Appendix A

NOP and Comment Letters

Nick Bobroff

From: Willy Dydo <willydydo@hotmail.com>
Sent: Monday, November 30, 2020 4:52 PM
To: Nick Bobroff
Subject: Rincon Bike Path

EXTERNAL EMAIL

Hi Nick,

I am writing In regards to the planned bike path near Bates beach/ Rincon. This site for Paragliding and Hang Gliding is the only coastal soaring site in Carpinteria and the best location for consistent soaring conditions between San Diego and San Francisco. This Cliff site is cherished by residents, tourists, and pilots alike. It deserves to be preserved.

Thank you,

Willy Dydo

Nick Bobroff

From: andrewcraig@cox.net
Sent: Monday, November 30, 2020 7:54 AM
To: Nick Bobroff
Subject: Save BATES/RINCON paragliding launch

****EXTERNAL EMAIL****

Nick,

I am horrified to hear that the Bates/Rincon paragliding launch is in jeopardy.

I travel to Carpinteria at least once each year to fly this incredibly rare site. I often stay in Carpinteria for up to 10 days at a time to get my annual "paragliding fix." I've been doing this for the past 20 years.

I have reviewed the proposals for a bike/walking trail and strongly urge you to consider locating the path along the highway. There is plenty of opportunity for walkers/bikers to experience the beauty of the ocean view, even with this half-mile "detour."

If this site is ruined by this proposed path, I will simply drive through Carpinteria and make my way to Seaside/Monterey to fly there, spending my roughly $2500 vacation money elsewhere.

Such sites are rare and once destroyed, they can never be brought back. Please think long-term, from both an outdoorsman's perspective and an economic perspective.

Thank you.

Andrew Craig, Fredericksburg VA 540-244-0744

- What Bates means to you and why the ridge should be preserved
- Why the EIR needs to assess impacts to wind and recreation

- Why the City should consider alternat ***Put the proposed trail along the highway and save money while preserving our precious paragliding site. I travel there at least once a year to paraglide and spend a lot of money in Carpinteria. If the site is gone, so am I. Andrew Craig, Virginia BATES RINCON BIKE PATH, 11/17/2020***

- ives like the North side of Bates.

Nick Bobroff

From: Angela Findley <angelafindley92@gmail.com>
Sent: Monday, November 30, 2020 1:05 PM
To: Nick Bobroff
Subject: Rincon Bike Path

****EXTERNAL EMAIL****

Hey Nick,

Just emailing to reiterate why I don't support the proposed new bike path at Rincon.

1. It's going to ruin flying at a historical, frequently used, well loved free flight location
2. It's going to feed cyclists into a super unsafe parking lot with a steep grade at the end
3. It would be way more affordable and have less of an environmental impact if the path was just built along the highway.

Thanks,

Angela

Nick Bobroff

From: Andrew Labedz <realtimedigimob@gmail.com>
Sent: Monday, November 30, 2020 4:48 PM
To: Nick Bobroff
Subject: Bates paragliding

EXTERNAL EMAIL

Nick Bobroff,

HI Nick, I'm a visiting pilot that purposely came to the Santa Barbara area to fly paragliders. In doing so I found an awesome little town called Carpinteria. Has it not been for flying I would have never stumbled upon it. Long story short, please consider revamping the bike path plans.

Thank you,
Andrew from OhIo

Sent from my iPhone

Nick Bobroff

From: Aaron LaPlante <aaron@cusd.net>
Sent: Sunday, November 01, 2020 7:17 PM
To: Nick Bobroff
Subject: Re: FW: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

When are you going to take a paragliding lesson Nick? All this paper pushing stuff has to be making you insane. Let's go fly!

Aaron

On Fri, Oct 30, 2020 at 11:22 AM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.
>
> The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.
>
> The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
>
> https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
>
> A copy of the NOP and project description is also attached to this email.
>
> Should you have any questions about the proposed project or this NOP, please feel free to contact me.
>
> Thank you,
>
> Nick Bobroff, Principal Planner

Community Development Department

(805) 755- 4407

Nick Bobroff

From: Aaron LaPlante <aaron@cusd.net>
Sent: Friday, November 06, 2020 2:20 PM
To: Nick Bobroff
Subject: Rincon Trail

****EXTERNAL EMAIL****

Hi Nick, hope your leisure life is more pleasant than dealing with this battle.

The EIR sales pitch by design paints a pretty picture but leaves out the fact that paragliding and hang gliding will be lost with this project at this site.

Please keep in mind that paragliders and hang gliders are a sanctioned aircraft and activity by the Federal Aviation Administration (FAA). We are breaking no rules by flying in this airspace. There are no FAA regulations about flying near trains, railroad tracks, bicycles, freeways or transportation corridors. Even the Rincon Park rule of no landing in the park would not hold up in a court of law as we are legally allowed to land there according to the FAA rules.

It does not matter if we launch from la cumbre peak, the beach, the bluff in the park, the privately owned bluff, off the top of my friends building, rincon mountain, etc, that it is 100% legal to fly in that airspace and only the FAA can decide otherwise.

We look forward to a complete impact report. Thanks for considering alternatives. Call if you want to chat.

Aaron LaPlante
805-886-1435
--

Nick Bobroff

From: Andrew Quine <drewski808@gmail.com>
Sent: Monday, November 30, 2020 11:59 AM
To: Nick Bobroff
Subject: Paragliding at Bates

EXTERNAL EMAIL

Hi Nick,

Biking is just as important to me and many others as paragliding. The has been a free soaring site for a long time. We as a community are asking not that you stop the bike trail but that you find a way to keep the flying site and construct the bike path. There is a way, but once the flying site is destroyed it will never be the same.

Thank you for your time and consideration,

Drew Quine

Sent from my iPhone

Nick Bobroff

From: Bill Fosdick <fosdick@mcn.org>
Sent: Monday, November 16, 2020 3:11 PM
To: Nick Bobroff
Subject: Bates

Hello,

I have been driving to the Santa Barbara area for paragliding for at least two weeks a year for the past 10 years. I stay at the hotels and eat at the restaurants. I love flying the area and the Bates soaring site is one of my favorites. The wind hits the hillside and makes a perfect flying site….taking advantage of frequent wind directions…making it a perfect alternative when other sites are not flyable.

Flying is a lot like surfing….you need very special terrain conditions to make it work….and Bates works.

I also ride a bicycle a lot. I love riding. However there are thousands of miles of great cycling routes and only a select few flying sites.

Why destroy a very special site in order to make a path for bicycles? Can't we be creative and design something that works for both?

I'm truly surprised at a bicyclist wanting to destroy a flying site.

I'm wondering if there is someone else ….someone who stands to make a lot of money moving dirt around who is pushing this….it can't be coming from cyclists.

Please consider some alternative to destroying Bates for flying.

Thankyou for listening.

William B Fosdick
707 742 9296

Nick Bobroff

From: Becky Higbee <becky.higbee@gmail.com>
Sent: Wednesday, November 25, 2020 3:30 PM
To: Nick Bobroff
Subject: Bates bike path

****EXTERNAL EMAIL****

Good afternoon,

The ridge above Rincon Beach is a world class short ridge flight for paragliders. The current bike path plan would destroy the launch area, making flights there no longer possible. My spouse and I traveled from Colorado to be able to fly Bates and other sites in the region. I humbly request that you take the interests of paragliders into consideration with these plans. It would be heartbreaking to hear Bates was destroyed.

Thank you,
Becky Higbee

November 23, 2020

City of Carpinteria

5775 Carpinteria Ave.

Carpinteria, Ca. 93013

Attn: Nick Bobroff

Re: Focused EIR for the Rincon Trail project

My name is Brian Nash and I reside at 6508 Camino Carreta. I am writing to you today with the purpose of giving my support to the Rincon trail project. As a 40-year resident of the city I have participated in numerous local projects including the community pool, Bluffs 1&3 and the proposed skate park. I believe that this project of connecting the city with the Rincon park via this bike path will be accretive to the residents and to the visitors of the area.

The current situation with bicycle riders using the highway or Bates road is simply dangerous. I drive to Rincon park daily via Bates road and observe the riders using good manners but the lack of shoulder gives them and motorists little room for error.

The opponents to this project are primarily from the Paraglider community. They use the parcel owned by King Ventures as their launching point. They apparently feel that their interests outweigh the interests of the rest of the community. I understand that they believe that this project will have detrimental effects on their ability to sail. The current geography that enables them to get the lift they require is not natural but rather man made from the time the original railroad line was bluff side. Since that time the railroad was moved, the current highway built and the old highway abandoned.

I want to be clear that I have no vendetta against the gliding community, however I do have issues with the logic that they are using. They are using private property to launch from and when the owner comes up with a plan to develop this parcel they will be forced to launch from an alternative site. They claim that this geography is natural and it clearly is not. They are looking at this project from their lens as it pertains to now and not looking forward to the future.

The legacy projects that have been accomplished in this community are amazing and this project of connecting the city to the Rincon park would be icing on the cake.

Respectfully submitted,

Brian Nash

Nick Bobroff

From: Carly V. Barham <BarhamC@sbcapcd.org>
Sent: Thursday, November 19, 2020 3:04 PM
To: Nick Bobroff
Subject: Carp Rincon Trail Project Question

****EXTERNAL EMAIL****

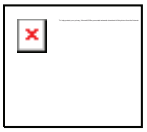
Hi Nick,

We are in the process of preparing comments on the NOP of an EIR for the Carp Rincon Multi-Use Trail Project. I was hoping to get a little more information on proposed equipment and duration of its use so that we can determine potential regulatory requirements for this project.

Is it possible to find out the anticipated timeline for the bridge construction/installation portion of the project? The total project duration is two years, but unclear how long the bridge portion may take. I ask because I'd like to determine how long the two cranes could be used/located onsite for this project.

Also, if it's possible to get more detail on the cranes that might be used, that would be helpful, but I understand if those specifics may not be nailed down yet.

Thanks,
Carly



Carly Barham
Planning Division
Air Pollution Control District
Santa Barbara County

BarhamC@sbcapcd.org
805.961.8890
Available Tues, Thurs, Fri

ourair.org @OurAirSBC

Sign Up for Air Alerts

Nick Bobroff

From: Chris Clontz <chrisgoglide@gmail.com>
Sent: Monday, November 30, 2020 5:20 PM
To: Nick Bobroff
Subject: Rincon trail concerns

****EXTERNAL EMAIL****

To, **City of Carpinteria Community Development Department**

I have been a Santa Barbara resident for the past 17 years, as well as the sole proprietor of my own business, and a career staff member of the UC Santa Barbara Department of Recreation. I am also an outdoor recreation enthusiast who frequents the many hiking trails and bike paths of South Santa Barbara County, and Ventura County. You may remember me from my original message to you back in December of 2019, regarding my concerns about the proposed Rincon Multi-Use Trail project.

First and foremost, although I strongly agree that a multi-use trail should be constructed to provide a safe, economical, and easily-maintainable path for cyclists and pedestrians, I strongly disagree with the currently-proposed plan by the Community Development Department. I believe that the currently-proposed plan aimlessly focuses more on aesthetics than practicality, which is a detriment to the land proposed to be used for the project's construction, and furthermore generates wasteful spending of financial resources, both now and well into the future. Please view my specific points of concern as follows:

- **Unstable seaside slope proposed as a site for the path:** Science has proven that sea levels are rising, storm activity has increased, and both are contributing to the erosion of coastal sea walls, beaches, and cliffs. I believe it makes neither practical, nor economical sense to spend the time and financial resources building and maintaining a multi-use trail next to the sea that will almost certainly be eroded beyond repair within the next decade or two. A more cost-efficient, reliable multi-use path would best be routed more inland, along the highway, and away from the sea.
- **Unsafe routing of path through vehicle parking lot:** I believe it is the Community Development Department's responsibility to be fully accountable for the safety of everyone who would potentially use the proposed path. Therefore, it was disturbing to hear the lack of accountability from the planning committee earlier this year, regarding the traffic and obstacles within the parking lot through which the proposed multi-use path would be routed. A more practical way to address this safety concern is to remove the traffic and obstacles completely from this plan by developing a dedicated path for pedestrians and cyclists, which physically prevents vehicle traffic and most obstacles from impeding the path.

Again, I strongly agree that a multi-use trail should be constructed, but I strongly disagree with the current plan. I implore you to please listen to your local community, and work with everyone to develop a safer, longer-lasting, and more cost-effective product that addresses all concerns. In doing so, I believe that the revised finished product will be the subject of efficiency, appreciation, and comradery for the people of Carpinteria, for many generations to come.

--

Chris Clontz

Owner/Proprietor,
Isla Vista Adventure Services
Santa Barbara, CA USA

Nick Bobroff

From: Caleb Phillips <cphillips@smallwhitecube.com>
Sent: Wednesday, November 25, 2020 3:25 PM
To: Nick Bobroff
Subject: Save Bates Paragliding

Hi Nick,

I live in Colorado but visit Santa Barbara to paraglide. It's where I learned, and is one of the best places for the sport in the country. The Bates beach ridge is a world class location for ridge soaring. A bike path is a great addition to the area and would be enjoyed by many, but there certainly must be a way to add a bike path and save this renowned free flying site? Appreciate your consideration and thanks for recieving input from the community.

Cheers,

Caleb Phillips

Nick Bobroff

From: Ristig, Ciara <cristig@co.santa-barbara.ca.us>
Sent: Wednesday, November 04, 2020 10:38 AM
To: Nick Bobroff
Cc: Harris, Tess
Subject: Rincon Trail Site Visit

Hi Nick,

Would it possible for Tess and I to come down for a site visit sometime soon? We don't want to take up too much of your time, but it would great if you could show us the project site and help us get our bearings.

We're available this Friday the 6th in the afternoon or the 13th.
The 9th or 16th are also options.

Thanks in advance!

Thanks,
Ciara

Ciara Ristig
Planner
Planning & Development
Development Review
123 E. Anapamu St.
Santa Barbara, CA 93101
805-568-2077
cristig@countyofsb.org
http://www.countyofsb.org/plndev/home.sbc

In light of the measures recommended by the CDC and State Government, Planning & Development has enacted a "work remotely" program. We are committed to advancing projects and will stay in regular communication. While we regularly check voicemail, it is best to contact us via email. Thank you.

Nick Bobroff, City of Carpinteria
5775 Carpinteria Avenue, Carpinteria, CA 93013
11-23-2020

Dear Mr. Bobroff,

Citizens for the Carpinteria Bluffs supports the development of the Carpinteria Rincon Multi-Use Trail project. It will provide a much needed link from the Carpinteria and Rincon Bluffs to the coastal walking/bike path that now runs from Rincon south to Ventura. However, we do have a concern that the current plan offers no on-site parking, unlike the original plan's inclusion of a small parking lot planned near the intersection of Carpinteria Ave and Highway 150. We anticipate that some bikers will choose to park near that intersection, whether or not there is a parking lot. With the acquisition and improvements at the Rincon Bluffs preserve, it is important to note that the current parking lot proposed is small and intended for preserve use. Perhaps, parking in that area by bikers and hikers may never become a problem, but we suggest that the City include a backup plan to accommodate future parking should that need arise.

One possible remedy in lieu of an additional parking lot might be to offer some on-street parking slots near that intersection and making them slightly longer than usually delineated to safely accommodate bikers as they unload their bikes. In addition, it would be helpful for City planners to make a determination of how many of these larger on-street parking spaces might be possible. A sign at the trailhead encouraging bikers to park at the larger Viola Fields lot also might be helpful.

We look forward to the development and completion of this critical link in our coastal trail system and support the City in its work on this project.

Sincerely,

Ted Rhodes

President, Citizens for the Carpinteria Bluffs

Nick Bobroff

From: Dylan Laughlin <dylanlaughlin@gmail.com>
Sent: Monday, November 16, 2020 5:10 PM
To: Nick Bobroff
Subject: Rincon bike path

Hi Nick,

To keep it short, while cycling is popular, it can be done nearly anywhere. In a niche sport like paragliding, we have to stand up for our flyable areas since they are shrinking. We are trying to grow our sport in the Santa Barbara area, and nationwide. There is plenty of cycling that can be done here at any time, but flying requires specific geography. To tear down a great, consistent feature like the Rincon bluff would be a shame. Cyclists currently have access to the bike path as is. Wouldn't a barrier on the current highway path be much more cost effective than terraforming a large hill for 1/4 mile of path? I believe alternative plans are definitely worth exploring in this case.

Dylan Laughlin
--

Dylan Laughlin

Nick Bobroff

From: desmond177@cox.net
Sent: Sunday, November 15, 2020 8:37 AM
To: Nick Bobroff
Cc: ottisgillespie@gmail.com
Subject: Bates paragliding and the bike path extension project

EXTERNAL EMAIL

Hello Nick, I am a local resident and Santa Barbara County tax payer, and I am contacting you out of concern for the current bike path extension plan as presently constituted. We all know how much the tourist industry fiscally benefits Santa Barbara county. The beaches of Santa Barbara county, particularly Carpinteria State Beach, are a prime resource for Santa Barbara county's tourist industry, and I am sure we would all agree that such a resource should be protected and preserved because of how much it benefits Santa Barbara county.

Likewise the Carpinteria bluffs in the area of Bates Road 101 exit draws paragliding visitors from all over the country and the world because of its unique configuration to the prevailing wind. The bulldozing of the little Diamond Head bluff at the Bates Rd area would destroy a significant part of the topography that allows regular paragliding in that area and as such would have a significant fiscal impact on the Santa Barbara-Carpinteria tourist industry.

What I and other local free-flight pilots are proposing is that instead of bulldozing the little Diamond Head bluff and destroying a precious local resource, you simply relocate the bike path to the mountain side of the bluff and allow paragliding and biking to co-exist in harmony where neither tourist resource is irreparably harmed. I would note that there is a current dirt bike path at the base of the bluff that could be another alternative to the bulldozing of a precious local resource. Simply put, why destroy one invaluable local resource when you can have both, all to the fiscal benefit of Santa Barbara county.

