.51 | 1289.72 | | 1289.64 | 563,106 | 44% | 2.5 | 2.42 | 0.46 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Proposed lift station depth to achieve proposed gravity sewer connections to buildings. | | | | | | | | | | | | | | | | | | | | | |

August 28, 2019

Smoke Tree Resort

7101 East Lincoln Drive Paradise Valley, Arizona 85253

Water Service Impact Study

Prepared for: **Gentree LLC** 3620 East Campbell Avenue Suite B Phoenix, AZ 85018

67062 CASSANDRA

EJANDRO

Contact: Sam Robinson

EPCOR Accepted By: Real finhe Date: 9-26-2019

Prepared by:

Coe & Van Loo Consultants, Inc.

4550 N. 12th Street Phoenix, AZ 85014 Contact: Cassandra Alejandro, P.E. 602.285.4763

Job # 1.01.0315301





APPENDIX B

Water Quarter Section Map







APPENDIX C

Fire Flow Test Results



Flow Test Summary

| Project Name: | EJFT 23040 - Smoketree Resort |
|------------------------|---|
| Project Address: | 7125 E Lincoln Drive, Paradise Valley, Az 85253 |
| Date of Flow Test: | 2023-02-03 |
| Time of Flow Test: | 7:40 AM |
| Data Reliable Until: | 2023-08-03 |
| Conducted By: | Steven Saethre & Sheila Schauble (EJ Flow Tests) 602.999.7637 |
| Witnessed By: | Mike Gomez (EPCOR Water) 480.450.4670 |
| City Forces Contacted: | EPCOR Water (480.450.4670) |
| | |

Raw Flow Test Data

Static Pressure:95.0 PSIResidual Pressure:75.0 PSIFlowing GPM:2,392GPM @ 20 PSI:4,885

Hydrant F₁

Pitot Pressure (1):45PSICoefficient of Discharge (1):0.9Hydrant Orifice Diameter (1):4inchesAdditional Coefficient 0.83 on orifice #1

Data with a 10 % Safety Factor

| Static Pressure: | 85.5 PSI |
|--------------------|----------|
| Residual Pressure: | 65.5 PSI |
| Flowing GPM: | 2,392 |
| GPM @ 20 PSI: | 4,540 |



EJ Flow Tests, LLC 21505 North 78th Ave. | Suite 130 | Peoria, Arizona 85382 | (602) 999-7637 | John L. Echeverri | NICET Level IV 78493 SME | C-16 FP Contractor ROC 271705 AZ | NFPA CFPS 1915 www.flowtestsummary.com Page 1

E•J Flow Test Summary

Static-Residual Hydrant



Approximate Project Site



Water Supply Curve N^{1.85} Graph



EJ Flow Tests, LLC 21505 North 78th Ave. | Suite 130 | Peoria, Arizona 85382 | (602) 999-7637 | John L. Echeverri | NICET Level IV 78493 SME | C-16 FP Contractor ROC 271705 AZ | NFPA CFPS 1915 www.flowtestsummary.com Page 2

APPENDIX D

WaterCAD Results (Domestic)

Smoketree Resort Active Scenario: Peak Hour Average Day Demand Named View - 1



Smoke Tree Resort 2023.09.02.wtg 2/9/2023

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 1 of 8

Active Scenario: Peak Hour

Average Day Demand

Pipe Table - Time: 0.00 hours

| Label | Length (ft) | Start Node | Stop Node | Diameter (in) | Material | Hazen - Willia ms C | Flow (gpm) | Velocity (ft/s) | Headloss Gradient (ft/ft) |
|-------|----------------|---------------|--------------|------------------|--------------|------------------------------|---------------|--------------------|---------------------------------|
| P-8 | 32 | R-1 | PMP-1 | 16.00 | Cast iron | 130.0 | 30.00 | 0.05 | 0.000 |
| P-9 | 29 | PMP-1 | J-9 | 16.00 | Cast iron | 130.0 | 30.00 | 0.05 | 0.0000 |
| P-19 | 260 | J-9 | J-7 | 16.00 | Ductile Iron | 130.0 | 30.00 | 0.05 | 0.0000 |
| P-64 | 12 | J-7 | J-31 | 8.00 | Copper | 135.0 | 0.00 | 0.00 | 0.0000 |
| P-68 | 37 | J-7 | J-33 | 16.00 | Ductile Iron | 130.0 | 30.00 | 0.05 | 0.0000 |
| P-69 | 445 | J-33 | J-34 | 16.00 | Ductile Iron | 130.0 | 14.30 | 0.02 | 0.0000 |
| P-70 | 16 | J-34 | J-35 | 16.00 | Ductile Iron | 130.0 | 14.30 | 0.02 | 0.0000 |
| P-72 | 155 | J-33 | J-38 | 8.00 | Ductile Iron | 130.0 | 15.71 | 0.10 | 0.0000 |
| P-73 | 33 | J-35 | J-36 | 12.00 | Ductile Iron | 130.0 | 14.30 | 0.04 | 0.0000 |
| P-74 | 1,087 | J-38 | J-39 | 8.00 | Ductile Iron | 130.0 | 0.61 | 0.00 | 0.0000 |
| P-75 | 233 | J-39 | J-37 | 8.00 | Ductile Iron | 130.0 | 4.91 | 0.03 | 0.0000 |
| P-76 | 239 | J-38 | J-37 | 8.00 | Ductile Iron | 130.0 | 5.09 | 0.03 | 0.0000 |
| P-78 | 158 | J-41 | J-39 | 8.00 | Ductile Iron | 130.0 | 14.30 | 0.09 | 0.0000 |
| P-79 | 67 | J-36 | J-41 | 12.00 | Ductile Iron | 130.0 | 14.30 | 0.04 | 0.0000 |

Smoke Tree Resort 2023.09.02.wtg 2/9/2023

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 2 of 8

Active Scenario: Peak Hour

Average Day Demand

Junction Table - Time: 0.00 hours

| Label | Elevation | Demand | Hydraulic Grade | Pressure | Pressure Head |
|-------|-----------|--------|-----------------|----------|---------------|
| | (ft) | (gpm) | (ft) | (psi) | (ft) |
| J-7 | 1,309.00 | 0.00 | 1,527.44 | 94.51 | 218.44 |
| J-9 | 1,308.00 | 0.00 | 1,527.44 | 94.94 | 219.44 |
| J-31 | 1,310.00 | 0.00 | 1,527.44 | 94.07 | 217.44 |
| J-33 | 1,310.00 | 0.00 | 1,527.44 | 94.07 | 217.44 |
| J-34 | 1,311.00 | 0.00 | 1,527.44 | 93.64 | 216.44 |
| J-35 | 1,312.00 | 0.00 | 1,527.44 | 93.21 | 215.44 |
| J-36 | 1,313.00 | 0.00 | 1,527.44 | 92.78 | 214.44 |
| J-37 | 1,314.00 | 10.00 | 1,527.43 | 92.34 | 213.43 |
| J-38 | 1,311.00 | 10.00 | 1,527.43 | 93.64 | 216.43 |
| J-39 | 1,313.00 | 10.00 | 1,527.43 | 92.78 | 214.43 |
| J-41 | 1,315.00 | 0.00 | 1,527.44 | 91.91 | 212.44 |

Reservoir Table - Time: 0.00 hours

| ID | Label | Elevation (ft) | Flow (Out net) (gpm) | Hydraulic Grade (ft) |
|----|-------|-------------------|-------------------------|-------------------------|
| 45 | R-1 | 1,308.00 | 30.00 | 1,308.00 |

Pump Table - Time: 0.00 hours

| Label | Elevation | Hydraulic Grade (Discharge) | Flow (Total) | Pump Head |
|-------|-----------|-----------------------------|--------------|-----------|
| | (ft) | (ft) | (gpm) | (ft) |
| PMP-1 | 1,307.00 | 1,527.44 | 30.00 | 219.44 |

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 3 of 8

Active Scenario: Peak Hour

Maximum Day Demand

Pipe Table - Time: 0.00 hours

| Label | Length (ft) | Start Node | Stop Node | Diameter (in) | Material | Hazen | Flow (gpm) | Velocity (ft/s) | Headloss Gradient |
|-------|----------------|---------------|--------------|------------------|--------------|-------|---------------|--------------------|----------------------|
| | | | | | | ms C | | | (11/11) |
| P-8 | 32 | R-1 | PMP-1 | 16.00 | Cast iron | 130.0 | 54.00 | 0.09 | 0.0000 |
| P-9 | 29 | PMP-1 | J-9 | 16.00 | Cast iron | 130.0 | 54.00 | 0.09 | 0.0000 |
| P-19 | 260 | J-9 | J-7 | 16.00 | Ductile Iron | 130.0 | 54.00 | 0.09 | 0.0000 |
| P-64 | 12 | J-7 | J-31 | 8.00 | Copper | 135.0 | 0.00 | 0.00 | 0.0000 |
| P-68 | 37 | J-7 | J-33 | 16.00 | Ductile Iron | 130.0 | 54.00 | 0.09 | 0.0000 |
| P-69 | 445 | J-33 | J-34 | 16.00 | Ductile Iron | 130.0 | 25.73 | 0.04 | 0.0000 |
| P-70 | 16 | J-34 | J-35 | 16.00 | Ductile Iron | 130.0 | 25.73 | 0.04 | 0.0000 |
| P-72 | 155 | J-33 | J-38 | 8.00 | Ductile Iron | 130.0 | 28.27 | 0.18 | 0.0000 |
| P-73 | 33 | J-35 | J-36 | 12.00 | Ductile Iron | 130.0 | 25.73 | 0.07 | 0.0000 |
| P-74 | 1,087 | J-38 | J-39 | 8.00 | Ductile Iron | 130.0 | 1.10 | 0.01 | 0.0000 |
| P-75 | 233 | J-39 | J-37 | 8.00 | Ductile Iron | 130.0 | 8.83 | 0.06 | 0.0000 |
| P-76 | 239 | J-38 | J-37 | 8.00 | Ductile Iron | 130.0 | 9.17 | 0.06 | 0.0000 |
| P-78 | 158 | J-41 | J-39 | 8.00 | Ductile Iron | 130.0 | 25.73 | 0.16 | 0.0000 |
| P-79 | 67 | J-36 | J-41 | 12.00 | Ductile Iron | 130.0 | 25.73 | 0.07 | 0.0000 |

Smoke Tree Resort 2023.09.02.wtg 2/9/2023

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 4 of 8

Active Scenario: Peak Hour

Maximum Day Demand

Junction Table - Time: 0.00 hours

| Label | Elevation | Demand | Hydraulic Grade | Pressure | Pressure Head | |
|-------|-----------|--------|-----------------|----------|---------------|--|
| | (ft) | (gpm) | (ft) | (psi) | (ft) | |
| J-7 | 1,309.00 | 0.00 | 1,527.41 | 94.49 | 218.41 | |
| J-9 | 1,308.00 | 0.00 | 1,527.41 | 94.93 | 219.41 | |
| J-31 | 1,310.00 | 0.00 | 1,527.41 | 94.06 | 217.41 | |
| J-33 | 1,310.00 | 0.00 | 1,527.41 | 94.06 | 217.41 | |
| J-34 | 1,311.00 | 0.00 | 1,527.41 | 93.63 | 216.41 | |
| J-35 | 1,312.00 | 0.00 | 1,527.41 | 93.20 | 215.41 | |
| J-36 | 1,313.00 | 0.00 | 1,527.41 | 92.76 | 214.41 | |
| J-37 | 1,314.00 | 18.00 | 1,527.40 | 92.33 | 213.40 | |
| J-38 | 1,311.00 | 18.00 | 1,527.40 | 93.63 | 216.40 | |
| J-39 | 1,313.00 | 18.00 | 1,527.40 | 92.76 | 214.40 | |
| J-41 | 1,315.00 | 0.00 | 1,527.41 | 91.90 | 212.41 | |

Reservoir Table - Time: 0.00 hours

| ID | Label | Elevation (ft) | Flow (Out net) (gpm) | Hydraulic Grade (ft) |
|----|-------|-------------------|-------------------------|-------------------------|
| 45 | R-1 | 1,308.00 | 54.00 | 1,308.00 |

Pump Table - Time: 0.00 hours

| Label | Elevation | Hydraulic Grade (Discharge) | Flow (Total) | Pump Head |
|-------|-----------|-----------------------------|--------------|-----------|
| | (ft) | (ft) | (gpm) | (ft) |
| PMP-1 | 1,307.00 | 1,527.41 | 54.00 | 219.41 |

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Active Scenario: Peak Hour

Peak Hour Demand

Pipe Table - Time: 0.00 hours

| Label | Length (ft) | Start Node | Stop Node | Diameter (in) | Material | Hazen - Willia ms C | Flow (gpm) | Velocity (ft/s) | Headloss Gradient (ft/ft) |
|-------|----------------|---------------|--------------|------------------|--------------|------------------------------|---------------|--------------------|---------------------------------|
| P-8 | 32 | R-1 | PMP-1 | 16.00 | Cast iron | 130.0 | 90.00 | 0.14 | 0.0000 |
| P-9 | 29 | PMP-1 | J-9 | 16.00 | Cast iron | 130.0 | 90.00 | 0.14 | 0.0000 |
| P-19 | 260 | J-9 | J-7 | 16.00 | Ductile Iron | 130.0 | 90.00 | 0.14 | 0.0000 |
| P-64 | 12 | J-7 | J-31 | 8.00 | Copper | 135.0 | 0.00 | 0.00 | 0.0000 |
| P-68 | 37 | J-7 | J-33 | 16.00 | Ductile Iron | 130.0 | 90.00 | 0.14 | 0.0000 |
| P-69 | 445 | J-33 | J-34 | 16.00 | Ductile Iron | 130.0 | 42.89 | 0.07 | 0.0000 |
| P-70 | 16 | J-34 | J-35 | 16.00 | Ductile Iron | 130.0 | 42.89 | 0.07 | 0.0000 |
| P-72 | 155 | J-33 | J-38 | 8.00 | Ductile Iron | 130.0 | 47.12 | 0.30 | 0.0001 |
| P-73 | 33 | J-35 | J-36 | 12.00 | Ductile Iron | 130.0 | 42.89 | 0.12 | 0.0000 |
| P-74 | 1,087 | J-38 | J-39 | 8.00 | Ductile Iron | 130.0 | 1.83 | 0.01 | 0.0000 |
| P-75 | 233 | J-39 | J-37 | 8.00 | Ductile Iron | 130.0 | 14.72 | 0.09 | 0.0000 |
| P-76 | 239 | J-38 | J-37 | 8.00 | Ductile Iron | 130.0 | 15.28 | 0.10 | 0.0000 |
| P-78 | 158 | J-41 | J-39 | 8.00 | Ductile Iron | 130.0 | 42.89 | 0.27 | 0.0001 |
| P-79 | 67 | J-36 | J-41 | 12.00 | Ductile Iron | 130.0 | 42.89 | 0.12 | 0.0000 |

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Active Scenario: Peak Hour

Peak Hour Demand

Junction Table - Time: 0.00 hours

| Label | Elevation | Demand | Hydraulic Grade | Pressure | Pressure Head | |
|-------|-----------|--------|-----------------|----------|---------------|--|
| | (ft) | (gpm) | (ft) | (psi) | (ft) | |
| J-7 | 1,309.00 | 0.00 | 1,527.34 | 94.47 | 218.34 | |
| J-9 | 1,308.00 | 0.00 | 1,527.34 | 94.90 | 219.34 | |
| J-31 | 1,310.00 | 0.00 | 1,527.34 | 94.03 | 217.34 | |
| J-33 | 1,310.00 | 0.00 | 1,527.34 | 94.03 | 217.34 | |
| J-34 | 1,311.00 | 0.00 | 1,527.34 | 93.60 | 216.34 | |
| J-35 | 1,312.00 | 0.00 | 1,527.34 | 93.17 | 215.34 | |
| J-36 | 1,313.00 | 0.00 | 1,527.34 | 92.73 | 214.34 | |
| J-37 | 1,314.00 | 30.00 | 1,527.33 | 92.30 | 213.33 | |
| J-38 | 1,311.00 | 30.00 | 1,527.33 | 93.60 | 216.33 | |
| J-39 | 1,313.00 | 30.00 | 1,527.33 | 92.73 | 214.33 | |
| J-41 | 1,315.00 | 0.00 | 1,527.34 | 91.87 | 212.34 | |

Reservoir Table - Time: 0.00 hours

| ID | Label Elevation | | Flow (Out net) | Hydraulic Grade | |
|----|-----------------|----------|----------------|-----------------|--|
| | (ft) | | (gpm) | (ft) | |
| 45 | R-1 | 1,308.00 | 90.00 | 1,308.00 | |

Pump Table - Time: 0.00 hours

| Label | Elevation | Hydraulic Grade (Discharge) | Flow (Total) | Pump Head | |
|-------|-----------|-----------------------------|--------------|-----------|--|
| | (ft) | (ft) | (gpm) | (ft) | |
| PMP-1 | 1,307.00 | 1,527.34 | 90.00 | 219.34 | |

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 7 of 8

APPENDIX E

WaterCAD Results (Fire Flow)

Fire Flow Node FlexTable: Fire Flow Results Table

| Label | Max Day | Fire Flow | Flow | Flow | Pressure | Junction | Pressure | Pipe w/ | Maximu | Satisfie |
|-------|---------|-----------|------------|----------|------------|----------|-----------|----------|----------|----------|
| | Demand | (Needed) | (Total | (Total | (Calculate | w/ | (Calculat | Maximu | m | s Fire |
| | (gpm) | (gpm) | Available) | Needed) | d | Minimum | ed | m | Velocity | Flow |
| | | | (gpm) | (gpm) | Residual | Pressure | Residual | Velocity | of Pipe | Constra |
| | | | | | @ Total | (Zone @ |) | | (ft/s) | ints? |
| | | | | | Flow | Total | (psi) | | | |
| | | | | | Needed) | Flow | | | | |
| | | | | | (psi) | Needed) | | | | |
| J-33 | 0.00 | 2,000.00 | 2,001.00 | 2,000.00 | 78.64 | J-41 | 78.62 | P-19 | 3.28 | True |
| J-35 | 0.00 | 2,000.00 | 2,001.00 | 2,000.00 | 77.42 | J-41 | 77.40 | P-19 | 3.28 | True |
| J-36 | 0.00 | 2,000.00 | 2,001.00 | 2,000.00 | 76.90 | J-41 | 76.88 | P-73 | 4.90 | True |
| J-38 | 18.00 | 2,000.00 | 2,019.00 | 2,018.00 | 76.32 | J-37 | 76.31 | P-72 | 8.05 | True |
| J-41 | 0.00 | 2,000.00 | 2,001.00 | 2,000.00 | 75.87 | J-37 | 75.86 | P-73 | 4.73 | True |
| J-39 | 18.00 | 2,000.00 | 2,019.00 | 2,018.00 | 75.31 | J-37 | 75.29 | P-78 | 7.57 | True |
| J-37 | 18.00 | 2,000.00 | 2,019.00 | 2,018.00 | 73.60 | J-39 | 73.58 | P-72 | 6.86 | True |

Active Scenario: Residential Fire Flow

Smoke Tree Resort 2023.09.02.wtg 2/9/2023

Bentley Systems, Inc. Haestad Methods Solution Center 76 Watertown Road, Suite 2D Thomaston, CT 06787 USA +1-203-755-1666 WaterCAD [10.03.05.05] Page 1 of 1

APPENDIX F

Water Quality Report

PARADISE VALLEY

2020 WATER QUALITY REPORT



EPCOR

epcor.com

PWS ID AZ0407056

EPC@R

Safety. Quality. Community. You'll hear these words spoken often around EPCOR.

At EPCOR, we're committed to providing you safe, quality, reliable drinking water every day. It's our mission, and it's an honor. Water fuels our economy, quenches our thirst, and breathes life into our daily routines.

But we can't take it for granted. Our water system needs a steward, one who's there behind the scenes 24 hours a day, 7 days a week to manage, maintain and invest in it.

EPCOR takes this responsibility seriously. From daily water quality checks that ensure safety and quality to investing in your water system, we're ensuring that water will be available for years to come, whether your water source is deep underground or from rivers and lakes.

While the COVID-19 pandemic has created many uncertainties, we want to remind customers that your water is safe. The virus has not been detected in drinking water supplies, and there is no evidence to suggest that it survives the standard disinfection process.

In addition to monitoring the water that comes out of your tap, we're also maintaining and improving the miles of pipelines, water mains, wells and hydrants that make up your water system. We're ensuring that water isn't wasted, and that it's a resource that will be there for the long term.

Because every drop matters.



Sincerely,

. D. Apel

Joe Gysel President, EPCOR USA, Inc.

YOU WANT TO KNOW WHAT'S IN THE WATER YOU'RE DRINKING

As your water service provider, we're committed to ensuring the quality and safety of that water. That's why you are receiving this annual water quality report from us. We hope it will help you understand your community's water a little better and what we're doing to protect it.

WHAT WILL I FIND IN THIS REPORT?

This report complies with state and U.S. Environmental Protection Agency (EPA) drinking water regulations.

In it you'll find information on:

- Where your water comes from
- Protecting your water
- What's in your water

Information in this report is compiled, in part, from analytical data generated by laboratories certified in drinking water analysis.

READ THIS REPORT – AND SHARE IT!

Reading this report and understanding your community's water is the first step. But it's also important to share this information with those who might not receive it directly. If you're a landlord, business, school or hospital, please share this report with water users in your community.

QUESTIONS?

EPCOR Customer Care: 1-800-383-0834 • **mywater@epcor.com** Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

250

ABOUT YOUR WATER PARADISE VALLEY

ABOUT YOUR DISTRICT

 EPCOR provides water service to approximately 4,900 service connections in the Paradise Valley district.

WHERE YOUR WATER COMES FROM

 Groundwater in the West Salt River Valley (WSRV) Sub-Basin, bordering the Phoenix Mountains

Additional information about the groundwater in **vour** area

- The WSRV Sub-Basin is a broad, gently sloping alluvial plain, drained by the Gila and Salt Rivers.
- Sources of groundwater recharge include natural recharge from stream flows and along mountain fronts, incidental recharge from agricultural and urban uses, and intentional recharge at constructed recharge facilities.

How We Protect Groundwater Together

Both groundwater and the associated pumping and delivery facilities are part of a complex system that needs not just monitoring, but also maintenance. From pipelines to water mains, wells to hydrants, we're ensuring that the groundwater supply is protected and accessible.

How You Can Help

Properly dispose of hazardous household chemicals on hazardous material collection days and limit your pesticide and fertilizer use. For information on household hazardous material collection days in your area, contact the Arizona Department of Environmental Quality at 602-771-2300 or Earth911.com.



NOTICE OF SOURCE WATER ASSESSMENT

In 2004, the Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the seven wells used by EPCOR-Paradise Valley. The assessment reviewed the adjacent land uses that may pose a potential risk to the sources. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, wastewater treatment plants, and mining activities. Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the water sources. The results of the assessment were that two wells had no adjacent land uses, four wells had 10 adjacent land uses that posed a low risk to the source and each well also had one adjacent land use that posed a high risk, and one well had one adjacent land use that posed a high risk.

The complete assessment is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, AZ 85007, between the hours of 8 a.m. and 5 p.m. For more information please contact ADEQ at 602-771-2300.

GETTING INVOLVED

Consulting with the community is important to us. If you have a question, concern or suggestion about your local water system, please contact our Customer Care team at 1-800-383-0834.

WHAT YOU CAN EXPECT TO FIND IN YOUR WATER

SOURCES OF DRINKING WATER

The sources of drinking water—both tap water and bottled water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over land surfaces or through the ground, it can acquire naturally occurring minerals. In some cases it can also acquire radioactive material and substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Information Hotline** at **1-800-426-4791**.

DID YOU KNOW?

- One-Part-Per-Million (mg/L or ppm) is equivalent to one inch in 16 miles.
- One-Part-Per-Billion (ug/L or ppb) is equivalent to a single 4-inch hamburger in a chain of hamburgers long enough to circle the earth at the equator 2.5 times.
- One-Part-Per-Trillion (ng/L or ppt) is equal to a single drop of water being diluted into 20 Olympicsize swimming pools.



SUBSTANCES THAT MAY BE PRESENT IN SOURCE WATER

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides, may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

ENSURING YOUR WATER

To ensure that tap water is safe to drink, the **EPA** prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. To ensure bottled water is safe to drink, U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water.
WHAT YOU CAN EXPECT TO FIND IN YOUR WATER

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants may be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the **EPA's Safe Drinking Water Information Hotline** at **1-800-426-4791**.

Lead

EPCOR monitored the water for lead and copper in 2020 at 30 residences throughout the community and met the federal lead and copper standards. The 30 houses sampled were representative of the types of houses throughout the system. If your house was sampled you would have received the analysis results. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. EPCOR is responsible for providing highquality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Information Hotline or at www.epa.gov/safewater/lead.



DID YOU KNOW?

Tap water costs a lot less than what you pay for other beverages. A gallon of water costs you about 1 penny.



Compare that to the cost of a gallon of these beverages*:

Milk = \$3.29/gallon

Orange Juice = \$2.55/gallon

Beer = \$15.00/gallon

• Bottled Water = \$1.21/gallon

• Wine = \$25/gallon

* Costs for milk, orange juice and bottled water obtained from Bureau of Labor Statistics and Beverage Marketing Association reports. Other costs determined by calculating average supermarket pricing for bottles of soda, wine and beer and converting to a gallon.

HOME WATER TREATMENT UNITS

Failure to perform maintenance on your home water treatment unit can result in poor water quality. If you installed a home water treatment system such as a water softener or reverse osmosis system, please remember to follow the manufacturer's instructions on operation and maintenance. For more information, contact the manufacturer of your treatment system for maintenance instructions or assistance. Additional information about home water treatment systems is available from the **Water Quality Association** at **630-505-0160** or by visiting **wqa.org**.

FREQUENTLY ASKED QUESTIONS

WHAT IS THE WHITE OR COLORED DEPOSIT ON MY DISHES OR FAUCETS?

In most cases, the deposits or sediments left behind after water evaporates are calcium carbonate. The amount of calcium in the water is referred to as hardness. Cleaning with white vinegar can help to dissolve and remove deposits. Using a commercial conditioner, liquid detergents or the "air-dry" option in dishwashers can help to decrease the calcium carbonate found on dishes.

ARE THE DEPOSITS OR HARD WATER HARMFUL?

Hardness and/or the deposits left by hard water don't pose a health concern and may have health benefits. We don't treat drinking water for water hardness that can result in hard water deposits.

WHAT IS THE LEVEL OF HARDNESS IN MY WATER?

The hardness in your water ranges from 12 to 20 grains per gallon (gpg).

Degree of water hardness range (gpg)

Soft Slightly Hard Moderately Hard Hard Very Hard

1 to 3.4 3.5 to 6.9 7 to 10.4 Greater than 10.5

Less than 1

WHY IS MY WATER CLOUDY OR MILKY IN APPEARANCE WHEN IT COMES OUT OF THE TAP?

Water that appears cloudy or milky is typically caused by trapped air (very small air bubbles) in the water. If this occurs, simply let the water stand for a few minutes—the air will dissipate leaving a clear glass of water. The quality of your water depends on the source water itself as well as factors such as the geology and biology of the area where the water came from. For some elements that are known to have an effect on the aesthetics of the water quality parameters, the EPA has established guidance levels known as secondary maximum contaminant level standards (SMCLs). When levels of these contaminants are found to be above the SMCLs, they may impact the aesthetic quality of the water (e.g., color, taste and odor). Although aesthetic water qualities may vary, your water meets all state and federal regulatory standards and is safe to use for all drinking water purposes. Secondary contaminants include, but are not limited to, manganese, iron and total dissolved solids (TDS).

WHY IS CHLORINE ADDED TO MY DRINKING WATER?

Chlorine is added to your water for your protection and is used as a disinfectant to ensure that harmful organisms, such as bacteria and viruses, are destroyed in the treatment process.

ARE THERE OTHER WAYS TO REMOVE THE CHLORINE TASTE OR SMELL FROM MY WATER?

To remove the taste of chlorine from your water, try these tips:

- Place water in a glass container in the refrigerator overnight, uncovered. This will let the chlorine dissipate.
- Bring your water to a rolling boil for five minutes and let it stand to cool.
- Add a slice of lemon or a few drops of lemon juice to your glass of drinking water.

WILL MY HOME TREATMENT DEVICE REMOVE CHLORINE?

Some home treatment devices can remove chlorine. Once chlorine is removed, the water should be treated like any other beverage product and used as quickly as possible. We recommend that you follow the manufacturer's instructions for maintaining the device to ensure water quality.



DEFINITION OF TERMS

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

GPG (grains per gallon): Used to describe the dissolved hardness minerals contained in water and is a unit of weight that equals 1/7,000 of a pound.

HAA5 (Haloacetic Acids): Consist of Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Bromoacetic Acid and Dibromoacetic Acid.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MNR: Monitored, not regulated.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not Applicable.

ND: None Detected.

NTU: Nephelometric turbidity units.

ppb (Parts per Billion): One part substance per billion parts water (or micrograms per liter).

pCi/L (Picocuries per Liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).



ppm (Parts per Million): One part substance per million parts water (or milligrams per liter).

ppt (Parts per Trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): Nonenforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water.

Total Dissolved Solids: An overall indicator of the amount of minerals in water.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

TTHM (Total Trihalomethanes): Consist of Chloroform, Bromoform, Bromodichloromethane and Dibromochloromethane.

UCMR (Unregulated Contaminant Monitoring Rule): Unregulated substances are measured, but maximum contaminant levels have not been established by the government.

WHAT'S IN YOUR WATER

HOW TO READ YOUR WATER QUALITY TABLE

Below, you'll see an analysis of your drinking water. Here's an example of how to read these tables:



| Start here and read across | 2020 or year prior | The goal level for that substance | Highest level of substance allowed | Highest amount that was found | Highest and lowest amounts found | Yes means the amount found is below gov't requirements | Where substance usually originates |
|-------------------------------|-----------------------|--|---|-------------------------------------|--|---|---------------------------------------|
| Substance (units) | Year Sampled | MCLG | MCL | Highest Amount Detected | Range of Detections | Compliance Achieved | Typical Sources |

YOUR WATER QUALITY TABLE

The data shown in the tables below are results from commercial laboratories certified in drinking water analysis by the Arizona Department of Health Services.

The table shows what substances were detected in your drinking water during 2020 or the last required sampling period within the last five years.

Regulated Substances Measured in the Water Leaving the Treatment Facility

| Substance (units) | Year Sampled | MCLG | MCL | Highest Amount Detected | Range of Detections | Compliance Achieved | Typical Sources |
|--|-----------------|------|-----|----------------------------|------------------------|------------------------|---|
| Arsenic (ppb) | 2020 | 0 | 10 | 8.2 ¹ | 6.4 - 8.2 | YES | Erosion of natural deposits |
| Barium (ppm) | 2017 | 2 | 2 | 0.017 | 0.017 | YES | Erosion of natural deposits |
| Chromium (ppb) | 2017 | 100 | 100 | 25 | 25 | YES | Erosion of natural deposits |
| Fluoride (ppm) | 2017 | 4.0 | 4.0 | 0.37 | 0.37 | YES | Erosion of natural deposits |
| Nitrate (ppm) | 2020 | 10 | 10 | 4.34 | 4.34 | YES | Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits |
| Selenium (ppb) | 2017 | 50 | 50 | 2.2 | 2.5 | YES | Erosion of natural deposits |
| Sodium (ppb) | 2017 | NA | MNR | 65 | 65 | YES | Erosion of natural deposits |
| Gross Alpha excluding radon and uranium (pCi/L) | 2014 | 0 | 15 | 4.8 | 4.8 | YES | Erosion of natural deposits |

WHAT'S IN YOUR WATER

Regulated Substances Measured in the Distribution System

| Substance (units) | Year Sampled | MCLG/ MRDLG | MCL/ MRDL | Highest Running Annual Average | Range of Detections | Compliance Achieved | Typical Sources |
|-------------------------|-----------------|-----------------|--------------|-----------------------------------|------------------------|------------------------|---|
| TTHMs (ppb) | 2020 | NA ² | 80 | 3.4 | 3.4 | YES | By-product of drinking water disinfection |
| Chlorine Residual (ppm) | 2020 | 4 | 4.0 | 0.86 | 0.7 - 0.86 | YES | Water additive used to control microbes |

Tap Water Samples: Lead and Copper Results

| Substance (units) | Year Sampled | MCLG | Action Level | Number of Samples | 90th Percentile | Number of Samples Above Action Level | Compliance Achieved | Typical Sources |
|-------------------|-----------------|------|-----------------|----------------------|--------------------|---|------------------------|---|
| Copper (ppm) | 2020 | 1.3 | 1.3 | 30 | 0.14 | 0 | YES | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) | 2020 | 0 | 15 | 30 | ND | 0 | YES | Corrosion of household plumbing systems; erosion of natural deposits |

Unregulated Substances Measured in the Water Leaving the Treatment Facility

| Substance (units) | Year Sampled | Range of Detections | Typical Sources | |
|---|--------------|---------------------|---------------------------------------|--|
| Hardness (grains/gallon) 2017 11.7 - 19.8 | | 11.7 - 19.8 | Natural calcium and magnesium content | |
| Total Dissolved Solids (ppm) | 2017 | 470 - 640 | Erosion of natural deposits | |

WHAT'S IN YOUR WATER

Unregulated Contaminant Monitoring Rule Substances Measured at the Treatment Facility and in the Distribution System

| Substance (units) | Year Sampled | Range of Detections | Typical Sources |
|-------------------|----------------|---------------------|---|
| HAA6Br (ppb) | 2018 | 0.7 - 1.98 | By-product of drinking water disinfection |
| НАА9 (ррb) | 2018 0.7 - 2.2 | | By-product of drinking water disinfection |

'Arsenic: EPCOR's groundwater arsenic removal facility continues to produce water with arsenic levels below the current federal and state standards. While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

2TTHM/HAA5: Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants: Trihalomethanes: bromodichloromethane (0.0 mg/L); bromoform (0.0 mg/L); chloroform (0.07 mg/L); dibromochloro-methane (0.06 mg/L). Haloacetic acids: dichoroacetic acid (0.0 mg/L); trichloroacetic acid (0.3 mg/L). Monochloroacetic acid, bromoacetic acid and dibromoacetic acid are regulated with this group but have no MCLGs.

ADDITIONAL MONITORING

In addition to the parameters listed in this table, other parameters were monitored for, including regulated pesticides, herbicides, petroleum by-products and metals. None of those parameters were detected in the water. If you have any questions about this report or your drinking water, please call our **Customer Care** team at **1-800-383-0834**.

EPCOR encourages feedback related to the quality of water that is provided to you. Please feel free to submit comments to us directly at **mywater@epcor.com**. You may also provide feedback to the Arizona Corporation Commission (ACC).



Learn more about your water at **epcor.com.**





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February 10, 2023

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Mr. Price Nosky Walton Global Holdings 8800 N Gainey Center Drive, Suite 345 Scottsdale, Arizona, 85258

RE: PARKING STATEMENT FOR SMOKETREE RESORT MIXED-USE HOTEL AND RESTAURANT PROJECT AT THE SEC OF QUAIL RUN DRIVE & LINCOLN DRIVE – PARADISE VALLEY, ARIZONA

Dear Mr. Nosky,

Thank you for retaining CivTech to provide a parking statement for the proposed Project planned to consist of 82 total resort hotel rooms, 75 lodge rooms, and 7 casita room keys. Additionally, the Smoke Tree Resort will provide a total of 17,222 square feet of quality restaurant which will be open to the public as well as resort guests, an event space, and other hotel amenities for guests to utilize. The proposed site plan is included herewith as **Attachment A**.

BACKGROUND AND PURPOSE

The Project is submitting for a Special Use Permit (SUP) within The Town of Paradise Valley. This SUP anticipates the preparation of a parking study prepared and sealed by a licensed engineer that will consider, among other things, internal capture and time-of-day usage. The information herein provides the parking requirements for the SmokeTree Resort during its peak operations on a typical weekday and weekend. Peak operations are defined as the number of parking spaces required during the peak season when all of the resort users are at full occupancy. CivTech has completed this parking study to determine the number of spaces required compared to the number of spaces provided at the resort. The results of this analysis are documented herein.

The parking ratio requirements for a report are summarized in **Table 1** per the *Town of Paradise Valley Special Use Permit Guidelines: Section 4 Resorts, July 2017.* An excerpt of the Town code is included as **Attachment B**.

| SUP | Category | Parking Requirement | | | | |
|------|--|---|--|--|--|--|
| i. | Hotel Guest | 1.2 spaces per Key | | | | |
| ii. | Homes/Dwelling Unit | 2.0 spaces per DU | | | | |
| iii. | Restaurant | 1 space per 50 SF of net dining area | | | | |
| iv. | Meeting Rooms/Auditoriums/Group Assembly | 1 space per 2 seats of public area (50 SF per seat) | | | | |
| ٧. | Retail/Sales Establishments | 1 space per 300 SF of net sales area | | | | |
| vi. | Office/Service Establishments | 1 space per 300 SF of net occupied space | | | | |

Table 1 – Town of Paradise Valley Special Use Permit (SUP) Parking Ratios

WALKER STUDY REVIEW RATES

A previous version of this parking study was reviewed by Walker Parking to determine if the noncaptive and shared parking methodology applied met the industry standard of care and standard practice of application. The review indicates that Walker Parking's calculations result in slightly less parking demand than shown herein. It also states that "Based on our review of the January 2020 Parking Study, we have determined that the materials were prepared in a professional manner and follow (sic) applicable standards of care. The proposed parking supply is projected to exceed the Project's parking needs based on ITE and ULI methodologies and standards. The operational recommendations provided within the report are sound and follow industry best practices." Significantly, the peer review specifically concluded that the methodology used in the CivTech analysis was correct and indeed even somewhat conservative. The Walker review is included in **Attachment C**.

PROPOSED DEVELOPMENT

The proposed development will consist of 82 hotel rooms, 75 lodge rooms, and 7 casita room keys. Additionally, the Smoke Tree Resort will provide a 5,000 square foot French cowboy quality restaurant, a 3,420 square foot Speakeasy bar, an 8,252 SF contemporary casual dining 3-Meal Lounge, a 550 SF pool bar, and a 200-person event space, all of which will be open to the public as well as resort guests. 130 parking stalls will be provided. **Table 2** summarizes the land uses for the proposed development.

| ⁽¹⁾ SUP | Land Use | ⁽²⁾ Quar | ntities |
|--------------------|--|----------------------|---------|
| i. | Hotel Key | 82 | Keys |
| | Arrival Lobby / Front Desk / Guest Business Center | 3,215 | SF |
| | Front Office / Administration | 2,466 | SF |
| | Hotel Kitchen / Support | 3,340 | SF |
| | Truck Dock Area | 1,780 | SF |
| | Mechanical and Electrical | 3,017 | SF |
| | Housekeeping and Laundry | 5,499 | SF |
| | Human Resources | 1,323 | SF |
| iii. | "French Cowboy" Dining / Lounge | 5,000 | SF |
| | "French Cowboy" Kitchen / Storage | 5,515 | SF |
| iii. | "Speak Easy" Bar / Lounge | 3,420 | SF |
| iii. | "3 Meal Lounge" Dining / Lounge | 8,290 | SF |
| iii. | "Pool Bar" Stool Bar / Deck Seating | 550 | SF |
| | "Pool Bar" Storage / Restrooms | 110 | SF |
| iv | Banquet Hall | 200 | Seats |
| | Danquet nui | ⁽³⁾ 6,900 | SF |
| | Banquet Staging / Kitchen / Storage | 4,510 | SF |
| vi. | Fitness / Spa Guest Facilities Indoor | 4,955 | SF |
| | Spa / Pool Facilities Outdoor | 8,346 | SF |
| | Fitness / Spa Lobby / Storage / Administration | 815 | SF |
| i. | Hotel | 80 | Keys |
| iii. | Standalone Restaurant | 5,000 | SF |
| iii. | Guest Oriented Restaurant | 12,260 | SF |
| iv. | Banquet and Meeting Space | 200 | Seats |
| vi. | Indoor Fitness / Spa | 4,955 | SF |
| vi. | Outdoor Spa / Pool | 8,346 | SF |
| | Back of House | 31,590 | SF |

Table 2 - Proposed Land Uses

(1) See Table 1 for category description

(2) Area considered back of house were not included in the parking generation

(3) Banquet space not used simultaneously with the Event Lawn



SIMILAR PROJECTS

CivTech collected parking lot information for the total parking supply provided at similar resort hotels in the Town area to provide a comparison to the proposed parking supply. The existing resort parking is summarized in **Table 3**.

| Resort | Size (Acres) | Guest Units | Other Facilities | Parking Provided | Spaces per Key |
|---|--------------------|----------------|---|----------------------------|---------------------------|
| Hermosa Inn | 6.4 | 35 | Restaurant & Meeting Space | 111 | 3.17 |
| Sanctuary | 53 | 125 | Restaurant, Meeting Space, Spa, & Tennis Courts | 369 | 2.95 |
| Camelback Inn | 117 | 453 | Restaurant, Conference, & Spa | 1157 | 2.55 |
| Ritz Carlton (Proposed) | 110 | 225 | Restaurant, Ballroom/Banquet, & Meeting Space | 480 | 2.13 |
| Montelucia | 28 | 293 | Retail & Restaurant | 610 | 2.08 |
| SmokeTree Resort | 5 | 82 | Event/Meeting space & Restaurant | 130/ ⁽⁴⁾ 150 | 1.59/ ⁽⁴⁾ 1.82 |
| Mountain Shadows | ⁽¹⁾ 8.4 | 183 | Event/Meeting Space, Restaurant, Retail, Spa, Golf | 305 | 1.67 |
| Doubletree Paradise Valley | 20 | 378 | Retail, Restaurant, Ballroom, & Meeting Space | 559 on-site 45 off-site | 1.60 |
| Scottsdale Plaza | 36.5 | 404 | Restaurant, Ballroom/Banquet, & Meeting Space | 403 | 1.00 |
| Andaz Resort | 27.5 | 145 | Restaurant, Meeting Space, & Fitness/Spa | 145 | 1.00 |
| ⁽²⁾ Average for Other Resorts | 45.2 | 249 | - | 465 | ⁽³⁾ 1.87 |

Table 3 - Comparison of Parking Provided at Town Resorts

(1) Acreage from Maricopa County Assessor's Office (does not include golf course which adds 34.2 acres)

(2) Average excludes SmokeTree Resort values

(3) Calculated by taking the average number of parking spaces and dividing by the average number of rooms

(4) Assumes valet parking supply increase of 15%

A comparison of existing resorts reveals that the proposed parking ratio is greater than several existing resorts within the Town.

SHARED PARKING ANALYSIS

For projects with a variety of land uses, the parking demand for each land use would peak at different hours. Therefore, the actual number of spaces needed in a given hour is less than cumulative parking demand. *Shared Parking* Urban Land Institute [ULI] states, "Shared parking is defined as a parking space that can be used to serve two or more individual land uses without conflict or encroachment. The opportunity to implement shared parking is the result of two conditions:

- Variations in the peak accumulation of parked vehicles as the result of different activity patterns of adjacent or nearby land uses (by hour, by day, by season)
- Relationships among land use activities that result in people's attraction to two or more land uses on a single auto trip to a given area or development"



NON-CAPTIVE ADJUSTMENT

The determination of parking requirements for a resort should also consider the utilization of many uses within the resort by the same patron staying in the resort. To consider this, parking required for each use is prorated by assigning a percentage indicating the overlap from guests already staying within the resort ("on-site demand") vs. drawing new trips (vehicles) from outside the resort ("off-site demand"). All parking demand from guest rooms and employees were determined to originate completely "off-site demand". Parking demand generated by all other uses was assumed to be used by patrons already staying at the resort ("on-site demand") and non-Resort occupants ("off-site demand"). This occurrence is known as non-captive demand. **Table 4** summarizes the non-captive adjustments for each land use.

As requested by the Town, the non-captive adjustments applied at other resorts within the Town are summarized in **Attachment D**.

DRIVE RATIO ADJUSTMENT

The determination of parking requirements for a resort should also consider the likelihood that a resort guest will drive themselves versus using a non-driving mode of transportation. Examples of non-driving modes of transportation include public transit, walking, biking, taxi, and transportation network companies (TNCs) such as Lyft/uber. To consider this, parking required for each use is prorated by assigning a percentage indicating the overlap from guests that will actually drive themselves to the resort. Data collected at the Biltmore Resort suggests that 40 percent of their patrons arrive via ride hailing services. Just over 25 percent of the patrons of the Phoenician Resort arrive via ride hailing services. This occurrence is modeled as a driving ratio adjustment. **Table 4** summarizes the driving ratio adjustment for each land use.

MONTHLY ADJUSTMENT

Monthly Reductions are used to normalize patrons' activities levels during certain times of the year based on seasonal trends. Since the primary adjacent land use is a resort hotel the occupancy is anticipated to peak in March. Data compiled from Smith Research Travel for Paradise Valley hotels include historical occupancy rates from 2009 to May 2015. Per the table, the maximum occupancy occurred in March 2013 and was 92.7%. March is historically the highest month with an average of 86.9% over the 7 years of data. The data also include average occupancy rates per day of the week. February and March are the only months that had a day of week average occupancy greater than 90%. Therefore, the occupancy on the remaining days of the year is expected to be less than 90% with a 61% average occupancy during the summer months (June through September). The peak shared parking analysis is based on 100% hotel occupancy, and therefore represents the worst-case and conservative scenario. Based on the occupancy data compiled by Smith Travel, During the off-peak season (May to January) an average occupancy of 70% can be assumed. The occupancy study data is included in **Attachment E**.

The March monthly factor was used for the respective uses reported in the *ULI 3rd Edition Shared Parking* manual. Restaurant tends to peak later in the year and therefore in March, a 2 percent patron parking reduction is applied to the restaurant base parking rates to model the peak parking season. Fitness center parking demand is also expected to be reduced by 10 percent.



Table 4 summarizes the adjustments for each use within the ITE/PV shared parking model based on conversation with the developer about the resort operation and non-captive adjustments applied at other resorts within the Town.

| | Farking would | Aujustinents | |
|---------------------------|---------------|--------------|-------------|
| Category | Monthly | Non-Captive | Drive Ratio |
| Hotel Guest Unit | 100% | 100% | 80% |
| Standalone Restaurant | 98% | 75% | 90% |
| Guest-Oriented Restaurant | 98% | 25% | 40% |
| Banquet / Meeting Rooms | 100% | 40% | 40% |
| Indoor Fitness / Spa | 90% | 10% | 100% |
| Outdoor Spa / Pool | 90% | 5% | 100% |

Table 4 – Summary of Shared Parking Model Adjustments

Parking hourly percentages have been established for the weekday and weekend for the different land uses within the proposed SmokeTree Resort. A shared parking model based on parking rates found in the Town's SUP and time of day percentages in *ITE Parking Generation Manual 5th Edition* is summarized in **Table 5**.

| Land Use | Quan | tities | SUP Rate | Gross Stalls | Adjustments | Net Stalls | TOD Reduction | Peak Demand |
|----------------------------------|--------|--------|---------------|-----------------|------------------------|---------------|------------------|----------------|
| Hotel | 82 | Keys | 1.2 per Key | 98.40 | -19.68 | 78.72 | 19.68 | 59.04 |
| Standalone Restaurant | 5,000 | SF | 1 per 50 SF | 100.00 | -33.85 | 66.15 | 13.89 | 52.26 |
| Guest- Oriented Restaurant | 12,260 | SF | 1 per 50 SF | 245.20 | -221.17 | 24.03 | 17.54 | 6.49 |
| Meeting Space | 200 | Seats | 1 per 2 Seats | 100.00 | -84.00 | 16.00 | 0.00 | 16.00 |
| Indoor Fitness/Spa | 4,955 | SF | 1 per 300 SF | 16.52 | -15.03 | 1.49 | 0.22 | 1.26 |
| Outdoor Spa/Pool | 8,346 | SF | 1 per 300 SF | 27.82 | -26.57 | 1.25 | 0.19 | 1.06 |
| Peak Season Total | | | | 587.94 | -400.30 | 187.64 | 47.40 | 140.24 |
| Off-Peak Season Total | | | | 558.42 | -394.39 ⁽¹⁾ | 164.02 | 41.02 | 123.00 |

 Table 5 – Summary of Shared Parking Model with Adjustments

(1) Off-peak adjustments shown in complete shared parking analysis in Attachment F

The Town SUP rates anticipate a gross parking demand of 588 stalls. The application of the monthly, non-captive, and drive ratio adjustment results in a total reduction of approximately 400 stalls, resulting in a total parking demand of 188 stalls. The application of time-of-day rates found within the *ITE Parking Generation Manual 5th Edition* results in a total reduction of approximately 47 stalls, resulting in a total parking demand during the peak time of 140 stalls, 10 more than is provided. During the peak season, a valet plan should be implemented to address the demand. For the remainder of the year, occupancy is anticipated to be 70%, during which a total shared parking demand of 123 spaces is anticipated, 7 fewer than is provided. The complete shared parking analysis sheets are provided in **Attachment F**.

VALET EVENT SCENARIO

To help validate the increased amount of parking available due to valet only operations, an estimated valet parking supply was estimated as 15% more than the total stalls provided. Hence, an estimated 150 parking spaces are assumed in the valet scenario.



During the peak demand season, the resort will operate in a valet only scenario which provides as few as 130 and as many as 150 parking spaces. Per the analysis, the peak parking demand on a weekday is estimated to be 140 spaces at 9:00 AM, resulting in a surplus of 10 parking spaces.

CONCLUSIONS

From the above, the following can be concluded:

- The proposed development will consist of 82 hotel rooms, 75 lodge rooms, and 5 casita room keys. Additionally, the Smoke Tree Resort will provide a 5,000 square foot French cowboy quality restaurant, a 3,420 square foot Speakeasy bar, an 8,252 SF contemporary casual dining 3-Meal Lounge, a 550 SF pool bar, and a 200-person event space, all of which will be open to the public as well as resort guests.
- The peak shared parking analysis is based on 100% hotel occupancy, and therefore represents the worst-case and conservative scenario. Based on the occupancy data compiled by Smith Travel, During the off-peak season (May to January) an average occupancy of 70% can be assumed.
- The Town SUP rates anticipate a gross parking demand of 588 stalls. The application of the • monthly, non-captive, and drive ratio adjustment results in a total reduction of approximately 400 stalls, resulting in a total parking demand of 188 stalls.
- The application of time-of-day rates found within the *ITE Parking Generation Manual 5th Edition* • results in a total reduction of approximately 47 stalls, resulting in a total parking demand during the peak time of 140 stalls, 10 more than is provided. During the peak season, a valet plan should be implemented to address the demand.
- During the peak demand season, the resort will operate in a valet only scenario which provides • as few as 130 and as many as 150 parking spaces. Per the analysis, the peak parking demand on a weekday is estimated to be 140 spaces at 9:00 AM, resulting in a surplus of 10 parking spaces.
- For the remainder of the year, during the off-peak season, occupancy is anticipated to be 70%, • during which a total shared parking demand of 123 spaces is anticipated, 7 fewer than is provided.

Thank you for allowing CivTech to assist you on this project. Please contact me with any questions you may have on this Parking Statement.

Sincerely,

CivTech

Dawn Cartier, P.E.

Attachments (6)

- A. Site Plan
- B. Town of Paradise Valley Special Use Permit Excerpt
- C. Walker Parking Study ReviewD. Non-Captive AnalysisE. Occupancy Study Data

- F. Shared Parking Model

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ATTACHMENT A

SITE PLAN





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Scale: 1/32" = 1'-0"

Conceptual Site Plan SMOKETREE RESORT 7101 E Lincoln Drive Paradise Valley , Arizona

Conceptual Project Data

| Gross Site Area: | 5.363 ac |
|------------------|------------|
| | 233,630 sf |
| Net Site Area: | 5.007 ac |
| | 218.096 sf |

Gross Area

| 49,890 sf |
|-----------|
| 61,785 sf |
| 27,205 sf |
| 27,750 sf |
| |

Total Gross Area:

166,630 sf

Total Gross Area Above 116,740 sf Grade:

Room Count

19 keys First Floor: Second Floor: 31 keys Third Floor: 27 keys Casitas: 6 keys

Total Project Keys : 83 keys

Parking

Level B1: First Floor:

76 spaces 70 spaces

Total Spaces Provided: 146 spaces 1.76 spaces per key

Color Key

| RESTROOMS |
|-----------------------|
| FOOD & BEVERAGE |
| KITCHEN |
| BOH CIRCULATION |
| вон |
| LOBBY/FOH CIRCULATION |
| GUEST ROOMS |
| BALLROOM |
| SPA / FITNESS |



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ATTACHMENT B

TOWN OF PARADISE VALLEY SPECIAL USE PERMIT EXCERPT



Section 4 <u>Resorts</u>

- 1. Site Standards
 - a. Except for properties that have existing special use permits for resort uses, the minimum site area shall be 20 acres which shall not be bisected by any public right-of-way.
 - b. Except for properties that have existing special use permits for resort uses, the site shall have primary access from and frontage of at least 300 feet on a Major or Minor Arterial as designated in the Paradise Valley General Plan.
 - c. Principal structures shall be those containing guest units or those containing guest registration areas, facility administrative offices and accessory uses. Principal structures with guest units also may contain permitted accessory uses.
 - d. Accessory structures shall be those containing accessory uses.
 - e. Service structures shall include those structures used for support and maintenance of the resort.
 - f. All parking on a site shall be at the surface or underground.
 - g. No individual retail business, office or business service shall occupy more than 2000 square feet. Entrances to any retail business, office or business service shall be from within a principal or accessory structure.
- 2. Bulk and Density Standards
 - a. Maximum building height:
 - i. Principal Structures 36 feet
 - ii. Accessory structures 24 feet
 - iii. Service structures 18 feet
 - iv. Towers and other architectural features may exceed maximum building heights, subject to special use permit or major amendment approval.
 - v. To maintain view corridors around the perimeter of a property, building heights shall be limited around property lines in accordance with the Open Space Criteria per Section 3 of the Special Use Permit Guidelines.
 - b. Lot coverage
 - *i.* Total of all structures 25%
 - ii. Total of all impervious surfaces including building footprints 60%
 - iii. Open space, which shall consist of land and water areas retained for active or passive recreation purposes or essentially undeveloped areas retained for resource protection or preservation purposes, a minimum of **40**%
 - c. Maximum density of guest units 1 unit for each 4000 sq. feet of site area

3. Perimeter Standards

- a. Minimum distance from exterior property lines where the adjacent use is residential:
 - i. Principal structures 100 feet
 - ii. Accessory structure 60 feet
 - iii. Service structure 100 feet
 - iv. Outdoor game courts and swimming pools which are generally available to all guests 200 feet
 - v. Parking lots and interior drives, excluding exterior points of access -60 feet
 - vi. Any portion of an equestrian facility, including structures, barns, stalls and corrals 200 feet
- b. Minimum distance from exterior property lines where the adjacent use is other than residential or is adjacent to a public street:
 - i. Principal structures 100 feet
 - ii. Accessory structure 40 feet
 - iii. Service structure 65 feet
 - iv. Outdoor game courts and swimming pools which are generally available to all guests 65 feet
 - v. Parking lots and interior drives, excluding exterior points of access 40 feet.
- c. There shall be a 40 foot wide landscaped area adjacent to an exterior property line where it abuts residentially zoned property.
- d. There shall be a minimum 30 foot wide landscaped area where an exterior property line abuts a public or private local or collector street and a 50 foot wide landscaped area where an exterior property line abuts a Major or Minor Arterial.
- e. The provisions of Chapter XXIV, Walls, and Fences, of the Town's Zoning Ordinance shall apply.
- 4. Parking and Circulation
 - a. On site parking shall be provided as follows:
 - i. For each guest unit 1.2 spaces.
 - ii. For each dwelling unit 2.0 spaces.
 - iii. For each 50 square feet of net dining area in restaurants 1.0 space.
 - iv. For each two seats or equivalent area in meeting rooms, auditoriums or group assembly areas 1.0 space.
 - v. For each 300 square feet of net sales areas in retail establishments 1.0 space.

- vi. For each 300 square feet of net occupied space in office and service establishments 1.0 space.
- b. These requirements may be modified in conjunction with special use permit or major amendment approval based on information documenting overlapping usage of on-site facilities by guests or visitors and as contained in an approved traffic and parking analysis.
- c. All parking and driveway areas shall be located so as to prevent lights from shining onto adjacent residential property.
- d. All parking areas and driveways located within 200 feet of adjacent residentially zoned property shall be screened with a minimum three foot high, solid, decorative wall or a landscaped berm providing equivalent screening or a combination of both.
- e. *Landscaped islands shall be provided every 100 feet within surface parking areas.* Shade tree planters shall be provided between every four stalls.
- f. No loading, truck parking, trash containers or outdoor storage area shall be located within 100 feet of adjacent residentially zoned property. All such areas shall provide visual and noise screening to minimize impacts on adjacent residential property.
- 5. Signs
 - a. An identification sign may be located at each entrance to the resort from a Major or Minor arterial street. The maximum height shall be 8 feet and the maximum sign area shall be 40 square feet, aggregate.
 - b. On entrances from all other streets, the maximum height shall be 4 feet and the maximum area shall be 32 square feet, aggregate.
 - c. All signs shall be only backlit or indirectly illuminated according to the standards in Article XXV, Signs, of the Town's Zoning Ordinance.
 - d. No moving or animated signs shall be permitted. Changeable copy is permitted within the allowable sign area.
 - e. Traffic and directional signs within the site shall not exceed 12 square feet in area, aggregate, and shall not exceed 5 feet in height.
 - f. A sign, mounted on an exterior wall of any structure shall contain only structure identification as necessary for emergency access.
- 6. Lighting as per Section 2 of the Special Use Permit Guidelines

ATTACHMENT C

WALKER STUDY REVIEW





| JATE: | July 23, 2020 |
|-----------------|---|
| ГО: | Mr. Taylor Robinson, Project Manager |
| COMPANY: | Gentree, LLC |
| ADDRESS: | 3620 East Campbell Avenue, Suite B |
| CITY/STATE: | Phoenix, AZ 85018 |
| ROM: | Jeff Weckstein, Sue Thompson |
| PROJECT NAME: | SmokeTree Resort Parking Needs Analysis |
| PROJECT NUMBER: | 23-008039.00 |
| | |

Gentree, LLC and CivTech engaged Walker Consultants ("Walker") to conduct a parking needs analysis, utilizing the 3rd Edition of the Urban Land Institute Shared Parking Model for the proposed SmokeTree Resort redevelopment at 7101 E. Lincoln Drive in the Town of Paradise Valley. A summary of Walker's findings includes the following, with detailed findings contained in the body of this memo:

Summary of Findings

Land Use Assumptions

- SmokeTree Resort
 - o 122-key hotel
 - o 3,200 square foot restaurant
 - o 500 square foot coffee shop
 - o 2,000 square foot retail/hotel sundry shop
 - o 2,000 square foot fitness center
 - o 4,000 square foot pavilion
 - o 4,200 square foot event lawn
 - o On-site parking supply:
 - 170 striped self-park spaces
 - 29 valet spaces
 - TOTAL = 199 On-site spaces

Parking Needs Analysis (Shared Parking Analysis)

- Peak parking demand is anticipated to occur at 9 p.m. on weekdays with a recommended supply of 181+ spaces.
- The weekend peak is anticipated to occur at 8 p.m. with a recommended supply of 175+ spaces.
- With plans to provide 170 striped parking spaces, and the ability to park 199 vehicles on site through utilization of valet parking, the proposed parking supply exceeds the recommended parking supply of 181<u>+</u> parking spaces.

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MEMORANDUM SmokeTree Resort Parking Needs Analysis 23-008039.00

Shared Parking Analysis

To provide an understanding of how much parking would be needed to adequately accommodate the proposed project, a parking needs analysis was conducted using the shared parking methodology.

The shared parking methodology was developed in the 1980s and has been a widely accepted industry standard for rightsizing parking facilities over the past 30+ years. Applied to mixed-use development and cities throughout the U.S., and codified in zoning ordinances as an acceptable practice, shared parking is endorsed by the Urban Land Institute (ULI), the American Planning Association (APA), the National Parking Association (NPA), and the International Council of Shopping Centers (ICSC) as an acceptable method of parking planning and management.

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support a development from a commercial and operational standpoint and protect the interests of neighboring property owners while minimizing the negative aspects of excessive land area or resources devoted to parking. The ultimate goal of a shared parking analysis is to find a peak period, reasonably predictable worst-case scenario, or design day condition.

Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment—instead of providing a minimum number of parking spaces for each use. Shared parking commonly results in a reduction of needed and required parking spaces. This reduction, which is sometimes significant, depends on the quantities and mix of uses and local code requirements.

Shared parking considers the parking demand for more than 45 different land uses; the availability and use of alternative modes of transportation; captive market effects¹; and daily, hourly, and seasonal variations. A shared parking model generates 456 parking demand computations as follows:

- 19 hours during a day, beginning at 6:00 a.m. and concluding at 1:00 a.m.
- 2 days per week, a weekday and a weekend day
- 12 months of the year
- 19 x 2 x 12 = 456 different calculations

The recommended parking capacity is derived based on the highest figure generated from these 456 computations.

For most land uses, shared parking is based on the 85th percentile of peak-hour observations, a standard espoused by the ITE, the NPA's Parking Consultants Council, and renowned parking planners. Therefore, the intent is to design for the busiest hour of the year, the busiest day of the year, and the busiest month of the year, at an 85th percentile level relative to similar properties.

This 85th percentile is a significant and high threshold to meet in terms of supplying parking capacity in that it provides a parking supply that will not be needed by most developments. The 85th percentile recommendation is informed by field data counts in the fifth edition of ITE's *Parking Generation*² and this threshold represents the 85th percentile of peak-hour observations supplied during the study. The latest edition of ULI's *Shared Parking*

¹ Recognition of a user group already on site for another primary purpose and not generating incremental parking demand for an accessory use. For example, a sandwich shop located in an office tower generates very little, if any, outside parking demand. Since the parking demand for the office tower tenants has already been accounted for, to avoid double counting, a non-captive adjustment factor is applied to the parking demand calculation for the sandwich shop. In this extreme example, the non-captive ratio may be 0 percent. ² Parking Generation, Fifth Edition. Washington DC: Institute of Transportation Engineers, 2019.



publication represents the latest thinking, best practices and recommendations espoused by parking industry. leaders and is intended to facilitate a 'just enough, no regrets' parking supply for mixed-use projects being developed in the foreseeable future.³

A shared parking analysis begins first by taking the land use quantities of the project, e.g., the number of hotel rooms, and multiplying by a base parking demand ratio and monthly and hourly adjustment factors. All base ratios and hourly and monthly adjustments are industry standards that are based on thousands of parking occupancy studies, vetted by leading parking consultants and real estate professionals, and documented within the Third Edition of ULI/ICSC's Shared Parking.

Walker, in accordance with standard shared-parking methodology, applies two additional adjustments to the base parking demand ratios, one to reflect an estimate of the local transportation modal split (called the driving ratio) and another to account for the best estimate of captive market effects⁴ (called the non-captive ratio).

The following graphic, Figure 1, provides an illustrative view of the steps involved in the shared parking analysis. This graphic is used within this document to help the reader understand the shared parking process and to also assist in communicating the step of the analysis that is being described within. The shared parking analysis process follows this graphic in consecutive order, moving from left to right.

Figure 1: Steps of Shared Parking Analysis

| STEP 1 | | STEP 2 | | STEP 3 | | STEP 4 | | | | S (Preser | TEP 5 Ice Fa | ; actors) | | STEP 6 |
|------------------------|---|-------------------------------------|---|------------------|---|--------------------------|---|-----------------|---|-------------------|-----------------|------------------|---|-----------------------|
| Land Use Program | x | Base Parking Demand Ratios | x | Driving Ratio | x | Non- Captive Ratio | = | Project Rate | x | Monthly Factor | х | Hourly Factor | = | Recommended Supply |

Source: Walker Consultants, 2020

Land Use Program

Based on development assumptions provided by Gentree, LLC and available at the time of this study, the land use program presented in Table 1 was used for this analysis.

Table 1: SmokeTree Resort Land Use Program

| Land Use | Quantity |
|---------------------------|-------------------|
| Hotel Rooms | 122 Keys |
| Hotel Fitness Center | 2,000 square feet |
| Restaurant | 3,200 square feet |
| Coffee Shop | 500 square feet |
| Pavilion | 4,000 square feet |
| Sundry/Gift Shop (Retail) | 2,000 square feet |
| Event Lawn | 4,200 square feet |
| ource: Gentree, LLC, 2020 | |

³ Shared Parking, 3rd Edition (Urban Land Institute, 2020)

⁴ Captive market means attendees who are on-site for more than one reason and are not creating additive parking demand.

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This shared parking analysis includes only the 4,200 square foot Event Lawn, the largest contiguous meeting/event space on the site. It is Walker's understanding that Gentree, LLC has agreed to a condition prohibiting concurrent use of both event spaces by separate parties.

Other areas within the hotel, such as storage space, offices, the front desk, lobby, valet/bag & bell area, pool deck, and housekeeping areas are considered ancillary land uses that do not generate additional parking demand on their own. The potential parking demand generated by hotel employees, and the space they occupy, are accounted for in the hotel employee base parking ratio, discussed below.

Base Parking Ratios

The second step of the shared parking analysis is to start with the type and quantity of land use to be analyzed. Each land use has a specific metric considered by the parking industry to be a reliable measure of the parking demand for that use. For hotel and resorts, that metric is the number of keys (hotel rooms). The parking demand is divided by the quantity for each metric to generate a base parking ratio for each land use based on that metric (i.e. for hotels the ratio is presented as "spaces per key").

Additionally, these rates are informed by thousands of field parking occupancy studies performed by parking and transportation professionals over decades. These ratios have been vetted by a team of consultants who specialize in parking demand analyses and who mutually agreed upon the use of these ratios prior to the publication of the Third Edition of *Shared Parking*.

Simply put, the base parking demand ratios represent how many parking spaces should be supplied if the spaces are unshared, and the project is in a suburban context where the driving ratio, or the number of people driving to the site, is at or near 100 percent.

Table 2 displays the base parking demand ratios used for this analysis.



Table 2: ULI Base Parking Ratios

| Land Use | Base | Ratio |
|---------------------------------|---------|---------|
| | Weekday | Weekend |
| Retail | | |
| Customer | 2.90 | 3.20 |
| Employee | 0.70 | 0.80 |
| Fine/Casual Dining ¹ | | |
| Customer | 13.25 | 15.25 |
| Employee | 2.25 | 2.50 |
| Fast Casual/Fast Food | | |
| Customer | 12.40 | 12.70 |
| Employee | 2.00 | 2.00 |
| Fitness Center | | |
| Customer | 6.60 | 5.50 |
| Employee | 0.40 | 0.25 |
| Hotel | | |
| Guest | 1.00 | 1.00 |
| Employee | 0.15 | 0.15 |
| Hotel Meeting/Event Space | | |
| Customer | 25.19 | 15.19 |
| Employee | 1.76 | 1.76 |
| | | |

¹For restaurants with a bar, the fine/casual dining category was used in the Shared Parking Model as this land uses more accurately reflects restaurants with bars. Source: *Walker Consultants*, 2020

To present a more conservative analysis, both the restaurant and coffee shop spaces were analyzed as external restaurants rather than as 'hotel restaurant,' and the retail space was analyzed as an external use as opposed to an entirely internal hotel sundry shop.

Drive Ratio Adjustment

A driving ratio adjustment is the percentage of patrons and employees that are projected to drive to the site in a personal vehicle expressed as a ratio. This excludes all non-driving modes of transportation including public transportation, walking, bicycling, taxi, ride-hailing (Lyft/Uber), and carpooling passengers.

Employees

Driving-ratio adjustments for employees were made to the base ratios based on U.S. Census data (2012-2016 American Community Survey). Approximately 85 percent of those who work within the census tract the SmokeTree Resort is located drive alone to work when single occupant vehicles and drivers of carpools are combined. WALKER CONSULTANTS | 5



MEMORANDUM SmokeTree Resort Parking Needs Analysis 23-008039.00

Approximately 15% of employees working within the census tract bike, walk, ride transit, or carpool to work, with carpooling being the predominant form of non-single occupant vehicle commuting to work in the tract. A 10% drive ratio reduction was applied to the drive ratio for retail, restaurant, and hotel employees based on this data.

Hotel Guests

For the hotel use, *Shared Parking*, provides extensive guidance on drive ratios based on the many studies and discussions related to this frequently studied land use. For Resort Hotels, the guidance is a 50% drive ratio, as many guests arrive via taxi, shuttle, hired vehicle (limo, black car), or ridehailing service (Uber, Lyft). For business hotels in suburban locations, the guidance in the 3rd Edition of *Shared Parking* is a 59% drive ratio on weekdays and a 69% drive ratio on weekdays. This guidance includes a 10% reduction in drive ratios from the 2nd Edition of shared parking to account for the advent and increased use of app-based ridehailing services that has occurred in the past decade. The recommendation in the Shared Parking Model is to reduce hotel drive ratios even further for ridehailing use as appropriate. Data and information collected by CivTech at other resorts in Paradise Valley suggest that 25-40% of resort guests utilize ride-hailing services to access the sites.⁵ Walker heard anecdotally in the City Council Work Session on June 11, 2020 that there is a feeling that hotels in Paradise Valley, due to its location, would have drive-in rates higher than normal. To present a conservative analysis, Walker has utilized a 75% drive ratio for hotel guests in this parking needs analysis, which is above the recommendation in *Shared Parking.*

Hotel Event Space Patrons

Similarly, *Shared Parking* provides extensive guidance on drive ratios for hotel meeting/event space. For Resort Hotels, the guidance is a 50% drive ratio, as many event attendees arrive via taxi, shuttle, hired vehicle (limo, black car), or ridehailing service (Uber, Lyft). For business hotels in suburban locations, the guidance in the 3rd Edition of *Shared Parking* is a 68% drive ratio. This guidance includes a 10% reduction in drive ratios from the 2nd Edition of shared parking to account for the advent and increased use of app-based ridehailing services that has occurred in the shared Parking Model is to reduce hotel drive ratios even further for ridehailing use as appropriate. Similar to the hotel guest drive-in rate, Walker has utilized a 75% drive ratio, which is above the recommendation in *Shared Parking*, for hotel event patrons to present a conservative analysis.

