

# **GRAVEL POINT COMMUNITY COMMENTS RECEIVED AND APPLICANT RESPONSE**

September 20, 2023

Greetings,

To date we have received many emails, phone calls and letters from community members who wanted to provide feedback on the Gravel Point project. We anticipate additional testimony at the public hearing scheduled for September 28, 2023 that will likely duplicate the comments below. In order to proceed with the hearing in an orderly and timely fashion, we are providing the following responses for the record. This will aid in keeping the meeting questions and rebuttal to a minimum and provide time for additional information to be shared.

Where the comments have been addressed in the Findings of Fact, the page number and response has been included below for reference to our main document. There have been a few revisions to the plans and findings since our submission date- all based on public and staff feedback.

Sincerely,

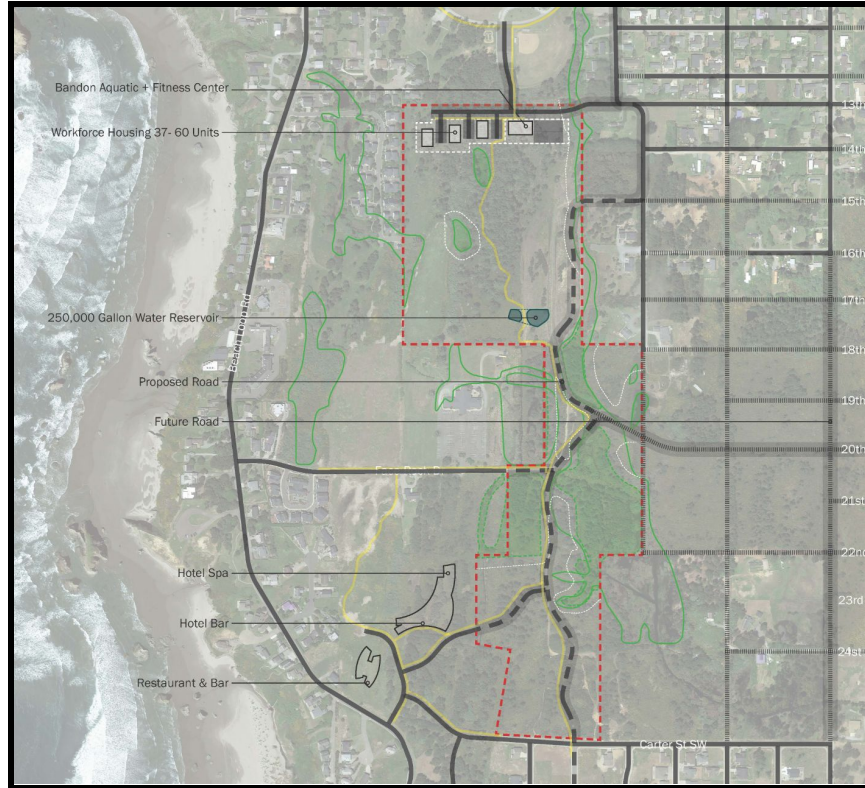
Sheri McGrath  
On behalf of the Development Team

## **HALL TESTIMONY SUBMITTED TO THE CITY 9-16-23**

They raise common concerns from what the community has voiced. What is this project going to give back to our community in the way of...

## **HOUSING**

The property owner has purchased the adjoining properties with the intention to provide workforce housing for the Gravel Point project. 37-60 workforce housing units are proposed to be located on the Northern side of the contiguously owned parcels, and more specifically clustered south of the Bandon City Park. The housing units are located on a separate parcel of land and will be permitted through a separate application process.



CUP Findings Page 85: Gravel Point will help the current housing shortage by providing accommodations to traveler's otherwise seeking Vacation Rental Stays. The City of Bandon currently has a shortage of room rental accommodations which further encourages the conversion of single family dwellings to short term rentals. The Villas/Suites will provide short-term housing for Hotel and Golf Resort personnel, Traveling Medical Providers and other transient workers that would typically occupy a long-term rental in our area that is needed by local workers. The proposed development will help balance the need for both long-term and short-term rentals in our area.

**PARKING**

CUP Findings Page 36: As shown on the enclosed plans, Gravel Point will meet the minimum parking space requirements. All vehicle parking for guests and staff will be in parking garages on the lower basement levels of the Meadow and Dune Lodges or at designated spaces throughout the property as shown on the attached plan. A total number of 152 spaces are required and the plans show a total count of 164 spaces, plus an additional 16 bicycle parking spaces.

CUP Findings Page 41: All of the proposed parking is within the property boundaries and does not face specifically a residential zone.

CUP Findings Page 41: As shown on the attached site plan, no parking spaces back into a street right-of-way, ie: Carter Street or Beach Loop Drive.

CUP Findings Page 42: The enclosed plan does not account for compact spaces. All spaces are of standard size.

CUP Findings Page 61: It is the desire of the developer to maintain a natural environment and reduce the need for impervious surfaces, ie: parking. Parking has been provided on the lower basement level of the Lodges and additional parking is shown on the enclosed plans. The requirement for RV parking spaces is in excess of the intended and proposed use as a Hotel/Motel site. Based on the number of parking spaces required (152), the required parking for RV spaces will be 8 in total. It is a rare occasion when an RV will visit a Hotel, and the applicant believes that the parking requirement is specific to a tourist area of town where shopping, dining and beach-going is relevant. The applicant is requesting a specific review of this criteria. If 8 RV parking spaces are required by the planning commission, the applicant is requesting a condition of approval to (1. Create the required parking spaces on the subject site prior to the issuance of Zoning Compliance or (2. Lease the required parking spaces within 500' of the subject property with a long-term lease agreement of at least 10 years and recorded against the deed.

#### **TRANSPORTATION (VEHICULAR, BIKE/PEDESTRIAN TRAFFIC)**

- **Donut Hole “overlay plan” to guide traffic on and off hwy 101 with a main street feeder. Is this Face Rock, Carter to Lincoln to Beach Loop to Seabird?**
  - **“Recommend reviewing alternate traffic routes associated with the project if approved, ensure they can work with a yet to be determined larger traffic plan to include the Coos County to enhance the surrounding areas and projects.”**

The City of Bandon has a “Future Street Network Classification” plan in place and is found in the Findings of Fact and provided here for reference. Face Rock Drive/20th Street will be extended in the East/West direction at some point in the future. The Gravel Point project accounts for the street extension and the exact location will be dependent on the outcome of the Wetland Delineation. Franklin Avenue is proposed to be extended as a Collector Street South to Seabird. Jackson Avenue is proposed to be a Local Street extension to Carter which will also contain new utilities.

See CUP Findings on Pages 73-76

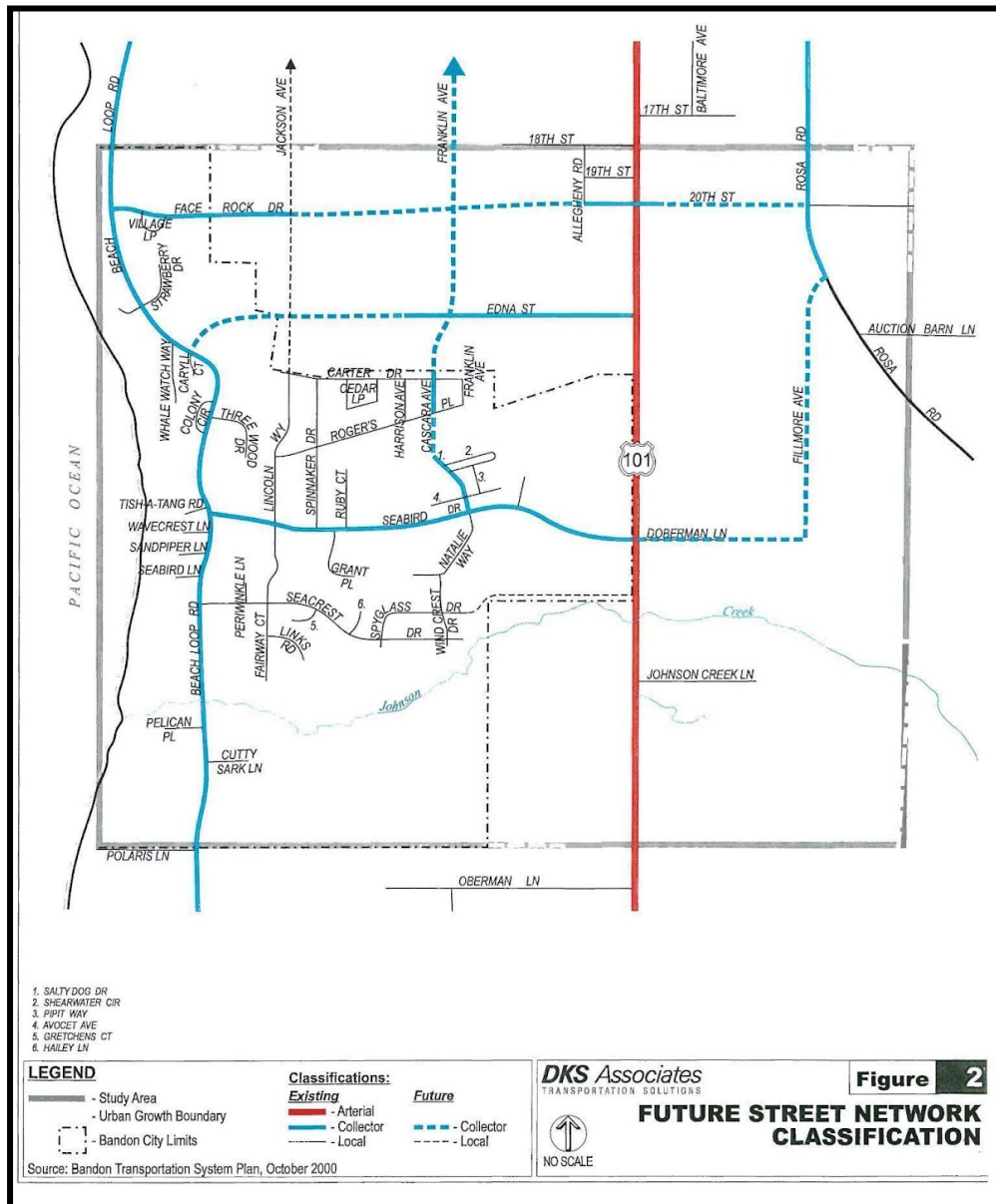
CUP Findings Page 86: The proposed plan shows a true East/West connection and a stub for a future connection to Edna Street and/or Face Rock Drive/20th Street as shown on the enclosed map from the 2010 Transportation Refinement Plan.

CUP Findings Page 91: Gravel Point and the adjoining 60 acres are located within the area known as South Bandon. The “Donut Hole” area of Bandon contains several wetlands, and the

TSP acknowledges that new streets, paths and the like will be natural and move around wetlands as much as possible. The proposed streets and paths take this into account as well and the street standard exceptions appear to be in compliance with the South Bandon Refinement Plan and TSP.

CUP Findings Page 35: The long-term plan for the 90 acres is to provide a series of pedestrian trails that connect the Seabird area to City Park along with a new North/South and East/West street connection per the Transportation Plan.

CUP Findings Page 61: A stub-out has been provided for a future road connection at such a time that development to the East is proposed. The plans show a 24' wide asphalt street with 8' drainage swales on each side and a 6' gravel sidewalk.



**FUTURE STREETS TSP REFINEMENT PLAN**

## **HAS A TRAFFIC STUDY BEEN DONE BY THE CITY ON BEACH LOOP?**

The City of Bandon has a Transportation System Plan in place. Beach Loop Drive appears 104 times within the TSP 2000 document found on the City website: [bandon\\_transplan\\_.pdf \(cityofbandon.org\)](#). The City of Bandon has a Bandon Transportation Refinement Plan dated 2010 and found on the City website: [Microsoft Word - Bandon Transportation Refinement Plan.doc \(cityofbandon.org\)](#). Page 17 identifies three key intersections as part of the Study- Hwy 101/Seabird, Beach Loop/Seabird and Beach Loop/Face Rock Drive.

## **HAS A TRAFFIC STUDY BEEN DONE BY GPR INDICATING EXPECTED IMPACT ON TRANSPORTATION?**

A copy of the GP Transportation Study was provided to the City on September 18 and September 21, 0223.

The Traffic Assessment concluded that potential traffic impacts of the proposed Gravel Point development are forecasted to meet ODOT and City LOS and mobility standards. The general findings have also forecasted that Gravel Point traffic volumes, trip generation, distribution and assignment during PM Peak hours anticipate up to 111 new PM peak hour trips, significantly less than the forecasted trips set forth in City of Bandon's "Bandon Transportation Refinement Plan", adopted in 2010. Our calculations were conducted conservatively with the assumption that individual trips are generated with a single car ride, and not through group shuttle, rideshare, or taxi services. Our conservative approach anticipates that the traffic impacts to the nearby community are minimal and do not create a problem. The City of Bandon's adopted and forecasted transportation plan has been unrealized to date.

## **"ALL OUR ROADS ARE SUBSTANDARD IF THEY MUST HANDLE TRAFFIC AND LOADS FOR WHICH THEY WERE NOT DESIGNED TO CARRY. SEABIRD IS UNRAVELING DUE TO CONSTRUCTION TRAFFIC."**

Until 2000, a significant number of streets were gravel, without pavement. It was decided at that time that all streets in Bandon should be paved. To raise the necessary funds, the City secured voter approval of a bond to finance a Citywide Street Paving Project, the amount of which was based on ensuring the citizens that the property tax supported bonds would reflect the lowest possible cost to get all existing streets paved. A citizen's committee was appointed to oversee the project. It was decided that the lowest cost alternative would be to simply overlay the existing road bases. The project was a success, although no base work other than final grading was eligible for funding, which meant substandard roads in terms of carrying heavy traffic.

In terms of Seabird in particular, it is our understanding that the repair is a high priority for the Public Works Department and that it will be repaired as soon as next year if the general budget allows for the funding.

The developer will provide an analysis of the road conditions prior to any construction, and will contribute to any repairs directly associated with the subject site. This will likely include keeping the streets clean and free from dirt, debris and other construction materials.

### **ADDITIONAL TRAFFIC ON BEACH LOOP IS DANGEROUS; INCREASED COMPETITION BETWEEN USERS**

It is the interest of the developer to increase both pedestrian and vehicular circulation throughout the 85 acres. This increased pedestrian and vehicular circulation is expected to alleviate pressures currently on Beach Loop Road. The developer is planning a future trail system on the adjacent parcels and increased connectivity for vehicular transportation. Additionally, our traffic assessment has concluded that the forecasted Gravel Point traffic volumes, trip generation, distribution, and assignment during Peak PM hours meet ODOT and City LOS and mobility standards and are significantly less than the forecasted trips set forth in the City of Bandon's "Bandon Transportation Refinement Plan, which has been adopted by the City.

It is anticipated that as part of the Public Works permit process, the developer will be required to provide Pedestrian Crossings at Beach Loop Drive and Carter Street. Additionally, all proposed sidewalks show a 3' bicycle lane and a 3' walking lane to alleviate competition on the driving surfaces. Guests of Gravel Point will be given a trail map showing on site trails and cycling options that avoid Beach Loop and lead to the Face Rock beach access with minimal crossing at Beach Loop Drive. Gravel Point is also incorporating a shuttle system which will reduce trips per day on all of the City streets.

### **MOST ROADS ARE IN DISREPAIR, LACK OF MAINTENANCE**

Gravel Point will provide several thousands of dollars in System Development Charges which will provide much needed funding to repair the City streets.

CUP Findings Page 89: The developer has agreed to pay for and maintain the new connection from Carter Street to Beach Loop Drive if the street standard exceptions are approved.