Thanking you in advance for considering this in your bike path plans, Desmond McIntosh

Sent from my iPad

Nick Bobroff

From: Gmail <dmusashe@gmail.com>
Sent: Monday, November 30, 2020 4:57 PM
To: Nick Bobroff
Subject: Comments on the Rincon bike path project

EXTERNAL EMAIL

Hi Nick,
I am a local resident and paragliding pilot, and I am the VP of Paragliding for the Santa Barbara Soaring Association.

I've made multiple public comments in the various town halls that have been open to public about the Rincon bike path project.

I won't rehash everything I have said about the project past, because my comments are a matter of public record, but I just want to reiterate how important this coastal bluff is to free flight recreation in Carpinteria (and the entire region, really). Removing as much soil as has been proposed would utterly destroy our flying site around the bluff, and would negatively affect soaring birds as well that rely on that bluff to travel along the coast.

The environmental impact review really must include changes to airflow of the project and its impacts on recreation and wildlife. This site is just too important to screw up, and I speak for the entire paragliding and hang gliding community when I say that I hope we can find an alternative solution to the current proposal that will still allow a path for cyclists and pedestrians while still preserving this historic soaring site.

Thanks in advance for your consideration.

Sincerely,
Derek Musashe

Nick Bobroff

From: David Patterson <davepatterson@ucsb.edu>
Sent: Friday, November 13, 2020 10:58 AM
To: Nick Bobroff
Subject: Support for maintaining the flyability of Bates Bluff

Nick -
My name is Dave Patterson; I am a professor at UCSB and a resident of Santa Barbara.

I'm writing to add my voice to the concerns regarding the future of flying at Bates bluff, as a consequence of the proposed Rincon Trail. I share the concerns of many other local pilots who believe that the proposed work will radically lessen the flyability of the site, which unique in our area and has been used continuously for over 40. I moved to Santa Barbara county a few years ago for work, but only fell in love with the area last summer when I learned to fly here, and flying at Bates Bluff has been a huge part of that. The site is truly a gem - a unique place to appreciate the unmatched peace that comes from silently floating above the ocean in perfect air.

I further believe that there are ways to both provide important bicycle access and maintain the site largely in its current form. I expect you are already familiar with those proposals, but if not they are described in the video at https://youtu.be/SVIdEfWHMpE, made by a local pilot. If nothing else, I strongly disagree with the current Carpinteria Rincon Trail report's conclusion that the proposed project will have no impact on recreation at the site - to the contrary, it will dramatically reduce the flyability of the site. Alteration to the airflow is unambiguously a physical change to the site, just as increased noise or unpleasant smell would be. Please let me know if there's anything I can do to maintain the site in a flyable form.

Thank you for taking the time to consider this matter which is very important to so many of us.

--Dave Patterson

Nick Bobroff

From: Ed S <drawdeylf@gmail.com>
Sent: Monday, November 30, 2020 5:04 PM
To: Nick Bobroff
Subject: Bates Beach

Nick.

Again the EIR has to include the Monarch butterfly habitat in the Eucalyptus trees. The wind will highly effect their WINTER Grounds..
The coastal migratory birds the fly up n down the coast twice a week. That use the ridgeline for lift and staging to fly around the next corner. With "X" amount of lift obtained at the cliff face. That will no longer be obtainable.

The banana farm thats micro climate will no longer be in a Perfect wind shadow. That will no longer grow!

The Coriolis effect the wind will AUTOMATICALLY Happen through the MILLION Dollar homes. Also a Butterfly habitat..

The fact is. Endangered species like the Monarch is a Priority.
The same with the growth on the front of the hill. That us being destroyed.

Those plants cannot be TOUCHED OR TRANSPLANTED under law!!!!

Even California condors come to the face every winter. It is the end of their feeding flight line. That will not allow them to soar and return to La Concheta an back to the Fillmore habitat..

These endangered spices need to be involved. As does the banana farm etc.

Mr Ed S

Nick Bobroff

From: efthacher@yahoo.com
Sent: Wednesday, November 04, 2020 2:02 PM
To: Nick Bobroff
Subject: Carp/Rincon multi use trail

To Whom it May Concern;

Just wanted to let you know that I think this trail connecting Rincon to Carpinteria and beyond is a splendid idea! Some of us in the family look forward to biking into Carp from our beach house rather than using a car and the freeway.
We hope that the public respects the trail and that maintenance includes adequate trash receptacles and monitoring for graffiti, etc.
We hope that the building goes without a hitch,

Emily Ayala
The Thacher Family Beach House
132 Rincon Pt. Rd,
Rincon Point
Carpinteria

Nick Bobroff

From: Mr. E J <gnidilg@gmail.com>
Sent: Monday, November 16, 2020 7:10 PM
To: Nick Bobroff
Subject: Re: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

Good Morning.

In the preceeding meetings there was blatant disregards for endangered species whether animal or plants.

The Monarch butterflies the WINTER in the Eucalyptus trees behind the proposed path. That will NO LONGER allow safe harboring in the trees with such high wind blowing thru them! Caused by changing the slope of the hill.
The FEDERAL and STATE laws ignored of Migratory spices.
Birds. Butterflies. Raptors. CONDOR'S.
That all frequent the area. That use the ridge lift to continue there journey.
The Endangered plant life that cannot be LEGALLY cut, moved, or touched.
All protected by federal law, CA Costal commission etc.
The air flow change alone, will put enormous amount of wind through the MILLION DOLLAR homes. On the point.
The 1 an only place bananas grow along the coast will be greatly Affected!!! Potentially destroying the crop an farm. That grow in a perfect wind shadow. Caused by the bluff. That is being proposed to change!!!
The path is NOT ADA Compliant!
It cannot be done with the Enormuse slope thru the Parking lot!
The original path has the SAME SLOPE issue.
It will never be connected with a 100 million dollar bridge and rework of the WHOLE path!

These issues are beyond ignorent.

I know the little white book of rules.
Dealt with million dollar fines building 2 new hospitals in Ventura! Approx 18million in fines. For the 6million you are fighting to get!

Perhaps one needs to look at the bigger picture!
Do we as citizens want to do LEGAL Battle with all the above societies. An protected under federal law plants an wild life.

I hope the E.I.R. Has real people involving these issues being TRULY Addressed. Not swept aside with blatant disregard.

Although I cannot attend the Zoom meeting as I will be with patients that day/time.
I hope this is READ and brought to All peoples attn.

Edword Skow

On Thu, Oct 29, 2020, 7:43 PM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.
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> The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.
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> The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
>
> https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
>
> A copy of the NOP and project description is also attached to this email.
>
> Should you have any questions about the proposed project or this NOP, please feel free to contact me.
>
> Thank you,
>
> Nick Bobroff, Principal Planner
>
> Community Development Department
>
> (805) 755- 4407

Nick Bobroff

From: Elizabeth Zernik <Elizabeth.Zernik@bsigroup.com>
Sent: Monday, November 02, 2020 6:52 PM
To: Nick Bobroff
Subject: Stormwater for Rincon trail project

****EXTERNAL EMAIL****

CAUTION: This email originated from outside the City of Carpinteria. DO NOT OPEN attachments or CLICK on links unless you are sure they are safe. Remember, reputable vendors, banks, etc. will not ask you to disclose passwords or other sensitive information.

Hi Nick,

I'm a local Stormwater professional with a passion for protecting the ocean so please keep me in mind when you will be looking for QSD and/or QSP services on the Rincon Trail project.

I'd love to help make a difference in our own back yard!

I've worked previously on a wide range of construction projects including remote mountaintops, in sensitive habitats, public spaces, and with bridge installations.

Thank you and see you on the Zoom soon!

Elizabeth Zernik, QSD/QSP, QISP
BSI
Please excuse any typos

Thank you for giving me the opportunity to speak. My name is George Jimenez.

I've lived in Carpinteria for over 60 years. As a member of the Santa Barbara Soaring Association and long- time Carpinteria resident I strongly object to Rincon Trail Project as proposed.

Listed below are my objections to the current Rincon Trail plan and suggestions to implement the Rincon Trail so all can enjoy [redacted] including para and hang gliders.

1. The City of Carpinteria and the Coastal Commission should look at alternative routes for the proposed Rincon Trail Project. Building a path along the freeway corridor is one possible alternative solution.

2. Following the existing bike path route to Muscle Shoals beside the 101 freeway is less destructive to nature and the local topography. It makes sense to construct the Rincon Trail for cyclists and hikers and preserve the Paraglider and Hang-glides flying site. It is a less costly alternative.

3. The alignment of the wind and the cliff at the Rincon site provides an ideal flying site. It's the only place between San Diego and San Francisco with a lift so paragliders can fly long distance from this spot.

4. As proposed, The Rincon Trail Project takes the airflow and changes the wind current, rendering the Paragliders Carpinteria flying ridge site destroyed. Our sport recreation opportunity would be taken away. I strongly object to losing our flying site

5. Cyclists, hikers and Paragliders can co-exist. There is no reason for the Rincon Trail Project to take our wind. We can all share the same space and enjoy our sport.

6. Thousands of Paragliders have flown from the Cliffs above the proposed Rincon Trail Project for over 50 years. To abolish the recreational activity and sport of Paragliding completely disregards a segment of the population. The Santa Barbara Soaring Association has over 500 members. Many live in or near Carpinteria and fly along the cliffs above the Rincon frequently. Destroying Paragliders flying site does not provide recreational opportunities for all.

7. As proposed, the Rincon Trail endpoint dangerously places pedestrians and cyclists onto an overloaded, ADA non-compliant parking lot. The project needs to be re-designed for pedestrian and cyclist safety.

8. Please preserve the Paragliders flying site in perpetuity. Preserve the integrity of the landscape, and lesson the amount of dirt extracted from the Rincon Cliffs.

9. This project destroys the natural contour of these cliffs and displaces nature. Carpinteria needs to build a Rincon Trail that includes hiking, biking and Paragliding and doesn't disturb nature especially Environmentally Sensitive Habitat Areas. (ESHA) Please, preserve the environment and habitat area for wildlife.

In closing, Carpinteria City needs to work with the Paragliding Community to find a win-win solution so all can enjoy the Rincon Trail Project.

We've provided the city with a video outlining our need to retain the flying site and how the currently proposed Rincon Trail project would destroy our flying site.

I would like to Thank you sincerely for hearing the voices of the Paragliding community.

George Jimenez

November 2, 2020

Contact Information:

Address:

George Jimenez

6379 Lagunitas Court

Carpinteria, CA 93013

Phone: 805.290.5171

Nick Bobroff

From: Jamie Bishop <jamieb805@gmail.com>
Sent: Monday, November 16, 2020 1:07 PM
To: Nick Bobroff
Cc: Jeff Longcor
Subject: Rincon Trail Bike Path

Dear Nick,

I have concerns about the Rincon Trail Bike Path. It will ruin flying at Bates, and haphazardly and only temporarily link the existing bike paths.

Alternative routes and solutions exist that would satisfy all recreational users. The current design expands access to cyclists at the exclusion of free flyers. The construction of this 0.2 mile section does not need to result in the utter deconstruction of the only soaring site in Carpinteria.

This Project needs to be reassessed from the perspective of the very groups it's trying to help.The current design is focused on providing a “blue ocean view” rather than a safe, useful, long-lasting solution.

- The current design will not last long; a railroad and highway have already failed, and we may reasonably assume that any additional projects along this eroding seawall will face a similar fate.
- The current design is not safe; linking the bike paths, but then dumping cyclists into a congested and incredibly steep Rincon Beach parking lot belies the planning and human resources that are going into this project.

I'm also in support of Planners reassessing the faulty logic that underpins the plan to take 156,000 tons of dirt away, to make the remaining dirt stay. Free flight does not require alteration to the existing natural environment, and the scope of the EIR ought to address ways to avoid massive earthwork at this site.

Thank you for your time and consideration.

Sincerely,
Jamie Bishop, Santa Barbara Soaring Association member

Nick Bobroff

From: Jamie Bishop <jamieb805@gmail.com>
Sent: Tuesday, November 17, 2020 5:20 PM
To: Nick Bobroff
Cc: Jeff Longcor
Subject: comments on Rincon Train Project scoping

Dear Nick,

I'm forwarding on my comments from this evening's scoping meeting.
Consider the history of recreation other than cycling along the bluffs. The proposed grading would destroy the site for free flight.

Consider cyclist safety. The current design dumps southbound cyclists down a steep grade, into a heavily used parking lot. The majority of cyclists and particularly those commuting by bike would gladly forgo an ocean view for 2 tenths of a mile for a safer ride.

Consider the points at which the new bike path links up with the existing bike paths. A parking lot ought not to be the top location in which to do so.

Consider the natural forces that act on the coastline. The coastline is subject to erosion, and other public projects have washed away. Despite that history, the planners would remove 94,000 tons of dirt and add 3 more drainage vias.

Consider responsible stewardship of natural resources. The proposed route seems entirely inconsistent with Carpinteria's track record. The proposed route is illogical, needlessly expensive, destructive to the natural environment as well as free flight - and it would be ugly.

Consider whether anyone stands to gain, i.e., from a contract, for the removal of 94,000 tons of earth, versus the vastly more economical, and logical solution of extending the bike path along the wide shoulder of the 101 or somewhere along the north side of the bluff. Consider potential conflicts of interest.

Thank you,
Jamie Bishop, SBSA member

Nick Bobroff

From: Jon Blake <sbkiter@gmail.com>
Sent: Monday, November 30, 2020 10:27 AM
To: Nick Bobroff
Subject: Bates bike path project

Hi Nick,

I wanted to voice my concerns around the current plans for the bike path that passes through the Bates area.

As a member of the Santa Barbara Soaring Association (SBSA) I am in full support of the much needed bike path, however, I oppose the current project design because it displaces 156,000 tons of soil from the natural environment and destroys the unique geographic features that have made Bates a treasured recreational facility and world-renowned soaring site for the last 40 years. We are asking the City to redesign this 0.2 mile bike path so that it is inclusive of all users and preserves the flying potential of the area.

1. Paragliding and Hang Gliding are official sports that have been fully established at Bates for over 40 years. Bates uniquely combines Southwest facing terrain with prevailing channel winds, allowing airflow to hit the ridge like the swells hit Rincon Point. It is the only coastal soaring site in Carpinteria and the best location for consistent soaring conditions between San Diego and San Francisco. This recreational airpark is cherished by residents, tourists, and pilots alike. It deserves preservation with the City.

2. Bates is a coastal gem that allows small groups like ours to use the same natural resources for recreation as the local bikers, surfers, beachgoers, and joggers. The current design runs counter to this sentiment: the bike path expands access to one group at the exclusion of another. While bikers and joggers have many miles of recreational paths to access, the construction of this 0.2 mile section will drastically impact wind flow, ending free flight for many members of the soaring community and ruining the only soaring site in Carpinteria.

3. The scope of the EIR should address ways to avoid massive earthwork at this site. The Certified Santa Barbara County Coastal Land Use Plan adopted in 1982 states "recreational uses on oceanfront lands, both public and private, that do not require extensive alteration to the natural environment...shall have priority over uses requiring substantial alteration". According to this guidance, free flight at Bates should have priority over this massive earthwork Project because our recreational uses do not require alteration to the existing natural environment.

4. The current design is focused on providing a “blue ocean view” rather than a safe, useful, long-lasting solution. There is no plan for maintaining this bike path after it's constructed on a 100 year old eroding seawall, where a railroad and highway have already failed. There is also no plan for managing traffic in the already congested and incredibly steep Rincon Beach parking lot where the bike path terminates. This Project needs to be reassessed from the perspective of the very groups it's trying to help.

5. I request project alternatives that preserve the ridge at Bates. A possible option is constructing the Bike Path

on the Northside of the ridge, either along the highway or on the North side of the highway. The use of barriers along the highway shoulder, for example, would be consistent with the bike path design that exists from Rincon to Ventura, and would be more cost effective while preserving the natural environment.

Please ensure the EIR includes and investigates the current impact to our sport as well as to the flow of the wind that supports our flying.

Sincerely,
Jon Blake
SBSA Board of Directors, Secretary

Nick Bobroff

From: John Callender <callender.john@gmail.com>
Sent: Thursday, October 29, 2020 9:37 PM
To: Nick Bobroff
Subject: Re: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

Is this the same project for which the city previously argued that an MND was sufficient? Is the city now taking the position that a full EIR is required? What changed since the Planning Commission voted to approve the MND?

John

On Thu, Oct 29, 2020 at 7:44 PM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.
>
> The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.
>
> The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
>
> https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
>
> A copy of the NOP and project description is also attached to this email.
>
> Should you have any questions about the proposed project or this NOP, please feel free to contact me.
>
> Thank you,
>
> Nick Bobroff, Principal Planner
>
> Community Development Department

(805) 755- 4407

Nick Bobroff

From: Joey Juhasz-Lukomski <joey@bikeventura.org>
Sent: Thursday, October 29, 2020 9:09 PM
To: Nick Bobroff
Subject: Re: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

Hi Nick,

I remember the planning commission meeting where there were many public comments from "soarers," but the commission recommended against re-doing the EIR for the adjustments to the trail design. Did city council decide differently? Will this affect the timing of construction, and thus the ATP funding?

Thanks,

Joey

On Thu, Oct 29, 2020 at 7:43 PM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.
>
> The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.
>
> The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
>
> https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
>
> A copy of the NOP and project description is also attached to this email.
>
> Should you have any questions about the proposed project or this NOP, please feel free to contact me.
>
> Thank you,

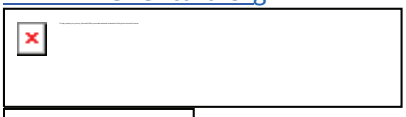
Nick Bobroff, Principal Planner

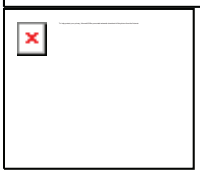
Community Development Department

(805) 755- 4407

--

Joey Juhasz Lukomski (he/him)
Executive Director - BikeVentura
Office (805)641-2665
Cell (347)563-6444
www.BikeVentura.org





Nick Bobroff

From: Jeffrey A. Longcor <jlongcor@gmail.com>
Sent: Monday, November 30, 2020 2:02 PM
To: Nick Bobroff
Subject: Public Comments - EIR Scoping
Attachments: Rincon Trail Concerns - SBSA Letter 8.21.20.pdf

Hi Nick,

I appreciate your team's work on this project. As an avid cyclist and paraglider, I am hopeful that an alternative design can be engineered that meets the needs of all recreational users. I moved from Boston to Carpinteria for the biking, but I stayed for the flying because it's what makes Carpinteria truly special and unique. I feel the scope of the EIR should cover the items below in order to preserve what I deeply value in this City, and what many others care about too.