Retail/Dining Customers

A 100% drive ratio for retail/dining, and miscellaneous customers was assumed in the analysis.

A summary of the drive ratios used for this analysis is provided in Table 3.

⁵ Parking Study for SmokeTree Resort, Civtech (May 22, 2020)



Table 3: Drive Ratio Assumptions

| Land Use | Drive | Ratio |
|--|------------|------------|
| | Weekday | Weekend |
| Retail, Dining & Fitness | | |
| Customer | 100% | 100% |
| Employee | 90% | 90% |
| Hotel Rooms Customer Employee | 75% 90% | 75% 90% |
| Hotel Event Space Visitor Employee | 75% 90% | 75% 90% |

Source: Walker Consultants, 2020

Non-Captive Adjustments

A shared parking analysis recognizes that people often visit two or more land uses housed within the same development site, without increasing their on-site parking use. For example, a hotel guest who has lunch at the project's restaurants and arrived by automobile creates parking demand for one, not two parking spaces. A non-captive ratio allows for an adjustment to the parking needs analysis by taking into account the portion of on-site visitors who are already accounted for as hotel demand and are therefore not creating additional parking demand. This double counting is avoided by applying what is referred to as a "non-captive ratio," the inverse of a captive ratio, and which therefore only counts those cars parked specifically for the intended uses.

Non-captive ratios can vary from one property to the next and from one function to the next within the same property. Typically, a reduction ranging from 20 to 70 percent has been used by parking and transportation professionals to fine-tune the parking requirements for mixed-use projects with primary attractors and secondary attractors.

Retail/Restaurant

The 3rd Edition of the shared parking model includes a non-captive adjustment subroutine model which calculates the non-captive ratio for several secondary land uses. Walker utilized the results of this subroutine for the restaurant and retail spaces.

Fitness Center

A hotel fitness center is typically considered an entirely captive land use since, typically, only hotel guests have access to the fitness center via keycard. For this analysis, a 90% non-captive ratio was utilized to account for the slim possibility that an external visitor might come to the SmokeTree Resort to use the fitness center with a registered guest.

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Hotel Meeting/Event Space

Similar to the drive ratio, the shared parking model provides guidance on non-captive assumptions for hotel meeting/event space. For a resort hotel, the suggested non-captive ratio is 25%, for a typical business hotel in a suburban location, the suggested non-captive ratio is 60% on weekdays and 70% on weekends. This analysis has utilized the suggested non-captive factors for business hotels in a suburban location for the SmokeTree Resort.

| Table | Table 4: Non-Captive Ratio Assumptions | | | | | | | | | | | | |
|---|--|--------------------|--------------------|--------------------|--|--|--|--|--|--|--|--|--|
| Land Use | Drive Ratio | | | | | | | | | | | | |
| | Weekday Daytime | Weekday Evening | Weekend Daytime | Weekend Evening | | | | | | | | | |
| Retail Customer Employee | 78% 100% | 67% 100% | 85% 100% | 71% 100% | | | | | | | | | |
| Fine/Casual Restaurant Customer Employee | 66% 100% | 73% 100% | 58% 100% | 76% 100% | | | | | | | | | |
| Fast/Casual Restaurant (Coffee Shop) Customer Employee | 10% 100% | 10% 100% | 10% 100% | 10% 100% | | | | | | | | | |
| Fitness Center Customer Employee | 10% 100% | 10% 100% | 10% 100% | 10% 100% | | | | | | | | | |
| Hotel Rooms Customer Employee | 100% 100% | 100% 100% | 100% 100% | 100% 100% | | | | | | | | | |
| Hotel Event Space Visitor Employee | 60% 100% | 60% 100% | 70% 100% | 70% 100% | | | | | | | | | |

Source: Walker Consultants, 2020

Presence Factors

After the land use has been quantified and base parking ratios have been applied, adjustments are made to account for parking demand variability by the hour of day and month of the year. These time-based adjustments are referred to as a "presence" adjustment.



Presence is expressed as a percentage of the peak hour demand on a design day (a typical day) for both time of day and month of the year. The 3rd Edition of *Shared Parking* provides these presence factors for the proposed project land uses which were used for this analysis.

Shared Parking Analysis Results

The SmokeTree Resort is projected to experience the period of peak parking demand at approximately 9:00 p.m. on weekdays. The recommended parking supply to serve the project at this time is $181\pm$ spaces. On weekends, the peak is expected to occur at approximately at 8:00 p.m., with a recommended supply of $175\pm$ spaces.

The proposed SmokeTree resort redevelopment plans include 170 striped parking spaces on-site, with the ability to park 199 vehicles on-site through the use of valet parking and stacking of vehicles in drive aisles when necessary.

The results of this analysis are shown in Table 5 and Table 6.

Table 5: SmokeTree Resort Weekday Peak Recommended Parking Supply

| | | | | | Weekday | | Weekday | | | |
|-------------------------------------|----------|--------|-------|---------|--------------------------|------------------|-------------------|----------------|----------------|----------------------|
| Land Use | Project | t Data | Base | Driving | Non- Captive Ratio | Project Ratio | Unit For Ratio | Peak Hr Adj | Peak Mo Adj | Estimated Parking |
| | Quantity | Unit | natio | Auj | | | | 9 PM | March | Demand |
| Retail (<400 ksf) | 2,000 | sf GLA | 2.90 | 100% | 67% | 1.95 | ksf GLA | 45% | 70% | 1 |
| Employee | | | 0.70 | 90% | 100% | 0.63 | | 60% | 79% | 1 |
| Fine/Casual Dining | 3,200 | sf GLA | 13.25 | 100% | 73% | 9.67 | ksf GLA | 100% | 98% | 31 |
| Employee | | | 2.25 | 90% | 100% | 2.03 | | 100% | 100% | 7 |
| Fast Casual/Fast Food (Coffee Shop) | 500 | sf GLA | 12.40 | 100% | 10% | 1.24 | ksf GLA | 30% | 97% | - |
| Employee | | | 2.00 | 90% | 100% | 1.80 | | 40% | 100% | - |
| Fitness Center | 2,000 | sf GLA | 6.60 | 100% | 10% | 0.66 | ksf GLA | 70% | 85% | 1 |
| Employee | | | 0.40 | 90% | 100% | 0.36 | | 20% | 95% | - |
| Hotel-Leisure | 122 | keys | 1.00 | 75% | 100% | 0.75 | key | 95% | 100% | 87 |
| Hotel Employees | 122 | keys | 0.15 | 90% | 100% | 0.14 | key | 20% | 100% | 3 |
| Meeting/Banquet | 4,200 | sf GLA | 25.19 | 75% | 60% | 11.34 | ksf GLA | 100% | 100% | 48 |
| Meeting/Banquet Employees | 4,200 | sf GLA | 1.76 | 90% | 100% | 1.58 | ksf GLA | 20% | 100% | 2 |
| | | | | | | | | Custom | er/Visitor | 168 |
| | | | | | | | | Emp | lovee | 13 |

Source: Walker Consultants, 2020



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Total

175

Table 6: SmokeTree Resort Weekend Peak Recommended Parking Supply

| | | | | Weekend Weekend | | | | | Peak Hr Peak Mo Adj Adj 8 PM March 55% 70% 75% 79% 100% 98% 100% 97% 50% 97% 50% 97% 50% 97% 20% 100% 100% 100% 100% 100% 100% 100% 100% 100% | |
|-------------------------------------|--------------|--------|-------|-----------------|-----------------|------------------|-------------------|----------------|---|----------------------|
| Land Use | Project Data | | Base | Driving | Non- Captive | Project Ratio | Unit For Ratio | Peak Hr Adj | Peak Mo Adj | Estimated Parking |
| | Quantity | Unit | Matio | Auj | Ratio | Hatto | mario | 8 PM | March | Demand |
| Retail (<400 ksf) | 2,000 | sf GLA | 3.20 | 100% | 71% | 2.27 | ksf GLA | 65% | 70% | 2 |
| Employee | | | 0.80 | 90% | 100% | 0.72 | | 75% | 79% | 1 |
| Fine/Casual Dining | 3,200 | sf GLA | 15.25 | 100% | 76% | 11.57 | ksf GLA | 100% | 98% | 36 |
| Employee | | | 2.50 | 90% | 100% | 2.25 | | 100% | 100% | 7 |
| Fast Casual/Fast Food (Coffee Shop) | 500 | sf GLA | 12.70 | 100% | 10% | 1.27 | ksf GLA | 50% | 97% | - |
| Employee | | | 2.00 | 90% | 100% | 1.80 | | 60% | 100% | 1 |
| Fitness Center | 2,000 | sf GLA | 5.50 | 100% | 10% | 0.55 | ksf GLA | 30% | 85% | - |
| Employee | | | 0.25 | 90% | 100% | 0.23 | | 50% | 95% | - |
| Hotel-Leisure | 122 | keys | 1.00 | 75% | 100% | 0.75 | key | 90% | 100% | 83 |
| Hotel Employees | 122 | keys | 0.15 | 90% | 100% | 0.14 | key | 20% | 100% | 4 |
| Meeting/Banquet | 4,200 | sf GLA | 15.19 | 75% | 70% | 7.98 | ksf GLA | 100% | 100% | 34 |
| Meeting/Banquet Employees | 4,200 | sf GLA | 1.76 | 90% | 100% | 1.58 | ksf GLA | 100% | 100% | 7 |
| | | | | | | | | Cust | omer | 155 |
| | | | | | | | | Emn | lovee | 20 |

Source: Walker Consultants, 2020

With plans to provide 170 striped parking spaces, and the ability to park 199 vehicles on site through utilization of valet attendants and stacked parking, the proposed parking supply exceeds the recommended parking supply.

This analysis utilized the gross leasable area for the project's commercial uses, consistent wit the ULI Shared Parking methodology for such uses. If the gross square footage of the retail/sundry shop (4,000 square feet) and Coffee Shop (1,800 square feet) were utilized instead, the recommended parking supply would increase from 181<u>+</u> spaces to 190<u>+</u> spaces.

Figure 2 shows projected parking accumulation by hour on weekdays.

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Total

181





MEMORANDUM SmokeTree Resort Parking Needs Analysis 23-008039.00



Source: Walker Consultants, 2020

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ATTACHMENT D

NON-CAPTIVE ANALYSIS





ATTACHMENT D – INTERNAL CAPTURE PERCENTAGE DATA

This summation has been prepared to document the reasoning for internal capture percentages presented as part of the Smoketree Resort parking study. Several parking studies for resorts in the Town of Paradise Valley have been prepared; many at existing locations where actual data was provided. The procedure for internal capture at many of the resorts was a result of negotiation with the Town's Planning Commission which was documented as the approved percentages within each of the previous parking studies however, there is not formal documentation of how the percentages were developed.

The Smoketree Resort internal capture percentages represent the likely operations of the hotel once it is constructed. While there is not a hotel operator selected, the size and scale of the hotel limit the potential operators and suggests a boutique resort can be assumed. Discussions with the developer to understand their vision for the resort help guide the research and application of internal capture. These internal capture rates are then compared to rates that have been applied at other resorts within the Town with similar characteristics to verify if the assumption is reasonable.

Discussions with the developer and a comparison to other similar resorts suggests that the internal restaurant will be less likely to attract non-guests while the external restaurant would be more likely to attract non-guests. The rates chosen are similar to Mountain Shadows and provide for more utilization by off-site patrons than Ritz Carlton or the Sanctuary. The guest-oriented retail internal capture percentage was discussed during a meeting on Monday, January 13th, 2020 with the Town of Paradise Valley. Based on the meeting a guest-oriented retail internal capture of 65% has been utilized within the TIA and also applied within the parking study.

The parking study for the Ritz Carlton Resort evaluated 200 hotel keys, 120 villa units, and 151,000 square feet of retail/restaurant. The percentages applied to the uses were originally determined from data provided by Marriott International for their resort at Camelback Inn and a verification by The Ritz Carlton Hotel Company, LLC. In subsequent parking evaluations within the Town of Paradise Valley, the assumptions have been refined to reflect the character and demographics of a typical resort user.

The parking study for the Mountain Shadows Resort evaluated a hotel with 183 key units, a condominium hotel building with 45 owned units, golf course, fitness center, and event/meeting space. The internal capture percentages were assumed for this development based upon previous studies and operations at other resorts within the Town of Paradise Valley.

A parking study was prepared for the Sanctuary Resort in February 2012 when they proposed an expansion of 20 additional guest rooms and 1,350 SF of spa area. The Sanctuary Resort is slightly different from the other resorts in the sense that has a large spa that attracts guests not staying at the resort. The internal capture percentages utilized for their February 2012 parking study were provided by the Sanctuary, using data from the daily operations of the existing resort.

A parking study was prepared for the Hermosa Inn Resort in June 2018. Hermosa Inn is proposing to reallocate approved event space with some new construction while not exceeding the existing approved square footage. With a 49-room boutique resort hotel, 2,177 square feet of net indoor dining area, 3,800 square feet of outdoor patios for the Last Drop Bar and Lon's, 4,424 square feet of exclusive use meeting space, and 2,000 square feet of spa. The internal capture percentages utilized were based upon their daily operations of the existing resort.

Please refer the table below summarizing interaction at Smoketree Resort and at other resorts.

| Internal Capture Percentages | | | | | | | | | | |
|------------------------------|------------|----------------|---------------|-------------|-----------|---------|---------|----------------|------|--|
| | Resource | nt Guest Ories | hedland Alone | let Oiented | and Honel | Fittess | Weeting | Space Event SP | se . | |
| Smoketree | 50% | 60% | 65% | - | 90% | 90% | 50% | 50% | | |
| Ritz Carlton | 75% | 75% | - | 90% | 90% | 100% | 75% | 75% | | |
| Mountain Shadows | 60% | 50% | 100% | 50% | 90% | 90% | 50% | 75% | | |
| Sanctuary | 75% | 75% | 60% | 75% | 60% | - | 10% | 10% | | |
| Hermosa Inn | 25% | 25% | - | - | 90% | 90% | 75% | 75% | | |



ATTACHMENT **E**

OCCUPANCY STUDY DATA



Smoketree Resort Occupancy by Month and Day of Week

| Occupancy (%) Paradi | se Valley R | esorts per S | mith Travel | Research | | | | | | | | |
|-----------------------|-------------|--------------|-------------|----------|------|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | Мау | June | July | August | September | October | November | December |
| 2009 | 59.2 | 66.0 | 77.9 | 67.6 | 70.8 | 57.7 | 52.1 | 54.5 | 58.7 | 69.3 | 68.4 | 58.6 |
| 2010 | 74.4 | 80.9 | 88.0 | 79.3 | 71.4 | 66.4 | 51.6 | 53.8 | 61.4 | 74.9 | 75.3 | 54.2 |
| 2011 | 74.0 | 81.6 | 89.0 | 82.7 | 70.5 | 65.5 | 59.0 | 56.8 | 61.4 | 68.0 | 72.8 | 56.6 |
| 2012 | 74.2 | 82.7 | 90.2 | 75.6 | 69.6 | 68.0 | 54.2 | 70.2 | 61.6 | 74.2 | 67.6 | 56.7 |
| 2013 | 79.8 | 83.4 | 92.7 | 84.4 | 73.2 | 69.8 | 58.2 | 61.1 | 64.1 | 74.2 | 74.2 | 63.2 |
| 2014 | 69.1 | 82.0 | 83.0 | 76.8 | 72.7 | 65.9 | 63.0 | 66.8 | 65.8 | 73.8 | 69.3 | 60.7 |
| 2015 | 73.9 | 82.6 | 87.7 | 80.8 | 73.2 | | | | | | | |
| Avg | 72.1 | 79.9 | 86.9 | 78.2 | 71.7 | 65.5 | 56.4 | 60.6 | 62.2 | 72.4 | 71.3 | 58.3 |
| | | | | | | | | | | | | |
| Resort Parking | January | February | March | April | Мау | June | July | August | September | October | November | December |
| @ 100% Occupancy | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 |
| w/ Driver Rate @ 50% | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| @ Avg. Occupancy | 158 | 175 | 191 | 172 | 157 | 144 | 124 | 133 | 137 | 159 | 156 | 128 |
| w/ Driver Rate @ 50%* | 79 | 88 | 95 | 86 | 79 | 72 | 62 | 66 | 68 | 80 | 78 | 64 |

| Occupancy (%) Paradi | Dccupancy (%) Paradise Valley Resorts per Smith Travel Research | | | | | | | | | | | | | | |
|-----------------------|---|------|------|------|------|------|------|----|-------|--|--|--|--|--|--|
| | Sun | Mon | Tue | Wed | Thu | Fri | Sat | То | tal I | | | | | | |
| Jun - 14 | 47.0 | 63.1 | 75.7 | 73.3 | 65.2 | 69.6 | 72.7 | | | | | | | | |
| Jul - 14 | 46.1 | 59.3 | 64.5 | 62.2 | 61.6 | 70.9 | 76.1 | | | | | | | | |
| Aug - 14 | 54.9 | 63.5 | 69.1 | 66.2 | 61.3 | 70.9 | 80.1 | | | | | | | | |
| Sep - 14 | 55.6 | 65.5 | 70.9 | 69.5 | 65.5 | 63.1 | 68.9 | | | | | | | | |
| Oct - 14 | 55.4 | 77.1 | 82.8 | 77.0 | 71.8 | 73.9 | 78.1 | | | | | | | | |
| Nov - 14 | 48.5 | 63.3 | 68.5 | 79.3 | 78.7 | 79.3 | 72.1 | | | | | | | | |
| Dec - 14 | 54.5 | 55.1 | 59.3 | 66.9 | 60.8 | 60.8 | 67.9 | | | | | | | | |
| Jan - 15 | 55.4 | 70.3 | 81.7 | 87.5 | 80.0 | 72.1 | 70.0 | | | | | | | | |
| Feb - 15 | 78.6 | 76.7 | 86.8 | 91.0 | 86.4 | 80.9 | 77.5 | | | | | | | | |
| Mar - 15 | 79.1 | 84.0 | 88.7 | 91.6 | 94.0 | 87.3 | 92.1 | | | | | | | | |
| Apr - 15 | 61.6 | 83.2 | 88.7 | 86.3 | 83.3 | 78.1 | 82.2 | | | | | | | | |
| May - 15 | 64.9 | 69.8 | 77.3 | 72.5 | 67.9 | 77.7 | 81.1 | | | | | | | | |
| Total Year | 58.5 | 69.1 | 75.8 | 76.7 | 73.1 | 73.7 | 76.5 | | | | | | | | |
| Resort Parking | Sun | Mon | Tue | Wed | Thu | Fri | Sat | То | tal | | | | | | |
| @ 100% Occupancy | 220 | 220 | 220 | 220 | 220 | 220 | 220 | | | | | | | | |
| w/ Driver Rate @ 50% | 110 | 110 | 110 | 110 | 110 | 110 | 110 | | | | | | | | |
| @ Avg. Occupancy | 128 | 152 | 166 | 168 | 161 | 162 | 168 | | | | | | | | |
| w/ Driver Rate @ 50%* | 64 | 76 | 83 | 84 | 80 | 81 | 84 | | | | | | | | |

* The Sanctuary averages a 50% drive-in rate of occupied rooms.

ATTACHMENT F

SHARED PARKING MODEL



| Shared Parking Use: | | ⁽¹⁾ H | otel | | ⁽³⁾ Standalone Restaurant | | | | ⁽²⁾ Guest-Oriented Restaurant | | | | ⁽⁴⁾ Banquet Meeting Space | | | | ⁽⁵⁾ Ir | ndoor F | itness / | Spa | ⁽⁵⁾ C | Outdoor | Spa / P | ool | Totals/Averages | | | | | |
|-----------------------|------------------------|------------------|-----------|---------------|--------------------------------------|---------------|-------------|------------------------|---|---------------|------------------------|-------------------|--------------------------------------|------------------------|------------|---------|-------------------|------------------------|----------|---------|------------------|---------|---------|----------|-----------------|-------------|----------------|------------|--------------------|--------------------|
| Gross Size | 82.0 Key | | | 5,000.0 SF | | | 12,260.0 SF | | | | | 200.0 | Seats | | 4,955.0 SF | | | | 8 | ,346.0 | SF | | | | | | | Valet | | |
| Location Setting | General Urban/Suburban | | | an | General Urban/Suburban | | | General Urban/Suburban | | | General Urban/Suburban | | | General Urban/Suburban | | | | General Urban/Suburban | | | | | | | | Self Park | Event | | | |
| Monthly Factor | | 10 | 0% | | 100% | | | 100% | | | | 100% | | | 100% | | | | | 10 | 0% | | | | | | Provided | Only | | |
| Weekday Parking Rate | 1.20 | per | 1 | Unit | 1.00 | per | 50 | SF | 1.00 | per | 50 | 50 SF | | 1.00 per | | 2 Seats | | per | 300 | SF | 1.00 per 300 SF | | | SF | | | | | | |
| Weekend Parking Rate | 1.20 | per | 1 | Unit | 1.00 per 50 SF | | 1.00 | 50 | 50 SF 1 | | 1.00 per 2.9 | | Seats | 1.00 per | | 300 | SF | 1.00 per | | 300 SF | | | | | | 130 | 149.5 | | | |
| Weekday Req. Spaces | 98.40 Spaces | | | 100.00 Spaces | | 245.20 Spaces | | | | 100.00 Spaces | | | 16.52 Spaces | | | | 27.82 Spaces | | | | 587 | .94 | Weekday | / Spaces | | | | | | |
| Weekend Req. Spaces | | 98.40 | Spaces | | 100.00 9 | | Spaces | | 245.20 S | | Spaces | Spaces | | 100.00 | Spaces | baces | | 16.52 | Spaces | Spaces | | 27.82 | Spaces | | 587.94 | | Weekend Spaces | | | 15% |
| Adjustments | NC | 100% | DR | ### | NC | 100% | DR ### | | NC 100% | | DR | DR ### | | NC 100% | | DR ### | | NC 100% | | DR 100% | | NC 100% | | 100% | NC = Non-Capti | | | | | |
| PERIOD: | wee | каау | wee | skena | wee | каау | wee | kena | wee | каау | wee | kena ه | wee | eekday Weekend | | wee | каау | wee | skend | wee | каау | wee | kena " | Weekday | | weekend | | | | |
| Harris Davisation | eak | Jace | eak | Jace | eak | bace | eak | Dace | eak | Dace | eak | bace | eak | Jace | eak | Jace | eak | bace | eak | bace | eak | bace | eak | Jace | e of | Jace | ੂਰ ਹ | Dace | а. 4 | ч. ч |
| Hours Beginning | of P | of SI | of P | of SI | of P | of SI | of P | of St | of P | of Sp | of P | of S _I | of P | of SI | of P | of SI | of P | of S _I | of P | of Sp | of P | of Sp | of P | of Sp | g % quin | al of Sp | g % | of St | of aces vide | of aces vide |
| | % | # | % | # | % | # | % | " # | % | * | % | # | % | " # | % | # | % | # | % | ° # | % | ° # | % | # | Ave | Tot # (| Ave | Tot # (| Pel Spi Pro | Pel Spi Pro |
| 6:00 AM | 81% | 79.7 | 60% | 59.0 | 10% | 10.0 | 10% | 10.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 15.7% | 92.2 | 12.2% | 71.5 | 70.9% | 61.6% |
| 7:00 AM | 82% | 80.7 | 60% | 59.0 | 10% | 10.0 | 10% | 10.0 | 73% | 179.0 | 100% | 245.2 | 0% | 0.0 | 30% | 30.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 45.9% | 269.7 | 58.6% | 344.2 | 264.8% | 230.3% |
| 8:00 AM | 89% | 87.6 | 68% | 66.9 | 10% | 10.0 | 10% | 10.0 | 100% | 245.2 | 90% | 220.7 | 30% | 30.0 | 60% | 60.0 | 0% | 0.0 | 80% | 13.2 | 0% | 0.0 | 80% | 22.3 | 63.4% | 372.8 | 66.9% | 393.1 | 302.4% | 262.9% |
| 9:00 AM | 100% | 98.4 | 70% | 68.9 | 10% | 10.0 | 10% | 10.0 | 63% | 154.5 | 80% | 196.2 | 60% | 60.0 | 60% | 60.0 | 20% | 3.3 | 100% | 16.5 | 20% | 5.6 | 100% | 27.8 | 56.4% | 331.7 | 64.5% | 379.4 | 291.8% | 253.8% |
| 10:00 AM | 97% | 95.4 | 68% | 66.9 | 10% | 10.0 | 10% | 10.0 | 57% | 139.8 | 65% | 159.4 | 60% | 60.0 | 60% | 60.0 | 62% | 10.2 | 100% | 16.5 | 62% | 17.2 | 100% | 27.8 | 56.6% | 332.7 | 57.9% | 340.6 | 262.0% | 227.8% |
| 11:00 AM | 91% | 89.5 | 69% | 67.9 | 10% | 10.0 | 10% | 10.0 | 42% | 103.0 | 62% | 152.0 | 60% | 60.0 | 65% | 65.0 | 55% | 9.1 | 97% | 16.0 | 55% | 15.3 | 97% | 27.0 | 48.8% | 286.9 | 57.5% | 337.9 | 259.9% | 226.0% |
| 12:00 PM | 86% | 84.6 | 69% | 67.9 | 10% | 10.0 | 10% | 10.0 | 39% | 95.6 | 40% | 98.1 | 65% | 65.0 | 65% | 65.0 | 44% | 7.3 | 79% | 13.0 | 44% | 12.2 | 79% | 22.0 | 46.7% | 274.8 | 46.9% | 276.0 | 212.3% | 184.6% |
| 1:00 PM | 81% | 79.7 | 64% | 63.0 | 10% | 10.0 | 10% | 10.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 41% | 6.8 | 81% | 13.4 | 41% | 11.4 | 81% | 22.5 | 40.7% | 239.1 | 42.9% | 252.4 | 194.1% | 168.8% |
| 2:00 PM | 83% | 81.7 | 59% | 58.1 | 25% | 25.0 | 25% | 25.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 36% | 5.9 | 73% | 12.1 | 36% | 10.0 | 73% | 20.3 | 43.2% | 253.8 | 44.0% | 258.9 | 199.1% | 173.2% |
| 3:00 PM | 79% | 77.7 | 57% | 56.1 | 32% | 32.0 | 45% | 45.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 41% | 6.8 | 71% | 11.7 | 41% | 11.4 | 71% | 19.8 | 44.1% | 259.1 | 46.9% | 276.0 | 212.3% | 184.6% |
| 4:00 PM | 81% | 79.7 | 61% | 60.0 | 42% | 42.0 | 39% | 39.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 69% | 11.4 | 70% | 11.6 | 69% | 19.2 | 70% | 19.5 | 48.2% | 283.5 | 46.5% | 273.5 | 218.1% | 189.6% |
| 5:00 PM | 75% | 73.8 | 63% | 62.0 | 64% | 64.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 100% | 100.0 | 96% | 15.9 | 65% | 10.7 | 96% | 26.7 | 65% | 18.1 | 53.0% | 311.6 | 52.6% | 309.3 | 239.7% | 208.4% |
| 6:00 PM | 73% | 71.8 | 73% | 71.8 | 87% | 87.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 100% | 16.5 | 62% | 10.2 | 100% | 27.8 | 62% | 17.2 | 62.8% | 369.4 | 54.1% | 317.8 | 284.1% | 247.1% |
| 7:00 PM | 75% | 73.8 | 86% | 84.6 | 79% | 79.0 | 58% | 58.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 85% | 14.0 | 30% | 5.0 | 85% | 23.6 | 30% | 8.3 | 60.7% | 356.7 | 56.9% | 334.4 | 274.4% | 238.6% |
| 8:00 PM | 87% | 85.6 | 96% | 94.5 | 65% | 65.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 50% | 8.3 | 0% | 0.0 | 50% | 13.9 | 0% | 0.0 | 57.7% | 339.0 | 53.2% | 312.9 | 260.8% | 226.7% |
| 9:00 PM | 90% | 88.6 | 100% | 98.4 | 42% | 42.0 | 35% | 35.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 50.5% | 296.8 | 53.0% | 311.9 | 239.9% | 208.6% |
| 10:00 PM | 95% | 93.5 | 96% | 94.5 | 21% | 21.0 | 33% | 33.0 | 10% | 24.5 | 32% | 78.5 | 50% | 50.0 | 50% | 50.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 32.1% | 189.0 | 43.5% | 255.9 | 196.9% | 171.2% |
| 11:00 PM | 96% | 94.5 | 88% | 86.6 | 21% | 21.0 | 15% | 15.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 20.1% | 117.9 | 17.7% | 104.0 | 90.7% | 78.9% |
| 12:00 AM | 95% | 93.5 | 79% | 77.7 | 10% | 10.0 | 15% | 15.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 18.0% | 105.9 | 16.2% | 95.2 | 81.5% | 70.9% |
| 1 Averaged hourly per | centages | are from | 1 ITE Par | kina Ger | neration. | 5th Editi | on for IT | E Code | 310 (Hot | el. Subu | rban) & I | TE Code | 330 (Re | sort Hot | el) | | | | | | | | | | 63% | 372.8 | | | | |

67%

394 on Weekends.

9:00 AM

393.1

2 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 936 (Coffee/Donut Shop without Drive-through Window, Weekday)

3 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 932 (High-Turnover Sit-Down Restaurant, Weekday Family Breakfast, lunch, and dinner)

4 ITE Parking Generation, 5th Edition does not provide hourly percentages for conference/meeting space. Hourly percentages from Urban Land Institute's Shared Parking, 2nd Edition for Hotel Conference/Banquet were utilized.

5 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 492 (Health/Fitness Club, Weekday).

Restaurant time of day percentages adjusted to match restaurant hours of operation

| Shared Parking Use: | | ⁽¹⁾ H | otel | | ⁽³⁾ Standalone Restaurant | | | | ⁽²⁾ Guest-Oriented Restaurant | | | | ⁽⁴⁾ Banquet Meeting Space | | | | ⁽⁵⁾ Ir | ndoor F | itness / | Spa | ⁽⁵⁾ C | outdoor | Spa / P | ool | Totals/Averages | | | | | |
|-----------------------|------------------------|-------------------|---------|------------------------|--------------------------------------|----------|------------------------|----------------|---|------------------------|-----------|----------|--------------------------------------|------------------|-----------|--------|-------------------|------------|-----------|---------|------------------|-----------|-----------|----------|-----------------|-------------|----------------|------------|--------------------|-------------------|
| Gross Size | 82.0 Key | | | 5 | 6,000.0 | SF | | 12,260.0 SF | | | | | 200.0 | Seats | | 4 | ,955.0 | SF | | 8 | ,346.0 | SF | | | | | | | Valet | |
| Location Setting | General Urban/Suburban | | | General Urban/Suburban | | | General Urban/Suburban | | | General Urban/Suburban | | | Ge | eneral Urb | an/Suburt | ban | Ge | neral Urba | an/Suburb | an | | | | | Self Park | Event | | | | |
| Monthly Factor | | 70 | 1% | | 100% | | | | 100% | | | | 100% | | | | | 10 | 0% | | | 10 | 0% | | | | | | Provided | Only |
| Weekday Parking Rate | 1.20 | per | 1 | Unit | 1.00 per 50 SF | | | 1.00 per 50 SF | | | 1.00 | per | 2 | Seats | 1.00 | per | 300 | SF | 1.00 | per | 300 | SF | | | | | | | | |
| Weekend Parking Rate | 1.20 | per | 1 | Unit | 1.00 per | | 50 | SF | 1.00 per | | 50 | 50 SF | | 1.00 per 2 Seats | | Seats | 1.00 per 300 SF | | | 1.00 | per | 300 | SF | | | | 130 | 149.5 | | |
| Weekday Req. Spaces | 68.88 Spaces | | | 100.00 Spaces | | | 245.20 Spaces | | | 100.00 Spaces | | | | 16.52 | Spaces | | 27.82 Spaces | | | | 558 | 3.42 | Weekday | / Spaces | | | | | | |
| Weekend Req. Spaces | | 68.88 | Spaces | | | 100.00 | Spaces | | 245.20 Sp | | Spaces | paces | | 100.00 | Spaces | baces | | 16.52 | Spaces | Spaces | | 27.82 | Spaces | 1000/ | 558.42 | | Weekend Spaces | | | 15% |
| Adjustments | NC | 100% | DR | ### | NC | 100% | DR ### | | NC 100% | | DR | DR ### | | 100% | DR | DR ### | | NC 100% | | DR 100% | | 100% | % DR 100% | | NC = Non-Capu | | | | | |
| PERIOD: | wee | каау | wee | ekena | wee | каау | wee | skend | wee | каау | wee | kena | wee | каау | wee | kena | wee | каау | wee | skend | wee | каау " | wee | kena ، | Weekday | | vveekend " | | | |
| User Destadas | eak | bace | eak | Dace | eak | bace | eak | Jace | eak | Jace | eak | Dace | eak | Jace | eak | bace | eak | bace | eak | bace | eak | Jace | eak | Jace | e of | bace | g of | Dace | а. 4 | ч |
| Hours Beginning | of P | of S _I | of P | of Sp | of P | of SI | of P | of SI | of P | of SI | of P | of St | of P | of SI | of P | of Sp | of P | of SI | of P | of SI | of P | of Sp | of P | of Sp | g % quirt | al of St | g % nint | of St | of aces vide | cen of aces |
| | ~ % | # | ~ % | # | % | 4 | % | # | % | # | ~% | # | % | # | ~ % | # | - % | 4 | ~ % | # | ~ % | 4 * | ~ % | # | Avg Rec | Tot # 0 | Avg Rec | Tot # 0 | Per Spi | Per % |
| 6:00 AM | 81% | 55.8 | 60% | 41.3 | 10% | 10.0 | 10% | 10.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 12.2% | 68.2 | 9.6% | 53.8 | 52.5% | 45.6% |
| 7:00 AM | 82% | 56.5 | 60% | 41.3 | 10% | 10.0 | 10% | 10.0 | 73% | 179.0 | 100% | 245.2 | 0% | 0.0 | 30% | 30.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 44.0% | 245.5 | 58.5% | 326.5 | 251.2% | 218.4% |
| 8:00 AM | 89% | 61.3 | 68% | 46.8 | 10% | 10.0 | 10% | 10.0 | 100% | 245.2 | 90% | 220.7 | 30% | 30.0 | 60% | 60.0 | 0% | 0.0 | 80% | 13.2 | 0% | 0.0 | 80% | 22.3 | 62.1% | 346.5 | 66.8% | 373.0 | 286.9% | 249.5% |
| 9:00 AM | 100% | 68.9 | 70% | 48.2 | 10% | 10.0 | 10% | 10.0 | 63% | 154.5 | 80% | 196.2 | 60% | 60.0 | 60% | 60.0 | 20% | 3.3 | 100% | 16.5 | 20% | 5.6 | 100% | 27.8 | 54.1% | 302.2 | 64.2% | 358.7 | 275.9% | 239.9% |
| 10:00 AM | 97% | 66.8 | 68% | 46.8 | 10% | 10.0 | 10% | 10.0 | 57% | 139.8 | 65% | 159.4 | 60% | 60.0 | 60% | 60.0 | 62% | 10.2 | 100% | 16.5 | 62% | 17.2 | 100% | 27.8 | 54.5% | 304.1 | 57.4% | 320.6 | 246.6% | 214.4% |
| 11:00 AM | 91% | 62.7 | 69% | 47.5 | 10% | 10.0 | 10% | 10.0 | 42% | 103.0 | 62% | 152.0 | 60% | 60.0 | 65% | 65.0 | 55% | 9.1 | 97% | 16.0 | 55% | 15.3 | 97% | 27.0 | 46.6% | 260.0 | 56.9% | 317.6 | 244.3% | 212.4% |
| 12:00 PM | 86% | 59.2 | 69% | 47.5 | 10% | 10.0 | 10% | 10.0 | 39% | 95.6 | 40% | 98.1 | 65% | 65.0 | 65% | 65.0 | 44% | 7.3 | 79% | 13.0 | 44% | 12.2 | 79% | 22.0 | 44.7% | 249.4 | 45.8% | 255.6 | 196.6% | 171.0% |
| 1:00 PM | 81% | 55.8 | 64% | 44.1 | 10% | 10.0 | 10% | 10.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 41% | 6.8 | 81% | 13.4 | 41% | 11.4 | 81% | 22.5 | 38.5% | 215.2 | 41.8% | 233.5 | 179.6% | 156.2% |
| 2:00 PM | 83% | 57.2 | 59% | 40.6 | 25% | 25.0 | 25% | 25.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 36% | 5.9 | 73% | 12.1 | 36% | 10.0 | 73% | 20.3 | 41.1% | 229.3 | 43.2% | 241.5 | 185.7% | 161.5% |
| 3:00 PM | 79% | 54.4 | 57% | 39.3 | 32% | 32.0 | 45% | 45.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 41% | 6.8 | 71% | 11.7 | 41% | 11.4 | 71% | 19.8 | 42.2% | 235.8 | 46.4% | 259.2 | 199.4% | 173.4% |
| 4:00 PM | 81% | 55.8 | 61% | 42.0 | 42% | 42.0 | 39% | 39.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 65% | 65.0 | 69% | 11.4 | 70% | 11.6 | 69% | 19.2 | 70% | 19.5 | 46.5% | 259.6 | 45.8% | 255.5 | 199.7% | 173.6% |
| 5:00 PM | 75% | 51.7 | 63% | 43.4 | 64% | 64.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 65% | 65.0 | 100% | 100.0 | 96% | 15.9 | 65% | 10.7 | 96% | 26.7 | 65% | 18.1 | 51.8% | 289.4 | 52.1% | 290.7 | 223.6% | 194.4% |
| 6:00 PM | 73% | 50.3 | 73% | 50.3 | 87% | 87.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 100% | 16.5 | 62% | 10.2 | 100% | 27.8 | 62% | 17.2 | 62.3% | 347.8 | 53.0% | 296.2 | 267.6% | 232.7% |
| 7:00 PM | 75% | 51.7 | 86% | 59.2 | 79% | 79.0 | 58% | 58.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 85% | 14.0 | 30% | 5.0 | 85% | 23.6 | 30% | 8.3 | 59.9% | 334.6 | 55.3% | 309.0 | 257.3% | 223.8% |
| 8:00 PM | 87% | 59.9 | 96% | 66.1 | 65% | 65.0 | 40% | 40.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 50% | 8.3 | 0% | 0.0 | 50% | 13.9 | 0% | 0.0 | 56.1% | 313.3 | 51.0% | 284.6 | 241.0% | 209.6% |
| 9:00 PM | 90% | 62.0 | 100% | 68.9 | 42% | 42.0 | 35% | 35.0 | 27% | 66.2 | 32% | 78.5 | 100% | 100.0 | 100% | 100.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 48.4% | 270.2 | 50.6% | 282.3 | 217.2% | 188.9% |
| 10:00 PM | 95% | 65.4 | 96% | 66.1 | 21% | 21.0 | 33% | 33.0 | 10% | 24.5 | 32% | 78.5 | 50% | 50.0 | 50% | 50.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 28.8% | 161.0 | 40.8% | 227.6 | 175.1% | 152.2% |
| 11:00 PM | 96% | 66.1 | 88% | 60.6 | 21% | 21.0 | 15% | 15.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 16.0% | 89.6 | 14.0% | 78.1 | 68.9% | 59.9% |
| 12:00 AM | 95% | 65.4 | 79% | 54.4 | 10% | 10.0 | 15% | 15.0 | 1% | 2.5 | 1% | 2.5 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 13.9% | 77.9 | 12.9% | 71.9 | 59.9% | 52.1% |
| 1 Averaged hourly per | rentages | are from | ITF Par | rkina Ger | neration | 5th Edit | on for IT | F Code | 310 (Hot | el Subu | rhan) & i | ITE Code | 330 (Re | sort Hot | ല) | | | | | | | | | | 62% | 347 82 | | | | |

67% 373.0

373 on Weekends.

9:00 AM

2 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 936 (Coffee/Donut Shop without Drive-through Window, Weekday)

3 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 932 (High-Turnover Sit-Down Restaurant, Weekday Family Breakfast, lunch, and dinner)

4 ITE Parking Generation, 5th Edition does not provide hourly percentages for conference/meeting space. Hourly percentages from Urban Land Institute's Shared Parking, 2nd Edition for Hotel Conference/Banquet were utilized.

5 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 492 (Health/Fitness Club, Weekday).

Restaurant time of day percentages adjusted to match restaurant hours of operation
| Shared Parking Use: | e: ⁽¹⁾ Hotel ⁽³⁾ Standalone Restaurant | | | urant | ⁽²⁾ Guest-Oriented Restaurant | | | | ⁽⁴⁾ Banquet Meeting Space | | | ⁽⁵⁾ Indoor Fitness / Spa ⁽⁵⁾ Outdoor Sp | | | Spa / P | ool | Totals/Averages | | | ; | | | | | | | | | | |
|-----------------------|--|------------|-----------|-------------|---|------------|-----------|--------|--------------------------------------|-----------|-----------|---|-----------|-----------|-----------|-------|-----------------|-----------|-----------|------------|------|--------------|-----------|-------|-------------|----------------------|-------------|-----------|----------------|------------------|
| Gross Size | | 82.0 | Key | | 5 | ,000.0 | SF | | 12 | ,260.0 | SF | | | 200.0 | Seats | | 4 | ,955.0 | SF | | 8 | ,346.0 | SF | | | | | | | Valet |
| Location Setting | Ge | neral Urba | an/Suburb | an | Ge | neral Urba | an/Suburb | an | Ge | neral Urb | an/Suburt | ban | Ge | neral Urb | an/Suburt | an | Ge | neral Urb | an/Suburt | ban | Ge | neral Urba | an/Suburb | an | | | | | Self Park | Event |
| Monthly Factor | | 10 | 0% | | | 98 | % | | | 98 | 3% | | | 10 | 0% | _ | | 90 | 0% | | | 90 | 1% | | | | | | Provided | Only |
| Weekday Parking Rate | 1.20 | per | 1 | Unit | 1.00 | per | 50 | SF | 1.00 | per | 50 | SF | 1.00 | per | 2 | Seats | 1.00 | per | 300 | SF | 1.00 | per | 300 | SF | | | | | 100 | Provided |
| Weekend Parking Rate | 1.20 | per | 1 | Unit | 1.00 | per | 50 | SF | 1.00 | per | 50 | SF | 1.00 | per | 2 | Seats | 1.00 | per | 300 | SF | 1.00 | per | 300 | SF | 10 | 7.6 | 147 L L J | | 130 | 149.5 |
| Weekday Req. Spaces | | 78.72 | Spaces | | | 66.15 | Spaces | | | 24.03 | Spaces | | | 16.00 | Spaces | | | 1.49 | Spaces | | | 1.25 | Spaces | | 18 | 7.6 | weekday | y Spaces | | 1 5 0/ |
| Adjuctmonts | NC | 1000/- | Spaces | 900/- | NC | 00.15 | Spaces | 000/- | NC | 24.03 | Spaces | 400% | NC | 10.00 | Spaces | 400% | NC | 1.49 | Spaces | 1000/- | NC | 1.25 | Spaces | 1000% | 18 NC = | 7.0 = Non-Cantive | DR = Drive | a Spaces | | 15% |
| PERIOD | Wee | kday | Wee | kond | Wee | kday | Wee | kond | Wee | z3-70 | Wee | 4070 | Wee | kday | Wee | 40-70 | Wee | kday | Wee | kond | Wee | 5-70 kdav | Wee | kond | Wee | kdav | Weel | kond | | |
| TERIOD. | wee | Kuay ន | wee | skenu si | wee | Kuay S | wee | s s | wee | Kuay ន | wee | s s | wee | Kuay ន | wee | s s | wee | Kuay ន | wee | skenu S | wee | Kudy ន | wee | si si | WEE | Kudy ន | wee | kenu ม | | |
| Hours Posinning | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | eak | pace | ed | pace | ed | pace | ي هي ب | g t |
| nours beginning | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | of P | of S | g % quir | of S | g % quir | of S | of of or | of of aces |
| | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | Å | °1 # | Av Re | ° + | Pro % | Prc Sp |
| 6:00 AM | 81% | 63.8 | 60% | 47.2 | 10% | 6.6 | 10% | 6.6 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 37.6% | 70.6 | 28.8% | 54.1 | 54.3% | 47.2% |
| 7:00 AM | 82% | 64.6 | 60% | 47.2 | 10% | 6.6 | 10% | 6.6 | 73% | 17.5 | 100% | 24.0 | 0% | 0.0 | 30% | 4.8 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 47.3% | 88.7 | 44.1% | 82.7 | 68.2% | 59.3% |
| 8:00 AM | 89% | 70.1 | 68% | 53.5 | 10% | 6.6 | 10% | 6.6 | 100% | 24.0 | 90% | 21.6 | 30% | 4.8 | 60% | 9.6 | 0% | 0.0 | 80% | 1.2 | 0% | 0.00 | 80% | 1.0 | 56.2% | 105.5 | 49.9% | 93.6 | 81.2% | 70.6% |
| 9:00 AM | 100% | 78.7 | 70% | 55.1 | 10% | 6.6 | 10% | 6.6 | 63% | 15.1 | 80% | 19.2 | 60% | 9.6 | 60% | 9.6 | 20% | 0.3 | 100% | 1.5 | 20% | 0.25 | 100% | 1.3 | 59.0% | 110.6 | 49.7% | 93.3 | 85.1% | 74.0% |
| 10:00 AM | 97% | 76.4 | 68% | 53.5 | 10% | 6.6 | 10% | 6.6 | 57% | 13.7 | 65% | 15.6 | 60% | 9.6 | 60% | 9.6 | 62% | 0.9 | 100% | 1.5 | 62% | 0.78 | 100% | 1.3 | 57.5% | 108.0 | 47.0% | 88.1 | 83.1% | 72.2% |
| 11:00 AM | 91% | 71.6 | 69% | 54.3 | 10% | 6.6 | 10% | 6.6 | 42% | 10.1 | 62% | 14.9 | 60% | 9.6 | 65% | 10.4 | 55% | 0.8 | 97% | 1.4 | 55% | 0.69 | 97% | 1.2 | 53.0% | 99.4 | 47.4% | 88.9 | 76.5% | 66.5% |
| 12:00 PM | 86% | 67.7 | 69% | 54.3 | 10% | 6.6 | 10% | 6.6 | 39% | 9.4 | 40% | 9.6 | 65% | 10.4 | 65% | 10.4 | 44% | 0.7 | 79% | 1.2 | 44% | 0.55 | 79% | 1.0 | 50.8% | 95.3 | 44.3% | 83.1 | 73.3% | 63.7% |
| 1:00 PM | 81% | 63.8 | 64% | 50.4 | 10% | 6.6 | 10% | 6.6 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 41% | 0.6 | 81% | 1.2 | 41% | 0.51 | 81% | 1.0 | 47.1% | 88.4 | 41.2% | 77.3 | 68.0% | 59.1% |
| 2:00 PM | 83% | 65.3 | 59% | 46.4 | 25% | 16.5 | 25% | 16.5 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 36% | 0.5 | 73% | 1.1 | 36% | 0.45 | 73% | 0.9 | 53.2% | 99.7 | 44.3% | 83.1 | 76.7% | 66.7% |
| 3:00 PM | 79% | 62.2 | 57% | 44.9 | 32% | 21.2 | 45% | 29.8 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 41% | 0.6 | 71% | 1.1 | 41% | 0.51 | 71% | 0.9 | 54.0% | 101.4 | 50.5% | 94.7 | 78.0% | 67.8% |
| 4:00 PM | 81% | 63.8 | 61% | 48.0 | 42% | 27.8 | 39% | 25.8 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 69% | 1.0 | 70% | 1.0 | 69% | 0.86 | 70% | 0.9 | 58.8% | 110.3 | 50.0% | 93.8 | 84.9% | 73.8% |
| 5:00 PM | 75% | 59.0 | 63% | 49.6 | 64% | 42.3 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 100% | 16.0 | 96% | 1.4 | 65% | 1.0 | 96% | 1.20 | 65% | 0.8 | 64.4% | 120.9 | 54.1% | 101.5 | 93.0% | 80.9% |
| 6:00 PM | 73% | 57.5 | 73% | 57.5 | 87% | 57.6 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 100% | 1.5 | 62% | 0.9 | 100% | 1.25 | 62% | 0.8 | 74.7% | 140.2 | 58.3% | 109.3 | 107.9% | 93.8% |
| 7:00 PM | 75% | 59.0 | 86% | 67.7 | 79% | 52.3 | 58% | 38.4 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 85% | 1.3 | 30% | 0.4 | 85% | 1.06 | 30% | 0.4 | 72.5% | 136.1 | 69.6% | 130.6 | 104.7% | 91.0% |
| 8:00 PM | 87% | 68.5 | 96% | 75.6 | 65% | 43.0 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 50% | 0.7 | 0% | 0.0 | 50% | 0.63 | 0% | 0.0 | 72.1% | 135.3 | 67.0% | 125.7 | 104.1% | 90.5% |
| 9:00 PM | 90% | 70.8 | 100% | 78.7 | 42% | 27.8 | 35% | 23.2 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 64.5% | 121.1 | 66.9% | 125.6 | 96.6% | 84.0% |
| 10:00 PM | 95% | 74.8 | 96% | 75.6 | 21% | 13.9 | 33% | 21.8 | 10% | 2.4 | 32% | 7.7 | 50% | 8.0 | 50% | 8.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 52.8% | 99.1 | 60.3% | 113.1 | 87.0% | 75.6% |
| 11:00 PM | 96% | 75.6 | 88% | 69.3 | 21% | 13.9 | 15% | 9.9 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 47.8% | 89.7 | 42.3% | 79.4 | 69.0% | 60.0% |
| 12:00 AM | 95% | 74.8 | 79% | 62.2 | 10% | 6.6 | 15% | 9.9 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.00 | 0% | 0.0 | 43.5% | 81.6 | 38.6% | 72.4 | 62.8% | 54.6% |
| 1 Averaged hourly per | centages | are from | ITE Par | king Ger | eration, | 5th Editi | on for IT | E Code | 310 (Hot | el, Subu | rban) & I | TE Code | e 330 (Re | sort Hot | el). | | | | | | | | | | 75% | 140.24 | | | | |

70% 130.6

141 on Weekdays.

6:00 PM

2 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 936 (Coffee/Donut Shop without Drive-through Window, Weekday)

3 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 932 (High-Turnover Sit-Down Restaurant, Weekday Family Breakfast, lunch, and dinner)

4 ITE Parking Generation, 5th Edition does not provide hourly percentages for conference/meeting space. Hourly percentages from Urban Land Institute's Shared Parking, 2nd Edition for Hotel Conference/Banquet were utilized.

5 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 492 (Health/Fitness Club, Weekday).

Restaurant time of day percentages adjusted to match restaurant hours of operation

| Shared Parking Use: | | ⁽¹⁾ H | otel | | ⁽³⁾ Sta | Indalon | e Resta | urant | (; | ²⁾ Guest- Resta | Oriente | d | ⁽⁴⁾ Bar | nquet M | eeting S | Space | ⁽⁵⁾ Ir | 1door F | itness / | Spa | ⁽⁵⁾ O | utdoor | Spa / P | ool | Totals/Averages | | | | | |
|-----------------------|----------|------------------|-----------|----------|--------------------|-----------|-----------|--------|----------|-------------------------------|-----------|---------|--------------------|-----------|-----------|-------|-------------------|------------|-----------|--------|------------------|-----------|-----------|--------|-----------------|---------------|---------------|---------------|--------------------------------|--------------------------------|
| Gross Size | | 82.0 | Key | | 5 | ,000.0 | SF | | 12 | 2,260.0 | SF | | | 200.0 | Seats | | 4 | ,955.0 | SF | | 8 | ,346.0 | SF | | | | | | | Valet |
| Location Setting | Ger | neral Urba | an/Suburb | an | Ge | neral Urb | an/Suburt | ban | Ge | eneral Urb | an/Suburb | an | Ge | neral Urb | an/Suburb | an | Ge | eneral Urb | an/Suburt | ban | Ge | neral Urb | an/Suburb | an | | | | | Self Park | Event |
| Monthly Factor | | 70 | 1% | | | 98 | 3% | | | 98 | 3% | | | 10 | 0% | | | 90 | 0% | | | 90 |)% | | | | | | Provided | Only |
| Weekday Parking Rate | 1.20 | per | 1 | Unit | 1.00 | per | 50 | SF | 1.00 | per | 50 | SF | 1.00 | per | 2 | Seats | 1.00 | per | 300 | SF | 1.00 | per | 300 | SF | | | | | | |
| Weekend Parking Rate | 1.20 | per | 1 | Unit | 1.00 | per | 50 | SF | 1.00 | per | 50 | SF | 1.00 | per | 2 | Seats | 1.00 | per | 300 | SF | 1.00 | per | 300 | SF | | | | | 130 | 149.5 |
| Weekday Req. Spaces | | 55.10 | Spaces | | | 66.15 | Spaces | | | 24.03 | Spaces | | | 16.00 | Spaces | | | 1.49 | Spaces | | | 1.25 | Spaces | | 164 | .02 | Weekday | / Spaces | | |
| Weekend Req. Spaces | | 55.10 | Spaces | | | 66.15 | Spaces | | | 24.03 | Spaces | | | 16.00 | Spaces | | | 1.49 | Spaces | | | 1.25 | Spaces | | 164 | .02 | Weekend | Spaces | | 15% |
| Adjustments | NC | 100% | DR | 80% | NC | 75% | DR | 90% | NC | 25% | DR | 40% | NC | 40% | DR | 40% | NC | 10% | DR | 100% | NC | 5% | DR | 100% | NC = | = Non-Captive | e, DR = Drive | Ratio | | |
| PERIOD: | Wee | kday | Wee | kend | Wee | kday | Wee | kend | Wee | kday | Weel | kend | Wee | kday | Wee | kend | Wee | kday | Wee | kend | Wee | kday | Wee | kend | Wee | kday | Weel | kend | | |
| Hours Beginning | Peak | Spaces | Peak | Spaces | Peak | Spaces | Peak | Spaces | Peak | Spaces | Peak | Spaces | Peak | Spaces | Peak | Space | Peak | Space | Peak | Spaces | Peak | Spaces | Peak | Spaces | % of ired | Spaces | % of ired | Space | es ded | es ded |
| | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | % of | # of | Avg ' | Total # of | Avg ' | Total # of | Perce % of Spao Provi | Perce % of Spac Provi |
| 6:00 AM | 81% | 44.6 | 60% | 33.1 | 10% | 6.6 | 10% | 6.6 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 31.4% | 51.5 | 24.3% | 39.9 | 39.6% | 34.4% |
| 7:00 AM | 82% | 45.2 | 60% | 33.1 | 10% | 6.6 | 10% | 6.6 | 73% | 17.5 | 100% | 24.0 | 0% | 0.0 | 30% | 4.8 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 42.3% | 69.3 | 41.8% | 68.5 | 53.3% | 46.4% |
| 8:00 AM | 89% | 49.0 | 68% | 37.5 | 10% | 6.6 | 10% | 6.6 | 100% | 24.0 | 90% | 21.6 | 30% | 4.8 | 60% | 9.6 | 0% | 0.0 | 80% | 1.2 | 0% | 0.0 | 80% | 1.0 | 51.5% | 84.5 | 47.3% | 77.5 | 65.0% | 56.5% |
| 9:00 AM | 100% | 55.1 | 70% | 38.6 | 10% | 6.6 | 10% | 6.6 | 63% | 15.1 | 80% | 19.2 | 60% | 9.6 | 60% | 9.6 | 20% | 0.3 | 100% | 1.5 | 20% | 0.3 | 100% | 1.3 | 53.0% | 87.0 | 46.8% | 76.7 | 66.9% | 58.2% |
| 10:00 AM | 97% | 53.5 | 68% | 37.5 | 10% | 6.6 | 10% | 6.6 | 57% | 13.7 | 65% | 15.6 | 60% | 9.6 | 60% | 9.6 | 62% | 0.9 | 100% | 1.5 | 62% | 0.8 | 100% | 1.3 | 51.9% | 85.1 | 43.9% | 72.0 | 65.4% | 56.9% |
| 11:00 AM | 91% | 50.1 | 69% | 38.0 | 10% | 6.6 | 10% | 6.6 | 42% | 10.1 | 62% | 14.9 | 60% | 9.6 | 65% | 10.4 | 55% | 0.8 | 97% | 1.4 | 55% | 0.7 | 97% | 1.2 | 47.5% | 78.0 | 44.3% | 72.6 | 60.0% | 52.1% |
| 12:00 PM | 86% | 47.4 | 69% | 38.0 | 10% | 6.6 | 10% | 6.6 | 39% | 9.4 | 40% | 9.6 | 65% | 10.4 | 65% | 10.4 | 44% | 0.7 | 79% | 1.2 | 44% | 0.6 | 79% | 1.0 | 45.7% | 75.0 | 40.7% | 66.8 | 57.7% | 50.2% |
| 1:00 PM | 81% | 44.6 | 64% | 35.3 | 10% | 6.6 | 10% | 6.6 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 41% | 0.6 | 81% | 1.2 | 41% | 0.5 | 81% | 1.0 | 42.2% | 69.3 | 37.9% | 62.2 | 53.3% | 46.3% |
| 2:00 PM | 83% | 45.7 | 59% | 32.5 | 25% | 16.5 | 25% | 16.5 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 36% | 0.5 | 73% | 1.1 | 36% | 0.5 | 73% | 0.9 | 48.9% | 80.1 | 42.2% | 69.1 | 61.7% | 53.6% |
| 3:00 PM | 79% | 43.5 | 57% | 31.4 | 32% | 21.2 | 45% | 29.8 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 41% | 0.6 | 71% | 1.1 | 41% | 0.5 | 71% | 0.9 | 50.4% | 82.7 | 49.5% | 81.2 | 63.6% | 55.3% |
| 4:00 PM | 81% | 44.6 | 61% | 33.6 | 42% | 27.8 | 39% | 25.8 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 65% | 10.4 | 69% | 1.0 | 70% | 1.0 | 69% | 0.9 | 70% | 0.9 | 55.6% | 91.2 | 48.4% | 79.4 | 70.1% | 61.0% |
| 5:00 PM | 75% | 41.3 | 63% | 34.7 | 64% | 42.3 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 65% | 10.4 | 100% | 16.0 | 96% | 1.4 | 65% | 1.0 | 96% | 1.2 | 65% | 0.8 | 62.9% | 103.2 | 52.8% | 86.6 | 79.4% | 69.0% |
| 6:00 PM | 73% | 40.2 | 73% | 40.2 | 87% | 57.6 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 100% | 1.5 | 62% | 0.9 | 100% | 1.3 | 62% | 0.8 | 75.0% | 123.0 | 56.1% | 92.1 | 94.6% | 82.3% |
| 7:00 PM | 75% | 41.3 | 86% | 47.4 | 79% | 52.3 | 58% | 38.4 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 85% | 1.3 | 30% | 0.4 | 85% | 1.1 | 30% | 0.4 | 72.2% | 118.4 | 67.2% | 110.3 | 91.1% | 79.2% |
| 8:00 PM | 87% | 47.9 | 96% | 52.9 | 65% | 43.0 | 40% | 26.5 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 50% | 0.7 | 0% | 0.0 | 50% | 0.6 | 0% | 0.0 | 70.0% | 114.8 | 62.8% | 103.0 | 88.3% | 76.8% |
| 9:00 PM | 90% | 49.6 | 100% | 55.1 | 42% | 27.8 | 35% | 23.2 | 27% | 6.5 | 32% | 7.7 | 100% | 16.0 | 100% | 16.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 60.9% | 99.9 | 62.2% | 101.9 | 78.4% | 68.2% |
| 10:00 PM | 95% | 52.3 | 96% | 52.9 | 21% | 13.9 | 33% | 21.8 | 10% | 2.4 | 32% | 7.7 | 50% | 8.0 | 50% | 8.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 46.7% | 76.6 | 55.1% | 90.4 | 69.6% | 60.5% |
| 11:00 PM | 96% | 52.9 | 88% | 48.5 | 21% | 13.9 | 15% | 9.9 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 40.9% | 67.0 | 35.8% | 58.7 | 51.6% | 44.8% |
| 12:00 AM | 95% | 52.3 | 79% | 43.5 | 10% | 6.6 | 15% | 9.9 | 1% | 0.2 | 1% | 0.2 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 0% | 0.0 | 36.1% | 59.2 | 32.7% | 53.7 | 45.5% | 39.6% |
| 1 Averaged hourly per | rentages | are from | ITF Par | kina Ger | neration. | 5th Editi | on for IT | F Code | 310 (Hot | el. Subu | rban) & I | TF Code | 330 (Re | sort Hot | el) | | | | | | | | | | 75% | 123.00 | | | | |

67% 110.3

124 on Weekdays.

6:00 PM

Averaged hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 310 (Hotel, Suburban) & ITE Code 330 (Resort Hotel)

2 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 936 (Coffee/Donut Shop without Drive-through Window, Weekday)

3 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 932 (High-Turnover Sit-Down Restaurant, Weekday Family Breakfast, lunch, and dinner)

4 ITE Parking Generation, 5th Edition does not provide hourly percentages for conference/meeting space. Hourly percentages from Urban Land Institute's Shared Parking, 2nd Edition for Hotel Conference/Banquet were utilized.

5 Hourly percentages are from ITE Parking Generation, 5th Edition for ITE Code 492 (Health/Fitness Club, Weekday).

Restaurant time of day percentages adjusted to match restaurant hours of operation

Smoke Tree Resort

Traffic Impact Analysis

7101 E. Lincoln Drive Town of Paradise Valley, Arizona

February 2023 Project No. 18-0555

Prepared For:

Walton Global Holdings 8800 N Gainey Center Drive, Suite 345 Scottsdale, Arizona 85258

For Submittal to:

Town of Paradise Valley

Prepared By:



10605 North Hayden Road Suite 140 Scottsdale, Arizona 85260 480-659-4250

SMOKE TREE RESORT TRAFFIC IMPACT ANALYSIS

7101 E Lincoln Drive Town of Paradise Valley, Arizona

Prepared for: Walton Global Holdings 8800 N Gainey Center Drive, Suite 345 Scottsdale, Arizona 85258

> **For Submittal to:** Town of Paradise Valley

Prepared By:



CivTech Inc.

10605 North Hayden Road Suite 140 Scottsdale, Arizona 85260 Office: (480) 659-4250 Fax: (480) 659-0566



February 2023 CivTech Project No. 18-0555

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EXECUTIVE SUMMARY

This report documents a traffic impact analysis performed for the proposed Smoke Tree Resort south of Lincoln Road between Mockingbird Lane and Scottsdale Road in the Town of Paradise Valley. The proposed development will consist of 80 hotel rooms composed of 75 lodge rooms and 5 casita room keys. Additionally, the Smoke Tree Resort will provide 17,222 square feet of quality restaurant which will be open to the public as well as resort guests, an event space, and other hotel amenities for guests to utilize.

CivTech, Inc. has been retained by Walton Global Holdings to perform the traffic impact analysis for the proposed redevelopment. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

The following conclusions have been documented in this study.

GENERAL

• The proposed development is anticipated to generate approximately 1,168 external weekday daily trips, with 39 trips (23 in/ 16 out) occurring in the AM peak hour and 98 trips (61 in/ 37 out) occurring in the PM peak hour.

EXISTING CONDITIONS

- The results of the existing conditions analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better). The following intersections include one or more approaches which currently operate with poor levels of service.
- The intersection of Mockingbird Lane and Lincoln Drive currently operates with poor levels of service on the northbound and southbound approaches during the AM peak hour. Due to the actuated coordinated nature of this signal, if a vehicle does not approach the northbound or southbound approach of the intersection, this phase will be skipped, and the green time will be added to the eastbound and westbound green times. The northbound and southbound approaches of this intersection experience minimal traffic volumes during both the AM and PM peak hours, meaning that when they do approach the intersection, they must wait until the cycle starts again in order to pass through the intersection. If more vehicles utilize the intersection, this delay should decrease because the northbound and southbound green times will be utilized during more cycles throughout the peak hours.
- The intersection of **Scottsdale Road and Lincoln Drive** currently experiences delays on the eastbound and westbound approaches during both the AM and PM peak hours and the southbound approach during the PM peak hour. Although mitigation is not typically recommended for existing conditions, since this stretch of Lincoln Drive is currently under development, recommendations will be made in order to minimize the current delay.



During the AM and PM peak hours, it is recommended that the green time is increased for the southbound, eastbound, and westbound movements. This mitigation measure is anticipated to reduce the southbound delay from 58.4 sec/veh (LOS E) to 28.1 sec/veh (LOS C) in the PM peak hour. The eastbound delay is improved from 76.8 sec/veh (LOS E) to 52.1 sec/veh (LOS D) in the AM peak hour and 71.7 sec/veh (LOS E) to 46.9 sec/veh (LOS D) in the PM peak hour. The westbound approach remains unchanged, in order to mitigate this delay, the initial green time could be changed allowing for more vehicles to pass through the intersection before the signal changes, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

OPENING YEAR 2024

- The results of the 2024 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.
- The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches. The southbound approach experiences delay during the PM peak hour in the 2024 opening year. The eastbound and westbound approaches experience delay in the AM and PM peak hours in both no-build and build scenario in the 2024 opening year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.
 - With these mitigation measures applied to the 2024 Build PM peak hour scenario, the southbound delay is anticipated to decrease from 62.0 sec/veh (LOS E) to 27.1 sec/veh (LOS C).
 - In the eastbound approach during the AM peak hour in the 2024 Build opening year, the delay is anticipated to decrease from 81.8 sec/veh (LOS F) to 50.8 (LOS D). In the eastbound approach during the PM peak hour in the 2024 opening year, the delay is anticipated to decrease from 79.0 sec/veh (LOS E) to 52.6 sec/veh (LOS D).
 - The westbound approach remains unchanged in the AM and PM peak hours at both the 2024 Build opening year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.



HORIZON YEAR 2029

- The results of the 2029 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.
- The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches in both the no-build and build scenarios. The southbound approach experiences delay during the PM peak hour in the 2029 horizon year. The eastbound and westbound approaches experience delay in the AM and PM peak hours during the 2029 horizon year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.
 - With these mitigation measures applied, it is expected that in the southbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 134.9 sec/veh (LOS F) to 37.4 sec/veh (LOS D).
 - In the eastbound approach during the 2029 Build AM peak hour scenario, the delay is anticipated to decrease from 133.2 sec/veh (LOS F) to 66.5 sec/veh (LOS E). In the eastbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 174.0 sec/veh (LOS F) to 91.9 sec/veh (LOS F).
 - The westbound approach remains unchanged in the AM and PM peak hours at the 2029 Build horizon year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

QUEUE STORAGE

• The recommended storage lengths in **Table 7** are provided for horizon year 2029 using the total traffic projections.

SIGHT DISTANCE

• Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development.

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• The developer should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.



INTRODUCTION

This report documents a traffic impact analysis performed for the proposed Smoke Tree Resort south of Lincoln Road between Mockingbird Lane and Scottsdale Road in the Town of Paradise Valley. The proposed development will consist of 80 total hotel rooms comprised of 75 lodge rooms and 5 casita room keys. Additionally, the Smoke Tree Resort will provide a total of 17,222 square feet of quality restaurant which will be open to the public as well as resort guests, an event space, and other hotel amenities for guests to utilize.

STUDY REQUIREMENTS

This study analyzes the traffic impact due to the proposed development on the surrounding street network. The study will be prepared in conformance with the Town of Paradise Valley's Traffic Impact Analysis (TIA) Criteria and Traffic Impact Statement (TIS) Criteria, May 2015. The specific objectives of the study are:

- To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development.
- To recommend additional street improvements or traffic control devices, where necessary, and to mitigate the additional site-generated traffic.

STUDY **A**REA

This study is classified as a Category 1 TIA meaning the study area is defined as all signalized and major unsignalized intersections within a ¹/₄ -mile radius of the site. The following study area intersections have been evaluated:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- Smoke Tree Driveway & Lincoln Drive
- Apartment Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

HORIZON YEARS

Per the study requirements, a Category 1 Traffic Impact and Mitigation Analysis is required. Analysis will be conducted on the current conditions, the opening year and opening plus five years. For purposes of this study, the development will be assumed fully built out by 2024. Therefore, the analysis years to be analyzed for this study include the opening year 2024 and horizon year 2029. A vicinity map of the study area is provided in **Figure 1**.









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EXISTING CONDITIONS

SURROUNDING LAND USE

The surrounding area includes various land uses. Directly north of the site, on the north side of Lincoln Drive, is the site for the new Ritz Carlton luxury hotel. Bordering the site to the east is the site for the proposed Lincoln Medical Center expansion. West of the site are detached single-family homes. Northeast of the site is the Lincoln Scottsdale, multi-family apartment homes. Also within the vicinity of the site are many retail shops and restaurants.

EXISTING ROADWAY NETWORK

The existing roadway network analyzed in this study includes Mockingbird Lane, Lincoln Drive, Quail Run Road, and Scottsdale Road.

Mockingbird Lane is a north-south three-lane road with one lane in each travelling direction and a continuous two-way-left-turn lane (TWLTL) north of Lincoln Drive, and a two-lane road south of Lincoln Drive. Mockingbird Lane begins at the intersection with McDonald Road and continues north for approximately 2 miles before terminating at the intersection with Northern Avenue. The posted speed limit is 35 miles per hour (mph).

Lincoln Drive is an east-west four-lane road with two lanes in each travelling direction. Within the vicinity of the site, there are raised medians along portions of the road. Lincoln Drive begins just east of the State Route 51 freeway and continues east for approximately 7 miles before terminating at the intersection with Cattletrack Road, just west of the Arizona Canal. The posted speed limit is 40 mph within the vicinity of the site.

Quail Run Road is a north-south two-lane road with one lane in each travelling direction. Quail Run Road begins just north of a private property south of the site and continues north for approximately 0.15 miles before terminating at the intersection with Lincoln Drive. There is no posted speed limit.

