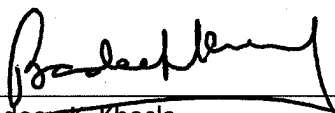


Business Case Analysis
University of California, San Diego
Voigt Transit Operations Center
December 2019

Approved:

A handwritten signature in black ink, appearing to read "Pradeep K. Khosla", written over a horizontal line.

Pradeep K. Khosla
Chancellor

Voigt Transit Operations Center

Business Case Analysis

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1. Executive Summary

The San Diego campus proposes construction of the Voigt Transit Operations Center (VTOC) on surface parking lot P701, located just south of Voigt Drive and east of Interstate 5 on the East Campus (see Appendix A). The VTOC would provide approximately 1,500 parking spaces (see Appendix B), bus storage and charging space for campus shuttles, as well as approximately 10,000 square feet of office space for Transportation Services (replacing current offices in trailers and multiple storage sheds). Each of these elements represent advance mitigation of displacement anticipated in the University's Long Range Development Plan.

Over the past decade, the ongoing physical development of the campus has had significant impact on the demand for and availability of parking. Construction of more than four million gross square feet of new instruction and research facilities and student housing addressed space deficiencies associated with past enrollment growth. At the same time, however, most of those new facilities were constructed on surface parking lots that were not replaced, significantly reducing the parking inventory over time.

Even with tremendous progress made in recent years to reduce the number of single occupancy vehicles entering campus, and anticipation of a 10 percent reduction in demand upon completion of Light Rail Transit service to campus, there remains a critical need for additional parking options. Students, faculty, and staff currently spend a significant amount of time looking for parking, when the only available spaces are located at more than a ten-minute walk from their offices or classrooms. The experience for visitors is similar, but with the added disadvantage of not being familiar with the campus. This project mitigates just 65 percent of anticipated parking loss in adjacent facilities, relying on the continued success of the University's Transportation Demand Management program and demand reduction from the launch of the Light Rail Transit on campus.

The estimated total project cost is \$67.5 million and would be funded with Campus Funds. The Voigt Transit Operations Center is targeted for completion in September 2021.

2. Context

UC San Diego is located in La Jolla, a suburb of the larger San Diego metro area. Like many modern cities in the United States, as the population of San Diego grew, development of the regional transportation network was focused primarily on single occupancy vehicles with little to no regard for public transportation. Residential, commercial, and industrial areas throughout the County are linked by highways and a regional road network. Only recently has there been a county-wide focus on improving options for public transportation; however, the effort is challenged by canyons that disrupt the grid, funding for local transit, and an auto-centric culture.

Historically, parking at UC San Diego was located in surface lots that were scattered throughout the campus. As the few remaining surface parking lots are displaced by construction of new facilities, most parking will be consolidated in structures, consistent with the 2018 Long Range Development Plan (LRDP) – La Jolla Campus. The LRDP explains that parking structures would be located at key campus entry points along the perimeter and along the campus loop road in an effort to remove vehicular traffic from the interior of campus. Per campus policy, new parking structures shall include parking guidance systems with signage that displays available space counts to reduce the need to drive from structure to structure, seeking parking. Signage at these centralized locations enhances way-finding to supplement pre-arrival guidance via the UC San Diego Mobile App.

While La Jolla is well-developed, it continues to function as a suburban area, and UC San Diego, in contrast to other, more urban UC campuses such as Berkeley and San Francisco, is most easily accessible by car. Despite the traffic, the most efficient way to get around continues to be in a private vehicle. Downtown San Diego and other essential areas are accessible via alternative transit, such as bus, but use of public transportation often requires a significant and often unrealistic time commitment by the rider when traveling from the communities where faculty and staff reside. Extension of the Light Rail Transit (LRT) service to La Jolla will improve connections to downtown and neighborhoods in south and east San Diego County, but the LRT will not link the campus to the heavily populated areas directly north and east of campus. There are plans to extend LRT service to the north and east areas but construction is planned for several decades from now.

3. Parking Supply and Demand

Historically, much of the excess demand for parking on the West Campus could be accommodated in surface parking lots located on the East Campus. For those who are only able to find parking in overflow lots on the East Campus, UC San Diego shuttles provide transportation to and from the West Campus. The strategy of providing overflow parking on the East Campus was successful in past years, however, this option is no longer viable as a result of displacements and reallocation of parking spaces due to on-going development and increased parking demands on the East Campus as shown in the table below. It is noteworthy that East Campus parking is increasingly dedicated to Health System support, one of the least elastic sources of parking demand.