1. CEQA considers all recreational uses to be valid if established. Paragliding and Hang Gliding are official sports that have been fully established at Bates for over 40 years. This recreational airpark is cherished by residents, tourists, and pilots alike. In the MND hearing, our qualified experts stated that the Rincon Trail Project will have a significant impact on this established recreation. Additional engineering data can be generated with modeling, similar to how structures are tested for wind loading.

2. The EIR should evaluate wind flow impacts, not just for pilots, but also for soaring birds and insects. The unique geographic features that make Bates a special flying site also make it essential for coastal animal life including pelicans, gulls, and butterflies. Animals use this corridor for transportation just like we do, connecting the Bates Ridge back to the bluffs behind, soaring winds from Carpinteria to Ventura and beyond. Appropriate environmental conservation groups should be notified and consulted.

3. CEQA considers all recreational uses to be valued equally. The current design runs counter to this criteria: the bike path expands access to one group at the exclusion of another. While bikers and joggers have access to many miles of recreational paths, the construction of this 0.2 mile section will ruin the **only** soaring site in Carpinteria, significantly impacting the recreational use of countless pilots. The EIR needs to assess alternatives that avoid this impact and equally accommodates all existing and proposed recreational users.

4. The scope of the EIR should evaluate ways to avoid massive earthwork at this site. The Certified Santa Barbara County Coastal Land Use Plan asserts that "recreational uses on oceanfront lands, both public and private, that do not require extensive alteration to the natural environment...shall have priority over uses requiring substantial alteration". According to this guidance, free flight at Bates should have priority over the current proposal to displace 104,000 CY of material because our recreational uses do not require alteration to the existing natural environment. The proposed project design is significantly damaging to the coastline, infringing on the Coastal Act, while excluding current recreational users. Alternatives that avoid cutting into Bates ridge should be considered, and if these are rejected, then substantial mitigations should be implemented through the EIR to account for the massive amount of earthwork.

5. The EIR should evaluate alternatives that better serve users. The current design is too focused on providing a “blue ocean view” rather than a safe, useful, long-lasting solution. There is no plan for maintaining this bike path after it's constructed on a 100 year old eroding seawall, where a railroad and highway have already failed. There is also no plan for managing traffic in the already congested and incredibly steep Rincon Beach parking lot where the bike path terminates. This Project needs to be reassessed from the perspective of the very groups it's trying to help.

6. The EIR cannot rely on a statement of overriding consideration because alternatives clearly exist. A possible option is constructing the Bike Path on the Northside of the ridge, either along the highway or on the North side of the highway. The use of barriers along the highway shoulder, for example, would be consistent with the bike path design that exists from Rincon to Ventura, and would be more cost effective and easier for cyclists to use, while preserving the natural environment.

I've also attached a letter from the Santa Barbara Soaring Association (SBSA) that was submitted to City Council in August as a response to the MND decision. As stated at the MND hearing, we have a number of experts willing to provide testimony or technical support, including geotechnical engineers, FAA specialists, and CEQA land use attorneys. We look forward to participating in the EIR. We're not trying to cause issues, we're trying to help.

In conclusion, I am in full support of the much needed bike path, however, I oppose the current project design because it displaces 104,000 CY of soil (approximately 156,000 tons) from the natural environment and destroys the unique geographic features that have made Bates a treasured recreational facility and world-renowned soaring site for the last 40 years. I am asking the City to redesign this 0.2 mile bike path so that it is inclusive of all users and preserves the flying potential of the area.

Please consider project alternatives that avoid cutting into Bates ridge and work to achieve no impact to free flight recreation, with corroboration from scientific evidence and expert testimony.

Thank you,
Jeff Longcor
Carpinteria Resident
Biker & Paraglider

August 21, 2020

RE: Concerns Regarding the Rincont Trail Project

To the Carpinteria City Council Members,

The Santa Barbara Soaring Association (SBSA) is submitting this official letter to members of the City Council in the interest of working together to minimize the impact of the Rincon Trail Project. We are in full support of the much needed bike path, however, the current design virtually eliminates coastal soaring in Carpinteria, destroying a treasured recreational facility.

We're sending this letter in response to the MND determination made on January 6, 2020. We initially delayed transmission in order to respect the difficulties caused by Covid-19. Our hope is to use this letter in lieu of a legal appeal to convey our concerns and demonstrate our willingness to collaborate with the City and public. We are asking the City to help us implement design changes that will preserve airflow along Bates ridge and allow continued use of this widely-celebrated flying site. Bates is visited by countless pilots from around the world. It would be tragic to lose this special place because 0.2 miles of bike path couldn't be routed elsewhere.

Paragliding and Hang Gliding are established sports that have been happening regularly at Bates for over 40 years and are fully established there. It is the only coastal soaring site in Carpinteria and the best known site with consistent soaring wind between San Diego and San Francisco. Unique geographic features combine Southwest facing terrain with prevailing channel winds, allowing airflow to hit Bates ridge like the swells hit Rincon Point. This is a recreational airpark that attracts visitors from afar and deserves preservation with the City.

Our local group of 500 members is concerned the MND was rushed to avoid our inclusion. Those attempting to participate early in the Project were told it did not concern us. While this was true for the previous designs, the current proposal will significantly impact our recreational site. We were surprised to hear of this latest iteration when it was announced in November 2019, especially because the City's website still carried the outdated Alternative Proposal.

It's difficult to understand the City's lack of outreach given that the MND includes a photograph of a paraglider flying over the project site. Our frustration with this treatment is evident in the public comments of Appendix E in the MND. To push this Project past our group, last minute changes were made to the Proposed Final MND (Exhibit 2) for the purpose of denying CEQA consideration, disqualifying free flight as a form of recreation, and bypassing the EIR. These changes included inaccurate statements that we have addressed in the attached Appendix.

We are fortunate to live in Carpinteria, a place where many land uses coexist. This is especially true at Bates. This coastal gem creates pockets of diversity where small groups like ours can use the same natural resources for recreation as the local bikers, surfers, beachgoers, and joggers. The current Project design runs counter to this sentiment: the bike path expands access to one group at the exclusion of another. While bikers and joggers have many miles of recreational paths to access, the construction of this 0.2 mile path will likely end free flight for many of the soaring community members and ruin the only soaring site in Carpinteria.

Additionally, the Certified Santa Barbara County Coastal Land Use Plan adopted in 1982 states "recreational uses on oceanfront lands, both public and private, that do not require extensive alteration to the natural environment...shall have priority over uses requiring substantial alteration". According to this guidance, free flight at Bates should be given priority over this Project because our recreation requires no alteration to the existing environment.

We would like to challenge the City to design a Project that is inclusive of all users and that avoids ruining this 40-year flying site. This is the one place in Carpinteria where we can pursue our passion and practice our craft, sharing the joy of free flight with residents and tourists alike. Please consider Project alternatives that avoid cutting into Bates ridge and work to achieve no impact to free flight recreation, with corroboration from scientific evidence and expert testimony.

We look forward to building a bike path that meets everyone's needs. Rather than creating conflict around this Project, SBSA is focused on working with the City to find solutions. We have nationwide resources to support these efforts, including our membership with the United States Hang Gliding and Paragliding Association (USHPA). Please contact us to review next steps using the email addresses provided. Thank you for considering the importance of this matter.

Sincerely,

Santa Barbara Soaring Association Officers

James Zender, President
Daniel Garcken, Vice President, Hang Gliding
Derek Musashe, Vice President, Paragliding
Cort Flinchbaugh, Treasurer
Jon Blake, Secretary
Mike Harrington, Activities, Hang Gliding
Chris Heckman, Activities, Paragliding
John McMahon, Website Design and Maintenance
John Greynald, Public Relations
Rob Sporrer, Safety Officer
Aaron LaPlante, Site Preservation
Jeff Longcor, Director at Large

Appendix

Corrections to the Proposed Final MND

Appendix:
Corrections to the Proposed Final MND

1. Inaccuracy #1: free flight at Bates is an unsanctioned activity (p.133)
    a. We legally fly in this airspace as a recognized group by the Federal Aviation Administration (FAA) and United States Hang Gliding & Paragliding Association (USHPA). We have federal permission to use this airspace.
    b. Paragliding and Hang Gliding have been happening regularly at the Bates bluff for over 40 years and is fully established in this location. It is the only coastal soaring site in Carpinteria and the best known site with consistent prevailing wind soaring between San Diego and San Francisco. Unique geographic features combine Southwest facing terrain with channel winds, allowing airflow to hit Bates ridge like the swells hit Rincon Point.
    c. Bates is special in allowing cross country flight. The Project site generates lift that allows pilots to transition to the surrounding bluffs and travel dozens of miles along the coastline, making this activity suited to the “transportation corridor”.
    d. Exhibit 2 lists official rules governing free flight while also claiming it’s an unrecognized recreational activity. This is an obvious contradiction resulting from the City’s selective use of the term “unsanctioned” to fit their needs. How do activities become publicly recognized? Are bikers or surfers sanctioned? No guidelines or examples are provided to address a shared space like Bates.
    e. Exhibit 2 states there are safety hazards regarding the freeway and UPRR, yet no evidence is provided. No free flying accidents have occured in these areas. Meanwhile, the MND has no mitigation plan for the significant impact of bike traffic in Rincon Park caused by the Project. This congested area is already the site of numerous collisions that regularly occur between bikers and vehicles.
    f. Exhibit 2 states that flying at Bates is questionable because foot traffic across the UPRR is restricted. However, pilots are not crossing the tracks by foot and there are no airspace restrictions around the UPRR.
    g. FAA officials and career airline pilots provided expert testimony during the MND hearing to confirm that no aviation rules are being violated at this site.

2. Inaccuracy #2: the preferred launch site disqualifies free flight from CEQA (p.134)
    a. The Rincon Trail Project has no bearing on the current launch locations, it is outside the scope of the project and irrelevant to the MND.
    b. The ownership status of the launch location parcels is subject to change before, during, and after the project, and should not factor into the MND.
    c. Pilots have the capacity to launch from public and private locations to arrive at Bates, at times flying from National Forest property, but can only soar Bates ridge if the existing geological features remain within this unique recreational facility.
    d. On rare windy days, pilots launch from the county property portion below the bluff, which is not in the Rincon Beach County Park or any private property.

e. The Certified Santa Barbara County Coastal Land Use Plan adopted in 1982 states "recreational uses on oceanfront lands, both public and private, that do not require extensive alteration to the natural environment...shall have priority over uses requiring substantial alteration". According to this plan, whether the land is public or private, free flight at Bates should be given priority over this Project because our recreation requires no alteration to the natural environment.

3. Inaccuracy #3: the Project will not have a negative impact on uplift and airflow (p.135)
    a. During the Public Workshop and the MND hearing, SBSA provided expert testimony and evidence from engineers and FAA officials to substantiate the Project's negative impact on uplift and airflow.
    b. SBSA created a video describing in detail how the Project will drastically affect airflow. This video was provided to the Planning Commission and City Employees, and discussed at length during the MND hearing: https://www.youtube.com/watch?v=SVIdEfWHMpE&t= .
    c. Despite SBSA's efforts, Exhibit 2 states that the flying community has not provided evidence of negative impact. This assertion is made without acknowledgement of what SBSA already provided and without explanation of what more is needed. Additionally, the City fails to share the burden of proof. If a study of scaled models is required to demonstrate the before and after conditions of wind deflection, the City should take responsibility for gathering this data.
    d. The City should be responsible for proving that this Project will not change airflow and will be inclusive of all current users. Where is the proof that this project will not ruin a treasured flying site that has been lovingly used for decades?
    e. Exhibit 2 claims that the Project will not have a negative impact on airflow. No expert testimony, data, or evidence is provided. It also appears that Exhibit 2 confuses our sport with parasailing, which is a separate activity involving a boat. How can the City make assertions without even knowing the name of our sport?
    f. Exhibit 2 states that the Project will improve uplift, yet no scientific proof is provided. Wind gradient models are readily available online and SBSA is willing to further demonstrate how uplift is less productive at lower elevations and severely disrupted by benches like the two proposed for this Project. Below are two online articles that speak to soaring dynamics in areas of ridge lift.
    Ridge Lift Research: http://journals.sfu.ca/ts/index.php/ts/article/viewFile/608/571
    Ridge Soaring: https://chessintheair.com/what-conditions-produce-good-ridge-lift/
    g. Exhibit 2 wrongly suggests that uplift is equal across all seaside bluffs in the area. While pilots may launch from a lower bluff, rarely is there enough uplift to sustain flight. Pilots immediately transition to the Bates ridge, which has a steep, unobstructed face that generates adequate lift in a wide range of wind conditions.
    h. The Project will cause permanent damage to a unique, treasured flying site, yet there are no assurances it will withstand rising sea levels and increased storm activity on the unstable slopes where it's being proposed. The MND has not

demonstrated compliance with the Carpinteria Rising Sea Policy and does not account for long term maintenance or provide a plan for preventing eventual slope failure, which has already happened for the old railroad and highway.

i. The City has not provided evidence of exploring a North Side alternative on either the North or South sides of the highway. This approach would satisfy all potential end users and potentially save costs. If not for the blue view directive, this project could be replaced by a line of barriers along the 101 South to protect bikers between exits.

Nick Bobroff

From: Jeffrey A. Longcor <jlongcor@gmail.com>
Sent: Monday, November 30, 2020 4:50 PM
To: Nick Bobroff; George Jimenez
Subject: EIR Scoping - Zoom Recording

Hi Nick,

When you get a chance, please send a link or file transfer information for the zoom recording of the EIR Scoping meeting. I know George and others may have already requested this, but I haven't seen it come through in any prior emails.

Also I wanted to make sure this video is part of the EIR Scoping as it addresses recreational issues and suggested some alternatives and mitigations, while perhaps being readily accessible for viewers.
https://www.youtube.com/watch?v=SVIdEfWHMpE

Thanks again,
Jeff

Nick Bobroff

From: J Plaehn <specialbuild4u@gmail.com>
Sent: Monday, November 16, 2020 6:35 PM
To: Nick Bobroff; gnidilg@gmail.com
Subject: Bates environmental impact study Carpinteria public meeting

Sent my iPhone

To whom it may concern my name is Jay Plaehn I attended the public Carpinteria meeting regarding altering the Bates bluff. It is a matter of public record that my testimony before the council and many other concerned pilots from the Santa Barbara Flying Association and independently were voiced. Many of these concerns and warnings were also publicly reported in one of the local Carpinteria newspapers shortly there after further confirming testimony and further publicly documenting the concerns of many local citizens. My testimony before the council focused on the fact that Bates point is a highly sensitive geological region where wind patterns affect the micro climate north and south of the point. It is known that this micro climate provides growing conditions that allow certain plants to be farmed and grown in La Conchita. As in bananas for example, one of the few, if not the only place in California as is locally thought. Given this specificity of environmental factors there may be other plant or animal life or insects as in migrating butterflies that could be affected by altering the wind patterns, temperature and the local environment with massive earth moving. It is not unreasonable to expect that the law be followed and a proper and complete environmental study be made. This is what the law was meant to apply to as in the Bates Point. Bates Point is the definition of a micro climate. Please include my concerns in any formal review of the situation. Thank you for your considerations. Jay Plaehn

Nick Bobroff

From: throgrog@aol.com
Sent: Sunday, November 29, 2020 2:56 PM
To: Nick Bobroff
Subject: Re: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

Hi Nick,

Thank you for the opportunity to provide input for the EIR that is required for the proposed Carpinteria Rincon Multi-Use Trail. Please include this in the record.

1 The current plan has no information on alternative plans for the path other than to mention that previous version had land slide issues. Without detailed cost data on other possible routes, such as following the freeway and using existing structures, the EIR would be incomplete.

2 With the high tides and storms that are predicted to erode the bluff due to climate change, a plan to have a path on the ocean side of the bluff that will fail within the next 40 years is would be an expensive mistake without the **most current data** on the potential for serious erosion.

3 The plan to terminate the path onto steep and busy parking lot after going through all the effort to make it ADA compliant makes no sense when there are safer alternatives. Alternatives that need to be in the EIR.

4 The plan will permanently destroy an extremely rare and valuable existing recreational resource--- the bluff for soaring gliders. **There is no mitigation possible for this significant loss; therefore the project as it is currently proposed should be terminated ASAP. The regulatory entities needed for approval will never sign-off on this when they see how illegal and ill-conceived it is.**

5 **IF** more time and money **IS** to be spent on an EIR for the current plan, then the value of the bluff for soaring hang gliders and paragliders would need to be a significant section of the EIR. The need for wind tunnel testing on the planned reduced slope and angle of a 3D model of the bluff would probably not be necessary because the proposed change in the ability to soar the bluff would be significant enough to be easily calculated on paper using common wind-flow data and formulas.

It is great to see that an EIR will be used in the process. It will likely be less expense to produce a comprehensive EIR than to have the city defend a lawsuit from the Glider pilots. The fact that the pilots were so blatantly left out of the process raises questions that have yet to be answered. Did the planers really think that the soaring would not be affected? Did long small town personal conflicts create a plan that will likely never be permitted?

John Greynald

Director, Santa Barbara Soaring Association

805-886-6160

-----Original Message-----
From: Nick Bobroff <nickb@ci.carpinteria.ca.us>
To: Nick Bobroff <nickb@ci.carpinteria.ca.us>
Sent: Thu, Oct 29, 2020 7:40 pm
Subject: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.

The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.

The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
A copy of the NOP and project description is also attached to this email.

Should you have any questions about the proposed project or this NOP, please feel free to contact me.
Thank you,
Nick Bobroff, Principal Planner
Community Development Department
(805) 755- 4407

Nick Bobroff

From: Kevin Carter <xckevinc@gmail.com>
Sent: Monday, November 30, 2020 3:24 PM
To: Nick Bobroff
Subject: Bates

****EXTERNAL EMAIL****

CAUTION: This email originated from outside the City of Carpinteria. DO NOT OPEN attachments or CLICK on links unless you are sure they are safe. Remember, reputable vendors, banks, etc. will not ask you to disclose passwords or other sensitive information.