Scottsdale Road is a north-south six-lane road with three lanes in each travelling direction within the vicinity of the site. There are broken, raised medians along the whole length of road. Scottsdale Road begins at the intersection with Rio Salado Parkway and continues north for approximately 18 miles before terminating at the intersection with Carefree Highway. The posted speed limit is 45 mph.

EXISTING INTERSECTION CONFIGURATION

The intersection of **Mockingbird Lane and Lincoln Drive** is a four-legged signalized intersection with protected left turns on the northbound and westbound approaches. The northbound approach provides one exclusive left turn lane and a shared through/right-turn lane. The southbound approach provides an exclusive left turn lane, a through lane, a bike lane, and a dedicated right turn lane. The eastbound approach provides an exclusive left turn lane. The westbound approach provach provides and right turn lane. The westbound approach provides and provides an exclusive left turn lane.



provides an exclusive left turn lane, two through lanes, and a dedicated right turn lane. There are pedestrian crosswalks across all legs of the intersection.

The intersection of **Quail Run Road and Lincoln Drive** is a four-legged, signalized with permitted protected phasing in the eastbound and westbound approaches. The northbound approach provides one shared left-turn/through/right-turn lane. The eastbound approach provides an exclusive left-turn lane, two through lanes, and a dedicated right turn lane. The westbound provides one exclusive left-turn, one through lane, and one shared through/right-turn lane. The southbound approach provides one shared provides one shared left-turn, and one shared through/right-turn lane.

The intersection of **Shared Driveway and Lincoln Drive** is a three-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach consists of one shared left and right turn lane. The eastbound approach consists of one through lane and one shared through and right turn lane. The westbound approach consists of an exclusive left-turn lane and two through lanes.

The intersection of **AJ's Driveway and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach provides a one shared left/through/right lane. The eastbound approach provides an exclusive left-turn lane, a through lane, and one shared through/right-turn lane. The southbound approach provides one exclusive left turn lane and one dedicated right turn lane. The westbound approach provides a TWTL, one through lane, and one shared through/right-turn lane.

The intersection of **Scottsdale Road and Lincoln Drive** is a four-legged signalized intersection with split phasing on the eastbound and westbound approaches, protected left turns on the northbound and southbound approaches, and permitted overlap right turn phasing in the southbound and eastbound approaches. The northbound approach provides two exclusive left turn lanes, two through lanes, and one shared through/right-turn lane. The westbound approach provides one exclusive left-turn lane, one through lane, one shared through/right-turn lane, and a bike lane. The southbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The southbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane. The eastbound approach provides one exclusive left turn lane.

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The existing intersection configurations and traffic control are illustrated in Figure 2.





Figure 2: Existing Lane Configurations and Traffic Controls

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EXISTING TRAFFIC VOLUMES

CivTech engaged Field Data Services of Arizona, Inc. to record traffic volumes at six (6) study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 7:00-9:00 AM and 4:00-6:00 PM on Wednesday, November 16, 2022. Peak hour turning movement counts were conducted at the following study intersections:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- West Smoke Tree Driveway & Lincoln Drive
- Shared Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

Existing traffic volumes are presented in **Figure 3** for the weekday AM and PM peak hours. Raw traffic volume data obtained for this study have been included in **Appendix B**.





Figure 3: Existing Traffic Volumes

EXISTING CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM), Special Report 209,* and Updated 2016 and using Synchro software, version 11.0 under the HCM 6th edition methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined in terms of delay ranges. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

| Level of Service | Control Delay (seconds/vehicle) | | | | | | | | |
|------------------|---------------------------------|----------------------------|--|--|--|--|--|--|--|
| | Signalized Intersections | Unsignalized Intersections | | | | | | | |
| А | ≤ 10 | ≤ 10 | | | | | | | |
| В | > 10-20 | > 10-15 | | | | | | | |
| С | > 20-35 | > 15-25 | | | | | | | |
| D | > 35-55 | > 25-35 | | | | | | | |
| Е | > 55-80 | > 35-50 | | | | | | | |
| F | > 80 | > 50 | | | | | | | |

Table 1 – Level of Service Criteria

Source: Exhibit 19-8, Exhibit 20-2, Exhibit 21-8 and Exhibit 22-8, Highway Capacity Manual 2017

Synchro 11.0 software calculates the LOS per the HCM 6th edition methodology. The 6th edition HCM documents the signalized LOS calculation methodology which considers lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Signal timing data for the intersection of Mockingbird Lane and Lincoln Drive was provided by the Town of Paradise Valley. Timing for the intersection of Scottsdale Road and Lincoln Drive was provided by the City of Scottsdale. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. The existing conditions analysis worksheets have been included in **Appendix C**.



| ID | Intersection | Control | Approach/ Movement | Existing LOS AM (PM) | Mitigated AM (PM) |
|----|--|-----------------------|--|--|--------------------------------------|
| 1 | Mockingbird Lane & Lincoln Drive | Signal | NB SB EB WB Overall | E(D) E(D) A(A) B(B) B(B) | [Not Mitigated] |
| 2 | Quail Run Road & Lincoln Drive | Signal | NB SB EB WB Overall | B(B) B(B) B(D) D(A) D (C) | [Not Mitigated] |
| 4 | Smoke Tree Driveway & Lincoln Drive | 1-way stop (NB) | NB Shared WB Left | B(B) A(A) | [Not Mitigated] |
| 5 | AJ's Driveway & Lincoln Drive | 2-way stop (NB/SB) | NB Shared SB Left SB Right EB Left WB Left | B(B) B(B) A(B) A(A) A(A) | [Not Mitigated] |
| 6 | Scottsdale Road & Lincoln Drive | Signal | NB SB EB WB Overall | D(D) D(E) E(E) E(E) D(D) | C(C) B(C) D(D) E(E) C(C) |

| Table | 2 – | Existina | Peak | Hour | Levels | of Servi | ce |
|-------|-----|----------|-------|------|--------|-----------|----|
| Table | ~ - | LAISting | I Cuk | noui | LCVCIJ | 01 301 11 | |

The results of the existing conditions analysis summarized in **Table 2** indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better). The following intersections include one or more approaches which currently operate with poor levels of service.

The intersection of **Mockingbird Lane and Lincoln Drive** currently operates with poor levels of service on the northbound and southbound approaches during the AM peak hour. Due to the actuated coordinated nature of this signal, if a vehicle does not approach the northbound or southbound approach of the intersection, this phase will be skipped, and the green time will be added to the eastbound and westbound green times. The northbound and southbound approaches of this intersection experience minimal traffic volumes during both the AM and PM peak hours, meaning that when they do approach the intersection, they must wait until the cycle starts again in order to pass through the intersection. If more vehicles utilize the intersection, this delay should decrease because the northbound and southbound green times will be utilized during more cycles throughout the peak hours.

The intersection of **Scottsdale Road and Lincoln Drive** currently experiences delays on the eastbound and westbound approaches during both the AM and PM peak hours and the southbound approach during the PM peak hour. Although mitigation is not typically



recommended for existing conditions, since this stretch of Lincoln Drive is currently under development, recommendations will be made in order to minimize the current delay.

During the AM and PM peak hours, it is recommended that the green time is increased for the southbound, eastbound, and westbound movements. This mitigation measure is anticipated to reduce the southbound delay from 58.4 sec/veh (LOS E) to 28.1 sec/veh (LOS C) in the PM peak hour. The eastbound delay is improved from 76.8 sec/veh (LOS E) to 52.1 sec/veh (LOS D) in the AM peak hour and 71.7 sec/veh (LOS E) to 46.9 sec/veh (LOS D) in the PM peak hour. The westbound approach remains unchanged, in order to mitigate this delay, the initial green time could be changed allowing for more vehicles to pass through the intersection before the signal changes, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.



PROPOSED DEVELOPMENT

SITE LOCATION

The proposed redevelopment will be located at 7101 East Lincoln Drive in the Town of Paradise Valley, Arizona.

SITE ACCESS

- <u>Access A</u> is a proposed full access on Quail Run Road to the Smoke Tree site. The access point is approximately 165 feet south of Lincoln Drive.
- <u>Access B</u> is an existing full movement access point on Lincoln Drive located at the Smoke Tree Resort eastern property line; this is a shared access with the Lincoln Medical Plaza bordering Smoke Tree to the east.

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The proposed site plan is provided in **Figure 4**.







Figure 4: Site Plan and Access



TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* and *Trip Generation Handbook, 3rd Edition.* The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information on daily and peak hour trips.

The proposed development will consist of 80 hotel rooms which consist of 75 lodge rooms and 5 casita room keys. Additionally, the Smoke Tree Resort will provide a 5,000 square foot French cowboy quality restaurant, a 3,420 square foot Speakeasy bar, an 8,252 SF contemporary casual dining 3-Meal Lounge, a 550 SF pool bar, and a 200-person event space, all of which will be open to the public as well as resort guests. Event space and other hotel amenities for guests will be provided but are not anticipated to generate any off-site trips.

ITE's definition of the hotel land use (LUC 310) includes supporting facilities such as, "a fullservice restaurant, cocktail lounge, meeting rooms, banquet rooms, and convention facilities." The proposed ancillary uses to the hotel: the Speakeasy bar, contemporary casual dining 3meal lounge, pool bar, and event space, are therefore included in the hotel trip generation.

Additionally, an internal capture percentage was applied to the external French Cowboy quality restaurant trips because it is assumed that not all trips to and from these areas will be external. For the French Cowboy quality restaurant uses, it is anticipated that 50% of the trips will be arriving externally and the other 50% will be hotel guests. **Table 3** depicts the trip generation summary for the proposed development. Trip generation calculations are provided in **Appendix D**.



| | | | | Weekday Trips | | | | | | |
|---------------------------------------|-------------|----------|----------|---------------|-----|-----|-------|------|------|-------|
| | ITE | | | Daily | | AM | | | PM | |
| Proposed Use | LUC | Size | Units | Total | In | Out | Total | In | Out | Total |
| Main Hotel/ Resort Villas | 310 | 80 | Rooms | 444 | 18 | 15 | 33 | 16 | 15 | 31 |
| (French Cowboy) Quality Restaurant | 931 | 17,222 | SF | 1,448 | 10 | 3 | 13 | 90 | 45 | 135 |
| | | Tot | al Trips | 1,892 | 28 | 18 | 46 | 106 | 60 | 166 |
| Internal Capture Reduction | on (Quality | Restaura | (724) | (5) | (2) | (7) | (45) | (23) | (68) | |
| | 1,168 | 23 | 16 | 39 | 61 | 37 | 98 | | | |

Table 3 – Trip Generation Summary

The proposed development is anticipated to generate approximately 1,168 external weekday daily trips, with 39 trips (23 in/ 16 out) occurring in the AM peak hour and 98 trips (61 in/ 37 out) occurring in the PM peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the resort development will generate trips based on future population within a 7-mile radius of the site. Future total population within a 7-mile radius of the site, as predicted by the 2020/2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution for the resort development

The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix E**.

| Direction (To/From) | Trip Distribution |
|-------------------------|-------------------|
| North on Mockingbird Ln | 6% |
| South on Mockingbird Ln | 4% |
| West on Lincoln Dr | 25% |
| North on Scottsdale Rd | 35% |
| South on Scottsdale Rd | 30% |
| Total | 100% |

Table 4 – Site Trip Distribution

Figure 5 illustrates the trip distribution percentages shown in **Table 4** on the existing roadway network with the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. The resulting site generated traffic for the proposed development are presented in **Figure 6**.





Figure 5: Trip Distribution

Smoke Tree Resort - Traffic Impact Analysis



Figure 6: Site Generated Traffic Volumes

FUTURE BACKGROUND TRAFFIC

CivTech applied a growth rate to the existing traffic counts for this study in order to obtain the background traffic volumes along the adjacent roadway network. In reviewing the City of Scottsdale Traffic Counts Map, a 1.7% average growth rate was found within the proposed study area. **Table 5** shows the expansion factors used for the proposed opening year 2024 and horizon year 2029.

| Horizon Year | Expansion Factor |
|--------------|------------------|
| 2024 | 1.017 |
| 2029 | 1.106 |

 Table 5 – Growth Rate Expansion Factors

Applying the growth rate expansion factors to the existing traffic volumes predicts the volume of traffic anticipated on the surrounding area roads for opening year 2024 and horizon year 2029.

RITZ CARLTON

Directly north of the proposed Smoke Tree Resort is the new Ritz Carlton Resort. Phase 1 of that development was expected to be open by 2021, meaning that it is already adding some site generated trips to the surrounding roadway network. Since CivTech was the company that performed the analysis for the Ritz Carlton in 2016, the site generated volumes expected for the 2026 horizon year, as depicted in the *Ritz Carlton Resort Master Traffic Impact Analysis, March 2016,* were added to the grown existing volumes.

The future signal at the intersection of Quail Run Road and Lincoln Drive is being constructed by the Ritz Carlton developer. By the horizon year 2026, this intersection will provide a dedicated southbound right turn lane striped at 300 feet. These two improvements have been included in the analysis for the 2029 horizon year.

The background traffic for the opening year 2024 is presented in **Figure 7**. The background traffic for the horizon year 2029 is presented in **Figure 8**. Detailed background traffic calculations are included in **Appendix F**.

TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic to the projected background traffic. Total peak hour traffic volumes for the opening year 2024 are shown in **Figure 9**. Total peak hour traffic volumes for the horizon year 2029 are shown in **Figure 10**.





Figure 7: 2024 Background Traffic Volumes



Figure 8: 2029 Background Traffic Volumes



Figure 9: 2024 Total Traffic Volumes



Figure 10: 2029 Total Traffic Volumes

TRAFFIC AND IMPROVEMENT ANALYSIS

INTERSECTION CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for all of the intersections within the study area. All study area intersections were analyzed using Synchro 11.0 analysis software and the methodologies previously presented. Signalized intersections were analyzed with signal timing presented by the Town of Paradise Valley and the City of Scottsdale. According to the City of Scottsdale, the intersection of **Scottsdale Road and Lincoln Drive** will be restriped in the future to operate with dual left turn lanes and a shared through/right turn lane. It is unknown by what year these improvements will be made, so all analysis will be conducted using the existing lane configurations. The overall intersection and approach levels of service are summarized in **Table 6** for the 2024 opening year and the 2029 horizon year. Detailed analysis worksheets can be found in **Appendix G** for the 2024 no-build scenario, **Appendix H** for 2024 build scenario, **Appendix I** for 2029 no-build scenario, and **Appendix J** for 2029 build scenario.

| | | | Approach/ | | 2024 | - | | 2029 | |
|------|------------------|------------|-----------|-----------------|---------------|------------|---------------|---------------|------------|
| ID | Intersection | Control | Movement | No-Build | Build | Mitigated | No-Build | Build | Mitigated |
| | | | NB | E (D) | E (D) | | D(D) | D(D) | |
| | Mockinghird Lp | | SB | E (D) | E (D) | [Not | D(D) | D(D) | [Not |
| 1 | | Signal | EB | A(A) | A(A) | Mitigated] | A(B) | A(B) | Mitigated] |
| | | | WB | B(B) | B(B) | | B(C) | B(B) | |
| | | | Overall | B(B) | B(B) | | C(C) | C(C) | |
| | | | NB | B(B) | B(B) | | B(B) | B(B) | |
| | Quail Dup Dd | | SB | B(B) | B(B) | [Not | B(B) | B(B) | [Not |
| 2 | Quali Ruli Ru | Signal | EB | D(D) | D(D) | Mitigated] | D(D) | D(D) | Mitigated] |
| | | | WB | B(A) | B(A) | | B(B) | B(B) | |
| | | | Overall | D(C) | D(C) | | D(C) | D(C) | |
| 1/D | Shared Drwy & | 1-Way Stop | NB Shared | B(B) | B(B) | [Not | B(C) | B(C) | [Not |
| 47 D | Lincoln Dr | (NB) | WB Left | A(A) | A(A) | Mitigated] | A(A) | A(A) | Mitigated] |
| | | | NB Shared | B(B) | B(B) | | C(C) | B(C) | |
| | Al's Drug & | 2 May Stop | SB Left | B(B) | B(B) | [Not | B(B) | B(B) | [Not |
| 5 | Lincoln Dr | | SB Right | A(B) | A(B) | Ibota | A(B) | A(B) | Ibotenti |
| | | (110/30) | EB Left | A(A) | A(A) | witigateu | A(A) | A(A) | wittgateu |
| | | | WB Left | A(A) | A(A) | | A(A) | A(A) | |
| | | | NB | D(D) | D(D) | C(C) | D(D) | D(D) | C(D) |
| | Scottedalo Dd & | | SB | D(E) | D(E) | C(C) | D(F) | D(F) | C(D) |
| 6 | | Signal | EB | F(E) | F(E) | D(D) | F(F) | F(F) | E(F) |
| | | | WB | E(E) | E(E) | E(E) | E(E) | E(E) | E(E) |
| | | | Overall | D(E) | D(E) | C(D) | E(F) | E(F) | D(D) |
| ٨ | Access A & Quail | 1-Way Stop | WB Shared | | A(A) | [Not | | A(A) | [Not |
| А | Run Dr | (WB) | SB Left | - | A(A) | Mitigated] | - | A(A) | Mitigated] |

Table 6 – Peak Hour Analysis

The results of the peak hour analysis are summarized indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.



2024 CAPACITY ANALYSIS

The results of the 2024 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.

The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches. The southbound approach experiences delay during the PM peak hour in the 2024 opening year. The eastbound and westbound approaches experience delay in the AM and PM peak hours in both no-build and build scenario in the 2024 opening year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.

With these mitigation measures applied to the 2024 Build PM peak hour scenario, the southbound delay is anticipated to decrease from 62.0 sec/veh (LOS E) to 27.1 sec/veh (LOS C).

In the eastbound approach during the AM peak hour in the 2024 Build opening year, the delay is anticipated to decrease from 81.8 sec/veh (LOS F) to 50.8 (LOS D). In the eastbound approach during the PM peak hour in the 2024 opening year, the delay is anticipated to decrease from 79.0 sec/veh (LOS E) to 52.6 sec/veh (LOS D).

The westbound approach remains unchanged in the AM and PM peak hours at both the 2024 Build opening year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

2029 CAPACITY ANALYSIS

The results of the 2029 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.

The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches in both the no-build and build scenarios. The southbound approach experiences delay during the PM peak hour in the 2029 horizon year. The eastbound and westbound approaches experience delay in the AM and PM peak hours during the 2029 horizon year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.

With these mitigation measures applied, it is expected that in the southbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 134.9 sec/veh (LOS F) to 37.4 sec/veh (LOS D).



In the eastbound approach during the 2029 Build AM peak hour scenario, the delay is anticipated to decrease from 133.2 sec/veh (LOS F) to 66.5 sec/veh (LOS E). In the eastbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 174.0 sec/veh (LOS F) to 91.9 sec/veh (LOS F).

The westbound approach remains unchanged in the AM and PM peak hours at the 2029 horizon year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

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The proposed lane configurations are presented in Figure 11.





Figure 11: Proposed Lane Configurations and Traffic Controls

CivTech

QUEUE LENGTH ANALYSIS

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was prepared according to the methodology documented in *AASHTO's A Policy on Geometric Design of Highways and Streets*. The study intersections were analyzed to determine the left-turn and right-turn storage needed to accommodate the expected traffic volumes in the 2029 horizon year.

The storage length for a turn lane is typically estimated as the length required to hold the average number of arriving vehicles per two minutes, where unsignalized, or per one-and-a-half to two signal cycles, where signalized.¹

For signalized intersections, the storage length is determined by the following equations:

Storage Length = $\left[\frac{1.5 \ x \ (veh/hr)}{(cycles/hr)}\right] \times 25 \ feet$

For unsignalized intersections, the storage length for a left turn lane is determined by the following equation:

Storage Length =
$$\left\{\frac{\ln[P(n>N)]}{\ln \frac{p}{c}} - 1\right\} \times 25 feet$$

where:

$$c = \frac{V_0 e^{-V_0 t_c/3600}}{1 - e^{-V_0 t_c/3600}}$$

as defined in AASHTO's A Policy on Geometric Design of Highways and Streets Equations 9-3 and 9-4.



¹ The American Association of Highway and Transportation Officials, under Section 9.7.2.2 (page 9-96) of the latest (7th) edition of its publication, A Policy on Geometric Design of Highways and Streets (the AASHTO "Green Book"), indicates that storage length for a turn lane, exclusive of taper, "should usually be based on 1.5 to 2 times the average number of vehicles that would need to be stored per signal cycle" at a signalized intersection.
| | | | | Queue Storage | | | | | |
|-----|--------------------------------|--------------------|-----------|-------------------------|-----------------------|------------------------|------------------------|--|--|
| ID | Intersection | Control | Movement | ⁽¹⁾ Existing | AASHTO | 95 th %-ile | Recommended | | |
| | | | NB Left | 85′ | 50' | 35′ | 85′ | | |
| | | | SB Left | 185′ | 125' | 90′ | 185′ | | |
| 1 | Mockingbird Lane & | Signal | EB Left | 345′ | 400' | 140′ | 345′ | | |
| ' | Lincoln Dr | Signal | WB Left | 145′ | 50' | 25′ | 145′ | | |
| | | | SB Right | 230′ | 550' | 460′ | ⁽³⁾ 230' | | |
| | | | WB Right | 280′ | 125' | 45′ | 280′ | | |
| | Quail Dup Dd & | | EB Left | 175′ | 100' | 100′ | 175′ | | |
| 2 | | Signal | WB Left | 150′ | 50' | 25′ | 150′ | | |
| | | | WB Right | 155′ | 125' | 275′ | 275′ | | |
| 4/B | Apartment Drwy & Lincoln Dr | 1-Way Stop (NB) | WB Left | 50′ | 25′ | 25′ | 50′ | | |
| | | | SB Left | 100′ | 25′ | <25′ | 100′ | | |
| Б | AJ's Drwy & Lincoln | 2-Way Stop | EB Left | 70′ | 25′ | 25′ | 70′ | | |
| 5 | Dr | (NB/SB) | WB Left | TWLTL | 25′ | <25′ | TWLTL | | |
| | | | SB Right | 100′ | 25′ | 25′ | 100′ | | |
| | | | NB Left | ⁽²⁾ 455' | ⁽²⁾ 700' | ⁽²⁾ 335' | ⁽²⁾ 455' | | |
| | | | SB Left | 185′ | 100' | 115' | 185′ | | |
| 6 | Scottsdale Rd & | Signal | EB Left | ⁽²⁾ 310' | ⁽²⁾ 1,300' | ⁽²⁾ 690' | ⁽³⁾⁽²⁾ 310' | | |
| 0 | o Lincoln Dr | Signal | WB Left | 90′ | 100' | 70' | 90′ | | |
| | | | SB Right | 315′ | 1,425' | 1,010' | ⁽³⁾ 315′ | | |
| | | | EB Right | 175′ | 750' | 525' | ⁽³⁾ 175′ | | |
| А | Access A & Quail Run Dr | 1-Way Stop (WB) | WB Shared | - | 25′ | 50′ | 50′ | | |

Table 7 – Queue Storage Lengths

(1) Measured from stop bar to end of storage length

(2) Dual left turn lanes. Queue storage includes total storage length of both lanes

(3) Insufficient space exists to permit extension of turn lane

The recommended storage lengths in **Table 7** are provided for horizon year 2029 using the total traffic projections.

SIGHT DISTANCE ANALYSIS

Adequate sight distance must be provided at intersections and site access driveways to allow safe turning movements. There must be sufficient unobstructed sight distance along both approaches of a street/driveway intersection and across their included corners to allow operators of vehicles to see each other in time to prevent a collision.

The Town of Paradise Valley maintains sight distance requirements within their Town Code, standard details, and development services guidelines. The Town of Paradise Valley measures sight distance using AASHTO methodology except that the sight triangle from the driveway is measured from the center of the egress lane, 14.5 feet back from the curb return line. Sight distance calculations according to AASHTO guidelines are summarized in **Table 8**.



| | | Design Speed (mph) | Sight Distance Along Roadway | | | | | | |
|--------------|--------------------------------|--------------------------|-------------------------------------|-----------------------------------|------------------------------|--|--|--|--|
| Roadway | Posted Speed Limit (mph) | | Left of Driveway (Case B2/B3) | Right of Driveway (Case B1) | On Major Road (Case F) | | | | |
| Lincoln Dr | 40 | 45 | 500′ | 565′ | 430′ | | | | |
| Quail Run Rd | - | 30 | 290′ | 335′ | 245′ | | | | |

Table 8 – AASHTO Sight Distance Requirements

Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development. Recommended distances for these movements can be found in **Table 8**.

The developer should ensure that sight visibility is provided at all proposed intersections according to the distances shown in and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations. Sight distance worksheets have been included within **Appendix L**.



CONCLUSIONS

The following conclusions have been documented in this study.

<u>General</u>

• The proposed development is anticipated to generate approximately 1,168 external weekday daily trips, with 39 trips (23 in/ 16 out) occurring in the AM peak hour and 98 trips (61 in/ 37 out) occurring in the PM peak hour.

EXISTING CONDITIONS

- The results of the existing conditions analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better). The following intersections include one or more approaches which currently operate with poor levels of service.
- The intersection of Mockingbird Lane and Lincoln Drive currently operates with poor levels of service on the northbound and southbound approaches during the AM peak hour. Due to the actuated coordinated nature of this signal, if a vehicle does not approach the northbound or southbound approach of the intersection, this phase will be skipped, and the green time will be added to the eastbound and westbound green times. The northbound and southbound approaches of this intersection experience minimal traffic volumes during both the AM and PM peak hours, meaning that when they do approach the intersection, they must wait until the cycle starts again in order to pass through the intersection. If more vehicles utilize the intersection, this delay should decrease because the northbound and southbound green times will be utilized during more cycles throughout the peak hours.
- The intersection of Scottsdale Road and Lincoln Drive currently experiences delays on the eastbound and westbound approaches during both the AM and PM peak hours and the southbound approach during the PM peak hour. Although mitigation is not typically recommended for existing conditions, since this stretch of Lincoln Drive is currently under development, recommendations will be made in order to minimize the current delay.
 - o During the AM and PM peak hours, it is recommended that the green time is increased for the southbound, eastbound, and westbound movements. This mitigation measure is anticipated to reduce the southbound delay from 58.4 sec/veh (LOS E) to 28.1 sec/veh (LOS C) in the PM peak hour. The eastbound delay is improved from 76.8 sec/veh (LOS E) to 52.1 sec/veh (LOS D) in the AM peak hour and 71.7 sec/veh (LOS E) to 46.9 sec/veh (LOS D) in the PM peak hour. The westbound approach remains unchanged, in order to mitigate this delay, the initial green time could be changed allowing for more vehicles to pass through the intersection before the signal changes, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.



OPENING YEAR 2024

- The results of the 2024 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.
- The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches. The southbound approach experiences delay during the PM peak hour in the 2024 opening year. The eastbound and westbound approaches experience delay in the AM and PM peak hours in both no-build and build scenario in the 2024 opening year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.
 - With these mitigation measures applied to the 2024 Build PM peak hour scenario, the southbound delay is anticipated to decrease from 62.0 sec/veh (LOS E) to 27.1 sec/veh (LOS C).
 - In the eastbound approach during the AM peak hour in the 2024 Build opening year, the delay is anticipated to decrease from 81.8 sec/veh (LOS F) to 50.8 (LOS D). In the eastbound approach during the PM peak hour in the 2024 opening year, the delay is anticipated to decrease from 79.0 sec/veh (LOS E) to 52.6 sec/veh (LOS D).
 - The westbound approach remains unchanged in the AM and PM peak hours at both the 2024 Build opening year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

HORIZON YEAR 2029

- The results of the 2029 peak hour analysis indicate that all intersections currently operate at an overall acceptable level of service (LOS D or better) with the exception of **Scottsdale Road and Lincoln Drive**.
- The intersection of **Scottsdale Road and Lincoln Drive** is expected to experience delay in the southbound, eastbound, and westbound approaches in both the no-build and build scenarios. The southbound approach experiences delay during the PM peak hour in the 2029 horizon year. The eastbound and westbound approaches experience delay in the AM and PM peak hours during the 2029 horizon year. To mitigate this delay, it is recommended that the green time is increased for the through movements on the southbound, eastbound, and westbound approaches.



- With these mitigation measures applied, it is expected that in the southbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 134.9 sec/veh (LOS F) to 37.4 sec/veh (LOS D).
- In the eastbound approach during the 2029 Build AM peak hour scenario, the delay is anticipated to decrease from 133.2 sec/veh (LOS F) to 66.5 sec/veh (LOS E). In the eastbound approach during the 2029 Build PM peak hour scenario, the delay is anticipated to decrease from 174.0 sec/veh (LOS F) to 91.9 sec/veh (LOS F).
- The westbound approach remains unchanged in the AM and PM peak hours at the 2029 Build horizon year. In order to mitigate this delay, the initial green time could be changed to allow for more vehicles to pass through the intersection without the light changing from green to yellow, however, this change will be at the discretion of the City of Scottsdale as this intersection is owned and operated by the City.

QUEUE STORAGE

• The recommended storage lengths in **Table 7** are provided for horizon year 2029 using the total traffic projections.

SIGHT DISTANCE

• Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development.

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• The developer should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.



LIST OF REFERENCES

Highway Capacity Manual. Transportation Research Board, Washington, D.C., 2000.

Manual on Uniform Traffic Control Devices. U.S. Department of Transportation, Federal Highways Administration, Washington, D.C., 2009.

Roadway Design Manual, Maricopa County Department of Transportation, Phoenix, Arizona, Revised April 2004.

Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, Washington, D.C., 2016.

Trip Generation Handbook, 3nd *Edition*, Institute of Transportation Engineers, Washington, D.C., 2016.

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Lincoln Medical Center, Paradise Valley Traffic Impact Analysis (TIA), CivTech, Scottsdale, AZ, November 2018.



TECHNICAL APPENDIX

- APPENDIX A: REVIEW COMMENTS AND RESPONSES
- APPENDIX B: EXISTING TRAFFIC COUNTS
- APPENDIX C: EXISTING PEAK HOUR ANALYSIS
- APPENDIX D: TRIP GENERATION
- APPENDIX E: TRIP DISTRIBUTION
- APPENDIX F: BACKGROUND TRAFFIC
- APPENDIX G: 2024 NO-BUILD PEAK HOUR ANALYSIS
- APPENDIX H: 2029 NO-BUILD PEAK HOUR ANALYSIS
- APPENDIX I: 2024 BUILD PEAK HOUR ANALYSIS
- APPENDIX J: 2029 BUILD PEAK HOUR ANALYSIS
- APPENDIX K: QUEUE STORAGE ANALYSIS
- APPENDIX L: SIGHT DISTANCE ANALYSIS



APPENDIX A

REVIEW COMMENTS AND RESPONSES



APPENDIX B

EXISTING TRAFFIC COUNTS













APPENDIX C

EXISTING PEAK HOUR ANALYSIS



APPENDIX D

TRIP GENERATION



18-0555 Walton Global SmokeTree Resort

Methodology Overview

This form facilitates trip generation estimation using data within the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition and methodology described within ITE's Trip Generation Handbook, 3rd Edition. These references will be referred to as Manual and Handbook, respectively. The Manual contains data collected by various transportation professionals for a wide range of different land uses, with each land use category represented by a land use code (LUC). Average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized LUC in various settings and time periods. The Handbook indicates an established methodology for how to use data contained within the Manual when to use the fitted curve instead of the average rate and when to adjustments to the volume of trips are appropriate and how to do so. The methodology tors are trendowing in obxes in Figure 3.1. This worksheet applies calculations for each box if applicable.

Box 1 - Define Study Site Land Use Type & Site Characteristics

The analyst is to pick an appropriate LUC(s) based on the subject's zoning/land use(s)/future land use(s). The size of the land use(s) is described in reference to an independent variable(s) specific to (each) the land use (example: 1,000 square feet of building area is relatively common).

Land Use Types and Size

| Proposed Use | Amount Units | ITE LUC | ITE Land Use Name |
|--------------------|--------------------------|---------|---------------------------|
| Resort Hotel | 83 Rooms | 330 | Resort Hotel |
| Quality Restaurant | 10.012 1,000 square feet | 931 | Quality Restaurant |
| Strip Retail Plaza | 2.282 1,000 square feet | 822 | Strip Retail Plaza (<40k) |
| | | | |

Box 2 - Define Site Context

Context assessment is to "simply determine whether the study sites is in a multimodal setting" and "could have persons accessing the site by walking, bicycling, or riding transit." This assessment is used in Box 4. The Manual separates data into 4 setting categories - Rural, General Urban/Suburban, Dense Multi-Urban Use and Center City Core. This worksheet uses the following abbreviations, respectively: R, G, D, and C. The Manual ober and a for all settings of all land use codes. See the table on the next page titled "Site Context and Time Periods" - if this table is not provided, the "General Urban/Suburban" setting is used by default.

Box 3 - Define Analysis Objectives Types of Trips & Time Period

This tool will focus on vehicular trips for a 24-hour period on a typical weekday as well as its AM peak hour and PM peak hour. Other time period(s) may be of interest. Site Context and Time Periods - Actual Setting, Setting Data Available for LUC, Setting Used in Analyses

| | | | ADT | ADT | | our | PM Peak Hour | | |
|--------------------|------------------------|---|-----------|------|-----------|---------|--------------|------|--|
| Proposed Use | Setting | | Available | Used | Available | Used | Available | Used | |
| Resort Hotel | General Urban/Suburban | G | [] | N/A | G | G | G | G | |
| Quality Restaurant | General Urban/Suburban | G | G | G | G | G | G | G | |
| Strip Retail Plaza | General Urban/Suburban | G | G | G | G | G | G | G | |
| | | | ſ′ | (| | · · · · | (| (| |

If the desired setting is not available within the Manual, adjustments may be made in Boxes 6 through 8.

Per the Handbook, "if the objective is to establish a local trip generation rate for a particular land use or study site, the simplified approach (Box 9) may be acceptable but the Box 5 through 8 Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Determine Equation)

Vehicle trips are estimated using rates/equations applicable to each LUC. When the appropriate graph has a fitted curve, the Handbook has a process (Figure 4.2) to determine when to use it versus using the weighted average rate or collecting local data. The methodology requires for engineering judgement is some circumstances and permits engineering judgement to override or make adjustments when appropriate to best project (example 1: study site is expected to operate differently than data in the applicable land use code - such as restaurant that is closed in the morning or in the evening; example 2: LUC data in a localized area fails to be represented by the typically selected fitted curve/weighted average rate - a small shop/LUC 820, AM peak hour is skewed by the high v-intercept).

Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

| Proposed Use | ADT | AM Peak Hour | PM Peak Hour |
|--------------------|------------------------------|----------------------------------|-----------------------------------|
| Resort Hotel | C: T=X*5.74 [5.74] | FC: T=0.38*X-28.58 [0.04] | WA: T=X*0.41 [0.41] |
| Quality Restaurant | WA: T=X*83.84 [83.84] | WA: T=X*0.73 [0.73] | WA: T=X*7.8 [7.80] |
| Strip Retail Plaza | FC: T=42.2*X+229.68 [142.85] | FC: LN(T)=0.66*LN(X)+1.84 [4.76] | FC: LN(T)=0.71*LN(X)+2.72 [11.95] |
| | | | |

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Apply Equations and in/out Distributions)

Baseline Vehicular Trips

| | | ADT | | | AM Peak Hour | | | PM Peak Hour | | | | |
|--------------------|------|-----|-----|-------|--------------|----|-----|--------------|------|----|-----|-------|
| Proposed Use | % In | In | Out | Total | % In | In | Out | Total | % In | In | Out | Total |
| Resort Hotel | 50% | 238 | 238 | 476 | 72% | 2 | 1 | 3 | 43% | 15 | 19 | 34 |
| Quality Restaurant | 50% | 420 | 420 | 840 | 80% | 6 | 1 | 7 | 67% | 52 | 26 | 78 |
| Strip Retail Plaza | 50% | 163 | 163 | 326 | 60% | 7 | 4 | 11 | 50% | 14 | 13 | 27 |
| Totals | | 821 | 821 | 1,642 | | 15 | 6 | 21 | | 81 | 58 | 139 |

If vehicle trip reductions are not applied for internal capture and alternative mode, vehicle trips may be separtated into vehicle trip subsets (pass-by trips, diverted trips, truck trips, new passenger vehicle trips) as part of Box 10. If vehicle trip reductions are to be applied, continue to Box 6.

Box 6 - Convert Baseline Vehicle Trips to Person Trips

If no vehicle trip reductions are to be applied, this portion may be ignored. The Handbook states "There are not enough samples to derive precise percentages by mode...however, for all but one...he motor vehicle percentage of total person trips is at least 96 percent." and "Vehicle occupancy for] many of the most commonly analyzed land use codes are not [available]." This form assumes that the total baseline vehicle trips for all land use codes accounts for 90% of total person trips. Unless otherwise specified, this form later reverses the conversion in Box 8.

Box 7 - Estimate Internal Person Trips, External Walk/Bike Trips, Transit Person Trips, External Person Trips (Internal Capture)

Internal capture occurs for mixed-use developments when a portion of the trips generated by the site are expected to have the both the origin and destination within the site. Internal capture is not dependent on mode choice. The table below presents the internal capture percentages and trips in units of vehicle trips. CivTech can provide trips in units of persons if requested.

Adjustments for Internal Trips

| | | ADT | | | | AM Peak Hour | | | PM Peak Hour | | | |
|--------------------|---------|-----|-----|-------|---------|--------------|-----|-------|--------------|----|-----|-------|
| Proposed Use | Percent | In | Out | Total | Percent | In | Out | Total | Percent | In | Out | Total |
| Resort Hotel | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 |
| Quality Restaurant | 50% | 210 | 210 | 420 | 50% | 3 | 1 | 4 | 50% | 26 | 13 | 39 |
| Strip Retail Plaza | 65% | 106 | 106 | 212 | 65% | 5 | 2 | 7 | 65% | 9 | 9 | 18 |
| Totals | | 316 | 316 | 632 | | 8 | 3 | 11 | | 35 | 22 | 57 |

Box 8 - Convert Person Trips to Final Vehicle Trips

The vehicle occupancy and baseline alternate mode are now factored out from the external trips in vehicles, after any adjustments for internal capture and additional alternate mode from Box 7. In Box 6, vehicle trips were considered to account for 90% of total person trips. Alternate mode trips in addition to the baseline, if any, are accounted for in Box 7. It is estimated that vehicle trips should be reduced by an additional 0% due to carpooling. The final external trips in vehicles is multiplied by 90% (= 90% - 0%) to produce the external vehicle trips.

External Vehicular Trips

| | ADT | | | AM Peak Hour | | | | PM Peak Hour | | | | |
|--------------------|-----|-----|-----|--------------|----|----|---|--------------|--|----|-----|-------|
| Proposed Use | | In | Out | Total | In | Ou | t | Total | | In | Out | Total |
| Resort Hotel | | 238 | 238 | 476 | 2 | | 1 | 3 | | 15 | 19 | 34 |
| Quality Restaurant | | 210 | 210 | 420 | 3 | | 0 | 3 | | 26 | 13 | 39 |
| Strip Retail Plaza | | 57 | 57 | 114 | 2 | | 2 | 4 | | 5 | 4 | 9 |
| Totals | | 505 | 505 | 1,010 | 7 | | 3 | 10 | | 46 | 36 | 82 |

CivTech

APPENDIX E

TRIP DISTRIBUTION



| | | 202 | | 2 | 030 | |
|-----------------|------------|---------|------------|---------|-----|--|
| Quadrant | Population | Percent | Population | Percent | | |
| North Northwest | 65,355 | 13.6% | 70,346 | 13.6% | | |
| North Northeast | 46,994 | 9.8% | 50,587 | 9.8% | | |
| North | 112,348 | 23.4% | 120,934 | 23.4% | | |
| East Northeast | 49,891 | 10.4% | 52,124 | 10.1% | | |
| East Southeast | 14,233 | 3.0% | 14,712 | 2.8% | | |
| East | 64,123 | 13.4% | 66,836 | 12.9% | | |
| South Southeast | 81,730 | 17.0% | 92,480 | 17.8% | | |
| South Southwest | 92,361 | 19.2% | 99,928 | 19.3% | | |
| South | 174,091 | 36.2% | 192,407 | 37.1% | | |
| West Southwest | 69,372 | 14.4% | 74,834 | 14.4% | | |
| West Northwest | 60,317 | 12.6% | 63,387 | 12.2% | | |
| West | 129,689 | 27.0% | 138,221 | 26.6% | | |
| Totals | 480,252 | 100.0% | 518,398 | 100.0% | | |

Radius

Population radius: 10 miles

Select Analysis Year (2020, 2030, 2040,2050) 2020



Traffic Impact (and Mitigation) Analysis/Study

Page 1

Appendix E November 2018

APPENDIX F

BACKGROUND TRAFFIC



2024 2029

Location of counts:

Source(s): City of Scottsdale Traffic Counts Map

| | Year | Volume |
|------------|------|--------|
| Start | 2015 | 10,484 |
| End | 2019 | 10,744 |
| AAGR | | 0.60% |
| Exp Factor | | 1.025 |

| Growth Rate Used | 1.7% |
|---------------------|-------|
| Per-Year Multiplier | 1.017 |

| | Expansion | |
|------|-----------|----------|
| Year | Factor(s) | |
| 2023 | 1.000 | Existing |
| 2024 | 1.017 | Opening |
| 2025 | 1.034 | |
| 2026 | 1.052 | |
| 2027 | 1.070 | |
| 2028 | 1.088 | |
| 2029 | 1.106 | Horizon |
| 2030 | 1.125 | |
| 2031 | 1.144 | |
| 2032 | 1.164 | |
| 2033 | 1.184 | |
| 2034 | 1.204 | |
| 2035 | 1.224 | |
| 2036 | 1.245 | |
| 2037 | 1.266 | |
| 2038 | 1.288 | |
| 2039 | 1.310 | |
| 2040 | 1.332 | |
| 2041 | 1.354 | |
| 2042 | 1.378 | |
| 2043 | 1.401 | |
| 2044 | 1.425 | |
| 2045 | 1.449 | |
| 2046 | 1.474 | |
| 2047 | 1.499 | |
| 2048 | 1.524 | |
| 2049 | 1.550 | |
| 2050 | 1.576 | |
| 2051 | 1.603 | |
| 2052 | 1.630 | |
| 2053 | 1.658 | |
| 2054 | 1.686 | |
| 2055 | 1.715 | |



APPENDIX G

2024 NO-BUILD PEAK HOUR ANALYSIS



| 18-0555 SmokeTr 2024 Background | ee Resc AM | ort | | | |
|------------------------------------|---------------|-------|------|------|-------|
| | ≯ | * | 1 | 1 | 4 |
| Phase Number | 1 | 2 | 3 | 4 | 6 |
| Movement | EBL | WBTL | SBL | NBTL | EBTL |
| Lead/Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | |
| Recall Mode | None | C-Max | None | None | C-Max |
| Maulanuas Callà (a) | 01 | 10 / | 01 | 47.4 | 111 |

1: Mockingbird Ln & Lincoln Dr Timing Report, Sorted By Phase

| | ≯ | + | 1 | - | 4 | _\$⊳ |
|------------------------|-------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 3 | 4 | 6 | 8 |
| Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL |
| Lead/Lag | Lead | Lag | Lead | Lag | | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | 7 | 7 | 7 |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 |
| Dual Entry | No | No | No | Yes | No | Yes |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 |
| Intersection Summary | | | | | | |

| Cycle Length | 130 | |
|-----------------|--|---|
| Control Type | Actuated-Coordinated | |
| Natural Cycle | 80 | |
| Offset: 0 (0%), | Referenced to phase 2:WBTL and 6:EBTL, Start of Gree | n |

Splits and Phases: 1: Mockingbird Ln & Lincoln Dr

| Ø1 | ● ♥ Ø2 (R) | 1 03 | ₹¶ø4 | |
|------------|------------|-------------|--------|--|
| 21 s | 40.6 s | 21 s | 47.4 s | |
| Ø6 (R) | | ↓ Ø8 | | |
| 61.6 s | | 68.4 s | | |

| 2024 Background | PM | | | | | | Timing Report, Sorted By Ph |
|----------------------------|--------------|------------|-----------|-------------------------|-------|-------|-----------------------------|
| | ≯ | * | 1 | $\langle \cdot \rangle$ | 4 | -⊈⊳ | |
| Phase Number | 1 | 2 | 3 | 4 | 6 | 8 | |
| Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL | |
| Lead/Lag | Lead | Lag | Lead | Lag | | | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Cool | rdinated | | | | |
| Natural Cycle | | | 80 | | | | |
| Offset: 0 (0%), Referenced | to phase 2 | :WBTL ar | nd 6:EBTI | ., Start of | Green | | |
| Splits and Phases: 1: Mo | ockingbird L | .n & Linco | ıln Dr | | | | |
| | | | | | 5 | | < ↑ |

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Synchro 11 Report Page 1

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| 18-0555 SmokeTree 2024 Background A | e Reso M | rt | | | | | | 1: Moc HCM 6t | kingbir h Signaliz | rd Ln 8 zed Inters | E Linco ection Su | oln Dr ummary |
|--|-------------|-------------|--------------------|----------|-----------|-------|------------|------------------|------------------------------|-----------------------|----------------------|------------------|
| | ۶ | - | $\mathbf{\hat{z}}$ | 4 | ← | • | 1 | Ť | ۲ | 1 | ŧ | ~ |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | ሻ | ≜ î≽ | | <u>۲</u> | †† | 1 | - 1 | eî 👘 | | <u>۲</u> | ↑ | 1 |
| raffic Volume (veh/h) | 186 | 831 | 63 | 11 | 545 | 40 | 21 | 20 | 21 | 46 | 58 | 170 |
| iture Volume (veh/h) | 186 | 831 | 63 | 11 | 545 | 40 | 21 | 20 | 21 | 46 | 58 | 170 |
| al Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| ng 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 |
| ne On Approach | | No | | | No | | | No | | | No | |
| low, veh/h/ln | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 |
| ow Rate, veh/h | 198 | 884 | 67 | 12 | 586 | 43 | 23 | 22 | 23 | 57 | 72 | 210 |
| lour Factor | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 | 0.91 | 0.81 | 0.81 | 0.81 |
| t Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| h/h | 570 | 2619 | 198 | 423 | 2461 | 988 | 149 | 79 | 83 | 209 | 316 | 241 |
| e On Green | 0.05 | 0.74 | 0.74 | 0.44 | 0.44 | 0.44 | 0.09 | 0.09 | 0.09 | 0.04 | 0.16 | 0.16 |
| low, veh/h | 1688 | 3524 | 267 | 559 | 3741 | 1502 | 1039 | 881 | 921 | 1688 | 1969 | 1502 |
| /olume(v), veh/h | 198 | 469 | 482 | 12 | 586 | 43 | 23 | 0 | 45 | 57 | 72 | 210 |
| Sat Flow(s).veh/h/ln | 1688 | 1870 | 1921 | 559 | 1870 | 1502 | 1039 | 0 | 1803 | 1688 | 1969 | 1502 |
| ve(q s), s | 4.7 | 11.2 | 11.2 | 1.6 | 12.7 | 2.1 | 2.7 | 0.0 | 3.0 | 3.9 | 4.1 | 17.7 |
| le Q Clear(q c), s | 4.7 | 11.2 | 11.2 | 1.7 | 12.7 | 2.1 | 2.7 | 0.0 | 3.0 | 3.9 | 4.1 | 17.7 |
| In Lane | 1.00 | | 0.14 | 1.00 | | 1.00 | 1.00 | | 0.51 | 1.00 | | 1.00 |
| e Grp Cap(c), veh/h | 570 | 1390 | 1427 | 423 | 2461 | 988 | 149 | 0 | 162 | 209 | 316 | 241 |
| Ratio(X) | 0.35 | 0.34 | 0.34 | 0.03 | 0.24 | 0.04 | 0.15 | 0.00 | 0.28 | 0.27 | 0.23 | 0.87 |
| il Cap(c, a), veh/h | 699 | 1390 | 1427 | 423 | 2461 | 988 | 382 | 0 | 567 | 362 | 937 | 715 |
| V Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| tream Filter(I) | 1.00 | 1.00 | 1.00 | 0.92 | 0.92 | 0.92 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| orm Delay (d), s/veh | 6.6 | 5.7 | 5.7 | 12.9 | 16.0 | 13.0 | 55.0 | 0.0 | 55.2 | 49.2 | 47.5 | 53.2 |
| Delay (d2), s/veh | 0.4 | 0.7 | 0.6 | 0.1 | 0.2 | 0.1 | 0.5 | 0.0 | 0.9 | 0.7 | 0.4 | 9.3 |
| 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 |
| BackOfO(95%), veh/ln | 2.9 | 7.6 | 7.8 | 0.4 | 9.9 | 1.3 | 1.3 | 0.0 | 2.6 | 3.0 | 3.7 | 11.8 |
| a. Movement Delay, s/ve | h | | | | | | | | | | | |
| irp Delav(d).s/veh | 7.0 | 6.4 | 6.4 | 13.0 | 16.2 | 13.1 | 55.5 | 0.0 | 56.1 | 49.9 | 47.9 | 62.5 |
| Srp LOS | A | А | А | В | В | В | E | A | E | D | D | E |
| pach Vol. veh/h | | 1149 | | | 641 | | | 68 | | | 339 | |
| proach Delay, s/veh | | 65 | | | 15.9 | | | 55.9 | | | 57.3 | |
| nnroach LOS | | Δ | | | 13.7 B | | | 55.7 F | | | 57.5 F | |
| proden EOS | | ~ | | | D | | | L | | | L | |
| ner - Assigned Phs | 1 | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Duration (G+Y+Rc), s | 11.1 | 91.5 | 9.2 | 18.2 | | 102.6 | | 27.4 | | | | |
| ange Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 6.5 | | 6.0 | | 6.5 | | | | |
| k Green Setting (Gmax), s | 17.0 | 34.6 | 17.0 | 40.9 | | 55.6 | | 61.9 | | | | |
| ax Q Clear Time (g_c+I1), s | 6.7 | 14.7 | 5.9 | 5.0 | | 13.2 | | 19.7 | | | | |
| een Ext Time (p_c), s | 0.4 | 4.2 | 0.1 | 0.3 | | 7.6 | | 1.2 | | | | |
| section Summary | | | | | | | | | | | | |
| oth Ctrl Delay | | | 18.6 | | | | | | | | | |
| 1.00 | | | | | | | | | | | | |

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02/13/2023 CivTech Inc. Synchro 11 Report Page 2

18-0555 SmokeTree Resort 2024 Background AM

2: Quail Run Rd & Lincoln Dr Timing Report, Sorted By Phase

| | - | | 4 | |
|------------------------|-------|----------|----------|-------|
| Phase Number | 2 | 4 | 6 | 8 |
| Movement | WBTI | NBTI | FBTI | SBTI |
| Lead/Lag | | DIE | LDIL | SDIE |
| Lead-Lag Optimize | | | | |
| Recall Mode | C-Max | Max | C-Max | Max |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1 | 1 | 1 | 1 |
| Minimum Initial (s) | 5 | 5 | 5 | 5 |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 |
| Minimum Gap (s) | 3 | 3 | 3 | 3 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 |
| Walk Time (s) | 7 | 7 | 7 | 7 |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 |
| Dual Entry | Yes | Yes | Yes | Yes |
| Inhibit Max | Yes | Yes | Yes | Yes |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 |
| Intersection Summary | | | | |
| Cycle Length | | | 130 | |
| Control Type | Actu | ated-Coo | rdinated | |

Valural Cycle 45 Offset: 94.6 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Splits and Phases: 2: Quail Run Rd & Lincoln Dr

| ₩ Ø2 (R) | ≪† <i>Ø</i> 4 |
|-------------|----------------------|
| 63.6 s | 66.4 s |
| Ø6 (R) | ▼Ø8 |
| 63.6 s | 66.4 s |

| 18-0555 SmokeTr 2024 Background | ee Resc PM | ort | | | 2: Quail Run Rd & Lincoln Timing Report, Sorted By Ph |
|------------------------------------|---------------|----------|-----------|-----------|--|
| | 4 | | 4 | 4 | |
| Phase Number | 2 | 4 | 6 | 8 | |
| Movement | WBTL | NBTL | EBTL | SBTL | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize | | | | | |
| Recall Mode | C-Max | Max | C-Max | Max | |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 | |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% | |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | |
| All-Red Time (s) | 1 | 1 | 1 | 1 | |
| Minimum Initial (s) | 5 | 5 | 5 | 5 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | |
| Walk Time (s) | 7 | 7 | 7 | 7 | |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 | |
| Dual Entry | Yes | Yes | Yes | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 | |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 | |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 | |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 | |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 | |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 | |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 | |
| Intersection Summary | | | | | |
| Cycle Length | | | 130 | | |
| Control Type | Actu | ated-Coo | rdinated | | |
| Natural Cycle | | | 45 | | |
| Offset: 94.6 (73%), Refere | nced to pha | se 2:WB | TL and 6: | EBTL, Sta | art of Green |

| √ Ø2 (R) | <\$ ↑ Ø4 | |
|----------|--------------------|--|
| 53.6 s | 66.4 s | |
| Ø6 (R) | | |
| 53.6 s | 66.4 s | |

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02/13/2023 CivTech Inc.

| 18-0555 SmokeTree 2024 Background AM | Reso M | rt | | | | | | 2: Qu HCM 6t | iail Ru i th Signaliz | n Rd 8 zed Inters | ection Su | ummary |
|--|------------|------------|---|----------|------|------|------|-----------------|---------------------------------|----------------------|-----------|----------|
| | ≯ | → | $\mathbf{\hat{v}}$ | 4 | + | * | ٠ | Ť | 1 | 1 | ŧ | ~ |
| vement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ne Configurations | <u>٦</u> | ¢۴ | | <u>۲</u> | tβ | | | 4 | | | 4 | |
| ffic Volume (veh/h) | 9 | 877 | 3 | 1 | 584 | 16 | 2 | 0 | 3 | 8 | 0 | 6 |
| ure Volume (veh/h) | 9 | 877 | 3 | 1 | 584 | 16 | 2 | 0 | 3 | 8 | 0 | 6 |
| al Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| ng 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 |
| Zone On Approach | 1070 | No | 1070 | 1070 | No | 1070 | 1070 | No | 1070 | 1070 | No | 1070 |
| at Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| low Rate, veh/h | 10 | 1020 | 3 | 1 | 642 | 18 | 3 | 0 | 5 | 11 | 0 | 9 |
| ak Hour Factor | 0.86 | 0.86 | 0.86 | 0.91 | 0.91 | 0.91 | 0.62 | 0.62 | 0.62 | 0.70 | 0.70 | 0.70 |
| rcent Heavy Ven, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| p, ven/n | 334 | 1652 | 5 | 161 | 1605 | 45 | 294 | 16 | 453 | 421 | 12 | 319 |
| Tive On Green | 0.15 | 0.15 | 0.15 | 0.60 | 0.60 | 0.60 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| t Flow, ven/n | //4 | 3035 | = | 551 | 3530 | 99 | 537 | 34 | 951 | /95 | 25 | 6/1 |
| p Volume(v), veh/h | 10 | 499 | 524 | 1 | 323 | 337 | 8 | 0 | 0 | 20 | 0 | 0 |
| p Sat Flow(s), ven/n/in | 1/4 | 1/// | 1868 | 551 | 12.2 | 1853 | 1522 | 0 | 0 | 1491 | 0 | 0 |
| Serve(g_s), s | 1.5 | 34.2 | 34.2 | 0.2 | 12.3 | 12.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| cie Q Ciear(g_c), s | 13.8 | 34.2 | 34.2 | 34.4 | 12.3 | 12.3 | 0.3 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| op In Lane | 1.00 | 000 | 0.01 | 1.00 | 000 | 0.05 | 0.37 | 0 | 0.62 | 0.55 | 0 | 0.45 |
| ne Grp Cap(c), ven/n | 334 | 808 | 849 | 101 | 808 | 842 | /03 | 0 | 0 | /53 | 0 | 0 |
| | 0.03 | 0.62 | 0.62 | 0.01 | 0.40 | 0.40 | 0.01 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 |
| /all Cap(c_a), ven/n | 334 | 808 | 849 | 1 22 | 808 | 842 | /03 | 1.00 | 1.00 | /53 | 1.00 | 1.00 |
| LIVI PIALOUTI RALIO | 0.33 | 0.33 | 0.33 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Stream Filler(I) | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 17.0 | 0.00 | 0.00 | 10.0 | 0.00 | 0.00 |
| ar Dolou (d2), s/ven | 41.5 | 44.7 | 44.7 | 33.0 | 10.0 | 10.0 | 17.9 | 0.0 | 0.0 | 18.0 | 0.0 | 0.0 |
| ti Delay (uz), siven | 0.2 | 3.3 | 3.2 | 0.1 | 1.5 | 1.4 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| | 0.0 | 22.7 | 24.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ie BackOlQ(95%),venini isia Movement Delay, s/vet | 0.0 | 23.7 | 24.7 | 0.0 | 0.0 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Grn Delav(d) s/veh | 41.6 | 48.0 | 47.8 | 33.6 | 17.9 | 17.9 | 17.9 | 0.0 | 0.0 | 18.1 | 0.0 | 0.0 |
| nGrn LOS | -11.0 D | -10.0 D | -17.0 D | C. | B | B | B | A | A | B | 0.0 A | 0.0 A |
| norp 200 | D | 1033 | | 0 | 661 | 5 | U | 8 | N | D | 20 | |
| Approach Delay, s/yeh | | /7 0 | | | 17.0 | | | 17.0 | | | 18.1 | |
| Approach LOS | | -,,, | | | B | | | B | | | B | |
| ipproudin EOO | | 0 | | | U | | | U | | | U | |
| mer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| hs Duration (G+Y+Rc), s | | 63.6 | | 66.4 | | 63.6 | | 66.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Nax Green Setting (Gmax), s | | 59.1 | | 61.9 | | 59.1 | | 61.9 | | | | |
| Max Q Clear Time (g_c+l1), s | | 36.4 | | 2.3 | | 36.2 | | 2.8 | | | | |
| reen Ext Time (p_c), s | | 4.2 | | 0.0 | | 7.3 | | 0.1 | | | | |
| ersection Summary | | | | | | | | | | | | |
| CM 6th Ctrl Delay | | | 35.9 | | | | | | | | | |
| M 6th LOS | | | D | | | | | | | | | |

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02/13/2023 CivTech Inc. Synchro 11 Report Page 4

18-0555 SmokeTree Resort 2024 Background AM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh Movement Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Stage 2 Stage 2 | 0.2 EBT 908 908 908 908 908 908 908 908 | EBR 10 10 0 Free None - - - - - - - - - - - - - - - - - - - | WBL 11 11 0 Free - 60 - - - 12 Major2 1068 - - - - - - - - - - - - - | WBT ↑↑↑ 599 599 0 Free None - 0 0 91 2 658 N 0 - | NBL 2 2 0 Stop - 0 0 0 0 0 0 0 0 0 0 0 2 4 Minor1 1415 1062 | NBR 8 0 Stop None - - 50 2 16 534 |
|--|---|---|--|---|--|---|
| Movement Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuven Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuven Mov Cap-2 Maneuven Stage 1 Stage 1 | EBT 908 908 908 908 908 908 908 908 | EBR 10 10 0 Free None - - - - - - - - - - - - - - - - - - - | WBL 11 11 0 Free - 60 - 60 - 12 12 Major2 1068 - - - - - - - - - - - - - | WBT 599 599 0 Free None - 0 0 0 91 2 658 | NBL 2 2 0 Stop - 0 0 0 0 0 0 0 0 2 4 Minor1 1415 1062 | NBR 8 0 Stop None - - 50 2 16 |
| Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-2 Maneuvec Stage 1 Stage 2 | 908 908 908 908 908 908 908 908 908 908 | 10 10 0 Free None - - - - - - - - - - - - - - - - - - - | 11 11 11 0 Free - 60 - - 91 2 12 1068 - - 1068 - - 4,14 | | Vinor1 1415 1062 | 8 8 0 Stop None - - - 50 2 16 |
| Traffic Vol, veh/h Future Vol, veh/h Future Vol, veh/h Future Vol, veh/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Critical Hdwy Stg 2 Follow-up Hdwy Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % | 908 908 908 908 908 908 908 908 908 908 | 10 10 0 Free None - - - - - - - - - - - - - - - - - - - | 11 11 0 Free - - - - - - - - - - - - - - - - - - | 599 599 0 Free None 0 0 91 2 658 | 2 2 0 Stop 0 0 0 0 0 0 50 2 4 4 <u>Minor1</u> 1415 1062 | 8 8 0 Stop None - - 50 2 16 |
| Haine Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | 908 908 908 Free - - - - - - - - - - - - - - - - - - | 10 10 0 Free None - - - - - - - - - - - - - | 11 11 0 Free - 60 - 91 2 12 Major2 1068 - 4,14 | 599 0 Free None 0 0 91 2 658 | 2 0 Stop 0 0 0 0 50 2 4 4 <u>Minor1</u> 1415 1062 | 8 0 Stop None - - 50 2 16 |
| Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuved Stage 1 Stage 1 Stage 2 | 908 r 0 Free ge, # 0 0 86 2 1056 <u>Major1</u> 0 - - - | 10 0 Free None - - - - - - - - - - - - - - - - - - - | 11 0 Free - 60 - 91 2 12 12 Major2 1068 - 4,14 | 599 0 Free None - 0 0 0 91 2 658 0 0 | 2 0 Stop - 0 0 0 50 2 4 Minor1 1415 1062 | 8 0 Stop None - - - 50 2 16 |
| Conflicting Peeds, #I/ Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | " 0 Free - - - - - - - - - - - - - - - - - - | 0 Free None - - - - - - - - - - - - - - - - - - - | 0 Free - - - - 91 2 12 12 1068 - - - - - - - - - - - - - - - - - - - | 0 Free None 0 0 91 2 658 | Stop - 0 0 0 0 0 50 2 4 Minor1 1415 1062 | 534 |
| sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuve Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-1 Maneuve Stage 1 Stage 2 | Free - - ge, # 0 0 866 2 1056 1056 - - - - - - - - - - | Free None - - - - - - - - - - - - - - - - - - - | Free - 60 - 91 2 12 Major2 1068 - 4,14 | Free None 0 0 91 2 658 0 0 | Stop - 0 0 50 2 4 <u>Minor1</u> 1415 1062 | Stop None - - 50 2 16 534 |
| KT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuved Mov Cap-2 Maneuved Stage 1 Stage 2 | - ge, # 0 86 2 1056 <u>Major1</u> 0 - - - | None - - - - 86 2 12 12 - - - - - | | Noné - 0 0 91 2 658 0 - | 0 0 50 2 4 <u>Minor1</u> 1415 1062 | Noné - - 50 2 16 534 |
| Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-1 Maneuver Stage 1 Stage 2 | ge, # 0 0 86 2 1056 <u>Major1</u> 0 - - - | - - - 86 2 12 12 - - - | 60 - - 91 2 12 12 1068 - - - 4,14 | - 0 91 2 658 0 - | 0 0 50 2 4 <u>Minor1</u> 1415 1062 | - 50 2 16 534 |
| ven in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | ge, # 0 0 86 2 1056 <u>Major1</u> 0 - - - | - 86 2 12 0 - - | - 91 2 12 1068 - - 4,14 | 0 0 91 2 658 0 - | 0 0 2 4 <u>Minor1</u> 1415 1062 | - 50 2 16 534 |
| Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuved Mov Cap-2 Maneuves Stage 1 Stage 2 | 0 86 2 1056 <u>Major1</u> 0 - - - - - - | - 86 2 12 12 - - | - 91 2 12 12 <u>Major2</u> 1068 - - 4,14 | 0 91 2 658 0 - | 0 50 2 4 <u>Vinor1</u> 1415 1062 | 50 2 16 534 |
| Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 2 Critical Hdwy Stg 2 Critical Hdwy Stg 2 Follow-up Hdwy Pol Cap-1 Maneuven Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | 86 2 1056 <u>Major1</u> 0 - - - - - - | 86 2 12 0 - | 91 2 12 Major2 1068 - 4,14 | 91 2 658 0 - | 50 2 4 <u>Minor1</u> 1415 1062 | 50 2 16 534 |
| Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | 2 1056 <u>Major1</u> 0 - - - | 2 12 0 - - | 2 12 <u>Major2</u> 1068 - - 4.14 | 2 658 0 - | 2 4 <u>Vinor1</u> 1415 1062 | 2 16 534 |
| Mymt Flow Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuved Mov Cap-2 Maneuves Stage 1 Stage 2 | 1056 <u>Major1</u> 0 - - - - | 12 1 0 - - - | 12 <u>Major2</u> 1068 - - 4.14 | 658 N 0 - | 4 Vinor1 1415 1062 | 16 534 |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pol Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | <u>Major1</u> 0 - - - | 1 0 - - - | Major2 1068 - - 4.14 | 0 | <u>Vinor1</u> 1415 1062 | 534 |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | <u>Major1</u> 0 - - - | 1 - - - | <u>Major2</u> 1068 - - 4.14 | 0 - | Vinor1 1415 1062 | 534 |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 1 | - Major1 0 - - - - | | 1068 - 4.14 | 0 | 1415 1062 | 534 |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | 0 - - - | - | 1068 - - 4.14 | - | 1415 1062 | 534 |
| Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 | - - - - | - | - | - | 1062 | |
| Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuved Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | - | - | 4.14 | | | - |
| Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | - | - | 4.14 | | 353 | - |
| Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | - | - | | - | 6.84 | 6.94 |
| Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Stage 1 Stage 2 | - | | - | - | 5.84 | - |
| Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | | | 5.84 | |
| Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | - | | 2.22 | | 3.52 | 3.32 |
| Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | 1005 | | *//1 | *715 |
| Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | 1000 | | *627 | 713 |
| Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | | | *700 | |
| Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | 1 | | 109 | 1 |
| Mov Cap-1 Maneuve Mov Cap-2 Maneuve Stage 1 Stage 2 | | | 1005 | | 1 | +745 |
| Mov Cap-2 Maneuve Stage 1 Stage 2 | er - | - | 1005 | - | *436 | *715 |
| Stage 1 Stage 2 | er - | - | - | - | *436 | - |
| Stage 2 | - | - | - | - | *627 | - |
| Oldgo L | | | | | *779 | |
| | | | | | , | |
| | | | | | | |
| Approach | ÉB | | WB | | NB | |
| HCM Control Delay, | s 0 | | 0.2 | | 10.9 | |
| HCM LOS | | | | | В | |
| | | | | | | |
| Minor Lano/Major M | unot | MDI n1 | EDT | EDD | M/D | W/DT |
| | viill | INDLIII | EDI | EDR | WDL | WDI |
| Capacity (veh/h) | | 634 | 1.1 | - | 1005 | - |
| HCM Lane V/C Ratio |) | 0.032 | - | - | 0.012 | - |
| HCM Control Delay | (s) | 10.9 | - | - | 8.6 | - |
| HCM Lane LOS | | В | | - | A | - |
| HCM 95th %tile Q(ve | eh) | 0.1 | | - | 0 | |
| | / | | | | | |
| NOLES | | | | | | |
| ~: Volume exceeds of | | | | S shaa | 00s | +: Com |
| | capacity | \$: De | elay exc | Julius Ji | | |

| 02/1 | 3/20 | 23 |
|------|------|------|
| Civ1 | Tech | Inc. |

Synchro 11 Report Page 5

18-0555 SmokeTree Resort 2024 Background PM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh | 0.2 | | | | | | |
|-----------------------|-----------|--------|--------|--------|--------|--------|--------|
| Mariana | | | | | | | |
| MIMUAMANI | FRT | FRP | RP 1 | WRI | WRT | NRI | NRP |
| Lane Configurations | | EDR | ו אט | VVDL | | INDL | INDIK |
| Traffic Vol. voh/h | 4T 050 | 2 | 2 | - 1 | 044 | - T' | 11 |
| Future Vel veh/h | 052 | 3 | 3 | 0 | 904 | 5 | 11 |
| Conflicting Dode #/br | 802 | 3 | 3 | 0 | 904 | 0 | 11 |
| Sign Control | Eroc | Eroc | 0 | Eroc | Eroc | Stop | Stor |
| RT Channelized | riee | None | nee I | riee | None | Siup | None |
| Storage Length | | NOUS | ле | 60 | NOLIG | - | NOUG |
| Voh in Modian Storage | · # 0 | | | 00 | 0 | 0 | |
| Crade % | ,# U | | | | 0 | 0 | |
| Doak Hour Factor | 0 | - 94 | 96 | 01 | 01 | 50 | 50 |
| | 00 | 00 | 00 | 91 | 7 | | 50 |
| Heavy Venicles, % | 2 | 2 | 2 | 2 | 1050 | 10 | 2 |
| NVMT FIOW | 991 | 3 | 3 | / | 1059 | 10 | 22 |
| | | | | | | | |
| Major/Minor I | Major1 | N | Ma | ajor2 | 1 | Vinor1 | |
| Conflicting Flow All | 0 | 0 | 0 | 994 | 0 | 1537 | 497 |
| Stage 1 | - | - | - | - | - | 993 | - |
| Stage 2 | - | - | | - | - | 544 | - |
| Critical Hdwy | - | - | | 4.14 | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | | | | - | | 5.84 | |
| Critical Hdwy Stg 2 | - | | - | - | - | 5.84 | |
| Follow-up Hdwy | | | - | 2.22 | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | - | | - 1 | 1051 | - | *328 | *739 |
| Stage 1 | | | | - | | *652 | - |
| Stage 2 | | | - | - | | *652 | |
| Platoon blocked % | | | | 1 | | 1 | 1 |
| Mov Cap-1 Maneuver | | | - 1 | 1051 | - | *325 | *730 |
| Mov Cap-1 Maneuver | | | | 1031 | - | *325 | 137 |
| Stago 1 | - | - | - | - | - | *652 | - |
| Stage 2 | | | | | | *440 | |
| Stage 2 | | | - | - | | 048 | |
| | | | | | | | |
| Approach | EB | | | WB | | NB | |
| HCM Control Delay, s | 0 | | | 0.1 | | 12.2 | |
| HCM LOS | | | | | | В | |
| | | | | | | | |
| Minor Long/Major Mum | .+ 1 | | n1 | EDT | | WDI | WDT |
| | 11 1 | INDLIT | | EDI | EDK | WDL | VVDI |
| Capacity (veh/h) | | 529 | 529 | - | | 1051 | |
| HCM Lane V/C Ratio | | 0.06 | .06 | | - | 0.006 | |
| HCM Control Delay (s) | | 12.2 | 2.2 | - | | 8.4 | |
| HCM Lane LOS | | В | В | - | | A | - |
| HCM 95th %tile Q(veh) |) | 0.2 | 0.2 | - | | 0 | |
| Notes | | | | | | | |
| ~: Volume exceeds car | nacity | \$∙ De | . Dela | av exc | eeds 3 | 00s | +· Com |
| . Volume exceeds cu | oucity | ψ. Βυ | . Delu | uy cho | | 005 | 1.0011 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 02/13/2023 | | | | | | | |