### **DELIVER SAFE AND ACCEPTABLE FACILITIES AND PATHWAYS**

**“Recommend reviewing alternate traffic routes associated with the project if approved, ensure they can work with a yet to be determined larger traffic plan to include the coos county to enhance the surrounding areas and projects.”**

The City of Bandon has a "Future Street Network Classification" plan in place which includes the Coos County streets as currently platted. A "larger traffic plan", ie: Master Plan will be provided

at such a time when the adjoining properties to the east are annexed into City limits. A traffic plan for the proposed development has been provided and exceeds the requirements of the Conditional Use Permit process.

The developer is proposing to use a Chip Seal Treatment to reduce maintenance of walkways and driveways. Chip Seal is an ODOT, ADA approved treatment for roads, sidewalks, pathways and other surfaces. This replaces the originally proposed Gravel sidewalks.

### **SEWER AND SANITATION**

- **Sewer issues are not immediate but long term**
- **Aging Plant**
- **What assurances that the sewer plant will keep functioning?**
- **Replace the Plant at what cost?**

It is our understanding from the Sewer Master Plan that the Sewer Plant is operating at less than anticipated for the growth that Bandon is experiencing. Additionally, Gravel Point will be contributing several thousands of dollars in System Development Charges that will provide much needed funding for the improvements needed now or in the future. The City of Bandon will be able to provide maintenance much sooner than anticipated with the contribution from the proposed development and is considered a financial benefit to the City as a whole; eliminating a need for a sewer tax or improvement district to be formed.

CUP Findings Page 64: The Sewer Master Plan was prepared and adopted in 2002. The Plan assumed a growth rate that would have been 4241 people in 2022. The 2020 census reported 3321 people. No upsizing of the Beach Loop Drive line was recommended by the plan to serve this area, so it is found that the existing sanitary sewer lines are adequately sized to accommodate the Gravel Point development.

### **WATER SOURCE AND DISTRIBUTION**

- **Concerns with sources and capacity**
- **Sources and back options are available for a price**
- **Cost-prohibitive reservoir**

It is our understanding from the Water Master Plan that the Water Plant is operating at less than anticipated for the growth that Bandon is experiencing. Additionally, Gravel Point will be contributing several thousands of dollars in System Development Charges that will provide

much needed funding for the improvements needed now or in the future. The City of Bandon will be able to provide maintenance much sooner than anticipated with the contribution from the proposed development and is considered a financial benefit to the City as a whole; eliminating a need for a sewer tax or improvement district to be formed.

The Water Master Plan identifies the need for a 250,000 gallon water reservoir to be located in South Bandon approximately one-third mile NW of Seabird and Beach Loop which places this on or near the Gravel Point properties. The developer has proposed the reservoir to be built on the contiguous owned property to the North. There will be an easement for the City of Bandon and Rural Fire Department to have access to the reservoir for emergency purposes as proposed in the Plan.



**PROPOSED 250,000 GALLON WATER RESERVOIR**



**TABLE 8.4.1  
ENTIRE SYSTEM FIRE FLOW ASSESSMENTS**

Parameter/year	2021	2026	2031	2036	2041
Water Demand (GPD)					
MMD	993,152	1,028,402	1,064,904	1,102,701	1,141,840
Necessary Storage (gal)					
Emergency Storage (1 x MDD)	993,152	1,028,402	1,064,904	1,102,701	1,141,840
Equalization (.25 x MDD)	248,288	257,101	266,226	275,675	285,460
Fire Reserve (4500 GPM @ 2 Hours)	540,000	540,000	540,000	540,000	540,000
Total Required Storage	1,781,440	1,825,503	1,871,130	1,918,376	1,967,300
Storage Assessment (gal)					
Existing Storage	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Surplus Storage	1,218,560	1,174,497	1,128,870	1,081,624	1,032,700

**Recommended Storage Improvements**

Although an additional reservoir is not required based on storage capacity, it is recommended that the City of Bandon construct an additional 250,000 gallons of storage approximately one third of a mile NW of Seabird and Beach Loop for equalization in the southern portion of the City. This reservoir would provide emergency water to the surrounding area if it was cut off from the primary reservoirs at the WTP due to broken water lines during a seismic event.

Corrosion was noted on the interior of both the one and two million gallon tanks and on the exterior of the two million gallon tank during the last reservoir inspections. Both tanks are not outfitted with seismic features. The two million gallon tank deficiencies are being addressed. After the larger tank is upgrade focus should be on upgrading the one million gallon reservoir.

**WATER MASTER PLAN 2022 PAGE 87**

CUP Findings Page 64: The City of Bandon Water Master Plan outlines the capacity of the existing water system to serve the residential and commercial users located in both the City limits and the urban growth boundary. It was found in June 2022 that there is adequate water for the estimated and expected growth through the year 2041. The Plan identifies new water lines to be installed and two of them are located near the subject site and adjacent or within the adjoining 60 acres. Additionally, the 6” water line located in Beach Loop Drive is proposed to be increased to a 10” main to provide the fire flow requirements for the hotels/motels along Beach Loop Drive. These new water lines will provide the fire flow capacity requirements that the current system lacks, but the actual amount of water availability is not increasing; therefore, it is found that the City of Bandon has adequate water to serve the proposed use.

**ELECTRICITY**

- **Is there a plan for underground utilities?**

All new utilities are required to be underground.

- **Does the City have a maintenance plan?**

The Electric Department is responsible for the operation and maintenance of the electric substations and distribution system, which require a large number of inspections and tests that must be undertaken at specified intervals.

- **“Defer a decision until infrastructure needs have been finalized with a projected general utility needs assessment and financial requirements with a timeline to meet future utility requirements. Other items above list (1-6) with similar evaluations.”**

The City of Bandon has developed Master Plans for all infrastructure, and the development has taken into consideration the overall impact to the existing and proposed infrastructure in Bandon. Gravel Point has proposed and proven that Green Roofs, Storm Drainage Swales, Gray Water for irrigation and reduced impervious surfaces exceed the requirements that the City of Bandon places on development. Further, infrastructure needs are outside of the purview of the Planning Commission and will be determined in great detail during the Public Works Permit process. At that time, the City Engineer will provide details for the developer to incorporate into the overall plan. The Planning Commission is tasked with reviewing only the Conditional Use for the Hotel/Motel, Restaurant and other accessory commercial uses on the site including the building heights, the signage, the commercial design standards and the land use. The Public Works Permit has not been consolidated with the Conditional Use permit and is outside of this review period.

### **CARBON EMISSIONS AND ENVIRONMENTAL IMPACT**

- **What is GPR doing to keep Bandon moving towards zero emissions?**

It is of the interest of the Developer to meet LEED Platinum Certification Standards under the United States Green Building Council. In addition, it is of the interest of the Developer to compliment the LEED Platinum Certification with a LEED Zero Certification. This certification can only be achieved by lowering carbon emissions, enhancing resilience and creating healthier places for people.

The goal of sustainable development will provide long-term stability for the economy and environment which is only achievable through the integration of economic, environmental, and social concerns throughout the design and planning process. This project has considered each of these components and is proposing a low-profile, light footprint and aesthetically pleasing approach that will achieve the goal of improved economic development and nature conservation. You will see in the following pages and in the attached presentation that the Wetlands, Dunes and Wildlife have been the prominent focus. The building structures also support a sustainable wildlife habitat.

CUP Findings Page 53: The applicant is committed to the preservation and enhancement of all wetlands on the project site, and will provide for the mitigation for any wetlands disturbed or negatively impacted by project development. A wetlands analysis and mitigation plan has been

prepared by a qualified wetlands professional, and will be reviewed and permitted by the Department of State Lands. As required, the applicant agrees to provide for the regular maintenance and monitoring of the mitigation site(s) at their own expense.

CUP Findings Page 62/65/69: A Green Roof can reduce the flow of stormwater by up to 65%. Additionally, a Green Roof meets the criteria listed in (l) by providing a design feature that reduces noise, vibration, glare and dust due to the vegetation. According to the US Environmental Pollution Agency Green Roofs reduce air pollution and greenhouse gas emissions (Using Green Roofs to Reduce Heat Islands | US EPA).

### **BANDON PARKS AND RECREATION TO RECEIVE 10% TOWARDS PLANNING AND DEVELOPMENT OF SHARED PATHS**

- **Shared paths means all paths traveled by guests and the community.**

CUP Findings Page 72: The City has not required the applicant to create private property easements for viewshed trails, but it is considered an important component of the desired outcome of the development. The design has been developed by delivering on a few guiding principles:

- “Restore the Oregon Coast” by using native plant species and removing invasive plant species to restore the natural and organic environment.
- “Concentrate and Touch Lightly” to make room for wildlife by leaving much of the site as habitat.
- “Be Good Neighbors” by blending into the undulating land, screening with the existing trees and supplementing with new native bushes; by sharing in the amenities of the site by creating walking trails and supplying restaurants within walking distance of home.
- “Gracious Hospitality” with a goal to attract visitors with a high quality hotel with a resort atmosphere that serves golfers, hiking enthusiasts, cyclists, outdoors-people, birdwatchers and beach-goers that love this stretch of the Oregon Coast.

CUP Findings Page 84: We are confident that the community will benefit from the proposed development as it provides a park-like setting with recreational opportunity for hiking, wildlife viewing and a trail connection through Bandon by avoiding Beach Loop Drive. A trail system is proposed to connect Carter Street and Beach Loop Drive North to Face Rock Drive. The adjoining 60 acres in contiguous ownership and there is a long term plan for additional park facilities, bicycle and walking trails that connect to City Park. These recreational opportunities are paid for and maintained by the owner/developer and are a benefit to the City of Bandon as a whole.

- **Gravel is unacceptable due to ADA and balance issues**

The developer is proposing to use a Chip Seal Treatment to reduce maintenance of walkways and driveways. Chip Seal is an ODOT, ADA approved treatment for roads, sidewalks, pathways and other surfaces. This replaces the originally proposed Gravel sidewalks.

CUP Findings Page 28: One of the features of Gravel Point will be the provision of pedestrian sidewalks and meandering pathways, which will be open and available to the general public and guests, as well as a golf cart transit system providing guest transportation service to the Villas/Suites. As shown on the attached plans, in addition to roadside gravel sidewalks, a number of meandering pedestrian paths will be included. The roadside gravel sidewalks will connect the Beach Loop Drive walkways with the residential neighborhood along Carter Street. Providing the new street and gravel sidewalks to the boundary of the undeveloped land to the East will provide the opportunity to extend the walkways to Face Rock Drive, and eventually all the way to City Park.

- **Consider Paved or crushed granite like Oregon Parks uses**

The developer is proposing to use a Chip Seal Treatment to reduce maintenance of walkways and driveways. Chip Seal is an ODOT, ADA approved treatment for roads, sidewalks, pathways and other surfaces. This replaces the originally proposed Gravel sidewalks. This was updated for the City Council meeting packet, and has been submitted for the Planning Commission.

- **Deliver safe and acceptable facilities and pathways**

The developer is proposing to use a Chip Seal Treatment to reduce maintenance of walkways and driveways. Chip Seal is an ODOT, ADA approved treatment for roads, sidewalks, pathways and other surfaces. This replaces the originally proposed Gravel sidewalks.

Pedestrian crossings will be provided in appropriate locations and as directed by the Public Works Department.

- **No mention of bike paths, bike lanes and accommodations for cyclists**

The City of Bandon requires a sidewalk width that can accommodate a cyclist and a walking pedestrian. The City does not currently require an independent bike lane on Local Streets.

CUP Findings Page 85: Gravel Point will attract youth due to the park-like setting with bicycle and walking trails from the Seabird Area to City Park.

CUP Findings Page 86: A trail system is proposed for the current and future development which will provide a mix of transportation options such as bicycles, golf carts, power wheelchair options and other alternative forms of transportation. The proposed sidewalks provide pedestrian safety and continuity in the North/South direction without having to access Beach Loop Drive.

CUP Findings Page 91: The proposed plans show 16 dedicated bicycle parking stalls and there will be room for parking at each Villa/Suite and Lodge.

### **LANE TESTIMONY SUBMITTED SEPTEMBER 15, 2023**

- **“Extend the 6’ high landscape or fencing buffer zone to the southeast portion of the proposed development to the south of Carter Street as a residential property has recently been built fronting Carter Street.”**
- **“Similarly, all property owners abutting the development should have the appropriate landscape of fencing buffer zones applied.”**

6’ high landscape screening is required on all sides of the property abutting a residential zone. Compliance with this will be reviewed during the Zoning Compliance Review and will be subject to final installation prior to Certificate of Occupancy.

CUP Findings Page 23: As shown on the plans, a 6’ tall landscaping screen is proposed to be located on sides abutting residential properties. The surrounding properties have fences installed already. The setbacks exceed the minimum city standards, so there is room for design flexibility and the opportunity to be good neighbors.

CUP Findings Page 40: A 6’ tall screen is required and shown on the attached plans for the portions of the site that are adjacent to a residential property.

CUP Findings Page 62: The design team is proposing landscape hedges because fencing is already installed along the residential properties. Sunset Motel has a similar hedging in lieu of fencing for reference. Generally speaking, hedging will outlive fencing and will provide a visual and noise buffer superior to wood fencing materials.

- **“Street and sidewalk improvements on Beach Loop Drive. Where applicable, the developer should provide street and sidewalk improvements, including pedestrian crossings where necessary, along their entire property boundaries that run adjacent to Beach Loop Drive for the safety of pedestrians, bicyclists, joggers and vehicles.”**
- **“This is of particular importance at the intersection of Beach Loop Drive and the Carter Street extension intersection.”**

The developer will provide Pedestrian Crossings at appropriate locations and as directed by the Public Works Department during the Public Works Permit process. That process is not a concurrent review with the Conditional Use Permit and is outside of Commission review.

## QUESTIONS AND COMMENTS RECEIVED THROUGH EMAIL OR THROUGH THE CITY

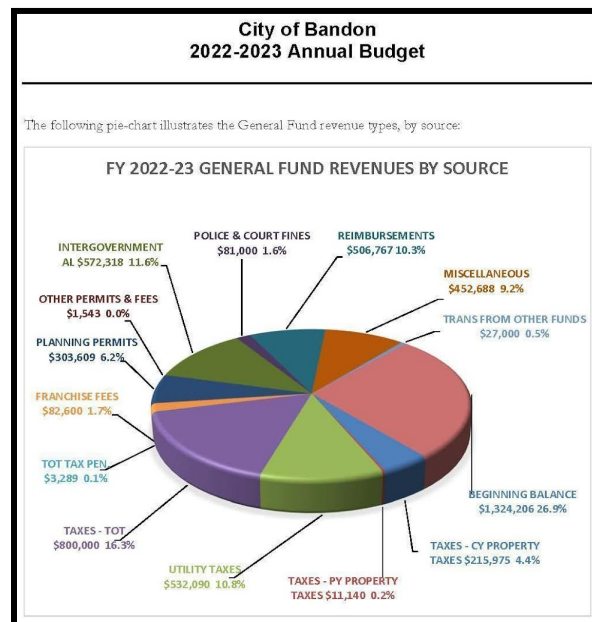
- This development is a legacy-type project for the City of Bandon. I am in full support of this project. The development team have done a great job at putting together a project that fits in the CD-1 zoning without being obtrusive. I can see that this group has taken into consideration the natural elements of the site and have made it a priority to stay “hidden in plain sight.”
- Will the Developer be required to pay System Development Charges?

The SDC payment for this project will result in several thousands of dollars which will provide the City with the much needed funding to upgrade, replace or add facilities.

- What is the overall economic benefit of Gravel Point?
- Who really wants this development? What does it do for the residents and disharmony with nature?