Hi Nick,

My name is Kevin Carter and I am a pilot. Since 2003 I have been travelling to the Santa Barbara/Carpinteria area in the winter months to fly and recreate. It saddens me to see one of the few accessible flying sites face an unnecessary demise, especially when an alternative exists that would allow all of the desired types of recreation. As an avid cyclist, rollerblader, pilot, etc I embrace all efforts to increase recreation access but as a pilot I know that access to viable flying sites in America is far more difficult to obtain and maintain then for other activities. It is ironic that flying site access is the primary and only reason I travel to your area, but now the reason that I am contacting you to voice my opinion.

Thank you for your time and consideration,
Kevin

Nick Bobroff

From: Karen Castle <karicastle@me.com>
Sent: Monday, November 30, 2020 12:46 PM
To: Nick Bobroff
Subject: Hi nick

EXTERNAL EMAIL

Sorry for not responding sooner. How can I help save Bates?? I love that flying site!!
Kari

Sent from my iPhone

Nick Bobroff

From: Karen Ensign <ensignkaren@gmail.com>
Sent: Saturday, November 28, 2020 10:09 AM
To: Steve Goggia; Nick Bobroff
Subject: Carpinteria Rincon Multi-Use Trail Project

****EXTERNAL EMAIL****

To Whom It May Concern,

We are against the initial scope of this project. The hang gliders have been using this space for years, and they bring joy to those of us who watch them sailing over the bluffs and the ocean.

We love to ride our bikes and would appreciate a continuous trail from Carp Avenue to Rincon Beach Park, but NOT at the expense of hang gliders who have enjoyed this spot for decades.

We are concerned that an EIR is not being done; how will this project affect the hillside after steep grading? How will this project affect the local flora and fauna? We understand that there is a safety issue involved due to cyclists using the 101 freeway or rail access; why not encourage them to use Hwy 150 to Rincon Hill Road?

We are hopeful that the Carpinteria Planning Commission will listen to the voices of the soaring community, and to average citizens like us, and reconsider this project, or at least allow an EIR to be done.

Sincerely,
Karen Ensign and Steve Tonnesen

Nick Bobroff

From: Kate Faulkner <kerfaulkner@gmail.com>
Sent: Tuesday, November 17, 2020 2:38 PM
To: Nick Bobroff
Subject: Rincon Trail EIR Scoping Meeting

Hello Nick,

I am a member of the Channel Islands Bicycle Club and a frequent bicyclist between Ventura and Carpinteria. I am hoping to join the Zoom NOP meeting this afternoon. However, there is the possibility that a conflict will prevent me from joining. Will the Zoom be recorded and available on your web site?

I am really looking forward to the proposed Rincon Trail project. Rincon Beach is a terrific park and the trail should make the park more accessible to walkers and cyclists from Carpinteria.

My biggest concern is the safe accommodation of the increased numbers of bikes that will be transiting Rincon Beach County Park. The parking lot is already dicey for cars, pedestrians, and bicyclists. The proposed trail should greatly increase the number of bikes. Hopefully S.B. County Parks is engaged and will be planning better routing bikes, peds, and cars through the park.

I plan to submit a letter prior to the Nov. 30 deadline. It will be helpful if I am able to review today's discussion so that I have a full understanding of the proposed Rincon Trail project.

Thanks,
Kate Faulkner

Nick Bobroff

From: Kathleen Reddington <reddington4@verizon.net>
Sent: Monday, November 30, 2020 1:22 PM
To: Nick Bobroff
Subject: Fwd: Rincon Trail Project EIR Scoping Comments

-----Original Message-----
From: Kathleen Reddington <reddington4@verizon.net>
To: nickb@carpinteria.ca.us <nickb@carpinteria.ca.us>
Sent: Mon, Nov 30, 2020 1:17 pm
Subject: Rincon Trail Project EIR Scoping Comments

Hi Nick,

Please accept the suggestion to thoroughly investigate and research the items stated below as part of the Scoping Process within the EIR for the Rincon Trail Project.

To: Dudek Environmental Impact Report Scoping Suggestions

1. City of Carpinteria and the CCC must examine alternative routes on the North side of the Bluffs running parallel to the 101 Freeway.

2. City of Carpinteria and the CCC thoroughly research, the geology of the area and what erosion might be caused in the removal of 100,000 tons of dirt during the construction of this trail which includes bridges, concrete support systems and extensive drainage. How does this effect the stability and also the liabilities of the public falling or injuring themselves on this trail, Who is responsible for those liabilities and what safety precautions can/will be taken to prevent injury to the public?

3. Wildlife habitat,, the presence of ESHA and the overall plant and animal species native to the area should be thoroughly researched and documented. Displacing any of our native California Wildlife must be avoided at all costs. Would the Rincon Trail interrupt/destroy an established wildlife corridor? This question must be answered.

4. The Hang gliders and Para gliders launch pad can not and should not be destroyed. It's is a long established site of over 40 years and one of only three such sites in California where the wind drift allows a launch and long distance flying opportunity. The hang gliders should be included as participants in the EIR process and there must be a serious amount of research and time spent to allow the Hang and Para gliders to keep their recreational activity and their launch spot. This project needs to take the effects it will have on the hang gliders wind, document, measure and the Rincon Trail Project must be modified to not destroy the wind current from the bluffs launch.

5. The aesthetic and majestic beauty of the coastline needs to be preserved and the changes measured as to how this project will effect the view corridor looking down the coast to the Rincon.

6. The current proposal unsafely dumps cyclists, hikers and members of the public into a very congested non-ADA compliant parking lot. Other designs need to be explored to avoid this danger.

Thank-you for the opportunity to submit these suggestion for the Rincon Trail Project. I sincerely hope the preparation of the EIR will take these items in to account as part of the Scoping process.

Respectfully Submitted,

Kathleen Reddington

November 30, 2020

Nick Bobroff

From: Katharina Roesler <katroesler@gmail.com>
Sent: Friday, November 13, 2020 12:13 PM
To: Nick Bobroff
Subject: Bike path proposal

Dear Mr. Bobroff,
As you review the proposal to create a bike path in Carpinteria, please consider the impact this would have on paragliding. I am a pilot and frequently visit Santa Barbara in order to fly there. I believe this helps the city's tourism and is a beautiful part of its character that would be a shame to lose.

Please consider finding an alternative proposal that does not destroy the ridge.

All the best,
Katharina Roesler
305-608-3457

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 30, 2020

Nick Bobroff
Principal Planner
City of Carpinteria
5775 Carpinteria Avenue
Carpinteria, CA 93013
Nickb@ci.carpinteria.ca.us

Subject: Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Carpinteria Rincon Multi-Use Trail, SCH #2020060534, Santa Barbara County

Dear Mr. Bobroff:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Carpinteria Rincon Multi-Use Trail (Project). The City of Carpinteria (City) is the lead agency preparing a DEIR pursuant to the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et. seq.) with the purpose of informing decision-makers and the public regarding potential environmental effects related to the Project.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & Game Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in "take" (see Fish & Game Code, § 2050) of any species protected under the California Endangered Species Act (CESA; Fish & Game

Code, § 2050 *et seq.*) or the Native Plant Protection Act (NPPA; Fish & Game Code, § 1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Location: The Project would extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria, to Rincon Beach County Park, in unincorporated Santa Barbara County. The Carpinteria Bluffs Nature Preserve lies to the east of the Project and the Project is bordered by the Rincon Bluffs Preserve.

Project Description/Objectives: The proposed Project includes the construction of a paved 16-foot-wide trail (10-foot-wide path with 3-foot-wide paved shoulder along both sides); an approximately 2,800-feet-long, a clear-span bridge over the Union Pacific Railroad alignment; parking facilities; fencing; signage; and a storm drainage collection system, with new drain outlets to the ocean. The bridge would be approximately 160-feet-long, with a width of between 14-feet and 16-feet.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

Specific Comments

1) Crotch Bumble Bee. Potential for Crotch bumble bee (*Bombus crotchii*) within the Project vicinity. Project ground disturbing activities may result in crushing or filling of active bee colonies, causing the death or injury of adults, eggs, and larvae. The Project may remove bee habitat by eliminating vegetation that may support essential foraging habitat. Impacts to Crotch's bumble bee could result from ground disturbing activities. Project disturbance activities could result in mortality or injury to hibernating bees, as well as temporary or long-term loss of suitable foraging habitats. Construction during the breeding season of bees could result in the incidental loss of breeding success or otherwise lead to nest abandonment.

    a) CDFW recommends that measures be taken, primarily, to avoid Project impacts to Crotch bumble bee. On June 12, 2019, the California Fish and Game Commission accepted a petition to list the crotch bumble bee as endangered under the California Endangered Species Act ("CESA"), determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process.

    b) CDFW recommends, within one year prior to vegetation removal and/or grading, a qualified entomologist familiar with the species behavior and life history should conduct surveys to determine the presence/absence of Crotch's bumble bee. Surveys should be conducted during flying season when the species is most likely to be detected above ground, between March 1 to September 1 (Thorp et al. 1983). Survey results including negative findings should be submitted to CDFW prior to initiation of Project activities. If "take" or adverse impacts to Crotch's bumble bee cannot be avoided either during Project activities or over the life of the Project, the City must consult CDFW to determine if a CESA incidental take permit is required (pursuant to Fish & Game Code, § 2080 et seq.).

2) California Endangered Species Act (CESA). A review of CNDDB indicates several occurrences within two miles of the Project vicinity of light-footed Ridgway's rail (*Rallus obsoletus levipes*), a CESA-listed and Fully-Protected species (Fish and G. Code § 3511) that is also listed under the federal Endangered Species Act. A review of CNDDB indicates several occurrences within two miles of the Project vicinity of Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), a CESA-listed species. Project related activities may adversely impact potential habitat for this species. CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. As to CESA, take of any endangered, threatened, candidate species, or State-listed rare plant species that results from the Project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9). Consequently, if the Project, Project construction, or any Project-related activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the Project proponent seek appropriate take authorization under CESA prior to implementing the Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options [Fish & Game Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

   CDFW cannot authorize the take of any fully protected species as defined by State law. State fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for its take except for collecting those species for necessary scientific research and relocation of the bird species for protection of livestock (Fish & G. Code, §§ 3511, 4700, 5050, 5515). Take of any species designated as fully protected under the Fish and Game Code is prohibited. CDFW recognizes that light-footed Ridgway's rail is documented to occur in the vicinity of the project area. CDFW recommends the City fully avoid all impacts to light-footed Ridgway's rail occupied habitat.

3) Human-Wildlife Interface. Due to the location of the Project site within coastal bluff and beach environment, CDFW recommends the lead agency evaluate the use of this trail and its potential impacts to wildlife in the adjacent open space settings.

4) Biological Baseline Assessment. A CNDDB review indicates the occurrence of several special status insect, reptile, mammal, and plant species including Coulter's saltbush (*Atriplex coulteri*), globose dune beetle (*Coelus globosus*), western snowy plover (*Charadrius alexandrinus nivosus*), Northern California legless lizard (*Anniella pulchra*), white-veined monardella (*Monardella hypoleuca ssp. hypoleuca*),Townsend's big-eared bat (*Corynorhinus townsendii*), southern tarplant (*Centromadia parryi ssp. australis*), and monarch - California overwintering population (*Danaus plexippus* pop. 1) within the Project vicinity. The majority of the Project site is open space. Undisturbed land may provide suitable habitat for special status or regionally and locally unique species. CDFW recommends providing a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project area, with emphasis upon identifying endangered,

threatened, sensitive, regionally and locally unique species, and sensitive habitats. Impact analysis will aid in determining any alternative trail designs that could reduce impacts to any special status species detected, as well as assess direct, indirect, and cumulative biological impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to the Project. CDFW also considers impacts to Species of Special Concern a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. The DEIR should include the following information:

a) Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)]. The DEIR should include measures to fully avoid and otherwise protect Sensitive Natural Communities from Project-related impacts. Project implementation may result in impacts to rare or endangered plants or plant communities that have been recorded adjacent to the Project vicinity. CDFW considers these communities as threatened habitats having both regional and local significance. Plant communities, alliances, and associations with a state-wide ranking of S1, S2, S3 and S4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities;

b) A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline);

c) Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at the Project site and within the neighboring vicinity. *The Manual of California Vegetation*, second edition, should also be used to inform this mapping and assessment (Sawyer, 2008). Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions;

d) A complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by the Project. CDFW's CNDDB in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat. CDFW recommends that CNDDB Field Survey Forms be completed and submitted to CNDDB to document survey results. Online forms can be obtained and submitted at http://www.dfg.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp;

e) A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including California Species of Special Concern and California Fully Protected Species (Fish & Game Code, §§ 3511, 4700, 5050 and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of the Project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise

identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the USFWS; and,

f) A recent, wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame, or in phases.

5) Biological Direct, Indirect, and Cumulative Impacts. Due to the proximity of the Project site to undeveloped land and open space just north of the Project site, it is essential to understand how these open spaces and the biological diversity within them may be impacted by Project activities. This should aid in identifying specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends providing a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. The following should be addressed in the DEIR:

a) A discussion regarding indirect Project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a Natural Community Conservation Plan (NCCP, Fish & Game Code, § 2800 *et. seq.*). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR;

b) A discussion of potential adverse impacts from lighting, noise, temporary and permanent human activity, and exotic species and identification of any mitigation measures;

c) A discussion on Project-related changes on drainage patterns and downstream of the Project site; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and, post-Project fate of runoff from the Project site. The discussion should also address the proximity of the extraction activities to the water table, whether dewatering would be necessary and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included;

d) An analysis of impacts from land use designations and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR; and,

e) A cumulative effects analysis, as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

6) Nesting Birds. Project activities may impact nesting birds. Project activities occurring during the breeding season of nesting birds could result in the incidental loss of fertile eggs, or

nestlings, or otherwise lead to nest abandonment in trees directly adjacent to the Project boundary. The Project could also lead to the loss of foraging habitat for sensitive bird species.

a) CDFW recommends that measures be taken, primarily, to avoid Project impacts to nesting birds. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

b) Proposed Project activities including (but not limited to) staging and disturbances to native and nonnative vegetation, structures, and substrates should occur outside of the avian breeding season which generally runs from February 15 through August 31 (as early as January 1 for some raptors) to avoid take of birds or their eggs. If avoidance of the avian breeding season is not feasible, CDFW recommends surveys by a qualified biologist with experience in conducting breeding bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300-feet of the disturbance area (within 500-feet for raptors). Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

General Comments

7) Project Description and Alternatives. To enable CDFW to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the DEIR:

a) A complete discussion of the purpose and need for, and description of, the proposed Project, including all staging areas and access routes to the construction and staging areas; and,

b) A range of feasible alternatives to Project component location and design features to ensure that alternatives to the proposed Project are fully considered and evaluated. The alternatives should avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas.

8) Wetlands Resources. CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and Game Commission's policies. The Wetlands Resources policy (http://www.fgc.ca.gov/policy/) of the Fish and Game Commission "…seek[s] to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California. Further, it is the policy of the Fish and Game Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, project mitigation assures there will be 'no net loss' of either wetland

habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values."

a) The Wetlands Resources policy provides a framework for maintaining wetland resources and establishes mitigation guidance. CDFW encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. CDFW encourages activities that would avoid the reduction of wetland acreage, function, or habitat values. Once avoidance and minimization measures have been exhausted, the Project must include mitigation measures to assure a "no net loss" of either wetland habitat values, or acreage, for unavoidable impacts to wetland resources. Conversions include, but are not limited to, conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks, which preserve the riparian and aquatic values and functions for the benefit to on-site and off-site wildlife populations. CDFW recommends mitigation measures to compensate for unavoidable impacts be included in the DEIR and these measures should compensate for the loss of function and value.

b) The Fish and Game Commission's Water policy guides CDFW on the quantity and quality of the waters of this state that should be apportioned and maintained respectively so as to produce and sustain maximum numbers of fish and wildlife; to provide maximum protection and enhancement of fish and wildlife and their habitat; encourage and support programs to maintain or restore a high quality of the waters of this state; prevent the degradation thereof caused by pollution and contamination; and, endeavor to keep as much water as possible open and accessible to the public for the use and enjoyment of fish and wildlife. CDFW recommends avoidance of water practices and structures that use excessive amounts of water, and minimization of impacts that negatively affect water quality, to the extent feasible (Fish & Game Code, § 5650).

9) Compensatory Mitigation. The DEIR should include mitigation measures for adverse Project-related impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

10) Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, the DEIR should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the Project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased

human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

11) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of moving an individual from the Project site and permanently moving it to a new location. CDFW generally does not support the use of, translocation or transplantation as the primary mitigation strategy for unavoidable impacts to rare, threatened, or endangered plant or animal species. Studies have shown that these efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving sensitive plants and animals and their habitats.

12) Moving out of Harm's Way. The proposed Project is anticipated to result in clearing of habitats that support many species of indigenous wildlife. To avoid direct mortality, we recommend that a qualified biological monitor approved by CDFW be on-site prior to and during ground and habitat disturbing activities to move out of harm's way special status species or other wildlife of low mobility that would be injured or killed by grubbing or Project-related construction activities. It should be noted that the temporary relocation of on-site wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss. If the Project requires species to be removed, disturbed, or otherwise handled, we recommend that the DEIR clearly identify that the designated entity should obtain all appropriate state and federal permits.

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the City of Carpinteria in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Kelly Schmoker, Senior Environmental Scientist, at (626) 335-9092 or by email at Kelly.Schmoker@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erinn Wilson-Olgin
B6E58CFE24724F5...

Erinn Wilson-Olgin
Environmental Program Manager I

Ec: CDFW
Steve Gibson, Los Alamitos – Steve.Gibson@wildlife.ca.gov
Sarah Rains, Los Alamitos – Sarah.Rains@wildlife.ca.gov
Susan Howell, San Diego – Susan.Howell@wildlife.ca.gov
CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov

State Clearinghouse, Sacramento – CEQACommentLetters@wildlife.ca.gov

References

Sawyer, J. O., Keeler-Wolf, T., and Evens J.M. 2008. A manual of California Vegetation, 2nd ed. ISBN 978-0-943460-49-9.