18-0555 SmokeTree Resort 2024 Background AM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | | | | | | | |
|-----------------------|----------|--------|----------|--------|------|--------|----------|---------|---------|----------|-------|----------|
| Int Delay, s/veh | 1.3 | | | | | | | | | | | |
| | EDI | EDT | | W/DI | WDT | MDD | NIDI | NDT | NDD | CDI | CDT | CDD |
| Novement | EBL | EBI | ERK | WBL | WBI | WRK | NRL | INRI | NRK | SBL | SBT | SBK |
| Lane Conligurations | 1 | 4T | (0 | 10 | TP | 0 | 4.4 | | 10 | <u>,</u> | 0 | r |
| Trainc voi, ven/n | 21 | 830 | 69 | 12 | 551 | 9 | 44 | 5 | 60 | 4 | 0 | 10 |
| Future Vol, ven/n | 21 | 830 | 69 | 12 | 551 | 9 | 44 | 5 | 60 | 4 | 0 | 10 |
| Jonnicting Peas, #/nr | - 0 | 0 | 0 | 0 | - 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | 1.1 | None | 1.1 | | None | - | 1.1 | None |
| Storage Length | 60 | - | | 25 | - | - | - | - | | 0 | - | 0 |
| ven in Median Storage | e,# - | 0 | | 1.1 | 0 | | 1.1 | | | | 1 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | /6 | /6 | /6 | /0 | /0 | /0 |
| Heavy venicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Vivmt Flow | 24 | 943 | /8 | 13 | 580 | 9 | 58 | / | /9 | 6 | 0 | 14 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | 1 | Minor1 | | | Vinor2 | | |
| Conflicting Flow All | 589 | 0 | 0 | 1021 | 0 | 0 | 1346 | 1645 | 511 | 1134 | - | 295 |
| Stage 1 | - | - | - | - | - | - | 1030 | 1030 | - | 611 | - | - |
| Stage 2 | - | - | - | - | - | - | 316 | 615 | - | 523 | - | - |
| Critical Hdwy | 4.14 | | | 4.14 | | | 7.54 | 6.54 | 6.94 | 7.54 | | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.54 | 5.54 | - | 6.54 | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.54 | 5.54 | - | 6.54 | - | - |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | - | 3.32 |
| Pot Cap-1 Maneuver | *1286 | - | | 1017 | - | - | *499 | *229 | *739 | *582 | 0 | *860 |
| Stage 1 | - | - | - | - | | - | *599 | *546 | - | *810 | 0 | - |
| Stage 2 | - | - | - | - | - | - | *810 | *710 | - | *697 | 0 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | 1 | 1 | 1 | 1 | | 1 |
| Mov Cap-1 Maneuver | *1286 | - | - | 1017 | 1.1 | - | *479 | *222 | *739 | *500 | | *860 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | *509 | *372 | - | *519 | - | - |
| Stage 1 | - | - | - | - | | - | *588 | *536 | - | *795 | | - |
| Stage 2 | - | - | - | - | - | - | *787 | *701 | - | *603 | - | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | _ | | NB | | | SB | _ | |
| HCM Control Delay, s | 0.2 | | | 0.2 | | | 12.8 | | | 10.1 | | |
| HCM LOS | | | | | | | В | | | В | | |
| | | | | | | | | | | | | |
| Minor Lano/Major Myr | nt | NRI n1 | ERI | ERT | ERD | W/RI | WRT | W/RD | CRI n1 | CRI n2 | | |
| Capacity (vob/b) | m | 402 | * 1204 | LDI | LDK | 1017 | WDI | WDR. | E10 | 040 | | |
| Lapacity (Venin) | | 0.02 | 0.010 | | | 0.012 | | - | 0.011 | 0.017 | | |
| HCIVI Larie V/C Ralio | \ \ | 0.238 | 0.019 | | | 0.012 | - | | 0.011 | 0.017 | | |
| HCM Long LOS |) | 12.8 | 7.9 | | | 8.0 | | | IZ D | 9.3 | | |
| HOW LOTE LUS | 1) | 0.0 | A 0.1 | | | A | | | 0 | A 0.1 | | |
| | 9 | 0.9 | 0.1 | | | 0 | | - | 0 | 0.1 | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds ca | pacity | \$: D | elay exc | eeds 3 | 00s | +: Com | putation | n Not D | efined | *: All | major | volume i |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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18-0555 SmokeTree Resort 2024 Background PM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|--------|-------------|--------|--------|-------------|-------|--------|------|-----------|--------|------|------|
| Lane Configurations | 5 | ≜ †} | | 5 | ≜ †} | | | 4 | | 5 | | 1 |
| Traffic Vol, veh/h | 8 | 790 | 62 | 6 | 872 | 9 | 80 | 2 | 72 | 3 | 0 | 19 |
| Future Vol, veh/h | 8 | 790 | 62 | 6 | 872 | 9 | 80 | 2 | 72 | 3 | 0 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sian Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 60 | | - | 25 | | - | | | - | 0 | | 0 |
| Veh in Median Storage | e.# - | 0 | | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade. % | | 0 | | | 0 | - | | 0 | | | 0 | |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mymt Flow | 9 | 898 | 70 | 6 | 918 | 9 | 105 | 3 | 95 | 4 | 0 | 27 |
| | | | | - | | - | | - | | - | - | |
| Maior/Minor | Maior1 | | 1 | Maior2 | | 1 | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 927 | 0 | 0 | 968 | 0 | 0 | 1422 | 1890 | 484 | 1404 | | 464 |
| Stage 1 | | - | - | | | - | 951 | 951 | - | 935 | | |
| Stage 2 | | | | | | | 471 | 939 | | 469 | | |
| Critical Hdwy | 4.14 | - | | 4.14 | | - | 7.54 | 6.54 | 6.94 | 7.54 | | 6.94 |
| Critical Hdwy Stg 1 | | | | | | | 6.54 | 5.54 | | 6.54 | | |
| Critical Hdwy Stg 2 | | - | - | | | - | 6.54 | 5.54 | | 6.54 | | |
| Follow-up Hdwy | 2.22 | | | 2.22 | | - | 3.52 | 4.02 | 3.32 | 3.52 | | 3.32 |
| Pot Cap-1 Maneuver | *1070 | - | - | 1036 | | - | *446 | *218 | *763 | *446 | 0 | *715 |
| Stage 1 | | | | | | | *637 | *576 | | *674 | 0 | |
| Stage 2 | | - | | - | - | - | *674 | *591 | - | *720 | 0 | |
| Platoon blocked, % | 1 | | | 1 | | - | 1 | 1 | 1 | 1 | | 1 |
| Mov Cap-1 Maneuver | *1070 | | | 1036 | - | - | *424 | *215 | *763 | *384 | | *715 |
| Mov Cap-2 Maneuver | - | | - | - | | - | *483 | *361 | - | *467 | | - |
| Stage 1 | | - | | - | - | - | *631 | *571 | - | *669 | | |
| Stage 2 | | | - | - | | | *645 | *588 | - | *622 | | - |
| | | | | | | | 2.5 | | | | | |
| Approach | EB | _ | | WB | | _ | NB | | | SB | _ | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | | 14.5 | | | 10.6 | | |
| HCM LOS | 271 | | | | | | В | | | B | | |
| | | | | | | | - | | | | | |
| Minor Lane/Major Mvn | nt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | | |
| Capacity (veh/h) | | 580 | * 1070 | | | 1036 | | | 467 | 715 | | |
| HCM Lane V/C Ratio | | 0.349 | 0.008 | | | 0.006 | | | 0 009 | 0.038 | | |
| HCM Control Delay (s) |) | 14 5 | 8.4 | - | | 8.5 | - | | 12.8 | 10.2 | | |
| HCM Lane LOS | | R | Δ | | | Δ | | | 12.0 R | R | | |
| HCM 95th %tile Q(veh |) | 1.6 | 0 | - | - | 0 | - | - | 0 | 0.1 | | |
| Notes | | | | | | | | | | | | |
| NOICS | | | | | | | | | | | | |

02/13/2023 CivTech Inc.

| 18-0555 SmokeTree Resort | |
|--------------------------|--|
| 2024 Background AM | |

6: Scottsdale Rd & Lincoln Dr/Lincoln Ln Timing Report, Sorted By Phase

| | × | t | \$ | \$ | 4 | 7 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | | | | | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Intersection Summary | | | | | | |
| Cycle Length | | | 130 | | | |

Control Type Actuated-Coordinated
Natural Cycle 75
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr/Lincoln Ln

| Ø1 | ¶ø₂ | Ø4 | ▼ Ø8 |
|--------------|--------|------|-------------|
| 26 s | 48 s | 28 s | 28 s |
| \$ Ø5 | Ø6 (R) | | |
| 28 s | 46 s | | |

| | - \ | + | 2 | \$ | 4 | * | |
|----------------------------|-------------|-----------|------------|---------|-------|-------|----------|
| Dhaso Numbor | 1 | ן ר | 4 | *1 | • | • | |
| Movement | SBI | NRT | FRTI | NRI | SBT | WRTI | |
| | Lead | Lan | LDIL | Lead | Lan | WDIL | |
| Lead-Lag Ontimize | Loud | Lug | | Loud | Lug | | |
| Recall Mode | None | None | None | None | C-Max | None | |
| Maximum Snlit (s) | 26 | 48 | 28 | 28 | 46 | 28 | |
| Maximum Split (%) | 20.0% | 36.9% | 21 5% | 21.5% | 35.4% | 21 5% | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | |
| Yellow Time (s) | 3.3 | 47 | 4 | 4 | 47 | 3.6 | |
| All-Red Time (s) | 2 | 1 | 15 | 15 | 1 | 2 | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | |
| Minimum Gan (s) | 1 | 1 | 1 | 1 | 1 | 1 | |
| Time Before Reduce (s) | 0 | | | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | - | 7 | - | - | 7 | - | |
| Flash Dont Walk (s) | | 15 | | | 18 | | |
| Dual Entry | No | Yes | No | No | Yes | No | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 | |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 90 | | | | |
| Offset: 0 (0%), Referenced | to phase 6 | :SBT, Sta | rt of Gree | en | | | |
| Solits and Phases 6. Sc | nttsdalo Pd | & Lincol | n Dr/Linco | oln I n | | | |
| | | | | лн L(I | | 1 | + |
| -Ø1 | Ø2 | | | | | | 17/4 0/8 |

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Synchro 11 Report Page 7

02/13/2023 CivTech Inc.

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|--|-------------|------------|--------------|------------|---------------|-------------|------------|----------|--------------|----------|-----------|---------------------------------------|
| | • | → | \mathbf{F} | 1 | - | • | 1 | Ť | 1 | - | Ŧ | - |
| lovement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | <u></u> | ર્ન | 1 | <u></u> | - † î> | | ሻሻ | <u> </u> | | <u></u> | <u></u> | 1 |
| Traffic Volume (veh/h) | 529 | 37 | 318 | 21 | 34 | 28 | 215 | 897 | 33 | 20 | 957 | 378 |
| uture Volume (veh/h) | 529 | 37 | 318 | 21 | 34 | 28 | 215 | 897 | 33 | 20 | 957 | 3/8 |
| niliai Q (QD), Ven Dod Riko Adi(A, phT) | 1.00 | 0 | 1.00 | 1.00 | 0 | 1.00 | 1.00 | U | 1.00 | 1.00 | U | 1.00 |
| Parking Rus Adi | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| ork Zone On Approach | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 |
| Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Flow Rate, veh/h | 617 | 0 | 353 | 24 | 39 | 32 | 236 | 986 | 36 | 22 | 1052 | 415 |
| Hour Factor | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| avy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| h/h | 617 | 0 | 409 | 93 | 102 | 75 | 294 | 1899 | 69 | 38 | 1583 | 766 |
| e On Green | 0.17 | 0.00 | 0.17 | 0.05 | 0.05 | 0.05 | 0.09 | 0.38 | 0.38 | 0.02 | 0.31 | 0.31 |
| Flow, veh/h | 3563 | 0 | 1585 | 1/81 | 1957 | 1433 | 3456 | 5057 | 184 | 1/81 | 5106 | 1585 |
| Volume(v), veh/h | 61/ | 0 | 353 | 24 | 35 | 36 | 236 | 663 | 359 | 22 | 1052 | 415 |
| Sat Flow(s), ven/n/in | 22.5 | 0.0 | 1585 | 1/81 | 25 | 1012 | 9.7 | 10.7 | 10.7 | 1/81 | 1702 | 1585 |
| $le \cap C(g_s), s$ | 22.5 | 0.0 | 22.5 | 1.7 | 2.5 | 2.0 | 8.7 | 19.7 | 19.7 | 1.0 | 23.3 | 23.0 |
| In Lane | 1 00 | 0.0 | 1 00 | 1.00 | 2.0 | 0.89 | 1.00 | 17.7 | 0.10 | 1 00 | 20.0 | 1 00 |
| e Grp Cap(c), veh/h | 617 | 0 | 409 | 93 | 93 | 84 | 294 | 1278 | 690 | 38 | 1583 | 766 |
| Ratio(X) | 1.00 | 0.00 | 0.86 | 0.26 | 0.38 | 0.43 | 0.80 | 0.52 | 0.52 | 0.59 | 0.66 | 0.54 |
| Cap(c_a), veh/h | 617 | 0 | 409 | 307 | 306 | 278 | 598 | 1278 | 690 | 284 | 1583 | 766 |
| 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 |
| eam Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| orm Delay (d), s/veh | 53.8 | 0.0 | 46.0 | 59.2 | 59.6 | 59.7 | 58.4 | 31.5 | 31.5 | 63.1 | 39.0 | 23.5 |
| Delay (d2), s/veh | 36.4 | 0.0 | 16.4 | 0.5 | 0.9 | 1.3 | 2.0 | 0.2 | 0.3 | 5.3 | 2.2 | 2.7 |
| al 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(95%),veh/In | 19.1 | 0.0 | 18.6 | 1.4 | 2.1 | 2.1 | 7.0 | 12.8 | 13.7 | 1.4 | 15.2 | 18.9 |
| nsig. Movement Delay, s/ven | 00.0 | 0.0 | 12.4 | F0 7 | (05 | (10 | 10.4 | 01 7 | 21.0 | (0.4 | 41.0 | 24.2 |
| Grp Delay(d),s/ven | 90.2 | 0.0 | 62.4 | 59.7 | 6U.5 | 61.U | 60.4 | 31.7 | 31.8 | 08.4 | 41.Z | 20.3 |
| roach Vol. voh/h | F | 070 | E | E | DE | E | E | 1250 | U | E | 1400 | <u> </u> |
| roach Delay, s/yeh | | 970 | | | 90 60 5 | | | 37.1 | | | 37 / | |
| proach LOS | | 60.0 | | | 60.5 | | | D. | | | 57.4 D | |
| or Appigned Dh- | 1 | | | , | | , | | - | | | _ | |
| er - Assigned Phs | 0.0 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| IS DUIATION (G+Y+RC), S | 8.0 | 54.5 | | 28.0 | 16.6 | 46.0 | | 12.4 | | | | |
| av Green Setting (Gmax) | 0.3 * 21 | 12.7 | | 22.5 | 22.5 | 0.7 /0.2 | | 22.0 | | | | |
| Max O Clear Time $(\alpha + 11)$ s | 3.6 | 21.7 | | 22.5 | 10.7 | 25.8 | | 4.8 | | | | |
| reen Ext Time (p_c+r1), s | 0.0 | 1.4 | | 0.0 | 0.3 | 1.5 | | 0.2 | | | | |
| | 2.5 | | | 2.5 | | | | | | | | |
| ICM (the Ctrl Delay | | | 40.7 | _ | _ | | | | _ | | | |
| ICM 6th LOS | | | 48.7 D | | | | | | | | | |
| lotes | | | | | | | | | | | | |
| er approved pedestrian inte | rval to h | e less tha | n nhase | max aree | n | | | | | | | |
| ser approved volume balanci | ng amoi | na the lan | es for tur | nina mov | ement. | | | | | | | |
| ICM 6th computational engin | ne requi | es equal | clearanc | e times fo | r the pha | ses cross | ing the ba | arrier. | | | | |
| 112/2022 | | | | | | | | | | <u> </u> | mohr- 11 | Dor' |
| 13/2023 | | | | | | | | | | 5) | nchro I I | Report |

18-0555 SmokeTree Resort 2024 Background AM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | _ | | | | |
|-------------------------|--------|-------|--------|--------|--------|----------|
| Int Delay, s/veh | 0 | | | | | |
| Movement | WBI | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | M | WDI(| 1 | NDI | JDL | 201 |
| Traffic Vol. voh/h | | 0 | 5 | 0 | 0 | * |
| Future Vol. veh/h | 0 | 0 | 5 | 0 | 0 | 4 |
| Conflicting Pods #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Eroo | Eroo | Eroo | Eroo |
| DT Channelized | Stop | Nono | Tiee | None | Tiee | Nono |
| Storago Longth | - | NULLE | | NULLE | | NULLE |
| Voh in Modian Storage | . # 0 | | 0 | | | 0 |
| Crode 0/ | :,# 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy venicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Nivmt Flow | 0 | 0 | 6 | 0 | 0 | 4 |
| | | | | | | |
| Maior/Minor | Vinor1 | I | Naior1 | 1 | Vaior2 | |
| Conflicting Flow All | 10 | 6 | 0 | 0 | 6 | 0 |
| Stage 1 | 6 | | - | 5 | - | - |
| Stage 7 | 1 | | | | | |
| Critical Udway | 4 | 4 22 | | | / 12 | |
| Critical Lidua Sta 1 | 0.42 | 0.22 | | | 4.12 | |
| Critical Huwy Stg T | 5.42 | | | | | |
| Critical Howy Stg 2 | 5.42 | - | | 1.1 | - | |
| Follow-up Hawy | 3.518 | 3.318 | - | | 2.218 | - |
| Pot Cap-1 Maneuver | 1010 | 1077 | 1.1 | 1.1 | 1615 | |
| Stage 1 | 1017 | - | - | - | | - |
| Stage 2 | 1019 | 1.1 | | 1.1 | 1.1 | |
| Platoon blocked, % | | | - | | | - |
| Mov Cap-1 Maneuver | 1010 | 1077 | - | | 1615 | |
| Mov Cap-2 Maneuver | 1010 | - | - | - | - | - |
| Stage 1 | 1017 | | - | - | | - |
| Stage 2 | 1019 | | - | | | |
| | | | | | | |
| Arrana | MID | | NID | | 00 | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 0 | | 0 | | 0 | |
| HCM LOS | Α | | | | | |
| | | | | | | |
| Minor Lane/Major Mym | nt | NRT | NRRV | VRI n1 | SBL | SBT |
| Canacity (voh/h) | n | NDT | NDIV | VDEIII | 141E | 301 |
| | | | | | 1015 | |
| HCIVI Lane V/C Ratio | | | | - | - | |
| HCIVI Control Delay (s) | | - | | 0 | 0 | |
| HUM Lane LUS | | | - | A | A | |
| HCM 95th %tile O(veh | | - | - | - | 0 | - |

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18-0555 SmokeTree Resort 2024 Background PM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | | _ | | _ | |
|------------------------|--------------|-------|----------|---------|---------|-------|
| Int Delay, s/yeh | 0 | | | | | |
| | | | NOT | | 0.01 | 0.0.7 |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Y | | ÷. | | _ | ન |
| Traffic Vol, veh/h | 0 | 0 | 3 | 0 | 0 | 2 |
| Future Vol, veh/h | 0 | 0 | 3 | 0 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | | None | | None | | None |
| Storage Length | 0 | - | | | | |
| Veh in Median Storage | e,# 0 | - | 0 | | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 3 | 0 | 0 | 2 |
| | | | | | | |
| Maria a D. Alara a | N 41-1 - 1-1 | | 4-1 | | 4-10 | |
| | | N | viajor i | | viajorz | |
| Conflicting Flow All | 5 | 3 | 0 | 0 | 3 | 0 |
| Stage 1 | 3 | | | | 1.1 | |
| Stage 2 | 2 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | | | 4.12 | |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | | | - | - | |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 1017 | 1081 | - | - | 1619 | - |
| Stage 1 | 1020 | | - | | - | - |
| Stage 2 | 1021 | - | - | - | - | - |
| Platoon blocked, % | | | | - | | - |
| Mov Cap-1 Maneuver | 1017 | 1081 | - | - | 1619 | |
| Mov Cap-2 Maneuver | 1017 | | | | - | - |
| Stage 1 | 1020 | | | - | - | |
| Stage 2 | 1021 | | | | | |
| Sidge 2 | 1021 | | | | | |
| | | | | | | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 0 | | 0 | | 0 | |
| HCM LOS | A | | | | | |
| | | | | | | |
| Minor Lane/Major Myr | nt | NRT | NRP\ | //RI n1 | SRI | SBT |
| Conceitu (uch/h) | m | NDT | NDR | VDLIII | 1/10 | 301 |
| | | | - | | 1019 | |
| HCM Captrol Dolary (*) | \ \ | | | - | - | |
| HCIVI Control Delay (s |) | | | - 0 | 0 | 1.1 |
| HCM Lane LOS | | | - | A | A | - |
| UCM 05th %tile O(vol | 1) | - | - | | 0 | |

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APPENDIX H

2029 NO-BULD PEAK HOUR ANALYSIS



| 18-0555 SmokeTre 2029 Background | ee Reso AM | ort | | | | | 1: Mockingbird Ln & Lincoln Dr Timing Report, Sorted By Phase |
|-------------------------------------|---------------|-------|-------|-------|-------|-------|--|
| | ۶ | * | 1 | | 4 | 4> | |
| Phase Number | 1 | 2 | 3 | 4 | 6 | 8 | |
| Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL | |
| Lead/Lag | Lead | Lag | Lead | Lag | | | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |

| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | | |
|---------------------------------|----------|-----------------|----------|----------|-------|------|--|--|
| Intersection Summary | | | | | | | | |
| Cycle Length | | | 130 | | | | | |
| Control Type | Actuat | ed-Coord | dinated | | | | | |
| Natural Cycle | | | 80 | | | | | |
| Offset: 0 (0%), Referenced to p | hase 2:V | VBTL and | d 6:EBTL | Start of | Green | | | |

126 34.6 57.6 102.5 34.6 102.5

Splits and Phases: 1: Mockingbird Ln & Lincoln Dr

| ▶ _{Ø1} | ● ♥ Ø2 (R) | Ø3 | ™ ø4 | |
|-----------------|------------|--------|-------------|--|
| 21 s | 40.6 s | 21 s | 47.4 s | |
| | | Ø8 | | |
| 61.6 s | | 68.4 s | | |

| | ٨ | ÷ | 1 | † | A | 4⊾ | |
|------------------------|-------|----------|----------|----------|-------|-------|--|
| Phase Number | 1 | 2 | 3 | 4 | 6 | • | |
| Movement | FBI | WBTI | SBL | NBTI | FBTI | SBTI | |
| Lead/Lag | Lead | Lag | Lead | Lag | LDIL | 0012 | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| | Actu | ated-Coo | rdinated | | | | |
| Control Type | | | | | | | |

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Local Yield (s)

Synchro 11 Report

Page 1

| 18-0555 SmokeTree 2029 Background AM | Reso 1 | rt | | | | | | HCM 6t | kingbir h Signaliz | rd Ln 8 zed Inters | ection Su | ummary |
|---|-----------|------|--------------------|----------|--------------|------|------------|--------|-----------------------|-----------------------|-----------|--------|
| | ≯ | - | $\mathbf{\hat{z}}$ | 4 | + | * | 1 | 1 | ۲ | 1 | Ŧ | ~ |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations. | ሻ | A1≯ | | <u>٦</u> | - † † | 1 | - 1 | 4Î | | ሻ | ↑ | 1 |
| Traffic Volume (veh/h) | 220 | 975 | 69 | 16 | 664 | 48 | 23 | 23 | 27 | 56 | 65 | 210 |
| ure Volume (veh/h) | 220 | 975 | 69 | 16 | 664 | 48 | 23 | 23 | 27 | 56 | 65 | 210 |
| al Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| king 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 |
| Zone On Approach | | No | | | No | | | No | | | No | |
| at Flow, veh/h/ln | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 |
| ow Rate, veh/h | 234 | 1037 | 73 | 17 | 714 | 52 | 25 | 25 | 30 | 69 | 80 | 259 |
| Hour Factor | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 | 0.91 | 0.81 | 0.81 | 0.81 |
| it Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| /eh/h | 490 | 2516 | 177 | 339 | 2286 | 918 | 170 | 95 | 114 | 247 | 382 | 291 |
| e On Green | 0.07 | 0.71 | 0.71 | 0.41 | 0.41 | 0.41 | 0.12 | 0.12 | 0.12 | 0.05 | 0.19 | 0.19 |
| low, veh/h | 1688 | 3545 | 249 | 481 | 3741 | 1502 | 987 | 815 | 978 | 1688 | 1969 | 1502 |
| /olume(v), veh/h | 234 | 547 | 563 | 17 | 714 | 52 | 25 | 0 | 55 | 69 | 80 | 259 |
| at Flow(s),veh/h/ln | 1688 | 1870 | 1924 | 481 | 1870 | 1502 | 987 | 0 | 1793 | 1688 | 1969 | 1502 |
| /e(g_s), s | 6.4 | 15.6 | 15.6 | 2.8 | 16.8 | 2.7 | 3.0 | 0.0 | 3.6 | 4.6 | 4.4 | 21.8 |
| Q Clear(g_c), s | 6.4 | 15.6 | 15.6 | 5.6 | 16.8 | 2.7 | 3.0 | 0.0 | 3.6 | 4.6 | 4.4 | 21.8 |
| n Lane | 1.00 | | 0.13 | 1.00 | | 1.00 | 1.00 | | 0.55 | 1.00 | | 1.00 |
| Grp Cap(c), veh/h | 490 | 1328 | 1366 | 339 | 2286 | 918 | 170 | 0 | 209 | 247 | 382 | 291 |
| Ratio(X) | 0.48 | 0.41 | 0.41 | 0.05 | 0.31 | 0.06 | 0.15 | 0.00 | 0.26 | 0.28 | 0.21 | 0.89 |
| l Cap(c_a), veh/h | 596 | 1328 | 1366 | 339 | 2286 | 918 | 366 | 0 | 564 | 389 | 937 | 715 |
| M Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| tream Filter(I) | 1.00 | 1.00 | 1.00 | 0.85 | 0.85 | 0.85 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| form Delay (d), s/veh | 9.1 | 7.7 | 7.7 | 17.4 | 19.9 | 15.7 | 52.1 | 0.0 | 52.4 | 45.8 | 44.0 | 51.0 |
| Delay (d2), s/veh | 0.7 | 0.9 | 0.9 | 0.2 | 0.3 | 0.1 | 0.4 | 0.0 | 0.7 | 0.6 | 0.3 | 9.0 |
| 2 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 |
| BackOfQ(95%),veh/In | 4.1 | 10.3 | 10.6 | 0.6 | 12.3 | 1.7 | 1.4 | 0.0 | 3.0 | 3.5 | 4.0 | 13.8 |
| . Movement Delay, s/veh | ı | | | | | | | | | | | |
| Srp Delay(d),s/veh | 9.9 | 8.7 | 8.7 | 17.7 | 20.2 | 15.8 | 52.5 | 0.0 | 53.0 | 46.5 | 44.3 | 60.1 |
| Grp LOS | А | А | A | В | С | В | D | А | D | D | D | E |
| proach Vol, veh/h | | 1344 | | | 783 | | | 80 | | | 408 | |
| proach Delay, s/veh | | 8.9 | | | 19.8 | | | 52.8 | | | 54.7 | |
| pproach LOS | | А | | | В | | | D | | | D | |
| er - Assigned Phs | 1 | 2 | 3 | 4 | | 6 | | 8 | | | | |
| hs Duration (G+Y+Rc), s | 12.8 | 85.5 | 10.1 | 21.6 | | 98.3 | | 31.7 | | | | |
| ange Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 6.5 | | 6.0 | | 6.5 | | | | |
| x Green Setting (Gmax), s | 17.0 | 34.6 | 17.0 | 40.9 | | 55.6 | | 61.9 | | | | |
| ax Q Clear Time (q c+l1). s | 8.4 | 18.8 | 6.6 | 5.6 | | 17.6 | | 23.8 | | | | |
| een Ext Time (p_c), s | 0.4 | 4.8 | 0.1 | 0.4 | | 9.4 | | 1.4 | | | | |
| section Summary | | | | | | | | | | | | |
| 6th Ctrl Delay | | | 20.7 | | | | | | | | | |
| thLOC | | | C | | | | | | | | | |

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18-0555 SmokeTree Resort 2029 Background AM

2: Quail Run Rd & Lincoln Dr Timing Report, Sorted By Phase

| | ¥ | | 4 | |
|------------------------|-------|----------|----------|-------|
| Phase Number | 2 | 4 | 6 | 8 |
| Movement | WBTI | NBTI | FBTI | SBTI |
| Lead/Lag | more | nore | LDIL | 0012 |
| Lead-Lag Optimize | | | | |
| Recall Mode | C-Max | Max | C-Max | Max |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1 | 1 | 1 | 1 |
| Minimum Initial (s) | 5 | 5 | 5 | 5 |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 |
| Minimum Gap (s) | 3 | 3 | 3 | 3 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 |
| Walk Time (s) | 7 | 7 | 7 | 7 |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 |
| Dual Entry | Yes | Yes | Yes | Yes |
| Inhibit Max | Yes | Yes | Yes | Yes |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 |
| Intersection Summary | | | | |
| Cycle Length | | | 130 | |
| Control Type | Actu | ated-Coo | rdinated | |

Valural Cycle 50 Offset: 94.6 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Splits and Phases: 2: Quail Run Rd & Lincoln Dr

| ₩ Ø2 (R) | A 04 |
|-------------|--------|
| 63.6 s | 66.4 s |
| Ø6 (R) | |
| 63.6 s | 66.4 s |

| 18-0555 SmokeTr 2029 Background | ee Resc PM | ort | | | 2: Quail Run Rd & Lincoln Timing Report, Sorted By Ph |
|------------------------------------|---------------|----------|----------|-------|--|
| 3 | + | ⊸t | | | |
| | | 1 | - | | |
| Phase Number | 2 | 4 | 6 | 8 | |
| Movement | WBTL | NBTL | EBTL | SBTL | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize | | | | | |
| Recall Mode | C-Max | Max | C-Max | Max | |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 | |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% | |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | |
| All-Red Time (s) | 1 | 1 | 1 | 1 | |
| Minimum Initial (s) | 5 | 5 | 5 | 5 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | |
| Walk Time (s) | 7 | 7 | 7 | 7 | |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 | |
| Dual Entry | Yes | Yes | Yes | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 | |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 | |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 | |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 | |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 | |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 | |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 | |
| Intersection Summary | | | | | |
| Cycle Length | | | 130 | | |
| Control Type | Actu | ated-Coo | rdinated | | |
| Natural Cycle | | | 60 | | |

| ₩ Ø2 (R) | | |
|-------------|--------|--|
| 63.6 s | 66.4 s | |
| 276 (R) | 108 | |

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| 18-0555 SmokeTree 2029 Background A | e Reso M | rt | | | | | | 2: QL HCM 6t | iail Ru i h Signaliz | n Rd 8 red Inters | k Linco section Su | In Dr Immary |
|--|-------------|-------------|--------------|------|-------------|--------------|------|-----------------|--------------------------------|----------------------|-----------------------|-----------------|
| | ≯ | → | \mathbf{r} | 4 | + | × | • | 1 | 1 | 1 | ţ | 1 |
| Novement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | ľ | ≜ t} | | 1 | ≜ 1, | | | \$ | | | \$ | |
| raffic Volume (veh/h) | 55 | 990 | 3 | 1 | 675 | 68 | 2 | 0 | 3 | 41 | 0 | 48 |
| ure Volume (veh/h) | 55 | 990 | 3 | 1 | 675 | 68 | 2 | 0 | 3 | 41 | 0 | 48 |
| al Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| king 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 |
| Zone On Approach | | No | | | No | | | No | | | No | |
| Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| j Flow Rate, veh/h | 64 | 1151 | 3 | 1 | 742 | 75 | 3 | 0 | 5 | 59 | 0 | 69 |
| ak Hour Factor | 0.86 | 0.86 | 0.86 | 0.91 | 0.91 | 0.91 | 0.62 | 0.62 | 0.62 | 0.70 | 0.70 | 0.70 |
| ercent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| ap, veh/h | 273 | 1653 | 4 | 130 | 1481 | 150 | 291 | 16 | 448 | 357 | 14 | 387 |
| rive On Green | 0.15 | 0.15 | 0.15 | 0.60 | 0.60 | 0.60 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| at Flow, veh/h | 669 | 3636 | 9 | 487 | 3259 | 329 | 531 | 34 | 941 | 665 | 30 | 813 |
| p Volume(v), veh/h | 64 | 562 | 592 | 1 | 404 | 413 | 8 | 0 | 0 | 128 | 0 | 0 |
| p Sat Flow(s), veh/h/ln | 669 | 1777 | 1869 | 487 | 1777 | 1811 | 1506 | 0 | 0 | 1508 | 0 | 0 |
| Serve(q s), s | 11.5 | 39.1 | 39.1 | 0.2 | 16.8 | 16.8 | 0.0 | 0.0 | 0.0 | 3.7 | 0.0 | 0.0 |
| cle Q Clear(q c), s | 28.3 | 39.1 | 39.1 | 39.3 | 16.8 | 16.8 | 0.3 | 0.0 | 0.0 | 6.0 | 0.0 | 0.0 |
| op In Lane | 1.00 | | 0.01 | 1.00 | | 0.18 | 0.37 | | 0.62 | 0.46 | | 0.54 |
| ine Grp Cap(c), veh/h | 273 | 808 | 850 | 130 | 808 | 823 | 755 | 0 | 0 | 758 | 0 | 0 |
| /C Ratio(X) | 0.23 | 0.70 | 0.70 | 0.01 | 0.50 | 0.50 | 0.01 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 |
| vail Cap(c_a), veh/h | 273 | 808 | 850 | 130 | 808 | 823 | 755 | 0 | 0 | 758 | 0 | 0 |
| CM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| pstream Filter(I) | 0.92 | 0.92 | 0.92 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| niform Delay (d), s/veh | 49.9 | 46.7 | 46.7 | 37.3 | 17.3 | 17.3 | 17.9 | 0.0 | 0.0 | 19.4 | 0.0 | 0.0 |
| ncr Delay (d2), s/veh | 1.8 | 4.5 | 4.3 | 0.1 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| tial 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(95%),veh/In | 4.0 | 26.7 | 27.8 | 0.1 | 10.7 | 10.9 | 0.2 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 |
| nsig. Movement Delay, s/ve | h | | | | | | | | | | | |
| nGrp Delay(d),s/veh | 51.7 | 51.3 | 51.1 | 37.5 | 19.5 | 19.5 | 17.9 | 0.0 | 0.0 | 19.8 | 0.0 | 0.0 |
| nGrp LOS | D | D | D | D | В | В | В | А | А | В | А | А |
| pproach Vol. veh/h | | 1218 | | | 818 | | | 8 | | | 128 | |
| pproach Delay, s/veh | | 51.2 | | | 19.5 | | | 17.9 | | | 19.8 | |
| Approach LOS | | D | | | В | | | В | | | В | |
| imor - Assigned Phs | | 2 | | ٨ | | 6 | | 8 | | | | |
| he Duration (C V Da) | | 42.6 | | 4 | | 62.6 | _ | 66.4 | _ | | _ | |
| The Duration (G+T+RC), S | | 03.0 | | 00.4 | | 03.0 4 F | | 00.4 | | | | |
| lay Groop Sotting (Gmay) | | 4.0 | | 4.0 | | 4.0 | | 4.0 | | | | |
| lax O Cloar Time (a. c.11) | | /1 2 | | 22 | | 09.1 /1 1 | | 01.9 | | | | |
| Green Ext Time (n_c) s | > | 5.0 | | 2.3 | | 41.1 | | 0.8 | | | | |
| toon the fine (p_o), 3 | | 0.0 | | 0.0 | | 0.1 | | 0.0 | | | | |
| arsection Summary | | | 07.6 | | | | | | | | | |
| 6th Ctrl Delay | | | 37.3 | | | | | | | | | |

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02/13/2023

CivTech Inc.

Synchro 11 Report Page 4
18-0555 SmokeTree Resort 2029 Background AM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | |
|--|-----------|--------|---------|---------|---------|--------|
| Int Delay, s/veh | 0.2 | | | | | |
| Movement | EBT | EBR | WBI | WBT | NBI | NBR |
| Lane Configurations | 41 | | 3 | ** | M | |
| Traffic Vol. veh/h | 1056 | 11 | 12 | 742 | 2 | Q |
| Future Vol. veh/b | 1056 | 11 | 12 | 7/2 | 2 | 0 |
| Conflicting Dade #/br | 1030 | 0 | 12 | / 42 | 2 | 9 |
| Sign Control | Eroc | Froe | Eroo | Eroc | Stop | Stop |
| DT Channelized | 1166 | None | nee | None | Siup | Nopo |
| Storago Longth | | NULLE | 40 | NULLE | - | NOLIG |
| Solidye Leng(f) | . # . 0 | | ΟU | - | U | |
| Crade 01 | ;,# U | 1 | | 0 | 0 | |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 86 | 86 | 91 | 91 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1228 | 13 | 13 | 815 | 4 | 18 |
| | | | | | | |
| Maior/Minor | Vaior1 | N | Vaior2 | N | /linor1 | |
| Conflicting Flow All | | 0 | 12012 | 0 | 1660 | 621 |
| Staro 1 | U | U | 1441 | U | 1007 | 021 |
| Stage 2 | - | | | | 1230 | |
| Stage 2 | - | | 114 | | 434 | 4.04 |
| | - | 1 | 4.14 | 1 | 0.84 | 0.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | | | | 5.84 | |
| Follow-up Hdwy | - | - | 2.22 | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | | | 932 | | *339 | *643 |
| Stage 1 | - | - | - | - | *589 | - |
| Stage 2 | - | - | - | - | *743 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | | 932 | | *334 | *643 |
| Mov Cap-2 Maneuver | | | | | *334 | |
| Stage 1 | | | | | *589 | |
| Stage 2 | | | | | *722 | |
| Juge 2 | | | | | 100 | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.1 | | 11.8 | |
| HCM LOS | | | | | В | |
| | | | | | - | |
| Minor Lano/Major M | d . | NRI e1 | EDT | EDD | WPL | W/DT |
| winor Lane/wajor MVm | it i | NDLNI | ERI | EBK | WBL | WBI |
| Capacity (veh/h) | | 550 | - | - | 932 | |
| HCM Lane V/C Ratio | | 0.04 | - | - | 0.014 | - |
| HCM Control Delay (s) | | 11.8 | - | - | 8.9 | - |
| HCM Lane LOS | | В | | - | Α | |
| HCM 95th %tile Q(veh) |) | 0.1 | - | - | 0 | |
| Notos | | | | | | |
| Volum | hor it | A D | lau | oods o | 206 | |
| volume exceeds cap | vacity | \$: De | eay exc | eeas 30 | UUS | +: Com |
| | | | | | | |

| Init Delay, s/veh 0.3 Wovement EBT EBR WBL WBT NBL NBR Lane Configurations ↑↑ <th>Intersection</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> | Intersection | | | | | | |
|--|------------------------|------------------------|--------|---------|--------------|--------|----------|
| Movement EBT EBR WBL WBT NBL NBR Lane Configurations 1 <td>Intersection</td> <td>0.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> | Intersection | 0.2 | | | | | |
| Movement EBT EBR WBL WBT NBL NBR Lane Configurations • • | nii Deldy, siven | 0.3 | | | | | |
| Lane Configurations 11 , 1188 6 12 Traffic Vol, veh/h 1083 3 7 1188 6 12 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Free Free Free Free Stop Stop RT Channelized None None None None Storage Length - 60 - 0 - Veh in Median Storage, # 0 - 0 0 - Freak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 2 Mvmt Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - 1 1261 - Stage 2 - 584 - Critical Hdwy Sig 1 - 584 - Critical Hdwy Sig 1 - 584 - Critical Hdwy Sig 2 - Stage 2 - 5584 - Critical Hdwy Sig 2 - Stage 1 - 5584 - Critical Hdwy Sig 2 - Stage 2 - Stage 2 - Stage 2 - Platoon blocked, % - Stage 2 - Stage 2 - Platoon blocked, % - Stage 2 - Critical Hdwy Sig 2 - Stage 2 - Platoon blocked, % - Stage 2 - Platoon blocked, % - Stage 2 - Stage 3 - Stage 2 - Stage 3 - Stag | Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Traffic Vol, veh/h 1083 3 7 1188 6 12 Future Vol, veh/h 1083 3 7 1188 6 12 Conflicting Feds, #hr 0 0 0 0 0 0 Storage Length - - 60 - 0 - Storage Length - - 0 0 - - Veh in Median Storage, # 0 - - 0 0 - Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 Major/Minor Major1 Major2 Minor1 - - 669 - Conflicting Flow All 0 0 1262 0 1930 631 - Stage 1 - - 1261 - - 584 - - - 669 - - - 610 - - - 522 3.32 - <td< td=""><td>Lane Configurations</td><td>t₽</td><td></td><td>ሻ</td><td>_ ††</td><td>Y</td><td></td></td<> | Lane Configurations | t₽ | | ሻ | _ † † | Y | |
| Future Vol, veh/h 1083 3 7 1188 6 12 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Storage Length 60 - 0 - Storage Length 60 - 0 - Grade, % 0 0 0 - Fak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 WmT Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 1261 - Stage 2 669 - Critical Hdwy Stg 2 - 584 - Critical Hdwy Stg 2 - 584 - Critical Hdwy Stg 2 - 584 - Follow-up Hdwy - 222 - Platon blocked, % - 1 - 584 - Stage 2 564 - Follow-up Hdwy - 222 - Platon blocked, % - 1 - 1 May Cap-1 Maneuver - 905 - 156 643 Mov Cap-1 Maneuver - 905 - 156 - Stage 2 5560 - Stage 1 5560 - Stage 2 5560 - Stage 2 5560 - Stage 2 5560 - Stage 1 5560 - Stage 2 5560 - Stage 2 5560 - Stage 1 5570 - Minor Lane/Major Mvmt NBLn1 EBT EBR WB WB HCM Control Delay, s 0 0.1 17.9 HCM Los - Winor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT Capacity (veh/h) 315 - 0 905 - HCM Stan VC Ratio 0.114 - 0 0.08 - HCM Stan VC Ratio 0.114 - 0 0 - Winor | Traffic Vol, veh/h | 1083 | 3 | 7 | 1188 | 6 | 12 |
| Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Future Vol, veh/h | 1083 | 3 | 7 | 1188 | 6 | 12 |
| Sign Control Free Free Free Stop None None None RT Channelized None None None None None None Storage Length - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 86 86 91 91 50 50 Peax Hour Factor 86 86 91 91 50 50 Peax Hour Factor 86 86 91 91 50 50 Peax Vehicles, % 2 2 2 2 2 2 Major/Minor Major 1259 3 8 1305 12 24 Major/Minor Major 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 1 - 1261 Critical Hdwy Stg 1 - - 5.84 - - Critical Hdwy Stg 2 - - 560 - Stage 1 | Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| RT Channelized - None - None - None Storage Length - - 0 - Veh In Median Storage, # 0 - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 4 Major/Minor Major Major Minort Major/Minor Major Major/Minor Major Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - - Critical Hdwy Stg 2 - - 560 - Stage 1 - - 158 *643 - - Stage 2 - - *560 - Stage 2 - - *560 - Stage 2 < | Sign Control | Free | Free | Free | Free | Stop | Stop |
| Storage Length 60 - 0 - Veh in Median Storage, # 0 0 0 - Forade, % 0 0 0 - Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 Mwmt Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 1261 - Stage 2 669 - Critical Hdwy Stg 1 5.84 - Critical Hdwy Stg 1 5.84 - Critical Hdwy Stg 2 5.84 - Follow-up Hdwy - 2,22 - 3.52 3.32 POC Cap-1 Maneuver - 905 - 1158 '643 Stage 1 560 - Stage 2 560 - Stage 2 562 - Platon blocked, % - 1 1 1 Mov Cap-1 Maneuver - 905 - *156 '643 Mov Cap-2 Maneuver - 905 - *156 '643 Mov Cap-2 Maneuver - 560 - Stage 1 560 - Stage 1 560 - Stage 2 560 - Stage 2 560 - Stage 2 560 - Stage 1 560 - Stage 1 560 - Stage 1 560 - Stage 2 560 - Stage 2 560 - Stage 1 7560 - Stage 1 560 - Stage 1 560 - Stage 2 660 - Stage 2 7560 - Stage 1 7560 - Stage 1 7560 - Stage 1 7560 - Stage 1 | RT Channelized | | None | | None | | None |
| Weh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy Stg 1 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - Critical Hdwy Stg 2 - - 5.54 - Critical Hdwy Stg 2 - - 5.56 - Stage 1 - - 5.56 - Stage 2 - - 1 1 Mow Cap | Storage Length | - | - | 60 | - | 0 | - |
| Grade, % 0 - - 0 0 - Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 4 Minor 1259 3 8 1305 12 24 4 Major/Minor Major 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy Stg 1 - - 5.84 - - Critical Hdwy Stg 2 - - 5.64 - Critical Hdwy Stg 2 - - - 5.64 - - T560 - Stage 1 - - 5.64 - - - 560 - Stage 1 - - 5.60 - Stage 1 - 1 1 Mov Cap: Maneuver - 905 - 156 - Stage 1 - - 550 - Stage 1 | Veh in Median Storage, | # 0 | | - | 0 | 0 | - |
| Peak Hour Factor 86 86 91 91 50 50 Heavy Vehicles, % 2 2 2 2 2 2 2 2 Mirrit Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 1 1261 - Stage 2 - 4.14 - 6.84 6.94 Critical Hdwy Stg 1 5.84 - Critical Hdwy Stg 2 5.84 - Stage 2 5.84 - Polow-up Hdwy - 2.22 - 3.52 3.32 Pot Cap-1 Maneuver - 905 - 158 643 Stage 1 - 5 - 560 - Stage 2 5.62 - Platon blocked, % - 1 - 1 1 Mov Cap-1 Maneuver - 905 - 156 643 Mov Cap-2 Maneuver - 905 - 156 643 Mov Cap-2 Maneuver - 560 - Stage 2 - 5 - 557 - Approach EB WB NB HCM Control Delay, S 0 0.1 17.9 HCM LoS C C Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT Capacity (veh/th) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Los C C - A - HCM Stage 1 - 6 - Stage 2 - 7 - 7 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major vol 20/13/2023 C01/13/2023 | Grade, % | 0 | - | | 0 | 0 | - |
| Heavy Vehicles, % 2 2 2 2 2 2 Mymi Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 24 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy Stg 1 - - 5.84 - - Critical Hdwy Stg 2 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - - Critical Hdwy Stg 2 - - 5.84 - Critical Hdwy Stg 2 - - - 5.60 - Stage 1 - - * 560 - Stage 2 - - * * 1 1 Mov Cap-1 Maneuver - 905 - * * 560 - Stage 1 - - * * * 557 - Stage 1 - - | Peak Hour Factor | 86 | 86 | 91 | 91 | 50 | 50 |
| Wmi Flow 1259 3 8 1305 12 24 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy Sig 2 - - 5.84 - - Critical Hdwy Sig 1 - - 5.84 - Critical Hdwy Sig 2 - - 5.84 - - 5.84 - Critical Hdwy Sig 2 - - - 5.84 - - Critical Hdwy Sig 2 - - - 5.60 - Stage 1 - - 15.6 - Stage 2 - 1 1 1 - - 1 1 - - 1 1 - - - 15.6 - - - 15.6 - - - | Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy - 4.14 - 6.84 6.94 - - Critical Hdwy Stg 1 - - - 5.84 - - - - - 669 - - - 670 - - 5.84 - - - 670 - - 5.84 - - - 670 - - 5.50 - - - 560 - - - 562 - Platon blocked, % - 1 1 1 Mov Cap-1 Maneuver - 905 - 156 - - Stage 1 - - - 557 - - Stage 1 - - - < | Mvmt Flow | 1259 | 3 | 8 | 1305 | 12 | 24 |
| Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 1262 0 1930 631 Stage 1 - - 1261 - Stage 2 - - 669 - Critical Hdwy - 4.14 - 6.84 6.94 - Critical Hdwy Stg 1 - - 5.84 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - - - 5.84 - - Follow-up Hdwy - 2.22 3.32 PPO Cap-1 Maneuver - 905 - 158 '643 - - - Platon blocked, % - 1 1 1 - Platon blocked, % - 1 1 1 - - 156 - Stage 1 - - - '560 - Stage 1 - - - '557 - - A <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| Approach Easy of the second state Stage 1 - - 1261 - Stage 2 - - 669 - - Critical Hdwy - 4.14 - 6.84 6.94 Critical Hdwy Stg 1 - - 5.84 - - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.60 - Cap -T Maneuver - 905 - 156 - Platoon blocked, % - 1 1 Mov Cap-1 Maneuver - - - '560 - Stage 1 - - - '560 - Stage 1 - - '560 - Stage 2 - - '557 - Stage 2 | Maior/Minor M | laior1 | Ν | Maior2 | 1 | Vinor1 | |
| Stage 1 - - - 1261 - Stage 2 - - - 669 - Critical Hdwy Stg 1 - - - 5.84 - Critical Hdwy Stg 1 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.64 - Cap-1 Maneuver 905 - 156 - - Stage 1 - - - '560 - - Stage 1 - - 156 - - - Vox Cap-1 Maneuver - 905 - 156 - - - 5560 - - Stage 1 - - - '556 - - Stage 1 - - '557 - Stage 2 - - '557 - - - '557 - - | Conflicting Flow All | <u>ا الالات.</u> () | 0 | 1262 | 0 | 1930 | 631 |
| Stage 2 - - 669 - Critical Hdwy Stg 1 - - 5.84 - Critical Hdwy Stg 1 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - Critical Hdwy Stg 2 - - 5.84 - Follow-up Hdwy - 2.22 3.52 3.32 Pot Cap-1 Maneuver - 905 - 158 '643 Stage 2 - - - '560 - Stage 1 - - - '560 - Stage 1 - - - '550 - Stage 2 - - - '550 - - Stage 1 - - - '550 - - - Stage 2 - - - '557 - - - - - - - - - - - - - | Stane 1 | 0 | 5 | 1202 | 0 | 1261 | 031 |
| Augu 2 - - - 009 - Critical Hdwy - 4.14 - 6.84 6.94 Critical Hdwy Stg 1 - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Critical Hdwy Stg 2 - - - 5.84 - Follow-up Hdwy - 2.22 3.52 3.32 - Pol Cap-1 Maneuver - 905 - 158 *643 Stage 1 - - - *560 - Stage 2 - - - *156 *643 Mov Cap-1 Maneuver - 905 - *156 * Platon blocked, % - 1 1 1 * Mov Cap-2 Maneuver - - *560 - Stage 1 - - * * Approach EB WB NB * * * Not stage 2 - - * * * * * * <t< td=""><td>Stage 2</td><td></td><td></td><td></td><td></td><td>640</td><td></td></t<> | Stage 2 | | | | | 640 | |
| Chickal Holy Stg 1 - - 5.84 - Critical Holy Stg 2 - - 5.84 - Critical Holy Stg 2 - - 5.84 - Follow-up Hdwy - 2.22 3.52 3.32 Pot Cap-1 Maneuver - 905 - 158 '643 Stage 1 - - - '560 - Stage 2 - - - '562 - Platon blocked, % - 1 - 1 1 Mov Cap-1 Maneuver - 905 - '156 '643 Mov Cap-1 Maneuver - 905 - '156 - Vox Cap-1 Maneuver - - '560 - Stage 1 - - '557 Stage 2 - - - '557 - - Stage 2 - - '557 Approach EB WB NB - - - - - - - - - - - | Critical Hdwy | | | 111 | | 6.84 | 6.0/ |
| Calcular Howy stg 1 - | Critical Hdwy Sta 1 | | | 4.14 | | 5.94 | 0.94 |
| Called in Howy or U 2 2 - | Critical Howy Sty 1 | | | | | D.04 | |
| Fullow-up Howy - - 2.22 - 3.32 Pot Cap-1 Maneuver - 905 - 158 '643 Stage 1 - - - '560 - Stage 2 - - - '562 - Platoon blocked, % - 1 - 1 1 Mov Cap-1 Maneuver - - '156 '643 Mov Cap-1 Maneuver - - '156 - Stage 1 - - - '550 - Stage 2 - - '550 - - Stage 2 - - '557 - - Approach EB WB NB - - HCM Control Delay, s 0 0.1 17.9 - - 905 - HCM LoS C C - A - - - - - - - - - - - - - - - - - <td< td=""><td>Childen up Udwar</td><td></td><td></td><td>-</td><td>1.1</td><td>5.84</td><td>2 22</td></td<> | Childen up Udwar | | | - | 1.1 | 5.84 | 2 22 |
| Full capit Finalite/Weither - - 905 - 108 043 Stage 1 - - - 560 - Stage 2 - - - 562 - Platoon blocked, % - 1 - 1 1 Mov Cap-2 Maneuver - 905 - 156 - Stage 1 - - - - 156 - Stage 1 - - - - 550 - Stage 2 - - - - 557 - Approach EB WB NB - | Follow-up Hawy | | | 2.22 | | 3.52 | 3.32 |
| Stage 1 - - - 560 - Stage 2 - - - 562 - Platoon blocked, % - 1 1 1 Mov Cap-1 Maneuver - 905 - '156 '643 Mov Cap-2 Maneuver - - - '156 - Stage 1 - - - '550 - Stage 2 - - - '557 - Approach EB WB NB - HCM Control Delay, s 0 0.1 17.9 - HCM Control Delay, s 0 0.1 17.9 - HCM Control Delay, s 0 0.1 17.9 - HCM Control Delay (s) 17.9 - 905 - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM Lane LOS C - A - HCM Stift %tile Q(veh) 0.4 - 0 - <td>Por Cap-1 Maneuver</td> <td></td> <td></td> <td>905</td> <td>1.1</td> <td>158</td> <td>043</td> | Por Cap-1 Maneuver | | | 905 | 1.1 | 158 | 043 |
| Stagle 2 - - - 562 - Platoon blocked, % - 1 1 1 Mov Cap-1 Maneuver - 905 - 156 *643 Mov Cap-2 Maneuver - - * *156 - Stage 1 - - - * *560 - Stage 2 - - - * *557 - Approach EB WB NB - - - * HCM Control Delay, s 0 0.1 17.9 - - - C Minor Lane/Major Mvmt NBLn1 EBT EBR WB WB - Capacity (veh/h) 315 - 905 - - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Lane V/C Ratio 0.114 - 0.008 - - A - HCM Lane LOS C - A - - A - HCM Stift % tile Q(veh) 0.4 - 0 | Stage I | - | | | | ~560 | |
| Platoon blocked, % - - 1 1 Mov Cap-1 Maneuver - 905 * 156 * 643 Mov Cap-2 Maneuver - - * 156 - Stage 1 - - - * 550 - Stage 2 - - - * 557 - Approach EB WB NB - HCM Control Delay, s 0 0.1 17.9 HCM LOS C - - 905 - Minor Lane/Major Mvmt NBLn1 EBT EBR WB WBT Capacity (veh/h) 315 - 905 - - HCM Los C - A - - - HCM Los C - A - - - - HCM Lane V/C Ratio 0.114 - 0.008 - | Stage 2 | | | - | 1.1 | 562 | - |
| Work Cap - Maneuver - - - 156 643 Mov Cap - Maneuver - - 156 - Stage 1 - - 1560 - Stage 2 - - - 5500 - Approach EB WB NB - - HCM Control Delay, s 0 0.1 17.9 - - HCM LOS C - - 905 - - Minor Lane/Major Mvmt NBLn1 EBT EBR WB WBT - Capacity (veh/h) 315 - 905 - - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM Lane LOS C - A - - - HCM Lane LOS C - A - HCM Sith %tile Q(veh) 0.4 - 0 - Notes - - <td>Platoon blocked, %</td> <td></td> <td></td> <td>1</td> <td></td> <td>1</td> <td>1</td> | Platoon blocked, % | | | 1 | | 1 | 1 |
| Work Cap-2 Maneuver - 550 - Stage 1 - - - - 557 - - - 557 - Approach EB WB NB - | Mov Cap-1 Maneuver | | | 905 | 1.1 | *156 | *643 |
| Stage 1 - - - * 550 - Stage 2 - - - * *557 - Approach EB WB NB - - * 557 - HCM Control Delay, s 0 0.1 17.9 - | Mov Cap-2 Maneuver | | | | | *156 | |
| Stage 2 - - - *557 - Approach EB WB NB NB HCM Control Delay, s 0 0.1 17.9 HCM LOS C C Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Lane LOS C - A - HCM Lane LOS C - A - HCM Stift %tile Q(veh) 0.4 - 0 - Notes | Stage 1 | | - | | 1.1 | *560 | 1.1 |
| Approach EB WB NB HCM Control Delay, s 0 0.1 17.9 HCM LOS C C Minor Lane/Major Mvmt NBLn1 EBT EBR WBL Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM Stift % tile Q(veh) 0.4 - 0 - Notes - Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume | Stage 2 | - | - | - | - | *557 | |
| Approach EB WB NB HCM Control Delay, s 0 0.1 17.9 HCM LOS C C | | | | | | | |
| HCM Control Delay, s 0 0.1 17.9 HCM LOS C Minor Lane/Major Mvmt NBLn1 EBT EBR WBT Capacity (veh/h) 315 - 905 - HCM Lone V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lone LOS C - A - HCM Stille Q(veh) 0.4 - 0 - Notes - - - - -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 02/13/2023 C - - - - | Approach | EB | | WB | | NB | |
| HCM LOS C Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Lane V/C Ratio 0.114 - 9 - HCM Lane LOS C - A - HCM Stift %tile Q(veh) 0.4 - 0 - Notes -: : Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume D2/13/2023 Cit/Jacob Inc. - - - | HCM Control Delay, s | 0 | | 0.1 | | 17.9 | |
| Minor Lane/Major Mvmt NBLn1 EBT EBR WBL Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM Stift % tile Q(veh) 0.4 - 0 - Notes - Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume D2/13/2023 Cit/Lock Inc. - - - | HCMLOS | | | | | C | |
| Minor Lane/Major Mvmt NBLn1 EBR WBL WBT Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Lone V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lone LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes - - 0 - -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 02/13/2023 C - Guide there - | | | | | | 5 | |
| Vinition Lamerinagion within NBLINI EBI EBI WBL Capacity (veh/h) 315 - 905 - HCM Lane VC Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - - 9 - HCM Lane LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes - - 0 - Notes - : All major volume 20/13/2023 C - Control provide the control *: All major volume | Min (MA-i + 4 | | | EDT | EDD | | MDT |
| Capacity (veh/h) 315 - 905 - HCM Lane V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 20/13/2023 C/13/2023 | Minor Lane/Major Mvmt | | NBLn1 | FRL | FRK | WBL | MRL |
| HCM Lane V/C Ratio 0.114 - 0.008 - HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 20/13/2023 C0/13/2023 | Capacity (veh/h) | | 315 | | 1.1 | 905 | 1.1 |
| HCM Control Delay (s) 17.9 - 9 - HCM Lane LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 02/13/2023 CM-Geb Inc. | HCM Lane V/C Ratio | | 0.114 | | | 0.008 | |
| HCM Lane LOS C - A - HCM 95th %tile Q(veh) 0.4 - 0 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume | HCM Control Delay (s) | | 17.9 | - | | 9 | |
| HCM 95th %tile Q(veh) 0.4 - 0 - Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 02/13/2023 CivTech Inc. | HCM Lane LOS | | С | - | - | A | - |
| Notes -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume 02/13/2023 CM2och los | HCM 95th %tile Q(veh) | | 0.4 | - | | 0 | 1.1 |
| -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume i 02/13/2023 CivToch Inc. | Notes | | | | | | |
| | -: Volume exceeds can | acity | \$. Do | | 2 shaa | 000 | +: Com |
| 02/13/2023 | Volume exceeds cap | acity | φ. DE | ady ext | iceus 3 | 003 | T. CUIII |
| 02/13/2023 | | | | | | | |
| 02/13/2023 | | | | | | | |
| Civitade Inc | 02/12/2022 | | | | | | |
| | CivTech Inc | | | | | | |

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

CivTech Inc.

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18-0555 SmokeTree Resort

2029 Background PM

02/13/2023

CivTech Inc.