Recent & Planned Parking Displacements on the East Campus					
Recent Projects Which Displaced Parking	Spaces Removed	Increased Demand Resulting From Project	Planned Future Projects* Which Will Displace Parking	Lot	Spaces to be Removed
Komen Outpatient Pavilion	200	540	Voigt Transit Operations Center	P701	320
Jacobs Medical Center	343	4,079	Voigt Drive Widening/Campus Point Drive Realignment	P702	200
Altman Clinical Translational Research Institute	n/a	512	Hotel with Conference Center, Restaurants	P703 P704 P705	1,149
Light Rail Transit	67	n/a	Shiley Viterbi Vision Research Center	P751	129
			Future "Medical" building site	P760	252
			Future Science Research	P782	243
Subtotal	610	5,131			2,293
Total Displaced					2,903
Increased Demand (prior to planned future projects)					5,100+

**Increased demand for future planned projects has yet not been studied as of the date of this BCA.*

As demonstrated in the table above, due to continued development, more than 2,900 spaces have been or will be displaced while the demand is estimated to grow by more than 5,100 spaces. Even with the completion of the proposed Voigt Transit Operations Center, only a small portion of the estimated demand will be served.

On the West Campus, existing surface parking lot (P502) located just west of Warren Apartments on Voigt Drive currently provides approximately 355 parking spaces and, according to data collected by UC San Diego Transportation Services, the average occupancy at this lot during peak hours is 97 percent. The 2018 LRDP designates surface lot P502 as “Academic” and in May 2019, the campus received Regental approval to begin construction of Franklin Antonio Hall at this location. In May 2018, the Regents authorized preliminary plans funding for the Triton Pavilion for Student Resources and Community Engagement. Triton Pavilion would redevelop approximately four acres at the University Center and would displace 90 heavily utilized spaces in the center of campus. Future redevelopment of remaining parcels in the University Center would displace another 485 spaces.

Hopkins Parking Structure, located at the western end of Voigt Drive, currently provides a total of 1,243 spaces that are allocated as follows: 84 faculty, 496 staff, and 663 student. Once construction of Franklin Antonio Hall begins December 2019 on surface lot P502, 355 spaces will be eliminated, including 143 that are allocated to faculty. To manage this in the interim, spaces in the Hopkins Parking Structure will be reallocated so that a larger portion are available to faculty. This will reduce the number of student and staff spaces in the Hopkins Structure. A portion of the spaces in the proposed Voigt Transit Operations Center structure would be allocated to staff and students. (See Appendix C for locations of referenced projects.)

Monthly rates for parking permits currently range from \$98 per month for faculty, \$86 per month for staff spaces, and \$65 per month for students. Anyone may purchase a “visitor” pass, which is available for \$3 per hour or \$30 per day.

Between 2001 and 2019, the total survey estimated number of commuters entering La Jolla campus (students, faculty, staff, and visitors) grew from just under 40,000 to almost 60,000 people. While UC San Diego has made tremendous progress towards reducing dependence on private vehicles (a 23 percent reduction since 2001), the data indicates that approximately 43 percent of people continue to drive to campus in personal vehicles (see Appendix D). Since the number of parking spaces on campus has remained relatively constant while the campus population has increased, there continues to be significant demand for parking. Results of parking surveys conducted in Spring 2019 and early Fall 2019, indicate parking occupancy on the East Campus during peak hours averages between 85 percent for student eligible permits and 97 percent for staff and graduate student permit parking. An ideal occupancy rate would be approximately 90 percent, which allows for turnover and reduces the amount of time people drive around looking for spaces.

4. 2018 Long Range Development Plan – La Jolla Campus

LRDP Goals for Parking and Transportation

The 2018 Long Range Development Plan (LRDP) describes land use categories that reflect those activities that will be predominant in any given area. Predominant uses are the primary programs, facilities, and activities in a general geographic area. In addition, other associated or compatible uses are allowable within any given area defined by a predominant use. For example, parking may be included in academic or medical use areas.

The 2018 LRDP projects that the vast majority of future parking would be in structures due to the limited amount of vacant land. To accomplish UC San Diego’s long-standing goals of easing access to the campus and minimizing the impacts of growth on the surrounding community, the campus has and will continue to emphasize the importance of using alternative transportation, including campus-operated shuttles, public mass transit, bicycles, carpools, rideshare and vanpools.

Consistent with the goal of optimizing the use of campus land and resources that was expressed in all of UC San Diego's previous LRDPs, the 2018 LRDP promotes the following strategy to guide the development of alternative transportation and parking:

- Expand and improve campus-operated alternative transportation programs (e.g., shuttle systems, carpooling, vanpooling, bicycle network) to minimize demand for parking;
- Collaborate with public agencies responsible for mass transit operations to secure external funding to expand the scope of services provided for UC San Diego commuters and to minimize demand for parking;
- Consider policy changes to contain both the amount of additional parking needed and permit cost increases, and to encourage expanded use of mass transit;
- Develop parking structures as needed to accommodate the long-range population of the campus. Carefully consider opportunities to co-locate parking structures with other facilities (e.g. office space, recreational facilities, etc.); and
- In siting and designing parking structures, carefully consider access to and from, topography, landscaping, noise impacts, nearby buildings, and lighting that ensures safety.