Thorp, Robbin W., Horning Jr, Donald S., and Dunning, Lorry L. 1983. Bumble Bees and Cuckoo Bumble Bees of California. Bulletin of the California Insect Survey 23.

Nick Bobroff

From: Leon Roullard <lroullard@gmail.com>
Sent: Tuesday, November 17, 2020 9:37 AM
To: Nick Bobroff
Subject: Rincon Trail Bike Path

****EXTERNAL EMAIL****

Hello Mr. Bobroff,

My name is Leon Roullard and I am writing this email in regards to the proposed bike path along the Rincon coast line. I am writing from the perspective of an avid Cyclist, Paraglider, and California native with a Marine Biology degree from UCSC. I am aware that many people enjoy this beautiful State and seek to find a solution that accommodates all those who choose to enjoy what it has to offer.

My love for the California coastline and all the amazing and beautiful activities it provides our citizens is difficult to quantify. I have been recreationally and competitively riding bicycles since the early 80's and intend to continue riding until my legs won't spin the gears. I have ridden large stretches of the California coast and I am well aware of the importance of safe bike paths, especially in the Rincon stretch. A bike path is essential through this section and will be a great boon to the community.

I have been an aviator for over 24 years and paragliding pilot for the past 5 years. The coastal soaring site known as Bates is a particularly special site for it's rare good conditions for all Paraglider pilots, and especially for me and my fiance.

My fiance Lena and I met paragliding in Santa Barbara in late 2017. She, a veteran of 10+ years in the sport and me, a fledgling pilot of a couple years at the time. We hit it off immediately and have traveled the world flying paragliders ever since. In 2019 on a flying trip to Santa Barbara we decided to check the conditions at Bates. In light conditions I launched and soared down to the beach. After hiking back up the ridge Lena met me at the edge of the launch. I dropped to my knee and asked the love of my life to spend the remainder of our lives together. She said yes. We both then launched into some of the best conditions I have ever experienced at Bates and flew till sunset on what is now one of the most special flying sites for us, in the entire world.

I am fully aware that all things in this life are passing and we gain little by clinging to them. However, it would be a shame to see this amazing and rare coastal soaring site destroyed when alternative solutions that accomodate all interested parties exist.

Thank you for taking the time to read this email and consider alternative solutions.

Blue Skies,

Leon Roullard

--
(831)229-6409
lroullard@gmail.com

Nick Bobroff

From: Lane <lanerubin@hotmail.com>
Sent: Monday, November 16, 2020 11:01 AM
To: Nick Bobroff
Subject: Rincon Bike trail and the effect on the Bates flying site

Dear Nick,

As a longtime Santa Barbara resident, and hang glider pilot, I urge you and the Carpinteria city council to please consider inclusion to the EIR any impact that any grade changes will have on the airflow over the ridge at the bates road launch site. This site is a local treasure, and one of the few places remaining on the coast for hang gliding and paragliding.

The shape of the hillside, has a direct impact on our ability to fly there, and we are very concerned to hear of the possible changes being proposed.

While I love the idea of a bike path, I truly hope that consideration can be made to facilitate flying there as well. And I'm sure that there are ways to accommodate both without adversely affecting the other.

Thanks for your time and consideration.

Lane Rubin
13 San Marcos Trout Club
Santa Barbara, CA
805 637-7789

Nick Bobroff

From: Logan Walters <logan.walters@gmail.com>
Sent: Monday, November 30, 2020 2:18 PM
To: Nick Bobroff
Subject: Thunder Bowl

Hello Nick,

My name is Logan and I grew up here in Carpinteria. For the last 29 years I have enjoyed the dirt playground and view from atop the Thunder Bowl. I am a Paraglider pilot, surfer and cyclist.

As a Paraglider pilot I am very concerned about the upcoming project and how it will destroy our flying at Bates. This site is the reason I first started flying and now it has become my lively hood. Both paragliding that lead me to flying airplanes and helicopters. The freedom of soaring at Bates is unbeatable and taking it will be a huge hit to the free flying community.

As a surfer and beach goer the current plan will not increase beach access. And will change the parking area into a more jumbled and dangerous parking area. I don't think that is the goal.

As a cyclist that has gone up and down the coast this section requires a quick trip on the shoulder of the on ramp/off ramp or going down Bates. Both have been easy options and with the new plan of dumping cyclist into the parking lot I am 100% positive the cyclist will opt to go around. This path is not for cyclist. And will hardly be used by pedestrians. Putting the path on the freeway side is of zero detriment to the plan and offers to keep the original beautify and usefulness as a multi recreational use area.

Please do the right thing, and consider different options.

Logan Walters

Nick Bobroff

From: Myles Connolly <contactmyles@yahoo.com>
Sent: Friday, November 13, 2020 6:43 PM
To: Nick Bobroff
Subject: Bates Bluffs Bike Trail

****EXTERNAL EMAIL****

CAUTION: This email originated from outside the City of Carpinteria. DO NOT OPEN attachments or CLICK on links unless you are sure they are safe. Remember, reputable vendors, banks, etc. will not ask you to disclose passwords or other sensitive information.

Hi Nick, just want to add my voice to the din to let you know I have real concerns about the bike path project and how it's coming together.

I feel there's a lot at stake here and hope that you will hear out all sides, follow the necessary guidance and do everything you can to ensure a fair and reasonable outcome.

Best,

M.

Myles Connolly, p.g.a.
CEO
360-MEDIA, LLC
International Mobile: +1 949 338 2987
Email: contactmyles@yahoo.com
Skype: mylesconnolly

Nick Bobroff

From: Mike Harrington <mikestoneyard@gmail.com>
Sent: Monday, November 30, 2020 11:40 AM
To: Nick Bobroff
Subject: Rincon Trails EIR

****EXTERNAL EMAIL****

Dear Nick, and those preparing the EIR,

I am expressing my concern that the displacement of existing dirt and rock, and consequent slope change, will irreparably harm the Rincon site. Local osprey and turkey vultures frequent this site. Will their flight patterns be impacted? Are there migratory birds that will be impacted? Are there other species that live in or near the slopes and rely on the updrafts?

Also, the recreational activities paragliding and hang gliding, which have utilized this site for more than 35 years, will be forever impacted by a slope change. I believe this warrants serious consideration. A plan that leaves the existing slope intact and routes the bike path differently would be greatly preferred.

Thank you for your consideration.

Mike Harrington
Activities Director
Santa Barbara Soaring Assoc.

--
Mike Harrington
cell 805-452-6162
store 805-962-9511
fax 805-962-7290
stoneyardbuilding.com

Nick Bobroff

From: Meng Heu <Meng.Heu@OPR.CA.GOV>
Sent: Friday, October 30, 2020 12:26 PM
To: Nick Bobroff
Subject: SCH Number 2020100582

Your project is published and the review period has begun. Please use the "navigation" and select "published document" to view your project with attachments on CEQAnet.

Closing Letters: The State Clearinghouse (SCH) would like to inform you that our office will transition from providing close of review period acknowledgement on your CEQA environmental document, at this time. During the phase of not receiving notice on the close of review period, comments submitted by State Agencies at the close of review period (and after) are available on CEQAnet.
Please visit: https://ceqanet.opr.ca.gov/Search/Advanced

- Filter for the SCH# of your project **OR** your "Lead Agency"
  - If filtering by "Lead Agency"
    - Select the correct project
  - Only State Agency comments will be available in the "attachments" section: **bold and highlighted**

Thank you for using CEQA Submit.

Meng Heu
Office of Planning and Research (OPR)
State Clearing House

To view your submission, use the following link.
https://ceqasubmit.opr.ca.gov/Document/Index/265632/2

STATE OF CALIFORNIA Gavin Newsom, Governor

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nahc@nahc.ca.gov
NAHC.ca.gov

November 2, 2020

Nick Bobroff, Principal Planner
City of Carpinteria
5775 Carpinteria Avenue
Carpinteria, CA 93013

Re: 2020100582, Carpinteria Rincon Trail Project, Santa Barbara County

Dear Mr. Bobroff:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

November 10, 2020

Mr. Nick Bobroff, Principal Planner
Community Development Department, City of Carpinteria
5775 Carpinteria Avenue
Carpinteria, CA 93013

Re: Rincon Multi-Use-Trail (M.U.T.) Notice of Preparation (NOP), Environmental Impact Report (EIR)

Dear Mr. Bobroff:

I am responding to the proposed project, with a few questions (see attached addendum page 1), for the video conferencing meeting, scheduled for November 17, 2020 at 4:30pm. The removal of "Little Diamondhead," (see addendum page 2) which is primarily used by paraglider and hang glider pilots (addendum pages: 3, 3a, 3b, 3c, and 3d). The focused, EIR, should include the effect of air flow, due to the prevailing Southwest winds, into a venturi (which will still exist, if the M.U.T. as proposed, is built) , to traffic on the 101 Freeway. The resulting traffic noise (measured in decibels, on both sides of "Little Diamondhead," removes a sound barrier for Rincon Point residents, and beach goers. If Point Mugu Rock were to be removed, to alter the existing bike path, on the Pacific Coast Highway, to gain a Pacific Ocean view, would that be, a safer alternative, for bicyclists? "Little Diamondhead," is a landmark. It should not be removed. Please review the video link to "Preserving Free Flight at Bates Bluff." This video was made by Santa Barbara Soaring Association member and outstanding pilot and friend, Aaron LaPlante.

https://www.youtube.com/watch?v=SVIdEfWHMpE&feature=share

Highway lane closures, during the expected two-year build interval, will cause more traffic and accidents on the freeway. Beach closures can also be anticipated. Construction noise and pollution will aggravate and affect, drivers and beach goers and bicyclists and paragliders and hang gliders.

I have taken an informal survey, of 100 bicyclists, from July 2020 to September 2020, at the King property, launch area on different days of the week, and at varying times of day. I asked three questions: 1) "Would you mind, if I asked you a few questions, about the proposed bike path?"
2) "Are you local, or from out of town?"
3) "Considering the wind, would you prefer to have the bike path extended across the front of that bluff ("Little Diamondhead, " as I pointed, to it) , or on the Southbound 101 freeway side?"(see addendum 4).

In the city of Ventura, the primary users of Surfers Pointe had their concerns and suggestions, ignored. The surfers asked and suggested that the Ventura bike path extension, not be built on the Pacific Ocean side. Funds were designated, the bike path was built, and was claimed by the Pacific Ocean.

Respectfully,
Ottis Gillespie 11/10/2020
Ottis Gillespie
1945 Spyglass Trail West
Oxnard, CA 93036

RECEIVED
NOV 12 2020
CITY OF CARPINTERIA

Eight attachments ORG

Cc: Mayor and Carpinteria City Council members, Dave Durflinger, Fidela Garcia, Matt Roberts, John L. Ilasin, United States Hang gliding and Paragliding Association, Santa Barbara Soaring Association, California Coastal Commission, and others.

If the "Little Diamondhead," bluff is destroyed, will the M.U.T. be aligned parallel, to the Southbound 101 freeway, as we, the paragliding and hang gliding pilots, have suggested, it be done, now, with the existing bluff? This preferred position and route can be implemented at less cost, less dirt removal, and less environmental impact. This will mean significantly fewer potential disruptions to Union Pacific Railroad operations, drivers on the 101 freeway, Rincon Point residents, and beach goers.

What is the "focus," of the "Focused Environmental Impact Report?" Will the primary users of "Little Diamondhead," have any input or be given, any consideration?

Will the E.I. R. include: current noise levels on both sides of "Little Diamondhead"? Can the measurement of decibels be conducted, hourly, for a one-week period, for 5 minutes, each hour, between the hours of 6 and 10am (commuter times,) and 2 and 6pm? This will measure what will be heard by residents of Rincon Point and beach goers, and M.U.T. users (Fifty feet, east of the wind sock and 15 feet above the freeway, and 20 feet away, from "Little Diamondhead?" Also, can high and low tide days, and wind speed measurement, in this E.I. R.?

If the "Little Diamondhead," bluff, is destroyed, will the amount of dirt and debris be pulverized on site? Will this undermine and/or destabilize the 101 freeway? The Union Pacific Railroad? The M.U. T.? The beach?

How will supports (drilled or impact driven into the dirt), affect the stability of the reconfigured land mass?

What will be the estimated and measured, emissions from equipment operating in the construction zone?

Did the "landslide sampling," include sampling on the north side of "Little Diamondhead?"

Will any or all of the approximately 90,000cu yds, of dirt left over, be stored or used on private property?

Addendum 3d

ORG

ORG

Addendum 4

Answers to informal survey of bicyclists from July 2020 to September 2020.

One hundred bicyclists were asked the three listed questions.

"Would you mind, if I asked you a few questions, about the proposed bike path?"

"Are you local, or from out of town?

"Considering the wind, would you prefer to have the bike path extended across the front of that bluff ("Little Diamondhead," as I pointed, to it, from the King property launch area), or on the Southbound 101 freeway side?"

1) One, "Yes," Ninety-nine, "No," answers
2) Thirty-one, "Local," bicyclists. Sixty-eight, "Out of town."
3) One respondent, did not respond,
4) One "Local," resident, preferred the Pacific Ocean side, of the bluff (Little Diamondhead).
5) Ninety-eight, of ninety-nine, bicyclists, responded that they would prefer the freeway side of "Little Diamondhead," as the route extension.

Nick Bobroff

From: Owen Searls <owen.searls@gmail.com>
Sent: Friday, November 20, 2020 8:08 AM
To: Nick Bobroff
Subject: Rincon Trail Bike Path

****EXTERNAL EMAIL****

- What Bates means to you and why the ridge should be preserved

Ridge soaring is the sole reason I got into paragliding and my first introduction into this was at the Bates site. Seeing it from the road or at the beach changed how I saw the world and allowed me to join a sport that has brought me endless joy. I have even turned down moving out of state for my job due to the fact that I could not paraglide and paraglide at the Bates site. If this site is destroyed i would have no reason to stay in the area and would most likely sell my house and move. That is how much this site means to me and i hope the severity of it is not lost on you or the economic impacts of a small change that will affect a community of very dedicated individuals.

- Why the EIR needs to assess impacts to wind and recreation

Please review what happened in Sand City, Ca. They removed a dune next to the coast and the environmental impacts have been felt ever since not to mention a permanent scar on the land. The arrogance of cities to structurally change nature to meet their needs is something I expect to see in parts of the country like Texas not in California where we hold ourselves to a hire environmental continuous standard.

I don't believe the walking trail will be used that much but the environmental impacts will have far reaching impacts that i don't believe have been looked into. Please reconsider this action

- Why the City should consider alternatives like the North side of Bates.

It is a win win, the community gets there walking trail (which i suspect will not even be used that much) and the site/dune will be preserved.

--
Owen Searls
501-773-7668
Owen.Searls@gmail.com

Nick Bobroff

From: natchumash@yahoo.com
Sent: Tuesday, November 17, 2020 8:12 AM
To: Nick Bobroff
Subject: Carp. Zoom meeting

Nick, If you don't mind in my behalf could you speak for me. The Bridge is a very sensitive site and from what I have been told there's a recorded site nearby. I would definitely recommend a Native monitor on site for any earth disturbing activity. I would like to be the one to monitor this project when it does happen.Thank you, and have a great day.
Sincerely,

Patrick Tumamait

Rob and Christi Hudson
6180 Via Real #98
Carpinteria, CA 93013

To: Nick Bobroff
Contact Person for the Carpinteria/Rincon Multi-Use Trail Project
Carpinteria City Hall

November 24, 2020

Dear Mr. Bobroff,

My husband, Rob, and I have lived in Carpinteria since 2007, and currently live in the Vista de Santa Barbara Mobile Home Park directly across from the Bluffs. We love our town and cherish the open spaces that we are privileged to enjoy! We fully support the idea of finishing a trail connection between Rincon Beach and the Carpinteria Coastal Trail. We love to ride our bikes on and around the Bluffs and frequently use both sections of the existing trail. Having a completed trail would be a great asset to many people.

We attended the virtual meeting held on November 17 in which the plan for the new trail section was discussed in preparation for an upcoming Environmental Impact Report, and we have a few questions, concerns, and requests.

First, we are concerned that the current plan involves the removal of so much dirt and land. Perhaps we are joining the conversation about this new trail segment too late, but have all other possible routes truly been considered and evaluated? Is the purpose of this segment to provide a practical and efficient completion of the trail, using existing corridors and structures, and being less invasive into natural habitat, or is it to provide a scenic experience for the hiker or biker?

We, personally, would be willing to sacrifice a great view as we ride along a short segment of the trail, if it meant that we could preserve a larger portion of the Bluffs undisturbed.

As I am sure you are aware, our Bluffs are a repository of many rapidly vanishing native species. If there is truly no other route option other than the one that is being presented, we request that every precaution be taken to evaluate and protect the plant and animal species that would be impacted by the location of the new trail and the digging and construction that would it would involve.

A Certificated California Botanist is needed to evaluate any plant species that would be impacted. A scientist with this certification would have specialized knowledge of plants and biomes that are specific to the Bluffs, and be able to determine if any lasting harm to a native plant species might be a result of this project. In the same manner, a biologist with specific training in the animal life of California habitats, especially coastal habitats, should be included in the upcoming EIR.

We are also concerned about the use of the Rincon Beach parking lot as a part of the new trail segment. This parking lot is extremely busy on almost every day of the year! This part of the proposal did not seem to be well thought-out, or perhaps was just not very clear. Will there be a way to separate and protect trail users from beach users and cars in the entire parking lot area extending down towards Bates Road?

We certainly recognize that there are numerous details, opinions, and desires to be taken into consideration as you move forward. We thank you in advance for using caution and care for the native species of plants and animals that live in the Bluffs as you make decisions regarding the completion of the Carpinteria/ Rincon Multi-Use Trail.

Sincerely,
Christi and Rob Hudson

Nick Bobroff

From: Richard Graham <richard.h.graham@gmail.com>
Sent: Friday, October 30, 2020 6:41 AM
To: Nick Bobroff
Subject: Re: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

Thank you for the information.