We are confident that the community will benefit from the proposed development as buildings and impervious surfaces cover less than 25% of the total lot area and this benefit will provide a park-like setting with opportunity for hiking, wildlife viewing and a trail connection through Bandon by enhancing pedestrian and vehicle circulation away from Beach Loop Drive. It will be an upscale hospitality experience that is focused on health and wellness in a natural environment that is open to all citizens of Bandon. The City is in great need of a trail system that avoids Beach Loop Drive. The adjoining neighborhoods gain a large park that currently does not exist.

Additionally, the TOT for a project of this size is tremendous. The estimated TOT from Gravel Point the first year of opening is \$1.6 million. The TOT contribution estimated for the 2023-2024 year is \$800,000.



Transient Occupancy Taxes				
Tax Year	Bandon	%YOY	Gravel Point	%/Bandon
2011-2012	\$ 376,122.00	-	\$ -	0%
2012-2013	\$ 437,584.00	16.34%	\$ -	0%
2013-2014	\$ 461,710.00	5.51%	\$ -	0%
2014-2015	\$ 525,301.00	13.77%	\$ -	0%
2015-2016	\$ 524,353.00	-0.18%	\$ -	0%
2016-2017	\$ 570,432.00	8.79%	\$ -	0%
2017-2018	\$ 684,971.00	20.08%	\$ -	0%
2018-2019	\$ 590,614.00	-13.78%	\$ -	0%
2019-2020	\$ 704,799.00	19.33%	\$ -	0%
2020-2021	\$ 744,017.00	5.56%	\$ -	0%
2021-2022	\$ 1,048,877.00	40.97%	\$ -	0%
2022-2023	\$ 803,289.00	-23.41%	\$ -	0%
2023-2024	\$ 741,448.00	-7.70%	\$ -	0%
2024-2025	\$ 801,431.14	8.09%	\$ -	0%
2025-2026	\$ 866,266.92	8.09%	\$ -	0%
2026-2027	\$ 936,347.92	8.09%	\$ 1,673,068.75	179%
2027-2028	\$ 1,012,098.46	8.09%	\$ 1,723,260.81	170%
2028-2029	\$ 1,093,977.23	8.09%	\$ 1,774,958.64	162%
2029-2030	\$ 1,182,479.99	8.09%	\$ 1,828,207.40	155%
2030-2031	\$ 1,278,142.62	8.09%	\$ 1,883,053.62	147%
2031-2032	\$ 1,381,544.36	8.09%	\$ 1,939,545.23	140%
2032-2033	\$ 1,493,311.29	8.09%	\$ 1,997,731.58	134%
2033-2034	\$ 1,614,120.18	8.09%	\$ 2,057,663.53	127%
2011-2024	Annual City Growth Average		8.09%	
2026-2034	Proj. Gravel Point Growth Average		3.00%	

**PROJECTED TOT FOR GRAVEL POIINT**

CUP Findings Page 48: Chapter 17.102 is also “intended to ensure reasonable economic use of property while protecting valuable natural resources.” The proposed development is for a commercial use, ie: hotel/motel use with on site amenities. This proposal is considered economically beneficial to both the property owner and the City of Bandon. The use is considered transient and subject to paying the Transient Occupancy Tax (TOT) which currently contributes 16% to the general fund. TOT is an important part of a thriving economy. It is the highest financial contributor to the budget next to Utilities. TOT funds support the Police Department, ensuring the safety and compatibility of the neighborhoods that contain residential and commercial mixed uses. The TOT funds support the Community Center and Sprague Theater which provides music, live theater and events which benefit all Bandon residents- year round or transient in nature.

Previous development plans were for dense urban residential subdivision development. That type of development is considered compatible in regard to the residential nature, but not compatible in regard to protecting the natural resources. Property taxes are also low in Bandon, so the general fund would not benefit to the extent proposed. The proposed use protects the natural resources, enhances them and provides public access for enjoyment.

- **“Welcome to the ‘hood! I LOVE your planned development, Gravel Point! Someone just brought it to my attention (had only heard distant rumors about a “resort” previously). Lovely! What caught my attention were your four planned wetlands landscape areas. Thank you from the bottom of my heart.”**
- **I saw the paragraph about sharing amenities with neighbors. Are they going to let us use their pool? 😊 or were they referring to hiking paths?**

Yes, the spa, trails and other amenities are available to the neighbors and the general public.

- **I prefer a well considered plan like this than a dense mishmash of houses. Can see how it could boost synergy in Bandon. Help tourism perhaps. Help employment.**

The previous developer planned on a 70+ home sub-division, so we agree that the proposed is a better use of land. The proposed development covers less than 25% of the subject property.

- **Do they have to go thru a more arduous process for approvals? Or is this a sure thing?**

There will be additional permits to apply for after gaining approval for the land use. There will be a City Council Hearing for Street Vacations, City Council Meeting for Street Standards, Public Works Permit process for all infrastructure and street improvements including grading and erosion control. There will also be a Geological Assessment Review and Zoning Compliance. The first step is gaining approval for the Conditional Use for the Hotel/Motel, Restaurant and Spa which are permitted conditionally in the CD-1 zone.

- **What do you think it will do to property values in the vicinity?**
- **Likely diminish the value of Strawberry Drive properties- will developer buy my home?**

We anticipate an increase in property values by 2-4 times the current value. The overall appraised value of the proposed development is at \$179,315,845 for Gravel Point only (adjoining 60 acres not included at this time).

- **This is an adverse action to the quiet Residential areas adjacent to the listed streets, also a backdoor way to allow the Gravel Point Hotel development to occur on land that the city said the community pool could not be built on. Its rezoning to commercial use is not wanted in this very quite and low light polluted area. As it stands the neighborhood is mostly retired full time residents, families with small children and pets. Its a very safe area to take walks and by vacating these undeveloped streets leads way to a commercial entity to ram through a development thats been kept quiet by the council. Time for this development and**



**the people being paid by them to be brought into the light. This resident wholly objects to this action and the follow one development outside of the residential plats that were already established per the attached materials.**

The Bandon Swimming Pool was never proposed to be located at the subject property. At one time they owned the Northern 30 acres which they sold. They sold the property because they could not afford to develop the site with the street and infrastructure improvements that the City requires for every type of development.

The property is not being rezoned for commercial use. The CD-1 zone is intended to provide both Residential and Commercial development.

*The purpose of the CD-1 zone is to recognize the scenic and unique qualities of Bandon's oceanfront and nearby areas and to maintain these qualities as much as possible by carefully controlling the nature and scale of future development in this zone. It is intended that a mix of uses would be permitted, including residential, tourist commercial and recreational. Future development is to be controlled in order to enhance and protect the area's unique qualities.*

CUP Findings Page 8: The CD-1 zone anticipates a mix of residential, tourist commercial and recreational uses, and Gravel Point has all three components. The use is consistent with the intention of a mixed-use district and the desire to enhance and protect the area's unique qualities.

As shown on the attached plans and drawings, the design of Gravel Point generally follows the contours of the natural terrain of the property and will fit well into the nature and scale of the nearby areas. Considering its low-profile design and location on the East side of Beach Loop Drive, the project will not negatively impact ocean views from surrounding residences.

The project will enhance the scenic views on the subject site by restoring the natural landscape and providing access to the wetlands, dunes and wildlife habitat for the general public to enjoy. The design team has controlled the development to enhance and protect the area's unique qualities by limiting development sprawl and instead focusing on two main structures with Green (vegetated) Roofs for bird habitat and storm water runoff control. The Villas/Suites are residential in nature and are intended to blend into the residential neighborhoods they adjoin. The Lodges are located in the lowest portion of the site and screened from residential development to the North, South and West.

**- Impact of noise, dust, disruption of services to neighborhood.**

The proposed development will reduce dust given the proposed landscaping plan. The site was infested with gorse when purchased, all of which has been mowed and is continuing to be maintained and eventually eliminated. All new roads and paths contain hard surfaces, and are required to be dustless according to the Municipal Code.

Disruption of services is not likely or anticipated. There is a “No Noise/No Party” policy in place that will result in the loss of a security deposit and possibly criminal charges. The City has a quiet period posted, so noise is not of general concern. Most if not all gatherings will take place indoors.

CUP Findings Page 63: The proposed hotel strives to make the well-being of its guests a high priority. The hotel operator will have a strict, no exceptions “No Noise/No Party Policy.”

Regardless of the time of day, all noise complaints which result in compensation to guests disturbed will be charged to the guest room or suite whose noise caused the complaint. For the comfort and convenience of all guests, the hotel will have “Quiet Time” between the hours of 10pm and 7am. All deposits will be forfeited upon any conviction.

The maximum number of guests allowed in a room or suite will be in accordance with the number of sleeping areas and as listed on the guest registration. If occupancy numbers are exceeded, a fee will be charged and the guests will be subject to eviction. The hotel operator will not hesitate to call local authorities and criminal charges could be applied for any complaint from guests or neighbors.

The restaurants, bars and spa are planned to be in operation 7 days per week with hours determined by OLCC as well as specific operating hours that the City may adopt through a local ordinance. The No Noise/No Party policy will apply to all hospitality offerings in both Lodges, all Villas/Suites and all outdoor offerings.

- **Enforcement of compliance with/adherence to appropriate building schedules/protocol- daily start and finish times.**

It is in the best interest of the developer to adhere to the City requirements for construction hours and compliance. The developer does not want to receive a fine or a stop work order due to non-compliance.

- **Erosion Control issues**

CUP Findings Page 87: The developer will employ best management practices when breaking ground on construction including, but not exclusive of, silt fencing, fiber coils, straw and other erosion control measures recommended by the geotechnical engineer and environmental consultants. Galli Group provided an erosion control plan as shown below and specific to the site conditions.

## 11.0 EROSION CONTROL

The site soils have low to moderate susceptible to erosion. However, the site grades are steep on the west and mild on the east sides of the site. Therefore, site erosion should generally be low to moderate on the east side of the site and high on the west side of the site. Erosion control measures must be implemented prior to and during construction to prevent sediment movement off site.

**Construction Erosion Control.** All disturbed areas shall have the low side surrounded by a silt fence with the bottom edge embedded in the soil at least two (2) inches. At select locations settling ponds of hay-bale backed silt fence should be established to decrease silt content of surface **water flowing off site**. **Hay bale “V’s” may be needed in ditches** to stop silt migration for up to 200 feet from the site.

The site will also require crushed rock (or shale) construction entrances to prevent "tracking" of mud by construction vehicles onto the roads. These are typically required to be at least 50 feet long and be constructed of a 12" section of angular, open-work rock over a woven fabric (more if needed to protect the subgrade soils).

**Permanent Erosion Control.** Permanent project landscaping and paving, as required by the City/County, will meet most needs of long-term erosion control. All disturbed areas on the site, but outside the developed area of the project, must be reseeded with local native grasses for erosion prevention. Ideally, these areas would be graded reasonably smooth and the surface scarified to 1/2 inch deep, then hydroseeded with a combination of erosion control grass seed, fertilizer and mulch. Alternatively, and at a minimum, these areas should be covered with a thin layer of crushed rock.

## EROSION CONTROL PLAN

### - Impact on already existing businesses- lodging, restaurants, spas, salons

A survey by the nonprofit organization Project for Public Places showed that visitors to a public market were 60% more likely to shop surrounding businesses on the same day. Supporting local businesses has a local economic multiplier effect resulting in a local recirculation of revenue of 48% vs 13% when shopping at a chain store (American Independent Business Alliance “The Local Multiplier Effect”).

### - What is the impact on evacuation?

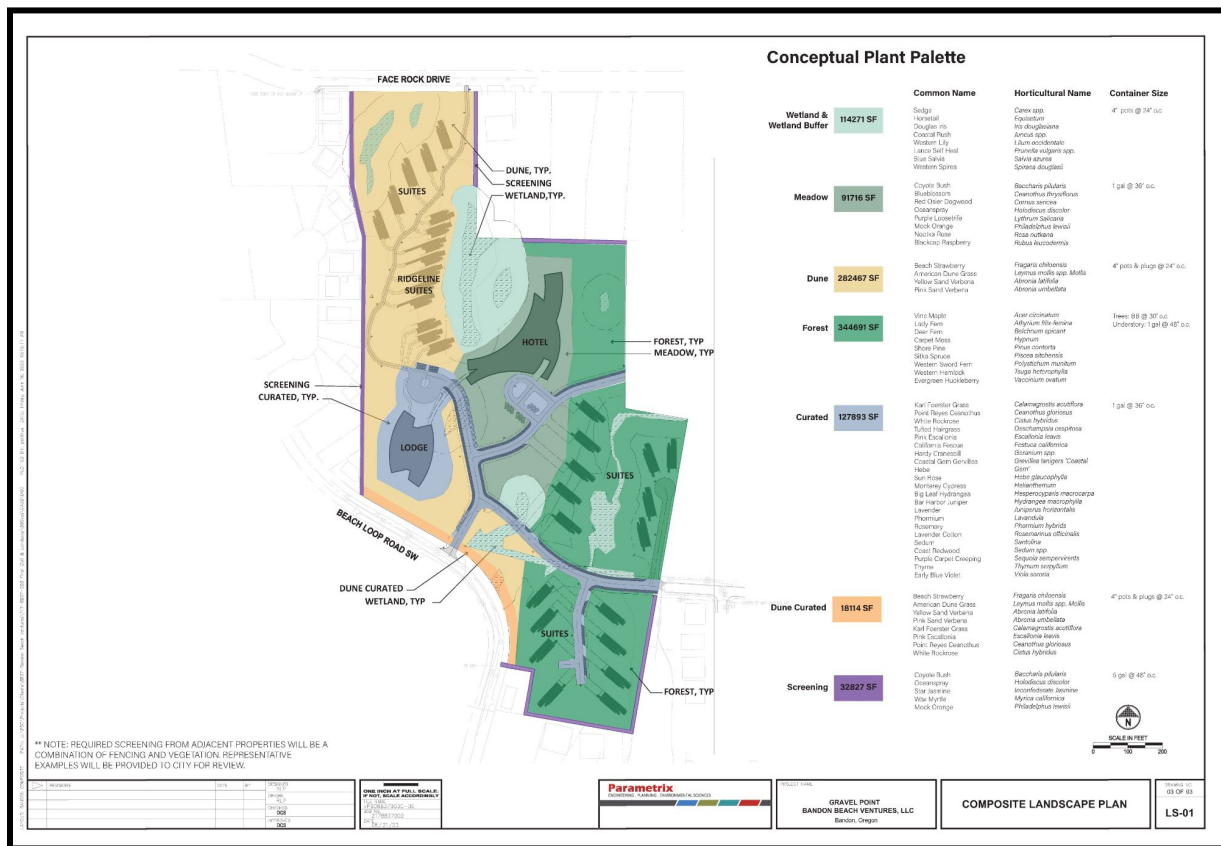
The subject site is considered “safe” in regard to a Tsunami threat, and guests will be able to stay in place instead of evacuating to higher ground. Gravel Point will have an emergency services plan in place that all guests will be made aware of. Evacuation maps will be located in

each guest room, posted at the main entry door. The hotel will provide enough supplies to provide food, water and sanitation for the maximum number of guests anticipated. The buildings will be built to withstand the highest category of seismic activity.

As part of the City of Bandon efforts to “Map your Neighborhood”, the neighboring properties can count on additional resources being available to them when a natural disaster happens. The addition of the water reservoir in this part of Bandon is over and beyond what is expected from a developer. Having a neighbor with ample water, seismic ready structures, emergency food supply, and space to house those who are displaced is a huge benefit to the neighboring parcels. Gravel Point is an ideal neighbor to have in the case of a major seismic event.

- I appreciate all your transparency throughout this process and taking the time to send this along.

We appreciate the feedback provided by the Bandon experts for the landscape plan. The input was thoughtful and guided our efforts.