5. Alternative Solutions and Transportation Demand Management Programs

At UC San Diego, parking supply and demand are regularly monitored to evaluate the quantity of parking available and to ensure that use of alternative modes of transportation is maximized. In an effort to maintain access, the campus also monitors modes of transportation used by people arriving on campus.¹ The process for advancing future parking facilities on campus involves the Transportation Advisory Committee (TAC) and the Campus/Community Planning Committee (C/CPC). Transportation Services also regularly provides updates for consult discussions with the Student Transportation Advisory Committee (STAC).

The TAC reports to the Vice Chancellor of Resource Management and Planning and advises on policy matters, allocation of parking spaces, alternative transportation programs, parking fees and rates, and location of future facilities. Specifically, the TAC provides advice on the development of alternative transportation programs, fees, location, timing, and scope of future parking facilities, and the investment of transportation and parking system revenues. Upon the determination that a new parking facility is justified, potential sites are advanced to the C/CPC, which provides siting and land use recommendations to the Chancellor.

A description of the alternatives that were considered to address parking demand are described below in conjunction with a summary of Transportation Demand Management Programs.

Policy Changes

Beginning in July 2016, two policy changes went into effect. Under the first change, incoming first-year undergraduate students are no longer able to purchase parking permits. This is a trend many colleges and universities are following. Prior to July 2016, there were approximately 900 first-year students on campus with parking permits. Preliminary surveys have indicated that the freshman car restriction reduced the demand for parking by approximately 800 spaces. Transportation Services is anticipating extending the current freshman parking permit restriction to sophomores². With

¹ UC San Diego Transportation Services conducts commute mode of entry transportation surveys – please refer to Appendix D

²As with the current freshman parking restriction, waivers would be available for individuals eligible for accessible parking, work or family care commitments, or other unique circumstances that make parking a private vehicle on campus necessary. The restriction would only apply to presold

a Target store expected to open on campus in the next year and the anticipated completion of the North Torrey Pines Living and Learning Neighborhood in fall 2020 that will provide additional undergraduate student housing, retail and dining options, the need for freshman and sophomores to have access to a private automobile should be significantly reduced. By extending the current freshman parking permit restrictions to sophomores, UC San Diego intends to reduce the amount of campus parking used for long-term vehicle storage; reduce commuting costs that would increase parking permit prices; and reduce the availability of funds for shuttles and programs that support low-impact commuting. Car-sharing, with Zipcar, unlimited transit access with U-Pass, Lyft discounts, bike sharing and shuttles, along with an on-campus bike-share and eScooter share would be utilized to meet the typical freshman or sophomore mobility needs.

The second policy change in effect July 2016 increased pay station rates from \$2 per hour to \$3 per hour with a daily maximum of \$30. Pay station permits are daily permits generally purchased by campus visitors, although faculty, staff and students are also able to purchase. As part of the change, pay station permits are no longer valid in 'B' (Staff) or 'S' (Student) spaces between 7:40 a.m. and 4:00 p.m. and must be used in 'V' (Visitor) spaces only. This change applies to the general campus and does not apply to parking spaces that are specifically allocated to patients of the UC San Diego Health System.

Pilot Programs

As part of the effort to improve parking and meet ever-increasing demand for proximate parking, the campus debuted a valet service pilot program at surface lot P416 two years ago, P610 shortly thereafter, and P302 with the groundbreaking of North Torrey Pines Living and Learning Neighborhood. The valet service provides convenient access to the center of campus for areas including the School of Medicine, the Administrative Complex and the Price Center, and UC San Diego Extension – locations with acute, local, temporary parking supply/demand imbalances and significant transient parking demand. The service is available for permit-holders (\$5/day) and visitors (\$30/day) Monday through Friday from 7:30 a.m. to 6:00 p.m. (last intake at 4:30 p.m.) The valet service pilot program will be evaluated for continuation on an annual basis by Transportation Services to assess the program's effectiveness.

ProRide is another pilot program that provides a free, sustainable transportation option to improve faculty mobility on campus when traveling between instructional locations. A fleet of electric SMART cars, NGV biogas sedans, and wheelchair-accessible vans provide transportation on weekdays from 7:00 a.m. to 8:00 p.m., excluding university holidays. Like other ride services, ProRide pickups are requested in real-time (via app, Website, or by telephone call), and requests enter a real-time queue. When a pickup request is submitted, ride status can be viewed in an app.