On Thu, Oct 29, 2020 at 7:43 PM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.
>
> The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.
>
> The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
>
> https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
>
> A copy of the NOP and project description is also attached to this email.
>
> Should you have any questions about the proposed project or this NOP, please feel free to contact me.
>
> Thank you,
>
> Nick Bobroff, Principal Planner
>
> Community Development Department
>
> (805) 755- 4407

Nick Bobroff

From: Richard Graham <richard.h.graham@gmail.com>
Sent: Monday, November 30, 2020 2:35 PM
To: Nick Bobroff
Subject: Bates terrain modifications

Nick,
Please seriously consider redirecting the bike lane to the highway side of the ridge. Sending it through the parking lot will be grossly problematic for bicyclist safety.
Also, when they move all that earth, consider directing the use of the soil to build up the paraglider launch vertically, or lengthwise, since it is a bunch of fill there anyway. The taller/longer the launch site can be made, the greater utility it has, basically forever. Hauling off 4K trucks full of soil is a waste of resources and generates CO2 which persists in the atmosphere for 100 years. Use the soil to make the launch site better, I'd say.
Thanks!
Rich Graham

Additional notes below:

1. Paragliding and Hang Gliding are official sports that have been fully established at Bates for over 40 years. Bates uniquely combines Southwest facing terrain with prevailing channel winds, allowing airflow to hit the ridge like the swells hit Rincon Point. It is the only coastal soaring site in Carpinteria and the best location for consistent soaring conditions between San Diego and San Francisco. This recreational airpark is cherished by residents, tourists, and pilots alike. It deserves preservation with the City.

2. Bates is a coastal gem that allows small groups like ours to use the same natural resources for recreation as the local bikers, surfers, beachgoers, and joggers. The current design runs counter to this sentiment: the bike path expands access to one group at the exclusion of another. While bikers and joggers have many miles of recreational paths to access, the construction of this 0.2 mile section will drastically impact wind flow, ending free flight for many members of the soaring community and ruining the only soaring site in Carpinteria.

3. The scope of the EIR should address ways to avoid massive earthwork at this site. The Certified Santa Barbara County Coastal Land Use Plan adopted in 1982 states "recreational uses on oceanfront lands, both public and private, that do not require extensive alteration to the natural environment...shall have priority over uses requiring substantial alteration". According to this guidance, free flight at Bates should have priority over this massive earthwork Project because our recreational uses do not require alteration to the existing natural environment.

4. The current design is focused on providing a “blue ocean view” rather than a safe, useful, long-lasting solution. There is no plan for maintaining this bike path after it's constructed on a 100 year old eroding seawall, where a railroad and highway have already failed. There is also no plan for managing traffic in the already congested and incredibly steep Rincon Beach parking lot where the bike path terminates. This Project needs to be reassessed from the perspective of the very groups it's trying to help.

5. We request project alternatives that preserve the ridge at Bates. A possible option is constructing the Bike Path on the Northside of the ridge, either along the highway or on the North side of the highway. The use of barriers along the highway shoulder, for

example, would be consistent with the bike path design that exists from Rincon to Ventura, and would be more cost effective while preserving the natural environment.

edited

Nick Bobroff

From: Randy Liggett <rliggett1960@icloud.com>
Sent: Monday, November 09, 2020 11:43 AM
To: Nick Bobroff
Subject: Bates flying site

EXTERNAL EMAIL

Dear sir I am weighting in support of the local flying community to save the bates cliff flying site I have flown from that spot since 1975 when I began flying at age fifteen. I have seen many sites be taken from the flying community over the years. Please don't let happen to this one. If you look at what Torrey Pines has done for the cities of Del Mar and La Jolla. It draws pilots from all over the world and bates has the potential to do the same. Thank you for your consideration, Randall Liggett 707-391-4516

Sent from my iPad

Nick Bobroff

From: Ramon Roullard <roullard11@gmail.com>
Sent: Tuesday, November 17, 2020 10:12 AM
To: Nick Bobroff
Subject: Bates

Save Bates! Don't level it for a bike path!

Thank you!

-Ramón

Nick Bobroff

From: Stephen Crye <stevecrye@gmail.com>
Sent: Monday, November 30, 2020 12:16 PM
To: Nick Bobroff
Subject: Please work with us to allow flying at Bates

Hi,

I'm confident that if CalTrans will work with the free flight community we can have both a bike path and a hill that will still provide the airflow we need to continue flying at Bates.

But the proposed design as it stands right now will completely ruin the lift at Bates. So I'm begging you, let's take the time to make this work for pilots and cyclists alike.

Thanks,

Steve Crye
El Paso, TX

•○•○•○•○•○•○•○•○•○•○•○•○•○•○•○•○•
Stephen T. Crye
915-412-5769 (Google Voice)
sent from phablet, please excuse typos and brevity.

Nick Bobroff

From: Shanon Lea Searls <lea.shanon@gmail.com>
Sent: Tuesday, November 17, 2020 4:41 PM
To: Nick Bobroff
Subject: Objection to Rincon Bike Path Project

Hi Nick,

I am writing to quickly say how much I love Bates and I don't agree with the proposed project for the Rincon Bike Path. Please accept this email as my formal objection as it will displace 156,000 tons of soil effectively ruining the flight ridge. What studies have been conducted to estimate the negative effects this will have?

Why don't you build stairs instead so folks can enjoy the sand and walk on the beach? Or please consider the north side of Bates for the flight path.

Kind regards,
Shanon

Shanon Lea Searls
303.887.7346

Nick Bobroff

From: Sarah Saturday <saturday.sarah@gmail.com>
Sent: Monday, November 30, 2020 3:22 PM
To: Nick Bobroff
Subject: Comments on Bike Path Project at Bates

EXTERNAL EMAIL

Hello,
My name is Sarah Saturday and I am a paragliding pilot that learned how to fly in Santa Barbara. Bates was my first ever coastal flight and it was extremely memorable and an invaluable learning opportunity. I have since returned and flown the site multiple times. Santa Barbara is a paragliding Mecca that brings pilots from all over the world, contributing to the tourism economy and expanding opportunities for coastal recreation. Building a bike path that will drastically reshape the bluff will create a dangerous or non-flyable zone for all pilots who wish to fly here. I am emailing to express my concern that a bike path will drastically reduce the visitors to this area and harm the paragliding community. Thank you for taking the time to read this message.

Regards,
Sarah Saturday

Nick Bobroff

From: Scott Schoenfeld <scottschoenfeld@hotmail.com>
Sent: Saturday, November 21, 2020 6:13 AM
To: Nick Bobroff
Subject: Bates Beach Bike Path

Good Day Nick,

I grew up in Carp and regularly come home to enjoy family, friends, beach, and a little paragliding.

A bike path to Rincon is a fine idea and I fully support this. Certainly, I remember the days when Rincon was little known to non-locals and only accessible by car. Riding to the beach from town by bike seems something I would do with my family, and this may attract both locals and tourists to a great spot on the California Coast. BUT, I do hope the impact to the Bates ridge soaring for Paragliders will be considered. With a little careful planning, by either dropping the path toward the water before the launch area or keeping at the top of the bluff till past the launch may allow both bicyclists and Paragliders to enjoy that great spot together.

Please engage with the local pilots to work on a plan to meet both uses.

Thanks,
Scott Schoenfeld
Carp High ‘91

Nick Bobroff

From: Sangwon Suh <sangwon@ucsb.edu>
Sent: Monday, November 30, 2020 10:11 AM
To: Nick Bobroff
Subject: Bates bike path

****EXTERNAL EMAIL****

Dear Mr. Bobroff,

I hope that this email finds you well despite the circumstances. This is Sangwon Suh, living in Goleta. I am sending you this email to share my humble opinion on the new proposal to construct a bike path around the Bates / Rincon bluff area.

As an environmental scientist and a nature lover, I applaud the effort to make the site more accessible to the public. Over the past years, I learned to appreciate the beauty of the view from Bates / Rincon bluff, while I thought that the remnants of the cement concrete blocks on the slope were an eyesore.

I happened to be a paragliding pilot and I am sure that you are aware of the concerns raised by some of my fellow paragliding pilots. There certainly is a wide-spread concern among paragliders, as the proposed plan may permanently damage the soarability of the site.

In my view, however, no development project can satisfy every single stakeholders and I trust that whatever the authority decides for the benefits of the public, it will be an improvement. I am writing this to you not as an attempt to sway the decision from one to another but to support and appreciate the transparent and open dialogue amongst all stakeholders.

I believe that the committee will make the decision taking all the voices into their consideration. Thank you for your willingness to listen to us.

Best, Sangwon

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_/ _/ _/ _/ _/ _/ _/ _/ _/ _/ _/ _/
Sangwon Suh, Ph.D.
Professor

Director, CLiCC Initiative | Suhstainability Lab
3422 Bren Hall
Bren School of Environmental Science and Management
University of California

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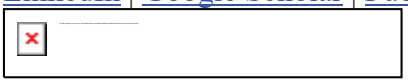
2018 Highly Cited Researcher
LinkedIn | Google Scholar | Publons


Sent from my iPhone

apcd air pollution control district
SANTA BARBARA COUNTY

November 25, 2020

Nick Bobroff
City of Carpinteria
Community Development Department
5775 Carpinteria Avenue
Carpinteria, CA 93013

Re: Santa Barbara County Air Pollution Control District Response to Notice of Preparation of a Draft Environmental Impact Report for Rincon Trail Project, 19-2015-CUP/CDP

Dear Nick Bobroff:

The Santa Barbara County Air Pollution Control District (District) appreciates the opportunity to provide comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Rincon Trail Project. The applicant proposes to construct and operate a multi-use trail approximately 2,800 feet long and 16 feet wide with a 160 feet long bridge over the railroad tracks. Grading is estimated at 104,000 cubic yards (CY) of cut, 10,300 CY of fill, and 94,100 CY of export. It is anticipated that construction of the proposed project would commence in March 2022 and reach completion by March 2024, for a total construction window of approximately two years. The project site is located at the end of Carpinteria Avenue in the City of Carpinteria and Rincon Beach County Park in the County of Santa Barbara.

District staff reviewed the NOP of a Draft EIR and concurs that air quality impacts should be addressed in the EIR. The District's guidance document, entitled *Scope and Content of Air Quality Sections in Environmental Documents* (updated June 2017), is available online at www.ourair.org/land-use. This document should be referenced for general guidance in assessing air quality impacts in the Draft EIR.

The EIR should evaluate the following potential impacts related to the Rincon Trail Project:

1. **Construction Impacts.** The proposed project will involve air quality impacts associated with heavy equipment use for earth-moving activities and bridge construction, as well as truck trips associated with the export of soils, equipment and materials delivery, and employee commute. Common earthwork equipment, such as dozer, excavator, dump truck, roller, skid steer, and tractor, will be used for trail construction, v-trench construction, and installation of fencing. Two cranes will be required for the installation of the prefabricated bridge. The bridge foundation will be constructed using deep piles. The EIR should include a description and quantification of potential air quality impacts, including criteria pollutant emissions and greenhouse gas emissions, associated with construction activities for the proposed project. The District's June, 2017 *Scope and Content* document, Section 6, presents recommended mitigation measures for fugitive dust and equipment exhaust emissions associated with construction projects. Construction mitigation measures should be enforced as conditions of approval for the project. The Draft EIR should

include a Mitigation Monitoring and Reporting Plan that explicitly states the required mitigation and establishes a mechanism for enforcement.

In addition, please be advised that the project will be subject to the following **regulatory requirements**:

1. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or District permits prior to grading/building permit issuance. **Construction engines with PERP certificates are exempt from the District permit, provided they will be on-site for less than 12 months.** If a District permit is required, proof of receipt of the District permits shall be submitted by the applicant to planning staff. *The District permit process can take several months*. *To avoid delay, the applicant is encouraged to submit their Authority to Construct permit application to the District as soon as possible, see www.ourair.org/permit-applications to download the necessary permit application(s).*

2. Two engine cranes are subject to CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation. For more information on applicable requirements of the Off-Road Regulation, please visit the following website: www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. In addition, the upper engine on a crane must have either a statewide Portable Equipment Registration Program (PERP) certificates or District permits prior to grading/building permit issuance. Two engine cranes are eligible for registration in PERP provided they will be on-site for less than 12 months.

3. The application of architectural coatings, such as paints, primers, and sealers that are applied to buildings or stationary structures, shall comply with District Rule 323.1, *Architectural Coatings* that places limits on the VOC-content of coating products.

4. Asphalt paving activities shall comply with District Rule 329, *Cutback and Emulsified Asphalt Paving Materials*.

5. Construction/demolition activities are subject to District Rule 345, *Control of Fugitive Dust from Construction and Demolition Activities*. This rule establishes limits on the generation of visible fugitive dust emissions at demolition and construction sites, includes measures for minimizing fugitive dust from on-site activities, and from trucks moving on- and off-site. Please see www.ourair.org/wp-content/uploads/rule345.pdf. Activities subject to Rule 345 are also subject to Rule 302 (*Visible Emissions*) and Rule 303 (*Nuisance*).

6. If the project area to be disturbed: a) is located in a geographic ultramafic rock unit; b) has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator; or c) is discovered by the owner/operator, a registered geologist, or the Air Pollution Control Officer to have naturally-occurring asbestos, serpentine, or ultramafic rock after the start of any construction or grading; then appropriate abatement measures must be undertaken pursuant to the requirements of the Air Resources Board Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operations (see www.arb.ca.gov/toxics/asbestos/asbestos.htm).

7. At all times, idling of heavy-duty diesel trucks should be minimized; auxiliary power units should be used whenever possible. State law requires that:
   - Drivers of diesel-fueled commercial vehicles shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location.
   - Drivers of diesel-fueled commercial vehicles shall not idle a diesel-fueled auxiliary power system (APS) for more than 5 minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle. Trucks with 2007 or newer model year engines must meet additional requirements (verified clean APS label required).
   - See www.arb.ca.gov/noidle for more information.

In addition, the District recommends that the following **best practices** be applied to the project as appropriate:

1. To reduce the potential for violations of District Rule 345 *(Control of Fugitive Dust from Construction and Demolition Activities)*, Rule 302 *(Visible Emissions)*, and Rule 303 *(Nuisance)*, standard dust mitigations (**Attachment A**) are recommended for all construction and/or grading activities. The name and telephone number of an on-site contact person must be provided to the District prior to grading/building permit issuance.

2. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in **Attachment B** to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures shall be implemented to the maximum extent feasible. Prior to grading/building permit issuance and/or map recordation, all requirements shall be shown as conditions of approval on grading/building plans, and/or on a separate sheet to be recorded with the map. Conditions shall be adhered to throughout all grading and construction periods. The contractor shall retain the Certificate of Compliance for CARB's In-Use Regulation for Off-Road Diesel Vehicles onsite and have it available for inspection.

We hope you find our comments useful. We look forward to reviewing the Draft EIR. Please contact me at 961-8873 or by e-mail at HoD@sbcapcd.org if you have questions.

Sincerely,

Desmond Ho

Desmond Ho
Air Quality Specialist
Planning Division

Attachments: Fugitive Dust Control Measures
Diesel Particulate and NO_x Emission Measures

cc: Planning Chron File

air pollution control district
SANTA BARBARA COUNTY

ATTACHMENT A
FUGITIVE DUST CONTROL MEASURES

These measures are required for all projects involving earthmoving activities regardless of the project size or duration. Projects are expected to manage fugitive dust emissions such that emissions do not exceed APCD's visible emissions limit (APCD Rule 302), create a public nuisance (APCD Rule 303), and are in compliance with the APCD's requirements and standards for visible dust (APCD Rule 345).

- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required when sustained wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
- Onsite vehicle speeds shall be no greater than 15 miles per hour when traveling on unpaved surfaces.
- Install and operate a track-out prevention device where vehicles enter and exit unpaved roads onto paved streets. The track-out prevention device can include any device or combination of devices that are effective at preventing track out of dirt such as gravel pads, pipe-grid track-out control devices, rumble strips, or wheel-washing systems.
- If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than one day shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
- Minimize the amount of disturbed area. After clearing, grading, earthmoving, or excavation is completed, treat the disturbed area by watering, OR using roll-compaction, OR revegetating, OR by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur. All roadways, driveways, sidewalks etc. to be paved should be completed as soon as possible.
- Schedule clearing, grading, earthmoving, and excavation activities during periods of low wind speed to the extent feasible. During periods of high winds (>25 mph) clearing, grading, earthmoving, and excavation operations shall be minimized to prevent fugitive dust created by onsite operations from becoming a nuisance or hazard.
- The contractor or builder shall designate a person or persons to monitor and document the dust control program requirements to ensure any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to grading/building permit issuance and/or map clearance.

PLAN REQUIREMENTS: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing**: Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: The Lead Agency shall ensure measures are on project plans and/or recorded with maps. The Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

air pollution control district
SANTA BARBARA COUNTY

ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment greater than 50 brake horsepower (bhp) shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of diesel-powered mobile construction equipment greater than 25 hp are subject to the California Air Resource Board (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulation (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NOx), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of diesel-fueled heavy-duty trucks and buses are subject to CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NOx and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Off-road vehicles subject to the State Off-Road Regulation are limited to idling no more than five minutes. Idling of heavy-duty diesel trucks during loading and unloading shall be limited to five minutes, unless the truck engine meets the optional low-NOx idling emission standard, the truck is labeled with a clean-idle sticker, and it is not operating within 100 feet of a restricted area.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible. Electric auxiliary power units should be used to the maximum extent feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.
- Construction truck trips should be scheduled during non-peak hours to reduce peak hour emissions whenever feasible.
- Proposed truck routes should minimize to the extent feasible impacts to residential communities and sensitive receptors.
- Construction staging areas should be located away from sensitive receptors such that exhaust and other construction emissions do not enter the fresh air intakes to buildings, air conditioners, and windows.

PLAN REQUIREMENTS AND TIMING: Prior to grading/building permit issuance and/or map recordation, all requirements shall be shown as conditions of approval on grading/building plans, and/or on a separate sheet to be recorded with the map. Conditions shall be adhered to throughout all grading and construction periods. The contractor shall retain the Certificate of Compliance for CARB's In-Use Regulation for Off-Road Diesel Vehicles onsite and have it available for inspection.