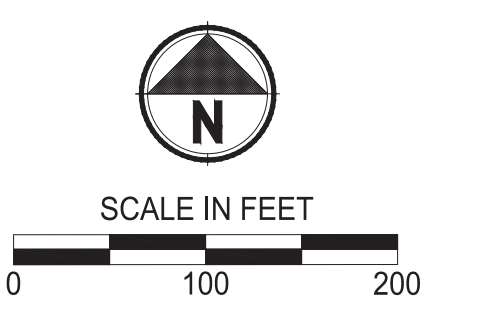


# Conceptual Plant Palette



	Common Name	Horticultural Name	Container Size
<b>Wetland &amp; Wetland Buffer</b> 114271 SF	Sedge Horsetail Douglas iris Coastal Rush Western Lily Lance Self Heal Blue Salvia Western Spirea	<i>Carex spp.</i> <i>Equisetum</i> <i>Iris douglasiana</i> <i>Juncus spp.</i> <i>Lilum occidentale</i> <i>Prunella vulgaris spp.</i> <i>Salvia azurea</i> <i>Spiraea douglasii</i>	4" pots @ 24" o.c.
<b>Meadow</b> 91716 SF	Coyote Bush Blueblossom Red Osier Dogwood Oceanspray Purple Loosetrife Mock Orange Nootka Rose Blackcap Raspberry	<i>Baccharis pilularis</i> <i>Ceanothus thrysiflorus</i> <i>Cornus sericea</i> <i>Holodiscus discolor</i> <i>Lythrum Salicaria</i> <i>Philadelphus lewisii</i> <i>Rosa nutkana</i> <i>Rubus leucodermis</i>	1 gal @ 36" o.c.
<b>Dune</b> 282467 SF	Beach Strawberry American Dune Grass Yellow Sand Verbena Pink Sand Verbena	<i>Fragaris chiloensis</i> <i>Leymus mollis spp. Mollis</i> <i>Abronia latifolia</i> <i>Abronia umbellata</i>	4" pots & plugs @ 24" o.c.
<b>Forest</b> 344691 SF	Vine Maple Lady Fern Deer Fern Carpet Moss Shore Pine Sitka Spruce Western Sword Fern Western Hemlock Evergreen Huckleberry	<i>Acer circinatum</i> <i>Athyrium filix-femina</i> <i>Belchnum spicant</i> <i>Hypnum</i> <i>Pinus contorta</i> <i>Piscea sitchensis</i> <i>Polystichum munitum</i> <i>Tsuga heterophylla</i> <i>Vaccinium ovatum</i>	Trees: BB @ 30' o.c. Understory: 1 gal @ 48" o.c.
<b>Curated</b> 127893 SF	Karl Foerster Grass Point Reyes Ceanothus White Rockrose Tufted Hairgrass Pink Escallonia California Fescue Hardy Cranesbill Coastal Gem Gervillea Hebe Sun Rose Monterey Cypress Big Leaf Hydrangea Bar Harbor Juniper Lavender Phormium Rosemary Lavender Cotton Sedum Coast Redwood Purple Carpet Creeping Thyme Early Blue Violet	<i>Calamagrostis acutiflora</i> <i>Ceanothus gloriosus</i> <i>Cistus hybridus</i> <i>Deschampsia cespitosa</i> <i>Escallonia leavis</i> <i>Festuca californica</i> <i>Geranium spp.</i> <i>Grevillea lanigera 'Coastal Gem'</i> <i>Hebe glaucophylla</i> <i>Helianthemum</i> <i>Hesperocyparis macrocarpa</i> <i>Hydrangea macrophylla</i> <i>Juniperus horizontalis</i> <i>Lavandula</i> <i>Phormium hybrids</i> <i>Rosemarinus officinalis</i> <i>Santolina</i> <i>Sedum spp.</i> <i>Sequoia sempervirens</i> <i>Thymum serpyllum</i> <i>Viola sororia</i>	1 gal @ 36" o.c.
<b>Dune Curated</b> 18114 SF	Beach Strawberry American Dune Grass Yellow Sand Verbena Pink Sand Verbena Karl Foerster Grass Pink Escallonia Point Reyes Ceanothus White Rockrose	<i>Fragaris chiloensis</i> <i>Leymus mollis spp. Mollis</i> <i>Abronia latifolia</i> <i>Abronia umbellata</i> <i>Calamagrostis acutiflora</i> <i>Escallonia leavis</i> <i>Ceanothus gloriosus</i> <i>Cistus hybridus</i>	4" pots & plugs @ 24" o.c.
<b>Screening</b> 32827 SF	Coyote Bush Oceanspray Star Jasmine Wax Myrtle Mock Orange	<i>Baccharis pilularis</i> <i>Holodiscus discolor</i> <i>Inconfederate Jasmine</i> <i>Myrica californica</i> <i>Philadelphus lewisii</i>	5 gal @ 48" o.c.

\*\* NOTE: REQUIRED SCREENING FROM ADJACENT PROPERTIES WILL BE A COMBINATION OF FENCING AND VEGETATION. REPRESENTATIVE EXAMPLES WILL BE PROVIDED TO CITY FOR REVIEW.



LAYOUT: BRANDON COMPOSITE PATH: U:\PSO\Projects\Clients\B837-Bandon Beach Ventures\217-8837-003 Final Civil & Landscape\995eva\CADD\DWG PLOTTED BY: petrius DATE: Friday, June 16, 2023 10:15:17 AM

REVISIONS	DATE	BY	DESIGNED
			RLP
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			RLP
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			DCS
			APPROVED
			DCS

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 FILE NAME: XPS08837003C-DE  
 JOB No: 2178837002  
 DATE: 08/21/23



PROJECT NAME  
**GRAVEL POINT**  
**BANDON BEACH VENTURES, LLC**  
 Bandon, Oregon

**COMPOSITE LANDSCAPE PLAN**

DRAWING NO.  
 03 OF 03  
**LS-01**

# Marineau and Associates

*real estate appraisers and consultants*

P.O. BOX 1017 • 510 HIGHLAND AVENUE • COOS BAY, OREGON 97420-0221  
TELEPHONE (541) 269-2624 • FAX NO. (541) 267-7808  
E-MAIL: office@marineau.net • WEB SITE: www.marineau.net

JEFFREY L. MARINEAU, MAI  
DAVID S. OLSON, CGA  
ZACHARY R. JOHNSON, RAA  
FRED J. MARINEAU (1919-1996)

PERK DEVELOPMENT  
188 Parkcrest  
Newport Coast, CA 92657

September 11, 2023

Attention: Brett Perkins, Owner/Developer

Dear Brett,

You have requested an opinion from me regarding a proposed City of Bandon street vacation that is outlined in the attached page. The request comes from the city manager in Bandon, Dan Chandler, who asks whether or not there will be any significant impact on property values for 3 lots that are abutting the proposed street vacation.

Those 3 properties, visually inspected on the 9<sup>th</sup> of September, are clearly marked on the following page and addressed in my comments here.

1. The property on Beach Loop Drive owned by Carolyn Forbes has current and adequate access from that main road system and there will be no financial loss due to the north side street vacation.
2. The property on Three Wood Drive owned by the Montgomery Family Trust has recently been built on and has excellent access off of Three Wood Drive, currently developed. The street vacation will not adversely affect value on that parcel, which touches the vacation on the north and east side of that lot.
3. The property on Carter Street owned by George Schwirian has recently been built on and has developed access off of Carter Street and will not adversely affect value on the parcel of land, which touches the street vacation on the west side of that lot.

In addition to the above comments, there are many examples of new subdivisions in the Beach Loop and Seabird Drive neighborhood abutting older residential properties in older subdivisions and there have not been negative impacts on value due to those types of developments. Although not directly related to the question from the City of Bandon, the proposed development appears to be well designed and will be unique to the South Coast in its concept, meshing residential living, private pathways, some private and public streets and larger group occupancies. In summary, a nice addition to the City of Bandon without negative value impacts to nearby residential properties.

If you have further questions, please do not hesitate to contact me.

Thanks,



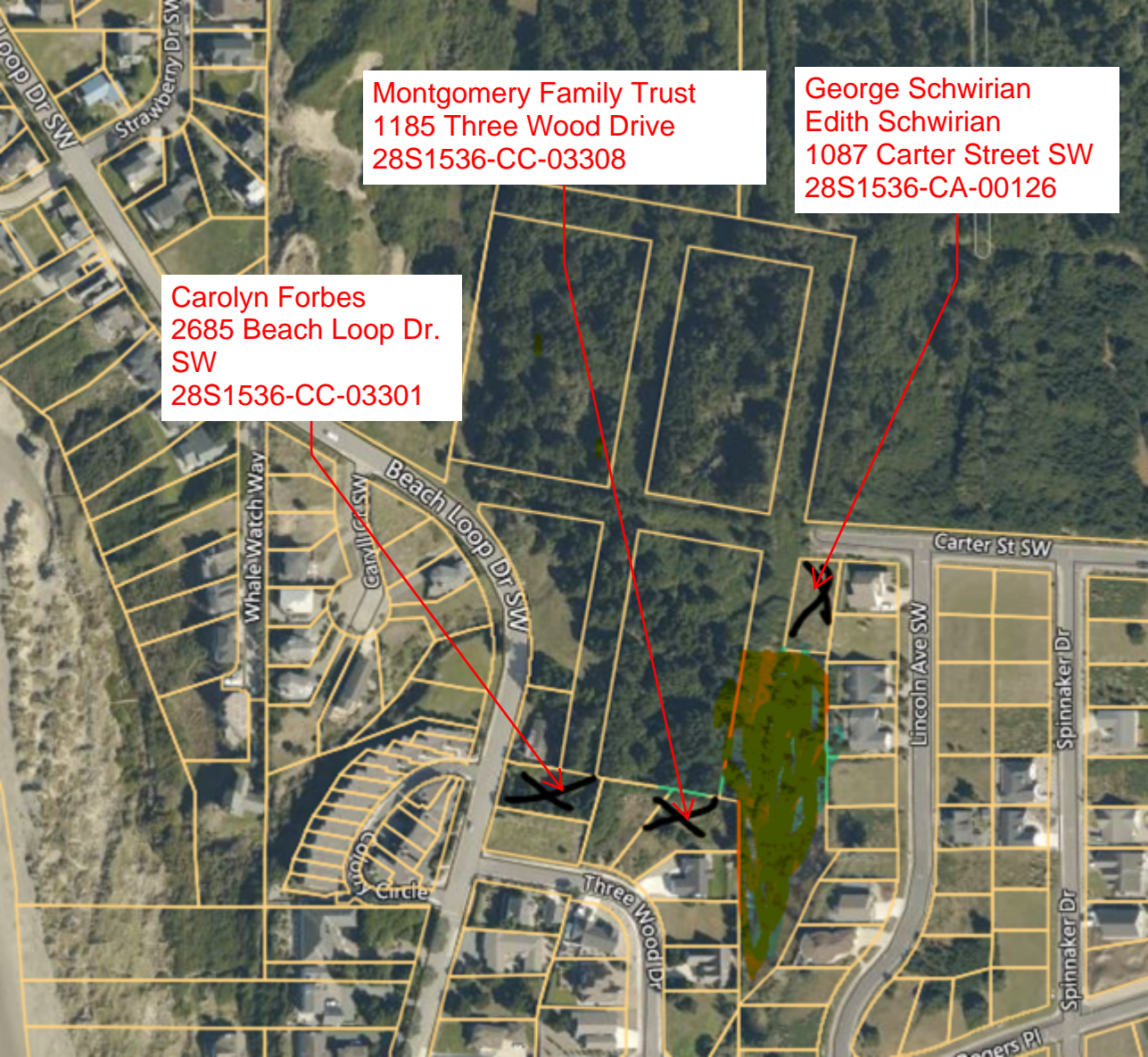
Jeffrey L. Marineau, MAI

Marineau and Associates  
510 Highland Avenue  
Coos Bay, Or 97420

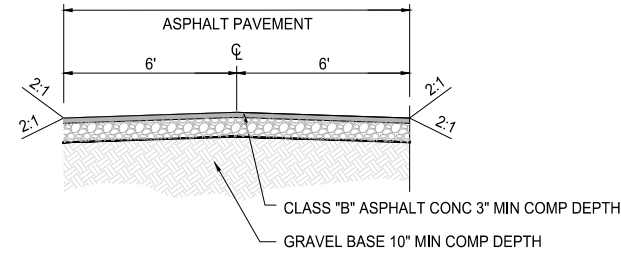
Montgomery Family Trust  
1185 Three Wood Drive  
28S1536-CC-03308

George Schwirian  
Edith Schwirian  
1087 Carter Street SW  
28S1536-CA-00126

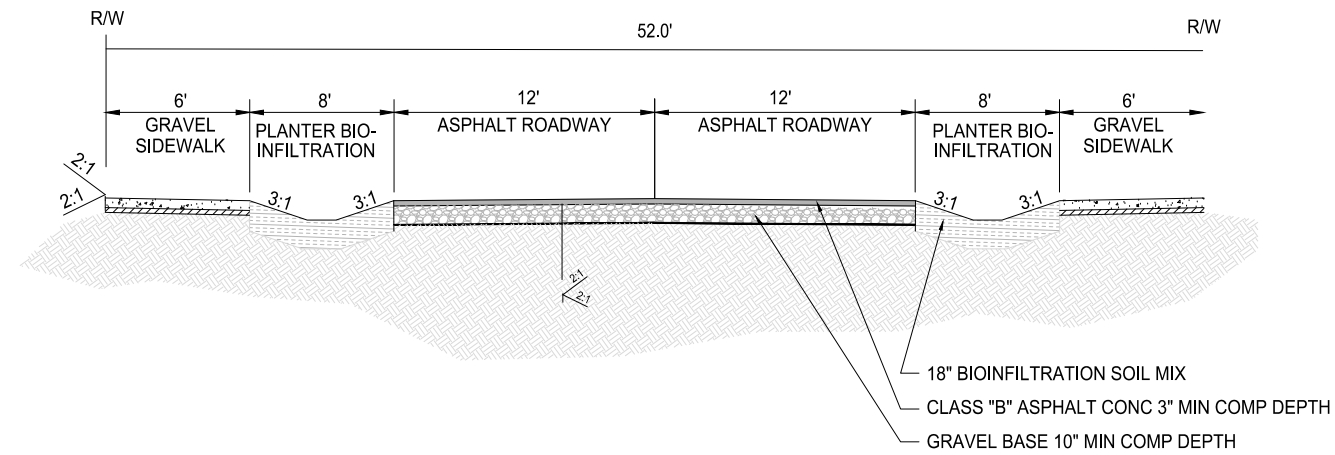
Carolyn Forbes  
2685 Beach Loop Dr.  
SW  
28S1536-CC-03301



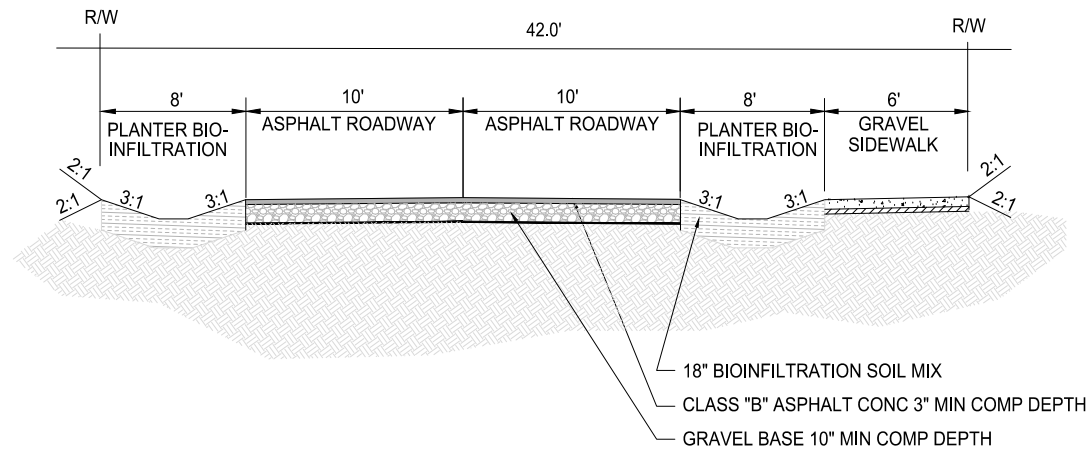
LAYOUT: ROAD SECTIONS PATH: U:\PSO\Projects\Clients\8837-Bandon Beach Ventures\217-8837-003 Final Civil & Landscape\99Sves\CA001.DWG PLOTTED BY: sander DATE: Monday, September 11, 2023 3:44:42 PM