Public Transit and Campus Shuttles

Since the early 1990's, UC San Diego has worked closely with the San Diego Association of Governments (SANDAG) to provide an extension of Light Rail Transit (LRT) service to the campus and the surrounding community. Referred to as the Mid Coast Light Rail Transit (LRT) or Blue Line Trolley Extension, the project will significantly improve transit accessibility to and from campus by providing one station on the UC San Diego West Campus and two stops close to the UC San Diego East Campus. Construction of the LRT extension began in 2016 (per SANDAG website) and completion is currently anticipated in 2021.

parking permits and would not apply to the use of parking pay stations or purchase of daily/hourly parking through the campus parking app; those resources would remain an option for both freshmen and sophomores.

LRT service will provide an alternative transportation option for students, faculty, staff, and visitors. Initial ridership modeling has estimated that the LRT would likely reduce the demand for parking on campus by about ten percent. However, even after completion of the LRT, there will continue to be demand for parking due to continued growth of the campus population (students, faculty, staff and visitors) and due to lack of viable public transportation options to campus from neighborhoods to the north and east of campus. The proposed VTOC represents replacement parking at 85 percent of displacement, meaning that per capita parking supply on campus will continue to decline as fast as or faster than per capita parking demand.

UC San Diego has also partnered with the Metropolitan Transit System (MTS) to offer several programs including the ECO Pass, U-Pass, College Student Pass, and Compass Card Special Passes. These pass programs continue the long-standing successful partnership with MTS to serve our mutual customers. Such programs are intended to provide the campus community with convenient regional transit access. The unique role and experience of UC San Diego in cooperating with MTS in piloting regional programs, and UC San Diego's significant customer base, suggest opportunities to transform initial practices into more effective systems and reduced costs. The total annual payment from UC San Diego to MTS for current programs is more than \$6 million. Annual ridership continues to grow and UC San Diego is on track to generate four million public transit trips in AY20 in addition to the 1.5 million trips on campus shuttles each year.

In 2017-18, UC San Diego students voted to re-approve a Student Transportation Fee of \$64.58 per student per quarter for a UC San Diego U-Pass. The U-Pass provides for all students with unlimited ridership during the fall, winter, and spring quarters on all mass transit bus and light rail routes in the San Diego region³. The original Student Transportation Fee went into effect Fall 2014 and does not currently include the summer session but discussions are underway to provide a year-round pass. The U-Pass provides a reasonable alternative to driving for both resident students and those who commute to campus. MTS also offers a "College Student Pass" which provides a discount to eligible full-time UC San Diego affiliated students who are not eligible for U-Pass, such as degree-bound International Program extension students.

ECO Pass is another MTS program that allows UC San Diego faculty and staff who enroll through payroll deduction to receive 25 percent fare discount for access to all regular MTS and NCTD buses, excluding the MTS rural and premium express routes as well as the NCTD Coaster Train, FLEX and LIFT. Campus payroll deductions for transit pass purchases also qualify for any federal pre-tax commuter benefit. Since the introduction of transit ridership in Fall 2014, there have been more than 19,000 boardings per weekday using the U-Pass and ECO Pass programs. A Winter 2019 survey shows over 9,000 unique transit commuters to campus daily and transit ridership is anticipated to continue to grow in 2019 and 2020 with the continuation of a pilot transit trial promotion. It should also be noted that this data does not include Campus Shuttle ridership. In 2018-19, a pilot promotion offered eligible employees a no-cost option for three months of ECO Pass to those employees who were willing to surrender their full-time parking permit. For employees who wish to continue with the ECO Pass beyond the first three months, the promotion offered the next three months at a 50 percent trial discount. Initial results have shown a significant increase in ECO Pass users by nearly 25 percent since the pilot program began.

The SuperLoop, San Diego's first Bus Rapid Transit route began operation in June 2009. The route provides bidirectional express bus service that connects the campus with key destinations throughout the University City community, including

³ U-Pass provides unlimited ridership on all mass transit and light rail operated by the San Diego Metropolitan Transit System (MTS) and the North County Transit District (NCTD) and excludes the MTS rural and premium express routes as well as the NCTD Coaster Train, FLEX and LIFT.

residential neighborhoods with a high concentration of student populations. There are currently three SuperLoop stations on campus. As part of the SuperLoop, SANDAG and the MTS completed the Gilman Transit Center (GTC) on the UC San Diego campus in Fall 2014. Four new bus shelters were constructed on the north and south sides of Gilman Drive between Myers Drive and Russell Lane. The GTC includes bus turnouts for efficient loading of passengers, larger waiting areas for riders, improved seating and lighting, and open space improvements. The project also provided a dedicated bike lane along Gilman Drive and additional bike racks near the GTC.