18-0555 SmokeTree Resort 2029 Background AM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | | | | | | | |
|------------------------|--------|--------|----------|--------|------|--------|----------|---------|--------|--------|-------|----------|
| Int Delay, s/veh | 1.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ٦ | A | | 1 | A | | | 4 | | ٦ | | 1 |
| Traffic Vol, veh/h | 23 | 971 | 75 | 13 | 690 | 10 | 48 | 6 | 65 | 4 | 0 | 11 |
| Future Vol, veh/h | 23 | 971 | 75 | 13 | 690 | 10 | 48 | 6 | 65 | 4 | 0 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 60 | - | - | 25 | - | - | - | - | - | 0 | - | 0 |
| Veh in Median Storage | e, # - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade, % | | 0 | - | - | 0 | - | - | 0 | | - | 0 | |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mymt Flow | 26 | 1103 | 85 | 14 | 726 | 11 | 63 | 8 | 86 | 6 | 0 | 16 |
| | | | | | | | | | | | | |
| Maior/Minor | Maior1 | | 1 | Maior2 | | 1 | Vinor1 | | _ | Minor2 | _ | _ |
| Conflicting Flow All | 737 | 0 | 0 | 1188 | 0 | 0 | 1589 | 1963 | 594 | 1368 | | 369 |
| Stage 1 | | - | - | | - | - | 1198 | 1198 | | 760 | | - |
| Stage 2 | | | | | | | 391 | 765 | | 608 | | |
| Critical Hdwy | 4 1 4 | | | 4 14 | | | 7 54 | 6 54 | 6 94 | 7 54 | | 6.94 |
| Critical Hdwy Sta 1 | 4.14 | | | 1.11 | | | 6.54 | 5.54 | 0.74 | 6.54 | | 0.74 |
| Critical Edway Stg 7 | | - | - | - | - | - | 6.54 | 5.54 | | 6.54 | | |
| Follow-up Hdwy | 2.22 | | | 2.22 | | | 3 52 | 1 02 | 3 3 2 | 3.52 | | 3 3 2 |
| Pot Cap 1 Manouvor | *121/ | - | - | 002 | - | - | *224 | 122 | *601 | *526 | 0 | *010 |
| Stago 1 | 1214 | - | | 705 | - | - | *516 | 122 | 071 | *755 | 0 | 012 |
| Stage 2 | | | | | | | *765 | 650 | | *652 | 0 | |
| Diatoon blockod % | 1 | - | | 1 | - | - | 1 | 1 | 1 | 1 | 0 | 1 |
| Mov Cap 1 Manouvor | *121/ | | | 003 | | | *200 | 110 | *601 | *//0 | | *010 |
| Mov Cap-1 Maneuver | 1214 | - | - | 903 | - | | */02 | 207 | 091 | *440 | - | 012 |
| Storo 1 | | | | | | | *505 | 470 | | *720 | | |
| Stage 2 | | - | - | | | | *720 | 4/0 | - | *540 | - | |
| Stage 2 | | - | | | - | | 139 | 049 | | 549 | | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.2 | | | 0.2 | | | 15.2 | | | 10.4 | | |
| HCM LOS | | | | | | | С | | | В | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvm | nt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR S | SBLn1 | SBLn2 | | |
| Capacity (veh/h) | | 509 | * 1214 | - | - | 903 | - | - | 470 | 812 | | |
| HCM Lane V/C Ratio | | 0.308 | 0.022 | - | - | 0.015 | - | - | 0.012 | 0.019 | | |
| HCM Control Delay (s) | | 15.2 | 8 | | - | 9 | 1.1 | | 12.8 | 9.5 | | |
| HCM Lane LOS | | С | A | - | - | A | - | - | В | А | | |
| HCM 95th %tile Q(veh |) | 1.3 | 0.1 | | - | 0 | 1.1 | | 0 | 0.1 | | |
| Notes | _ | | | | | | | | _ | | _ | _ |
| ~: Volume exceeds car | pacity | \$: De | elav exc | eeds 3 | 00s | +: Com | putation | n Not D | efined | *: All | maior | /olume |
| | puony | 4. 54 | onay one | 100000 | 000 | | paration | into D | onnou | ., | major | loidinio |
| | | | | | | | | | | | | |

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18-0555 SmokeTree Resort 2029 Background PM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| | ED | EDT | | MDI | WDT | WDD | ND | NDT | NDD | CDI | CDT | CD |
|------------------------|---------|-------|-------|---------|------|-------|--------|-------|-------|-----------|------|------|
| Novement | EBL | EBL | EBK | WBL | WBL | WBR | NBL | NBL | NBR | SBL | SBL | SBF |
| Larie Conligurations | <u></u> | 101/ | (7 | ្មា | 1007 | 10 | 07 | | 70 | า | 0 | |
| Trailic Vol, ven/n | 9 | 1016 | 6/ | 1 | 1087 | 10 | 8/ | 2 | 79 | 3 | 0 | 21 |
| Future Vol, ven/n | 9 | 1016 | 6/ | / | 1087 | 10 | 8/ | 2 | /9 | 3 | 0 | 21 |
| Conflicting Peas, #/nr | 0 | 0 | 0 | 0 | 0 | 0 | Chan | Char | Chan | U Chan | Ctan | Chan |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | | None | | 1 | None | - | | None |
| Storage Length | 60 | - | | 25 | - | | | - | | 0 | - | 0 |
| ven in wedian Storage | e,# - | 0 | | | 0 | | | 1 | | | 1 | |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | /6 | /6 | /6 | /0 | /0 | /0 |
| Heavy venicles, % | 10 | 1155 | 2 | 2 | 1144 | 2 | 114 | 2 | 104 | 2 | 2 | 2 |
| NVMT FIOW | 10 | 1155 | /6 | / | 1144 | 11 | 114 | 3 | 104 | 4 | 0 | 30 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | viajor2 | | | vinor1 | 0.005 | | viinor2 | | |
| Conflicting Flow All | 1155 | 0 | 0 | 1231 | 0 | 0 | 1799 | 2382 | 616 | 1763 | - | 578 |
| Stage 1 | - | - | 1.1 | - | - | 1.1 | 1213 | 1213 | - | 1164 | | - |
| Stage 2 | - | - | - | - | - | - | 586 | 1169 | - | 599 | - | - |
| Critical Hdwy | 4.14 | - | 1.1 | 4.14 | - | 1.1 | 7.54 | 6.54 | 6.94 | 7.54 | | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.54 | 5.54 | - | 6.54 | - | - |
| Critical Hdwy Stg 2 | - | - | | - | - | | 6.54 | 5.54 | - | 6.54 | - | - |
| Follow-up Hdwy | 2.22 | | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | - | 3.32 |
| Pot Cap-1 Maneuver | *962 | - | - | 896 | - | | *378 | *57 | *667 | *378 | 0 | *643 |
| Stage 1 | - | - | | - | - | | *552 | *500 | - | *606 | 0 | - |
| Stage 2 | - | - | | | - | 1.1 | *606 | *532 | - | *629 | 0 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | | 1 | 1 | 1 | 1 | | 1 |
| Mov Cap-1 Maneuver | *962 | - | | 896 | - | 1.1 | *355 | *56 | *667 | *312 | | *643 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | *415 | *256 | - | *394 | - | - |
| Stage 1 | - | - | - | - | - | | *547 | *495 | - | *600 | - | - |
| Stage 2 | - | - | - | - | - | | *574 | *527 | - | *523 | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.1 | | | 0.1 | | | 17.8 | | | 11.3 | | |
| HCM LOS | | | | | | | С | | | В | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvn | nt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | _ | _ |
| Capacity (veh/h) | | 500 | * 962 | | | 896 | | | 394 | 643 | | |
| HCM Lane V/C Ratio | | 0.442 | 0.011 | | | 0.008 | | | 0.011 | 0.047 | | |
| HCM Control Delay (s) |) | 17.8 | 8.8 | - | | 9.1 | | | 14.2 | 10.9 | | |
| HCM Lane LOS | | С | А | | | А | | | В | В | | |
| HCM 95th %tile Q(veh |) | 2.2 | 0 | - | - | 0 | - | - | 0 | 0.1 | | |
| Notes | | | | | | | | | | | | |
| | | _ | | _ | | | _ | | _ | _ | | |

02/13/2023 CivTech Inc.

| 18-0555 SmokeTree Resort | |
|--------------------------|--|
| 2029 Background AM | |

6: Scottsdale Rd & Lincoln Dr/Lincoln Ln Timing Report, Sorted By Phase

| | - \ | t | \$ | \$ | 4 | 7 |
|------------------------|------------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | - | | | - | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Intersection Summary | | | | | | |
| Cycle Length | | | 130 | | | |

| Cycle Length | 130 | |
|-----------------|--|---|
| Control Type | Actuated-Coordinated | |
| Natural Cycle | 80 | |
| Offset: 0 (0%), | Referenced to phase 6:SBT, Start of Gree | n |

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr/Lincoln Ln

| Ø1 | ↑ ø2 | ₩ Ø4 | 708 |
|--------------|-------------|---------|------|
| 26 s | 48 s | 28 s | 28 s |
| \$ Ø5 | ● ♥ Ø6 (R) | | |
| 28 s | 46 s | | |

| | - \ | 1 | 绺 | \$ | 4 | 7 | |
|----------------------------|-------------|-----------|------------|--------|-------|-------|----------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 | |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | |
| Lead-Lag Optimize | | | | | 0 | | |
| Recall Mode | None | None | None | None | C-Max | None | |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 | |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 | |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | | 7 | | |
| Flash Dont Walk (s) | | 15 | | | 18 | | |
| Dual Entry | No | Yes | No | No | Yes | No | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 | |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 120 | | | | |
| Offset: 0 (0%), Referenced | to phase 6 | :SBT, Sta | rt of Gree | en | | | |
| Splits and Phases: 6: Sci | ottsdale Rd | & Lincol | n Dr/Linco | oln Ln | | | |
| | 1 | | | | | 妙 | * |
| -01 | Ø2 | | | | _ | | 104 08 |

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02/13/2023 CivTech Inc.

| | VI | | | | | | | HCM 6t | h Signaliz | zed Inters | section Su | ummary |
|--|------------|------------|---------------|------------|------------|------------|-------------|-------------|------------|------------|------------|--------|
| | ≯ | → | \rightarrow | - | + | • | 1 | 1 | 1 | 1 | Ŧ | - |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | <u>۲</u> | 4 | 1 | ሻ | A | | ሻሻ | 4† Ъ | | ٦. | ^ | 1 |
| Traffic Volume (veh/h) | 624 | 44 | 361 | 23 | 41 | 37 | 258 | 1042 | 35 | 29 | 1122 | 474 |
| Future Volume (veh/h) | 624 | 44 | 361 | 23 | 41 | 37 | 258 | 1042 | 35 | 29 | 1122 | 474 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ed-Bike Adj(A_pb1) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| IKIIIY BUS, AUJ | 1.00 | 1.00 No | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 No | 1.00 | 1.00 | 1.00 No | 1.00 |
| i Sat Flow, voh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| di Elow Rate veh/h | 728 | 0 | 401 | 26 | 47 | 42 | 284 | 1145 | 38 | 32 | 1233 | 521 |
| ak Hour Factor | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| ent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| veh/h | 617 | 0 | 431 | 94 | 100 | 79 | 342 | 1950 | 65 | 47 | 1583 | 766 |
| ive On Green | 0.06 | 0.00 | 0.06 | 0.05 | 0.05 | 0.05 | 0.10 | 0.38 | 0.38 | 0.03 | 0.31 | 0.31 |
| t Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1884 | 1495 | 3456 | 5076 | 168 | 1781 | 5106 | 1585 |
| volume(v), veh/h | 728 | 0 | 401 | 26 | 44 | 45 | 284 | 768 | 415 | 32 | 1233 | 521 |
| Sat Flow(s), veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1601 | 1728 | 1702 | 1840 | 1781 | 1702 | 1585 |
| Serve(g_s), s | 22.5 | 0.0 | 22.5 | 1.8 | 3.1 | 3.6 | 10.5 | 23.3 | 23.3 | 2.3 | 28.6 | 32.9 |
| cle Q Clear(g_c), s | 22.5 | 0.0 | 22.5 | 1.8 | 3.1 | 3.6 | 10.5 | 23.3 | 23.3 | 2.3 | 28.6 | 32.9 |
| ip in Lane | 1.00 | 0 | 1.00 | 1.00 | 04 | 0.93 | 1.00 | 1200 | 0.09 | 1.00 | 1502 | 1.00 |
| Patio(Y) | 017 | 0.00 | 431 | 0.29 | 94 | 0.52 | 0.92 | 0.50 | 0.50 | 47 | 0.79 | 00/ |
| $raiiO(\Lambda)$ | 617 | 0.00 | //21 | 207 | 206 | 0.03 | 509 | 1209 | 707 | 294 | 1592 | 766 |
| M Platoon Ratio | 0.33 | 0.33 | 0.33 | 1 00 | 1 00 | 1 00 | 1 00 | 1 00 | 1 00 | 1 00 | 1 00 | 1 00 |
| tream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| iform Delay (d), s/veh | 61.3 | 0.0 | 51.8 | 59.2 | 59.8 | 60.0 | 57.5 | 31.8 | 31.8 | 62.7 | 40.8 | 25.9 |
| cr Delay (d2), s/veh | 97.2 | 0.0 | 26.2 | 0.6 | 1.3 | 1.9 | 2.0 | 0.5 | 0.9 | 6.3 | 3.9 | 4.8 |
| itial 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(95%),veh/In | 28.5 | 0.0 | 22.4 | 1.5 | 2.6 | 2.7 | 8.2 | 14.8 | 15.9 | 2.0 | 18.3 | 25.1 |
| nsig. Movement Delay, s/ve | h | | | | | | | | | | | |
| nGrp Delay(d),s/veh | 158.5 | 0.0 | 78.1 | 59.7 | 61.1 | 61.9 | 59.5 | 32.3 | 32.7 | 69.1 | 44.7 | 30.7 |
| Grp LOS | F | A | E | E | E | E | E | С | С | E | D | C |
| proach Vol, veh/h | | 1129 | | | 115 | | | 1467 | | | 1786 | |
| pproach Delay, s/veh | | 129.9 | | | 61.1 | | | 37.7 | | | 41.0 | |
| proach LUS | | F | | | E | | | D | | | D | |
| ner - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| hs Duration (G+Y+Rc), s | 8.7 | 55.7 | | 28.0 | 18.4 | 46.0 | | 12.5 | | | | |
| Change Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 5.6 | | | | |
| Max Green Setting (Gmax), s | ^ 21 | 42.3 | | 22.5 | 22.5 | 40.3 | | 22.4 | | | | |
| rviax Q Clear Time (g_c+l1), s Groop Ext Time (p_c) - c | 4.3 | 25.3 | | 24.5 | 12.5 | 34.9 | | 5.6 | | | | |
| sieen ext nine (p_c), s | 0.0 | 1.0 | | 0.0 | 0.4 | 1.4 | | 0.3 | | | | |
| ntersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 62.8 | | | | | | | | | |
| ICM 6th LOS | | | E | | | | | | | | | |
| tes | | | | | | | | | | | | |
| ser approved pedestrian inte | erval to b | e less th | in phase | max gre | en. | | | | | | | |
| Jser approved volume balance | cing amo | ng the la | nes for tu | rning mo | vement. | | | | | | | |
| HCM 6th computational eng | ine requi | res equa | clearanc | ce times f | or the pha | ises cross | sing the ba | arrier. | | | | |
| 2/13/2023 | | | | | | | | | | SI | nchro 11 | Report |
| Task las | | | | | | | | | | 5) | | |

18-0555 SmokeTree Resort 2029 Background AM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | | | | | |
|----------------------------|---------|-------|----------|--------|--------|----------|
| Int Delay, s/veh | 0 | | | | | |
| Movement | WRI | WRP | MRT | MRR | SRI | SRT |
| Lane Configurations | WDL N | WBI | 1 | NON | JDL | JDT |
| Traffic Vol. veh/b | | 0 | (| ٥ | 0 | H |
| Futuro Vol. voh/h | 0 | 0 | 6 | 0 | 0 | 4 |
| Conflicting Dods #/br | 0 | 0 | 0 | 0 | 0 | 4 |
| Sign Control | Stop | Stop | Eroo | Eroo | Eroo | Eroo |
| DT Channelized | Stop | Nopo | Fiee | None | Fiee | None |
| RT Channelizeu | - | None | | None | | None |
| Storage Length | 0 | | - | | - | - |
| ven in Median Storage | e,# 0 | | 0 | | 1.1 | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 7 | 0 | 0 | 4 |
| | | | | | | |
| Major/Minor | Minor1 | N | Maior1 | | Maior? | |
| Conflicting Flow All | 11 | 7 | 0 | 0 | 7 | 0 |
| Stage 1 | 7 | / | U | 0 | 1 | U |
| Stage 1 | 1 | | | | | |
| Stage 2 Critical Liduar | 4 | (22 | | | 4 1 2 | |
| Critical Huwy | 0.42 | 0.22 | | | 4.12 | |
| Critical Howy Stg 1 | 5.42 | - | | | | |
| Critical Hdwy Stg 2 | 5.42 | - | | 1.1 | - | 1.1 |
| Follow-up Hdwy | 3.518 | 3.318 | | | 2.218 | |
| Pot Cap-1 Maneuver | 1009 | 1075 | - | 1.1 | 1614 | 1.1 |
| Stage 1 | 1016 | - | - | | | - |
| Stage 2 | 1019 | - | - | - | | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1009 | 1075 | - | | 1614 | |
| Mov Cap-2 Maneuver | 1009 | - | | | | |
| Stage 1 | 1016 | - | | | | |
| Stage 2 | 1019 | | | | | |
| olugo 2 | | | | | | |
| | 14/15 | | NID | | 0.0 | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 0 | | 0 | | 0 | |
| HCM LOS | А | | | | | |
| | | | | | | |
| Minor Lane/Major Mym | nt | NBT | NRPV | VRI n1 | SBL | SBT |
| Consolity (ush/h) | n. | ND1 | NDIN | *BENT | 1/1/ | 301 |
| | | | | | 1014 | |
| HCM Cantral Data () | | | | - | - | |
| HCIVI Control Delay (s) | | | | 0 | 0 | 1.1 |
| HCM Lane LOS | | - | - | A | A | |
| HCM 95th %tile Q(veh) |) | | | - | 0 | - |

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18-0555 SmokeTree Resort 2029 Background PM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | | | _ | _ | |
|---|--|---|--|---|---|--|
| Int Delay, s/yeh | 0 | | | | | |
| | WD: | WDD | NIDT | NDD | 0.01 | ODT |
| Novement | WBL | WRK | NBL | NRK | SBL | SBL |
| Lane Configurations | ¥۲. | | - Fe | | | ન |
| Traffic Vol, veh/h | 0 | 0 | 3 | 0 | 0 | 2 |
| Future Vol, veh/h | 0 | 0 | 3 | 0 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | | None | | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage | e,# 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mymt Flow | 0 | 0 | 3 | 0 | 0 | 2 |
| | - | - | - | - | - | |
| | | | | | | |
| Major/Minor | Minor1 | Ν | Major1 | 1 | Major2 | |
| Conflicting Flow All | 5 | 3 | 0 | 0 | 3 | 0 |
| Stage 1 | 3 | - | | - | - | - |
| Stage 2 | 2 | - | | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | | | | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | | - | 2.218 | - |
| Pot Cap-1 Maneuver | 1017 | 1081 | | | 1619 | |
| Stage 1 | 1020 | - | | - | - | - |
| Stage 2 | 1021 | | | - | - | - |
| Platoon blocked % | | | | | | |
| Mov Cap-1 Maneuver | 1017 | | | | | |
| wov cap-r mancuver | | 1081 | | | 1610 | |
| Mov Can-2 Maneuver | 1017 | 1081 | - | - | 1619 | - |
| Mov Cap-2 Maneuver | 1017 | 1081 | • | - | 1619 | • |
| Mov Cap-2 Maneuver Stage 1 | 1017 1017 1020 | 1081 - - | • | - | 1619 - - | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 | 1017 1017 1020 1021 | 1081 - - - | - | - | 1619 - - | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 | 1017 1017 1020 1021 | 1081 - - | • | - | 1619 - - | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach | 1017 1017 1020 1021 WB | 1081 - - | - - - NB | • | 1619 - - - SB | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s | 1017 1017 1020 1021 WB 0 | | - - - - NB 0 | - | 1619 - - - SB 0 | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS | 1017 1017 1020 1021 WB 0 A | 1081 - - | - - - <u>NB</u> 0 | - | 1619 - - - SB 0 | - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS | 1017 1017 1020 1021 WB 0 A | 1081 - - | - - - NB 0 | - | 1619 - - - SB 0 | • |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS | 1017 1017 1020 1021 WB 0 A | 1081 | - - - NB 0 | | 1619 - - - SB 0 | |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn | 1017 1017 1020 1021 WB 0 A | 1081 - - - NBT | - - - - 0 0 | - - - VBLn1 | 1619 - - - - - - - - - - - - - - - - - - - | - - - SBT |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvm Capacity (veh/h) | 1017 1017 1020 1021 WB 0 A | 1081 - - - - NBT - | - - - - 0 0 | - - - - V <u>BLn1</u> | 1619 - - - - - - - - - - - - - - - - - - - | - - - - - - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio | 1017 1017 1020 1021 WB 0 A | 1081 - - - - - NBT - - | - - - - - 0 - - - | - - - - VBLn1 - - | 1619 - - - - - - - - - - - - - - - - - - - | - - - - - SBT - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) | 1017 1017 1020 1021 WB 0 A | 1081 - - - - - - - - - | - - - - - - - - - - | - - - - - - - 0 | 1619 - - - - - - - - - - - - - - - - - - - | - - - - - - - - - |
| Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s HCM Lane LOS | 1017 1017 1020 1021 WB 0 A | 1081 - - - - - - - - - - - | - - - - - - 0 - - - - - | - - - - - - - 0 A | 1619 - - - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - |

02/13/2023 CivTech Inc.

APPENDIX I

2024 BUILD PEAK HOUR ANALYSIS



| 2024 Total AM | e resc | л | | | | | Timing Report, Sorted By Phase |
|------------------------|--------|----------|----------|-------|-------|-------|--------------------------------|
| | ۶ | * | 1 | | 4 | \$► | <u> </u> |
| Phase Number | 1 | 2 | 3 | 4 | 6 | 8 | |
| Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL | |
| Lead/Lag | Lead | Lag | Lead | Lag | | | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 80 | | | | |

Splits and Phases: 1: Mockingbird Ln & Lincoln Dr

| ▶ _{Ø1} | 🔮 🖉 Ø2 (R) | Ø3 | ↑ Ø4 | |
|-----------------|------------|--------|--------|--|
| 21 s | 40.6 s | 21 s | 47.4 s | |
| | | Ø8 | | |
| 61.6 s | | 68.4 s | | |

| | ≯ | ÷ | 6 | ⊸t | A | 4 | |
|--|-------|----------|-----------------|-------|-------|-------|--|
| Phaso Number | - | 2 | 2 | 1 | | • | |
| Movomont | ERI | WRTI | SBI | NRTI | ERTI | SBTI | |
| | Load | VIDIL | Joad | INDIL | EDIL | SDIL | |
| Lead-Lag Ontimize | Vos | Vos | Vos | Vos | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | .0 | 3 | | 3 | | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Eocal field fro(5) | | | | | | | |
| Intersection Summary | | | | | | | |
| Intersection Summary Cycle Length | | | 130 | | | | |
| Intersection Summary Cycle Length Control Type | Actu | ated-Coo | 130 rdinated | | | | |

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Synchro 11 Report Page 1 Synchro 11 Report Page 1

02/13/2023 CivTech Inc.

JIV LECU TUC.

| 18-0555 SmokeTree 2024 Total AM | Reso | rt | | | | | | 1: Moc HCM 61 | kingbir th Signaliz | d Ln 8 | Linco section S | oln Dr ummary |
|------------------------------------|------|-------------|--------------|---------|------|-------|------|------------------|-------------------------------|--------|--------------------|------------------|
| | ۶ | - | \mathbf{r} | 4 | + | ٠ | 1 | 1 | 1 | 1 | ţ | ~ |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ۴. | ↑ ĵ≽ | | <u></u> | - 11 | 1 | 7 | f, | | ሻ | † | 1 |
| Traffic Volume (veh/h) | 186 | 837 | 63 | 12 | 549 | 41 | 21 | 20 | 22 | 47 | 58 | 170 |
| Future Volume (veh/h) | 186 | 837 | 63 | 12 | 549 | 41 | 21 | 20 | 22 | 47 | 58 | 170 |
| nitial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| d-Bike Adj(A_pbT) | 1.00 | 4.00 | 1.00 | 1.00 | 4.00 | 1.00 | 1.00 | 4.00 | 1.00 | 1.00 | 4.00 | 1.00 |
| king 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 |
| k Zone On Approach | 4770 | No | 4770 | 4770 | No | 4770 | 4770 | No | 4770 | 4770 | No | 4770 |
| sat Flow, veh/h/in | 1//2 | 1969 | 1//2 | 1//2 | 1969 | 1//2 | 1//2 | 1969 | 1//2 | 1//2 | 1969 | 1//2 |
| iow Rate, veh/h | 198 | 890 | 6/ | 13 | 590 | 44 | 23 | 22 | 24 | 58 | /2 | 210 |
| ak Hour Factor | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 | 0.91 | 0.81 | 0.81 | 0.81 |
| ercent Heavy Ven, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| o, veh/h | 568 | 2620 | 197 | 420 | 2461 | 988 | 148 | 11 | 84 | 208 | 316 | 241 |
| rive On Green | 0.05 | 0.74 | 0.74 | 0.44 | 0.44 | 0.44 | 0.09 | 0.09 | 0.09 | 0.04 | 0.16 | 0.16 |
| it Flow, veh/h | 1688 | 3526 | 265 | 556 | 3741 | 1502 | 1039 | 861 | 939 | 1688 | 1969 | 1502 |
| Volume(v), veh/h | 198 | 472 | 485 | 13 | 590 | 44 | 23 | 0 | 46 | 58 | 72 | 210 |
| Sat Flow(s), veh/h/ln | 1688 | 1870 | 1921 | 556 | 1870 | 1502 | 1039 | 0 | 1800 | 1688 | 1969 | 1502 |
| rve(g_s), s | 4.7 | 11.3 | 11.3 | 1.7 | 12.8 | 2.2 | 2.7 | 0.0 | 3.1 | 4.0 | 4.1 | 17.7 |
| Q Clear(g_c), s | 4.7 | 11.3 | 11.3 | 1.9 | 12.8 | 2.2 | 2.7 | 0.0 | 3.1 | 4.0 | 4.1 | 17.7 |
| In Lane | 1.00 | | 0.14 | 1.00 | | 1.00 | 1.00 | | 0.52 | 1.00 | | 1.00 |
| ne Grp Cap(c), veh/h | 568 | 1390 | 1428 | 420 | 2461 | 988 | 148 | 0 | 161 | 208 | 316 | 241 |
| CRatio(X) | 0.35 | 0.34 | 0.34 | 0.03 | 0.24 | 0.04 | 0.16 | 0.00 | 0.29 | 0.28 | 0.23 | 0.87 |
| il Cap(c_a), veh/h | 696 | 1390 | 1428 | 420 | 2461 | 988 | 382 | 0 | 566 | 360 | 937 | 715 |
| CM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| ostream Filter(I) | 1.00 | 1.00 | 1.00 | 0.92 | 0.92 | 0.92 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| niform Delay (d), s/veh | 6.6 | 5.7 | 5.7 | 13.0 | 16.0 | 13.0 | 55.1 | 0.0 | 55.3 | 49.3 | 47.5 | 53.2 |
| cr Delay (d2), s/veh | 0.4 | 0.7 | 0.6 | 0.1 | 0.2 | 0.1 | 0.5 | 0.0 | 1.0 | 0.7 | 0.4 | 9.3 |
| ial 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(95%),veh/In | 2.9 | 7.7 | 7.8 | 0.4 | 10.0 | 1.3 | 1.3 | 0.0 | 2.6 | 3.1 | 3.7 | 11.8 |
| nsig. Movement Delay, s/veh | - | | | | | | | | 54.0 | | 17.0 | 10.5 |
| .nGrp Delay(d),s/ven | 7.0 | 6.4 | 6.4 | 13.2 | 16.2 | 13.1 | 55.6 | 0.0 | 56.3 | 50.0 | 47.9 | 62.5 |
| LnGrp LOS | A | A | A | В | B | В | E | A (8) | E | D | D | E |
| Approach Vol, veh/h | | 1155 | | | 647 | | | 69 | | | 340 | |
| Approach Delay, s/veh | | 6.5 | | | 16.0 | | | 56.1 | | | 57.3 | |
| Approach LOS | | A | | | В | | | E | | | E | |
| Fimer - Assigned Phs | 1 | 2 | 3 | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.1 | 91.5 | 9.3 | 18.1 | | 102.6 | | 27.4 | | | | |
| Change Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 6.5 | | 6.0 | | 6.5 | | | | |
| Max Green Setting (Gmax), s | 17.0 | 34.6 | 17.0 | 40.9 | | 55.6 | | 61.9 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.7 | 14.8 | 6.0 | 5.1 | | 13.3 | | 19.7 | | | | |
| Green Ext Time (p_c), s | 0.4 | 4.2 | 0.1 | 0.3 | | 7.7 | | 1.2 | | | | |
| ntersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 18.6 | | | | | | | | | |
| HCM 6th LOS | | | 10.0 R | | | | | | | | | |
| LICIVI ULI LUS | | | D | | | | | | | | | |

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18-0555 SmokeTree Resort 2024 Total AM

2: Quail Run Rd & Lincoln Dr Timing Report, Sorted By Phase

| | ÷ | | 4 | - ↓- |
|------------------------|-------|----------|----------|-------|
| Phase Number | 2 | 4 | 6 | . 8 |
| Movement | WBTI | NBTI | FBTI | SBTI |
| Lead/Lag | more | nore | LDIL | 0012 |
| Lead-Lag Optimize | | | | |
| Recall Mode | C-Max | Max | C-Max | Max |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1 | 1 | 1 | 1 |
| Minimum Initial (s) | 5 | 5 | 5 | 5 |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 |
| Minimum Gap (s) | 3 | 3 | 3 | 3 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 |
| Walk Time (s) | 7 | 7 | 7 | 7 |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 |
| Dual Entry | Yes | Yes | Yes | Yes |
| Inhibit Max | Yes | Yes | Yes | Yes |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 |
| Intersection Summary | | | | |
| Cycle Length | | | 130 | |
| Control Type | Actu | ated-Coo | rdinated | |

Valural Cycle 45 Offset: 94.6 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Splits and Phases: 2: Quail Run Rd & Lincoln Dr

| Splits and Phases. 2. Quali Run Ru & Lincoln Di | |
|---|-------------|
| ₩ Ø2 (R) | ø4 |
| 63.6 s | 66.4 s |
| <u>→</u> 06 (R) | ↓ ∞8 |
| 63.6 s | 66.4 s |

| 18-0555 SmokeTre 2024 Total PM | ee Resc | ort | | | 2: Quail Run Rd & Lincoln Timing Report, Sorted By Pf |
|-----------------------------------|---------|----------|----------|-------|--|
| | ¥ | | 4 | 4 | |
| Phase Number | 2 | 4 | 6 | 8 | |
| Movement | WBTL | NBTL | EBTL | SBTL | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize | | | | | |
| Recall Mode | C-Max | Max | C-Max | Max | |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 | |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% | |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | |
| All-Red Time (s) | 1 | 1 | 1 | 1 | |
| Minimum Initial (s) | 5 | 5 | 5 | 5 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | |
| Walk Time (s) | 7 | 7 | 7 | 7 | |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 | |
| Dual Entry | Yes | Yes | Yes | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 | |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 | |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 | |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 | |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 | |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 | |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 | |
| Intersection Summary | | | | | |
| Cycle Length | | | 130 | | |
| Control Type | Actu | ated-Coo | rdinated | | |
| | | | 45 | | |

| √ Ø2 (R) | ≪ † ø4 |
|----------|---------------|
| i3.6 s | 66.4 s |
| Ø6 (R) | ✓Ø8 |
| 360 | 66.4 s |

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| 18-0555 SmokeTree 2024 Total AM | Reso | rt | | | | | | 2: QL HCM 6t | i ail Ru i h Signaliz | n Rd 8 zed Inters | Linco | In Dr ummary |
|------------------------------------|------|-------------|--------------|-------|------------|------|------|-----------------|---------------------------------|----------------------|-------|-----------------|
| | ۶ | - | \mathbf{r} | 4 | + | • | • | 1 | 1 | 1 | ţ | - |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 5 | 41 2 | | ٦ | Å ۵ | | | \$ | | | \$ | |
| Traffic Volume (veh/h) | 9 | 880 | 8 | 7 | 586 | 16 | 5 | 0 | 7 | 8 | 0 | 6 |
| Future Volume (veh/h) | 9 | 880 | 8 | 7 | 586 | 16 | 5 | 0 | 7 | 8 | 0 | 6 |
| 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 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adi | 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 | |
| Adi Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adi Flow Rate, veh/h | 10 | 1023 | 9 | 8 | 644 | 18 | 8 | 0 | 11 | 11 | 0 | 9 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.91 | 0.91 | 0.91 | 0.62 | 0.62 | 0.62 | 0.70 | 0.70 | 0.70 |
| Percent Heavy Veh. % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap. veh/h | 333 | 1641 | 14 | 159 | 1605 | 45 | 328 | 15 | 417 | 420 | 12 | 318 |
| Arrive On Green | 0.15 | 0.15 | 0.15 | 0.60 | 0.60 | 0.60 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| Sat Flow, veh/h | 773 | 3610 | 32 | 547 | 3531 | 99 | 605 | 32 | 876 | 792 | 25 | 669 |
| Grn Volume(v) veh/h | 10 | 504 | 528 | 8 | 324 | 338 | 19 | 0 | 0 | 20 | 0 | 0 |
| Grn Sat Flow(s) veh/h/ln | 773 | 1777 | 1865 | 547 | 1777 | 1853 | 1513 | 0 | 0 | 1/86 | 0 | 0 |
| O Serve(a, s) s | 15 | 34.5 | 34.5 | 15 | 12.4 | 12.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle O Clear(a, c) s | 13.9 | 34.5 | 34.5 | 36.0 | 12.4 | 12.4 | 0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Pron In Lano | 1.00 | 51.5 | 0.02 | 1 00 | 12.1 | 0.05 | 0.42 | 0.0 | 0.58 | 0.55 | 0.0 | 0.45 |
| ane Grn Can(c) veh/h | 333 | 808 | 8/8 | 150 | 808 | 8/2 | 760 | 0 | 0.50 | 751 | 0 | 0.43 |
| V/C Patio(X) | 0.03 | 0.62 | 0.62 | 0.05 | 0.40 | 0.40 | 0.03 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 |
| Avail Can(c, a) veh/h | 333 | 808 | 8/8 | 150 | 808 | 8/12 | 760 | 0.00 | 0.00 | 751 | 0.00 | 0.00 |
| HCM Platoon Ratio | 0.33 | 0.33 | 0.33 | 1 33 | 1 33 | 1 33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Instream Filter(I) | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d) s/yeb | /1 5 | 11.8 | 11.8 | 3/1.3 | 16.5 | 16.5 | 18.0 | 0.00 | 0.00 | 18.0 | 0.00 | 0.00 |
| Incr Delay (d2) s/veh | 0.2 | 3.4 | 3.3 | 0.6 | 15 | 1.4 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Initial O 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 BackOfO(95%) veh/ln | 0.6 | 23.9 | 24.9 | 0.4 | 85 | 8.8 | 0.6 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| Unsig Movement Delay s/ve | h | 20.7 | 2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I nGrp Delav(d).s/veh | 41.7 | 48.2 | 48.1 | 34.9 | 17.9 | 17.9 | 18.1 | 0.0 | 0.0 | 18.1 | 0.0 | 0.0 |
| InGrp LOS | D | D | D | С | В | В | В | А | A | В | A | A |
| Approach Vol. veh/h | | 1042 | | | 670 | | | 19 | | | 20 | |
| Approach Delay, s/veh | | 48.1 | | | 18.1 | | | 18.1 | | | 18.1 | |
| Approach LOS | | D | | | B | | | B | | | B | |
| | | 5 | | | 5 | | | 5 | | | 5 | |
| limer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 63.6 | | 66.4 | | 63.6 | | 66.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.1 | | 61.9 | | 59.1 | | 61.9 | | | | |
| Max Q Clear Time (g_c+I1), s | | 38.0 | | 2.8 | | 36.5 | | 2.8 | | | | |
| Green Ext Time (p_c), s | | 4.2 | | 0.1 | | 7.3 | | 0.1 | | | | |
| ntersection Summary | | | | | | | | | | | | |
| CM 6th Ctrl Delay | | | 36.0 | | | | | | | | | |
| | | | | | | | | | | | | |

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CivTech Inc.

Synchro 11 Report Page 4

18-0555 SmokeTree Resort 2024 Total AM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

| Int Delay, s/veh Movement Lane Configurations Traffic Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Storag Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-2 Maneuver Mov Cap-2 Maneuver | 0.3 EBT 912 912 912 r 00 Free - - - - - - - - - - - - - | EBR 13 13 0 Free None - - - 86 2 15 - - - - - - - - - - - - - | WBL 20 20 0 Free - - 91 2 22 Major2 | WBT 605 605 00 Free None 0 0 91 2 665 | NBL 4 4 5 5 0 0 0 0 0 0 0 0 0 0 2 8 Minor1 | NBR 14 14 0 Stop None - - - 50 2 28 |
|--|--|---|---|---|---|--|
| Movement Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Storag Grade, % Peak Hour Factor Heavy Vehicles, % Mymt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuveer Stage 2 Platoon blocked, % Mov Cap-1 Maneuvee Mov Cap-1 Maneuve Mov Cap-1 Maneuve | EBT 912 912 912 912 912 912 912 912 | EBR 13 13 0 Free None - - - 86 2 15 15 | WBL 20 20 0 Free - 60 - 91 2 22 Major2 | WBT 605 605 00 Free None - 0 0 0 91 2 665 | NBL 4 4 5top - 0 0 0 0 50 2 8 Minor1 | NBR 14 14 0 Stop None - - - 50 2 28 |
| Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peck, #/h Sign Control RT Channelized Storage Length Veh in Median Storag Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuver Mov Cap-2 Maneuver Mov Cap-1 Maneuver Mov Cap-2 | 2017 912 912 912 912 7 0 Free - - - - - - - - - - - - - - - - - - | 13 13 0 Free None - - - 86 2 15 | 20 20 0 Free - 60 - - 91 2 22 22 Major2 | | 4 4 0 Stop - 0 0 0 0 50 2 8 8 | 14 14 0 Stop None - - 50 2 28 |
| Traffic Vol, veh/h Future Vol, veh/h Future Vol, veh/h Future Vol, veh/h Sign Control RT Channelized Storage Length Veh in Median Storag Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-1 Maneuver | 912 912 r 0 Free - - - - - - - - - - - - - - - - - - | 13 0 Free None - - - 86 2 15 | 20 20 Free - 60 - 91 2 22 22 Major2 | 605 605 0 Free None 0 0 0 91 2 665 | 4 4 0 Stop - 0 0 0 0 50 2 8 8 | 14 14 0 Stop None - - - 50 2 28 |
| Hune Vol, veh/h Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver | 912 912 r 0 Free - - - - - - - - - - - - - | 13 0 Free None - - - 86 2 15 | 20 20 Free - 60 - 91 2 22 Major2 | 605 0 Free None 0 0 91 2 665 | 4 4 0 Stop - 0 0 0 0 50 2 8 8 | 14 0 Stop None - - - 50 2 28 |
| Conflicting Peds, #/h Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve | r 0 Free - ge, # 0 0 86 2 1060 <u>Major1</u> 0 - | 0 Free None - - - - 86 2 15 | 0 Free - 60 - 91 2 22 22 Major2 | 0 Free None 0 0 91 2 665 | 4 0 Stop - 0 0 0 0 50 2 8 8 | 0 Stop None - - 50 2 28 |
| Sign Control RT Channelized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-2 Maneuve | Free - - - - - - - - - - - - - - - - - - | Free None - - - - 86 2 15 | Free - 60 - 91 2 22 22 Major2 | Free None 0 0 91 2 665 | Stop - 0 0 0 50 2 8 8 | Stop None - - 50 2 28 |
| Argin Control Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | None - - - - - - - - - - - - - - - - - - - | - 60 | None 0 0 91 2 665 | | None - - 50 2 28 |
| KT Crianifielized Storage Length Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve | - ge, # 0 0 86 2 1060 <u>Major1</u> 0 - | None - - - - - - - - - - - - - - - - - - - | - 60 | 0 0 91 2 665 | - 0 0 50 2 8 | |
| Surage Lengin Veh in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-2 Maneuve | | - - - 86 2 15 15 | 60 - 91 2 22 <u>Major2</u> | 0 0 91 2 665 | 0 0 50 2 8 | - - 50 2 28 |
| Ven in Median Stora Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver | ge, # 0 0 86 2 1060 <u>Major1</u> 0 - | - 86 2 15 15 | - 91 2 22 <u>Vlajor2</u> | 0 91 2 665 | 0 0 50 2 8 | - 50 2 28 |
| Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | 0 86 2 1060 <u>Major1</u> 0 - | - 86 2 15 15 | 91 2 22 <u>Major2</u> | 0 91 2 665 | 0 50 2 8 | 50 2 28 |
| Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | 86 2 1060 <u>Major1</u> 0 - | 86 2 15 1 0 | 91 2 22 Major2 | 91 2 665 | 50 2 8 | 50 2 28 |
| Heavy Vehicles, % Mvmt Flow Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuver Mov Cap-1 Maneuver | 2 1060 <u>Major1</u> 0 - | 2 15 1 0 | 2 22 Major2 | 2 665 | 2 8 Vipor1 | 2 28 |
| Mvmt Flow Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | 1060 <u>Major1</u> 0 - | 15 1 0 | 22 <u>Major2</u> | 665 N | 8 Vipor1 | 28 |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | Major1 0 - | 1 0 - | Major2 | Ν | /inor1 | |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuver | Major1 0 - | 0 | Major2 | I | linor1 | |
| Major/Minor Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | Major1 0 - - | 0 | viajor2 | I I | unor1 | |
| Conflicting Flow All Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pol Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | 0 | 0 | 107F | | | |
| Stage 1 Stage 2 Critical Hdwy Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | - | - | 10/0 | 0 | 1445 | 538 |
| Stage 2 Critical Hdwy Stg 1 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | - | | | - | 1068 | - |
| Critical Hdwy Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | - | - | - | 377 | - |
| Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | - | 4.14 | - | 6.84 | 6.94 |
| Critical Hdwy Stg 2 Follow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | - | - | | 5.84 | - |
| Pollow-up Hdwy Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | | | | 5.84 | |
| Pot Cap-1 Maneuver Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | | 2.22 | | 3 5 2 | 3 32 |
| Stage 1 Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | - | | 2.22 | | *//1 | 3.32 *71E |
| Stage 2 Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | | 991 | | 44 I *()0 | /13 |
| Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | | | | | 620 *700 | - |
| Platoon blocked, % Mov Cap-1 Maneuve Mov Cap-2 Maneuve | - | 1.1 | - | | -789 | - |
| Mov Cap-1 Maneuve Mov Cap-2 Maneuve | - | - | 1 | - | 1 | 1 |
| Mov Cap-2 Maneuve | r - | 1.1 | 997 | - | *431 | *715 |
| | r - | - | - | - | *431 | - |
| Stage 1 | - | - | - | - | *620 | - |
| Stage 2 | | | | | *771 | |
| olugo 2 | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, | s 0 | | 0.3 | | 11.1 | |
| HCM LOS | | | | | В | |
| | | | | | | |
| | | | | - | 1110 | |
| Minor Lane/Major Mv | /mt | NBLn1 | EBL | EBR | WBL | WBT |
| Capacity (veh/h) | | 624 | - | - | 997 | - |
| HCM Lane V/C Ratio | | 0.058 | - | - | 0.022 | - |
| HCM Control Delay (| s) | 11.1 | | - | 8.7 | |
| HCM Lane LOS | | B | | | Δ | |
| HCM 95th %tile Offer | h) | 0.2 | | | 0.1 | |
| | | 0.2 | | | 0.1 | - |
| Notes | | | | | | |
| ~: Volume exceeds of | | \$ De | elav exc | eeds 3 | 00s | +: Com |
| | apacity | - I.I.I. | ., ., | | | |

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18-0555 SmokeTree Resort 2024 Total PM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | _ | | | | |
|--|-----------|--------|----------|---------|--------|--------|
| Int Delay, s/veh | 0.6 | | | | | |
| Movement | FRT | FRP | WR | WRT | NRI | MRP |
| Lane Configurations | A1- | LDK | WDL K | | NDL | NDR |
| | 4T | 10 | 20 | 090 | 10 | 2E |
| Futuro Vol. veh/h | 00Z | 12 | 20 | 900 | 10 | 20 |
| Conflicting Pods #/hr | 002 | 12 | 30 | 900 | 0 | 25 |
| Sign Control | Froo | Free | Froo | Froo | Ston | Ston |
| RT Channelized | - | None | - | None | Jiop | None |
| Storage Length | | - | 60 | NUTIC - | 0 | - |
| Veh in Median Storage | # 0 | | | 0 | 0 | |
| Grade % | 0 | | | 0 | 0 | |
| Peak Hour Factor | 86 | 86 | 91 | 91 | 50 | 50 |
| Heavy Vehicles % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mumt Flow | 1002 | 1/ | 22 | 1077 | 20 | 50 |
| | 1002 | 14 | 33 | 1077 | 20 | 50 |
| | | | | | | |
| Major/Minor N | lajor1 | Ν | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 1016 | 0 | 1614 | 508 |
| Stage 1 | - | | - | - | 1009 | - |
| Stage 2 | - | - | - | - | 605 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | | | 5.84 | - |
| Follow-up Hdwy | - | - | 2.22 | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | - | - | 1023 | | *305 | *739 |
| Stage 1 | - | | - | | *635 | - |
| Stage 2 | - | - | - | | *630 | - |
| Platoon blocked, % | - | | 1 | | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | 1023 | - | *295 | *739 |
| Mov Cap-2 Maneuver | - | | - | | *295 | - |
| Stage 1 | - | - | - | - | *635 | - |
| Stage 2 | | | | | *610 | - |
| , and the second s | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.3 | | 13.1 | |
| HCM LOS | | | | | В | |
| | | | | | | |
| Minor Lane/Maior Mymt | 1 | VBI n1 | FBT | FBR | WBI | WBT |
| Canacity (veh/h) | | 517 | | | 1023 | |
| HCM Lane V/C Patio | | 0 135 | | | 0.032 | |
| HCM Control Delay (s) | | 13.1 | | | 8.6 | - |
| HCM Lane LOS | | B | | | Δ | |
| HCM 95th %tile O(veh) | | 0.5 | | | 0.1 | |
| | | 0.5 | - | - | 0.1 | - |
| Notes | | | | | | |
| ~: Volume exceeds cap | acity | \$: De | elay exc | eeds 3 | 00s | +: Com |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 02/13/2023 | | | | | | |
| CivTech Inc. | | | | | | |

18-0555 SmokeTree Resort 2024 Total AM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | _ | | _ | | _ | _ | _ | |
|-------------------------------|--------|---------------|----------|--------------|-------------|--------|--------------|--------------|--------|--------|-------|--------|
| Int Delay, s/veh | 1.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 5 | A | | 1 | ≜ î⊧ | | | 4 | | 1 | | 1 |
| Traffic Vol, veh/h | 21 | 840 | 69 | 12 | 566 | 9 | 44 | 5 | 60 | 4 | 0 | 10 |
| Future Vol, veh/h | 21 | 840 | 69 | 12 | 566 | 9 | 44 | 5 | 60 | 4 | 0 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 60 | - | - | 25 | - | - | - | - | - | 0 | - | 0 |
| Veh in Median Storage | e,# - | 0 | - | | 0 | - | | 1 | - | - | 1 | |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 24 | 955 | 78 | 13 | 596 | 9 | 58 | 7 | 79 | 6 | 0 | 14 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | 1 | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 605 | 0 | 0 | 1033 | 0 | 0 | 1366 | 1673 | 517 | 1156 | - | 303 |
| Stage 1 | - | - | - | - | | - | 1042 | 1042 | | 627 | | - |
| Stage 2 | - | - | - | - | - | | 324 | 631 | - | 529 | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.54 | 6.54 | 6.94 | 7.54 | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.54 | 5.54 | - | 6.54 | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.54 | 5.54 | - | 6.54 | - | - |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.52 | 4.02 | 3.32 | 3.52 | - | 3.32 |
| Pot Cap-1 Maneuver | *1286 | - | - | 1002 | - | - | *471 | 214 | *739 | *582 | 0 | *860 |
| Stage 1 | - | - | - | - | - | - | *586 | 537 | - | *801 | 0 | - |
| Stage 2 | - | - | - | - | - | - | *810 | 700 | - | *697 | 0 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | 1 | 1 | 1 | 1 | | 1 |
| Mov Cap-1 Maneuver | *1286 | - | - | 1002 | - | - | *452 | 207 | *739 | *500 | - | *860 |
| Mov Cap-2 Maneuver | | | | | | - | *493 | 361 | | *519 | | |
| Stage 1 | | | | | | | *575 | 526 | | *786 | | |
| Stage 2 | - | - | - | | - | | *787 | 691 | | *603 | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.2 | | | 0.2 | | | 13 | | | 10.1 | | |
| HCM LOS | | | | | | | В | | | В | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvm | nt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR S | SBLn1 | SBLn2 | _ | _ |
| Capacity (veh/h) | | 591 | * 1286 | | | 1002 | | | 519 | 860 | | |
| HCM Lane V/C Ratio | | 0.243 | 0.019 | | | 0.013 | | | 0.011 | 0.017 | | |
| HCM Control Delay (s) | | 13 | 7.9 | - | - | 8.6 | - | | 12 | 9.3 | | |
| HCM Lane LOS | | В | A | | | A | | | В | A | | |
| HCM 95th %tile Q(veh |) | 0.9 | 0.1 | - | - | 0 | - | - | 0 | 0.1 | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds ca | nacity | \$ D | elav evo | eeds 3 | 005 | +: Com | putatio | n Not D | efined | *· ∆II | maior | /olume |
| · · June exceeds ca | paony | . Di | sidy che | 5005 5 | 000 | | parado | | onnod | . 730 | major | Siume |
| Notes -: Volume exceeds ca | pacity | 0.9 \$: De | elay exc | - ceeds 3 | - 00s | +: Com | - putatio | - n Not D | efined | *: All | major | volume |

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18-0555 SmokeTree Resort 2024 Total PM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| nt Delay, s/veh | 1.6 | | | | | | | | | | | |
|---------------------------------------|--------|---------|--------|--------|-------------|-------|-------------|------|--------|--------|------|------|
| Novement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | 5 | ₩ | | 1 | ∱î ≽ | | | 4 | | 1 | | 1 |
| raffic Vol, veh/h | 8 | 814 | 62 | 6 | 912 | 9 | 80 | 2 | 72 | 3 | 0 | 19 |
| uture Vol, veh/h | 8 | 814 | 62 | 6 | 912 | 9 | 80 | 2 | 72 | 3 | 0 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sian Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 60 | | - | 25 | | | | | | 0 | | 0 |
| /eh in Median Storage | . # - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - |
| Grade % | | 0 | | | 0 | | | 0 | | | 0 | |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 |
| leavy Vehicles % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Avmt Flow | 0 | 025 | 70 | 6 | 060 | 0 | 105 | 2 | 05 | 4 | 0 | 27 |
| NVIIII LIOW | 7 | 723 | 70 | U | 700 | 7 | 105 | J | 7J | 4 | 0 | 21 |
| /aior/Minor | Maior1 | | | Maior2 | | 1 | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 969 | 0 | 0 | 995 | 0 | 0 | 1470 | 1959 | 498 | 1459 | | 485 |
| Stane 1 | ,07 | 0 | 0 | 775 | 5 | - | 978 | 978 | 170 | 977 | | 100 |
| Stage 2 | | | | | | | /02 | 001 | | /82 | | |
| Critical Hdwy | 111 | - | - | 1 11 | | - | 7.54 | 6.54 | 6.0/ | 7.54 | | 6.01 |
| Critical Hdwy Sta 1 | 7.17 | | | 7.17 | | | 6.54 | 5.54 | 0.74 | 6.54 | | 0.74 |
| Critical Edwy Stg 7 | | | | | | | 6.54 | 5.54 | | 6.54 | | |
| Follow up Udwy | 2 22 | - | - | 2 22 | - | | 2.52 | 1.02 | 2 22 | 2.52 | | 2 22 |
| ollow-up Huwy | ×1070 | - | - | 2.22 | | - | 3.02 | 4.0Z | 3.32 | 3.02 | - | 3.32 |
| Pot Cap-1 Maneuver | 1070 | - | - | 1050 | | - | 440 | *500 | / 39 | 440 | 0 | /15 |
| Stage 1 | | - | - | | | - | 004 */74 | 589 | - | 6/4 | 0 | |
| | - | - | - | - | | - | 0/4 | 1 40 | - | 097 | U | - |
| Platoon blocked, % | *1070 | | - | 1050 | | | *404 | *174 | *720 | *202 | | *715 |
| Nov Cap-1 Maneuver | 1070 | | | 1050 | | | 424 | 1/4 | /39 | 382 | | /15 |
| viov Cap-2 Maneuver | | | - | | | | 489 | 345 | | 460 | | |
| Stage 1 | | 1.1 | 1.1 | | | 1.1 | 008 | 584 | | \$(00 | | |
| Stage 2 | | | | | | | 645 | .288 | | ~600 | | |
| Innroach | ED | | | WP | | | NP | | | SP | | |
| ACM Control Dolou o | 0.1 | | | 0.1 | | | 14.7 | | | 10 / | | |
| ICM LOS | 0.1 | | | 0.1 | | | 14.0 | | | 10.0 | | |
| | | | | | | | В | | | В | | |
| /inor Lano/Major Mum | .+ | NRI n1 | EDI | ERT | ERD | W/R/ | WRT | WRD | CRI n1 | SRI n2 | | |
| | it i | INDLIII | * 1070 | EDI | EDR | 10E0 | VDI | WDR. | | | _ | _ |
| Lapacity (ven/n) | | 5// | 1070 | | | 1050 | | | 460 | /15 | | |
| ICIVI Lane V/C Ratio | | 0.351 | 0.008 | - | | 0.006 | | | 0.009 | 0.038 | | |
| ICIVI CONTROL Delay (S) | | 14.6 | 8.4 | 1.1 | | 8.4 | 1.1 | 1.1 | 12.9 | 10.2 | | |
| | | B | A | - | | A | | | В | В | | |
| ICM Lane LOS | | 2/ | 0 | | | 0 | | | 0 | 01 | | |
| ICM Lane LOS ICM 95th %tile Q(veh) |) | 1.0 | 0 | - | - | 0 | | | 0 | 0.1 | | |

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| 18-0555 SmokeTree Resort | |
|--------------------------|--|
| 2024 Total AM | |

6: Scottsdale Rd & Lincoln Dr/Lincoln Ln Timing Report, Sorted By Phase

| | - \ | Ť | \$ | \$ | 4 | 7 |
|------------------------|------------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | 0 | | | 0 | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Intersection Summary | | | | | | |
| Cycle Length | | | 130 | | | |

| Cycle Length 130 | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|
| Control Type Actuated-Coordinated | | | | | | | | | | |
| Natural Cycle 80 | | | | | | | | | | |
| Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green | | | | | | | | | | |

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr/Lincoln Ln

| Ø1 | 1 Ø2 | ₩ Ø4 | ₹ _{Ø8} | |
|--------------|-------------|---------|-----------------|--|
| 26 s | 48 s | 28 s | 28 s | |
| \$ Ø5 | 🚽 🗣 Ø6 (R) | | | |
| 28 s | 46 s | | | |

| 18-0555 SmokeTre 2024 Total PM | ee Resc | ort | | | | 6: 5 | Scottsdale Rd & Lincoln Dr/Lincoln Lr Timing Report, Sorted By Phas |
|-----------------------------------|-------------|----------|------------|--------|-------|-------|--|
| | 1 | t | 4 | \$ | 4 | 7 | |
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 | |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | |
| Lead-Lag Optimize | | 0 | | | 0 | | |
| Recall Mode | None | None | None | None | C-Max | None | |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 | |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 | |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | | 7 | | |
| Flash Dont Walk (s) | | 15 | | | 18 | | |
| Dual Entry | No | Yes | No | No | Yes | No | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 | |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 90 | | | | |
| Offset: 0 (0%), Referenced | to phase 6 | SBT, Sta | rt of Gree | en | | | |
| Splits and Phases: 6: Sc | ottsdale Rd | & Lincol | n Dr/Linco | oln Ln | | | |
| ↓ _{Ø1} | 1 m | | | | | 4 | 04 7 08 |

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| | | | | | | | | • | in orginaliz | | | Jininary |
|----------------------------|--------------|------------|---------------|------------|--------------|--------------|--------------|---------------|--------------|----------|----------|----------|
| | • | → | \rightarrow | 1 | + | • | 1 | Ť | 1 | > | Ŧ | - |
| Novement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | | र्भ | 1 | <u></u> | ≜ î≽ | | ሻሻ | 4 4 1> | | <u> </u> | <u></u> | 1 |
| iraffic Volume (veh/h) | 535 | 37 | 323 | 21 | 34 | 28 | 222 | 897 | 33 | 20 | 957 | 386 |
| uture Volume (veh/h) | 535 | 37 | 323 | 21 | 34 | 28 | 222 | 897 | 33 | 20 | 957 | 386 |
| allal Q (QD), Ven | 1.00 | 0 | 1.00 | 1.00 | 0 | 1.00 | 1.00 | 0 | 1.00 | 1.00 | 0 | 1.00 |
| arking Rus Adi | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| ork Zone On Approach | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 |
| j Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Flow Rate, veh/h | 623 | 0 | 359 | 24 | 39 | 32 | 244 | 986 | 36 | 22 | 1052 | 424 |
| Hour Factor | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| ven/h | 617 | 0 | 413 | 93 | 102 | 75 | 302 | 1911 | 70 | 38 | 1583 | 766 |
| e on Green | 2562 | 0.00 | U.I/ | 0.05 | 0.05 | 0.05 | 2456 | 0.38 | 0.38 | 0.02 | 0.31 | 0.31 |
| low, venin | 400 | 0 | 250 | 24 | 1907 | 1433 | 2400 | 2007 | 250 | 1/01 | 1052 | 1000 |
| Sat Flow(s) veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1612 | 1728 | 1702 | 1837 | 1781 | 1702 | 1585 |
| erve(a_s), s | 22.5 | 0.0 | 22.5 | 1.7 | 2.5 | 2.8 | 9.0 | 19.6 | 19.6 | 1.6 | 23.3 | 24.5 |
| e Q Clear(q c), s | 22.5 | 0.0 | 22.5 | 1.7 | 2.5 | 2.8 | 9.0 | 19.6 | 19.6 | 1.6 | 23.3 | 24.5 |
| In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.10 | 1.00 | | 1.00 |
| Grp Cap(c), veh/h | 617 | 0 | 413 | 93 | 93 | 84 | 302 | 1286 | 694 | 38 | 1583 | 766 |
| Ratio(X) | 1.01 | 0.00 | 0.87 | 0.26 | 0.38 | 0.43 | 0.81 | 0.52 | 0.52 | 0.59 | 0.66 | 0.55 |
| Cap(c_a), veh/h | 617 | 0 | 413 | 307 | 306 | 278 | 598 | 1286 | 694 | 284 | 1583 | 766 |
| 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 |
| tream Filter(I) | 1.UU E2.0 | 0.00 | 1.00 | F0.2 | 1.00 E0.4 | 1.00 E0.7 | 1.00 E0.0 | 1.00 | 1.00 | 42.1 | 20.0 | 1.00 |
| Delay (d2) s/veh | 38.8 | 0.0 | 40.0 | 0.5 | 0.9 | 13 | 2.0 | 0.2 | 03 | 53 | 39.0 | 23.7 |
| al O Delav(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 |
| BackOfQ(95%),veh/ln | 19.5 | 0.0 | 18.9 | 1.4 | 2.1 | 2.1 | 7.3 | 12.8 | 13.6 | 1.4 | 15.2 | 19.3 |
| ig. Movement Delay, s/veh | | | | | | | | | | | | |
| p Delay(d),s/veh | 92.6 | 0.0 | 63.1 | 59.7 | 60.5 | 61.0 | 60.2 | 31.4 | 31.6 | 68.4 | 41.2 | 26.6 |
| LOS | F | A | E | E | E | E | E | С | С | E | D | С |
| ach Vol, veh/h | | 982 | | | 95 | | | 1266 | | | 1498 | |
| oach Delay, s/veh | | 81.8 | | | 60.5 | | | 37.0 | | | 37.5 | |
| Uduli LUS | | r | | | E | | | U | | | U | |
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Duration (G+Y+Rc), s | 8.0 | 54.8 | | 28.0 | 16.9 | 46.0 | | 12.4 | | | | |
| ange Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 5.6 | | | | |
| ax Green Setting (Gmax), s | 21 | 42.3 | | 22.5 | 22.5 | 40.3 | | 22.4 | | | | |
| een Ext Time (n c) s | 3.0 | 21.0 | | 24.5 | 0.3 | 20.0 | | 4.8 | | | | |
| n ext nine (p_c), s | 0.0 | 1.4 | | 0.0 | 0.5 | 1.J | | 0.2 | | | | |
| ersection Summary | | _ | 10.0 | | | | | | | | _ | |
| CM 6th Ctrl Delay | | | 49.2 | | | | | | | | | |
| II DIN LUS | | | D | | | | | | | | | |
| | | | | | | | | | | | | |
| approved pedestrian inter | rval to b | e less tha | in phase | max gree | n. | | | | | | | |
| er approved volume balanci | ng amoi | ng the lar | ies for tur | ning mov | ement. | | | | | | | |
| JM 6th computational engin | ne requi | res equal | clearanc | e times fo | r the pha | ses cross | ing the ba | arrier. | | | | |
| 13/2023 | | | | | | | | | | SI | nchro 11 | Report |
| Toch Inc | | | | | | | | | | 0) | | Dogo |

18-0555 SmokeTree Resort 2024 Total AM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | | _ | _ | _ | |
|------------------------|--------|-------|----------------|-------|--------|------------------|
| Int Delay, s/veh | 5.2 | | | | | |
| | 0.2 | 1105 | | | | 0.07 |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Y | | ب ا | | | ् र्भ |
| Traffic Vol, veh/h | 0 | 8 | 5 | 0 | 11 | 4 |
| Future Vol, veh/h | 0 | 8 | 5 | 0 | 11 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | | None | | None | | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage | e,# 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | | 0 | | | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 9 | 6 | 0 | 12 | 4 |
| | | | | | | |
| | | | | | | _ |
| Major/Minor | Minor1 | Ν | vajor1 | | Major2 | |
| Conflicting Flow All | 34 | 6 | 0 | 0 | 6 | 0 |
| Stage 1 | 6 | | - | | 1.1 | - |
| Stage 2 | 28 | | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | | - | - | | - |
| Critical Hdwy Stg 2 | 5.42 | - | | | | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 979 | 1077 | | - | 1615 | - |
| Stage 1 | 1017 | | | | | |
| Stage 2 | 995 | - | - | - | | - |
| Platoon blocked, % | | | | | | |
| Mov Cap-1 Maneuver | 972 | 1077 | | | 1615 | - |
| Mov Cap-2 Maneuver | 972 | - | | | | |
| Stage 1 | 1017 | | | | | |
| Stage 2 | 988 | | | | | |
| Judge 2 | 700 | | | | | |
| | | | | | | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 8.4 | | 0 | | 5.3 | |
| HCM LOS | А | | | | | |
| | | | | | | |
| | | NDT | NIDE | | CD | CDT |
| Minor Lane/Major Nivn | 11 | INBI | INBRV | VELUI | SBL | 2B1 |
| Capacity (veh/h) | | | 1.1 | 1077 | 1615 | |
| HCM Lane V/C Ratio | | | | 0.008 | 0.008 | - |
| HCM Control Delay (s) | | - | | 8.4 | 7.2 | 0 |
| HCM Lane LOS | | | - | A | А | А |
| HCM 95th %tile Q(veh |) | - | - | 0 | 0 | - |

| 02/13/2023 | |
|--------------|--|
| CivTech Inc. | |

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18-0555 SmokeTree Resort 2024 Total PM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | _ | _ | _ | _ | _ |
|-----------------------------|------------------|---------|---------|---------|---------|----------|
| Int Delay, s/veh | 6.9 | | | | | |
| Movement | W/RI | WRP | NRT | NRP | SBI | SBT |
| Lane Configurations | VVDL | VUDR | 1101 | NDK | JDL | 3D1 |
| Traffic Vol. voh/h | - T | 17 | 3 | 0 | 20 | N |
| Future Vol. veh/h | 0 | 17 | 3 | 0 | 27 | 2 |
| Conflicting Peds #/hr | 0 | 0 | 0 | 0 | 27 | 0 |
| Sign Control | Ston | Stop | Froo | Froo | Froo | Free |
| RT Channelized | Stop | None | TICC | None | TICC | None |
| Storage Length | 0 | NULLE | | NULLE | | NULLE |
| Veh in Median Storage |) # 0 | | 0 | | | 0 |
| Grado % | c, π 0 | | 0 | | | 0 |
| Doak Hour Eactor | 0 | 00 | 00 | 00 | 00 | 0 |
| Hoaw Vobiclos % | - 7 0 | 70 2 | 70 2 | 30 2 | 70 2 | 70 2 |
| Mumt Flow | 2 | 10 | 2 | 2 | 2 | 2 |
| IVIVITIL FIOW | 0 | 19 | 3 | 0 | 32 | 2 |
| | | | | | | |
| Major/Minor | Minor1 | N | Major1 | | Major2 | |
| Conflicting Flow All | 69 | 3 | 0 | 0 | 3 | 0 |
| Stage 1 | 3 | - | - | - | - | - |
| Stage 2 | 66 | - | | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | | | | - |
| Critical Hdwy Stg 2 | 5.42 | - | | - | | - |
| Follow-up Hdwy | 3.518 | 3.318 | | | 2.218 | - |
| Pot Cap-1 Maneuver | 936 | 1081 | | - | 1619 | - |
| Stage 1 | 1020 | | | - | | - |
| Stage 2 | 957 | - | | - | - | - |
| Platoon blocked, % | | | | | | |
| Mov Cap-1 Maneuver | 917 | 1081 | | | 1619 | - |
| Mov Cap-2 Maneuver | 917 | - | | | - | - |
| Stage 1 | 1020 | | | | | - |
| Stage 2 | 938 | | | | | |
| oldgo 2 | 700 | | | | | |
| | 11/0 | | ND | | 0.0 | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 8.4 | | 0 | | 6.8 | |
| HCM LOS | A | | | | | |
| | | | | | | |
| Minor Lane/Maior Mvm | nt | NBT | NBRV | WBLn1 | SBL | SBT |
| Canacity (veh/h) | | | | 1081 | 1619 | |
| HCM Lane V/C Ratio | | | | 0.017 | 0.02 | |
| HCM Control Delay (s) | | | | 8.4 | 7 3 | 0 |
| HCM Lane LOS | | | | Δ | Α | Δ |
| HCM 95th %tile O(veh |) | | | 0.1 | 01 | - |
| TOW YOUR DUILY OUR DUILY OF | / | | | 0.1 | 0.1 | |

02/13/2023 CivTech Inc.

18-0555 SmokeTree Resort 2024 Total AM Mitigated

6: Scottsdale Rd & Lincoln Dr Timing Report, Sorted By Phase

| | - \ | t | 4 | \$ | 4 | 7 |
|------------------------|------------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | | | | | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 11 | 72 | 34 | 17 | 66 | 13 |
| Maximum Split (%) | 8.5% | 55.4% | 26.2% | 13.1% | 50.8% | 10.0% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 113 | 124 | 66 | 113 | 0 | 100 |
| End Time (s) | 124 | 66 | 100 | 0 | 66 | 113 |
| Yield/Force Off (s) | 118.7 | 60.3 | 94.5 | 124.5 | 60.3 | 107.4 |
| Yield/Force Off 170(s) | 118.7 | 45.3 | 94.5 | 124.5 | 42.3 | 107.4 |
| Local Start Time (s) | 113 | 124 | 66 | 113 | 0 | 100 |
| Local Yield (s) | 118.7 | 60.3 | 94.5 | 124.5 | 60.3 | 107.4 |
| Local Yield 170(s) | 118.7 | 45.3 | 94.5 | 124.5 | 42.3 | 107.4 |
| Intersection Summary | | | | | | |

| Cycle Length | 130 | |
|-----------------|---|--|
| Control Type | Actuated-Coordinated | |
| Vatural Cycle | 80 | |
| Offset: 0 (0%), | Referenced to phase 6:SBT, Start of Green | |
| | | |

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr

| Ø1 | ↑ ø2 | 4 04 | 7 Ø8 |
|-------|-------------|-------------|-------------|
| 11 s | 72 s | 34 s | 13 s |
| \$ Ø5 | ♥ ♥ Ø6 (R) | | |
| 17 s | 66 s | | |

| | guiou | | | | | | Thinking Report, Control By This |
|----------------------------|------------|-------------|------------|-------|-------|-------|----------------------------------|
| | 1 | † | 4 | \$ | 4 | 7 | |
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 | |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | |
| Lead-Lag Optimize | | 0 | | | 0 | | |
| Recall Mode | None | None | None | None | C-Max | None | |
| Maximum Split (s) | 11 | 73 | 33 | 20 | 64 | 13 | |
| Maximum Split (%) | 8.5% | 56.2% | 25.4% | 15.4% | 49.2% | 10.0% | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 | |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | | 7 | | |
| Flash Dont Walk (s) | | 15 | | | 18 | | |
| Dual Entry | No | Yes | No | No | Yes | No | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 110 | 121 | 64 | 110 | 0 | 97 | |
| End Time (s) | 121 | 64 | 97 | 0 | 64 | 110 | |
| Yield/Force Off (s) | 115.7 | 58.3 | 91.5 | 124.5 | 58.3 | 104.4 | |
| Yield/Force Off 170(s) | 115.7 | 43.3 | 91.5 | 124.5 | 40.3 | 104.4 | |
| Local Start Time (s) | 110 | 121 | 64 | 110 | 0 | 97 | |
| Local Yield (s) | 115.7 | 58.3 | 91.5 | 124.5 | 58.3 | 104.4 | |
| Local Yield 170(s) | 115.7 | 43.3 | 91.5 | 124.5 | 40.3 | 104.4 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 90 | | | | |
| Offset: 0 (0%), Referenced | o phase 6 | :SBT, Sta | rt of Gree | en | | | |
| Splits and Phases: 6: Sco | ttsdale Rd | I & Lincoli | n Dr | | | | |
| | | | | | | | 4 |
| 01 02 | | | | | | | ₩ Ø0 |

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02/13/2023 CivTech Inc.

| | ⊁ | -+ | \mathbf{x} | | + | | • | ŧ | - | 1 | Ţ | 1 |
|---------------------------------------|-----------|----------------|--------------|-----------|------------|-----------|------------|---------|------|------|------|------|
| lovement | FBI | FBT | FBR | WBI | WBT | WRR | NBI | NBT | NBR | SBI | SBT | SBR |
| ano Configurations | * | 101 | 1 | * | A1. | WDIX | R.R. | AAT. | NDR | 1000 | | 1 |
| affic Volume (veh/h) | 535 | * 37 | 323 | 21 | 34 | 28 | 222 | 897 | 33 | 20 | 957 | 386 |
| uture Volume (veh/h) | 535 | 37 | 323 | 21 | 34 | 28 | 222 | 897 | 33 | 20 | 957 | 386 |
| itial O (Ob), veh | 0 | 0 | 0_0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ed-Bike Adj(A pbT) | 1.00 | - | 1.00 | 1.00 | - | 1.00 | 1.00 | - | 1.00 | 1.00 | - | 1.00 |
| arking 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 |
| /ork Zone On Approach | | No | | | No | | | No | | | No | |
| dj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| dj Flow Rate, veh/h | 623 | 0 | 359 | 24 | 39 | 32 | 244 | 986 | 36 | 22 | 1052 | 424 |
| eak Hour Factor | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| rcent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| p, veh/h | 781 | 0 | 482 | 93 | 102 | 75 | 294 | 2677 | 98 | 38 | 2368 | 1083 |
| rrive On Green | 0.22 | 0.00 | 0.22 | 0.05 | 0.05 | 0.05 | 0.09 | 0.53 | 0.53 | 0.02 | 0.46 | 0.46 |
| at Flow, veh/h | 3563 | 0 | 1585 | 1781 | 1957 | 1433 | 3456 | 5057 | 184 | 1781 | 5106 | 1585 |
| Firp Volume(v), veh/h | 623 | 0 | 359 | 24 | 35 | 36 | 244 | 663 | 359 | 22 | 1052 | 424 |
| Sing Sat Flow(s), veh/h/ln | 1/81 | 0 | 1585 | 1/81 | 1/// | 1612 | 1/28 | 1/02 | 1837 | 1/81 | 1/02 | 1585 |
| $i \text{ Serve}(\underline{y}_s), s$ | 21.5 | 0.0 | 20.0 | 1.7 | 2.5 | 2.8 | 9.0 | 14.8 | 14.8 | 1.0 | 10.1 | 15.0 |
| ycle Q Cledi (y_c), s | 1.00 | 0.0 | 20.0 | 1.7 | Z.3 | 2.0 | 9.0 | 14.0 | 0.10 | 1.0 | 10.1 | 1.00 |
| ane Grn Can(c) veh/h | 781 | 0 | 482 | 93 | 93 | 84 | 294 | 1802 | 973 | 38 | 2368 | 1083 |
| //C Ratio(X) | 0.80 | 0.00 | 0.74 | 0.26 | 0.38 | 0.43 | 0.83 | 0.37 | 0.37 | 0.59 | 0.44 | 0.39 |
| vail Cap(c_a), veh/h | 781 | 0 | 482 | 101 | 101 | 92 | 306 | 1802 | 973 | 78 | 2368 | 1083 |
| ICM 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 |
| pstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| niform Delay (d), s/veh | 48.0 | 0.0 | 40.7 | 59.2 | 59.6 | 59.7 | 58.5 | 17.9 | 17.9 | 63.1 | 23.5 | 8.9 |
| ncr Delay (d2), s/veh | 5.4 | 0.0 | 5.5 | 0.5 | 0.9 | 1.3 | 15.6 | 0.0 | 0.1 | 5.3 | 0.6 | 1.1 |
| nitial 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 |
| 6ile BackOfQ(95%),veh/In | 15.4 | 0.0 | 16.5 | 1.4 | 2.1 | 2.1 | 8.1 | 9.8 | 10.4 | 1.4 | 11.9 | 15.0 |
| Insig. Movement Delay, s/veh | | | | | | | | | | | | |
| nGrp Delay(d),s/veh | 53.4 | 0.0 | 46.2 | 59.7 | 60.5 | 61.0 | 74.1 | 17.9 | 18.0 | 68.4 | 24.1 | 10.0 |
| nGrp LOS | D | A | D | E | E | E | E | В | В | E | С | A |
| pproach Vol, veh/h | | 982 | | | 95 | | | 1266 | | | 1498 | |
| pproach Delay, s/veh | | 50.8 | | | 60.5 | | | 28.8 | | | 20.8 | |
| pproach LOS | | D | | | E | | | C | | | C | |
| imer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| hs Duration (G+Y+Rc), s | 8.0 | 74.5 | | 34.0 | 16.6 | 66.0 | | 12.4 | | | | |
| hange Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 5.6 | | | | |
| lax Green Setting (Gmax), s | * 5.7 | 66.3 | | 28.5 | 11.5 | 60.3 | | 7.4 | | | | |
| lax Q Clear Time (g_c+I1), s | 3.6 | 16.8 | | 28.5 | 11.0 | 20.1 | | 4.8 | | | | |
| Freen Ext Time (p_c), s | 0.0 | 1.4 | | 0.0 | 0.0 | 1.6 | | 0.0 | | | | |
| tersection Summary | | | | | | | | | | | | |
| ICM 6th Ctrl Delay | | | 32.1 | | | | | | | | | |
| ICM 6th LOS | | | С | | | | | | | | | |
| lataa | _ | | | | | | | | | | | |
| IOLES | val to h | loop the | n nhoo - | nov arc - | | | | | | | | |
| ser approved pedestrian inter | vai to b | e less tha | n phase i | nax greer | l. | | | | | | | |
| ser approved volume balancir | ng amor | ig the lan | es for tur | ning move | ernent. | | ing the h- | relor | | | | |
| HI BU DO COMPLITATIONAL ADDIN | ie reauii | es equal | ciearance | e umes fo | r ine phas | ses cross | ind the ba | irrier. | | | | |

В

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APPENDIX J

2029 BUILD PEAK HOUR ANALYSIS



| 2029 Total AM | e Resu | л | | | | | Timing Report, Sorted By Phase |
|------------------------|--------|----------|----------|-------|-------|-------|--------------------------------|
| | ٦ | * | 1 | | 4 | \$► | 5 1 |
| Phase Number | 1 | 2 | 3 | 4 | 6 | 8 | |
| Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL | |
| Lead/Lag | Lead | Lag | Lead | Lag | | | |
| Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| Recall Mode | None | C-Max | None | None | C-Max | None | |
| Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| Dual Entry | No | No | No | Yes | No | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 80 | | | | |