**TYPICAL 12' ASPHALT LANE SECTION**  
NO SCALE



**ASPHALT ROAD SECTION 1**  
NO SCALE



**ASPHALT ROAD SECTION 2**  
NO SCALE

**100% REVIEW SUBMITTAL**  
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	DESIGNED
			RLP
			DRAWN
			RLP
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			DCS
			APPROVED
			DCS

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Road Sections xPS08837003-DE  
JOB No.  
2178837002  
DATE  
09/11/23

**PRELIMINARY**



PROJECT NAME  
**GRAVEL POINT**  
**BANDON BEACH VENTURES, LLC**  
Bandon, Oregon

**ILLUMINATION DETAILS**

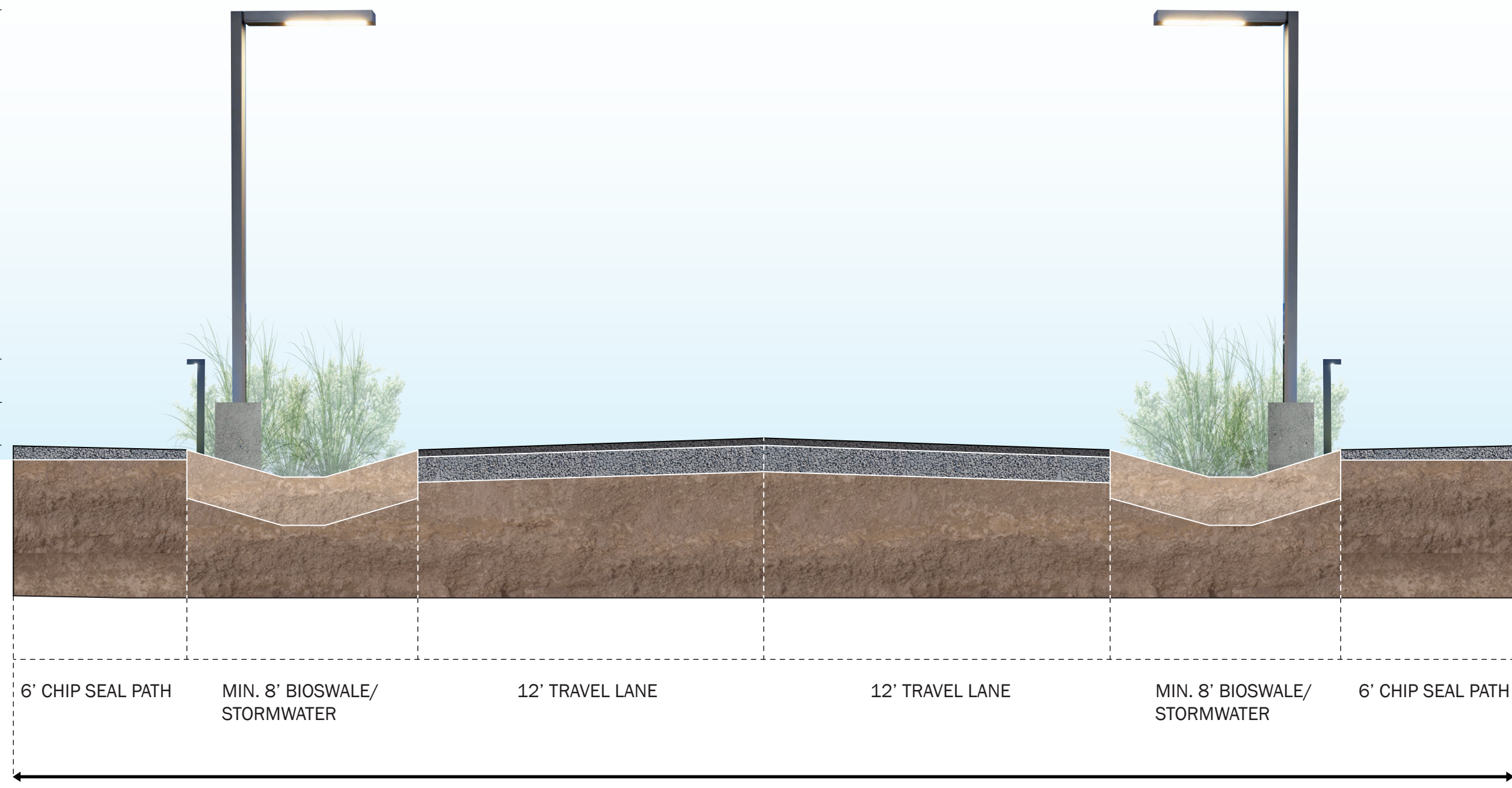
DRAWING NO.  
03 OF 06  
**RD-01**



15'-1"  
LIGHT BUILDING ELEMENT

3'-0"  
BOLLARD LIGHTS

1'-6"  
CONCRETE BASE



6' CHIP SEAL PATH    MIN. 8' BIOSWALE/  
STORMWATER    12' TRAVEL LANE    12' TRAVEL LANE    12' TRAVEL LANE    MIN. 8' BIOSWALE/  
STORMWATER    6' CHIP SEAL PATH

52' ROW

ROAD SECTION TO MEET CITY STANDARDS

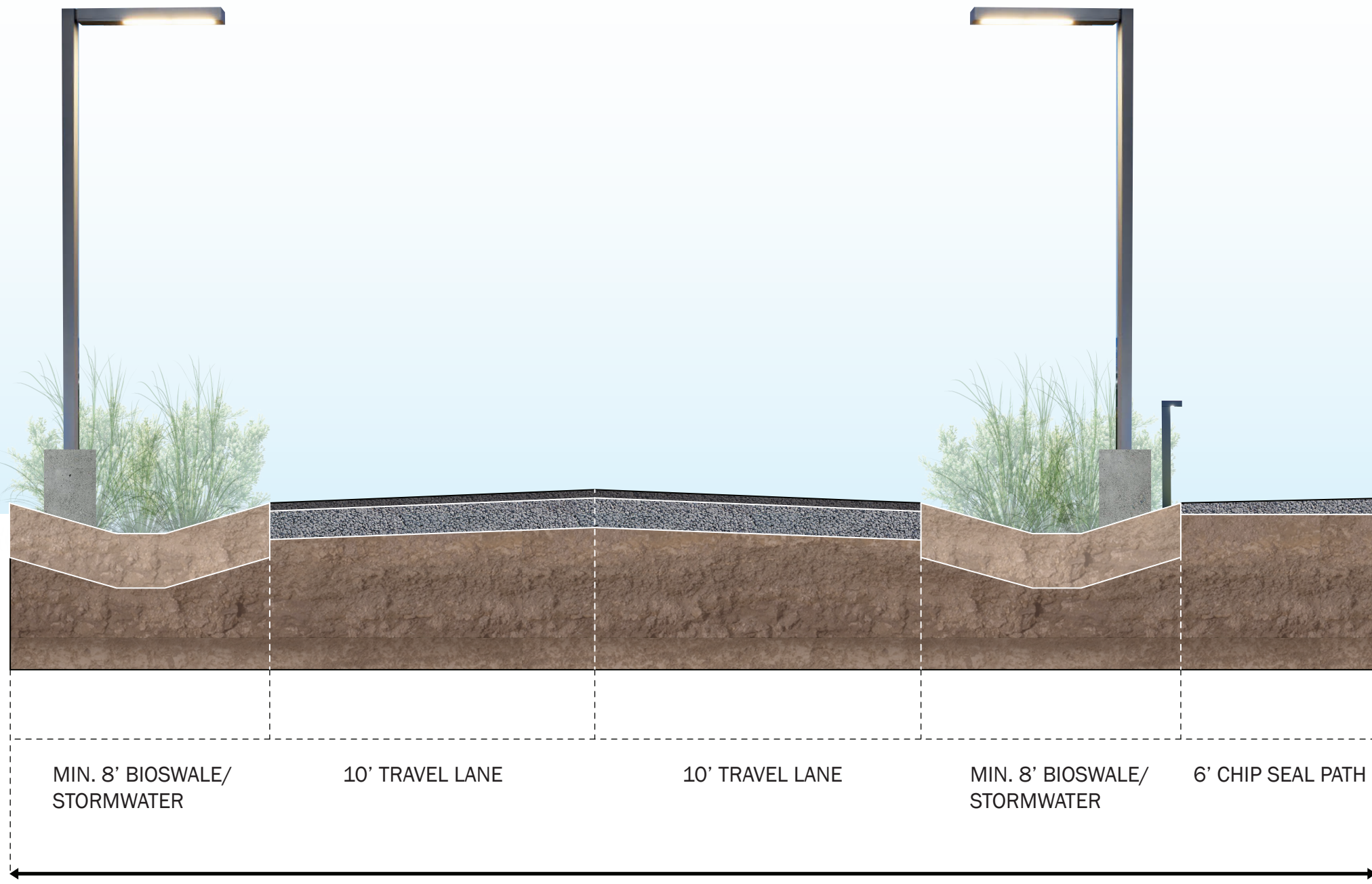
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0' 1' 2' 5'

15'-1"  
LIGHT BUILDING ELEMENT

3'-0"  
BOLLARD LIGHTS

1'-6"  
CONCRETE BASE



MIN. 8' BIOSWALE/  
STORMWATER

10' TRAVEL LANE

10' TRAVEL LANE

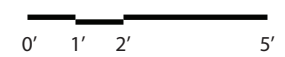
MIN. 8' BIOSWALE/  
STORMWATER

6' CHIP SEAL PATH

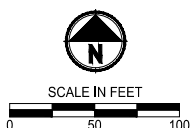
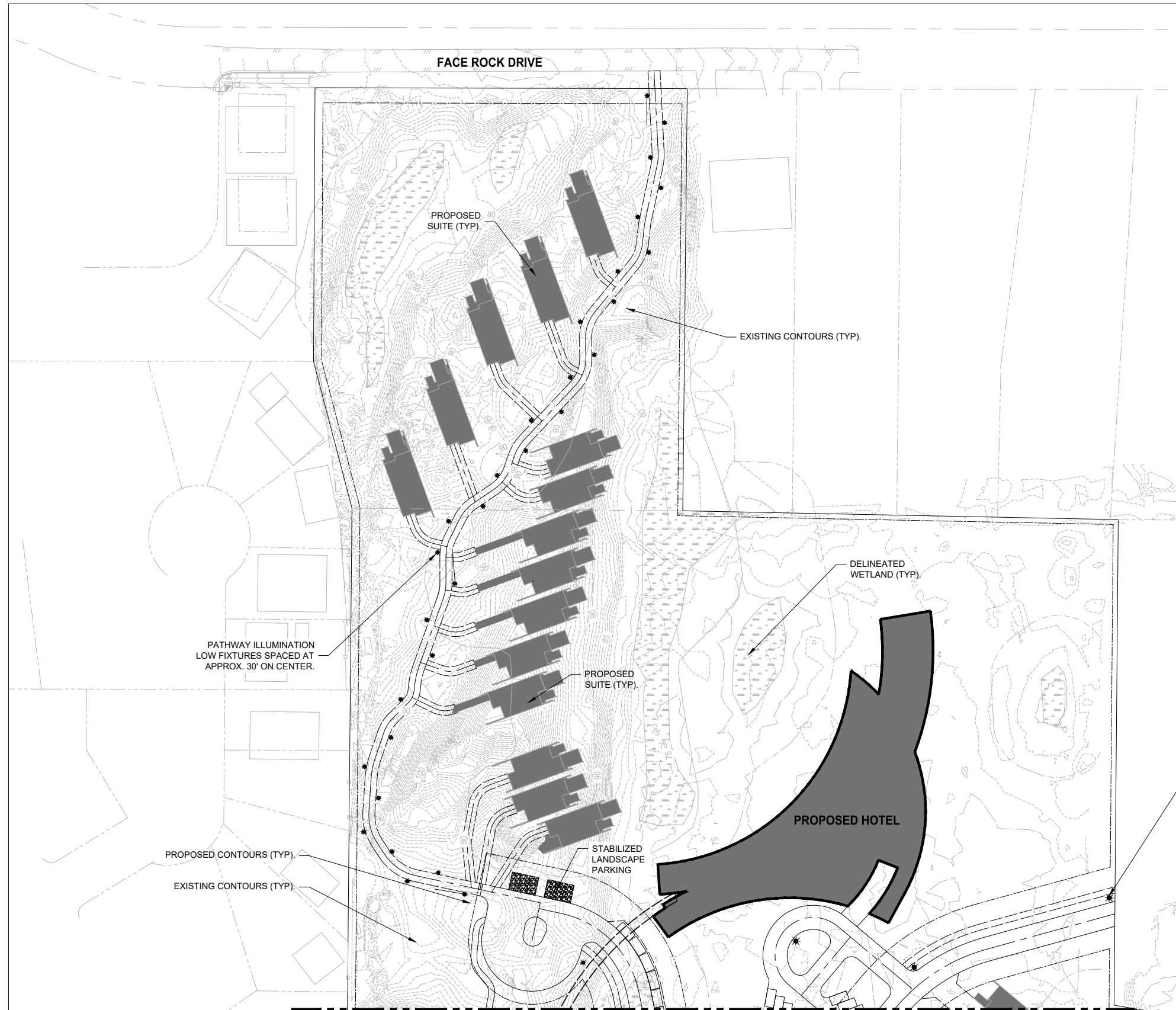
42' ROW

ROAD SECTION TO MEET CITY STANDARDS

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



PATH: u:\p50\Projects\Clients\Bandon Beach Ventures\217-8837-003 Final Civil & Landscape\995sva\CADD\DWG PLOTTED BY: sandebar DATE: Wednesday, September 20, 2023 11:01:37 AM  
 LAYOUT: ILLUMINATION



PRELIMINARY

REVISIONS	DATE	BY	DESIGNED RLP

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 JOB No.: 2178837002  
 APPROVED DCS  
 DATE: 09/20/23