Presently, there are seven public bus routes serving the campus:

1. Route 30 from Downtown San Diego, via the Pacific Beach and La Jolla communities
2. Route 41 from Fashion Valley, via Clairemont community
3. Route 101 from North County, south from Oceanside via north coastal communities
4. Route 150 Rapid via Old Town Transit Center
5. Routes 201/202 from University City (SuperLoop)
6. Route 237 from Rancho Bernardo
7. Route 921 from Mira Mesa/ Sorrento Mesa

In an effort to further reduce traffic congestion and parking demand, the campus operates a shuttle program with nine shuttle routes (listed below). Approximately half of the shuttle bus fleet have been converted to clean-burning compressed natural gas (CNG) buses, with the intent to convert all remaining gas-powered shuttles to either CNG or electric.

1. *Coaster Shuttle*: connects the Sorrento Valley Coaster Station with campus (with stops at Koman Family Outpatient Pavilion and Gilman Drive & Mandeville Lane)
2. *East Campus Circulator*: connects UC San Diego Health – La Jolla and east campus parking areas (with stops at Thornton Pavilion, ACTRI building, Lot P759, Jacobs Medical Center, Koman Family Outpatient Pavilion, Athena Circle, Lot P782, Lot P785, Athena Parking Structure and Thornton Pavilion)
3. *Medical Center Shuttle*: connects UC San Diego Health – Hillcrest and Old Town Transit Center, and UC San Diego Health – La Jolla (with stops at Athena Circle, Lot P782, Lot P785, Koman Family Outpatient Pavilion, Gilman Drive & Old Town Transit Center, Hillcrest and Gilman Transit Center)
4. *Mesa Nueva Shuttle*: connects Mesa Nueva housing and campus (with stops at Mesa Nueva Housing, Lot P785, Gilman Transit Center, and Mandeville Center)
5. *North Campus Shuttle*: runs in a counterclockwise loop between Regents parking lots and the Gliderport (with stops at Lot P704, Lot P510, Price Center, Warren Apartments, Atkinson Hall, Hopkins Parking Structure, Northpoint, Gliderport, Pangea Parking Structure and Eleanor Roosevelt College)
6. *SIO Shuttle*: runs in a counterclockwise loop between Mandeville Center and Scripps Institution of Oceanography (with stops at Mandeville Center, Gilman Drive & Osler Lane, Lot P103, Natural Sciences Building, La Jolla Shores Drive & Inyaha Lane, Coast Apartments, Southwest Fisheries, IGPP, Vaughan Hall, and Lot P003)
7. *South Campus Shuttle*: connects Mesa housing and campus (with stops at South Mesa Housing, Lot P785, Gilman Transit Center, and Mandeville Center)
8. *West Campus Connector*: runs in a continuous loop between Mandeville Center and Torrey Pines Center South, via Scholars Drive (with stops at Mandeville Center, Gilman Drive & Osler Lane, Lot P103, Natural Sciences Building, Marshall College, Pangea Parking Structure, Eleanor Roosevelt College, Torrey Pines Center South, Gliderport, and Pacific Hall)

Reliance upon Public Transit and Campus Shuttles has become increasingly more popular for campus in recent years and was successful at reducing the campus' carbon footprint, traffic congestion, and associated parking demand. While this strategy has been effective, it does not resolve the current geographical and metropolitan challenges. For example, people either have to live close enough to walk to a public transit station in order to use it or parking must be available for them to leave their cars at transit stations. Many people do not live close to a transit station or they elect not to use public transportation because it takes too long to get to campus.

Carpools, Vanpools, Ride-matching & Car-share

UC San Diego Transportation Services provides staffing to assist campus commuters with determining best options for access to campus, including an on-site vanpool coordinator to assist with new vanpool formations and commute planning. For example, carpoolers of three or more are allowed to park in reserved carpool spaces located conveniently throughout the campus. On-site vanpool staff and coordinators also assist employees with enrollment in pre-tax payroll deduction benefits and free drive-seat subsidies.

In addition to in-person, telephone and email assistance, a complete Alternative Transportation website is regularly updated and maintained to provide information and access to commuter resources. Transportation Services sponsors poster programs, student and new employee orientations, program mailings and email campaigns throughout each year, with many thousands of customer contacts annually providing information about Commute Solutions and alternative transportation options.

In case of emergency, SANDAG will provide alternative transportation users with up to three rides home each year as part of its Guaranteed Ride Home program. Many alternative transportation participants are eligible for incentive "Occasional Use" permits that provide a limited number of free days of parking per year for days when individual commuting may be necessary.

Transportation Services promotes special events such as the iCommute Rideshare 2019 Week. During National Rideshare Week, Oct. 1-4, registered participants of the Rideshare Week promotion were automatically entered for chances to win great Rideshare Week 2019 prizes.

Transportation Services has implemented a ride-share matching system using Zimride technology, which has increased from zero to over 12,000 cumulative users in the past eight years. The campus hosts a fleet of up to twenty Zipcar car-sharing vehicles, and also an incentive program allowing participants to receive Zipcar membership discounts.