MONITORING: The Lead Agency shall ensure measures are on project plans and/or recorded with maps. The Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

Nick Bobroff

From: todd.crowley@yahoo.com
Sent: Monday, November 16, 2020 8:23 PM
To: Nick Bobroff
Subject: Bates

****EXTERNAL EMAIL****

Dear Mr. Bobroff:

I write to voice sincere opposition to the proposed development that would change the topography of the Bates bluff.

The Bates free flight site is unique on the California Coast, and historically important for development of hang gliding and paragliding techniques that have improved performance, safety, and enjoyment for thousands locally and around the world.

I live in Utah, yet enjoy visiting Ventura annually to fly Bates.

Altering the slope will impair severely the wind currents and patterns such that not only will Bates be less flyable, if flyable at all, but since launching and ascending at Bates is necessary to access the ridges to the East, access to the ridge will be lost also.

I support property rights and also public access to the Coast.

I urge you to seek and implement a solution that enables the proposed access and use, but without altering Bates such that free flight use and enjoyment is lost forever.

Thank you for your consideration of this point of view.

Sincerely,

Todd Crowley, J.D.
United States Hang Gliding and Oaragliding Association Pilot #102302
(801) 910-8093

Nick Bobroff

From: Thomas Livingstone <tlphoto@frontier.net>
Sent: Tuesday, November 17, 2020 3:25 PM
To: Nick Bobroff
Subject: Bates/Rincon Bike path

EXTERNAL EMAIL

Good Afternoon,

As a part time resident of Carpinteria, I would like to chime in on the current proposal for the bike path extension. I am all for connecting the paths togethers through the Bates/Rincon area, However, as a paraglider pilot who has be flying at Bates for almost 30 years, I wish and hope that you consider what an incredible resource that having a ridge soaring site in Carpinteria is.
I know that paragliding is a relatively small fringe sport but its the small things that add to the greater whole which make Carpinteria so special. I'm not sure if there is a work around but once its gone it will be gone for good!

Thanks for your hard work on the project!

Sincerely, Thomas Livingstone

Nick Bobroff

From: Vince Semonsen <vsemonsen@gmail.com>
Sent: Tuesday, November 17, 2020 10:00 AM
To: Nick Bobroff
Subject: Re: Reminder: Rincon Trail EIR Scoping Meeting, Tuesday, November 17th at 4:30 p.m.

thanks Nick!
My only comment would be to request that the EIR try to address the hang gliders concerns with cutting back the hillsides.
Vince Semonsen

On Mon, Nov 16, 2020 at 4:52 PM Nick Bobroff <nickb@ci.carpinteria.ca.us> wrote:

> Good evening,
>
> This is a reminder that the City of Carpinteria will be hosting an environmental scoping meeting tomorrow afternoon (Tuesday, November 17th) beginning at 4:30 p.m. for the Rincon Multi-Use Trail Environmental Impact Report (EIR).
>
> If you would like additional information on the proposed project or information about your options for how to join the Zoom Webinar for the scoping meeting, please refer to the Notice of Preparation (NOP) released for this effort, available on the City's website at the following location:
>
> https://carpinteriaca.gov/wp-content/uploads/2020/10/FINAL_Carpinteria_Rincon_Trail-NOP__Attachment_A.pdf
>
> Alternatively, you may also join the Zoom Webinar directly through this link:
>
> https://us02web.zoom.us/j/85412486344
>
> Thank you,
>
> Nick Bobroff, Principal Planner
>
> Community Development Department
>
> (805) 755- 4407

Nick Bobroff

From: Ciuffetelli, Anthony <Anthony.Ciuffetelli@ventura.org>
Sent: Monday, November 30, 2020 10:07 AM
To: Nick Bobroff
Subject: Ventura County Agency Comments for Rincon Multi-Use Trail
Attachments: RMA 19-012-1_APCD.pdf; RMA 19-012-1_WPD.pdf; RMA 19-012-1_Cult_Heritage.pdf; RMA 19-012-1_EHD.pdf

Hello Mr. Bobroff,

Attached to this e-mail are the following comments regarding the Notice of EIR preparation:
-VC Air Pollution Control District
-VC Watershed Protection District
-VC Environmental Health Division
-VC Planning Division (Cultural Heritage section)

Please feel free to contact me with any questions regarding this submission. Responses to these comments should be sent directly to the commenter with a copy to me.

Regards,

Anthony Ciuffetelli
Ventura County Planning Division
Planning Programs
(805)654-2443

Ventura County
Air Pollution
Control District

669 County Square Dr
Ventura, California 93003

tel 805/645-1400
fax 805/645-1444
www.vcapcd.org

Dr. Laki Tisopulos, P.E.
Air Pollution Control Officer

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Nick Bobroff, Principal Planner

DATE: November 24, 2020

FROM: Nicole Collazo, Air Quality Specialist

SUBJECT: Comment Letter on Notice of Preparation of EIR for the Carpinteria Rincon Multi-Use Trail Project

Air Pollution Control District (APCD) staff has reviewed the subject Notice of Preparation (NOP) of a draft environmental impact report (EIR), which will identify any potential environmental impacts, for the construction and operation of the project mentioned above. The Lead Agency for the project is the City of Carpinteria.

GENERAL COMMENTS

The project lies within the jurisdiction of Santa Barbara County and the Santa Barbara County Air Pollution Control District (SBCAPCD). However, due to the construction operations occurring immediately adjacent to a residential community within Ventura County, it is suggested that emission reduction measures and fugitive dust control measures are recommended for construction operations occurring on the eastern end of the construction site to avoid dust-driven or odor-driven violations from complaints within Ventura County.

A reference document such as the Ventura County Air Quality Assessment Guidelines (AQAG), or SBCAPCD's guidelines for emission reduction measures for construction emissions are encouraged. We note that the AQAG has not been updated since 2003, serves as a guidance document, and greater reduction measures can be recommended for construction mitigation, including using newer, cleaner diesel Tier 3 or Tier 4 off-road engines and/or using on-road construction vehicles of year 2010 model or greater. These reduction measures can serve as a standard condition of approval for discretionary permit with Lead Agency in the case there are many sensitive receptors in the vicinity and/or if construction is expected to occur over several months. The diesel particulate matter (DPM) emissions from diesel-powered construction and grading equipment is a considered a toxic

air contaminant by the EPA and accounts for 70-80% of the overall cancer risk from mobile source emissions (CARB 2005 Land Use Handbook, MATES IV Study, respectively).

Thank you for the opportunity to comment on the project NOP. If you have any questions, you may reach me at nicole@vcapcd.org.

CULTURAL HERITAGE BOARD

county of ventura

November 6, 2020

Anthony Ciuffetelli
Ventura County Planning Division
Sent via email: Anthony.Ciuffetelli@ventura.org

Subject: **Request for Comment on Carpinteria Rincon Multi-Use Trail Project RMA Reference #19-012-1**

Dear Mr. Ciuffetelli,

Ventura County Cultural Heritage Board (CHB) Staff are in receipt of the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the above-referenced projects. Thank you for the opportunity to review and comment on the proposed telecommunications tower. We have researched the subject site, as well as property within the vicinity, and found the following:

- No listed or known historic resources eligible for listing are located on or near the subject site;
- Areas in the vicinity of the subject site do exhibit a low potential to contain paleontological resources;
- Areas in the vicinity of the subject site exhibits a high likelihood of containing archaeological resources (very sensitive).

A previous survey of the northern half of Ventura County indicated that "year-round settlements of Native Americans are located in areas of moderate winter climate, perennial water, and major plant communities for sustenance. […] Areas rich in natural resources, especially foods and implement materials, were sites of seasonal camp and food preparation sites."[1] We understand the subject area for the proposed project is located in the vicinity of natural waterways, including the Pacific Ocean and Rincon Creek. Due to the aforementioned historical practices, combined with the project site's proximity to these features, these activities could result in the subject area having a high sensitivity for tribal cultural resources. Therefore, it is recommended that outreach be conducted with relevant Native American tribes pursuant to federal and State law.

[1] James, Susanne M., *The North Half of Ventura County: Scenic, Biological and Cultural Resources*, April 1986.

Due to the potential paleontological and archaeological sensitivity of the subject site, implementation of the project could encounter previously undiscovered or unrecorded paleontological and archaeological sites, materials, and resources. Ground-disturbing activities have the potential to damage or destroy previously undiscovered or unrecorded paleontological and archaeological resources. Therefore, the following measures are recommended to reduce impacts to paleontological resources to the greatest extent feasible:

- The Applicant should retain a paleontological consultant or professional geologist to monitor all subsurface grading, trenching, or construction activities on the subject site;
- If any paleontological remains are uncovered during ground disturbance or construction activities, the Applicant should:
    a. Cease operations and ensure the preservation of the area in which the discovery was made;
    b. Notify the Lead Agency immediately;
    c. Obtain the services of a qualified paleontological consultant or professional geologist to assess the find and provide a report that assesses the resources and sets forth recommendations on the proper disposition of the site;
    d. Provide the paleontological report to the Lead Agency;
    e. Obtain the Lead Agency's written concurrence with the recommended disposition of the site before resuming development; and
    f. Implement the agreed upon recommendations.

Additionally, based on the subject site's high degree of sensitivity related to archeological resources, the following measures are recommended to reduce impacts to archaeological resources to the greatest extent feasible. Moreover, it is recommended that outreach be conducted with relevant Native American tribes to determine if known tribal cultural resources are present in the subject site area.

- The Applicant should retain a Native American monitor to monitor all subsurface grading, trenching, or construction activities on the subject site;
- If any archaeological or historical artifacts are uncovered during ground disturbance or construction activities, the Applicant should:
    a. Cease operations and ensure the preservation of the area in which the discovery was made;
    b. Notify the Lead Agency immediately;
    c. Obtain the services of a qualified archaeologist who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;
    d. Provide the report to the Lead Agency;

e. Obtain the Lead Agency's written concurrence with the recommended disposition of the site before resuming development; and
f. Implement the agreed upon recommendations.

- Consistent with Section 7050.5 of the California Health and Safety Code, if any human burial remains are encountered during ground disturbance or construction activities, the Applicant should:
    a. Cease operations and ensure the preservation of the area in which the discovery was made;
    b. Immediately notify the County Coroner and the Lead Agency;
    c. Obtain the services of a qualified archaeologist and, if necessary, Native American Monitor(s), who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;
    d. Provide the report to the Lead Agency;
    e. Obtain the Lead Agency's written concurrence with the recommended disposition of the site before resuming development; and
    f. Implement the agreed upon recommendations.

Thank you again for the opportunity to comment on the proposed project. If you require anything further or have questions regarding our findings, please do not hesitate to contact Dillan Murray at (805) 654-5042 or at Dillan.Murray@ventura.org.

Sincerely,

Dillan Murray
Cultural Heritage Program Planner

CC: Denice Thomas, Planning Programs Manager, Ventura County Planning Division
Case File

RESOURCE MANAGEMENT AGENCY
county of ventura

Environmental Health Division
Charles R. Genkel
Director

November 25, 2020

City of Carpinteria
Community Development Department
5775 Carpinteria Avenue
Carpinteria, CA 93013
ATTN: Nick Bobroff, Principal Planner

Carpinteria Rincon Trail, Environmental Document Review – Notice of EIR Preparation, (RMA REF # 19-012-1)

Ventura County Environmental Health Division (Division) staff reviewed the information submitted for the subject project.

Proposed Carpinteria Rincon Multi-Use Trail (Project) includes the construction of:

- A shared use trail;
- A clear-span bridge;
- A stormwater drainage collection system with new drain outlets to the ocean up to the western end of Rincon Beach County Park and the Ventura County Line in Santa Barbara County.

The Division provides the following comments:

1. Project includes the construction and use of three new stormwater drainage outlets south of the Union Pacific Railroad alignment and adjacent to the Rincon Creek outlet, which is a sampling point for the Division's Ocean Water Quality Monitoring Program (OWQMP). The additional drainage outlets near the Division's OWQMP sampling point at Rincon Creek outlet may result in potentially significant impacts, both during and after construction, due to exceedances of bacteriological standards.

2. The construction and use of the stormwater drainage outlets have the potential for proliferation of vectors of disease, including mosquitoes. Stormwater structures should be designed and maintained to prevent the harborage and breeding of vectors such as mosquitoes, as well as to minimize the potential health impacts created by these vectors. The Division's Vector Control and Mosquito Abatement Program staff respond to any complaints related to these potential vectors on the Ventura County side of Rincon Point.

800 South Victoria Avenue, Ventura, CA 93009-1730 (805) 654-2813 FAX (805) 654-2480
Internet Web Site Address: www.vcrma.org/divisions/environmental-health

If you have any questions, please contact me at (805) 654-2830 or Ashley.Kennedy@ventura.org.

Ashley Kennedy, R.E.H.S.
Land Use Section
Environmental Health Division

PUBLIC WORKS
VENTURA COUNTY

WATERSHED PROTECTION
WATERSHED PLANNING AND PERMITS DIVISION
800 South Victoria Avenue, Ventura, California 93009
Sergio Vargas, Deputy Director – (805) 650-4077

M E M O R A N D U M

DATE: November 13, 2020

TO: Anthony Ciuffetelli RMA Case Planner
County of Ventura

FROM: Alex Hill, Engineer II – Advanced Planning Section

SUBJECT: RMA19-012 Carpinteria Rincon Trail
Zone 4
Watershed Protection Project Number: WC2019-0081

Pursuant to your request dated October 30, 2020, this office has reviewed the submitted materials and provides the following comments.

PROJECT LOCATION:

The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue in the City of Carpinteria to the western end of Rincon Beach County Park and the Ventura County Line in Santa Barbara County.

PROJECT DESCRIPTION:

Watershed Protection previously provided a “No Comment” response on 11/6/2019 and the following comments provide context for that rationale. The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria, to Rincon Beach County Park, in Santa Barbara County. The proposed shared-use trail would be 16-feet wide (10- foot wide path with 3-foot wide paved shoulder along both sides) and approximately 2,800-feet long and would include a clear-span bridge over the UPRR alignment. The bridge would be approximately 160-feet-long, with a width of between 14-feet and 16- feet (clear width, measured inside the bridge rails). Earthwork for the trail construction would involve 104,000 cubic yards of cut, 10,300 cubic yards of which would be used for fill on-site and 94,100 cubic yards would be exported off-site. A storm drainage collection system is proposed, with new drain outlets to the ocean. The new, shared-use trail would provide a strategic addition to Carpinteria's Coastal Vista Trail that upon completion, would connect Padaro Lane to the west and Rincon Beach County Park to the east. In addition to providing critical improvements in public safety, the completion of this trail segment would provide improved public coastal access and recreational opportunities, and enhancement of non-vehicular travel alternatives to the region’s significant coastal resources.

WATERSHED PROTECTION DISTRICT COMMENTS:

The following comments are intended to provide context for the application review process, and they require no further action.

Flood Control Facilities / Watercourses – Ventura County Watershed Protection District

1. The project is located to the West of Highway 101 within Santa Barbara and Ventura Counties. There are no proposed direct connections to any Ventura County Watershed Protection District Jurisdictional redline channel. Project drainage will be conveyed to three (3) existing and three (3) proposed storm drains that will discharge into the Pacific Ocean, therefore there is no impact to WP facilities.

Hydraulic Hazards – FEMA

2. The project site is in a location identified by the Federal Emergency Management Agency (FEMA) as an area of minimal flood hazard Zone X unshaded. This is evidenced on FEMA Map Panel 06083C1438H effective September 28, 2018. The proposed development is therefore, deemed to be Less than Significant for Hydraulic Hazards - FEMA.

If you have any questions, please feel free to contact me by email at Alexander.Hill@ventura.org or by phone at (805) 654-3795.

END OF TEXT

Nick Bobroff

From: Horn, Wesley@Coastal <Wesley.Horn@coastal.ca.gov>
Sent: Wednesday, November 04, 2020 1:00 PM
To: Nick Bobroff
Subject: Rincon Trail NOP

****EXTERNAL EMAIL****

Hi Nick,

I hope you have been doing well. I know you are really busy but I received your email about the NOP for the Rincon Trail and had a chance to review and I was hoping to talk to you real quick about the project. Are you possibly free sometime over the next few days to talk about this real quick?

I have an item on the Commission agenda for tomorrow, but it will likely go consent. I'm generally free Thursday and Friday so if there is a time that works best for you let me know.

Thanks,
Wes

Nick Bobroff

From: Horn, Wesley@Coastal <Wesley.Horn@coastal.ca.gov>
Sent: Monday, November 30, 2020 3:02 PM
To: Nick Bobroff
Subject: RE: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)
Attachments: CCC Comments Carpinteria Trail SMND.pdf

****EXTERNAL EMAIL****

CAUTION: This email originated from outside the City of Carpinteria. DO NOT OPEN attachments or CLICK on links unless you are sure they are safe. Remember, reputable vendors, banks, etc. will not ask you to disclose passwords or other sensitive information.

Hello Nick,

Thank you for providing the opportunity to comment on the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project. Commission staff had the opportunity to review this NOP and the project here is the same project reviewed and commented on by Commission staff back in December 2019. Commission staff's concerns regarding grading and landform alteration, environmentally sensitive habitat area (ESHA), public access, and water quality are still relevant and as such our December 2019 comment letter is attached to this email for consideration for this NOP.

Commission staff would appreciate the opportunity to meet with City staff and further discuss our concerns what possible revisions can be made to the project to minimize impacts to coastal resources.

A hard copy of this email correspondence and attached letter will be sent by mail and should be arriving shortly.

Please let us know if you have any questions,

Wesley Horn
Transportation Program Analyst | California Coastal Commission
89 South California Street, Ventura, CA 93001
Wesley.Horn@coastal.ca.gov| (805) 585-1800

Every Californian should conserve water. Find out how at:
SaveOurWater.com · Drought.CA.gov

From: Nick Bobroff <nickb@ci.carpinteria.ca.us>
Sent: Thursday, October 29, 2020 7:40 PM
To: Nick Bobroff <nickb@ci.carpinteria.ca.us>
Subject: Notice of Preparation (NOP) for Carpinteria Rincon Multi-Use Trail Environmental Impact Report (EIR)

The City of Carpinteria has released a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Rincon Multi-Use Trail project.