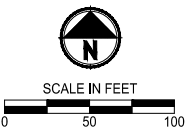
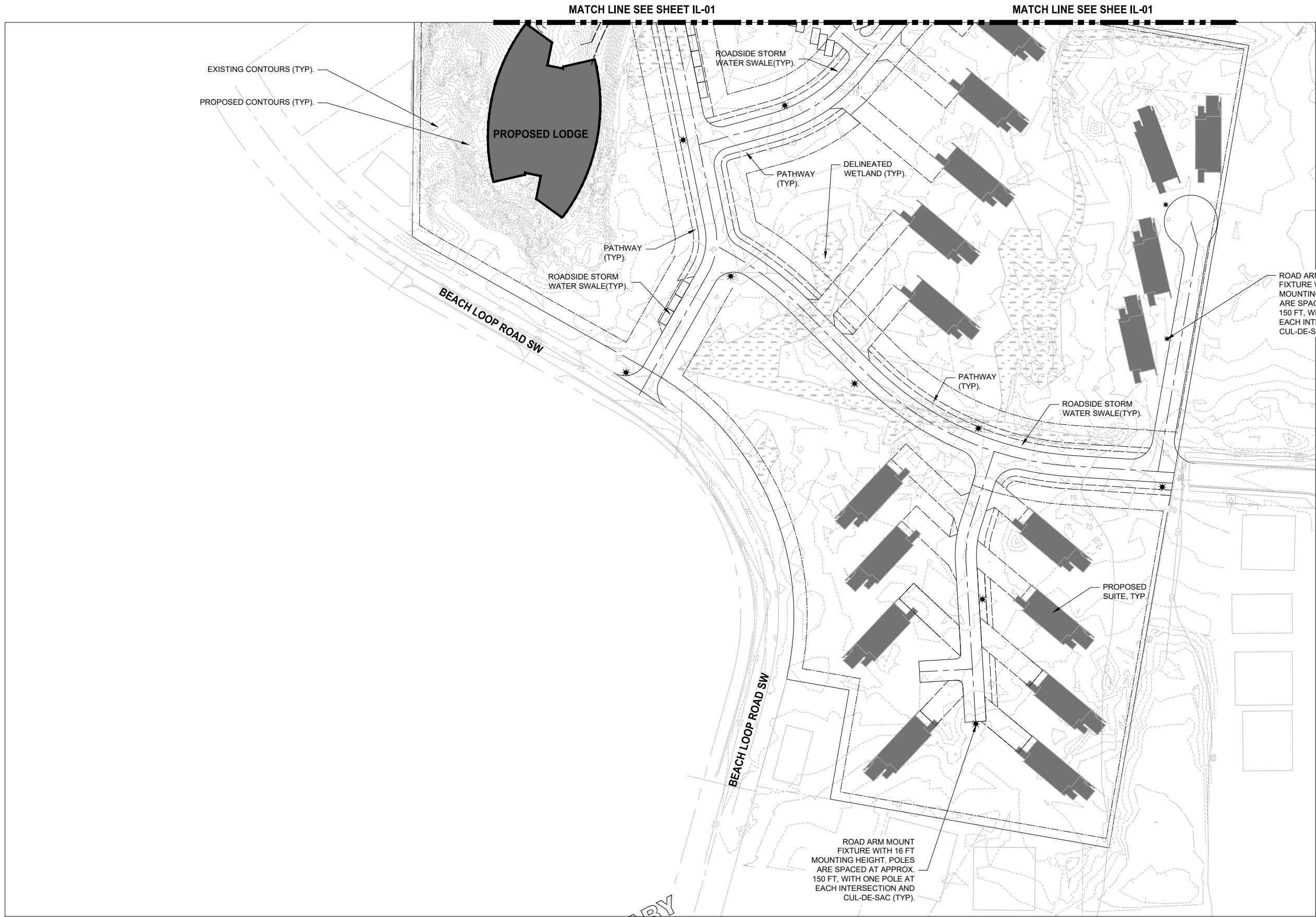


PROJECT NAME  
**GRAVEL POINT**  
**BANDON BEACH VENTURES, LLC**  
 Bandon, Oregon

**ILLUMINATION PLAN**

DRAWING NO.  
 01 OF 02  
**IL-01**

PATH: u:\PSO\Projects\Clients\Bandon Beach Ventures\217-8837-003 Final Civil & Landscape\9955va\_CADD\DWG PLOTTED BY: sanderb DATE: Wednesday, September 20, 2023 11:06:58 AM LAYOUT: ILLUMINATION2



PRELIMINARY

NO.	REVISIONS	DATE	BY	DESIGNED

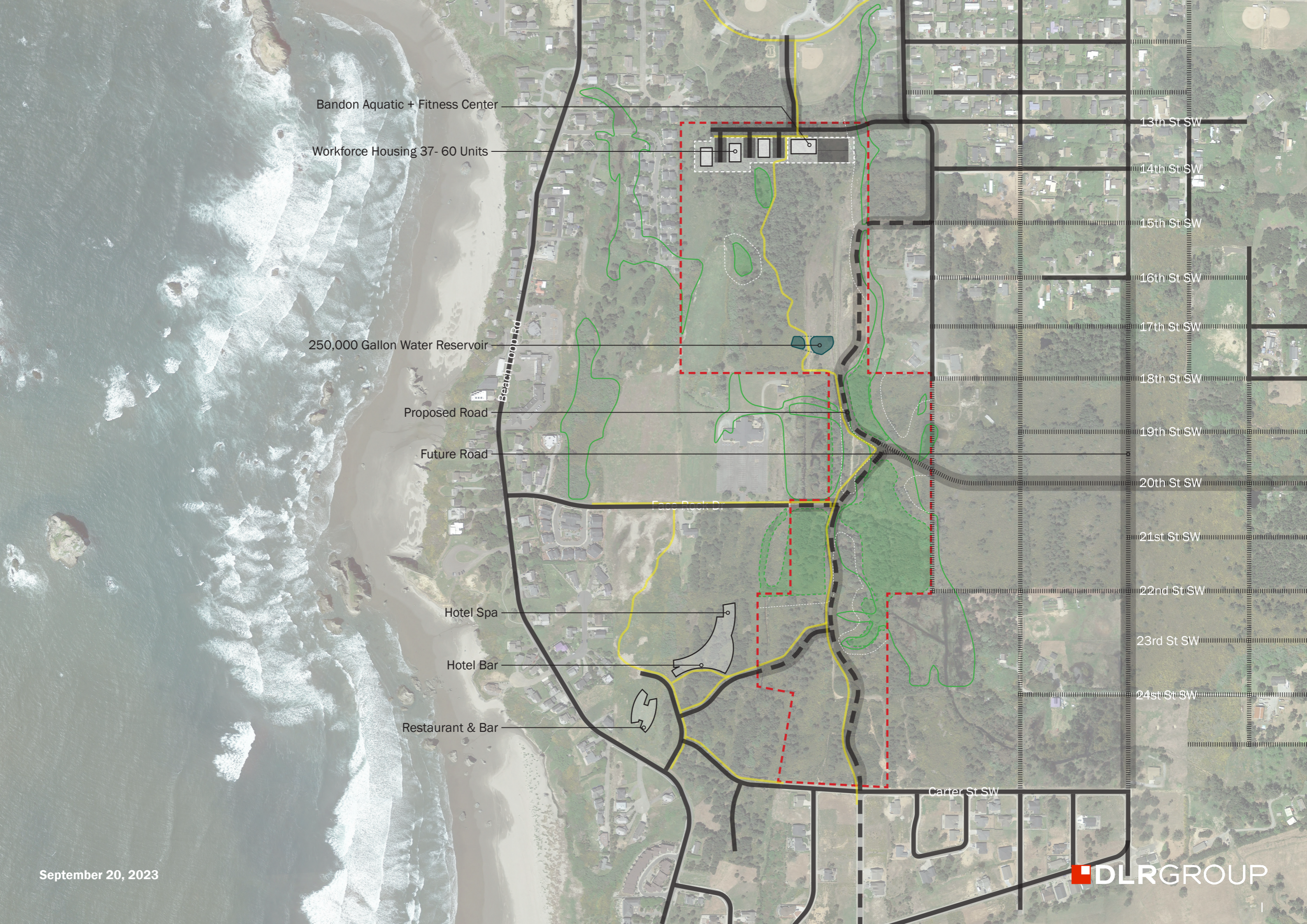
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IF NOT, SCALE ACCORDINGLY  
FILE NAME: Road Sections xPS08837002-DE\_revised  
JOB No. 2178837002  
DATE 09/20/23



PROJECT NAME  
**GRAVEL POINT**  
**BANDON BEACH VENTURES, LLC**  
Bandon, Oregon

**ILLUMINATION PLAN**

DRAWING NO.  
02 OF 02  
**IL-02**



Bandon Aquatic + Fitness Center

Workforce Housing 37- 60 Units

250,000 Gallon Water Reservoir

Proposed Road

Future Road

Hotel Spa

Hotel Bar

Restaurant & Bar

13th St SW

14th St SW

15th St SW

16th St SW

17th St SW

18th St SW

19th St SW

20th St SW

21st St SW

22nd St SW

23rd St SW

24th St SW

Carrer St SW



**RANDY HOFFINE – PRINCIPAL BROKER/OWNER**  
**CRYSTAL VIELMETTE – MANAGING PRINCIPAL BROKER**  
810 S. BROADWAY COOS BAY, OR 97420  
541-269-5263, OFFICE 541-269-7131, FAX

September 14, 2023

To whom it may concern:

As a long-standing resident of Coos County, I have been involved with many Commercial and Residential Developments in the County. I am in full support of the Gravel Point project. This development is a legacy-type project for the City of Bandon. The development and design team have done a great job putting together a project that fits within the CD-1 zoning without being obtrusive. I can see that this group has taken into consideration the natural elements of the site and have made it a priority to stay “Hidden in plain sight.” As someone that has been very familiar with this site and the surrounding parcels, the current program and plans are much better (and less dense) than previously proposed projects I have seen. The project also proposes to alleviate some congestion on Beach Loop Road by giving pedestrians a much safer access/pathway and great ocean views from the scenic dune and wetland off or Strawberry Point, while also finally implementing circulation to the east as part of the Bandon Transportation Plan! These items have been both documented and ‘longed for’ by the City of Bandon. This project surely will be a great addition to the City of Bandon, its well-deserved resident population, and the entire Oregon Coast! I am looking forward to seeing this project be APPROVED!

Thank you for the consideration,

**Joel Sweet**

*Oregon Licensed Broker*

Mobile: 541-290-9597

Email: [Joel@PacificPropertiesTeam.com](mailto:Joel@PacificPropertiesTeam.com)

## TECHNICAL MEMORANDUM

DATE: September 11, 2023  
TO: Brett Perkins, Perk Development  
FROM: Alex Atchison, PE, PTOE  
SUBJECT: Gravel Point Development - Traffic Assessment  
CC: Darren Sandeno  
PROJECT NUMBER: 217-8837-002  
PROJECT NAME: Gravel Point Development



This technical memorandum analyzes potential traffic impacts of the proposed Gravel Point development in Bandon, Oregon. This transportation technical memo evaluates traffic volumes, estimated weekday PM peak hour trips generated by the project, and traffic operations for the existing and future conditions. As discussed with City Planning Department staff, a formal traffic impact analysis is not required for this development.

### PROJECT OVERVIEW

The proposed Gravel Point project includes a 110-room hotel and 32 associated suites on a 24.8-acre site along Beach Loop Road SW in the City of Bandon, Oregon. The hotel will have amenities that include a spa, meeting rooms and a 258-seat restaurant and bar. The proposed project is anticipated to be constructed by 2026.

### STUDY AREA

#### Roadways

Highway 101, also known as the Oregon Coast Highway, connects the northern border of Washington with the southern border of California. Highway 101 is under the jurisdictional responsibility of the Oregon Department of Transportation (ODOT). Except for Highway 101, streets located within the city limits of Bandon are the responsibility of the city and streets located outside the city limits are the responsibility of Coos County.

Functional classification is designed to serve the transportation needs within the community. In general, arterials serve longer trips and through traffic, have limited access points, and are less desirable for pedestrian and bicycle trips. Local streets serve shorter trips with nearby destinations, have frequent access points and are ideal for pedestrian and bicycle trips. Collectors connect the arterial system to the local street system.

Highway 101 is a two-way three-lane facility with two through lanes and one center lane. It is classified as an arterial and has a posted speed of 45 mph. Seabird Drive and Beach Loop Road SW are two-way, two-lane roadways and are both classified as collectors. Seabird Drive has a posted speed limit of 30 mph and Beach Loop Road SW has a posted speed limit of 25 mph.

#### Study Intersections

This traffic assessment evaluates traffic operations at three intersections: Highway 101/Seabird Drive, Beach Loop Road SW/Seabird Drive and Beach Loop Road SW/Main Site Access. **Figure 1** shows the study area and study intersections. The intersections of Highway 101/Seabird Drive and Beach Loop Road SW/ Seabird Drive are both stop-controlled on Seabird Drive only.

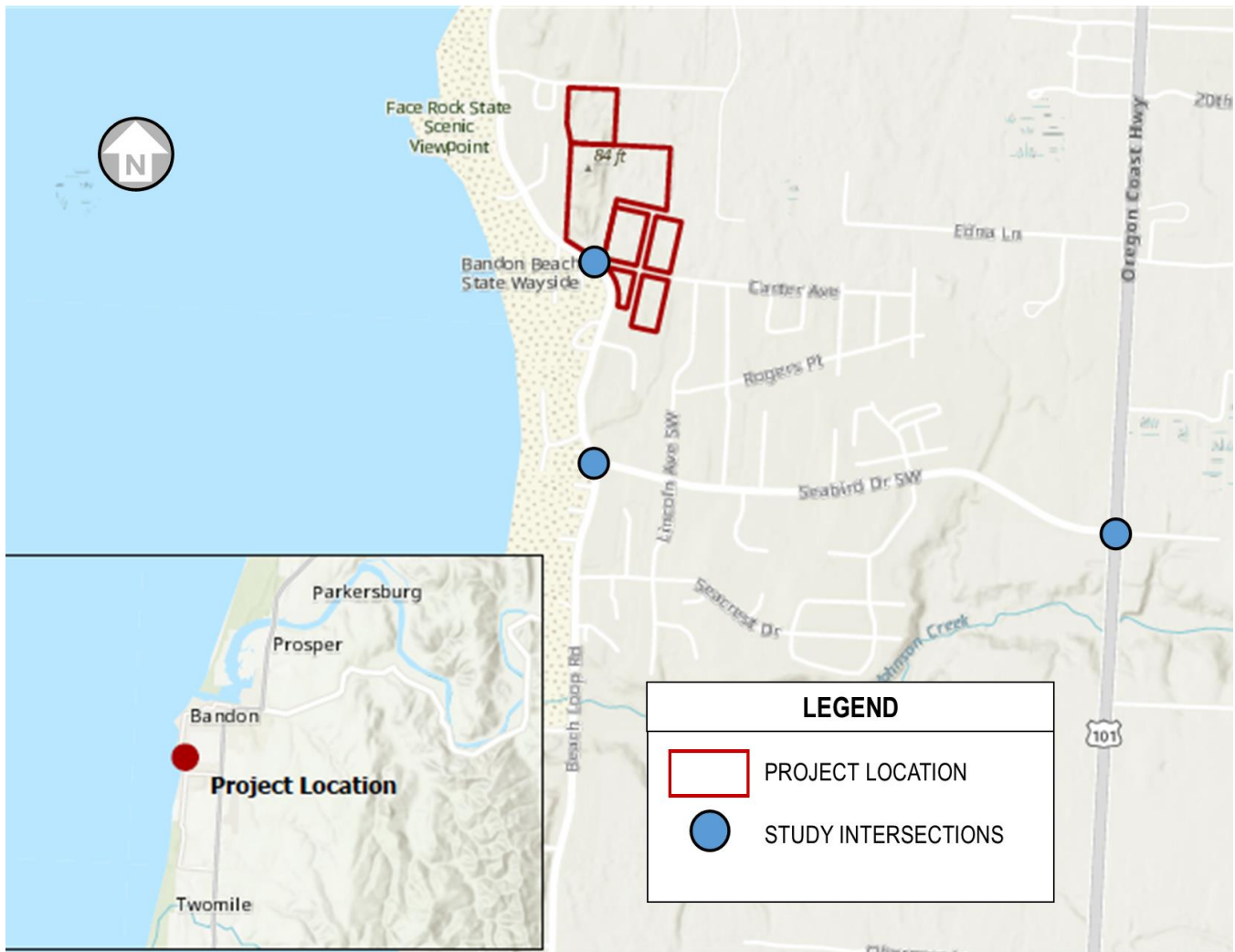


Figure 1. Study Area

## TRAFFIC VOLUMES

PM peak hour traffic counts at the intersection of Highway 101/Seabird Drive were collected in May 2021 as part of the Seabird Drive Multifamily Traffic Impact Analysis (2021). This count was reflective of off-season conditions. Because traffic volumes vary during different times of year, especially in areas like Bandon that experience significant volumes of recreational traffic, counts must be adjusted to represent the peak month by applying a seasonal factor, consistent with the ODOT's (2023) Analysis Procedures Manual (APM). The traffic volumes adjusted for seasonal variation are also referred to as the 30th highest annual traffic volumes and are commonly used for traffic analysis on ODOT facilities.