As the popularity of car-share programs increase, the campus will continue to allocate preferred parking spaces as needed to support the increased use of these services and to encourage new users.

Bicycles and Scooters

The campus has expanded bicycle parking with more than 7,000 bike rack spaces available and location of racks accessible on interactive MapLink webpage. Other bicycle related programs include:

- Recent investment of about \$3.3 million to improve and connect bicycle pathways through campus
- Pedal Club bicycle commuter incentive program providing courtesy occasional vehicle parking, Bike Shop discounts, promotional car-share credits, and events
- Free access to showers and lockers for bicycle commuter program participants

- Bicycle safety program featuring disbursement of hundreds of \$20-Off Bike Helmet purchases at on-campus Bike Shop
- Bike-sharing on campus has completed nearly 2 years of a vendor sponsored program resulting in over 300,000 rides through 2019. A pilot eScooter share program was introduced to access campus demand. The current fleet is 200 dockless bicycles and 200 eScooters.
- Annual Bike-To-Work Day events

Construct Additional Surface Parking Lots

The campus has made an effort to locate pockets of space in which temporary parking spaces could be added to mitigate some of the demand. However, there are no appropriate vacant parcels on the West Campus that could be used to construct permanent surface parking lots. Any land that is currently undeveloped has either been designated for a future building, or it has been set aside because it contains sensitive environmental habitat that requires preservation. Also as indicated in the LRDP, future parking needs are to be met in structure parking to maximize the amount of available land for academic, research, residential and clinical space to meet the goals of the University. All surface parking is considered an interim use.

Use peripheral lots and shuttle system

As described in Section 3 “Parking Supply & Demand” above, use of peripheral lots and the campus shuttle system had been effective in years past; however, with the increased development on the East Campus (as described in detail earlier in this document) those lots will be displaced by development.

Other Short-term Solutions

In an effort to address highly impacted parking demand the campus is working on a variety of strategies to help ease parking challenges. Short-term solutions implemented and under evaluation include:

- Constructing temporary surface lots, where reasonable;
- Temporarily adding on-street parking, where reasonable;
- Where possible, converting restricted spaces for UC vehicles and other designated vehicles into permit spaces; and
- Reconfiguring existing surface lots to add additional parking spaces or provide valet service to accommodate more cars within the same footprint.

Operational improvements also are being considered, such as:

- Assessment of “reserved” and “allocated” parking policies and review of overall parking rates, including possible proximity parking,
- Developing ways to better communicate space availability / location during peak demand periods, and
- Implementation of valet services for highly utilized areas that experience parking shortages.

6. Recommended Solution

The campus proposes construction of the Voigt Transit Operations Center (VTOC) in response to continued growth of the campus. The VTOC would be built on surface lot P701 just east of Interstate 5, adjacent to Triton Baseball Stadium. Existing lot P701 currently provides approximately 320 parking spaces, and according to data collected in Spring 2019 by UC San Diego Transportation Services, the estimated occupancy at this lot during peak hours is 99 percent.

Construction of a new parking structure (approximately 1,500 spaces) with parking guidance technology is the best solution to efficiently manage current and future demand for parking and, due to its location just east of Interstate 5, would serve the west and east campuses. The new structure would allow for an approximate 5 minute walk to the nearest North Campus shuttle stop, a 10 minute walk to the Pepper Canyon or UCSD Medical Center LRT stops or a 15 minute walk to the heart of campus (refer to Appendix E). A shuttle stop will be added on Voigt Drive, adjacent to the proposed structure, for convenience to those who park at the VTOC. The shuttle shop will be added as part of the East Voigt Drive Improvements project (Administrative Item approved June 2019).

Given the unmet demand and negative impact to the functionality of the campus that inadequate parking supply has had (and continues to have) there are no viable solutions other than constructing a new parking structure on the East Campus.

The proposed structure would also provide visitor parking during UC San Diego Triton baseball games. The University hosts approximately 28-38 home games per year. Attendance can range, depending on the date and opponent, anywhere from approximately 125-600 people. The competition season runs from February to June, and games during the week are at night and usually during the day on weekends. Four years ago, students voted unanimously in a referendum to support the move to the Big West Conference, which will garner UC San Diego teams unprecedented national exposure. As the university prepares to transition to National Collegiate Athletic Association (NCAA) Division 1 competition on July 1, 2020, games will be on Tuesdays, Fridays, Saturdays and Sundays. The fall season consists of practices and scrimmages from September through November, and approximately 45 people attend those events. During the summer months and into fall, the campus hosts youth camps and clinics, which range from one-day clinics attended by between 10 and 20 children to multi-day camps with approximately 200 children. It will also support the future Pepper Canyon Amphitheatre, an approximately 3,000 seat performance venue, a fifteen minute walk or five minute shuttle ride from VTOC.