Splits and Phases: 1: Mockingbird Ln & Lincoln Dr

| | Ø2 (R) | Ø3 | √ Ø4 | |
|--------|--------|-------------|-------------|--|
| 21 s | 40.6 s | 21 s | 47.4 s | |
| | • | ↓ Ø8 | | |
| 61.6 s | | 68.4 s | | |

| | 18-0555 SmokeTre 2029 Total PM | e Reso | ort | | | | | 1: Mockingbird Ln & Lincoln D Timing Report, Sorted By Phase |
|---|-----------------------------------|-------------|------------|-----------|-------------|-------------|-------|---|
| | | ۶ | * | 1 | - | 4 | \$⊳ | |
| | Phase Number | 1 | 2 | 3 | 4 | 6 | 8 | |
| | Movement | EBL | WBTL | SBL | NBTL | EBTL | SBTL | |
| | Lead/Lag | Lead | Lag | Lead | Lag | | | |
| | Lead-Lag Optimize | Yes | Yes | Yes | Yes | | | |
| | Recall Mode | None | C-Max | None | None | C-Max | None | |
| | Maximum Split (s) | 21 | 40.6 | 21 | 47.4 | 61.6 | 68.4 | |
| | Maximum Split (%) | 16.2% | 31.2% | 16.2% | 36.5% | 47.4% | 52.6% | |
| | Minimum Split (s) | 8 | 27 | 8 | 33.5 | 27 | 33.5 | |
| | Yellow Time (s) | 3 | 4.5 | 3 | 4 | 4.5 | 4 | |
| | All-Red Time (s) | 1 | 1.5 | 1 | 2.5 | 1.5 | 2.5 | |
| | Minimum Initial (s) | 3.5 | 15 | 3.5 | 7 | 15 | 7 | |
| | Vehicle Extension (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| | Minimum Gap (s) | 3 | 3 | 3 | 3 | 3 | 3 | |
| | Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Walk Time (s) | | 7 | | 7 | 7 | 7 | |
| | Flash Dont Walk (s) | | 14 | | 20 | 14 | 20 | |
| | Dual Entry | No | No | No | Yes | No | Yes | |
| | Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| | Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| | End Time (s) | 0 | 40.6 | 61.6 | 109 | 40.6 | 109 | |
| | Yield/Force Off (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| | Yield/Force Off 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| | Local Start Time (s) | 109 | 0 | 40.6 | 61.6 | 109 | 40.6 | |
| | Local Yield (s) | 126 | 34.6 | 57.6 | 102.5 | 34.6 | 102.5 | |
| | Local Yield 170(s) | 126 | 20.6 | 57.6 | 82.5 | 20.6 | 82.5 | |
| | Intersection Summary | | | | | | | |
| | Cycle Length | | | 130 | | | | |
| | Control Type | Actu | ated-Coo | rdinated | | | | |
| | Natural Cycle | | | 90 | | | | |
| | Offset: 0 (0%), Referenced | to phase 2 | :WBTL ar | nd 6:EBTI | L, Start of | f Green | | |
| | Splits and Phases: 1: Mo | ckingbird L | .n & Linco | oln Dr | | | | |
| | | - | | | | 5 | | <td< td=""></td<> |
| 1 | - Ø1 🕴 🔻 | Ø2 (R) | | | | * Ø3 | | 104 |

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02/13/2023 CivTech Inc.

| 18-0555 Smoke Free 2029 Total AM | Reso | rt | | | | | | HCM 6tl | n Signaliz | zed Inters | ection Su | ummary |
|-------------------------------------|------|--------------|--------------------|-----------|--------------|------|------------|---------|------------|------------|-----------|--------|
| | ۶ | - | $\mathbf{\hat{z}}$ | 4 | + | * | • | t | ۲ | 1 | Ŧ | ~ |
| /lovement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | ሻ | ↑ 1,- | | <u>٦</u> | - † † | 1 | - 1 | f, | | <u>۲</u> | ↑ | 1 |
| /affic Volume (veh/h) | 220 | 981 | 69 | 17 | 668 | 49 | 23 | 23 | 28 | 57 | 65 | 210 |
| ture Volume (veh/h) | 220 | 981 | 69 | 17 | 668 | 49 | 23 | 23 | 28 | 57 | 65 | 210 |
| al Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| g 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 |
| ne On Approach | | No | | | No | | | No | | | No | |
| low, veh/h/ln | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 | 1772 | 1969 | 1772 |
| Rate, veh/h | 234 | 1044 | 73 | 18 | 718 | 53 | 25 | 25 | 31 | 70 | 80 | 259 |
| Hour Factor | 0.94 | 0.94 | 0.94 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 | 0.91 | 0.81 | 0.81 | 0.81 |
| it Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| eh/h | 488 | 2517 | 1/6 | 337 | 2286 | 918 | 1/0 | 93 | 115 | 247 | 382 | 291 |
| On Green | 0.07 | 0.71 | 0.71 | 0.41 | 0.41 | 0.41 | 0.12 | 0.12 | 0.12 | 0.05 | 0.19 | 0.19 |
| low, ven/n | 1688 | 3547 | 248 | 478 | 3/41 | 1502 | 987 | /99 | 991 | 1688 | 1969 | 1502 |
| /olume(v), veh/h | 234 | 550 | 567 | 18 | 718 | 53 | 25 | 0 | 56 | 70 | 80 | 259 |
| at Flow(s), veh/h/ln | 1688 | 1870 | 1924 | 478 | 18/0 | 1502 | 987 | 0 | 1/90 | 1688 | 1969 | 1502 |
| ve(g_s), s | 6.4 | 15.7 | 15.7 | 3.0 | 16.9 | 2.8 | 3.0 | 0.0 | 3.7 | 4.6 | 4.4 | 21.8 |
| Q Clear(g_c), s | 6.4 | 15.7 | 15.7 | 6.0 | 16.9 | 2.8 | 3.0 | 0.0 | 3.7 | 4.6 | 4.4 | 21.8 |
| n Lane | 1.00 | 4000 | 0.13 | 1.00 | 000/ | 1.00 | 1.00 | 0 | 0.55 | 1.00 | 000 | 1.00 |
| Grp Cap(c), ven/n | 488 | 1328 | 1366 | 337 | 2286 | 918 | 1/0 | 0 | 207 | 247 | 382 | 291 |
| Ratio(X) | 0.48 | 0.41 | 0.41 | 0.05 | 0.31 | 0.06 | 0.15 | 0.00 | 0.27 | 0.28 | 0.21 | 0.89 |
| Cap(c_a), veh/h | 594 | 1328 | 1366 | 337 | 2286 | 918 | 366 | 0 | 563 | 387 | 937 | /15 |
| Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| ream Filter(I) | 1.00 | 1.00 | 1.00 | 0.85 | 0.85 | 0.85 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| orm Delay (d), s/ven | 9.2 | 7.8 | 7.8 | 17.6 | 19.9 | 15.7 | 52.1 | 0.0 | 52.5 | 45.9 | 44.0 | 51.0 |
| elay (d2), s/ven | 0.7 | 1.0 | 0.9 | 0.3 | 0.3 | 0.1 | 0.4 | 0.0 | 0.7 | 0.6 | 0.3 | 9.0 |
| Q Delay(d3),s/ven | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| sackOfQ(95%),ven/in | 4.1 | 10.4 | 10.6 | 0.7 | 12.4 | 1.7 | 1.4 | 0.0 | 3.1 | 3.6 | 4.0 | 13.8 |
| I. Movement Delay, S/Ven | 1 | 07 | 0.7 | 17.0 | 20.2 | 1E 0 | E0 E | 0.0 | E2 2 | 47 E | 44.2 | (01 |
| Sip Delay(u), s/ven | 9.9 | 8.7 | 8.7 | 17.8 D | 20.2 | 10.8 | 52.5 D | 0.0 | 03.Z | 40.0 | 44.3 | 0U. I |
| IP LUS | A | A | A | D | 700 | D | D | A 01 | D | D | 100 | E |
| proach Vol, ven/h | | 1351 | | | 10.0 | | | 51 | | | 409 | |
| oproach Delay, s/ven | | 8.9 | | | 19.9 | | | 53.U | | | 54.7 | |
| produir LUS | | A | | | Б | | | U | | | D | |
| er - Assigned Phs | 1 | 2 | 3 | 4 | | 6 | | 8 | | | | |
| s Duration (G+Y+Rc), s | 12.8 | 85.5 | 10.2 | 21.6 | | 98.3 | | 31.7 | | | | |
| ange Period (Y+Rc), s | 4.0 | 6.0 | 4.0 | 6.5 | | 6.0 | | 6.5 | | | | |
| Green Setting (Gmax), s | 17.0 | 34.6 | 17.0 | 40.9 | | 55.6 | | 61.9 | | | | |
| x Q Clear Time (g_c+I1), s | 8.4 | 18.9 | 6.6 | 5.7 | | 17.7 | | 23.8 | | | | |
| een Ext Time (p_c), s | 0.4 | 4.9 | 0.1 | 0.4 | | 9.5 | | 1.4 | | | | |
| ection Summary | | | | | | | | | | | | |
| th Ctrl Delay | | | 20.7 | | | | | | | | | |
| Stil Delay | | | 20.7 | | | | | | | | | |

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380

18-0555 SmokeTree Resort 2029 Total AM

2: Quail Run Rd & Lincoln Dr Timing Report, Sorted By Phase

| | ¥ | | 4 | |
|------------------------|-------|----------|----------|-------|
| Phase Number | 2 | 4 | 6 | 8 |
| Movement | WBTI | NBTI | FBTI | SBTI |
| Lead/Lag | WDIE | NOTE | LDIL | JUIL |
| Lead-Lag Optimize | | | | |
| Recall Mode | C-Max | Max | C-Max | Max |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1 | 1 | 1 | 1 |
| Minimum Initial (s) | 5 | 5 | 5 | 5 |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 |
| Minimum Gap (s) | 3 | 3 | 3 | 3 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 |
| Walk Time (s) | 7 | 7 | 7 | 7 |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 |
| Dual Entry | Yes | Yes | Yes | Yes |
| Inhibit Max | Yes | Yes | Yes | Yes |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 |
| Intersection Summary | | | | |
| Cycle Length | | | 130 | |
| Control Type | Actu | ated-Coo | rdinated | |

Valural Cycle 50 Offset: 94.6 (73%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Splits and Phases: 2: Quail Run Rd & Lincoln Dr

| | 🗸 🖉 Ø2 (R) | ≪† <i>Ø</i> 4 |
|---|------------|----------------------|
| e | i3.6 s | 66.4 s |
| | Ø6 (R) | |
| f | 53.6 s | 66.4 s |

| 18-0555 SmokeTr 2029 Total PM | ee Resc | ort | | | 2: Quail Run Rd & Lincoln Timing Report, Sorted By Ph |
|----------------------------------|-------------|----------|-----------|-----------|--|
| | 4 | | 4 | 4 | |
| Phase Number | 2 | 4 | 6 | 8 | |
| Movement | WBTL | NBTL | EBTL | SBTL | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize | | | | | |
| Recall Mode | C-Max | Max | C-Max | Max | |
| Maximum Split (s) | 63.6 | 66.4 | 63.6 | 66.4 | |
| Maximum Split (%) | 48.9% | 51.1% | 48.9% | 51.1% | |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | |
| All-Red Time (s) | 1 | 1 | 1 | 1 | |
| Minimum Initial (s) | 5 | 5 | 5 | 5 | |
| Vehicle Extension (s) | 3 | 3 | 3 | 3 | |
| Minimum Gap (s) | 3 | 3 | 3 | 3 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | |
| Walk Time (s) | 7 | 7 | 7 | 7 | |
| Flash Dont Walk (s) | 11 | 11 | 11 | 11 | |
| Dual Entry | Yes | Yes | Yes | Yes | |
| Inhibit Max | Yes | Yes | Yes | Yes | |
| Start Time (s) | 94.6 | 28.2 | 94.6 | 28.2 | |
| End Time (s) | 28.2 | 94.6 | 28.2 | 94.6 | |
| Yield/Force Off (s) | 23.7 | 90.1 | 23.7 | 90.1 | |
| Yield/Force Off 170(s) | 12.7 | 79.1 | 12.7 | 79.1 | |
| Local Start Time (s) | 0 | 63.6 | 0 | 63.6 | |
| Local Yield (s) | 59.1 | 125.5 | 59.1 | 125.5 | |
| Local Yield 170(s) | 48.1 | 114.5 | 48.1 | 114.5 | |
| Intersection Summary | | | | | |
| Cycle Length | | | 130 | | |
| Control Type | Actu | ated-Coo | rdinated | | |
| Natural Cycle | | | 60 | | |
| Offset: 94.6 (73%), Refere | nced to pha | se 2:WB | TL and 6: | EBTL, Sta | art of Green |

| Ø2 (R) | | ↑ _{Ø4} | |
|--------|---|------------------------|--|
| 63.6 s | 6 | 56.4 s | |
| Ø6 (R) | | ₩Ø8 | |
| 63.6 s | 6 | 56.4 s | |

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| -0555 SmokeTree 29 Total AM | Reso | rt | | | | | | 2: QL HCM 6t | i ail Ru h Signalia | n Rd 8 zed Inters | E Linco | oln Dr ummary |
|---------------------------------------|------|-------------|--------------|------|-----------|-------|------|-----------------|-------------------------------|----------------------|---------|------------------|
| | ۶ | → | \mathbf{r} | 4 | + | × | • | 1 | 1 | \mathbf{F} | ţ | ~ |
| vement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| e Configurations | 8 | A 1. | | 5 | A1 | | | 4 | | | 4 | |
| ffic Volume (veh/h) | 55 | 993 | 8 | 7 | 677 | 68 | 5 | 0 | 7 | 41 | 0 | 48 |
| ure Volume (veh/h) | 55 | 993 | 8 | . 7 | 677 | 68 | 5 | 0 | 7 | 41 | 0 | 48 |
| al \cap (\cap b) veb | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| I-Bike Adi(A_nhT) | 1.00 | U | 1.00 | 1 00 | 0 | 1 00 | 1 00 | 0 | 1 00 | 1 00 | 0 | 1 00 |
| kina Rus Adi | 1.00 | 1.00 | 1.00 | 1.00 | 1 00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| rk Zone On Annroach | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 |
| Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Flow Rate veh/h | 64 | 1155 | 0 | 8 | 744 | 75 | 8 | 0 | 11 | 50 | 0 | 60 |
| k Hour Factor | 0.86 | 0.86 | 0.86 | 0.01 | 0.01 | 0.01 | 0.62 | 0.62 | 0.62 | 0.70 | 0.70 | 0.70 |
| cent Heavy Veh % | 2 | 0.00 | 0.00 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| veh/h | 272 | 1643 | 13 | 128 | 1482 | 149 | 324 | 15 | 413 | 356 | 14 | 386 |
| vo On Groon | 0.15 | 0.15 | 0.15 | 0.60 | 0.60 | 0.60 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| Flow veh/h | 668 | 3614 | 28 | 482 | 3260 | 328 | 599 | 32 | 867 | 663 | 30 | 811 |
| Volumo(u) voh/h | 4.4 | E40 | E04 | 0 | 405 | 414 | 10 | 0 | 007 | 120 | 0 | 011 |
| Sat Flow(s) vob/b/lp | 669 | 1777 | 1965 | 192 | 1777 | 1011 | 1/07 | 0 | 0 | 1504 | 0 | 0 |
| | 11.5 | 20.5 | 20.5 | 1.0 | 16.9 | 16.0 | 0.0 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| $d_0 \cap Cloar(a, c) \in C$ | 20.2 | 20.5 | 20.5 | /1.0 | 16.0 | 16.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 0.0 |
| n la Lano | 1.00 | 37.3 | 0.02 | 1.00 | 10.0 | 0.10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| p III Lalle | 272 | 000 | 0.02 | 120 | 202 | 0.10 | 752 | 0 | 0.50 | 756 | 0 | 0.54 |
| · Datio(Y) | 0.22 | 0.70 | 0.70 | 0.06 | 000 | 023 | 0.02 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 |
| $\operatorname{Mallo}(\Lambda)$ | 0.23 | 0.70 | 0.70 | 129 | 0.00 | 0.30 | 752 | 0.00 | 0.00 | 756 | 0.00 | 0.00 |
| M Platoon Ratio | 0.33 | 0.33 | 040 | 1 33 | 1 3 3 | 1 3 3 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| tream Filter(I) | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| form Dolay (d) s/yoh | 10.0 | 16.0 | 16.0 | 20.2 | 17.2 | 17.2 | 10.0 | 0.00 | 0.00 | 10 / | 0.00 | 0.00 |
| Delay (d2) s/veh | 10 | 40.7 | 40.7 | 0.0 | 2.2 | 2.2 | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| al \cap Delay(d3) s/yeb | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| BackOfO(95%) veh/ln | 4.0 | 26.9 | 28.1 | 0.4 | 10.8 | 10.9 | 0.6 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 |
| sig Movement Delay s/ver | 1.0 | 20.7 | 20.1 | 0.1 | 10.0 | 10.7 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 |
| Grp Delav(d).s/veh | 51.8 | 51.6 | 51.4 | 39.2 | 19.6 | 19.5 | 18.1 | 0.0 | 0.0 | 19.8 | 0.0 | 0.0 |
| Gro LOS | D | D | D | D | B | В | В | A | A | В | A | A |
| proach Vol. veh/h | | 1228 | | | 827 | | | 19 | | | 128 | |
| roach Delay, s/veh | | 51.5 | | | 19.7 | | | 18.1 | | | 19.8 | |
| proach LOS | | D | | | B | | | B | | | B | |
| | | | | | _ | | | _ | | | _ | _ |
| er - Assigned Phs | _ | 2 | _ | 4 | | 6 | _ | 8 | | | | |
| Duration (G+Y+Rc), s | | 63.6 | | 66.4 | | 63.6 | | 66.4 | | | | |
| ange Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| k Green Setting (Gmax), s | | 59.1 | | 61.9 | | 59.1 | | 61.9 | | | | |
| <pre>x Q Clear Time (g_c+l1), s</pre> | | 43.2 | | 2.8 | | 41.5 | | 8.0 | | | | _ |
| en Ext Time (p_c), s | | 4.9 | | 0.1 | | 8.1 | | 0.8 | | | | |
| rsection Summary | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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Synchro 11 Report Page 4

18-0555 SmokeTree Resort 2029 Total AM

4: Shared Drwy & Lincoln Dr HCM 6th TWSC

Synchro 11 Report

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| ersection | | | | | | | | |
|---------------------|-------------|--------|---------|------------|----------|--------|----------------------|--------------------------------|
| Delay, s/veh | 0.3 | | | | | | | |
| vement | EBT | EBR | WBL | WBT | NBL | NBR | | |
| e Configurations | ≜ †} | | 1 | † † | ۰Y | | | |
| fic Vol, veh/h | 1060 | 14 | 21 | 748 | 4 | 15 | | |
| re Vol, veh/h | 1060 | 14 | 21 | 748 | 4 | 15 | | |
| flicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | | |
| n Control | Free | Free | Free | Free | Stop | Stop | | |
| Channelized | - | None | - | None | - | None | | |
| age Length | | - | 60 | - | 0 | - | | |
| in Median Storage | e,# 0 | - | - | 0 | 0 | - | | |
| de, % | 0 | - | - | 0 | 0 | - | | |
| k Hour Factor | 86 | 86 | 91 | 91 | 50 | 50 | | |
| vy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | | |
| t Flow | 1233 | 16 | 23 | 822 | 8 | 30 | | |
| | | | | | | | | |
| r/Minor | Major1 | Ν | Major2 | Ν | /linor1 | | | |
| flicting Flow All | 0 | 0 | 1249 | 0 | 1698 | 625 | | |
| Stage 1 | - | - | - | - | 1241 | - | | |
| Stage 2 | - | - | - | - | 457 | - | | |
| al Hdwy: | - | - | 4.14 | - | 6.84 | 6.94 | | |
| al Hdwy Stg 1 | - | - | - | - | 5.84 | - | | |
| al Hdwy Stg 2 | | | | | 5.84 | | | |
| w-up Hdwy | - | - | 2.22 | - | 3.52 | 3.32 | | |
| Cap-1 Maneuver | - | - | 922 | - | *339 | *643 | | |
| Stage 1 | - | - | - | - | *581 | - | | |
| Stage 2 | - | - | 1.1 | - | *743 | | | |
| oon blocked, % | - | - | 1 | - | 1 | 1 | | |
| Cap-1 Maneuver | 1.1 | | 922 | | *331 | *643 | | |
| Cap-2 Maneuver | | - | - | - | *331 | | | |
| Stage 1 | | - | - | - | *581 | | | |
| Stage 2 | - | - | | | *725 | - | | |
| | | | | | | | | |
| oach | EB | | WB | | NB | | | |
| VI Control Delay, s | 0 | | 0.2 | | 12.2 | | | |
| MLOS | | | | | В | | | |
| or Lano/Major Mur | nt I | IRI n1 | ERT | ERD | W/R/ | WRT | | |
| or Lane/Major MMI | nt I | 527 | EDI | EDR | 022 | VDI | | |
| Lano V/C Patio | | 0.071 | | | 922 | | | |
| Control Delay (c) |) | 12.2 | | | 0.020 | | | |
| Lane LOS |) | 12.Z | | | - 9 A | | | |
| / 95th %tile O(veh | ນ | 0.2 | | | 01 | | | |
| | ., | 0.2 | | | 0.1 | | | |
| lumo ovocod | nooitu | é. D- | lov our | oodo 24 | 200 | Com | utation Not Dafis ad | *. All major volume in al-terr |
| mme exceeds ca | pacity | 2: DE | eay exc | eeas 3 | JUS | +: COM | JULATION NOT DELINED | : All major volume in platoon |

| Intersection | | | | | | | |
|------------------------|-------------|------|--------|------|--------|------|--|
| Int Delay, s/veh | 0.7 | | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR | |
| Lane Configurations | ↑ ĵ≽ | | 1 | - 11 | Y | | |
| Traffic Vol, veh/h | 1093 | 12 | 31 | 1204 | 11 | 26 | |
| Future Vol, veh/h | 1093 | 12 | 31 | 1204 | 11 | 26 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Stop | Stop | |
| RT Channelized | - | None | - | None | - | None | |
| Storage Length | - | - | 60 | | 0 | - | |
| Veh in Median Storag | je,# 0 | - | - | 0 | 0 | - | |
| Grade, % | 0 | - | - | 0 | 0 | - | |
| Peak Hour Factor | 86 | 86 | 91 | 91 | 50 | 50 | |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | |
| Mvmt Flow | 1271 | 14 | 34 | 1323 | 22 | 52 | |
| | | | | | | | |
| Major/Minor | Major1 | 1 | Aajor2 | 1 | Vinor1 | | |
| Conflicting Flow All | 0 | 0 | 1285 | 0 | 2008 | 643 | |
| Stage 1 | - | - | - | | 1278 | - | |
| Stage 2 | - | | | | 730 | - | |
| Critical Hdwy | - | - | 4.14 | - | 6.84 | 6.94 | |
| Critical Hdwy Stg 1 | - | - | - | - | 5.84 | - | |
| 0 W 1111 01 0 | | | | | | | |

18-0555 SmokeTree Resort

2029 Total PM

| Connicting Flow All | 0 | 0 | 1205 | 0 | - 4 | .000 |
|------------------------|----|-------|------|-----|-------|------|
| Stage 1 | - | - | - | - | 12 | 78 |
| Stage 2 | - | | | - | 730 | |
| Critical Hdwy | - | - | 4.14 | - | 6.84 | 1 |
| Critical Hdwy Stg 1 | - | | | - | 5.84 | - |
| Critical Hdwy Stg 2 | | | | | 5.84 | |
| Follow-up Hdwy | - | | 2.22 | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver | - | | 927 | - | *135 | *619 |
| Stage 1 | - | | | - | *584 | |
| Stage 2 | - | | | - | *539 | |
| Platoon blocked, % | - | | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | | | 927 | | *130 | *619 |
| Mov Cap-2 Maneuver | - | - | - | - | *130 | - |
| Stage 1 | - | | | - | *584 | |
| Stage 2 | - | | | - | *519 | |
| | | | | | | |
| Approach | ED | | M/D | | ND | |
| HCM Control Dolov. o | | | 0.2 | _ | 21.5 | |
| HCIVI CONITOT Delay, S | 0 | | 0.2 | | 21.5 | |
| HUM LUS | | | | | C | |
| | | | | | | |
| Minor Lane/Major Mvmt | Ν | VBLn1 | EBT | EBR | WBL | WBT |
| Capacity (veh/h) | | 292 | | | 927 | |
| HCM Lane V/C Ratio | | 0.253 | | | 0.037 | |
| | | | | | | |

| HCM Lane V/C Ratio | 0.253 | - 1 | 0.037 | - | | | |
|-----------------------|-------|-------|-------|---|--|--|--|
| HCM Control Delay (s) | 21.5 | | 9 | - | | | |
| HCM Lane LOS | С | - | А | - | | | |
| HCM 95th %tile Q(veh) | 1 | - | 0.1 | - | | | |
| | | | | | | | |

Notes
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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4: Shared Drwy & Lincoln Dr

HCM 6th TWSC

02/13/2023 CivTech Inc.

18-0555 SmokeTree Resort 2029 Total AM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | | | | | | | |
|--|--------|--------|----------|--------|-------------|--------|----------|-----------------|--------|--------|-------|--------|
| Int Delay, s/veh | 1.4 | | | | | | | | | | | |
| Movement | FBI | FBT | FBR | WBI | WBT | WBR | NBI | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 1 | Ă۴. | LDIX | 3 | A 1. | | HDE | 4 | HBR | 1000 | 001 | 1 |
| Traffic Vol. veh/h | 23 | 981 | 75 | 13 | 705 | 10 | 48 | 6 | 65 | 4 | 0 | 11 |
| Future Vol. veh/h | 23 | 981 | 75 | 13 | 705 | 10 | 48 | 6 | 65 | 4 | 0 | 11 |
| Conflicting Peds. #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | | - | None | | - | None | - | - | None | - | - | None |
| Storage Length | 60 | | - | 25 | | - | - | - | | 0 | | 0 |
| Veh in Median Storage | . # - | 0 | | | 0 | | | 1 | | - | 1 | |
| Grade % | - | 0 | | | 0 | | | 0 | | | 0 | |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 |
| Heavy Vehicles % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mymt Flow | 26 | 1115 | 85 | 14 | 742 | 11 | 63 | 8 | 86 | 6 | 0 | 16 |
| WWW.CT IOW | 20 | 1115 | 00 | | 112 | | 00 | 0 | 00 | 0 | 0 | 10 |
| Maior/Minor | Maior1 | | | Maior2 | | | /linor1 | | | Minor2 | | |
| Conflicting Flow All | 752 | 0 | 0 | 1200 | 0 | 0 | 1600 | 1001 | 600 | 1300 | | 377 |
| Stage 1 | 103 | U | 0 | 1200 | 0 | U | 1210 | 1210 | 000 | 1390 | | 311 |
| Stage 2 | | | | | | | 200 | 701 | | 414 | | |
| Stage Z | 4 1 4 | | | 4 1 4 | | | 399 | /81 | 4.04 | 7.54 | | 4.04 |
| Critical Hduw Sta 1 | 4.14 | - | - | 4.14 | | - | 4 5 4 | 0.04 | 0.94 | 4 5 4 | | 0.94 |
| Critical Howy Stg 1 | | | | | | | 0.04 | 0.04 E.E.4 | | 0.04 | | |
| Cillical Huwy Sty 2 | | | - | 2 22 | | | 0.04 | 0.04 | 2 22 | 0.04 | | 2 22 |
| Follow-up Howy | Z.ZZ | | | 2.22 | | - | 3.52 | 4.02 | 3.32 | 3.02 | - | 3.32 |
| Pol Cap-1 Ivianeuver | 11/8 | - | - | 930 | | - | 302 | 123 | 00/ | 514 | 0 | /8/ |
| Stage 1 | | | | - | | - | 550 | 503 | | /42 | 0 | - |
| Stage Z | - | - | - | - | | - | 142 | 001 | - 1 | 029 | 0 | - |
| Platoon blocked, % | *1170 | | | 0.05 | | | *22/ | *110 | *//7 | *407 | | *707 |
| Mov Cap-1 Maneuver | 11/8 | | | 935 | | | 330 | *202 | 667 | 427 | | /8/ |
| Nov Cap-2 Maneuver | | | | | | | 420 | 303 | | 451 | | |
| Stage 1 | - | | | | | | 543 | 492 | | /20 | | |
| Stage 2 | | - | | - | - | | -717 | 641 | - | -528 | - | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s | 0.2 | | | 0.2 | | | 14.9 | | | 10.6 | | |
| HCM LOS | | | | | | | В | | | В | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvm | nt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 | _ | |
| Capacity (veh/h) | | 518 | * 1178 | | - | 935 | | | 451 | 787 | | |
| HCM Lane V/C Ratio | | 0.302 | 0.022 | | | 0.015 | | | 0.013 | 0.02 | | |
| HCM Control Delay (s) | | 14.9 | 8.1 | | | 8.9 | | | 13.1 | 9.7 | | |
| HCM Lane LOS | | B | A | | | A | | | B | A | | |
| HCM 95th %tile O(veh) |) | 1.3 | 0.1 | | | 0 | | | 0 | 0.1 | | |
| | , | 1.5 | 0.1 | | | 5 | | | 0 | 0.1 | | |
| NOTES | | | | | | | | | | | | |
| Volume exceeds cap | pacity | \$: De | elay exc | eeds 3 | UUS | +: Com | putation | n Not D | etined | *: All | major | volume |
| | | | | | | | | | | | | |

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18-0555 SmokeTree Resort 2029 Total PM

5: AJ's Drwy/Apartment Drwy & Lincoln Dr HCM 6th TWSC

| Intersection | | | | | | | | | | | | | |
|--|--------|-------|-------|--------|------|-------|--------|------|--------|--------|-------|---------|------------|
| nt Delay, s/veh | 1.7 | | | | | | | | | | | | |
| Vovement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| ane Configurations | 1 | đβ | | 1 | đ₽ | | | 4 | | 1 | | 1 | |
| Fraffic Vol, veh/h | 9 | 1040 | 67 | 7 | 1127 | 10 | 87 | 2 | 79 | 3 | 0 | 21 | |
| uture Vol, veh/h | 9 | 1040 | 67 | 7 | 1127 | 10 | 87 | 2 | 79 | 3 | 0 | 21 | |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None | |
| Storage Length | 60 | | - | 25 | | - | | - | - | 0 | - | 0 | |
| /eh in Median Storage | ,# - | 0 | - | - | 0 | - | - | 1 | - | - | 1 | - | |
| Grade, % | | 0 | - | - | 0 | | | 0 | - | - | 0 | - | |
| Peak Hour Factor | 88 | 88 | 88 | 95 | 95 | 95 | 76 | 76 | 76 | 70 | 70 | 70 | |
| leavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Avmt Flow | 10 | 1182 | 76 | 7 | 1186 | 11 | 114 | 3 | 104 | 4 | 0 | 30 | |
| | | | | | | | | | | | | | |
| /ajor/Minor N | Major1 | _ | 1 | Major2 | _ | I | Minor1 | | | Minor2 | | _ | |
| Conflicting Flow All | 1197 | 0 | 0 | 1258 | 0 | 0 | 1847 | 2451 | 629 | 1819 | - | 599 | |
| Stage 1 | | - | - | - | - | - | 1240 | 1240 | - | 1206 | - | | |
| Stage 2 | | | - | | | - | 607 | 1211 | - | 613 | - | - | |
| Critical Hdwy | 4.14 | - | - | 4.14 | | - | 7.54 | 6.54 | 6.94 | 7.54 | - | 6.94 | |
| Critical Hdwy Stg 1 | | | - | | | - | 6.54 | 5.54 | - | 6.54 | - | - | |
| Critical Hdwy Stg 2 | - | - | - | - | - | | 6.54 | 5.54 | - | 6.54 | | - | |
| ollow-up Hdwy | 2.22 | | - | 2.22 | | - | 3.52 | 4.02 | 3.32 | 3.52 | | 3.32 | |
| Pot Cap-1 Maneuver | *926 | | - | 910 | - | - | *355 | *47 | *643 | *355 | 0 | *619 | |
| Stage 1 | | | - | | | - | *578 | *513 | - | *584 | 0 | - | |
| Stage 2 | - | - | - | - | - | - | *584 | *512 | - | *606 | 0 | - | |
| Platoon blocked, % | 1 | | - | 1 | | | 1 | 1 | 1 | 1 | | 1 | |
| Nov Cap-1 Maneuver | *926 | - | - | 910 | - | - | *333 | *46 | *643 | *291 | - | *619 | |
| Nov Cap-2 Maneuver | - | | - | - | | - | *405 | *250 | - | *374 | - | - | |
| Stage 1 | - | - | - | - | - | - | *572 | *507 | - | *577 | - | - | |
| Stage 2 | - | | - | | - | - | *551 | *508 | - | *500 | - | | |
| , v | | | | | | | | | | | | | |
| Approach | EB | _ | _ | WB | _ | _ | NB | _ | _ | SB | _ | _ | |
| ICM Control Delay, s | 0.1 | | | 0.1 | | | 18.4 | | | 11.5 | | | |
| HCM LOS | | | | | | | С | | | В | | | |
| | | | | | | | | | | | | | |
| /inor Lane/Maior Mvm | t | NBLn1 | EBI | EBT | EBR | WBI | WBT | WBR | SBLn1 | SBLn2 | | | |
| Capacity (veh/h) | | 486 | * 926 | | - | 910 | | | 374 | 619 | | | |
| -ICM Lane V/C Ratio | | 0.455 | 0.011 | | | 0.008 | | | 0.011 | 0.048 | | | |
| HCM Control Delay (s) | | 18.4 | 8.9 | | | 9 | | | 14.7 | 11.1 | | | |
| | | С | A | | | A | | | B | В | | | |
| HCM Lane LOS | | 0 | | | | | | | 0 | 0.2 | | | |
| ICM Lane LOS ICM 95th %tile Q(veh) | | 2.3 | 0 | - | - | 0 | - | | 0 | 0.2 | | | |
| HCM Lane LOS HCM 95th %tile Q(veh) | 1 | 2.3 | 0 | - | - | 0 | | | 0 | 0.2 | | | |
| HCM Lane LOS HCM 95th %tile Q(veh) Notes | acity | 2.3 | 0 | - | - | 0 | - | - | ofinod | V.Z | major | (olume) | in platoon |

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| 18-0555 SmokeTree Resort | |
|--------------------------|--|
| 2029 Total AM | |

6: Scottsdale Rd & Lincoln Dr/Lincoln Ln Timing Report, Sorted By Phase

| | - \ | t | \$ | \$ | 4 | 7 |
|------------------------|------------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | Ū | | | | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 |
| Intersection Summary | | | | | | |
| Cyclo Longth | | | 120 | | | |

| Cycle Lengin | 130 | |
|-----------------|--|----|
| Control Type | Actuated-Coordinated | |
| Natural Cycle | 80 | |
| Offset: 0 (0%), | Referenced to phase 6:SBT, Start of Gree | en |
| | | |

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr/Lincoln Ln

| Ø1 | 1 Ø2 | ₩ Ø4 | 708 |
|--------------|-------------|---------|------|
| 26 s | 48 s | 28 s | 28 s |
| \$ Ø5 | 🚽 🗣 Ø6 (R) | | |
| 28 s | 46 s | | |

| 18-0555 Smoke i re 2029 Total PM | e Resc | ort | | | | 6: 5 | Timing Report, Sorted By Pha |
|-------------------------------------|-------------|-----------|------------|--------|-------|-------|------------------------------|
| | 1 | t | 4 | \$ | 4 | 7 | |
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 | |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | |
| Lead-Lag Optimize | | | | | 0 | | |
| Recall Mode | None | None | None | None | C-Max | None | |
| Maximum Split (s) | 26 | 48 | 28 | 28 | 46 | 28 | |
| Maximum Split (%) | 20.0% | 36.9% | 21.5% | 21.5% | 35.4% | 21.5% | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 | |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Walk Time (s) | | 7 | | | 7 | | |
| Flash Dont Walk (s) | | 15 | | | 18 | | |
| Dual Entry | No | Yes | No | No | Yes | No | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | |
| Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| End Time (s) | 128 | 46 | 74 | 0 | 46 | 102 | |
| Yield/Force Off (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Yield/Force Off 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Local Start Time (s) | 102 | 128 | 46 | 102 | 0 | 74 | |
| Local Yield (s) | 122.7 | 40.3 | 68.5 | 124.5 | 40.3 | 96.4 | |
| Local Yield 170(s) | 122.7 | 25.3 | 68.5 | 124.5 | 22.3 | 96.4 | |
| Intersection Summary | | | | | | | |
| Cycle Length | | | 130 | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | |
| Natural Cycle | | | 120 | | | | |
| Offset: 0 (0%), Referenced | to phase 6 | :SBT, Sta | rt of Gree | en | | | |
| Splits and Phases: 6: Sci | ottsdale Rd | & Lincol | n Dr/Linco | oln Ln | | | |
| 01 | 1 102 | | | | | 一些 | 704 |
| | 49 0 | | | | | 28.0 | 120 |

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Synchro 11 Report Page 7

02/13/2023 CivTech Inc.

| 2020 . 010. 7 | | | | | | | | HCIVI OL | n Siynaliz | eu miers | ection 30 | unnindi y |
|-------------------------------------|------------|--------------|--------------|------------|------------|-----------|------------|------------|------------|----------|-----------|-----------|
| | ≯ | → | \mathbf{F} | 4 | + | • | • | T. | 1 | 1 | ŧ | - |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| ane Configurations | ۲ | ب | 1 | ٦ | A | | ሻሻ | *†† | | ٢ | *** | 7 |
| Traffic Volume (veh/h) | 630 | 44 | 366 | 23 | 41 | 37 | 265 | 1042 | 35 | 29 | 1122 | 482 |
| Future Volume (veh/h) | 630 | 44 | 366 | 23 | 41 | 37 | 265 | 1042 | 35 | 29 | 1122 | 482 |
| itial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| d-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 4.00 | 1.00 | 1.00 | 4.00 | 1.00 |
| king 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 |
| Sat Flow, veh/h/lp | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Flow Rate veh/h | 735 | 1070 | 407 | 26 | 1070 47 | 42 | 201 | 1145 | 38 | 32 | 1233 | 530 |
| Hour Factor | 0.90 | 0.90 | 0.90 | 0.88 | 0.88 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| h/h | 617 | 0 | 435 | 94 | 100 | 79 | 349 | 1961 | 65 | 47 | 1583 | 766 |
| On Green | 0.06 | 0.00 | 0.06 | 0.05 | 0.05 | 0.05 | 0.10 | 0.39 | 0.39 | 0.03 | 0.31 | 0.31 |
| ow, veh/h | 3563 | 0 | 1585 | 1781 | 1884 | 1495 | 3456 | 5076 | 168 | 1781 | 5106 | 1585 |
| olume(v), veh/h | 735 | 0 | 407 | 26 | 44 | 45 | 291 | 768 | 415 | 32 | 1233 | 530 |
| at Flow(s),veh/h/ln | 1781 | 0 | 1585 | 1781 | 1777 | 1601 | 1728 | 1702 | 1840 | 1781 | 1702 | 1585 |
| rve(g_s), s | 22.5 | 0.0 | 22.5 | 1.8 | 3.1 | 3.6 | 10.7 | 23.2 | 23.3 | 2.3 | 28.6 | 33.8 |
| Q Clear(g_c), s | 22.5 | 0.0 | 22.5 | 1.8 | 3.1 | 3.6 | 10.7 | 23.2 | 23.3 | 2.3 | 28.6 | 33.8 |
| Lane | 1.00 | 0 | 1.00 | 1.00 | | 0.93 | 1.00 | 1015 | 0.09 | 1.00 | 1500 | 1.00 |
| srp Cap(c), ven/n | 01/ | 0 | 435 | 94 | 94 | 85 | 349 | 1315 | /11 | 4/ | 1583 | /66 |
| allo(X) | 417 | 0.00 | 0.94 | 0.28 | 0.47 | 0.53 | 0.83 | 0.58 | 0.58 | 0.08 | 0.78 | 0.69 |
| Platoon Patio | 017 | 0 33 | 433 | 1.00 | 1.00 | 1.00 | 1 00 | 1.00 | 1.00 | 204 | 1.00 | 1.00 |
| am Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| rm Delay (d) s/veh | 61.3 | 0.00 | 51.8 | 59.2 | 59.8 | 60.0 | 57.3 | 31.6 | 31.6 | 62.7 | 40.8 | 26.1 |
| elay (d2), s/veh | 101.8 | 0.0 | 27.5 | 0.6 | 1.3 | 1.9 | 2.0 | 0.4 | 0.8 | 6.3 | 3.9 | 5.1 |
| 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 |
| BackOfQ(95%),veh/In | 29.1 | 0.0 | 22.8 | 1.5 | 2.6 | 2.7 | 8.4 | 14.7 | 15.8 | 2.0 | 18.3 | 25.7 |
| g. Movement Delay, s/ve | h | | | | | | | | | | | |
| p Delay(d),s/veh | 163.1 | 0.0 | 79.2 | 59.7 | 61.1 | 61.9 | 59.3 | 32.1 | 32.4 | 69.1 | 44.7 | 31.2 |
| LOS | F | A | E | E | E | E | E | С | С | E | D | С |
| ich Vol, veh/h | | 1142 | | | 115 | | | 1474 | | | 1795 | |
| ach Delay, s/veh | | 133.2 | | | 61.1 | | | 37.6 | | | 41.1 | |
| Jach LUS | | F | | | E | | | D | | | D | |
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Juration (G+Y+Rc), s | 8.7 | 55.9 | | 28.0 | 18.6 | 46.0 | | 12.5 | | | | |
| ange Period (Y+Rc), s | * 5.3 | 5.7 | | 5.5 | 5.5 | 5.7 | | 5.6 | | | | |
| Green Setting (Gmax), s | * 21 | 42.3 | | 22.5 | 22.5 | 40.3 | | 22.4 | | | | |
| <pre>Q Clear Time (g_c+l1), s</pre> | 4.3 | 25.3 | | 24.5 | 12.7 | 35.8 | | 5.6 | | | | _ |
| i Ext Time (p_c), s | 0.0 | 1.6 | | 0.0 | 0.4 | 1.3 | | 0.3 | | | | |
| section Summary | | | | | | | | | | | | |
| CM 6th Ctrl Delay | | | 63.7 | | | | | | | | | |
| 6th LOS | | | E | | | | | | | | | |
| | | | | | | | | | | | | |
| proved pedestrian int | erval to b | e less tha | n phase | max gree | n. | | | | | | | |
| er approved volume balan | cing amo | ng the lar | es for tur | ning mov | ement. | | | | | | | |
| CM 6th computational eng | ine requi | res equal | clearanc | e times fo | or the pha | ses cross | ing the ba | arrier. | | | | |
| 2022 | | | | | | | | | | c. | inchro 11 | Donort |
| /2023 | | | | | | | | | | Sy | | Report |

18-0555 SmokeTree Resort 2029 Total AM Mitigated

6: Scottsdale Rd & Lincoln Dr Timing Report, Sorted By Phase

| | 1 | t | 4 | \$ | 4 | 7 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL |
| Lead/Lag | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize | | - | | | | |
| Recall Mode | None | None | None | None | C-Max | None |
| Maximum Split (s) | 12 | 69 | 35 | 18 | 63 | 14 |
| Maximum Split (%) | 9.2% | 53.1% | 26.9% | 13.8% | 48.5% | 10.8% |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk Time (s) | | 7 | | | 7 | |
| Flash Dont Walk (s) | | 15 | | | 18 | |
| Dual Entry | No | Yes | No | No | Yes | No |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes |
| Start Time (s) | 112 | 124 | 63 | 112 | 0 | 98 |
| End Time (s) | 124 | 63 | 98 | 0 | 63 | 112 |
| Yield/Force Off (s) | 118.7 | 57.3 | 92.5 | 124.5 | 57.3 | 106.4 |
| Yield/Force Off 170(s) | 118.7 | 42.3 | 92.5 | 124.5 | 39.3 | 106.4 |
| Local Start Time (s) | 112 | 124 | 63 | 112 | 0 | 98 |
| Local Yield (s) | 118.7 | 57.3 | 92.5 | 124.5 | 57.3 | 106.4 |
| Local Yield 170(s) | 118.7 | 42.3 | 92.5 | 124.5 | 39.3 | 106.4 |
| Intersection Summary | | | | | | |

| Cycle Length | 130 | |
|-----------------|--|----|
| Control Type | Actuated-Coordinated | |
| Vatural Cycle | 80 | |
| Offset: 0 (0%), | Referenced to phase 6:SBT, Start of Gree | en |
| | | |

Splits and Phases: 6: Scottsdale Rd & Lincoln Dr

| Ø1 | 1 ø₂ | Ø4 | 708 |
|--------------|-------------|------|------|
| 12 s | 69 s | 35 s | 14 s |
| \$ Ø5 | 🛛 🕈 Ø6 (R) | | |
| 18 s | 63 s | | |

| 18-0555 SmokeTre 2029 Total PM Miti | ee Resc dated | ort | | | | | 6: Scottsdale Timing Re | Rd & Lincoln E eport, Sorted By Pha |
|--|------------------|-------------|------------|-------|-------|-------|----------------------------|--|
| | <u>y</u> | t | 4 | \$ | 4 | 7 | | |
| Phase Number | 1 | 2 | 4 | 5 | 6 | 8 | | |
| Movement | SBL | NBT | EBTL | NBL | SBT | WBTL | | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | | |
| Lead-Lag Optimize | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | None | | |
| Maximum Split (s) | 12 | 71 | 34 | 22 | 61 | 13 | | |
| Maximum Split (%) | 9.2% | 54.6% | 26.2% | 16.9% | 46.9% | 10.0% | | |
| Minimum Split (s) | 11 | 27.7 | 13 | 13 | 30.7 | 13 | | |
| Yellow Time (s) | 3.3 | 4.7 | 4 | 4 | 4.7 | 3.6 | | |
| All-Red Time (s) | 2 | 1 | 1.5 | 1.5 | 1 | 2 | | |
| Minimum Initial (s) | 5 | 10 | 7 | 7 | 10 | 7 | | |
| Vehicle Extension (s) | 2 | 0.2 | 2 | 2 | 0.2 | 2 | | |
| Minimum Gap (s) | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Time Before Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Time To Reduce (s) | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Walk Time (s) | | 7 | | | 7 | | | |
| Flash Dont Walk (s) | | 15 | | | 18 | | | |
| Dual Entry | No | Yes | No | No | Yes | No | | |
| Inhibit Max | Yes | Yes | Yes | Yes | Yes | Yes | | |
| Start Time (s) | 108 | 120 | 61 | 108 | 0 | 95 | | |
| End Time (s) | 120 | 61 | 95 | 0 | 61 | 108 | | |
| Yield/Force Off (s) | 114.7 | 55.3 | 89.5 | 124.5 | 55.3 | 102.4 | | |
| Yield/Force Off 170(s) | 114.7 | 40.3 | 89.5 | 124.5 | 37.3 | 102.4 | | |
| Local Start Time (s) | 108 | 120 | 61 | 108 | 0 | 95 | | |
| Local Yield (s) | 114.7 | 55.3 | 89.5 | 124.5 | 55.3 | 102.4 | | |
| Local Yield 170(s) | 114.7 | 40.3 | 89.5 | 124.5 | 37.3 | 102.4 | | |
| Intersection Summary | | | | | | | | |
| Cycle Length | | | 130 | | | | | |
| Control Type | Actu | ated-Coo | rdinated | | | | | |
| Natural Cycle | | | 120 | | | | | |
| Offset: 0 (0%), Referenced | to phase 6 | :SBT, Sta | rt of Gree | en | | | | |
| Splits and Phases: 6: Sco | ottsdale Ro | I & Lincoli | n Dr | | | | | |
| Ø1 Ø2 | | | | | | | 2 104 IN | 708 |
| 12 s 71 s | | | | | | | 34 s | 13 s |

02/13/2023 CivTech Inc.

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Synchro 11 Report Page 1

02/13/2023 CivTech Inc. Synchro 11 Report Page 1

| EBL EBL EBT c Configurations 1 1 ic Volume (veh/h) 630 44 re Volume (veh/h) 630 44 re Volume (veh/h) 630 44 l Q (Db), veh 0 0 Bike Adj(A_pbT) 1.00 1.00 ing Bus, Adj 1.00 1.00 ring Bus, Adj 1.00 1.00 riog Bus, Adj 0.00 0.90 ent Heavy Veh, % 2 2 veh/h 808 0 e On Green 0.07 0.00 Tow, veh/h 3563 0 Volume(v), veh/h 735 0 Sat Flow(s), veh/h/ln 1781 0 | EBR WB 7 1 366 2 0 1 1.00 1.0 1.00 1.0 1870 187 407 2 0.90 0.8 2 2 512 9 | ▼ WBL 23 23 0 1.00 1.00 1.00 1870 26 | L WBT 1 1 3 41 3 41 0 0 0 0 1.00 | 8T WE | VBR | ۱ NBL | 1 | | | ¥ | - |
|---|---|---|--|------------------|----------|--|-------|------|----------|----------|----------|
| Interference Interference< | LOR WB 7 1 366 2 366 2 0 1.00 1.00 1.0 1870 187 407 2 0.90 0.8 2 2 512 9 | 23 23 0 1.00 1.00 1.00 | NBI 1 1 3 41 3 41 0 0 0 0 0 1.00 | 1 1 1 1 | 07 | NDL | MRT | NPD | SBL | SBT. | SDD |
| The Configurations The Configurations The Configurations affic Volume (veh/h) 630 44 ture Volume (veh/h) 630 44 ture Volume (veh/h) 630 44 ture Volume (veh/h) 630 44 tial Q (Qb), veh 0 0 ved-Bike Adj(A_pbT) 1.00 1.00 ork Zone On Approach No 1 j Sat Flow, veh/h/ln 1870 1870 j Flow Rate, veh/h 735 0 akt Hour Factor 0.90 0.90 vercent Heavy Veh, % 2 2 p, veh/h 808 0 rive On Green 0.07 0.00 ti Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/ln 1781 0 | Image: Constraint of the second sec | 1 23 23 0 1.00 1.00 1.00 | 1 11 № 3 41 3 41 0 0 0 0 _1.00 | ▶ 1 1 | | 100 | | NDK | JDL | JDT | JDR |
| allic Volime (velnin) 630 44 tital Q (Qb), veh 0 0 vd-Bike Adj(A_pbT) 1.00 1.00 riking Bus, Adj 1.00 1.00 ork Zone On Approach No 1 nj Sat Flow, veh/h/ln 1870 1870 j Flow Rate, veh/h 735 0 vak Hour Factor 0.90 0.90 recent Heavy Veh, % 2 2 pp, veh/h 808 0 rive On Green 0.07 0.00 th Flow, veh/h 735 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h 735 0 | 306 2 366 2 0 1.00 1.00 1.00 1.00 1.00 1.870 1.87 407 2 0.90 0.8 2 2 512 9 | 23 23 0 1.00 1.00 1.00 | 3 41 3 41 0 0 0 0 1.00 | 11 11 | -17 | <u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u> | 1042 | 25 |) | 1122 | (102 |
| Intervention 0.00 0 ad-Bike Adj(A_pbT) 1.00 0 rking Bus, Adj 1.00 1.00 rrking Bus, Adj 1.00 1.00 rik Zone On Approach No 1870 ij Sat Flow, veh/h/in 1870 1870 ij Flow Rate, veh/h 735 0 vak Hour Factor 0.90 0.90 rcent Heavy Veh, % 2 2 pp, veh/h 808 0 rive On Green 0.07 0.00 p Volume(v), veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s) veh/h/in 1781 0 | 300 2 0 1.00 1.00 1.00 1.00 1.00 1870 187/ 407 2 0.90 0.8 2 512 9 | 0 1.00 1.00 1870 26 | 0 0 00 | - | 37 | 200 | 1042 | 30 | 29 | 1122 | 482 |
| unit c (co), refr 0 0 unit c (co), refr 0 0 urking Bus, Adj 1.00 1.00 urking Bus, Adj 1.00 1.00 ork Zone On Approach No 1.870 ij Sat Flow, veh/h/in 1870 1870 ij Flow Rate, veh/h 735 0 ak Hour Factor 0.90 0.90 orcent Heavy Veh, % 2 2 pi, veh/h 808 0 rive On Green 0.07 0.000 t Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/in 1781 0 | 1.00 1.0 1.00 1.0 1870 187 407 2 0.90 0.8 2 512 9 | 1.00 1.00 1870 26 | 0 0 1.00 | 0 | 0 | 200 | 1042 | 30 | 29 | 0 | 40Z |
| Is bit of the point o | 1.00 1.0 1.00 1.0 1870 187 407 2 0.90 0.8 2 512 9 | 1.00 | 0 1.00 | 1 | 1 00 | 1 00 | U | 1.00 | 1 00 | 0 | 1 00 |
| Item Item Item Item Instruction Instruction Instruction Instruction Instruction Ig Sat Flow, veh/h/In 1870 1870 1870 1870 Ig Sat Flow, veh/h/In 735 0 1870 1870 value Hour Factor 0.90 0.90 0.90 1000 recent Heavy Veh, % 2 | 1870 187 407 2 0.90 0.8 2 512 9 | 1870 | |)() 1 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Internet Service Internet Network Internet Network 15 Sat Flow, veh/h/in 1870 1870 1j Flow Rate, veh/h 735 0 vak Hour Factor 0.90 0.90 recent Heavy Veh, % 2 2 pp, veh/h 808 0 rive On Green 0.07 0.00 tt Flow, veh/h 3563 0 p Volume(V), veh/h 735 0 p Sat Flow(s), veh/h/in 1781 0 | 1870 187 407 2 0.90 0.8 2 512 9 | 1870 | No | lo 1. | 1.00 | 1.00 | No | 1.00 | 1.00 | No | 1.00 |
| Joint RM, Kennin 1010 1010 Jelow Rate, veh/h 735 0 vak Hour Factor 0.90 0.90 vak Hour Factor 0.90 0.90 ap, veh/h 808 0 rive On Green 0.07 0.00 tt Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/in 1781 0 | 407 2 0.90 0.8 2 512 9 | 26 | 0 1870 | 10 | 870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Alk Hour Factor 0.90 vrcent Heavy Veh, % 2 p, veh/h 808 Morrise On Green 0.07 0.00 3563 p Volume(v), veh/h 735 p Sate Flow(s), veh/h/in 1781 0 2 | 0.90 0.8 | | 6 47 | 10 | 42 | 291 | 1145 | 38 | 32 | 1233 | 530 |
| Initial Televity Constraint Constraint Constraint pp, veh/h 808 0 | 2 512 9 | 0.88 | 8 0.88 | 18 0 | 1 88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Both Holdy Yoh, 70 2 2 py, veh/h 808 0 rive On Green 0.07 0.00 tt Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/ln 1781 0 | 512 9 | 2 | 2 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| b): Kim 000 0.00 vice On Green 0.07 0.00 tt Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/ln 1781 0 p Sat Flow(s), veh/h/ln 24.6 0 | | 94 | 4 100 | 0 | 79 | 332 | 2599 | 86 | 47 | 2251 | 1058 |
| tt Flow, veh/h 3563 0 p Volume(v), veh/h 735 0 p Sat Flow(s), veh/h/in 1781 0 Satr(a, c), c | 0.07 0.0 | 0.05 | 5 0.05 | 05 0 | 0.05 | 0.10 | 0.51 | 0.51 | 0.03 | 0.44 | 0.44 |
| p Volume(v), veh/h 735 0 p Sat Flow(s),veh/h/ln 1781 0 | 1585 178 | 1781 | 1 1884 | 34 14 | 495 | 3456 | 5076 | 168 | 1781 | 5106 | 1585 |
| p Sat Flow(s), veh/h/ln 1781 0 | 407 2 | 26 | 6 44 | 14 | 45 | 291 | 768 | 415 | 32 | 1233 | 530 |
| Somo(a, c), c 26.4 0.0 | 1585 178 | 1781 | 1 1777 | | 601 | 1728 | 1702 | 1840 | 1781 | 1702 | 1585 |
| JEIVELY 51, 5 ZO.O U.U | 29.5 1. | 1.8 | 8 3.1 | .1 3 | 3.6 | 10.8 | 18.5 | 18.5 | 2.3 | 23.1 | 21.7 |
| rcle Q Clear(g_c), s 26.6 0.0 | 29.5 1. | 1.8 | 8 3.1 | .1 3 | 3.6 | 10.8 | 18.5 | 18.5 | 2.3 | 23.1 | 21.7 |
| op In Lane 1.00 | 1.00 1.0 | 1.00 | 0 | 0. | 0.93 | 1.00 | | 0.09 | 1.00 | | 1.00 |
| ne Grp Cap(c), veh/h 808 0 | 512 9 | 94 | 4 94 | 94 | 85 | 332 | 1743 | 942 | 47 | 2251 | 1058 |
| C Ratio(X) 0.91 0.00 | 0.79 0.2 | 0.28 | 8 0.47 | 17 0. | 0.53 | 0.88 | 0.44 | 0.44 | 0.68 | 0.55 | 0.50 |
| vail Cap(c_a), veh/h 808 0 | 512 11 | 115 | 5 115 | 5 1 | 103 | 332 | 1743 | 942 | 92 | 2251 | 1058 |
| CM Platoon Ratio 0.33 0.33 | 0.33 1.0 | 1.00 | 0 1.00 | 00 1. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| ostream Filter(I) 1.00 0.00 | 1.00 1.0 | 1.00 | 0 1.00 | 00 1. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| niform Delay (d), s/veh 58.8 0.0 | 47.6 59. | 59.2 | 2 59.8 | .8 60 | 60.0 | 58.0 | 20.0 | 20.0 | 62.7 | 26.8 | 10.8 |
| cr Delay (d2), s/veh 13.9 0.0 | 7.8 0. | 0.6 | 6 1.3 | .3 ` | 1.9 | 21.3 | 0.1 | 0.1 | 6.3 | 1.0 | 1.7 |
| tial 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 | 0.0 | 0.0 |
| le BackOfQ(95%),veh/ln 20.6 0.0 | 19.8 1. | 1.5 | 5 2.6 | .6 2 | 2.7 | 9.6 | 11.8 | 12.6 | 2.0 | 14.6 | 20.5 |
| nsig. Movement Delay, s/veh | | | | | | | | | | | |
| Grp Delay(d),s/veh 72.7 0.0 | 55.4 59. | 59.7 | 7 61.1 | .1 6' | 61.9 | 79.3 | 20.0 | 20.1 | 69.1 | 27.8 | 12.5 |
| Grp LOS E A | E I | E | E E | E | E | E | С | С | E | С | В |
| pproach Vol, veh/h 1142 | | | 115 | 5 | | | 1474 | | | 1795 | |
| proach Delay, s/veh 66.5 | | | 61.1 | .1 | | | 31.8 | | | 24.0 | |
| pproach LOS E | | | E | E | | | С | | | С | |
| mer - Assigned Phs 1 2 | | 4 | 4 5 | 5 | 6 | | 8 | | | | |
| is Duration (G+Y+Rc) s 8.7 72.3 | 35 | 35.0 | 0 18.0 | 0 6 | 63.0 | | 12.5 | | | | |
| ange Period (Y+Rc), s * 5.3 5.7 | 5. | 5.5 | 5 5.5 | .5 5 | 5.7 | | 5.6 | | | | |
| ax Green Setting (Gmax), s * 6.7 63.3 | 29. | 29.5 | 5 12.5 | .5 57 | 57.3 | | 8.4 | | | | |
| ax Q Clear Time (g_c+l1), s 4.3 20.5 | 31. | 31.5 | 5 12.8 | .8 25 | 25.1 | | 5.6 | | | | |
| een Ext Time (p_c), s 0.0 1.6 | 0. | 0.0 | 0.0 | .0 | 1.9 | | 0.1 | | | | |
| oreaction Summany | | | | | | | | | | | |
| CM 6th Ctrl Dolay | 20.2 | | | | | | | | | | |
| TM 6th LOS | D | | | | | | | | | | |
| SWI OUT LOG | U | | | | | | | | | | |
| otes | | | | | | | | | | | |
| ser approved pedestrian interval to be less than p | in phase max gr | max greei | een. | | | | | | | | |
| ser approved volume balancing among the lanes | ies for turning m | ning move | ovement. | | | | | | | | |
| ICM 6th computational engine requires equal cle | clearance times | e times fo | for the ph | phases c | crossing | g the barr | rier. | | | | |

18-0555 SmokeTree Resort 2029 Total AM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | _ | _ | _ | _ | _ | |
|------------------------|--------|-------|--------|-------|--------|----------------|
| Int Delay, s/veh | 5.1 | | | | | |
| · | | WDD | NDT | NDD | 0.01 | CDT |
| Novement | WBL | WBK | NBL | NRK | SBL | SBL |
| Lane Configurations | Y | | િં | | | - 4 |
| Traffic Vol, veh/h | 0 | 8 | 6 | 0 | 11 | 4 |
| Future Vol, veh/h | 0 | 8 | 6 | 0 | 11 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage | e,# 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | | 0 | | | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mymt Flow | 0 | 0 | 7 | 0 | 12 | 4 |
| WWWITE FIOW | 0 | , | - / | 0 | 12 | - 1 |
| | | | | | | |
| Major/Minor M | Minor1 | Ν | Major1 | 1 | Major2 | |
| Conflicting Flow All | 35 | 7 | 0 | 0 | 7 | 0 |
| Stage 1 | 7 | - | - | - | | |
| Stage 2 | 28 | - | | | | - |
| Critical Hdwy | 6.42 | 6.22 | | | 4.12 | |
| Critical Hdwy Stg 1 | 5.42 | | | | | - |
| Critical Hdwy Stg 2 | 5.42 | | | | | |
| Follow-up Hdwy | 3.518 | 3.318 | | | 2.218 | |
| Pot Can-1 Maneuver | 978 | 1075 | | | 1614 | |
| Stano 1 | 1016 | 1073 | | | 1017 | |
| Stage 1 | 005 | | | | | |
| Sidye 2 | 442 | | | | | |
| Platuon blocked, % | 074 | 1075 | | | 1/1+ | |
| Nov Cap-1 Maneuver | 9/1 | 1075 | | | 1614 | |
| Mov Cap-2 Maneuver | 971 | - | | | | - |
| Stage 1 | 1016 | - | | 1.1 | 1.1 | - |
| Stage 2 | 988 | | - | - | | |
| | | | | | | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay | 8.4 | | 0 | _ | 5.2 | |
| HCM LOS | 0.4 | | 0 | | 0.3 | |
| ILUS | A | | | | | |
| | | | | | | |
| Minor Lane/Major Mvm | nt | NBT | NBRV | VBLn1 | SBL | SBT |
| Capacity (veh/h) | | | | 1075 | 1614 | - |
| HCM Lane V/C Ratio | | | | 0.008 | 0.008 | |
| LICM Captral Dalay (a) | | | - | 9.000 | 7.2 | 0 |
| HUV CONTO DEAVIST | | | | 0.4 | 1.1 | |
| HCM Lane LOS | | | | Δ | Λ.2 | 4 |

| 02/13/2023 |
|--------------|
| CivTech Inc. |

Synchro 11 Report Page 9

18-0555 SmokeTree Resort 2029 Total PM

7: Quail Run Rd & Access A HCM 6th TWSC

| Intersection | | | | | | |
|-----------------------|--------|-------|-----------|-----------|-----------|-----------|
| Int Delay, s/veh | 6.9 | | | - | | - |
| Movement | W/DI | WDD | NDT | NDD | CDI | CDT |
| Novement | WBL | WBR | INBI | NRK | SBL | SRI |
| Lane Conligurations | T . | 17 | 4 | 0 | 20 | |
| Traffic Vol, ven/n | 0 | 17 | 3 | 0 | 29 | 2 |
| Future Vol, Ven/n | 0 | 1/ | 3 | 0 | 29 | 2 |
| Connicing Peas, #/III | Ctop | Ctop | U Froo | U Free | U Free | U Free |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | | None | - | None |
| Storage Length | 0 | | - | - | - | - |
| ven in Median Storage | e,# 0 | | 0 | | | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 19 | 3 | 0 | 32 | 2 |
| | | | | | | |
| Maior/Minor | Vinor1 | Ν | Maior1 | 1 | Maior2 | |
| Conflicting Flow All | 69 | 3 | 0 | 0 | 3 | 0 |
| Stage 1 | 3 | - | - | - | - | - |
| Stage 2 | 66 | | | | | |
| Critical Hdwy | 6 4 2 | 6.22 | | | 4 12 | |
| Critical Hdwy Stg 1 | 5.42 | 0.22 | | | -1.12 | |
| Critical Hdwy Stg 7 | 5.42 | | | | | |
| Follow-up Hdwy | 3 518 | 3 318 | | | 2 218 | |
| Pot Can-1 Maneuver | 036 | 1081 | - | | 1610 | |
| 1 on cap-1 Mancuver | 1020 | 1001 | | | 1017 | |
| Stage 2 | 057 | | | | | |
| Diatoon blockod % | 737 | | | | | |
| May Cap 1 Manager | 017 | 1001 | - | | 1/10 | |
| Mov Cap-1 Maneuver | 917 | 1081 | | | 1013 | |
| wov Cap-2 waneuver | 91/ | | | | | |
| Stage I | 1020 | | 1.1 | 1 | - | |
| Stage 2 | 938 | | | | | |
| | | | | | | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s | 8.4 | | 0 | | 6.8 | |
| HCMLOS | A | | - | | | |
| | | | | | | |
| | | NDT | NIDE | | CDI | 0.07 |
| Minor Lane/Major Mvm | It | NRL | NRKA | VBLn1 | SBL | SBL |
| Capacity (veh/h) | | 1.1 | | 1081 | 1619 | 1.1 |
| HCM Lane V/C Ratio | | - | - | 0.017 | 0.02 | - |
| HCM Control Delay (s) | | - | - | 8.4 | 7.3 | 0 |
| , , , | | | | | | |
| HCM Lane LOS | | - | - | A | А | А |

02/13/2023 CivTech Inc.

APPENDIX K

QUEUE STORAGE ANALYSIS



VL (ft)

25

25

32

35

38

41

Table 9-23

Truck%

0%

2%

10%

15%

20%

25%

Signalized Intersections

2029

VL (ft) =

2

25

Average Vehicle Length, VL (Per Table 9-23, AASHTO "Green Book" 2018, p 9-99)

Intersection Cycle Length (sec): 130

> Cycles per Hour: Queuing Cycles: 28

> > Truck % =

2%

Average Vehicle Length

| <u>Equation Used</u> Storage Le | ength, SL, = | 2 x (vehicl | es/hour)/(cy | ycles/hour) | x Average | Vehicle Ler | ngth | • |
|---------------------------------|-----------------|---------------|---------------------|----------------------------|---------------------|--------------------------|----------------------------------|--|
| Intersection | Cycle Length | Move- ment | AM Peak (veh/hr) | Midday Peak (veh/hr) | PM Peak (veh/hr) | Max vehs per 2 cycles | AASHTO Storage Length (ft) | Synchro 95 th %-ile Q |
| | 130 | NB Left | 23 | 0 | 20 | 2 | 50' | 35 |
| | | SB Left | 57 | 0 | 59 | 5 | 125' | 90 |
| Mockingbird Lane & Lincoln | | EB Left | 220 | 0 | 212 | 16 | 400' | 140 |
| Drive | | WB Left | 17 | 0 | 13 | 2 | 50' | 25 |
| | | SB Right | 210 | 0 | 298 | 22 | 550' | 460 |
| | | WB Right | 49 | 0 | 66 | 5 | 125' | 45 |
| | 130 | EB Left | 55 | 0 | 43 | 4 | 100' | 100 |
| Quail Run Road & Lincoln Drive | | WB Left | 7 | 0 | 17 | 2 | 50' | 25 |
| | | WB Right | 68 | 0 | 36 | 5 | 125' | 275 |
| | 130 | NB Left | 265 | 0 | 379 | 28 | 700' | 335 |
| | | SB Left | 29 | 0 | 55 | 4 | 100' | 115 |
| Spottadala Road & Lincoln Driva | | EB Left | 630 | 0 | 720 | 52 | 1,300' | 690 |
| Scousuale Road & LINCOIN DIVE | | WB Left | 23 | 0 | 42 | 4 | 100' | 70 |
| | | SB Right | 482 | 0 | 788 | 57 | 1,425' | 1,010 |
| | | EB Right | 366 | 0 | 403 | 30 | 750' | 525 |

*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of acctual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.



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Unsignalized Intersections 2029

| Left Turns (Per AASHTO "Green | Book" 2018, pp 9-96 to 9-99) | | | |
|--|---|------------------------|--------------|---------------------------|
| Equation 9-3 | Equation 9-4 | | Tab | le 9-23 |
| U.S. Customary | U.S. Customary | | Truck% | VL (ft) |
| $V e^{-V_o t_c/3600}$ | | | 0% | 25 |
| $C = \frac{V_o c}{1 - a^{-V_o l_f/3600}}$ | $\ln \left[P(n > N) \right] 1 n \in M$ | | 5% | 28 |
| 1-e | $SL = \left\{ \frac{1}{ v } - 1 \right\} \times VL$ | | 10% | 32 |
| where: | $\left(\begin{array}{c} \operatorname{III}\left[\frac{-}{c}\right]\end{array}\right)$ | | 15% | 35 |
| c = left-turn capacity, veh/h | | | 20% | 38 |
| V_s = major-road volume conflicting with the | where: | | 25% | 41 |
| minor movement, assumed to be equal | SL = storage length, ft | Per Sectio | n 9.7.2.2 Si | torage Length |
| to one-half of the two-way major-road | P(n>N) = probability of turn-lane overflow | c (veh/hr) = | calculated | Left-Turn Capacity |
| volume, veh/h | v = left-turn vehicle volume, veh/h | V _ (veh/hr) = | Opposing | Major Road Volume |
| $t_r = \text{critical gap, s}$ | - left turn annaite anh /h | t_c (sec) = | 6.25 | 85th %-ile Critical Gap |
| $t_r = \text{follow-up gap, s}$ | c = iere-turn capacity, ven/ii | t _f (sec) = | 2.50 | Follow-Up Gap |
| | VL = average length per vehicle, ft | <i>SL</i> (ft) = | calculated | Storage Length |
| | | P(n > N) = | 0.005 | (a probability, no units) |
| Truck % = <u>2%</u> | VL (ft) = 25 Average Vehicle Len | gth ν (veh/hr) = | enter below | Left-Turn Vehicle Volume |

<u>*Right Turns*</u>: Equation Used: storage length = 2 x (vehicles/hour)/(60 minutes/hour) x average vehicle length

| Intersection | Move- ment | AM Peak (veh/hr) | Midday Peak (veh/hr) | PM Peak (veh/hr) | Veh per 2 minutes | Opposing V _o (veh/hr) | AASHTO Storage Length (ft) | Synchro 95 th %-ile Q |
|---------------------------------|---------------|---------------------|----------------------------|---------------------|----------------------|-------------------------------------|----------------------------------|--|
| Access B/Shared Driveway & | WB Left | 21 | 0 | 31 | 2 | 1,093 | 25 | 25' |
| | SB Left | 4 | 0 | 3 | 1 | 6 | 25 | 0' |
| A l's Driveway & Lincoln Drive | EB Left | 23 | 0 | 9 | 1 | 705 | 25 | 25' |
| AJ S DIIVeway & LIIICOIII DIIVe | WB Left | 13 | 0 | 7 | 1 | 981 | 25 | 0' |
| | SB Right | 11 | 0 | 21 | 1 | 0 | 25 | 25' |
| Quail Run Road & Access A | SB Left | 11 | 0 | 29 | 1 | 3 | 25' | 50' |
| Quali Mult Modu & Access A | WB Right | 8 | 0 | 17 | 1 | 0 | 25' | 70' |

*Note: Truck/Passenger Vehicle split is projected based on percentage and not reflective of acctual vehicle classification counts.