To account for seasonal variations, the Seabird Drive Multifamily TIA study increased traffic counts by 26%. This adjustment was based on five years of traffic data from ODOT's Automatic Traffic Recorder (ATR) at Station 06-004 (located on Highway 101, 1.02 miles south of 18th SW Street) approximately 0.3 miles south of Seabird Drive.

No existing traffic counts are currently available at the intersection of Beach Loop Road SW/Seabird Drive. However, the City of Bandon (2010) Bandon Transportation Refinement Plan includes PM Peak hour traffic counts collected in at the intersections of Highway 101/Seabird Drive and Beach Loop Road SW/Seabird Drive in January 2009. A seasonal adjustment factor was applied to the 2009 traffic counts and resulting 30th highest annual hour traffic volumes are included in Figure 5 of the Bandon Transportation Refinement Plan.



The seasonally adjusted 2009 traffic count at the intersection of Highway 101/Seabird Drive was compared to the 2021 seasonally adjusted traffic count to calculate the total growth along Seabird Drive. Weekday PM peak hour, seasonally adjusted volumes on Seabird Drive grew by 58% between 2009 and 2021. This growth rate was applied to the 2009 seasonally adjusted traffic counts at the intersection of Beach Loop Road SW/Seabird Drive to estimate 2021 PM Peak hour traffic counts.

The *Year 2026 No Build* traffic volumes were estimated by applying a background annual growth of 2% to the 2021 traffic volumes. The annual growth rate of 2% is the average of the growth rates reported in the Coos County (2011) Transportation System Plan (TSP) and the Bandon Transportation Refinement Plan. Traffic volumes are included in **Attachment A**.

## TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

The proposed project includes a resort hotel that includes 110 room, 32 suites and a 258-seat restaurant and bar. Trip generation estimates were prepared for the proposed hospitality development based on trip rates identified using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2022).

**Table 1** summarizes weekday PM peak hour trip generation estimates. The net new total trips do not include project traffic that would be internal to the site (linked trips between the hotel and restaurant uses). To be conservative, trips for the restaurant were calculated as if the use was stand-alone. However, it is anticipated that hotel guests will make up a large majority of the people patronizing the restaurant and bar and the PM peak hour trips generated by the restaurant will be lower than what is shown in Table 1. See **Attachment B** for detailed trip generation calculations.

As shown in Table 1, the development is estimated to generate approximately 111 net new PM peak hour trips (75 in/36 out). Trip distribution patterns are consistent with trip distribution estimates shown in Figure 7 of the Bandon Transportation Refinement Plan, with 55% coming to/from the north on Highway 101, 10% coming from the south on Highway 101, 20% coming to/from the south on Beach Loop Road SW, and the remaining 15% coming to/from the north on Beach Loop Road SW.

**Table 1: Weekday PM Peak Project Trip Generation**

Land Use <sup>1</sup>	Unit	Size	Gross Trips Total (in/out) <sup>2</sup>	Internal Trips Total (in/out) <sup>3</sup>	Net New Trips Total (in/out) <sup>4</sup>
Resort Hotel (LU 330)	Room	110	35 (25/10)	4 (2/2)	31 (23/8)
Suite Hotel (LU 311)	Room	32	12 (6/6)	0	12 (6/6)
Restaurant (LU 931)	Seats	258	72 (48/24)	4 (2/2)	683 (46/22)
<b>Total</b>			<b>119 (79/40)</b>	<b>8 (4/4)</b>	<b>111 (75/36)</b>

1) Land use from ITE Trip Generation Manual (11<sup>th</sup> edition)

2) Total vehicle trips based on rates/equations from ITE Trip Generation Manual (11th edition)

3) Trips that would remain internal to the project site and would not use external roads, based on rates from Trip Generation Handbook and NCHRP report 685.

4) Overall new trips that would travel externally to/from the proposed project.

## TRAFFIC OPERATIONS

Traffic operations are often measured by an approach called intersection level of service (LOS). LOS is a scale ranging from A to F in which rankings are based on the delay at a given intersection. LOS A represents the best conditions with minimal amount of delay, and LOS F represents the worst conditions with severe congestion and delay. **Table 2** lists the intersection LOS delay thresholds for signalized intersections and unsignalized intersections.

At signalized and all-way stop-control intersections, LOS is calculated based on the delay of all vehicles entering the intersection. At two-way or one-way stop-control intersections, LOS is calculated and reported based on the worst movement at the intersection.

**Table 2. Highway Capacity Manual LOS Ratings**

Level of Service (LOS)	Average Delay (seconds/vehicle) Signalized Intersections	Average Delay (seconds/vehicle) Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Source: *Highway Capacity Manual* (6th Edition), Transportation Research Board, 2022.

Another measure of intersection operations is the volume to capacity (v/c) ratio. V/C is a measure of the adequacy of an intersection geometry and capacity. The v/c ratio is a measure of the capacity sufficiency of the overall intersection and is a good indication of whether the physical geometry design features provide sufficient capacity for the intersection. A v/c ratio of 1.0 indicates that an intersection is operating at capacity.

Traffic analysis was performed to identify intersection operations conditions for comparison to adopted mobility standards. Mobility standards for the study intersections differ, depending on the jurisdiction. The intersection of US 101/Seabird Drive is an ODOT facility, and the other two intersections are City of Bandon facilities.

The City’s 2010 Bandon Transportation Refinement Plan states that the collector street network shall be maintained at LOS D during the peak hour. ODOT’s mobility targets are typically based on the intersection location, its classification, and speed. The ODOT mobility standard for the US 101/Seabird Drive intersection is a V/C ratio of 0-75 for US 101 approaches and 0.80 for Seabird Drive. It should be noted that at unsignalized ODOT intersections, these standards are applicable only to minor street movements.

Study intersections, traffic control, roadway jurisdiction, and operational standards/mobility targets at the study intersections are summarized in **Table 3**.

**Table 3: Study Area Intersection Operational Standards and Mobility Targets**

Intersection	Traffic Control	Jurisdiction	Performance / Mobility Standard
Highway 101 / Seabird Drive	Minor-Street Stop-Control	ODOT	Highway 101 v/c ≤ 0.75 Seabird Dr v/c ≤ 0.80
Beach Loop Road SW / Seabird Drive	Minor-Street Stop-Control	City on Bandon	LOS D
Beach Loop Road SW / Site Access	Driveway Stop-Control	City of Bandon	LOS D

### Operations Results

Analysis was performed using Synchro 11 software and implementing the Highway Capacity Manual 6th Edition operations methods for stop-controlled intersections. Operational measures—including LOS, delay, and v/c ratios—of existing year 2023, future year 2026 *No Build*, and future year 2026 *Build* conditions are summarized in **Table 4**. Synchro reports are included in **Attachment C**.

As shown in Table 4, all the study intersections are forecasted to operate well within ODOT and City standards through project buildout in the year 2026.

**Table 4: PM Peak Hour Intersection Operations Summary**

Intersection	LOS or Mobility Standard	2023 Existing			2026 No Build			2026 Build		
		LOS <sup>1</sup>	Delay (sec/veh) <sup>2</sup>	v/c ratio	LOS	Delay (sec/veh)	v/c ratio	LOS	Delay (sec/veh)	v/c ratio
Highway 101 / Seabird Drive	Seabird Dr v/c ≤ 0.80	EB = D	31.8	0.44	EB = E	44.6	0.58	EB = F	61.8	0.73
Beach Loop Rd SW / Seabird Drive	LOS D	WB = A	9.4	0.09	WB = A	9.5	0.10	WB = A	9.8	0.17
Beach Loop Rd SW/ Site Access	LOS D	-	-	-	-	-	-	EB = A	9.7	0.05

1. LOS is for worst movement; EB = eastbound; WB = westbound
2. Sec/veh = seconds per vehicle

## FINDINGS AND CONCLUSIONS

This technical memorandum summarizes the traffic assessment conducted for the proposed Gravel Point development in the City of Bandon, Oregon. General findings include:

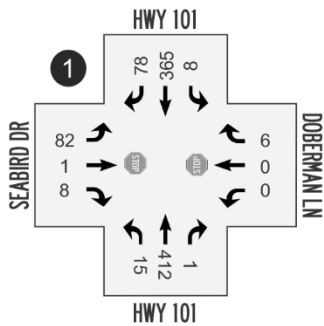
- The project would construct a 110-room hotel and 32 associated suites on a 24.8-acre site along Beach Loop Road SW in the City of Bandon, Oregon. The hotel will have amenities that include a spa, meeting rooms and a 258-seat restaurant and bar.
- The proposed project is anticipated to be constructed by 2026.
- The development is estimated to generate approximately 111 new PM peak hour trips.
- With the addition of the project trips, the off-site study intersections are forecast to continue to meet ODOT and City LOS and mobility standards.

## REFERENCES

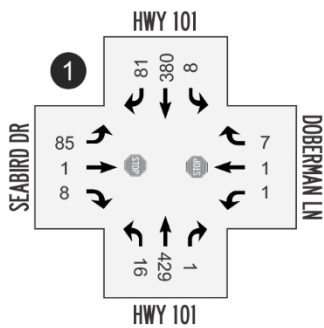
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## ATTACHMENT A – TRAFFIC VOLUMES

**2021 EXISTING TRAFFIC CONDITIONS  
WEEKDAY PM PEAK HOUR**



**2023 BACKGROUND TRAFFIC CONDITIONS  
WEEKDAY PM PEAK HOUR**



**2023 TOTAL TRAFFIC CONDITIONS  
WEEKDAY PM PEAK HOUR**

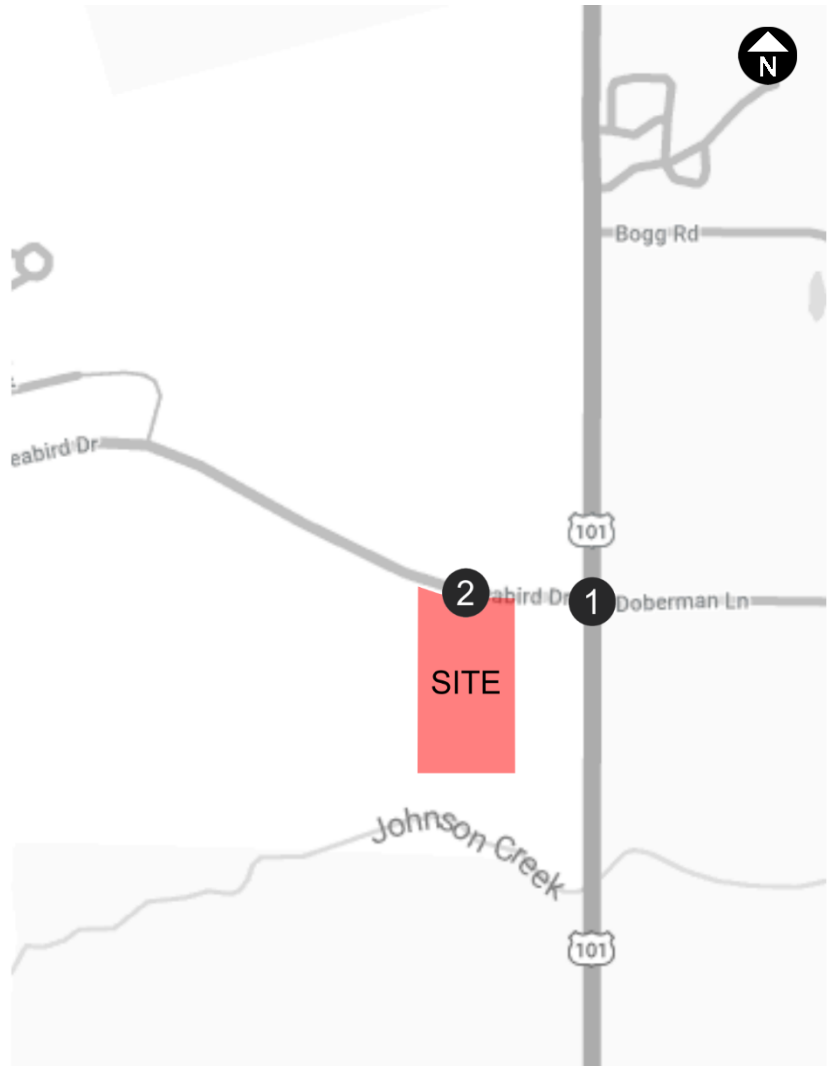
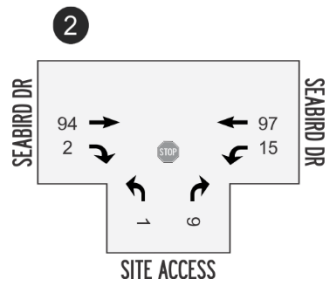
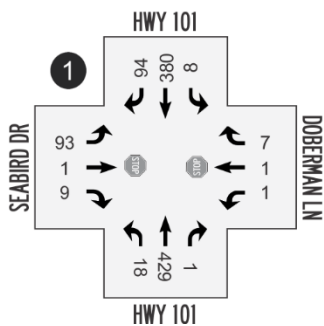
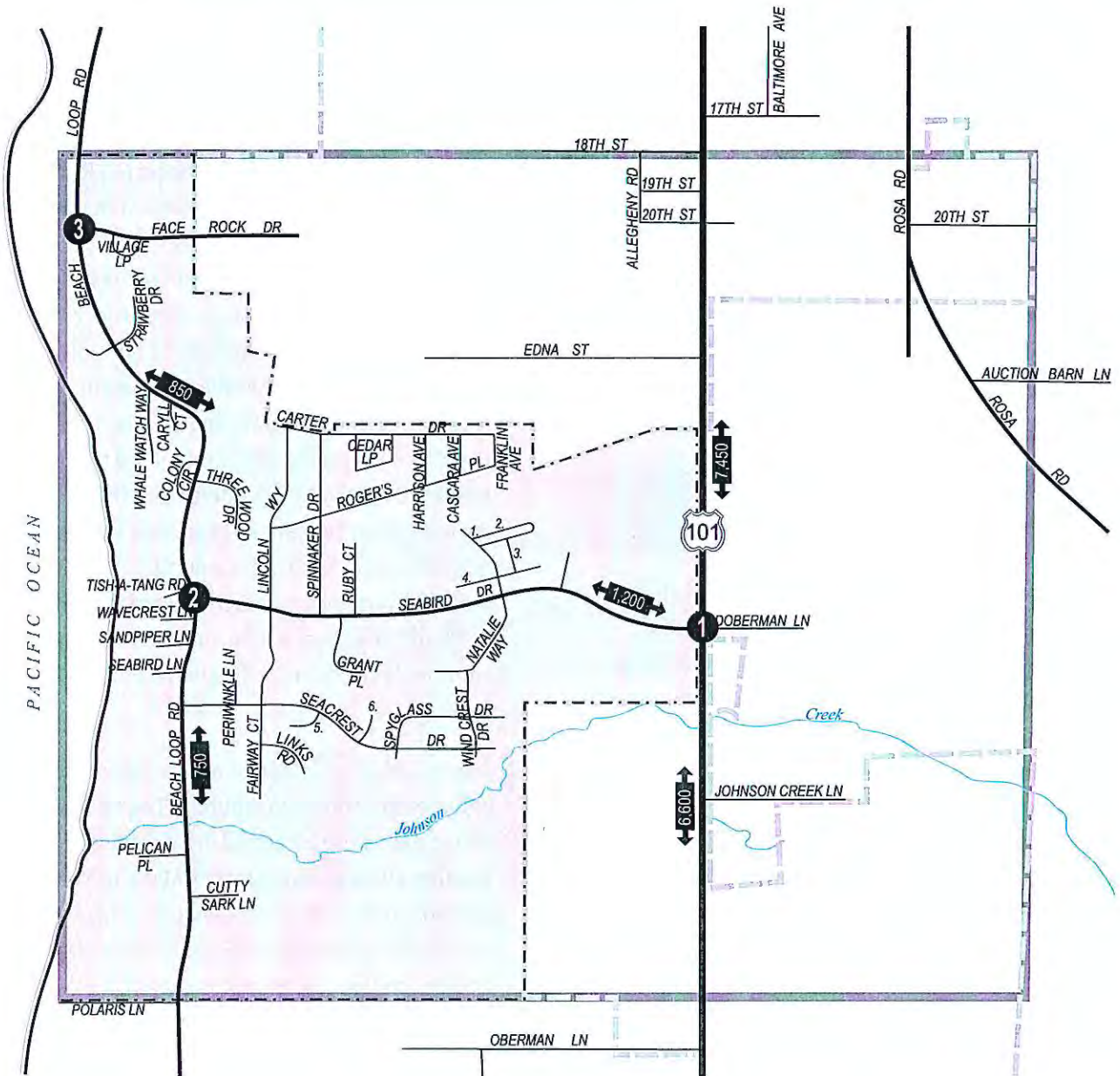