The below grade level of the structure would house approximately 10,000 square feet of office space for Transportation Services. This space would provide permanent office space to staff that is currently housed in trailers located near the Campus Services Complex and on East Campus parking lots that will be redeveloped in the near future. The final program for this space will be refined during the programming and design phase.

Parking lot P705, located on east campus, is currently used for campus shuttle bus parking. This lot is designated as “Academic/Community-Oriented” in the LRDP, and is currently planned for redevelopment as future a public-private-partnership (P3) project. The proposed VTOC would provide a permanent location for campus shuttle bus parking, in the future will also include charging, and is optimally located between the University’s fleet maintenance facility and the Energy Park where CNG biogas fueling facilities for the fleet are located.

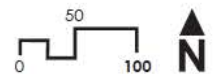
The proposed structure would also include the following sustainable features, to be further expanded and refined as part of design development:

- Spaces for motorcycles and bicycles
- Charging stations for electric vehicles
- Natural day-lighting and high-efficiency lighting
- Natural ventilation
- Water-efficient landscaping and storm water quality features

- Parking availability monitoring systems
- Solar panels on top deck

Target completion for the proposed parking structure is September 2021. Options for providing temporary parking solutions for those displaced are currently under analysis, including the aforementioned “Short-term Solutions”. The estimated total project cost is approximately \$67.5 million and would be funded with Campus Funds.