"Yield" for turns indicates that, while movement may or may not be subject to a Yield sign, vehicles must yield to oncoming traffic and may experience delays.



APPENDIX L

SIGHT DISTANCE ANALYSIS



| Assumptions and/or Givens Elements of Design from AASHTO Driver Eye Height Passenger Vehicle Truck Stopping Sight Distance Passing Sight Distance Passing Sight Distance Passing Sight Distance Passenger Vehicle Truck Truck Truck Passenger Vehicle Truck Truck Passenger Vehicle Truck Stopping Sight Distance Passenger Vehicle Truck Truck Truck Truck Major Street Design Speed (V _{mater}) State reaction time (1) Stopping Sight Distance Passenger Vehicle Truck Major Street Design Speed (V _{mater}) Major Street Design Speed (V _{mater}) Crades - Approaching Minor Street from: (-= approaching downhill) Left (G _x) Approach Grade Adjustment Factor Left (G _x) Major Road Through Lanes on Each Approach Major Road Access (check restricted) Major Road Access (check restricted) Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade d=1.47Vt+1.075 $\frac{y^2}{a}$ Calculated d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, since better visibility is considered to offset longer braking distance. Stopping Sight Distance design for truck operations, | Location: Lincoln Drive | | | | |
|--|--|--|--|--|--|
| Elements of Design from AASHTO 6th Edition AASHTO Driver Eye Height Passenger Vehicle 3.50 ft §3.2.6.1, p.3 Truck 7.60 ft §3.2.6.1, p.3 Object Height 3.2.6.2, p.3 Passing Sight Distance 2.00 ft §3.2.6.2, p.3 Vehicle Height 4.2.5 ft §3.2.6.2, p.3 Driver Eye Location From Edge of Major Rd Traveled Way 14.50 ft §9.5.3.2.1, p.6 Deceleration Rate (a) Passenger Vehicle 11.20 ft/sec ² §3.2.2.2, p. Truck NA ft Brake reaction time (t) 2.50 sec §3.2.2.1, p.6 Site Specific Data (Bike & turn lanes are outside traveled way and are not considered) Major Street Design Speed (V _{maio}) 45MPH Grades - Approaching Minor Street from: (- = approaching domhil) Left (G ₁) % Approach Grade Adjustment Factor Left 1.0 Tbl 9.5, p.6 Major Road Through Lanes on Each Approach 2.00 (Use 1 for RURO[/LI] only) Minor Road Access (check restricted) 1.0 Use 0 for RURO[/LI] only) Minor Road Access (check restricted) 1.0 Calculated d= 359.8 ft Design d= 360 ft With Effect of | Assumptions and/or Givens | | | | |
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| Civtech $ \begin{array}{c} 1,10ck & 7,60 \text{ ft} & \text{s}32.6.1, \text{p} \in 0 \\ 0 \text{ Object Height} & \text{s}32.6.2, \text{p} \in 0 \\ 1 \text{ Stopping Sight Distance} & 3.50 \text{ ft} & \text{s}32.6.2, \text{p} \in 0 \\ 2 \text{ Passing Sight Distance} & 3.50 \text{ ft} & \text{s}32.6.2, \text{p} \in 0 \\ 2 \text{ Vehicle Height} & 4.25 \text{ ft} & \text{s}32.6.2, \text{p} \in 0 \\ 2 \text{ Driver Eye Location} & 14.50 \text{ ft} & \text{s}32.6.2, \text{p} \in 0 \\ 1 \text{ Passenger Vehicle} & 11.20 \text{ ft/sec}^2 & \text{s}32.2.2, \text{p} \in 0 \\ 2 \text{ Deceleration Rate (a)} & 0 \\ 2 \text{ Passenger Vehicle} & 11.20 \text{ ft/sec}^2 & \text{s}32.2.2, \text{p} \\ 1 \text{ Truck} & N/A \text{ ft} \\ 3 \text{ Brake reaction time (t)} & 2.50 \text{ sec} & \text{s}32.2.1, \text{p} \\ 3 \text{ Site Specific Data (Bike & turn lanes are outside traveled way and are not considered)} \\ \text{ Major Street Design Speed (V_{make})} & 45 \text{ MPH} \\ 3 \text{ Grades - Approaching Minor Street from: (- = approaching downhill)} \\ \text{ Left (G_1)} & 1.0 & \text{Tb I9-5, p S} \\ \text{ Right (G_R)} & 0 & \text{Th I9-7, p S} \\ \text{ Major Road Through Lanes on Each Approach} & 2.0 (Use 1 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Minor Road Apcrease (check restricted)} & 1.0 (Use 0 for RI/RO[/LI] only) \\ \text{ Model Bay the Effect of Grade} & d= 1.47V(t+ 0.75 \frac{V^2}{a} = Calculated d = 359.1 \text{ ft - left} 360 \text{ ft - right} 360 \text{ ft - right} 360 ft - righ$ | Passenger Vehicle | | 3.50 | ft | §3.2.6.1, p 3 |
| Cupert Height Stopping Sight Distance 2.00 ft §3.2.6.2, p.3 Passing Sight Distance 3.50 ft §3.2.6.1, p.3 Driver Eye Location From Edge of Major Rd Traveled Way 14.50 ft §9.5.3.2.1, p.5 Deceleration Rate (a) Passenger Vehicle 11.20 ft/sec ² §3.2.2.2, p. Truck NA ft Brake reaction time (t) 2.50 sec §3.2.2.1, p.5 Site Specific Data (Bike & turn lanes are outside traveled way and are nonsidered) Major Street Design Speed (V _{matc}) 45 MPH Grades - Approach Ing Minor Street from: (- = approaching downhill) Left (G,) Major Road Through Lanes on Each Approach Moiror Road Approach Upgrade, if -33% Minor Road Approach Upgrade, if -33% Calculated = 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. S32.2.5, p Mage 1 of 8 | | | 7.60 | π | §3.2.6.1, p 3 |
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| Stopping Sight Distance = Brake Reaction Distance + Braking Distance Neglecting Effect of Grade Eq 3-2, p Meglecting Effect of Grade Eq 3-2, p Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade Eq 3-3, p Meglecting Effect of Grade Eq 3-3, p With Effect of Grade d=1.47Vt+ V ² Eq 3-3, p Meglecting Effect of Grade d=1.47Vt+ V ² Eq 3-3, p Megle 1.47Vt+ V ² Eq 3-3, p Calculated d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Appendit Page 1 of 8 | | | | | |
| Neglecting Effect of Grade $d=1.47Vt+1.075 \frac{V^2}{a}$ Eq 3-2, p Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade $d=1.47Vt+ \frac{V^2}{30((\frac{a}{32.2})\pm G)}$ Eq 3-3, p Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 Appendit | Stopping Sight Distance = Brake Reaction Distan | ce + Brakiı | ng Distance | | F . 0.0 |
| Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade $d=1.47Vt+\frac{V^2}{30((-\frac{a}{32.2}-)\pm G)}$ Eq 3-3, p Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 | Neglecting Effect of Grade | 47\/t+1 07 | - V ⁻ | | |
| Calculated d= 359.8 ft Design d= 360 ft With Effect of Grade $d=1.47Vt+\frac{V^2}{30((-\frac{a}{32.2}-)\pm G)}$ Eq 3-3, p Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 | u-1 | .47 010 1.070 | , <u> </u> | | Lq 0 2, p |
| $\frac{V}{Vith \ Effect of \ Grade} = \frac{V^2}{360 \ ft} = \frac{V^2}{360 \ ft} = \frac{V^2}{30((-\frac{a}{32.2})\pm G)} = Eq 3-3, p$ $\frac{d=1.47Vt+\frac{V^2}{30((-\frac{a}{32.2})\pm G)} = Calculated \ d=359.1 \ ft - left \\ 360 \ ft - right \\ Design \ d=359.1 \ ft - left \\ 360 \ ft - right \\ SSD's \ do \ not \ consider \ design \ for \ truck \ operations, \ since \ better \ visibility \ is \\ considered \ to \ offset \ longer \ braking \ distance. \qquad §3.2.2.5, p$ $CivTech \qquad Page \ 1 \ of \ 8 \qquad Design \ d=360 \ ft \ design \ d$ | u- i | .47 010 1.070 | a | | Lq 0 2, p |
| With Effect of Grade V^2 Eq 3-3, p $d=1.47Vt+$ V^2 V^2 Eq 3-3, p $30((-\frac{a}{32.2})\pm G)$ Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Appendit December 20 | u-r | alculated d | a = 359.8 | ft | Lq 0 2, p |
| With Effect of Grade $d=1.47Vt+$ V^2 Eq 3-3, p $30((-\frac{a}{32.2}-))\pm G)$ Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Appendi December 20 | Ca | alculated d | a = 359.8 = 360 | ft ft | Ε Ϋ Ο Ζ, Ρ |
| $d = 1.4 / V(+ \frac{a}{32.2}) \pm G$ Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. CivTech Page 1 of 8 Appendit December 20 | Ca | alculated de Design de | a = 359.8 = 360 | ft ft | L402, p |
| Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. S3.2.2.5, p CivTech Page 1 of 8 December 20 | Ca With Effect of Grade | alculated de Design de | a = 359.8 = 360 ∨ ² | ft ft | Eq 3-3, p |
| Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. \$3.2.2.5, p CivTech Page 1 of 8 Calculated d= 359.1 ft - left 360 ft - right 360 ft - right 26.2.2.5, p | Ca With Effect of Grade d=1. | alculated d Design d | 7 <u>a</u> = 359.8 = 360 | ft ft | Eq 3-3, p |
| Calculated d= 359.1 ft - left 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Appendi Page 1 of 8 December 20 | Ca With Effect of Grade d=1. | alculated d= Design d= .47Vt+30(| $rac{a}{a}$ = 359.8 = 360 V^2 (<u>a</u> (<u>32.2</u>) | ft ft ·)±G) | Eq 3-3, p |
| 360 ft - right Design d= 359.1 ft - left 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. CivTech Page 1 of 8 Appendi December 20 | Ca <u>With Effect of Grade</u> d=1. | alculated d: Design d: 47Vt+ 30(| $rac{a}{a}$ = 359.8 = 360 V^2 (<u>a</u> (<u>32.2</u> | ft ft ·)±G) | Eq 3-3, p |
| Design d= 359.1 ft - left 360 ft - right 360 ft - right SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Appendia Page 1 of 8 December 20 | Ca <u>With Effect of Grade</u> d=1. Ca | alculated d= Design d= 47Vt+ 30(alculated d= | $\frac{1}{a}$ = 359.8 = 360 $\frac{V^2}{(\frac{a}{32.2})^2}$ | ft ft)±G) ft - left | Eq 3-3, p |
| SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 December 20 | Cr With Effect of Grade d=1. Cr | alculated d= Design d= 47Vt+ 30(| $rac{a}{a}$ = 359.8 = 360 V^2 (<u>a</u> 32.2 = 359.1 360 - 360 | ft ft)±G) ft - left ft - right | Eq 3-3, p |
| SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 December 20 | Ca With Effect of Grade d=1. Ca | alculated d: Design d 47Vt+ 30(alculated d Design d | $rac{a}{a}$ = 359.8 = 360 V^2 (<u>a</u> (<u>a</u> 32.2 = 359.1 360 = 359.1 | ft ft)±G) ft - left ft - right ft - left ft - left | Eq 3-3, p |
| considered to offset longer braking distance. §3.2.2.5, p CivTech Page 1 of 8 December 20 | Cr <u>With Effect of Grade</u> d=1. Cr | alculated d: Design d: .47Vt+ 30(alculated d: Design d: | a 359.8 360 V ² (<u>a</u> 32.2 359.1 360 359.1 360 | ft ft (t-left ft - left ft - left ft - left ft - right | Eq 3-3, p |
| CivTech Appendi Page 1 of 8 December 20 | Ca <u>With Effect of Grade</u> d=1. Ca SSD's do not consider design for truck opera | alculated d: Design d: .47Vt+ | a = 359.8 = 360 V ² (<u>a</u> (<u>a</u> 32.2 = 359.1 360 = 359.1 360 better visibili | ft ft (t ft - left ft - right ft - left ft - right tt v is | _ Eq 3-3, p |
| CivTech Appendi Page 1 of 8 December 20 | Ca <u>With Effect of Grade</u> d=1. Ca SSD's do not consider design for truck opera considered to offset longer braking distance. | alculated d Design d 47Vt+ 30(alculated d Design d tions, since | a 359.8 360 V² (a 32.2 359.1 360 359.1 360 better visibili | ft ft)±G) ft - left ft - right ft - left ft - left ft - right tt y is | Eq 3-3, p |
| CivTech Page 1 of 8 December 20 | Ca <u>With Effect of Grade</u> d=1. Ca SSD's do not consider design for truck opera considered to offset longer braking distance. | alculated d= Design d= 47Vt+ 30(alculated d= Design d= tions, since | $rac{1}{2}$ $rac{$ | ft ft (t - left ft - left ft - right ft - left ft - right tt - right tt y is | Eq 3-3, p §3.2.2.5, p |
| Page 1 of 8 December 20 | Ca <u>With Effect of Grade</u> d=1. Ca SSD's do not consider design for truck opera considered to offset longer braking distance. | alculated d: Design d: 47Vt+ 30(alculated d: Design d: tions, since | a 359.8 360 V ² (<u>a</u> 32.2 359.1 360 359.1 360 better visibil | ft ft - left ft - left ft - left ft - left ft - right ft - right ty is | Eq 3-3, p §3.2.2.5, p |
| | Ca <u>With Effect of Grade</u> d=1. Ca SSD's do not consider design for truck opera considered to offset longer braking distance. CivTech | alculated d Design d 47Vt+30(alculated d Design d tions, since | a 359.8 360 V ² (<u>a</u> 32.2 359.1 360 359.1 360 better visibil | ft ft ()±G) ft - left ft - right ft - left ft - right ty is | Eq 3-3, p §3.2.2.5, p Appendi |
| | With Effect of Grade d=1. With Effect of Grade c=1. Ca Ca SSD's do not consider design for truck operationsidered to offset longer braking distance. CivTech Page 1 of a | alculated d: Design d: 47Vt+ | a = 359.8 = 360 V ² (<u>a</u> (<u>32.2</u>) = 359.1 360 = 359.1 360 better visibil | ft ft ft - left ft - right ft - left ft - left ft - right ty is | Eq 3-3, p §3.2.2.5, p Appendi December 20 |
| | With Effect of Grade d=1. Ca Ca SSD's do not consider design for truck opera considered to offset longer braking distance. CivTech Page 1 of a | alculated d: Design d: 47Vt+ — | a = 359.8 = 360 V ² (<u>a</u> 32.2 = 359.1 360 = 359.1 360 better visibil | ft ft ft - left ft - left ft - left ft - left ft - left ft - right ty is | _ Eq 3-3, p §3.2.2.5, p Appendi December 20 |
| | With Effect of Grade d=1. Ca Ca SSD's do not consider design for truck opera considered to offset longer braking distance. CivTech Page 1 of a | alculated d: Design d: 47Vt+ — | a = 359.8 = 360 V ² (<u>a</u> 32.2 = 359.1 360 = 359.1 360 better visibil | ft ft (t - left ft - left ft - left ft - left ft - left ft - right ty is | Eq 3-3, ; §3.2.2.5, ; Append December 2 |

| Location | Lincoln Drive | | 2.9. | |
|-----------------|---|---|--|---------------------------------------|
| Intersection Si | ght Distances | | | |
| Case B— | Case B—Intersections with Stop Control on the Minor Road | | | AASHTO Rei §9.5.3.2, p 9-42 |
| Cas | e B1–Left Turn from the Mi | nor Road | | §9.5.3.2.1, p 9-43 |
| | Design Vehicle | | Time Gap (t | .) |
| | Passenger Car | | 7.5 sec | Tbl 9-6, p 9-44 |
| | Single-Unit Tuck | | 9.5 sec | Tbl 9-6, p 9-44 |
| | Combination Truck | | 11.5 sec | Tbl 9-6, p 9-44 |
| | Time gap adjustments | | | |
| | Add'I lanes to cross (1st i | s assumed) | | |
| | Passenger Car | , | 0.5 sec | See Notes |
| | Trucks | | 0.7 sec | belov |
| | Minor Approach Upgrad | e (Per each 1%>3% |) 0.2 sec | Tbl 9-5, p 9-37 |
| Si | te data | | | |
| 0. | Major Road Lanes on Left | Annroach | 2.0 | 895321 n 9-44 |
| | Minor Road Approach Upg | jrade, if >3% | 0 % | §9.5.3.2.1, p 9-44 |
| IS | D to left & right along Major Passenger Car Single-Unit Tuck Combination Truck | Road ISD=1.47 calculated ISD design ISD calculated ISD calculated ISD calculated ISD design ISD | $ \frac{V_{major}t_{g}}{V_{major}t_{g}} (ft) \\ = \frac{ISD to Left}{562.3 ft} \\ = 565 ft \\ = 721.0 ft \\ = 725 ft \\ = 853.3 ft \\ = 855 ft $ | Eq 9-1, p 9-45 |
| CivTech | Pa | ge 2 of 8 | | Appendix I December 2022 |

| 18-0555 Smoke Tre | ee Resort | | Sig | ht Distance Analysis |
|-------------------|--|--------------------------------|--|---|
| Location | n: Lincoln Drive | | | |
| Intersection S | Sight Distances (cont'd) | | | |
| | | | | AASHTO Ref |
| Ca | se B2—Right Turn from the N | linor Road | | §9.5.3.2.2, p 9-47 |
| Ca | ase B3—Crossing Maneuver fi | rom the Minor Road | | §9.5.3.2.3, p 9-48 |
| | Design Vehicle | | Time Gap | (t _a) |
| | Passenger Car | | 6.5 sec | Tbl 9-8, p 9-47 |
| | Single-Unit Tuck | | 8.5 sec | & |
| | Combination Truck | | 10.5 sec | Tbl 9-10, p 9-49 |
| | Time gap adjustments | | | |
| | Add'I lanes to cross (1 st i | s assumed) - Case B-3 | Only* | |
| | Passenger Car | | 0.5 sec | See Notes |
| | Trucks | | 0.7 sec | below |
| | Minor Approach Upgrade | e (Per each 1%>3%) | | |
| | Case B-2 Only | - (| 0.1 sec | Tbl 9-8, p 9-47 |
| | Case B-3 Only | | 0.2 sec | Tbl 9-10, p 9-49 |
| | | | | |
| 5 | Site data | | | |
| | Major Road Lanes on Left | Approach | 2.0 | §9.5.3.2.2, p 9-47 |
| | Minor Road Approach Upg | grade, if >3% | 0 % | §9.5.3.2.2, p 9-47 |
| , | Fime Gap based on site data Design Vehicle Gap+Adj fo Passenger Car Single-Unit Tuck Combination Truck | (sec) or Approach Grade>3% | B2 & B3 E 5(+Adjs for Add 7.5 9.9 11.9 | 33 Only 17 Lanes & Median for B3) 8.0 10.6 12.6 |
| ł | SD to left (B2/B3) & right (B3) |) along Major Rd ISD=1 | .47V _{major} t _g (ft) | Eq 9-1, p 9-45 |
| | | 1 | SD to Left ISD | to right |
| | | | (B2 & B3) (B3 | 3 Only) |
| | Passenger Car | calculated ISD= | 496.1 | 529.2 |
| | J | design ISD= | 500 | 530 |
| | | | | |
| | Single-Unit Tuck | calculated ISD= | 654.9 | 701.2 |
| | | design ISD= | 655 | 705 |
| | Combination Truck | calculated ISD= design ISD= | 787.2 790 | 833.5 835 |
| * | Number of major road lanes | is irrelevant in Case B2 | | |
| 1 | The differences between Case | e B1 and Cases B2 & E | 3 are reduced | |
| tim | ne gaps and time gap adjustm | nent for the minor appro | ach upgrade. | §9.5.3.2.3, p 9-48 |
| | | | | Annendiy I |
| Civiech | Do | an 3 of 8 | | Decomber 2022 |
| | Pa | ye 5 01 o | | December 2022 |
| | | | | |
| | | | | |
| | | | | |

| 555 Smoke Tree Resort | | | Sig | ht Distance Anal | ysis |
|---------------------------------------|----------------|--------------------------------------|----------|-------------------|-------|
| Location. Encom Drive | | | | | |
| Intersection Sight Distances (cont'd) | | | | | |
| | | | | AASHTO |) Ref |
| Case F—Left Turns from the Major Roa | ad | | | §9.5.3.6, p | 9-56 |
| Design Vehicle | | | Time Gap | (t _q) | |
| Passenger Car | | | 5.5 sec | Tbl 9-16, p | 9-57 |
| Single-Unit Tuck | | | 6.5 sec | c Tbl 9-16, p | 9-57 |
| Combination Truck | | | 7.5 sec | Tbl 9-16, p | 9-57 |
| Time gap adjustments | | | | | |
| Add'I lanes to cross (1 assu | imed) | | | | |
| Passenger Car | , | | 0.5 sec | s See Not | es to |
| Trucks | | | 0.7 sec | c Tbl 9-16, p | 9-57 |
| Site data | | | | | |
| Opposing Lanes (adj'd for x-v | vide median) | | 2.0 | | |
| Time Gap based on site data | | | | | |
| Design Vehicle Gap+Adj for A | Add'l Opposing | Lanes | | | |
| Passenger Car | | | 6.5 sec | ; | |
| Single-Unit Tuck | | | 7.9 sec | 2 | |
| Combination Truck | | | 8.9 sec | | |
| ISD to front along Major Road | ISD=1 | .47V _{major} t _c | (ft) |) Eq 9-1, p | 9-45 |
| Passenger Car | calculated I | SD= | 430.0 ft | | |
| - | design I | SD= | 430 ft | | |
| Single-Unit Tuck | calculated Is | SD= | 522.6 ft | | |
| - | design I | SD= | 525 ft | | |
| Combination Truck | calculated Is | SD= | 588.7 ft | | |
| | design I | SD= | 590 ft | | |

time gaps and no time gap adjustment for any minor approach upgrade.

SIGHT DISTANCE SUMMARY

| Sight Distance Type | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|-------------------|-----|----------|----------------|
| Stopping | | | | |
| Without effect of grade | | 360 | N/A | N/A |
| With effect of grade on left | | 360 | N/A | N/A |
| With effect of grade on right | | 360 | N/A | N/A |
| Intersection | | | | |
| To Right | B1 | 565 | 725 | 855 |
| To Left | B2/B3 | 500 | 655 | 790 |
| On Major Road | F | 430 | 525 | 590 |



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Appendix L December 2022

§9.5.3.6, p 9-58

| Location: Quail Run Rd | | oigin | Diotarioo Anary |
|---|-------------|---------------------------------------|---------------------------------------|
| Assumptions and/or Givens | | | |
| Elements of Design from AASHTO | 6th | Edition | AASHTO |
| Passenger Vehicle | | 3.50 ft | 83261 n 3 |
| Truck | | 7.60 ft | \$3.2.6.1. p 3 |
| Object Height | | | 0 |
| Stopping Sight Distance | | 2.00 ft | §3.2.6.2, p 3 |
| Passing Sight Distance | | 3.50 ft | §3.2.6.2. p 3 |
| Vehicle Height | | 4.25 ft | §3.2.6.1, p 3 |
| Driver Eye Location | | | |
| From Edge of Major Rd Traveled Wa | ay | 14.50 ft | §9.5.3.2.1, p 9 |
| Deceleration Rate (a) | | | |
| Passenger Vehicle | | 11.20 ft/sec ² | §3.2.2.2, p |
| Truck | | N/A ft | |
| Brake reaction time (t) | | 2.50 sec | §3.2.2.1, p |
| | | | |
| Site Specific Data (Bike & turn lanes are outs | side travel | ed way and are no | t considered) |
| Major Street Design Speed (V _{major}) | | 30 MPH | |
| Grades - Approaching Minor Street from: | (– = appro | aching downhill) | |
| Len (GL) | | % | |
| Right (G _R) | 1 -4 | × 10 | |
| Approach Grade Adjustment Factor | Lei | L I.U | 1 bi 9-5, p s |
| Major Road Through Lanos on Each App | Rign | 1 0/Uso 1 | for PI/PO[/LI] only) |
| Median Width (in "Lane Equivalents") | oach | 0.0 (Use 0 | for RI/RO[/LI] only) |
| Minor Road Approach Upgrade if >3% | | 0.0 (030 0 | |
| Minor Road Access (check restricted) | | /0 | |
| | LI | LO/Th RC |) |
| | | | |
| Stopping Sight Distance = Brake Reaction Distance | e + Brakir | ng Distance | |
| Neglecting Effect of Grade | 47\/++4 070 | - <u>V²</u> | Eq 3-2, p |
| u-1.4 | +/ VI+1.0/3 | a | |
| | | | |
| Cal | culated d= | = 196.7 ft | |
| | Design d= | = 200 ft | |
| | | 2 | |
| With Effect of Grade d=1.4 | 17Vt+ | V ² | Eq 3-3, p |
| | 30(| (<u>a</u>)±G) | |
| | (| 32.2 | |
| | | | |
| Cal | culated d= | = 196.3 ft - left | |
| | | 200 ft - righ | t |
| | Llooign de | = 196.3 ft - left | |
| | Design u- | 000 8 | L |
| | Design u- | 200 ft - righ | |
| SSD's do not consider design for truck operation | ions sinco | 200 ft - righ | |
| SSD's do not consider design for truck operati | ions, since | 200 ft - righ better visibility is | 83225 p |
| SSD's do not consider design for truck operati considered to offset longer braking distance. | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p |
| SSD's do not consider design for truck operati considered to offset longer braking distance. | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p |
| SSD's do not consider design for truck operati considered to offset longer braking distance. | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p Appendi |
| SSD's do not consider design for truck operati considered to offset longer braking distance. | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p Appendi December 20 |
| SSD's do not consider design for truck operati considered to offset longer braking distance. CivTech Page 5 of 8 | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p Appendi December 20 |
| SSD's do not consider design for truck operati considered to offset longer braking distance. CivTech Page 5 of 8 | ions, since | 200 ft - righ better visibility is | §3.2.2.5, p Append December 20 |

| Locatio | n: Quail Run Rd | | | | Signit | Sistanoc Analysis |
|--------------|---|---|---|---|---|---------------------------------------|
| Intersection | Sight Distances | | | | | |
| Case B | –Intersections with Stop Co | ontrol on the | Minor R | oad | | AASHTO Ref §9.5.3.2, p 9-42 |
| C | ase B1—Left Turn from the Mi | nor Road | | | | §9.5.3.2.1, p 9-43 |
| | Dealers Maldala | | | Time | C (h.) | 0 |
| | Design Venicie | | | Time | Gap (i _g) | |
| | Passenger Car | | | 1.5 | sec | TDI 9-6, p 9-44 |
| | | | | 9.5 | sec | Tbi 9-6, p 9-44 |
| | Combination Truck | | | 11.5 | sec | 1 bi 9-6, p 9-44 |
| | Time gap adjustments | | | | | |
| | Add'I lanes to cross (1 st | is assumed) | | | | |
| | Passenger Car | | | 0.5 | i sec | See Notes |
| | Trucks | | | 0.7 | ' sec | below |
| | Minor Approach Upgrad | le (Per each | 1%>3%) | 0.2 | sec 2 | Tbl 9-5, p 9-37 |
| | Site data | | | | | |
| | Major Road Lance on Loff | Annroach | | 1.0 | ` | S0 5 2 2 1 p 0 4 |
| | Minor Road Approach Lin | arodo if > 2% | | 1.0 |) | 89.5.5.2.1, p 9-44 |
| | Minor Road Approach Op | grade, il >5% | | , | 70 | 99.5.5.2.1, p 9-44 |
| | Passenger Car Single-Unit Tuck Combination Truck ISD to left & right along Major Passenger Car Single-Unit Tuck Combination Truck | Road IS calcula des calcula des calcula des | GD=1.47 ed ISD= gn ISD= ed ISD= gn ISD= ed ISD= gn ISD= | 7.5 9.5 11.5 ISD to Left <u>and Right</u> 330.6 335 419.0 420 507.2 510 | 5 sec 5 sec 5 sec (ft) 1 5 ft 5 ft 2 ft 2 ft 1 1 ft | Eq 9-1, p 9-4 |
| CivTech | Pa | age 6 of 8 | | | | Appendix L December 2022 |
| 18-0555 Smoke T | ree Resort | | Sig | ht Distance Analysis |
|-----------------|--|---|---|--|
| Locati | on: Quail Run Rd | | | |
| Intersection | n Sight Distances (cont'd) | | | |
| | Case B2—Right Turn from the Minor Road | | | \$9.5.3.2.2, p 9-47 |
| ! | Case B3—Crossing Maneuver fr | om the Minor Road | | §9.5.3.2.3, p 9-48 |
| | Design Vehicle | | Time Gap (| (t.) |
| | Passenger Car | | 6.5 sec | Tbl 9-8, p 9-47 |
| | Single-Unit Tuck | | 8.5 sec | & |
| | Combination Truck | | 10.5 sec | Tbl 9-10, p 9-49 |
| | Time gap adjustments | | | |
| | Add'I lanes to cross (1 st is | s assumed) - Case B-3 | Only* | o |
| | Passenger Car | | 0.5 sec | See Notes |
| | Trucks | | 0.7 sec | below |
| | Minor Approach Upgrade | e (Per each 1%>3%) | | |
| | Case B-2 Only | | 0.1 sec | Tbl 9-8, p 9-47 |
| | Case B-3 Only | | 0.2 sec | Tbl 9-10, p 9-49 |
| | Site data | | | |
| | Major Road Lanes on Left | Approach | 1.0 | §9.5.3.2.2, p 9-47 |
| | Minor Road Approach Upg | rade, if >3% | 0 % | §9.5.3.2.2, p 9-47 |
| | Time Gap based on site data Design Vehicle Gap+Adj fo Passenger Car Single-Unit Tuck Combination Truck | isec) or Approach Grade>3% | B2 & B3 E (+Adjs for Add 6.5 8.5 10.5 | 1 <u>3 Only</u> 17 Lanes & Median for B3) 6.5 8.5 10.5 |
| | ISD to left (B2/B3) & right (B3) | along Major Rd ISD=1. | 47V _{major} t _g (ft) | Eq 9-1, p 9-45 |
| | | 10 | | to right |
| | | | | |
| | Passangar Car | calculated ISD= | 296 7 | 296.7 |
| | rassenger Gar | design ISD= | 290 | 290 |
| | | | | |
| | Single-Unit Tuck | calculated ISD= | 374.9 | 374.9 |
| | | design ISD= | 375 | 375 |
| | Combination Truck | calculated ISD= design ISD= | 463.1 465 | 463.1 465 |
| | *Number of major road lanes i | s irrelevant in Case B2. | | |
| 1 | The differences between Case time gaps and time gap adjustm | e B1 and Cases B2 & B ent for the minor approa | 3 are reduced ach upgrade. | §9.5.3.2.3, p 9-48 |
| 0 | | | | A |
| CivTech | Pa | ge 7 of 8 | | Appendix L December 2022 |
| | | | | |

| Intersection Sight Distances (cont'd) Case F–Left Turns from the Major Rod Design Vehicle Passenger Car | ad | | | |
|--|---------------|----------------------|-----------------------------------|-----------------|
| Case F–Left Turns from the Major Roa Design Vehicle Passenger Car | ad | | | |
| Case F–Left Turns from the Major Ro Design Vehicle Passenger Car | ad | | | AASHTO Re |
| Design Vehicle Passenger Car | | | | §9.5.3.6, p 9-5 |
| Passenger Car | | | Time Gap (t _g) | |
| J - | | | 5.5 sec | Tbl 9-16, p 9-5 |
| Single-Unit Tuck | | | 6.5 sec | Tbl 9-16, p 9-5 |
| Combination Truck | | | 7.5 sec | Tbl 9-16, p 9-5 |
| Time gap adjustments | | | | |
| Add'l lanes to cross (1 assu | imed) | | | |
| Passenger Car | | | 0.5 sec | See Notes |
| Trucks | | | 0.7 sec | Tbl 9-16, p 9-5 |
| Site data | | | | |
| Opposing Lanes (adj'd for x-v | vide median) | | 0.0 | |
| Time Gap based on site data | | | | |
| Design Vehicle Gap+Adj for A | Add'l Opposin | ig Lanes | | |
| Passenger Car | | | 5.5 sec | |
| Single-Unit Tuck | | | 6.5 sec | |
| Combination Truck | | | 7.5 sec | |
| ISD to front along Major Road | ISD= | 1.47V _{maj} | _{or} t _g (ft) | Eq 9-1, p 9-4 |
| Passenger Car | calculated | ISD= | 242.6 ft | |
| | design | ISD= | 245 ft | |
| Single-Unit Tuck | calculated | ISD= | 286.7 ft | |
| | design | ISD= | 290 ft | |
| Combination Truck | calculated | ISD= | 330.8 ft | |
| | design | ISD= | 335 ft | |

SIGHT DISTANCE SUMMARY

| | Governing | | | Combo |
|-------------------------------|-----------|-----|----------|-------|
| Sight Distance Type | Case | Car | SU Truck | Truck |
| Stopping | | | | |
| Without effect of grade | | 200 | N/A | N/A |
| With effect of grade on left | | 200 | N/A | N/A |
| With effect of grade on right | | 200 | N/A | N/A |
| Intersection | | | | |
| To Right | B1 | 335 | 420 | 510 |
| To Left | B2/B3 | 290 | 375 | 465 |
| On Major Road | F | 245 | 290 | 335 |



Page 8 of 8

Appendix L December 2022

Several General Plan policies apply related to the Major General Plan amendment of the Smoke Tree Resort. Primary policies that apply are copied below. As applicable, other policies may be considered.

Encourage renovation of Special Use Permit (SUP) sites while protecting the Town's low-density residential character and quality of life. (Goals LU 3 and LU 6)

LU 6.1 - The Town shall continue to encourage Special Use Permit property revitalization and improvement within their existing geographic boundaries as long as such improvement does not adversely affect the integrity and enjoyment of adjacent residential neighborhoods.

LU 6.2 - The Town shall require that proposals for revitalization and improvement of Special Use Permit properties include community impact assessments that address beneficial as well as adverse project impacts, including but not limited to noise, traffic, parking, open space or mountain views, and light pollution.

LU 3.1 - Consideration of Special Use Permit applications for development or redevelopment should balance a need for the Town's fiscal health against a steadfast commitment to protect the Town's low-density residential character and quality of life.

Mitigate the impact to residential neighborhoods and adjacent land uses (Goals LU 2, LU 6, and CC&H 1)

LU 2.4 - The Town shall ensure that construction projects are completed in a timely manner with minimal impact on surrounding residences, including minimizing the visual, traffic, parking, dust, noise and odor impacts related to the on-site schedule of work, location of temporary facilities, and placement of construction materials and debris.

LU 6.3 - The Town shall ensure that development within Special Use Permit properties is compatible with adjacent land uses, particularly residential uses, by requiring buffering techniques and enhanced site design measures, such as:

- Increased building setbacks from rear or side yard property lines adjoining single-family residential uses;
- Building heights stepped back from sensitive adjoining uses to maintain appropriate transitions in scale and to protect privacy;
- Landscaped off-street parking areas, loading areas, and service areas screened from adjacent residential areas, to the degree feasible;
- Lighting shielded to minimize impacts on adjacent residential uses and protect dark/night skies; and
- Operational restrictions to limit the adverse impact of noise, light, and traffic and minimize the risk of crime to adjacent residences.

CC&H 1.3 - The Town shall ensure the continued residential character of the Town by limiting the development of non-residential and new commercial land uses to Special Use Permit properties.

Use context-appropriate site/building design that is in harmony with the natural and built environment (Goals LU 2, LU 3, LU 4, LU 6, and CC&H 2)

LU 2.1 - The Town shall maximize the benefits of visual openness throughout the Town by specific limits on floor area ratio, lot coverage, setbacks, side yards, and building and wall heights.

LU 2.7 - Where walls and fences are used/necessary, the Town shall require use and effective upkeep of attractive wall and fence materials and finishes (e.g., stone, masonry, wrought iron, vegetation) and wall designs (meandering, see-through).

LU 3.2 - The Town shall require development or redevelopment within Special Use Permit properties to provide any necessary mitigation achieved through context and scale, and architectural design, setbacks, sound moderation, resort property programming, and landscape buffering.

LU 4.3 - The Town shall work with Special Use Permit properties to integrate pedestrian amenities, attractive streetscapes, shade trees, and lighting into open spaces in keeping with the character of the Town.

LU 6.5 - The Town shall encourage context- appropriate and responsive building design and site planning on Special Use Permit properties that mitigates the scale of larger buildings through careful use of building massing, setbacks, facade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details.

CC&H 2.2 - The Town shall encourage building design that respects and responds to the local context, massing and scale, including use of energy saving and sustainable materials where feasible, responsiveness to the Sonoran Desert climate, and consideration of the cultural and historic context of the Town of Paradise Valley's neighborhoods.

CC&H 2.6 - The Town shall support the development of architecturally significant public and private buildings and resort development in key locations to create new landmarks and focal features that contribute to the Town's identity and value the Town's location, climate and historic legacy.

Maintain and preserve Town's natural resources (Goals LU 1, CC&H 3, EPW 1, EPW 2, EPW 3, OS 1, and M 4)

LU 1.2 - The Town shall encourage streetscapes that are visually open and that preserve native desert landscaping.

CC&H 3.5 - The Town shall continue to balance the low light levels of the Town with the safety and security of residents and visitors.

EPW 1.3 - The Town shall encourage new development and redevelopment to retain on-site to the maximum extent feasible the preservation of native plants and wildlife habitat.

EPW 2.4 - The Town shall continue to promote planting native and compatible shade trees with substantial canopies, and require site design for non-residential properties which uses trees to shade, parking facilities, streets, and other facilities to minimize heat island effects.

OS 1.8 - The Town shall place a high priority on the preservation and restoration of mountain views from public rights-of-way during any new, intermediate or major Special Use Permit amendment process.

M 4.1 - The Town shall reduce the generation of dust by requiring streets, driveways, and parking lots to be paved or finished with a stabilized surface. In the cases of parking lots, the Town shall further utilize paving materials and/or shade trees to minimize the "heat island" effect of asphalt finishing.

Provide community spaces/public benefit (Goals LU 4, CC&H 4, OS 3, and EPW 4)

LU 4.4 - The Town should encourage the integration of art into the visual character of Town property, right of ways, and Special Use Permit properties.

CC&H 4.2 - The Town shall encourage Special Use Permit properties to incorporate strategically located (e.g., accessible to surrounding neighborhoods) community gathering spaces that include small and appropriately scaled community-oriented services or amenities designed to support the interaction of Town residents.

OS 3.2 - The Town shall continue to develop partnerships with resort properties to make private recreation programs, activities, and facilities available for public use to Town residents.

OS 3.3 - Ensure that new residential and resort developments provide adequate on-site recreational and open space amenities consistent with the values and standards of the Town and the needs of the new development.

EPW 4.6 - The Town shall support development of charging infrastructure within SUP developments and at Town facilities for residents and visitors that use electric vehicles.

Support sustainable building practices (Goals EPW 5, EPW 6, EPW 7, S 2, S 4, and S 5)

EPW 5.5 - The Town shall encourage water conservation for new and existing developments through the use of water-conserving fixtures and devices, conversion and installation of drought tolerant native landscaping, and other conservation techniques.

EPW 6.5 - Encourage and/or incentivize the use of Low-Impact Development (LID) or Green Infrastructure techniques as a viable alternative to traditional BMPs for stormwater management.

EPW 7.6 - The Town shall continue to require adequate on-site retention for new development and redevelopment and require the provision of appropriately sized facilities to retain and transport stormwater.

S2.5 - The Town shall require all new government buildings and encourage Special Use Permit projects to utilize a minimum level of sustainability based on an accepted "green" evaluation system (i.e. LEED).

S2.6 - The Town shall encourage adaptive reuse and recycling of materials when buildings are renovated, deconstructed or torn down.

S2.7 - Encourage the use of sustainable and innovative materials that minimize heat gain on outdoor surfaces such as parking lots, roadways, and sidewalks when appropriate maintenance is assured, and adjacent properties are not impacted.

S4.3 - Promote the economic and environmental benefits of water-efficient retrofit improvements to existing private buildings.

S4.4 - The Town shall encourage the harvesting of rainwater and grey water for reuse and recycling of other waters when feasible.

S5.3 - Support waste diversion by encouraging construction and demolition debris recycling for construction and demolition projects.

Smoke Tree Resort Guideline Comparison May 2023

Below is an evaluation of how the Smoke Tree Resort Major Special Use Permit amendment application meets the guidelines for property zoned Special Use Permit (SUP). Red highlighted text indicates where the proposed structures do not meet guidelines. Purple highlighted text indicates where existing structures (all proposed to be demolished) do not meet guidelines. The request is for the redevelopment of the 5.0 net acre site with 82 total resort guest units, a detached fine dining restaurant/bar with cellar and patio dining, all-day market bistro with outdoor patio, meeting function building with outdoor event lawn, resort pool, guest fitness and spa facility, and underground parking. The resort is located at 7101 E Lincoln Drive

| No. | Торіс | SUP Guideline - Town Code - Town | Proposed by Applicant |
|-----|-------|--|---|
| | | Policy - General Plan | sf=square feet |
| 1 | Use | Section 1102.2 of the Zoning Ordinance identifies allowable uses for a resort: • Guest units • Accessory uses • Indoor/outdoor recreational facilities • Retail sales • Office & business services • Meeting spaces Dwelling units | The primary use is for 82 guest units totaling approximately 52,796 sf (39% of the total area), back of house functions (offices, kitchen, storage, laundry, etc.) totaling approximately 49,542 sf (35%), public areas of the food/beverage uses totaling approximately 11,660 sf (10%), spa/fitness totaling approximately 5,361 sf (9%), lobby totaling approximately 4,958 sf (4%), and indoor meeting space totaling approximately 4,654 sf (3%). The total area used is 136,469 sf since there are public uses at the garage level (the 167,580 sf gross area minus the 31,301 sf underground garage parking area spaces). Analysis: The type of resort uses are compliant with Section 1102.2 of the Zoning Ordinance. The site is and has been since incorporation in 1961 used as a resort, with the resort not in operation for the last couple of years. The uses at the proposed resort will include additional resort amenities from the past resort. Besides additional guest units, the proposal offers two different food and beverage options instead of one restaurant facility, an indoor/outdoor meeting function space, and fitness/spa facilities. Improvements to the grounds include a larger resort pool, enhanced landscaping, new signage, and underground parking. |

| 2 | Noise Mitigation/Impact to Adjacent Uses | Section 1102.3.C of the Zoning Ordinance allows the Town to require various plans and studies, including a noise study to evaluate the compatibility of the proposed project with surrounding areas. | The applicant submitted a noise study that still requires additional clarification information and/or will require stipulations to demonstrate compliance to Town noise standards at the property line (specifically, the 45 decibels on Sundays, holidays, and between 10:00 p.m. and 7:00 a.m.) <i>Analysis: The submittal includes a noise study based on various modeling and assumptions that may include the consideration of stipulations, installation of noise mitigation equipment, and/or design modifications. There may be consideration of possible restrictions on the use of certain outdoor areas after 10:00 p.m. and on Sundays/legal holidays and/or the request needs to include technological noise mitigation and/or or other design modifications in the areas along the property line like the French Cowboy patios, west of the event lawn along Quail Run Road, and the south opening near the resort pool. Some items requested of the applicant to clarify includes providing more information on the type of dispersed speakers proposed (locations, quantity ranges, type of speakers, etc.), noise limiters, and/or noise monitoring devices. Compliance with noise mitigation is under review and will be revisited.</i> |
|---|--|---|---|
| 3 | Density | SUP Guidelines: Minimum 20 acres Minimum 20 acres Minimum 20 acres Minimum 1 guest unit per 4,000 sq ft = 52 maximum units (net including Lincoln Drive and Quail Run Road post dedication), 55 maximum units (net) or 58 maximum guest units (gross) (10.7 units per gross acre or 10.8 units per net acre or 11.0 units per net acre) | Site (Gross): 233,630 sf (5.4 acres) Site (Net): 218,096 sf (5.0 acres) Site (Net): 207,250 sf (4.8 acres Quail Run Road post dedication) Gross acres includes the rights-of-way on the adjoining streets. Existing net acres excludes the Lincoln Drive right-of-way at 33 feet in width in lieu of the typical 65 feet half width (but includes sidewalk easement of 7 feet) and Proposed net acres excludes the Lincoln Drive right-of-way at 33 feet in width in lieu of the typical 65 feet half width (but includes sidewalk easement of 7 feet) and Proposed net acres excludes the Lincoln Drive right-of-way at 33 feet in width in lieu of the typical 65 feet half width (but includes sidewalk easement of 7 feet) and excludes the Quail Run Road at the typical 25-foot half-width post dedication. 30 existing units (5.6 units per gross acre at 1 unit per 7,788 sf or 6.0 units per net acre at 1 unit per 7,720 sf) 82 proposed units (15.2 units per gross acre at 1 unit per 2,849 sf or 16.4 units per net acre at 1 unit per 2,660 sf or 17.1 units per net acre at 1 unit per 2,527 sf (includes Quail Run Road dedication) |

| | | | Analysis: The site area is and has been five acres, which is a quarter of the SUP Guideline for resorts for a minimum of 20 acres. Smoke Tree is the smallest resort by size within the Town. The proposed density at 15.2 units per acre (gross) and 16.4 and 17.1 units per acre (net) falls within the density range for existing Town resorts of 3.9 units per acre (Camelback Inn located at 5201 E Lincoln Drive due to it being the largest resort by size at 117 total acres) and 20.1 units per acre (Doubletree Paradise Valley located at 5401 N Scottsdale Road). Based on the five acres, the maximum number of guest units in accordance with the SUP Guideline is 58 units (gross) or 52 or 55 (net) and the applicant proposes 82 units. The SOD directs the Planning Commission to evaluate how the proposed density impacts safety and quality of life. |
|---|-------------------------|--------------------------------|---|
| 4 | Density Lot Coverage | Maximum 25% Lot Coverage | Existing at 24,100 sf (10.3% gross, 11.1% net); Proposed 64,350 sf (27.5% gross, 29.5% net and 31.0% net Quail Run Road post dedication |
| | | Maximum 60% Impervious Surface | Existing estimated at 69,700 sf (29.8% gross, 32.0% net) Proposed 137,360 sf (58.8% gross, 63% net and 66.3% net Quail Run Road post dedication) |
| | | Minimum 40% Open Space | Existing estimated at 152,000 sf (65.0% gross, 70.0% net) Proposed 96,271 sf (41.2% gross, 44.1% net and 46.5% net Quail Run Road post dedication) |
| | | No Floor Area Ratio Guidelines | Existing same as lot coverage. Proposed 116,570 sf (50.0% gross, 53.4% and 56.2% net Quail Run Road post dedication). Excludes basement level. |
| | | | Analysis: The proposed lot coverage at 27.5% (gross) and 31.0% (net) compared to SUP Guideline of 25% falls near the lot coverage range for existing Town resorts of 7.8% (Camelback Inn located at 5201 E Lincoln Drive due to it being the largest resort by size at 117 total acres) and 28.7% (Omni Montelucia resort located at 4949 E Lincoln Drive). There are two Town resorts that allow for different lot coverage requirements. The Montelucia resort allows for the maximum building footprint (excluding roof overhangs or other projections) not greater than 25% of the gross area and the maximum lot coverage including building footprints, overhangs, projections, canopies, shade structures, trellis, pool cabanas and miscellaneous structures not greater than 31% of the gross |

| | | | area. The Camelback Inn allows for fully enclosed buildings at a maximum of 20% of the gross area, all other structures at a maximum of 10% of gross area, and public areas a maximum of 30% of the gross area. The applicant should provide more detail on lot coverage by footprint, overhang, and other accessory structures should there be consideration in allowing total lot coverage above the 25% SUP Guideline. The proposed floor area ratio of 50.0% (gross) and 56.2% (net) would result in the highest floor area ratio percentage compared to existing Town resorts. The highest being the 35.1% (Montelucia) and 34.6% (Sanctuary on Camelback Mountain located at 5700 E McDonald Drive). As the SOD directs the Planning Commission to evaluate lot coverage and floor area ratio within the context of the immediately adjacent properties the applicant may want to provide lot coverage and floor area data on nearby resorts within the City of Scottsdale. Also, the SOD allows for consideration of lot coverage and floor area ratio based on the unique characteristics of the site (e.g. five acre size, proximity to the City of Scottsdale, and the site adjoining non-residential uses on three sides |
|---|------------------|--|---|
| | | | The maximum impervious surface meets the guideline using the gross acreage, but not the net acreage. The proposed project meets the guideline for open space. The reduced lot size of the resort, its location near the City of Scottsdale/Scottsdale Rd with public transit and more dense development, and adjoining non-residential on three sides may warrant some or all of the proposed differences from the SUP Guidelines. |
| 5 | Height/Viewsheds | SUP Guidelines (Buildings): | Existing buildings with guest units approximately 10-foot tall |
| | | 36-Foot Maximum – Principal Structures (guest registration, admin offices, and guest units). | <u>Arrival Building</u> – This building has the 3-meal service market, lobby, event space, spa, fitness, and 77 of the 82 guest units. 36 feet 3 inches at tallest measured within the pool courtyard and east elevation – other elements at 14 feet, 18 feet, and 22 feet tall. |
| | | 24-Foot Maximum Accessory Structures | Casitas - 5 one-story guest unit casitas located south of the event space. 14' feet tall |
| | | | Existing restaurant building 16 feet tall to tallest parapet/screen |
| | | | French Cowboy – 18 feet |
| | | | Event Lawn Gazebo – Approximately 20 feet by 20 feet, one-story. |

| | | Applicant to pr | ovide more info | rmation. | | |
|--|--|---|--|---|---|---|
| | | <u>Pool Bar/Restrooms</u> – 11 feet, 30 feet by 35 feet (1,050 square feet) with most being covered awning and barat approximately 225 square feet and the restrooms at approximately 125 square feet | | | | |
| | | <u>Cabanas</u> - Ap Applicant to pr | proximately 10 f ovide more info | eet by 70 feet total a mation. | area, one-s | story. |
| | 18-Foot Maximum Service Structures Towers/architectural features may be higher subject to SUP approval | None | | | | |
| | <u>SUP Guidelines (Open Space</u> <u>Criteria (OSC))</u> : Starting at 16-foot height at 20-foot setback in which height increases via 20-degree slope (24-foot height at 40-foot setback, 28-foot height at 60-foot setback, 32- foot height at 80-foot setback, 36-foot height at 100-foot setback) | The Open Spa exception of th the 20-foot set The Open Spa exception of th the roof of the plane. | ace Criteria is me three western back. ace Criteria is me he east end of th French Cowboy | et on all existing buil most buildings beca et on the proposed b e third story arrival b penetrates the Ope | dings with use they a puildings wi puilding and n Space C | the re within ith the d parts of criteria |
| | | Property Side | Existing Minimum | Principal Building Guest Units, Market etc. | Principal Building Casitas | Accessory French Cowboy |
| | | Height Original Grade | 10 feet | 36 feet 3 inches 14, 18, and 22 feet | 14 feet | 18 feet 25 feet 5 inches |
| | | Height Open Space Criteria | Meets, except 3 west buildings are within the | Meets, except part of 3 rd story along east | Meets | Meets, except some roof sections |
| | | | 20-foot setback | | | |

| | Analysis: The proposed structures are within the SUP Guidelines on height except for two buildings (French Cowboy building on height over 24 feet and penetrating the OSC and the Arrival building on height over 36 feet and portions of the third floor penetrating the OSC). There are some roof portions of the French Cowboy building penetrating the OSC but the exact encroachment is not clearly dimensioned or illustrated. For example, Section CC on the Conceptual Site Elevations illustrates a pitched roof with no chimney and the Conceptual Building Elevations show a chimney that would penetrate the OSC plane and the cross section shows a height of 25 feet 5 inches while the height diagram shows the height at 18 feet. There are portions of the Arrival building penetrating the OSC. 13 of the 25 third floor guest units on the arrival building have no OSC encroachment. However, eight third floor guest units almost fully encroach and four of the third floor guest units have some minor roof encroachment. The arrival building is 36 feet 3 inches tall. The nearest portions of the arrival building (meeting venue, market, lobby, back-of- house) are one-story ranging in height from 14 feet to 22 feet. The SOD identifies that heights comply with the guidelines with mechanical screening and architectural elements included in the maximum height, adding that 36 feet/three story is the exception and only considered where contextually appropriate and mitgated by design. The applicant could redesign the French Cowboy building to comply with the SUP Guidelines as the amount and roof location of the encroachment on this building is minimal. There may be options for the applicant to evaluate the design of the third story of the arrival building. This includes that the height could be lowered as the proposed finished floor to ceiling heights are ten feet for the first and second floors and 12 feet for the third floor encroachment might be considered as the market and lobby portion of the Arrival building and the approximate two-foot grad |
|--|--|
| | |

| 6 | Setbacks | Nine existing bu 0 feet to post de feet to south (Au Arrival Building Run Rd, 50 feet <u>Casitas</u> – 365 fe 230 feet to east | ildings with edication Qu ndaz). – 95 feet to to east (me eet to Lincol (medical), a | guest units approximately 4 ail Run Rd, 40 feet to east (b Lincoln Dr, 55 feet to post o edical), and 44 feet to south n Dr, 60 feet to post dedicat and 50 feet to south (Andaz) | 0 feet to Lincoln Dr, medical), and 35 dedication Quail (Andaz). ion Quail Run Rd, | |
|---|----------|--|---|---|--|--|
| | | | Property Side | Existing Minimum | Principal Building Arrival | Principal Building Casitas |
| | | | | building | | |
| | | North Front Lincoln Drive | 40 feet | <mark>95 feet</mark> 175 feet (2 nd /3 rd stories) | 365 feet | |
| | | West Street Side Quail Run Road | 0 feet | <mark>55 feet</mark> 175 feet (2 nd /3 rd stories) | 60 feet | |
| | | | East Adjoins Medical | 40 feet | 50 feet (all 3 stories) | 230 feet |
| | | | South Adjoins Andaz | 35 feet | 44 feet (1 st /2 nd stories) 75 feet (3 rd story) | 50 feet |
| | | 40-Foot Maximum - Accessory Structures | Existing restaur dedication Quai (Andaz). <u>French Cowboy</u> Run Rd, 305 fee <u>Event Lawn Gar</u> Quail Run Rd, 2 <u>Pool Bar/Restro</u> Quail Run Rd, 2 <u>Cabanas – 285</u> | ant building I Run Rd, 5 – <mark>25 feet to</mark> et to east (m <u>zebo</u> – 320 270 feet to e <u>ooms</u> – 315 220 feet to e feet to Linc | 64 feet to Lincoln Dr, 130 fe 2 feet to east (medical), and b Lincoln Dr, 39 feet to post of hedical), and 360 feet to sour feet to Lincoln Dr, 160 feet to ast (medical), and 135 feet to feet to Lincoln Dr, 200 feet to ast (medical), and 125 feet to ohn Dr, 225 feet to post dedic | eet to post 310 feet to south dedication Quail th (Andaz). to post dedication to south (Andaz). o post dedication to south (Andaz). cation Quail Run |

| | | Rd 165 feet to | east (medic | al) and 165 feet | to south (Andaz) |
|--|--|---|--|---|---|
| | | Property Side | Existing Minimum | Accessory French Cowboy | Resort Pool |
| | | North Front | 64 feet | 25 feet | 315 feet |
| | | West Street Side | 130 feet | 39 feet | 240 feet |
| | | East Adjoins Medical | 52 feet | 305 feet | 170 feet |
| | | South Adjoins Andaz | 310 feet | 360 feet | 95 feet |
| | 65-Foot Maximum – Service Structures <u>No guideline on number of stories</u> | None Existing one-sto <u>Two and three-</u> dedication Qua and 44 feet (see | ory and prop <u>story setbac</u> il Run Rd, 5 cond story) | oosed one, two, a <u>ck</u> – 175 feet to Li 0 feet to east (me to south (Andaz). | ind three-stories incoln Dr, 175 feet to post edical), and 75 feet (third sto |
| | <u>SUP Guidelines (Pools):</u> 65-Foot Minimum - Generally Available All Guests, No guideline for pools not generally available to all guests | Resort Pool/Adj dedication Qua (Andaz). The proposed s are located on t spa), 350 feet to feet to east (me (Andaz). The si and 15 feet in le feet in width an- | jacent Hot 1 il Run Rd, 1 seven plung the south sid o Lincoln Dr edical), and ze of these ength (150 s d 25 feet in V feet in wid | <u>ub</u> – 315 feet to 70 feet to east (n e pools are not a de of the site (one 5 feet to post o 35 feet (casitas) a plunge pools are square feet, four o length (250 squa | Lincoln Dr, 240 feet to post nedical), and 95 feet to south vailable to all guests. These e at each casita and two at th dedication Quail Run Rd, 125 and 30 feet (spa) to south approximately 10 feet in wid of the pools are at this size), re feet, one of the pools is at |

| | the pools are at this size). |
|--|--|
| | Analysis: Both the existing and proposed setbacks for the principal buildings are not within the SUP Guideline of 100 feet. The proposed arrival building is larger and taller than the existing buildings with setbacks that are greater than the existing buildings (particularly from Quail Run Rd moving from 0 feet to 55 feet and Lincoln Dr from 40 feet to 95 feet). The setback for the two story and three story elements exceed a setback of 100 feet from Lincoln Drive and Quail Run Road. The two-story setback to the medical plaza and Andaz Resort is similar to the two-story medical plaza setback along the shared eastern property line at 40 feet. The 44-foot setback to the south property line and the 50-foot setback to the east property line is why the third story encroaches into the OSC. This placement of the arrival building skewed eastwards results in a larger setback away from the single- family lots along the west side of Quail Run Road. Also, it places the guest unit balconies further away from the homes to the west and the Andaz Resort to the south due to the 'L' shape design with the open part of the 'L' facing south. The roof planters on the third floor are setback approximately 15 feet to 25 feet from the roof edge that will limit the visibility of persons on the roof patio for the two southernmost third floor guest units. The greatest impact of the third story is to the east with the medical plaza and the balconies of the resort on this side. |
| | The casitas building at one-story, 14-foot tall may have a setback less than 100 feet to the property lines of Quail Run Road and Andaz Resort, but these are 60 feet and 50 feet respectfully that would be no more impactful than an accessory structure with a lessor 40-foot setback and 24-foot height. This building also completes the courtyard that helps in mitigating noise/light from the event lawn. |
| | The event lawn gazebo, pool bar/restrooms, and cabanas accessory structures are all within the event lawn/resort pool courtyard at heights below the surrounding buildings which make these structures only visible when within the courtyard. |
| | The setbacks of the French Cowboy restaurant building (footprint/roof-patio overhang) at the northwest corner of the site are less than the SUP Guideline for an accessory structure of 40 feet from a public street. The |

| | | | building footprint is setback 38 feet 3 inches and setback approximately 30 feet to the edge of the patio roof along Quail Run Road. The building footprint setback is 33 feet 4 inches and setback approximately 25 feet to the edge of the patio roof along Lincoln Drive. It is suggested that the setback from the post Quail Run Road dedication property line not be less than 40 feet. Also, to consider a larger setback to the existing Lincoln Drive property line (33-foot half width right-of-way line) to account for any future right-of-way needs. |
|---|------------------------|---|---|
| 7 | Landscaping Buffers | SUP Guideline Landscape islands every 100 feet for within surface parking, shade trees every four stalls <u>SUP Guidelines (Setbacks for</u> <u>Parking Lots/Drives)</u> 40 feet from rights-of-way and non- residential <u>SUP Guidelines (Landscape Buffer):</u> 50-foot minimum – Lincoln Dr 30-foot minimum – Quail Run Rd No guideline adjoining non- residential - south & east | Compliant, longest span between landscape islands is 72 feet, shade trees generally every two to four stalls. 12 feet to 16 feet to Lincoln Dr, 0 feet & 18 feet to post dedication Quail Run Rd, 2 feet to east (medical), and 5 feet to south (Andaz). 8 feet to 12 feet 2 feet & 18 feet to post dedication Quail Run Rd 2 feet (east) & 5 feet (south) The top number being the parking setback and the lower number being the landscape setback. Red text indicating below the SUP Guideline. |

| | Section 5-10-7.D, Town | Property Side | Existing Minimum | Proposed Minimum | *Due to sidewalk ** 10 feet in right-of-way | | | |
|--|--|---|----------------------------|---------------------------------|--|--|--|--|
| | <u>Code/1996</u> <u>Landscape Guidelines</u> Landscape right-of-way at average of 100 lineal feet (If) with four 15-gallon | North Front | 0 to 2 feet 2 feet | 12 to 16 feet 8 to 12 feet * | lane | | | |
| | trees and five 1-gallon shrubs; 1996 | Lincoln Drive | | | | | | |
| | Landscape Guidelines trees 30-foot | West | 0 feet | Not Applicable | | | | |
| | shrubs 20-foot intervals. Lincoln Dr is | Street Side | 55 feet | 18 feet | | | | |
| | \sim 420 lf minus drives and Quail Run | North of Access | | | | | | |
| | Rd ~ 475 If minus drives. Results in 14 to 17 trees and 21 shrubs along | West | 0 feet | 2 feet | | | | |
| | Lincoln Dr and 16 to 19 trees and 24 | Street Side | 55 feet | 2 feet ** | | | | |
| | shrubs along Quail Run Rd. | South of Access | | | | | | |
| | due to the height, not indigenous, | Quail Run Road | 0.6 | 0.6 | | | | |
| | partially block view corridors, | East Adioins Medical | 2 feet | 2 feet | | | | |
| | irritants. Discourage oleander due to | South | 7 feet | 5 feet *** | | | | |
| | their toxicity and obstruction of views/public rights-of-way. Section 8- | Adjoins Andaz | 40 feet | 5 feet *** | | | | |
| | 2-6, Town Code prohibits mulberry, and olive (unless non-pollenating variety) | Lincoln Dr is proposed with 15 trees and Quail Run Rd with 17 trees. There are triple the number of shrubs/accents above the minimum. No Ironwood trees are proposed. No palm trees are on the detailed landscape plan, but shown on the color illustrated plan around the resort pool. There are no proposed mulberry or olive trees | | | | | | |
| | <u>Visually Significant Corridors Plan</u> Lincoln Drive is a significant corridor with guidelines for the Resort Living Zone addressing plant material, specialty paving at entry points or other areas, accent walls, 75% live cover, unique plants, outdoor room areas, massing of boulders, lighting, | The palette consists of a mixture of trees, shrubs, and accent cactus. primary palette includes mesquite trees with ghost gum trees and hope for creating a hedge along the south and east property lines. The other predominate shrubs, accents, and vines are bougainvillea, red yucca, agave, milkweed, and creosote. The predominate proposed ground co- along Lincoln Drive is pine muhly (an ornamental grass similar to mist grass). Except for the ghost gum (a type of eucalyptus that is from Australia and drought tolerant), these plants are all on the list or similar | | | | | | |

| | and utility screening. Major SUPs are suggested to meet the Best category. <u>General Plan LU 3.2.</u> Town shall require redevelopment within SUP properties to provide necessary mitigation through context and scale, architectural design, setbacks, sound moderation, resort property programming, and landscape buffering. [Refer to Setbacks for landscape buffer widths] | the plant list for the Resort Living Zone. The 1996 guidelines suggest avoiding eucalyptus, but these trees are drought tolerant and grow upward to 50 feet which may be beneficial for this application to screen the three- story building with the Hopseed bush are proposed to screen the ground- level areas. Current research shows that eucalyptus pollen is not easily airborne and allergies are more from its oils. The proposal includes specialty pavement at the arrival driveway, parking spaces along Lincoln Drive, and includes two walkways from Lincoln Dr into the site. The proposed patio and entry screen walls are illustrated as decorative tile to match the building architecture. The applicant was asked to provide more seasonal variation in color to better comply with the Visually Significant Corridors Plan and 1996 Landscape Guidelines the landscaping along Lincoln Drive. The predominate shrub/accent is Pine Muhly an ornamental grass and Milkweed with yellow/white flowers and Mesquite trees with yellow flowers. It is also suggested to change out three Mesquite trees with Ironwood trees along Lincoln Drive (possibly at the walkway toward the Market) and replacing several of the masses of Pine Muhly with a mix of desert accents like Aloe, Yucca, Ocotillo, Sage, and/or Saguaro. |
|--|--|---|
| | | Analysis: Neither the existing nor the proposed perimeter landscape and parking buffers meet the SUP Guidelines. The proposed plant quantities, hedge materials along the south and east property lines, and proposed screen/patio walls along the rights-of-way will buffer the resort as viewed from off the property with additional changes. These changes may include a greater setback of the French Cowboy as noted under Setbacks, a wider landscape buffer south of the access driveway along Quail Run Road, and plant material changes along Lincoln Drive and along the south and east property lines. Stipulations will be included regarding maintenance/replacement of plant material along with other applicable stipulations. Additional analysis is necessary as the applicant provides more information. |

| 8 | Exterior Lighting | SUP Guidelines: | |
|---|-------------------|---|---|
| | | Light source/bulb hooded and shielded so not visible from adjacent properties. | The proposed exterior light fixtures are all hooded and shielded except for possibly three fixtures that require additional information to verify proper hooding and/or shielding. These include fixture CP1 which is a hanging pendant light with an open weave shade proposed at and along the Quail Run arrival area. It has low illumination at 246 lumens, but the light element does not appear shielded. The M1 fixture are string lights on the event lawn. No mounted height is noted and the string lights are shown with the bulbs without a cap. The event lawn is within a courtyard so these lights should not be visible offsite particularly with landscape trees along Quail Run Rd. The N1 LED tape lights are shown within the casita pool areas which will meet guideline provided these are mounted with the light not directed upwards. |
| | | Up lighting 300 lumens maximum | The proposal includes several ground up light fixtures (G1, F1/F2). All these fixtures are at or under 300 lumens. |
| | | Pole lights: 16-foot maximum height 16-foot setback (height of pole determines setback) | The proposed pole light fixtures (P1 and P5) are all the same LED pole fixture directed downward. No height is provided, but assumed to be 16-foot tall. The P1 fixture is the predominant fixture used in the parking lot and fire lane. There are a total of five fixtures along both street frontages. This fixture is setback 20 feet or more from the property line (except for two fixtures nearest Lincoln Drive at an approximate 16-foot setback to the existing 33-foot half-width right-of-way line). The P1 fixture is 2,096 lumens and 2,700 Kelvins. The higher P5 fixture is shown in the arrival court nearest the arrival building at 3,695 lumens and 2,700 Kelvins. There are three P5 fixtures in this area. |
| | | 1.6 foot-candles (fc) – Parking Lots 5.0 foot-candles – Interior Driveways 5.0 foot-candles – Service Buildings 3.0 foot-candles – Other Structures 5.0 foot-candles – Pool Areas 10 foot-candles – Outdoor Dining | The average illumination based on use ranges from 0.61 to 2.52 foot- candles, except for egress stairs at 11.53 foot-candles. 10 foot-candles is the typical minimum for safety on stairwells. Most of these stairwells are internal to the site, with the nearest at the northwest portion of the French Cowboy building within the walled patio area and near Lincoln Dr and Quail Run Rd intersection which is illuminated with street lighting. |
| | | Illumination at other property lines not adjoining residential 0.75-foot cand maximum (applies to all 4 property lines) – (Section 1023 Zoning Ordinance) | Illumination at the property complies with Section 1023 of the Zoning Ordinance as no location is greater than 0.75 foot-candles (the maximum shown is 0.5 foot-candles at certain locations along the property line.) |

| | | Building lighting (no guidelines) | The proposed building lights are decorative down lights and sconces (e.g., CW2, CW3, W1) that vary in lumen count from 139 lumens to 1,250 lumens all at 2,700 Kelvins. The applicant has been asked to provide the proposed lighting on the second and third floors. Analysis: The proposed lighting appears to be within the Special Use Permit Guidelines with more information required on the hooding/shielding of fixtures CP1, M1, and N1. Also, the material needs to include the proposed light fixtures for the second and third floors. |
|----|---|---|---|
| 9 | Grading/Drainage & Utilities | Submit with SUP preliminary drainage, grading, water, and wastewater information provided and are reviewed by the Town's Engineering Division to ensure | Analysis: The site currently provides no onsite retention. The proposed improvements will utilize parking and drive corridors to drain stormwater east and north to match current drainage patterns through a series of catch basins and underground retention basins. Utility improvements are generally onsite with basic water and sewer connections in Lincoln Drive at the abarad access with the mediael place. The first review of these |
| | | compliance to required safety and other standards. | preliminary plans requires a couple of clarifications. |
| 10 | Traffic, Parking, Access, & Circulation | <u>SUP Guidelines:</u> 1.2 spaces per guest unit 2.0 spaces per dwelling unit 1.0 space per 50 sf net dining 1.0 space per 2 seats/equivalent meeting space 1.0 space per 300 net sf retail 1.0 parking space per 300 net sf office and service establishment Shared parking allowable via approved traffic/parking analysis | The primary circulation is off Quail Run Road via a new access driveway along with the shared access with the medical plaza along Lincoln Drive that the Town worked with the prior resort owner and the owner of the medical plaza to remove the past four driveways along Lincoln Drive to this shared access driveway. Circulation along the south and east of the site will be restricted due to a fire lane. Parking is roughly split between surface and an underground parking. The garage access and loading/trash back of house services are in the northeast portion of the site nearest the medical plaza. The proposal is for 143 total parking spaces (69 surface and 74 in a proposed underground garage). The parking and traffic analysis has been reviewed by the town professional staff with comments sent back to the applicant. |