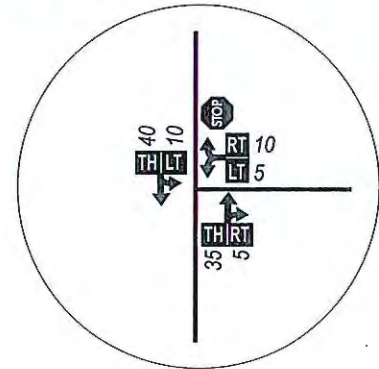
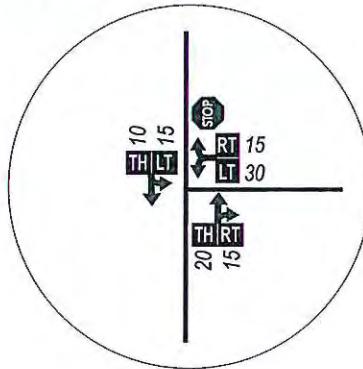
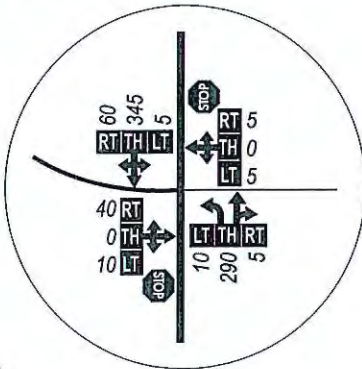
Figure 9. 2021 Existing and 2023 Forecast Traffic Volumes, Weekday PM Peak Hour.



1 US-101 @ Seabird Ln/  
Doberman Ln

2 Beach Loop Rd @  
Seabird Ln

3 Beach Loop Rd @  
Face Rock Dr



- 1. SALTY DOG DR
- 2. SHEARWATER CIR
- 3. PIPIT WAY
- 4. AVOCET AVE
- 5. GRETCHENS CT
- 6. HAILEY LN

**LEGEND**

- 1 - Study Intersection
- ← - Lane Configuration
- STOP - Stop Sign
- ↔ 1,150 ↔ - Average Daily Traffic

- 00 - 30th Highest Hour Traffic Volume
- LT TH RT - Volume Turn Movement
- Left-Thru-Right
- Study Area
- Urban Growth Boundary
- Bandon City Limits

**DKS Associates**  
TRANSPORTATION SOLUTIONS



**Figure 5**

**EXISTING TRAFFIC VOLUMES,  
LANE GEOMETRY &  
TRAFFIC CONTROL**

2023 No Build

Pipeline Projects [SeabirdApt\\_TIA.pdf](#)

2026 No Build

2026 Project Trips - Trip Distribution

2026 Project Trips - Trip Assignment

2026 Build

Main Site Access / Beach Loop Drive

	RT		LT	
	0		0	
LT				RT
TH	40		95	55
				TH

Main Site Access / Beach Loop Drive

	RT		LT	
	0		0	
LT				RT
TH	2		3	1
				TH

Main Site Access / Beach Loop Drive

	RT		LT	
	0		0	
LT	0			RT
TH	44		104	59
				TH

Main Site Access / Beach Loop Drive

	RT		LT	
	35%		65%	
LT				RT
TH			2	
				TH

Main Site Access / Beach Loop Drive

	RT		LT	
	13		23	
LT	26			RT
TH			111	49
				TH

Main Site Access / Beach Loop Drive

	RT		LT	
	13		23	
LT	26			RT
TH	44		215	59
				TH

Beach Loop Road / Seabird Drive

TH	LT		
15	25		
		25	RT
		165	
			45
30	25		LT
TH	RT		

Beach Loop Road / Seabird Drive

TH	LT		
0	2		
		1	RT
		3	
			0
0	0		LT
TH	RT		

Beach Loop Road / Seabird Drive

TH	LT		
16	29		
		28	RT
		177.9	
			48
32	27		LT
TH	RT		

Beach Loop Road / Seabird Drive

TH	LT		
0	65%		
		65%	RT
		1.3	
			0
0	0		LT
TH	RT		

Beach Loop Road / Seabird Drive

TH	LT		
0	23		
		49	RT
		72.15	
			0
0	0		LT
TH	RT		

Beach Loop Road / Seabird Drive

TH	LT		
16	52		
		76	RT
		250.1	
			48
32	27		LT
TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	81	380	8	
LT	85			7
TH	1			1
RT	8			1
		1018		
				1
				1
16	429			
LT	TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	13			
LT	8			RT
TH	0			0
RT	1			1
		24		
				2
				2
2				
LT	TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	99	403	8	
LT	98			7
TH	1			1
RT	10			1
		1104		
				1
				1
19	455			
LT	TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	55%			
LT	55%			RT
TH				1.3
RT				10%
		1.3		
				10%
				10%
10%				
LT	TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	41			
LT	20			RT
TH				72.15
RT	4			8
		72.15		
				8
				8
8				
LT	TH	RT		

Highway 101 / Seabird Drive

	RT	TH	LT	
	140	403	8	
LT	118			7
TH	1			1
RT	14			1
		1176		
				1
				1
26	455			
LT	TH	RT		

ATTACHMENT B – TRIP GENERATION



**PM PEAK HOUR - TRIP GENERATION**

Land Use					Gross Trips <sup>2</sup>				Internal Trips <sup>3</sup>			Net New Trips <sup>5</sup>		
	ITE LU	Size	Units	PM Peak Trip Rate <sup>1</sup>	Total Trips	% Inbound	In	Out	Total	In	Out	Total	In	Out
Resort Hotel	330	110	room	0.32	35	72%	25	10	4	2	2	31	23	8
Suite Hotel	311	32	room	0.36	12	49%	6	6	0	0	0	12	6	6
Resturant	931	258	seats	0.28	72	67%	48	24	4	2	2	68	46	22
					<b>119</b>		<b>79</b>	<b>40</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>111</b>	<b>75</b>	<b>36</b>

1) Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2022)

2) Total vehicle trips based on rates/equations from ITE Trip Generation Manual (11th edition)

3) Trips that would remain internal to the project site and would not use external roads, based on rates from Trip Generation Handbook and NCHRP report 685

4) Trips already on the adjacent street system that make a stop at the proeject site before continuing to final destination; rate based on ITE Trip Generation Manual (2021 rates); included as turning movements at project access points

5) Overall new trips that would travel externally to the proposed project

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Gravel Point	Organization:	Parametrix
Project Location:	Bandon, Oregon	Performed By:	A Atchison
Scenario Description:		Date:	8/14/2023
Analysis Year:	2026	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant				72	48	24
Cinema/Entertainment				0		
Residential				0		
Hotel				47	31	16
All Other Land Uses <sup>2</sup>				0		
Total				119	79	40

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses <sup>2</sup>						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	2	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	119	79	40
Internal Capture Percentage	7%	5%	10%
External Vehicle-Trips <sup>3</sup>	111	75	36
External Transit-Trips <sup>4</sup>	0	0	0
External Non-Motorized Trips <sup>4</sup>	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	4%	8%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	6%	13%

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*

<b>Project Name:</b>	Gravel Point
<b>Analysis Period:</b>	PM Street Peak Hour

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	48	48	1.00	24	24
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	31	31	1.00	16	16

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	1	10		2	4	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	3	11	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		14	0	0	5
Restaurant	0	0		0	0	22
Cinema/Entertainment	0	0	1		0	0
Residential	0	0	7	0		4
Hotel	0	0	2	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	2	46	48	46	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	2	29	31	29	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	2	22	24	22	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	2	14	16	14	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

## ATTACHMENT C – SYNCHRO REPORTS

HCM 6th TWSC  
1: Highway 101 & Seabird Drive

08/30/2023

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	85	1	8	1	1	7	16	429	1	8	380	81
Future Vol, veh/h	85	1	8	1	1	7	16	429	1	8	380	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	1	9	1	1	8	17	466	1	9	413	88

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	980	976	457	981	1020	467	501	0	0	467	0	0
Stage 1	475	475	-	501	501	-	-	-	-	-	-	-
Stage 2	505	501	-	480	519	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	229	251	604	229	237	596	1063	-	-	1094	-	-
Stage 1	570	557	-	552	543	-	-	-	-	-	-	-
Stage 2	549	543	-	567	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	221	244	604	220	230	596	1063	-	-	1094	-	-
Mov Cap-2 Maneuver	221	244	-	220	230	-	-	-	-	-	-	-
Stage 1	561	550	-	543	534	-	-	-	-	-	-	-
Stage 2	532	534	-	551	527	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	31.8		13.4		0.3			0.1		
HCM LOS	D		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1063	-	-	234	436	1094	-	-
HCM Lane V/C Ratio	0.016	-	-	0.437	0.022	0.008	-	-
HCM Control Delay (s)	8.4	-	-	31.8	13.4	8.3	0	-
HCM Lane LOS	A	-	-	D	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.1	0.1	0	-	-

HCM 6th TWSC  
2: Beach Loop Road & Seabird Lane SW

08/30/2023

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	45	25	30	25	25	15
Future Vol, veh/h	45	25	30	25	25	15
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	30	36	30	30	18

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	129	51	0	0	66
Stage 1	51	-	-	-	-
Stage 2	78	-	-	-	-
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	865	1017	-	-	1536
Stage 1	971	-	-	-	-
Stage 2	945	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	848	1017	-	-	1536
Mov Cap-2 Maneuver	848	-	-	-	-
Stage 1	971	-	-	-	-
Stage 2	926	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	4.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	902	1536
HCM Lane V/C Ratio	-	-	0.094	0.02
HCM Control Delay (s)	-	-	9.4	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

HCM 6th TWSC  
1: Highway 101 & Seabird Drive

08/30/2023

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	98	1	10	1	1	17	19	455	1	8	403	99
Future Vol, veh/h	98	1	10	1	1	17	19	455	1	8	403	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	107	1	11	1	1	18	21	495	1	9	438	108

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1057	1048	492	1054	1102	496	546	0	0	496	0	0
Stage 1	510	510	-	538	538	-	-	-	-	-	-	-
Stage 2	547	538	-	516	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	203	228	577	204	212	574	1023	-	-	1068	-	-
Stage 1	546	538	-	527	522	-	-	-	-	-	-	-
Stage 2	521	522	-	542	508	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	191	220	577	194	205	574	1023	-	-	1068	-	-
Mov Cap-2 Maneuver	191	220	-	194	205	-	-	-	-	-	-	-
Stage 1	535	532	-	516	511	-	-	-	-	-	-	-
Stage 2	493	511	-	524	502	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	44.6		12.9		0.3			0.1		
HCM LOS	E		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1023	-	-	204	479	1068	-	-
HCM Lane V/C Ratio	0.02	-	-	0.581	0.043	0.008	-	-
HCM Control Delay (s)	8.6	-	-	44.6	12.9	8.4	0	-
HCM Lane LOS	A	-	-	E	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	0.1	0	-	-

HCM 6th TWSC  
2: Beach Loop Road & Seabird Lane SW

08/30/2023

Intersection						
Int Delay, s/veh	5.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	28	32	27	29	16
Future Vol, veh/h	48	28	32	27	29	16
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	34	39	33	35	19

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	145	56	0	0	72
Stage 1	56	-	-	-	-
Stage 2	89	-	-	-	-
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	847	1011	-	-	1528
Stage 1	967	-	-	-	-
Stage 2	934	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	828	1011	-	-	1528
Mov Cap-2 Maneuver	828	-	-	-	-
Stage 1	967	-	-	-	-
Stage 2	913	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	4.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	887	1528
HCM Lane V/C Ratio	-	-	0.103	0.023
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1



HCM 6th TWSC  
1: Highway 101 & Seabird Drive

08/30/2023

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	118	1	14	1	1	7	26	455	1	8	403	140
Future Vol, veh/h	118	1	14	1	1	7	26	455	1	8	403	140
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	1	15	1	1	8	28	495	1	9	438	152

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1088	1084	514	1092	1160	496	590	0	0	496	0	0
Stage 1	532	532	-	552	552	-	-	-	-	-	-	-
Stage 2	556	552	-	540	608	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	193	217	560	192	195	574	985	-	-	1068	-	-
Stage 1	531	526	-	518	515	-	-	-	-	-	-	-
Stage 2	515	515	-	526	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	184	208	560	180	187	574	985	-	-	1068	-	-
Mov Cap-2 Maneuver	184	208	-	180	187	-	-	-	-	-	-	-
Stage 1	516	519	-	503	501	-	-	-	-	-	-	-
Stage 2	493	501	-	504	480	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	60.8		14.5		0.5			0.1		
HCM LOS	F		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	985	-	-	198	390	1068	-	-
HCM Lane V/C Ratio	0.029	-	-	0.73	0.025	0.008	-	-
HCM Control Delay (s)	8.8	-	-	60.8	14.5	8.4	0	-
HCM Lane LOS	A	-	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.7	0.1	0	-	-

HCM 6th TWSC  
 2: Beach Loop Road & Seabird Lane SW

08/30/2023

Intersection						
Int Delay, s/veh	6.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	76	32	27	52	16
Future Vol, veh/h	48	76	32	27	52	16
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	92	39	33	63	19

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	201	56	0	0	72
Stage 1	56	-	-	-	-
Stage 2	145	-	-	-	-
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	788	1011	-	-	1528
Stage 1	967	-	-	-	-
Stage 2	882	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	755	1011	-	-	1528
Mov Cap-2 Maneuver	755	-	-	-	-
Stage 1	967	-	-	-	-
Stage 2	845	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	5.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1528
HCM Lane V/C Ratio	-	-	0.167	0.041
HCM Control Delay (s)	-	-	9.8	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

HCM 6th TWSC  
3: Beach Loop Road & Site Access

08/30/2023

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	26	44	59	49	23	13
Future Vol, veh/h	26	44	59	49	23	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	53	71	59	28	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	130	0	-	0	216
Stage 1	-	-	-	-	101
Stage 2	-	-	-	-	115
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1455	-	-	-	772
Stage 1	-	-	-	-	923
Stage 2	-	-	-	-	910
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1455	-	-	-	755
Mov Cap-2 Maneuver	-	-	-	-	755
Stage 1	-	-	-	-	903
Stage 2	-	-	-	-	910

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1455	-	-	-	817
HCM Lane V/C Ratio	0.022	-	-	-	0.053
HCM Control Delay (s)	7.5	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2