Appendix A



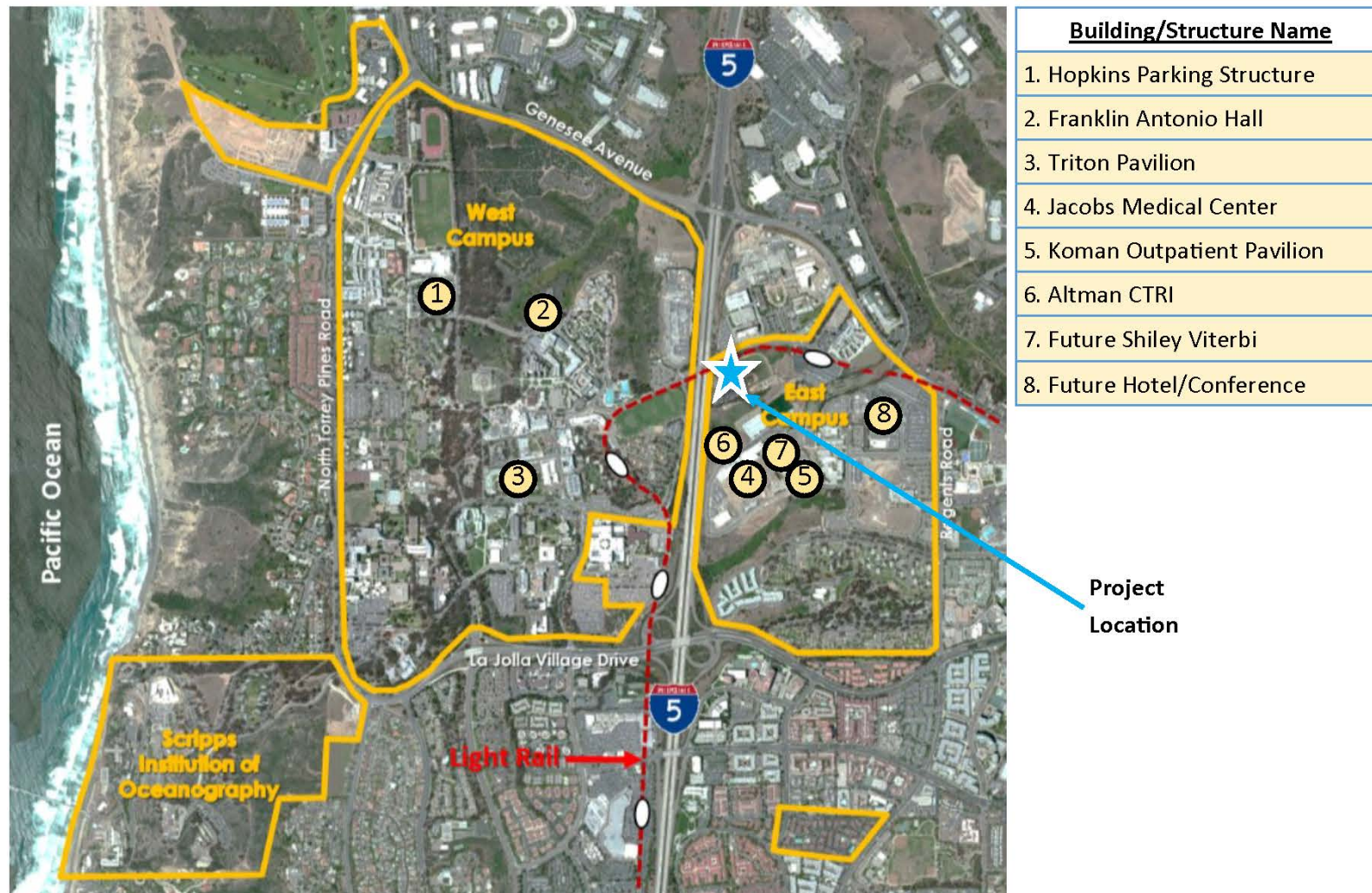
Appendix B



Appendix C

UC SAN DIEGO CAMPUS MAP

Voigt Transit Operations Center BCA



La Jolla Campus; Entering (East/West Campus Only)																			Winter Quarter					
COUNT	Commuter	People	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	COUNT	Commuter	People
Single-Occupant Automobile	25,044	27,960	28,196	26,233	27,576	26,066	24,948	25,081	24,099	23,287	22,492	21,084	21,598	21,603	21,881	23,205	24,907	26,159	26,587	Single-Occupant Automobile				
Carpool	8,249	9,771	10,443	10,115	11,417	10,264	10,149	12,710	13,236	13,480	13,472	13,436	11,630	13,020	14,059	14,223	15,372	16,373	14,469	Carpool				
Shuttle	388	394	2,304	3,804	4,902	4,231	4,645	5,163	5,951	6,014	6,308	6,138	6,042	5,220	3,641	2,965	2,532	3,064	1,921	Shuttle				
Bus	1,296	1,615	1,541	1,178	1,233	1,295	2,717	3,426	3,708	5,201	5,612	5,109	5,602	5,677	6,457	7,965	8,732	8,510	10,546	Bus				
Pedestrian	1,977	2,200	2,383	2,470	2,409	2,405	2,542	2,806	3,472	3,402	3,747	4,081	3,507	3,960	3,902	3,755	4,244	4,405	5,468	Pedestrian				
Bicycle	781	985	904	935	812	953	802	1,219	1,412	1,377	1,298	1,395	1,144	1,427	1,458	1,282	1,363	1,414	1,080	Bicycle				
Other (Vanpool-Motorcycle)	302	282	354	384	437	444	446	503	620	510	491	519	530	550	611	636	572	613	565	Other (Vanpool-Motorcycle)				
Total	38,037	43,207	46,125	45,119	48,786	45,658	46,249	50,908	52,498	53,271	53,420	51,762	50,053	51,457	52,009	54,031	57,722	60,538	60,636	Total Representative Survey Estimate Count				
MODE SPLIT %	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	La Jolla Campus; People Entering				
Single-Occupant Automobile	65.8%	64.7%	61.1%	58.1%	56.5%	57.1%	53.9%	49.3%	45.9%	43.7%	42.1%	40.7%	43.2%	42.0%	42.1%	42.9%	43.1%	43.2%	43.8%	Single-Occupant Automobile				
Carpool	21.7%	22.6%	22.6%	22.4%	23.4%	22.5%	21.9%	25.0%	25.2%	25.3%	25.2%	26.0%	23.2%	25.3%	27.0%	26.3%	26.6%	27.0%	23.9%	Carpool				
Shuttle	1.0%	0.9%	5.0%	8.4%	10.0%	9.3%	10.0%	10.1%	11.3%	11.3%	11.8%	11.9%	12.1%	10.1%	7.0%	5.5%	4.4%	5.1%	3.2%	Shuttle (Commuter)				
Bus	3.4%	3.7%	3.3%	2.6%	2.5%	2.8%	5.9%	6.7%	7.1%	9.8%	10.5%	9.9%	11.2%	11.0%	12.4%	14.7%	15.1%	14.1%	17.4%	Bus				
Pedestrian	5.2%	5.1%	5.2%	5.5%	4.9%	5.3%	5.5%	5.5%	6.6%	6.4%	7.0%	7.9%	7.0%	7.7%	7.5%	6.9%	7.4%	7.3%	9.0%	Pedestrian				
Bicycle	2.1%	2.3%	2.0%	2.1%	1.7%	2.1%	1.7%	2.4%	2.7%	2.6%	2.4%	2.7%	2.3%	2.8%	2.8%	2.4%	2.4%	2.3%	1.8%	Bicycle				
Other (Vanpool-Motorcycle)	0.8%	0.7%	0.8%	0.9%	0.9%	1.0%	1.0%	1.0%	1.2%	1.0%	0.9%	1.0%	1.1%	1.1%	1.2%	1.2%	1.0%	1.0%	0.9%	Other (Vanpool-Motorcycle)*				
	100.0% Mode %																							

Appendix E