| | Parking & driveway areas situated to prevent lights shining onto adjacent residential properties. Parking and driveway areas within 200' of residential to be screened with 3' tall wall or landscape berm | The proposal includes a 3-foot tall screen wall for the parking spaces along Lincoln Drive, a 6-foot tall wall in front of the parking spaces along Quail Run Rd, and a 5-foot tall wall along the east property line. There are no parking spaces along the south property line and the existing 5-foot tall wall will screen any activity along the proposed fire lane. |
|--|---|---|
| | No loading trucks, truck parking, trash containers within 100' of residential property | There are no loading trucks, truck parking, trash containers within 100 feet of residential property. The proposed loading area is at the northeast portion of the arrival building and approximately 300 feet away from the R-43 lots along the west side of Quail Run Rd with buildings, perimeter walls, and landscaping between these homes and this back-of-house functions. |
| | <u>General Plan Policy LU 6.2</u> Town shall require that proposals for revitalization and improvement of SUP properties include community impact assessments that address beneficial as well as adverse project impacts, including but not limited to noise, traffic, parking, open space or mountain views, and light pollution | The application packet includes acoustical, photometric, parking, traffic impact, open space criteria assessment. |
| | Policy 77 (Street Cross Sections and Details until the Town's Engineering Design Standards Manual is completed) identifies: | |
| | Major Arterial Cross Section with 130 feet in width (65 feet in half width) with median, 24-foot wide asphalt, 2-foot wide curbs, and a 6-foot wide sidewalk | Lincoln Drive. 33-foot half street existing and a 7-foot wide sidewalk easement granted in 2021 as part of the shared driveway work with the medical plaza along with a sidewalk built as part of a Town project in 2021/2022. |
| | Local Cross Section with 50' width (or 25' half width), 24' of asphalt and 2' curbs | Quail Run Road. 25-foot of half street (post dedication) and will comply with the minimum Town pavement standard of 26 feet measured from back of curb. |
| | | |

| | | | Analysis: The professional staff reviewed the parking analysis and traffic analysis and staff awaits a response from the applicant. There were aspects of the traffic and parking analysis requiring clarification such as the categorization of certain uses related to internal capture rate, time of day reductions, modeling assumptions related to back of house/employees, any valet mode options, queue storage, and additional information on warrants for deceleration lane(s). |
|----|---------|---|--|
| 11 | Signage | SUP Guidelines:ID/Monument Signs on ArterialStreet (Lincoln Dr):08-foot tall040 sq ft aggregate size0Placed at resort entrance | Sheet 21, Conceptual Signage Diagram, identifies a wall sign (Sign C-type) at the intersection of Lincoln Dr and Quail Run Rd and at the shared driveway with the medical plaza. These are 3 feet 6 inches tall and setback approximately 10 feet from the existing right-of-way property line for the west sign and on the property line for the east sign. No sign area is identified, but looks to be within the SUP guidelines. |
| | | ID/Monument Signs on Other Streets: 4-foot tall 32 sq ft aggregate size Placed at resort entrance | Sheet 21, Conceptual Signage Diagram, identifies a wall sign (Sign A-type) on the southern feature wall at the Quail Run Rd driveway. It appears to be mounted on the 8-foot tall wall at approximately 5 feet and the sign area is not listed. |
| | | Traffic & Directional Signs: o 5-foot tall o 12 sq ft aggregate size | No traffic or directional signs are identified. |
| | | Building Signs: • Not addressed in SUP Guidelines • Deferred to Fire/Building Codes No moving or animated signs | Two building signs are illustrated on Sheet 21. There is a sign at the lobby area on the arrival building and a building sign facing Lincoln Drive on the French Cowboy building. |
| | | <u>SUP Guidelines Recommend Sign</u> <u>Illumination in Compliance with</u> <u>Article XXV Zoning Ordinance</u> (<u>Signs):</u> Light source/bulb to be shieled so | |

| | | bulb not visible from off property 0.75- foot candles at property line for Internally illuminated 3000K for external illumination | Analysis: The proposed exterior signs appear consistent with the quality and design for a Town resort. Based on the conceptual plans the proposed signs should comply with SUP Guidelines. The applicant will provide a table summarizing the proposed exterior signs that includes maximum sign area, height from grade to the top of the sign, quantity, and the type of illumination. Also, the applicant will provide a typical detail with material identified and dimensions |
|----|--------------|--|--|
| 12 | Walls/Fences | SUP Guidelines Recommend | |
| | | <u>compliance with Article XXIV</u> <u>Zoning</u> Ordinance Walls & <u>Fences</u> | There are no perimeter walls in the existing condition except near the south property line. |
| | | Adjoining Residential – Maximum 8 feet tall | Not applicable, as the only zoned residential is along the west side of Quail Run Road. Quail Run Road adjoining a public the guideline for height is a maximum 6 feet. The proposal includes two 8-foot tall feature walls at the Quail Run Rd driveway. One 56 lineal feet an the other 18 lineal feet. |
| | | Varies from 3 feet to 8 feet tall (with 2-foot tall berm) depending on setback. Article XXIV provides for no walls/fences within the first 10- foot setback along a right-of-way, linear walls over three-feet tall up to six-feet tall along Quail Run Road be setback 20 feet from the post- dedication property line, linear walls over three-feet tall up to six-feet tall (eight-feet with a two-foot berm) along Lincoln Drive be setback 20 feet from the post-dedication property line since this is a major arterial, and walls/fences along the south and east property line can be at the property line up to six-feet tall. | |

| The Visually Significant Corridors Plan guidelines apply along Lincoln Drive for Major SUP amendments with decorative walls and encourages | The table below provides approximate post-dedication setbacks and heights. The top number being the setback measured from the property line (post-dedication right-of-way line along Lincoln Dr (33-foot half-width) and Quail Run Rd (25-foot half-width)) and the lower number being the height. Red text indicating below the SUP Guideline | | | | | | | |
|--|--|------------------|---------------|--------------------------------|-------------------------------|-------------|-------------------|--|
| | the materials used elsewhere | Property | Existing | Proposed | Proposed | Proposed | Proposed | |
| | within the plan, such as stone and patterns/themes from the applicable Character Zone (Resort Living). | Side | Minimum | Feature Walls Lincoln Drive | Feature Walls Quail Run | Patio Walls | Parking Screen | |
| | | North | No wall | 10 feet & 0 feet | Not | 12 feet | 12 feet | |
| | | Front | | 3 feet 6 inches | Applicable | 5 feet | 3 feet | |
| | | Lincoln Drive | | | | | | |
| | | West | No Wall | 12 feet | 5 feet | 18 feet | Not | |
| | | Street Side | | 3 feet 6 inches | 8 feet | 5 feet | Applicable | |
| | | North of | | | | | | |
| | | Access | | | | | | |
| | | Quail Run | | | | | | |
| | | Road | | | | | | |
| | | West | No wall | Not Applicable | 5 feet | Not | In Right- | |
| | | Street Side | | | 8 feet | Applicable | of-Way | |
| | | South of | | | | | 6 feet | |
| | | Access | | | | | | |
| | | Quail Run | | | | | | |
| | | Road | | | | | | |
| | | East | No wall | Not Applicable | Not | Not | Not | |
| | | Adjoins | | | Applicable | Applicable | Applicable | |
| | | Medical | | | | | | |
| | | South | Wall south | Not Applicable | Not | Not | Not | |
| | | Adjoins | of property | | Applicable | Applicable | Applicable | |
| | | Andaz | | | | | | |
| | | "Measured fro | om 33-toot ha | iit-wiath right-of-wa | iy line | | | |

| | | | Analysis: The three-foot tall parking screen wall along Lincoln Drive (based on a 33-foot half width right-of-way dedication) and the five-foot tall walls along the east and south property lines are within the guidelines. The four proposed feature walls (proposed with signage on at least three walls) and the two French Cowboy patio walls are not within the guidelines. Also, the proposed six-foot tall wall south of the Quail Run Road driveway is within the post-dedication right-of-way. Additional information on the screening and/or relocation of the APS utility cabinet north of the proposed French Cowboy restaurant building is needed. Some items requested of the applicant are to show the setbacks of each wall from the adjoining property lines and net/post dedication property lines, show the existing oleander hedge along the south property line (which is thought to be on the Andaz property), provide fence and site wall elevations, modify the proposed six- foot tall wall along Quail Run Road south of the access driveway to remove it from the right-of-way which may require a larger setback and redesign (e.g., material, meander, etc.), and to consider designing the inside west outdoor patio wall of the French Cowboy to a wall height of six feet tall to aid in noise mitigation as the west patio wall based on the site cross section shows a berm on the street side of this wall (goal is to make the wall appear three feet in height or less from the street side). Allowance for some taller walls at a setback closer than the guideline may or may not be warranted due to the resort site being a quarter of the recommended 20 acres and that walls help mitigate unwanted noise and other nuisances. |
|----|----------------------------------|---|---|
| 13 | Context Appropriate Design | <u>General Plan Policies:</u> LU 3.2 - The Town shall require development or redevelopment within Special Use Permit properties to provide any necessary mitigation achieved through context and scale, and architectural design, setbacks, sound moderation, resort property programming, and landscape buffering. LU 6.5 - The Town shall encourage | The application packet includes master plan, conceptual floor plans, conceptual elevations, visual images, conceptual renderings, illustrative color/materials, along with narrative text to aid in understanding context appropriate design. <i>Analysis: The policies from the General Plan broadly cover architecture and</i> <i>address mitigation of context appropriate development (e.g., scale, massing,</i> <i>façade articulation) and a high-quality built environment that contribute to the</i> <i>Town's identity. The proposed elevations and renderings illustrate the</i> <i>building architecture and visual impact off-site. The design mitigates the view</i> <i>of the three separate stories from Lincoln Drive by the placement of the</i> <i>approximate 18-foot tall market, ten-foot ceiling heights of the first and</i> <i>second floors compared to the 12-foot ceiling height of the third floor, and an</i> <i>approximate two-foot grade difference underneath the principal building.</i> |

| | | context- appropriate and responsive building design and site planning on Special Use Permit properties that mitigates the scale of larger buildings through careful use of building massing, setbacks, facade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details. CC&H 2.2 - Town shall encourage building design that respects and responds to local context, massing and scale, including use of energy saving and sustainable materials where feasible, responsiveness to the Sonoran Desert climate, and consideration of the cultural and historic context of the Town of PV neighborhoods. CC&H 2.6 - The Town shall support the development of architecturally significant public and private buildings and resort development in key locations to create new landmarks and focal features that contribute to the Town's identity and value the Town's location, climate and historic legacy. | Further analysis is warranted on the visual impact (particularly from Lincoln Drive) as the flat roof of this 36 feet 3 inch tall principal building and the 22- foot tall meeting space is approximately 325 lineal feet of the 445 lineal feet of post-dedication frontage along Lincoln Drive (75 percent) that elongates the building mass. The applicant has been asked to identify certain elevation points on the conceptual elevations/site sections, consider a darker decorative paver in the arrival zone, and provide additional renderings (e.g., view looking southwest from the north side of Lincoln Drive near the east end of the property, view looking southeast from the north side of Lincoln Drive near the west end of the property, view looking north from inside the Andaz property, view looking northeast from the south end of the site along Quail Run Road, the south and east view of the French Cowboy (which may be an elevation instead of a rendering), close up view of the ramp area into the garage, view inside the event lawn (looking west near the resort pool), view at the resort pool showing the access area between the casitas and spa, and view of a plunge pool at a casita.) |
|---|---|--|--|
| 1 | 1 | | |

| | | | | | | | | | | | | TOTAL | |
|--------------------------------------|-----------|------------|-------|--------------|-----------------|----------|-------------|-------------|---------|---------|------------|----------|------------|
| | | | | | TOTAL DRIP LINE | | | | | | | FLOOR | |
| | TOTAL NET | TOTAL SITE | | | SQUARE | LOT | TOTAL FLOOR | | MAXIMUM | | PARKING | AREA PER | Near |
| | SITE | SQUARE | TOTAL | DENSITY | FOOTAGE | COVERAGE | AREA (SF) | FAR (%) | HEIGHT | PARKING | SPACES PER | PARKING | Scottsdale |
| RESORT SUP PROPERTY | ACREAGE | FEET | UNITS | (UNITS/ACRE) | (ESTIMATED) | (%) | (ESTIMATED) | (ESTIMATED) | (FEET) | SPACES | UNIT | SPACE | Rd |
| Andaz (8) | 22.1 | 964,042 | 185 | 8.4 | 138,466 | 14.4% | 138,466 | 14.4% | 25 | 278 | 1.5 | 498 | * |
| Andaz (8) (Proposed) | 27.2 | 1,183,069 | 195 | 7.2 | 173,276 | 14.6% | 173,276 | 14.6% | 25 | 290 | 1.5 | 598 | * |
| Camelback Inn (10) | 117.0 | 5,096,520 | 453 | 3.9 | 400,000 | 7.8% | 500,000 | 9.8% | 36 | 1157 | 2.6 | 432 | |
| Doubletree PV | 18.8 | 818,928 | 378 | 20.1 | 173,970 | 21.2% | 257,251 | 31.4% | 28 | 559 | 1.5 | 460 | * |
| Hermosa Inn | 6.4 | 277,022 | 49 | 7.7 | 68,035 | 24.6% | 68,035 | 25.0% | 24 | 189 | 3.9 | 360 | |
| Montelucia (4) | 28.0 | 1,219,680 | 327 | 11.7 | 349,900 | 28.7% | 427,650 | 35.1% | 44 | 738 | 2.3 | 579 | |
| Mtn Shadows (3) | 68.5 | 2,983,860 | 331 | 4.8 | 505,750 | 16.9% | 767,524 | 25.7% | 36 | 494 | 1.5 | 1,554 | |
| Ritz Carlton (1)(2)(9) | 104.1 | 4,534,596 | 458 | 4.4 | 746,168 | 16.5% | 1,129,168 | 24.9% | 48 | 1380 | 6.4 | 818 | * |
| Sanctuary (5) | 37.4 | 1,629,144 | 184 | 4.9 | 219,566 | 13.5% | 564,000 | 34.6% | 24 | 369 | 2.0 | 1,528 | |
| Scottsdale Plaza (6) | 36.5 | 1,589,940 | 404 | 11.1 | 270,721 | 17.0% | 351,107 | 22.1% | 30 | 737 | 1.8 | 476 | * |
| Scottsdale Plaza (Proposed) | 36.5 | 1,589,940 | 468 | 12.8 | 346,779 | 21.8% | 464,935 | 29.2% | 36 | 571 | 1.2 | 814 | * |
| Smoke Tree (7) | 5.0 | 218,096 | 30 | 6.0 | 24,100 | 11.1% | 24,100 | 11.1% | 18 | 70 | 2.3 | 344 | * |
| Smoke Tree (Proposed) | 5.0 | 218,096 | 82 | 16.4 | 64,350 | 29.5% | 116,570 | 53.4% | 36 | 143 | 1.7 | 815 | * |
| AVERAGES (Existing, Excludes | | | | | | | | | | | | | |
| Proposed) | 44.4 | 1,933,183 | 280 | 8.3 | 289,668 | 17.2% | 422,730 | 23.4% | 31 | 597 | 2.6 | 705 | |
| | | | | | | | | | | | | | |
| AVERAGES (Proposed, Excludes | | | | | | | | | | | | | |
| Existing Andaz and Scottsdale Plaza) | 44.9 | 1,955,086 | 287 | 8.3 | 300,754 | 17.7% | 437,594 | 24.1% | 32 | 582 | 2.5 | 749 | |

(1) Total site acreage includes internal roads and Area E2 (which requires further SUP approval)

(2) A-1 Villas and D Attached Residences have maximum height 36'; E1 Resort Retail 30'; Height measured finished grade-not more than 2' fill to highest point

(3) Height measured from original natural grade or finish grade (if lower than natural grade), 3' allowance for chimney, elevator enclosure, architectural features; parking total includes for-sale product and excludes valet mode

(4) Height measured from finish grade to highest point, lodge at 36', Plaza buildings at 32' and 34'; some elements to 44'; stipulated to a total floor area of 427,650 sf and a maximum building footprint of 25%

and lot coverage of 31% with overhangs, canopies, shade structures and misc structures

(5) Includes the Casa parcels zoned SUP-Resort, assumes these have a 15% floor area ratio being hillside lots and likely not reaching 25%; excludes valet mode on parking

(6) Existing height on plans are from finished floor, not finished grade or natural grade that may result in increased height

(7) Net area, gross including right-of-way 5.363 acres

(8) SUP allows up to 201 units

(9) Parking total includes all areas including for-sale product, for-sale product only counted 2 spaces per unit and Area E-2 not factored since requires a future amendment; valet mode not included (10) The Camelback Inn allows for fully enclosed buildings at a maximum of 20% of the gross area, all other structures at a maximum of 10% of gross area, and public areas a maximum of 30% of the gross area.

Date: May 8, 2023

Data is as accurate as possible, some data are estimates

10 resorts in town (excludes the 2 country clubs and El Chorro)

The numbers provided in the table above are only one of many ways to evaluate an application and should be viewed as seeing general trends

SUP-23-01 Smoke Tree Resort Statement of Direction April 27, 2023

ST Holdco, LLC (Walton Global Holdings) submitted a Major Special Use Permit (SUP) amendment application for redevelopment of the Smoke Tree Resort located at 7101 E Lincoln Drive. The current proposal is for a complete redevelopment of the 5.0 net acre site with 82 total resort guest units ranging in size from approximately 533 square feet to 1,486 square feet (includes 5 single-story casitas with small plunge pools and a presidential suite on the 3rd floor), a detached fine dining restaurant/bar with cellar and patio dining, all-day market bistro with outdoor patio, meeting function building with outdoor event lawn, resort pool, guest fitness and spa facility, and underground parking.

Section 1102.3 of the Town's Zoning Ordinance states the Town Council must issue a Statement of Direction (SOD) for the Special Use Permit application within 45 days of the first staff presentation. In this case, the SOD must be issued on or before May 8, 2023.

The SOD is not a final decision of the Town Council and does not create any vested rights to the approval of a SUP. Any application for a SUP does not rely solely upon the matters addressed in the SOD. The following is the SOD for the Smoke Tree Resort being issued:

- The General Plan encourages the renovation of SUP sites while protecting the Town's lowdensity residential character and quality of life. The Town shall require development or redevelopment within Special Use Permit properties to provide any necessary mitigation achieved through context and scale, and architectural design, setbacks, sound moderation, resort property programming, and landscape buffering (General Plan Land Use Policy LU.3.2).
- Other General Plan policies related to SUP properties encourage the use of enhanced aesthetics, buffers between uses of significantly differing function and intensity, the integration of pedestrian amenities, attractive streetscapes, use of shade trees, and the integration of art.

The Planning Commission shall focus their review on the visible, audible, and operational effects the major amendment may have on the neighbors. In particular, the Planning Commission shall focus their review on:

1. <u>Use</u>. The uses at the proposed resort will include additional resort amenities from what was offered at the past resort with all uses in compliance with Section 1102.2, Uses Permitted, of the Town's Zoning Ordinance for resorts. Besides additional guest units, the proposal offers two different food and beverage options instead of one restaurant facility, an indoor/outdoor meeting function space, and fitness/spa facilities. Improvements to the grounds include a larger resort pool, enhanced landscaping, new signage, and underground parking.

The primary areas for the Planning Commission to study include, and are not limited to, the design/layout, impact of said uses to the surrounding area outside the site (specifically noise and light), as well as the specific operational factors (hours of operation, outdoor seating, etc.) and resort quality standards. For-sale product is not proposed nor desired at this location.

2. <u>Noise Mitigation/Impact</u>. Resorts include outdoor areas for events and places where people congregate that could create unintended nuisance for people off-site. As such, the Town partnered with MD Acoustics and a few resorts (this did not include Smoke Tree Resort) to assess noise and offer mitigation strategies. The proposed resort includes a main resort pool designed around a courtyard, seven small plunge pools as part of the casita suites and spa, meeting function building with event lawn, and outdoor dining patios as part of the two restaurants.

The Planning Commission shall consider impacts including noise, light, traffic, and any other adverse impacts, particularly for those existing residential properties west of the site along Quail Run Road. In particular, outdoor employee areas and service uses such as maintenance, maid service/laundry, trash collection/storage, mechanical equipment (roof/ground), outdoor areas (e.g., restaurant dining, patios/balconies), and all other noise generating elements shall be studied. The review shall address site design, location, and orientation; along with the reasonable separation between incompatible uses and effective buffering of unwanted noise, light, traffic, views of the buildings offsite, and other adverse impacts. The Planning Commission take into account mitigation measures based upon design (e.g., courtyards, walls), technology (e.g., installation of a distributed audio system), and operational means through stipulations.

3. <u>Density</u>. The available guest accommodations increase from 25 (originally 30) to 82 units. The SUP Guideline for guest unit density is one unit for each 4,000 square feet of site area. Site area is typically determined by the net site area. The net site area shown on the submittal is 218,096 square feet net (5.0 acres, accounts for the typical 25-foot half width right-of-way dedication along Quail Run Road and 33 feet of the typical 65 feet of half width right-of-way dedication along Lincoln Drive). Additionally, the SUP Guidelines suggest a minimum site area of 20 acres, which this existing resort is only a quarter of that area. The site's gross acreage is 233,630 square feet (5.4 acres). Based on this information, the number of guest units using the SUP Guideline is 55 to 58 depending on net or gross site acreage (10.2 to 11.6 units per acre). The proposed 82 guest units has a density of one unit for each 2,660 net square feet or 2,849 gross square feet (15.3 to 16.4 units per acre).

The Planning Commission shall evaluate how the proposed density impacts safety and quality of life. The site adjoins non-residential zoning on three sides, and the proposed site plan has reduced density on the west and south sides of the site.

4. Lot Coverage/Floor Area Ratio. SUP Guidelines suggest a lot coverage of 25 percent, with no guideline on floor area ratio. The existing resort lot coverage is 24,100 square feet (11.1 percent net and 10.3 percent gross). The proposed lot coverage is 64,350 square feet (29.5 percent net and 27.5 percent gross, which excludes the fully subterranean garage that includes storage, kitchen, laundry, office, and the 3,420 square feet of cellar dining beneath the French Cowboy). The existing total floor area is 24,100 square feet with a floor area ratio of 11.1 percent net and 10.3 percent gross, as the existing buildings are all one-story. The proposed total floor area is 116,740 square feet (53.4 percent net and 50.0 percent gross, this excludes the underground garage level).

The Planning Commission shall consider lot coverage and floor area ratio while taking into

consideration the unique characteristics of the site located on five acres, its proximity to the City of Scottsdale, and that non-residential zoning adjoins three sides of the site with the fourth side adjoining Quail Run Road adjacent to residential R-43 zoning. The Planning Commission shall also evaluate the lot coverage and floor area ratio within the context of the immediately adjacent properties. The lot coverage and floor area ratio shall be calculated based on both net and gross area.

5. Heights/Viewsheds. SUP Guidelines suggest a maximum height of 36 feet for principal structures (those containing guest units or containing guest registration, administrative offices, and accessory uses) and maximum height of 24 feet for accessory structures. The guidelines further apply the Open Space Criteria whereby no structure would penetrate an imaginary plane starting at a setback of 20 feet from all property lines at 16 feet above natural grade which slopes upward at a ratio of one foot vertically for each five feet horizontally. Except for the detached restaurant (French Cowboy) building nearest Lincoln Drive and the interior structures within the resort pool/event lawn, all the proposed buildings on the proposed site plan are principal structures. Existing building heights are generally not taller than 18 feet and all buildings are single-story. The proposed heights vary from approximately 14 to 36 feet 3 inches tall up to three stories. However, except for an "L" shaped portion of the principal guest unit building at three stories, the majority of the buildings proposed are single-story 14 to 22 feet tall. Heights are compliant with the SUP Guidelines except for a small portion of the roof of the detached restaurant building nearest Lincoln Drive and the eastern portion of the roof story nearest the adjoining medical plaza.

The Planning Commission shall evaluate the proposed height and viewsheds based on its visibility of proposed buildings as seen from off-site which may require additional visuals (e.g. sight line representation, rendering, etc.). Lower height is encouraged on the west side of the site nearest to existing residential properties. Heights shall comply with the SUP Guidelines with mechanical screening and architectural elements included in the maximum height.

This site is one quarter the suggested 20-acres per the SUP Guidelines and the location adjoins other non-residential uses. 36 feet or three-story resort development is the exception in the Town, and will only be considered where contextually appropriate and mitigated by design. The Planning Commission focus shall be that the overall mass of the structures are of an appropriate scale, with special consideration given to the views from the south side bordering the Andaz resort and the west side bordering Quail Run Road.

6. <u>Setbacks</u>. SUP Guidelines as applied to this site suggest that the setbacks to the exterior property lines are 100 feet for principal structures and 40 feet for accessory structures. The guideline for pools generally available to all guests is 65 feet from all property lines. The minimum setback of the existing buildings are approximately 50 feet from the Lincoln Drive net property line (35 feet to the restaurant porte-cochere), 10 feet to the Quail Run Road post dedication property line, 35 feet to the east property line along the medical plaza, and 38 feet to the south property line along the Andaz Resort. None of the proposed principal buildings meet the SUP Guideline for setback of 100 feet to any of the property lines. The minimum principal setbacks generally measure approximately 95 feet to the Lincoln Drive property line, 50 feet to the south property line, 55 feet to the Quail Run Road post-dedication property line, and 43 feet 9 inches to the south property line. The setbacks of the French Cowboy building are less than the SUP Guideline for an accessory structure of 40 feet from a public street being approximately 39 feet to the Quail Run Road post-dedication property line and approximately 25 feet to the Lincoln Drive net property line.

The Planning Commission shall explore appropriate setbacks for structures and outdoor spaces, with particular attention to the setback along Quail Run Road for the residents west of the site, visitors to the medical plaza to the east of the site, and the Andaz resort guests south of the site related to privacy and noise levels. The Commission shall also identify any mitigating circumstances that may buffer the development (e.g. the use of vegetation, modified setbacks or heights, reorientation of the structures, etc.).

7. Landscaping/Buffers. SUP Guidelines suggest a 30-foot wide landscape buffer along a local street (Quail Run Road) and a 50-foot wide landscape buffer along a major arterial (Lincoln Drive), with no buffer guideline along non-residentially zoned property lines (east and south). Buffers typically are measured to the property line allowing for additional landscaping within the right-of-way. The SUP Guidelines also include provisions for landscape islands and shade trees within parking lots. Lincoln Drive is a designated corridor with guidelines on landscape palette and design in accordance with the Resort Living Zone of the Town's Visually Significant Corridors Master Plan. The proposal has an approximate landscape buffer of 12 to 16 feet wide along Lincoln Drive measured from the back of, 18 feet wide along Quail Run Road north of the driveway and approximately two feet south of the driveway, approximately two feet along the east property line with the medical plaza, and approximately five feet to the proposed fire lane along the south property line with the Andaz Resort. There are no changes to the oleander hedge along the medical plaza as this hedge is part of the plaza site. The landscaping along the south property line is proposed with a hedge of Hopseed and Ghost Gum trees (but requires verification on retaining the existing oleander hedge as this hedge is thought to be on the Andaz Resort property).

The Planning Commission focus on landscaping/buffers shall be along the perimeter of the site. This includes, and is not limited to, appropriate screening or relocation of the utility cabinets along Lincoln Drive, locations and screening of loading zones and dumpsters, suggested guidelines along Lincoln Drive from the Town's Visually Significant Corridors Master Plan (e.g., Resort Living Character Zone), buffers along the rights-of-way adjoining the proposed restaurant (particularly the two outdoor patios) at the Lincoln Drive and Quail Run Road intersection, harmony of the proposed landscaping with the adjacent landscaping (e.g., Lincoln Drive medians), appropriate type of plant material for the location (e.g., drought tolerance, scale, seasonal color), review of plant impact (e.g., fire/fall hazard, pollen irritants), and appropriate stipulations (such as maintenance, early phasing of street frontage/perimeter landscaping, and replacing dead plant material).

8. <u>Exterior Lighting</u>. SUP Guidelines suggest that exterior lighting be hooded and shielded so as not to be visible from an adjacent property, the brightness for any up-lighting not exceed 300 lumens, pole lights be a maximum height of 16 feet tall (although encouragement is for pole fixtures at lower heights), fixtures be minimally setback equal to the height of the fixture, and the maximum illumination output be 0.5 foot candles adjacent to residential and 0.75 foot candles along other property lines (Section1023, Zoning Ordinance). The Town typically suggests not more than 3,000 Kelvins to keep in the warm and soft color scale. In general, the proposed lighting is compliant with Town guidelines based on the material submitted to date.

The Planning Commission focus on exterior lighting shall be how it meets SUP Guidelines and that the fixtures are of a quality expected for a Town resort. In particular, some focus areas include lighting along the perimeter of the site, how illumination might wash building elevations, limits on the visual impact of string lights and palm tree lights, and impact of lighting at the second and third floor elevations. 9. <u>Grading/Drainage & Utilities.</u> Preliminary drainage, grading, water, and wastewater reports have been provided and are reviewed by the Town's professional staff to ensure compliance with required safety best practices. The site currently provides no onsite retention. The proposed improvements will utilize parking and drive corridors to drain stormwater east and north to match current drainage patterns through a series of catch basins and underground retention basins.

The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should the drainage, grading, and utilities affect the design or impact to nearby properties.

10. **Traffic, Parking, Access, and Circulation**. The site is approximately 200 feet from the City of Scottsdale and adjoins Lincoln Drive which is a major arterial. Lincoln Drive east from Quail Run Road to the Town limits is 65 feet north of the street centerline and 33 feet south of the centerline. The Town's major arterial street cross section suggests a total right-of-way width of 130 feet. The proposal is for a total right-of-way width of 105 feet (40 feet south of the centerline inclusive of a seven-foot sidewalk and utility easement). Along Quail Run Road (a designed local street), the Town has 25 feet of right-of-way west of the street centerline. Primary access into the resort will be on Quail Run Road via the signalized light at Lincoln Drive and Quail Run Road. Secondary access will be on Lincoln Drive via the shared access driveway with the adjoining medical center. Normal operating circulation will occur along the north, west, and part of the eastern areas of the site, with a stabilized surface along the south and remaining east portions to allow for 360-degree fire access. The proposal is for 146 total parking spaces (70 surface and 76 in a proposed underground garage).

The proposed density and location within a heavily traveled and mixed-use density area near the City of Scottsdale creates a heightened need for ensuring the proposed redevelopment has a positive impact on traffic safety, parking, and circulation which is reviewed by the Town's professional staff to ensure compliance to safety and other standards which may require additional analysis. This analysis shall include, and is not limited to, necessary queuing areas (e.g., deceleration lanes) and driveway access functioning (e.g., allowed movements into and out from the driveway, favorable geometry, sight distance, Quail Run Road primary access considerations, and visibility). The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should these items affect the design or impact nearby residents.

11. <u>Signage</u>. The SUP Guidelines suggest up to one identification sign at each entrance not more than 8 feet tall and a sign area not more than 40 square feet along major arterials (Lincoln Drive) and along other street types (Quail Run Road) one identification sign at each entrance not more than 4 feet tall and a sign area not more than 32 square feet. The Guidelines include suggestions for illumination (e.g., 0.75 foot-candles at property line and 3,000 Kelvin limits) and no reference to building-mounted signs. The existing resort has a monument sign along Lincoln Drive along with two signs on separate driveway entry columns. The proposal includes two 42-inch tall signs on entry wall features at the southeast corner of Lincoln Drive and Quail Run Road and the shared driveway with the medical plaza, a sign at the Quail Run Road driveway on an eight-foot tall entry wall, a sign on the arrival building, and a building sign on the north elevation of the French Cowboy restaurant. Overall, with not all the sign information submitted, the information provided on the proposed exterior signs are consistent with the quality and design of a Town resort.

Planning Commission review shall focus on the impact of sign location, dimensions, and illumination on the streetscape and compliance with SUP Guidelines.

12. Walls. Walls help mitigate unwanted noise and other nuisances. The SUP Guidelines suggest compliance with Article XXIV, Walls and Fences, of the Zoning Ordinance. Article XXIV allows for the height of walls and fences to vary from 3 feet to 8 feet (with 2-foot berm) depending on setback, with no walls or fences within the first 10-foot setback along a right-ofway. The 3-foot tall parking screen wall along Lincoln Drive (based on a 33-foot half width right-of-way dedication) and the 5-foot tall walls along the east and south property lines are within the guidelines. The two proposed feature walls along Lincoln Drive at 3 feet 6 inches tall, the two proposed feature walls at the Quail Run Road driveway at 8 feet tall, and the two French Cowboy patio walls at 5 feet tall would all be 3 feet tall based on the proposed setbacks. The proposed 6-foot tall wall south of the Quail Run Road driveway is shown in the post-dedication right-of-way.

Planning Commission review shall evaluate the setback, height, and design of the proposed perimeter walls to ensure these walls are consistent with the quality and design of a Town resort. No walls shall be within the post-dedication rights-of-way.

The Town Council recognizes that too many and/or overly detailed plans and documents may create a substantial financial burden on the applicant. Therefore, the Planning Commission shall consider requesting and/or requiring only the necessary plans and documents needed to evaluate and complete the Intermediate SUP Amendment.

As per Section 1102.3.C.3.c of the Zoning Ordinance, at any time during the review process, the Planning Commission may request clarification and/or expansion of this Statement of Direction based on additional information. The Planning Commission shall complete their review and make a recommendation to the Town Council on or before September 19, 2023. The expectation is the applicant will provide all necessary information for the Commission to render a recommendation sooner.

| | Smoke Tree Major Special Use Permit Amendment (SUP-23-01) | | |
|---|---|--|---------------|
| | <u>Date</u> | <u>Comment</u> | <u>Туре</u> |
| 1 | 4/3/2023 | Kelley and Danny Kregle, town residents Mtn Shadows support the amer | Email |
| 2 | 3/29/2023 | Clay Coady with Applewood Pet Resort provided a letter of support | Email |
| | | Ruthee Goldcorn interested person that the resort will comply with all | |
| 3 | 3/22/2023 | federal disabled persons requirements | Phone |
| | | | |
| | | Jim Shough of Paradise Valley Medical Center adjoining the site to the | |
| | | east noted concerns with the the proposed 36-foot tall height at a | |
| | 3/21/2023 | setback less than the 100-foot guideline and the available parking based | |
| 4 | 3/20/2023 | on the square footage of food/beverage | Email & Phone |
| | | Gary Stougaard of Andaz Resort adjoining the site to the south | |
| 5 | 3/20/2023 | concerned with setback and height | Email |
| 6 | 3/16/2023 | Jack Elsner address Austin, TX requested public record of the plan set | Email |

Paul Michaud

Subject: FW: Smoke tree

From: <u>kelley kregle</u> Sent: Monday, April 3, 2023 1:00 PM To: <u>Mayor Jerry Bien-Willner</u> Subject: Smoke tree

External email: use caution with links & attachments

Please be advised we are very much in support of the Smoketree development project. If had been an eyesore for too long.

Kelley and Danny Kregle 5525 E Lincoln Dr #84 Paradise Valley AZ

Sent from my iPhone

Paul Michaud, AICP Planning Manager Community Development – Planning Division 6401 E. Lincoln Drive Paradise Valley, AZ 85253

Re: SmokeTree SUP Major Amendment - SUP-23-01

Dear Paul,

I am writing to express my support for the proposed redevelopment of the SmokeTree Resort. I have met with the development team on several occasions and am impressed by both the design of the proposed resort and the developer's thoughtful approach. I first met with Bill Doherty and his team in September 2022 to discuss the project and share feedback. It was immediately evident that Mr. Doherty is sincere in his desire to create a truly special resort experience that is visually stunning, respectful to surrounding property owners, and worthy of the historic nature of the site and the Town of Paradise Valley. We have remained in regular communication since that first meeting.

I am fully supportive of Walton Global's proposal and their efforts to transform and revitalize the SmokeTree property into a modern boutique luxury resort. From the outset, they have taken an approach that is transparent, communicative, and sensitive to the needs of their neighbors. Most importantly, they've demonstrated an uncanny willingness to listen. The result of their efforts is a beautiful boutique resort that is certain to become a treasured destination in the Town of Paradise Valley for both residents and visitors alike.

As a long-time resident and business owner in Paradise Valley, I am truly excited for Walton's vision for the SmokeTree Resort to become reality.

Sincerely,

Clay Coady

Resident, Paradise Valley Owner, Applewood Pet Resort

| James Shough |
|--|
| Paul Michaud; Jill Keimach; Mayor Jerry Bien-Willner |
| Fwd: Smoke Tree |
| Tuesday, March 21, 2023 9:39:06 AM |
| |

External email: use caution with links & attachments

Dear Paul

Thanks for the call Per our other email and discussion RE set back variance of 50 feet

I am very concerned about My surgery center On the 3rd floor. We have ha six operating rooms with four state of art equipped for Knee hip and any other full-service surgeries that are performed at any Hospital.

We have 18/24 max recovery time post-surgery. allowed to stay at PVMC depending on when surgery... The quiet enjoyment of a surgeon performing and patients recover time will affect quiet enjoyment and possibly a surgery performance.

100 feet set back will go along way to prevent. and help with our quiet enjoyment ..
From:Gary StougaardTo:Paul Michaud; James Shough; gstougaard@gmail.comCc:Mayor Jerry Bien-Willner; Jill Keimach; Lisa CollinsSubject:RE: Smoke Tree Resort Special Use Permit AmendmentDate:Monday, March 20, 2023 2:44:21 PM

External email: use caution with links & attachmen ts

Thank you Paul.

If I remember correctly, I believe that we were limited to height of no more than 24 feet for any of the resort structures at Andaz. Maybe all of our structures were considered "Accessory Structures" or have the rules changed since 2014-15?

If not, perhaps I should be more concerned about my memory !?

Regardless, I think we all want to see the Smoketree property revitalized – in a manner that works for everyone.

We are happy to participate as necessary thoughout this process.

Thanks again for your prompt response.

Gary Stougaard

From: Paul Michaud <pmichaud@paradisevalleyaz.gov>
Sent: Monday, March 20, 2023 2:26 PM
To: James Shough < >; Gary Stougaard < m>;

Cc: Mayor Jerry Bien-Willner <jbienwillner@paradisevalleyaz.gov>; Jill Keimach <JKeimach@paradisevalleyaz.gov>; Lisa Collins <LCollins@paradisevalleyaz.gov> **Subject:** Smoke Tree Resort Special Use Permit Amendment

Mr. Shough and Mr. Stougaard:

Thank you for commenting and I am welcome to discuss this in a phone call. This application is in beginning phases of the review process. See my responses below:

1. The height of 36 feet comes from the <u>Special Use Permit Guidelines</u> for principal buildings.

The guidelines are different for medical and resort (see below and the attached link). These are guidelines so based on the specific nature of the site and request the Town may approve something less or more.

Section 4 Resorts

1. Site Standards

- a. Except for properties that have existing special use permits for resort uses, the minimum site area shall be 20 acres which shall not be bisected by any public right-of-way.
- b. Except for properties that have existing special use permits for resort uses, the site shall have primary access from and frontage of at least 300 feet on a Major or Minor Arterial as designated in the Paradise Malley General Plan.
- c. Principal structures shall be those containing guest units or those containing guest registration areas, facility administrative offices and accessory uses. Principal structures with guest units also may contain permitted accessory uses.
- d. Accessory structures shall be those containing accessory uses.
- Service structures shall include those structures used for support and maintenance of the resort.
- f. All parking on a site shall be at the surface or underground.
- g. No individual retail business, office or business service shall occupy more than 2000 square feet. Entrances to any retail business, office or business service shall be from within a principal or accessory structure.
- 2. Bulk and Density Standards
 - a. Maximum building height:
 - i. Principal Structures 36 feet
 - ii. Accessory structures 24 feet
 - iii. Service structures 18 feet
 - Towers and other architectural features may exceed maximum building heights, subject to special use permit or major amendment approval.
 - v. To maintain view corridors around the perimeter of a property, building heights shall be limited around property lines in accordance with the Open Space Criteria per Section 3 of the Special Use Permit Guidelines.

Section 5 Medical Office

- 1. Bulk and Density Standards
 - a. Maximum building height
 - i. Principal Structures 30 feet
 - ii. Accessory structures 24 feet
 - iii. Service structures 18 feet
 - Towers and other architectural features may exceed maximum building heights, subject to special use permit or major amendment approval.
 - v. To maintain view corridors around the perimeter of a property, building heights shall be limited around property lines in accordance with the Open Space Criteria per Section 3 of the Special Use Permit Guidelines.
- 2. The application request includes several areas that are not within the Special Use Permit Guidelines that will be reviewed through the application process which starts with Town Council Statement of Direction. Based on this direction the applicant may chose to make revisions. The Statement of Direction phase looks at the big picture.
 - a. You are correct that the guideline setback for principal structures is 100 feet, and the proposal is half that setback (Minimum of 50 feet to the east and 44 feet to the south).
 - b. You are correct that the guideline is a 25% lot coverage, and the request is 27.5% (gross)/29.5% (net).
 - c. You are correct that there is a portion of the proposed 3rd floor that penetrates the

Open Space Criteria. The other metric of Open Space is from the guideline that "Open space, which shall consist of land and water areas retained for active or passive recreation purposes or essentially undeveloped areas retained for resource protection or preservation purposes, a minimum of 40%" The open space is 96,271 square feet or 41.2% which would be compliant on the gross metric in the submitted plans.

3. Staff provided the applicant with several comments on their request which they have not yet responded back. This includes their parking analysis.

Regards,

Paul E. Michaud, AICP
Planning Manager
Community Development – Planning Division
6401 E Lincoln Drive
480-348-3574 (phone)
pmichaud@paradisevalleyaz.gov
Office Hours: Mon-Fri 7:00 a.m. – 4:00 p.m., closed noon-1:00 p.m. and holidays

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Paul

I have read your presentation and left voice maill . Ive cc Gary as we have the most exposure to the SUP.

Here are my Questions and concerns . 1 SUP height please provide section that allows 36 feet., PV medical was restricted to 30 feet . (andez 24 feet) My view corridor is NOW completly blocked . SET backs and open space Your presentation shows set back encroachment of 50% of the required 100Feet both east and south . This encroachment and density is contrary to open space FAR or lot coverage of 25%. once again these rules would have allowed me have 60,000 feet vs current..

Parking 1 restaurant 1/50feet based on 50/60% of total floor area 17,500 at 50% = 8750 feet = 175 space in Scottsdale 82 keys at 1.2 spaces =98 spaces Total =273. I dont see how a shared model will work. These restaurants s may accommodate

guests but to actually work will need 75% outside guests. .

lets discuss

James Shough Town & Country Camelback LLC

Phoenix, AZ 85016

TOWN OF PARADISE VALLEY

Smoke Tree Resort Major Special Use Permit Amendment 7101 E Lincoln Drive Work Session

> Planning Commission May 16, 2023

TODAY'S GOAL

- Applicant Presentation
- Staff Presentation
 - Review scope (focused on structures & SUP Guidelines)
 - Review Statement of Direction (SOD) with preliminary analysis
- Commission Discussion







VICINITY MAP





BACKGROUND

- Began operation in 1954
- Annexed 1961
- Original SUP Zoning in 1969
- Closed since 2020
- 30-room resort, 25 rooms in service
- No physical improvements since 2008
- New owner 2022
- Last SUP amendment 2018 (sign)
- Designated SUP-Resort, zoned SUP-Resort





SCOPE – OVERALL SITE PLAN



SCOPE – BUILDINGS

- 2 principal buildings
 - Arrival building
 - Lobby
 - 77 guest units
 - Market (3-meal service)
 - Event space
 - Back of house (office, etc.)
 - Casitas
 - 5 guest units
- 4 accessory buildings
 - French Cowboy Restaurant
 - Event Lawn Gazebo
 - Cabannas
 - Pool bar/restrooms



Text in purple indicates existing conditions not within the SUP Guidelines. Text in red indicates proposed conditions not within the SUP Guidelines.

SCOPE – ARRIVAL BUILDING

| Height Original Natural Grade Elevation 1312.5' Varies from 14', 18', 22', 36'3" Varies in stories from 1 to 3 | Setbacks | Principal Arrival Building | |
|---|-------------------------------|--|---|
| Within SUP Guideline Maximum 36' except measured from pool courtyard and southeast elevation | Guideline | 100 feet | Underground Garage |
| Portion 3rd floor penetrates Open Space Criteria | North Front | <mark>95 feet</mark> 175 feet | |
| Setbacks | Lincoln Drive | (2 nd /3 rd stories) | |
| Not fully within 100' SUP Guideline 2nd & 3rd floors east portion setback away from Quail | Street Side Ouail Run Road | 175 feet (2 nd /3 rd stories) | |
| Run Rd Connects with the underground garage | East Adjoins Medical | 50 feet (all 3 stories) | |
| Applicant design stated as "French agrarian" | South Adjoins Andaz | 44 feet (1 st /2 nd stories) | |
| arranged around courtyard | | 75 feet (3 rd story) | |
| Project Calling: 34 Hom O.N.G. | | Photod Open Serbook Space 88 Stepbook | Property Live Unit Cross Property Live Root And Roor And |

Principal Setback 50

3

SCOPE – ARRIVAL BUILDING







SCOPE – ARRIVAL BUILDING

Pool Looking East





SCOPE – CASITAS BUILDING

| Setbacks | Principal Casitas Building |
|--|----------------------------------|
| Guideline | 100 feet |
| North Front Lincoln Drive | 365 feet |
| West Street Side Quail Run Road | 60 feet |

11

5/16/2023

| Height | Setbacks | Principal Cositos |
|--|----------------------------------|----------------------|
| 14' tall, 1 story | | Building |
| Within SUP Guideline Maximum 36' | | |
| Meets Open Space Criteria | Guideline | 100 feet |
| Setbacks | | |
| Not within 100' SUP Guideline for principal structure to west and south property line | North Front Lincoln Drive | 365 feet |
| As a comparison, meets the SUP Guideline for accessory structure (under 24' tall/40' setback) | West Street Side Quail Run | 60 feet |
| - Completes the sourtward to help mitigate pains | Road | 220 fa at |
| Completes the courtyard to help mitigate hoise Architectural Design | East Adjoins Medical | 230 feet |
| Applicant design stated as "French agrarian" | South Adioins Andaz | 50 feet |
| fry Net Property Open Space Strack St | | |

Gross Property Line

Qual Run

SCOPE – CASITAS BUILDING



Pool and Fitness





SCOPE – FRENCH COWBOY BUILDING¹³

Height

- 18' (pitched roof/chimney higher)
- 25'5" on cross section (clarify)
- 1 story
- Portions of roof/chimney penetrates Open Space Criteria and 24' height
- Setbacks
 - Not fully within 40' SUP Guideline
- Connects with the underground garage
- Architectural Design
 - Applicant design stated as "French agrarian"



SCOPE – FRENCH COWBOY BUILDING



SCOPE – FRENCH COWBOY BUILDING



SCOPE – EVENT LAWN GAZEBO

Height

- Expected to be under 24' tall (more info needed)
- SUP Guideline 24' tall maximum
- 400 sf (20' x 20')
- Setbacks
 - All more than the 40' SUP Guideline



| Setbacks | Accessory Building Gazebo |
|--|---------------------------------|
| Guideline | 40 feet |
| North Front | 320 feet |
| Lincoln Drive | |
| West Street Side Quail Run Road | 160 feet |
| East Adjoins Medical | 270 feet |
| South Adjoins Andaz | 135 feet |
| | |

SCOPE – POOL BAR/RESTROOMS

| Height 11 feet tall Less than the SUP Guideline of 24' 1,050 sf (30' x 35') [Bar 225 sf and restroor | m 125 sf] | | |
|--|--|---|-----------|
| Setbacks All more than the 40' SUP Guideline | Setbacks | Accessory Building Pool Bar/Restroom | |
| | Guideline | 40 feet | |
| Parking Parking | North Front Lincoln Drive | 315 feet | |
| 43 43 43 43 43 43 43 43 43 44 43 44 44 4 | West Street Side Quail Run Road | 200 feet | |
| al de la contra de angles de la contra d | East Adjoins Medical | 220 feet | |
| Do Fire Access | South Adjoins Andaz | 125 feet | 5/16/2023 |

| Setbacks | Accessory Building Cabanas | SCOPE – CABANAS | 18 |
|--|----------------------------------|---|---------|
| Guideline | 40 feet | | |
| North Front Lincoln Drive | 285 feet | | FI |
| West Street Side Quail Run Road | 225 feet | | |
| East Adjoins Medical | 165 feet | Dining Courty and Service | |
| South Adjoins Andaz | 165 feet | Height Under 16' tall (more info needed) SUP Guideline 24' tall maximum 700 sf (10' x 70' area) Setbacks All more than the 40' SUP Guideline | |
| | | DG Fire Access | 16/2023 |



| Setbacks | Accessory Building Main Pool |
|---------------|------------------------------------|
| Guideline | None |
| North | 350 feet |
| Front | |
| Lincoln Drive | |
| West | 65 feet |
| Street Side | |
| Quail Run | |
| Road | |
| East | 125 feet |
| Adjoins | |
| Medical | |
| South | 30 feet |
| Adjoins Andaz | 35 feet |

SCOPE – PLUNGE POOLS 20





- 2 at 70 square feet
- 4 at 150 square feet
- 1 at 250 square feet
- Setbacks
 - No guideline on pools not available to all guests

SCOPE – DESIGN

- No specific SOD on architectural design
- 3 broad policies on architecture in General Plan (context appropriate and high-quality built environment)
- SOD requires only requesting necessary plans/documents to complete review
- Applicant's narrative describes the design as "French agrarian"
- Identify any additional renderings/information needed
 - More views from the street
 - View north from Andaz
 - More views inside the event lawn/resort pool area



View of the plunge pools at a casita



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STATEMENT OF DIRECTION (SOD)

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- SOD provides general guidelines and/or project parameters Council wants Commission to review and/or not review
- SOD issuance begins SUP review process
- The SOD is not a final decision of the Council
- SOD creates no vested right to a SUP approval
- Commission shall focus their review on the visible, audible, and operational effects the major amendment may have on the neighbors
- Commission to complete review by Sept 19, 2023
- Commission, by majority vote, can request clarification and/or expansion of SOD to Council
- 12 sections to the SOD

GENERAL PLAN POLICIES

- Preamble of the SOD refers to the General Plan
- Primary policies fall under Goals LU 3 and LU 4
- Refer to applicable polices in staff report attachment

LU 3.2 - The Town shall require development or redevelopment within Special Use Permit properties to provide any necessary mitigation achieved through context and scale, and architectural design, setbacks, sound moderation, resort property programming, and landscape buffering.

LU 3.1 - Consideration of Special Use Permit applications for development or redevelopment should balance a need for the Town's fiscal health against a steadfast commitment to protect the Town's low-density residential character and quality of life.



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[1] SOD USE

The primary areas for the Planning Commission to study include, and are not limited to, the design/ layout, impact of said uses to the surrounding area outside the site (specifically noise and light), as well as the specific operational factors (hours of operation, outdoor seating, etc.) and resort quality standards. For-sale product is not proposed nor desired at this location.

Analysis

- Uses comply with Zoning Ordinance (Section 1102.2)
- Guest units
- Accessory uses
 - Meeting spaces
 - Resort pool
 - Spa/fitness area
 - Lobby and administrative offices
 - Food/beverage



[2] SOD NOISE/IMPACT

The Planning Commission shall consider impacts including noise, light, traffic, and any other adverse impacts, particularly for those existing residential properties west of the site along Quail Run Road. In particular, outdoor employee areas and service uses such as maintenance, maid service/laundry, trash collection/storage, mechanical equipment (roof/ground), outdoor areas (e.g., restaurant dining, patios/balconies), and all other noise generating elements shall be studied. The review shall address site design, location, and orientation; along with the reasonable separation between incompatible uses and effective buffering of unwanted noise, light, traffic, views of the buildings offsite, and other adverse impacts. The Planning Commission take into account mitigation measures based upon design (e.g., courtyards, walls), technology (e.g., installation of a distributed audio system), and operational means through stipulations.

[2] SOD NOISE/IMPACT

Noise study provided 45 and 56 code decibel limit

Analysis

- Meets day limits
- Awaiting applicant response
 - Clarify impact of plunge pools/patios
 - Clarify referenced decibel levels
- Consideration of stipulations to meet night/holiday limit
 - Restrictions on use of certain outdoor areas after 10:00 p.m. and on Sundays/legal holidays
 - Technological noise mitigation and/or or other design modifications



Compliance with noise mitigation under review and will be revisited

09822204-Smoke Tree Resort Noise Level Contours Scenario 3: Distributed Audio System



26

45 50

55

60

65

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>= 65

[3] SOD – DENSITY

The Planning Commission shall evaluate how the proposed density impacts safety and quality of life. The site adjoins non-residential zoning on three sides, and the proposed site plan has reduced density on the west and south sides of the site. Analysis

- Smallest resort by site area in Town
- 15.2 17.1 units per acre falls within density range of existing resorts (3.9 -20.1)
- Evaluate density so not impacting safety and quality of life per SOD

| | SUP Guidelines | Existing | Proposed |
|----------|---------------------------|---|--------------------------------|
| Lot Size | Minimum 20 acres | 233,630 gross square feet (sf) | 233,630 sf |
| | | 218,096 net sf | 207,250 sf |
| | | 5.4 gross acres/ 5.0 net acres | 5.4 gross acres/ 4.8 net acres |
| Guest | 58 units (gross) | 30 units | 82 units |
| Units | 52 (net) * or 55 (net) | 1 unit per 7,788 sf (gross) | 1 unit per 2,849 sf (gross) |
| Density | 1 unit per 4,000 sf | 5.6 units per gross acre | 15.2 units per gross acre |
| | 10.7 units per gross acre | 1 unit per 7,720 sf (net) | 1 unit per 2,660 sf (net) |
| | 10.8 units per net * acre | 6.0 units per net acre | 16.4 units per net acre |
| | 11 0 units per net acre | | 1 unit per 2,527 sf (net) * |
| | | A CONTRACTOR OF | 17.1 units per net * acre |

* Net includes Quail Run Road post dedication

[4] SOD – LOT COVERAGE

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| The | e Planning | Commission shall | consider lot | | nalysis | |
|------|-------------|------------------------|------------------------|---------|---|--|
| COV | verage and | d floor area ratio wh | nile taking into | | Lot covera | ge tails near |
| con | sideratior | n the unique charac | teristics of the site | | the range of | ot existing |
| loca | ated on fiv | ve acres, its proximi | ity to the City of | | resorts (7.8 | 8% - 28.7%) |
| Sco | ottsdale, a | nd that non-resider | ntial zoning adjoins | | Two resort | s allow> 25% |
| thre | e sides o | f the site with the fo | ourth side adjoining | | Montelucation footprint a | ia which breaks 25% and 31% with |
| Qua | ail Run Ro | bad adjacent to resi | idential R-43 zoning | • | overhang | is & certain |
| The | e Planning | commission shall | also evaluate the lo | t | accessor ■ Camelba | y structures ck Inn fullv enclosed |
| COV | verage and | d floor area ratio wi | thin the context of th | ne | buildings | at 20% gross area, |
| imn | nediately | adjacent properties | . The lot coverage | | all other s area, and | structures 10% gross I public areas 30% |
| anc | floor area | a ratio shall be calc | ulated based on bot | th | gross are | a |
| net | and gross | s area. | | | More detai | l needed |
| [| | SUP Guidelines | Existing | Propose | d | |
| Dis | Lot | 25% | | | | |



| | SOP Guidelines | Existing | Proposed |
|----------------|--------------------------------|---------------------------|---------------------------|
| Lot | 25% | | |
| Coverage | 58,408 sf (gross) | 10.3% (24,100 sf – gross) | 27.5% (64,350 sf – gross) |
| | 54,524 sf (net) | 11.1% (24,100 sf – net) | 29.5% (64,350 sf – net) |
| | | and the second second | 31.0% (64,350 sf – net) * |
| * Net includes | Quail Run Road post dedication | n | |

[4] SOD – FLOOR AREA RATIO (FAR)

The Planning Commission shall consider lot coverage and floor area ratio while taking into consideration the unique characteristics of the site located on five acres, its proximity to the City of Scottsdale, and that non-residential zoning adjoins three sides of the site with the fourth side adjoining Quail Run Road adjacent to residential R-43 zoning. The Planning Commission shall also evaluate the lot coverage and floor area ratio within the context of the immediately adjacent properties. The lot coverage and floor area ratio shall be calculated based on both net and gross area Analysis

- No guideline on FAR
- Results in highest FAR compared to existing resorts (9.8% - 35.1%)
- More detail needed to evaluate context of the immediately adjacent properties (e.g. FAR on nearby resorts within Scottsdale)

| TOWN | OF PARADISE | ALLEY |
|------|-------------|-------|
| INC | ORATED MAT | 1981 |

| | SUP Guidelines | Existing | Proposed |
|---------------------|----------------------------------|--|--|
| Floor Area Ratio | No guideline | 10.3% (24,100 sf – gross) 11.1% (24,100 sf – net) | 50.0% (116,570 sf – gross) 53.4% (116,570 sf – net) 56.2% (116,570 sf – net) * |
| * Net include | s Quail Run Road post dedication | | |

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[5] SOD – HEIGHT/VIEWSHEDS

The Planning Commission shall evaluate the proposed height and viewsheds based on its visibility of proposed buildings as seen from off-site which may require additional visuals (e.g. sight line representation, rendering, etc.). Lower height is encouraged on the west side of the site nearest to existing residential properties. Heights shall comply with the SUP Guidelines with mechanical screening and architectural elements included in the maximum height.

This site is one quarter the suggested 20acres per the SUP Guidelines and the location adjoins other non-residential uses. 36 feet or three-story resort development is the exception in the Town, and will only be considered where contextually appropriate and mitigated by design. The Planning Commission focus shall be that the overall mass of the structures are of an appropriate scale, with special consideration given to the views from the south side bordering the Andaz resort and the west side bordering Quail Run Road

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[5] SOD – HEIGHT/VIEWSHEDS

| | SUP Guideline | Existing Minimum | Principal Building Guest Units, Market etc. | Principal Building Casitas | Accessory French Cowboy |
|-------------------------------------|---|---|---|----------------------------------|--|
| Height Original Grade | 36 feet principal 24 feet accessory | 10 feet | 36 feet 3 inches and portions at 14, 18, and 22 feet | 14 feet | 18 feet 25 feet 5 inches |
| Height Open Space Criteria | 16 feet increases based on setback to 36 feet at 100- foot setback | Meets, except 3 west buildings are within the 20-foot setback | Meets, except part of 3 rd story along east | Meets | Meets, except some roof sections |

Analysis

- Meets guidelines except French Cowboy and portions of arrival building
 - Need to determine contextually appropriate and mitigated by design if exceeds guideline
- More detail needed explore options
 - Lower French Cowboy roof
 - Lower 3rd floor celling height
 - Stepback east 3rd floor units
 - Remove units



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[6] SOD – SETBACKS

The Planning Commission shall explore appropriate setbacks for structures and outdoor spaces, with particular attention to the setback along Quail Run Road for the residents west of the site, visitors to the medical plaza to the east of the site, and the Andaz resort guests south of the site related to privacy and noise levels. The Commission shall also identify any mitigating circumstances that may buffer the development (e.g. the use of vegetation, modified setbacks or heights, reorientation of the structures, etc.)





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[6] SOD – SETBACKS

| Setbacks | Principal Arrival Building | Principal Casitas Building | Accessory Building French Cowboy |
|-----------------|--|-------------------------------|--|
| Guideline | 100 feet | 100 feet | 40 feet |
| North | 95 feet | 365 feet | 25 feet |
| Front | 175 feet | | |
| Lincoln Drive | (2 nd /3 rd stories) | | |
| West | 55 feet | 60 feet | 39 feet |
| Street Side | 175 feet | | |
| Quail Run Road | (2 nd /3 rd stories) | | |
| East | 50 feet | 230 feet | 305 feet |
| Adjoins Medical | (all 3 stories) | | |
| South | 44 feet | 50 feet | 360 feet |
| Adjoins Andaz | (1 st /2 nd stories) | | |
| | 75 feet | | |
| | (3 rd story) | | |



Analysis

 Most existing and proposed buildings are not within SUP Guidelines

- 2nd & 3rd story of the arrival building greater than the setback of 100 feet from both streets
- "L" shaped design of the arrival building and 3rd floor planters place balconies away from homes and Andaz
- French Cowboy building redesign to meet 40' to west and consider larger setback along Lincoln Dr 5/16/2023

[7] SOD – LANDSCAPING/BUFFERS

The Planning Commission focus on landscaping/buffers shall be along the perimeter of the site. This includes, and is not limited to, appropriate screening or relocation of the utility cabinets along Lincoln Drive, locations and screening of loading zones and dumpsters, suggested guidelines along Lincoln Drive from the Town's Visually Significant Corridors Master Plan (e.g., Resort Living Character Zone), buffers along the rights-of-way adjoining the proposed restaurant (particularly the two outdoor patios) at the Lincoln Drive and Quail Run Road intersection, harmony of the proposed landscaping with the adjacent landscaping (e.g., Lincoln Drive medians), appropriate type of plant material for the location (e.g., drought tolerance, scale, seasonal color), review of plant impact (e.g., fire/fall hazard, pollen irritants), and appropriate stipulations (such as maintenance, early phasing of street frontage/perimeter landscaping, and replacing dead plant material).



[7] SOD – LANDSCAPING/BUFFERS

| PLANT LEGEND BOTANICAL NAME SYM. COMMON NAME | SIZE | MIN. CAL HT X W | QTY. | Statin COLN | DRIVE | |
|--|------------------|--------------------------|------|------------------------------|---------------------------------|----------------------------|
| TREES EUCALYPTUS PAPUANA GHOST GUM | 36" BOX | 1.5" CAL 9' H X 4' W | 19 | | | |
| PROSOPIS JULIFLORA NATIVE MESQUITE | 36" BOX MULTI | 2.5" CAL 11' H X 6' W | 29 | | LOUNGE 8 | |
| QUERCUS VIRGINIANA LIVE OAK | 48" BOX | 4" CAL 15' H X 9' W | 3 | | | |
| SHRUBS DODONAEA VISCOSA | 5 GAL | | 91 | EVENT | | |
| / HOPBUSH LARREA TRIDENTATA | 5 GAL | | 41 | EVENT I | | |
| CREOSOTE BUSH LEUCOPHYLLUM LANGMANIAE 'RIO BRAVO' | 5 GAL | | 18 | LAWN H | | |
| | | | | | | |
| AGAVE WEBERI | 5 GAL | | 105 | | SPA FITNESS | |
| | 5 GAL | | 56 | | | |
| HESPERALOE PAVIFLORA 'MSWNPERED' | 5 GAL | | 177 | and a start start | المسافيد فيد في المد في المد ال | |
| OPUNTIA FICUS-INDICA INDIAN FIG PRICKLY PEAR | 15 GAL | P | 14 | when we are at the set | E | |
| VINES | | | | SUP Guidelines | Existing | Proposed |
| BOUGAINVILLEA 'BARBARA KARST' BARBARA KARST BOUGAINVILLEA | 5 T | otal Are | ea | 60% all impervious area | 29.8% gross, 32.0% net | 58.8% gross, 63% net and |
| GROUNDCOVER | Ir | npervic | bus | 953,616 sf | (Estimated 69,700 sf) | 66.3% net * (137,360 sf) |
| LANTANA 'NEW GOLD' NEW GOLD LANTANA | 10 | - | | | | |
| ⊕ MUHLENBERGIA 'DUBIA' PINE MUHLY | |)pen Sp | ace | Minimum 40% | 65.0% gross, 70.0% net | 41.2% gross, 44.1% net and |
| SPHAGNETICOLA TRILOBATA | 50 | | | and the second second second | (Estimated 152,000 sf) | 46.5% net * (96,271 sf) |
| TOPDRESS / DUST CONTROL | | | | | | |
| 3/8" MINUS DECOMPOSED GRANITE: 2" MIN. [| JEPTH: | | | **** | | 5/16/2023 |

[7] SOD – LANDSCAPING/BUFFERS

Analysis

- Existing and proposed buffer setbacks not within guidelines
- Maximum impervious surface meets the guideline using gross acreage, but not the net acreage
- More detail needed explore options
 - French Cowboy greater setback to street
 - Wider landscape buffer south of the access along Quail Run Road
 - More color/plant variety along Lincoln Drive
 - Evaluate hedge material along the south and east property lines
 - Draft applicable stipulations



 Table above -The top number being the parking setback and the lower number being
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 the landscape setback. Red text indicating below the SUP Guideline.
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[8] SOD – EXTERIOR LIGHTING

The Planning Commission focus on exterior lighting shall be how it meets SUP Guidelines and that the fixtures are of a quality expected for a Town resort. In particular, some focus areas include lighting along the perimeter of the site, how illumination might wash building elevations, limits on the visual impact of string lights and palm tree lights, and impact of lighting at the second and third floor elevations.



[8] SOD – EXTERIOR LIGHTING



[9] SOD –GRADING/DRAINAGE & UTILITIES ³⁹

The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should the drainage, grading, and utilities affect the design or impact to nearby properties.

Analysis

- Currently no onsite retention
- Stormwater historically flows east and exits northeast



 Existing drainage pattern to remain with series of catch basins & underground retention basins



[10] SOD – TRAFFIC/PARKING/ACCESS

The proposed density and location within a heavily traveled and mixed-use density area near the City of Scottsdale creates a heightened need for ensuring the proposed redevelopment has a positive impact on traffic safety, parking, and circulation which is reviewed by the Town's professional staff to ensure compliance to safety and other standards which may require additional analysis. This analysis shall include, and is not limited to, necessary queuing areas (e.g., deceleration lanes) and driveway access functioning (e.g., allowed movements into and out from the driveway, favorable geometry, sight distance, Quail Run Road primary access considerations, and visibility). The Planning Commission has this information as a resource to understand the scope of the project and if applicable provide general input should these items affect the design or impact nearby residents.

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SCOPE – PARKING/TRAFFIC/CIRCULATION 41

Analysis

- Parking & Traffic Analysis provided
- Main access off Quail Run Rd
- Shared access on Lincoln Dr
- Propose underground garage
- 143 total spaces (69 surface)
- Circulation restricted south and east for fire line use
- More detail needed
 - Categorization of certain uses related to internal capture rate
 - Time of day reductions
 - Modeling assumptions related to back of house/employees
 - Any valet mode options
 - Queue storage
 - Warrants for deceleration lane(s)



[11] SOD – SIGNAGE

Planning Commission review shall focus on the impact of sign location, dimensions, and illumination on the streetscape and compliance with SUP Guidelines.



Hotel Monument Signage Wall: 42* Tall

Analysis

- Signs are expected to comply with SUP Guidelines
- More detail needed
 - Table summarizing the proposed exterior signs with sign area, height, quantity, illumination
 - Detail with typical material identified and dimensions



[12] SOD – WALLS/FENCES

Planning Commission review shall evaluate the setback, height, and design of the proposed perimeter walls to ensure these walls are consistent with the quality and design of a Town resort. No walls shall be within the post-dedication rights-of-way.



[12] SOD – WALLS/FENCES

- Guidelines follow Article XXIV, Walls
 - No walls within 10' setback along right-of-way
 - 3' tall maximum between 10' and 20' setback
 - 6' tall maximum setback > 20' (Quail Run Rd)
 - 8' tall on 2' berm maximum setback > 20' (Lincoln Dr)
- No walls allowed within the right-of-way
- Walls meet except the following
 - Height of feature walls along Lincoln Dr at 3'6"
 - Height of French Cowboy patio at 5' tall
 - 6' tall parking wall along Quail Run Rd in rightof-way
 - Height & setback of feature walls along Quail Run Rd at 8' tall, 5' setback

| Setback Height | Proposed Feature Walls Lincoln Drive | Proposed Feature Walls Quail Run | Proposed Patio Walls | Proposed Parking Screen |
|------------------------------|--|---|--------------------------------|-------------------------------|
| North Lincoln Drive | 10 feet & 0 feet 3 feet 6 inches | Not Applicable | 12 feet 5 feet | 12 feet 3 feet |
| West (North of Access) | 12 feet 3 feet 6 inches | 5 feet 8 feet | 18 feet <mark>5 feet</mark> | Not Applicable |
| West (South of Access) | Not Applicable | 5 feet 8 feet | Not Applicable | In Right- of-Way 6 feet |
| East | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| South | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

Note: The top number in the table is wall setback and lower number is the height



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[12] SOD – WALLS/FENCES

Analysis

- Parking screen wall along Lincoln Dr & walls along the east & south property lines are within SUP Guidelines
- 4 feature walls, French Cowboy patio walls, and screen wall along Quail Run Rd are not within the SUP Guidelines
- More detail needed explore options
 - Screening and/or relocation of APS cabinet at Lincoln
 - More clearly show setbacks on the plan
 - Show existing Andaz oleander hedge
 - Provide wall elevations
 - Modify 6' tall wall along Quail Run Rd to remove from right-of-way, larger setback, and redesign



Consider redesigning French Cowboy outdoor patio wall taller and with berms on outside mitigate noise



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NEXT STEPS

- Applicant to resubmit to respond to comments
- Continued discussion by Planning Commission

| Event | Date |
|-------------------------------|--|
| SUP submittal | Feb 17, 2023 |
| SOD Approval | Apr 27, 2023 |
| Citizen Review Session | To be scheduled |
| Planning Commission | [Jun – Sept 2023]; [Jun 20, 2023]; May 16, 2023 |
| Meetings | |
| Council Meetings | [Oct – Dec 2023]; Apr 27, 2023; Apr 13, 2023; Mar 23, 2023 |



[Date] = tentative

5/16/2023

QUESTIONS?