The City is soliciting comments from the public concerning the contents and analysis to be considered in the EIR for the proposed project. The scoping comment period will run from October 30, 2020 to November 30, 2020 at 5:00 p.m. A virtual public scoping meeting will be held online on Tuesday, November 17th at 4:30 p.m. via Zoom Webinar. Information on how to attend the virtual scoping meeting is included in the NOP.

The Notice of Preparation and detailed project description are available on the City's Rincon Trail project webpage at:
https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/
A copy of the NOP and project description is also attached to this email.

Should you have any questions about the proposed project or this NOP, please feel free to contact me.
Thank you,
Nick Bobroff, Principal Planner
Community Development Department
(805) 755- 4407

CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT OFFICE
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

December 2, 2019

Nick Bobroff, Senior Planner
Community Development Department
5775 Carpinteria Avenue
Carpinteria, CA 93013

RE: Draft Subsequent Mitigated Negative Declaration for the Carpinteria Rincon Trail (Conditional Use Permit/Coastal Development Permit 19-2015-CUP/CDP)

Dear Mr. Bobroff:

Commission staff has reviewed the Draft Subsequent Mitigated Negative Declaration (SMND) regarding the proposed realignment and redesign of the Carpinteria Rincon Trail located within the City of Carpinteria and Santa Barbara County, and we appreciate the opportunity to provide comments for your consideration. The subject SMND modifies the previously circulated Mitigated Negative Declaration (MND) for the Rincon Trail, which was subsequently approved by the City through CDP No. 15-1760, and included a 12 foot wide and 4,000 foot long shared-use trail, a 110 foot long clear-span bridge over the Union Pacific Rail Road (UPRR) alignment, 17 public parking spaces and a rest area with three picnic tables, signage, lighting and a storm drainage collection system including an on-site bioswale and a 5,000 gallon cistern to provide water for native landscaping during dry months. The original project also included 30,000 cubic yards of cut, 7,000 cubic yards of fill and 23,000 cubic yards of export. As described within the SMND, the previously approved project is proposed to be modified to include a 16 foot wide and approximately 2,800 foot long shared-use trail, a 160 foot long clear-span bridge over the UPRR alignment, and a storm drainage collection system including new drain outlets to the ocean. The project, as proposed to be amended, would also include 104,000 cubic yards of cut, 10,300 cubic yards of fill and 94,100 cubic yards of export.

The SMND states that the proposed realignment is necessary to avoid areas with historic landslides, to eliminate the need for retaining walls, to shorten the path length, and to ensure accessibility of the trail for persons with disabilities pursuant to Americans with Disabilities Act (ADA) and Architectural Barriers Act requirements. Despite these improvements, the proposed project to realign and redesign the Rincon Trail raises issues regarding grading and landform alteration, native vegetation communities, public access, and water quality. The entire project is located in the Coastal Zone, but spans both the jurisdiction of the City of Carpinteria (City) and County of Santa Barbara (County). Because the Commission has certified a LCP for both the City and County, the standard of review for the proposed project would be the respective LCP policies and provisions.

Grading and Landform Alteration

The previously approved project included 30,000 cubic yards of cut, 7,000 cubic yards of fill, and 23,000 cubic yards of export while the proposed realignment and redesign includes 104,000 cubic yards of cut, 10,300 cubic yards of fill and 94,100 cubic yards of export. This is a 77,300 cubic yard increase in the total amount of grading. The City's LCP contains Coastal Act Section 30251, which requires that

the scenic and visual qualities of coastal areas shall be considered and protected and that new development is sited and designed to minimize alteration of natural land forms and also subordinate to the character of its setting. The proposed project would significantly increase the amount of grading and landform alteration at the subject site. While grading impacts were analyzed in the draft SMND, it was determined that with the incorporation of mitigation measures the proposed project would not result in any significant impacts as a result of grading. However, in order to determine consistency with the certified LCP, siting and design alternatives to minimize grading and landform alteration must be analyzed. Furthermore, because the previously approved project would require significantly less grading, it appears that there are other feasible design alternatives that minimize the amount of grading and landform alteration consistent with Coastal Act Section 30251.

ESHA

Coastal Act Section 30240, which is incorporated into the City's LCP, requires that Environmentally Sensitive Habitat Areas (ESHA) be protected to the maximum extent feasible. The draft SMND includes an analysis of temporary and permanent impacts to various vegetation communities; however, the analysis should specifically identify and analyze potential impacts to ESHA and should evaluate project alternatives that would avoid impacts to the maximum extent feasible. Only if no feasible project alternative exists for avoidance then the alternative that minimizes impacts to the maximum extent feasible should be selected and mitigation should be required.

Public Access

The previously approved project included the construction of 17 public parking spaces and a rest area with picnic tables at the western terminus of the Rincon Trail, located along Carpinteria Avenue. However, the proposed redesign and realignment does not include the construction of these public access amenities, and the draft SMND indicates that instead, the existing dirt lot would continue to provide informal parking. However, based upon the information included within the SMND, it is unclear which portions of the dirt areas along Carpinteria Avenue are intended to function as parking for the proposed trail, and if those areas are actually available for public use. In order to facilitate maximum public access to the Rincon Trail, and to ensure consistency with the public access policies of the LCP, the final SMND should analyze project alternatives that include construction of the previously approved, or similar, public access components.

Water Quality

The draft SMND states that because there are no parking lots or other facilities that would result in the creation of impervious surfaces , the project would be considered exempt from post-construction water quality control requirements pursuant to California Central Coast Regional Water Quality Control Board Resolution No. R3-2013-0032. As such, the previously approved storm drainage collection system, including the on-site bioswale and a 5,000 gallon cistern, are no longer proposed. Instead, the proposed project would include a drainage system that would convey storm water run-off from the trail surface to the ocean via outfalls. No storm water treatment components are proposed. Section 30231 of the Coastal Act, as incorporated into the City's LCP, requires development to maintain the quality of coastal waters through minimizing the adverse effects of waste water discharges and entrainment and controlling runoff. In order to ensure consistency with the City's LCP, the final SMND should include an analysis of project alternatives that incorporate storm water treatment components that would prevent untreated storm water from being released directly into the marine environment.

Each of the issues identified in this letter, as well as other impacts identified in the environmental review process, should be analyzed in the context of alternative project designs. As described above, an analysis of project alternatives is critical to ensure that adverse impacts to coastal resources are avoided to the maximum extent feasible, and that unavoidable impacts are minimized and mitigated. Please note that the comments provided herein are preliminary in nature. More specific comments may be appropriate as the project develops, and Coastal Commission staff requests notification of any future activity associated with this project or related projects. Again, thank you for the opportunity to comment.

Thank you for your consideration of our comments.

Sincerely,

Wesley Horn
Coastal Program Analyst

County Of Santa Barbara

Mona Miyasato
County Executive Officer

105 East Anapamu Street
Room 406
Santa Barbara, California 93101
805-568-3400 • Fax 805-568-3414
www.countyofsb.org

Executive Office

Assistant County Executive Officers
Nancy Anderson
Jeff Frapwell
Bernard Melekian
Terri Nisich

November 30, 2020

Nick Bobroff, Principal Planner
City of Carpinteria
Community Development Department
5775 Carpinteria Ave
Carpinteria, CA 93103
Email: nickb@ci.carpinteria.ca.us

RE: Notice of EIR Preparation for the Carpinteria Rincon Multi-Use Trail

Dear Mr. Bobroff:

Thank you for the opportunity to comment on the Notice of Preparation for a Environmental Impact Report for the Carpinteria Rincon Multi-Use Trail. At this time, the County submits comments from the Planning and Development Department, and Community Services Department.

If you should have further questions, please do not hesitate to contact my office directly, or Lisa Plowman, Director of the Planning and Development Department, at (805) 568-2086 or, Jeff Lindgren, Park Superintendent for the Parks Division of the Community Services Department, at (805) 568-2475.

Sincerely,

Nancy Anderson
Assistant County Executive Officer

cc: Lisa Plowman, Director of the Planning and Development Department
Jeff Lindgren, Park Superintendent, Community Services Department, Parks Division

Enclosure: Planning and Development Department Letter, dated November 23, 2020
Community Services Department Letter, dated November 24, 2020

County of Santa Barbara
Planning and Development

Lisa Plowman, Director
Jeff Wilson, Assistant Director
Steve Mason, Assistant Director

November 23, 2020

Nick Bobroff, City of Carpinteria
5775 Carpinteria Avenue,
Carpinteria, CA 9301
Email: nickb@ci.carpinteria.ca.us

Re: Carpinteria Rincon Multi-Use Trail Notice of Preparation for an Environmental Impact Report

Dear Mr. Bobroff:

The County of Santa Barbara Planning and Development Department reviewed the Notice of Preparation (NOP) for the Carpinteria Rincon Multi-Use Trail and appreciates the opportunity to provide the comments listed below.

1. **Project Description**
   - The project description should include a list of agencies and permit approvals necessary to implement the proposed project.
   - Please include the expected parking demand and proposed parking improvements. If none are proposed, please substantiate this decision.
   - Please outline the proposed maintenance plan and/or agreement between jurisdictions for the trail.
   - Please describe how bike and pedestrian trail users will safely traverse through the Rincon Beach parking lot and avoid conflict with vehicles in the parking lot (i.e. separated pathway for bikes and pedestrians, striping, etc.). Consider a pathway connection parallel to the parking lot.

2. **Trail Location**
   - The alternatives analysis should include alternative trail alignments, and weigh the ocean view versus required earthwork for the proposed alignment.
   - Provide any quantitative analysis for the impacts to wind patterns and best alternatives, if any.

3. **Landscape**
   - Please outline a basic landscape and irrigation plan and confirm how irrigation will be provided.
   - Identify an anticipated native plant palette for landscaping.

4. General

- Please ensure the EIR is circulated to UPPR for their review and comments.
- Please provide the anticipated impacts to existing vegetation and habitat communities resulting from the project.
- Please confirm that local and County Emergency services have reviewed and are satisfied with the proposed project plan, including the proposed bridge.
- Please provide additional detail in the EIR on the proposed storm drains to address visual impacts, including photosimulations and/or further aesthetic analysis. Please indicate their size, length and any other relevant information.
- The EIR should use the Santa Barbara County Environmental Thresholds in addition to those used by the City of Carpinteria. The County Environmental Thresholds Manual can be found here: https://www.countyofsb.org/plndev/permitting/environmentalreview.sbc
- The County's permit will include a policy consistency analysis with the County's Comprehensive Plan. The EIR should provide information throughout the document, and specifically in the Land Use section, to address the relevant County policies, including:

Recreation

- **Coastal Land Use Plan Policy 7-33**: To encourage walking and biking as alternatives to travel by automobile, the County shall strongly encourage development of new pedestrian and/or bicycle-friendly paths along the highway corridor. Improvements to Highway 101 shall not remove existing bikeways or pedestrian paths or preclude the development of proposed bikeways or pedestrian paths that are identified in the County's Comprehensive Plan, Coastal Land Use Plan and community plans, without providing comparable or better replacement facilities.

- **Coastal Act 30211**. Development shall not interfere with the public's right of access to the sea where acquired through use, custom, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

- **Coastal Act Policy 30252**. The location and amount of new development should maintain and enhance public access to the coast by: (1) facilitating the provision or extension of transit service; (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads; (3) providing non-automobile circulation within the development; (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation; (5) assuring the potential for public transit for high-intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not- overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.

- **Coastal Act Policy 30210**. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners and natural resource areas from overuse.

- **Coastal Act Policy 30212.5** Wherever appropriate and feasible, public-facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

- **Coastal Act Policy 30213**. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

- **CLUP Policy 7-8**: Increased opportunities for beach access shall be provided in the Carpinteria planning area.

Geologic:

- **CLUP Policy 3-13:** Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.

- **CLUP Policy 3-14:** All development shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited for development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.

Environmentally Sensitive Habitat:

- **Coastal Act Policy 30240 (b).** Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Visual:

- **Coastal Act Policy 30251.** The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

- **CLUP Policy 4-3:** In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural landforms; shall be designed to follow the natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing places.

Transportation:

- **Circulation Element Policy 5C:** The County shall continue to develop programs that encourage the use of alternative modes of transportation including, but not limited to, an updated bicycle route plan, park and ride facilities, and transportation demand management ordinances.

5. Future Notices

- When they become available, please send a copy of the Draft EIR Notice of Completion, all notices of City decision-maker hearings regarding the project, and Final EIR Notice of Determination to:
    - Dan Klemann, Deputy Director of Long Range Planning, via email at dklemann@countyofsb.org or mail at 123 E. Anapamu Street, Santa Barbara, CA 93101.
    - Ciara Ristig, Senior Planner, via email at cristig@countyofsb.org or mail at 123 E. Anapamu Street, Santa Barbara, CA 93101
    - Tess Harris, Supervising Planner, via email at tharris@countyofsb.org or mail at 123 E. Anapamu Street, Santa Barbara, CA 93101

Thank you for the opportunity to provide comments on the NOP. If you have any questions or require further information, please contact me at (805) 568-2086 or Mr. Klemann at (805) 568-2072.

Regards,

Lisa Plowman

Lisa Plowman, Director
Planning & Development Department

cc: Dan Klemann, Deputy Director, Long Range Planning Division
Zoe Carlson, Senior Planner, Planning and Development Department
Ciara Ristig, Senior Planner, Planning and Development Department
File

Community Services Department
Connecting People to Opportunities

George Chapjian, Director, Community Services
Sarah York Rubin, Executive Director, Office of Arts & Culture
Ryder Bailey, CPA, Chief Financial Officer, Community Services
Dinah Lockhart, Deputy Director, Housing & Community Development
Jeff Lindgren, Superintendent, Park Division
Ashley Watkins, Division Chief, Sustainability Division

November 24, 2020

Nick Bobroff, Principal Planner
City of Carpinteria
Community Development Department
5775 Carpinteria Avenue
Carpinteria, CA 93013

Subject: Carpinteria Rincon Multi-Use Trail
NOP Comments

Dear Mr. Bobroff,

Thank you for the opportunity to comment on the Notice of Preparation for the draft Environmental Impact Report for the Carpinteria Rincon Multi-Use Trail. Santa Barbara County Parks Division looks forward to the implementation of this key link in the California Coastal Trail between Carpinteria and Rincon Beach County Park. The Parks Division also looks forward in partnering with the City of Carpinteria and the Santa Barbara County Association of Governments in planning the continuation of this path to close a gap between this project and the multi-use path that begins at the Bates Road Highway 101 southbound onramp and continues south alongside the highway toward Ventura.

The County Parks Division comments on the NOP are as follows:

Transportation Section:

Upper Rincon Parking Lot

Although this project will provide significant benefit of direct bike and ped access between Carpinteria and Rincon Beach County Park, it will leave a gap in path continuity between the eastern endpoint of the project and the existing path that originates near the Bates Road southbound onramp and continues into Ventura County. The County Parks Rincon upper parking lot is situated between the two path endpoints however it is not intended nor designed to be a throughway for bicyclists and other trail users connecting through, particularly with the two paths at each end serving as key links in the popular California Coastal Trail. Accordingly, the Parks Division requests the DEIR require development of a plan that includes milestones and identifies responsible parties to implement a multi-use path that would parallel the parking lot to provide a separate route for trail users.

Also, for clarity, the Existing Trail Network figure should be revised to demarcate the segment along the upper Rincon parking lot as "Future Trail" rather than as part of the project as "Proposed Trail."

Emergency Access

The Parks Division requests the DEIR indicate the type of emergency vehicles that can utilize the proposed bridge. If it is not proposed to be rated for all standard types of emergency vehicles, the impact analysis should assess response times including the ability to access an emergency from either

the Carpinteria Ave trailhead or from the Rincon Parking lot depending on the location of the emergency along the path whether it be an accident, crime activity or fire.

Air Quality, Noise, Recreation and Transportation Sections:
The NOP indicates 94,100 cubic yards of earth material will need to be exported off site for construction activities which according to the proposed final MND will require approximately 5,880 dump truck round trips. It is assumed doubling that number to 11,760 would account for the total number of one way dump truck trips to be either entering or leaving the project site.

In order to assess the impact of truck trips that will use the upper Rincon parking lot, the Parks Division requests this figure be split between total number of trips necessary to access the project site west of the railroad (City jurisdiction) and of total number of truck trips necessary to access east of the railroad (County jurisdiction) through the Rincon parking lot. The impact analysis should also include assessing the expected number of days of the week (if possible) and which months of the year the dump trucks will need to access the project site through the Rincon parking lot.

The analysis should evaluate the impact of dump truck trips on users of the Rincon Park grassy recreational picnic area located adjacent to the upper parking lot and to beach goers using the beach below with respect to air quality, noise, recreation including beach access and transportation (parking) and how it can be mitigated. If parking stalls are proposed to be used for staging if no other staging location is possible, Parks Division also requests the analysis assess the impacts with mitigations of potentially increased parking demand to the lower Rincon Point Parking lot and the parking along Bates Road as a result.

The Parks Division requests mitigation include not allowing construction to occur during the weekends during the busier November to March months and assessing the use of larger dump trucks if possible to lessen the amount of overall trips.

Aesthetics Section:
The NOP indicates that three vertical storm drains are proposed to be installed down the County Park bluff face below the proposed path in addition to the two other storm drains that already exist. The Parks Division requests the DEIR assess the aesthetic impacts and mitigations of the storm drains to trail users, beachgoers and those recreating in the ocean (e.g., surfers, boaters). Photo renditions should include directly facing the bluff, farther down the beach such as to the east near Rincon Point and to the west at the beach below the Carpinteria Bluffs Nature Preserve, and from a trail user's view walking east along the higher grade toward the proposed bridge to ascertain the level of impact.

Utilities and Service Systems:
Regarding the dumping of excess earth material from excavation, please note that Rincon Beach cannot be used as a dumping site due to the popular use of the beach.

I can be reached at (805) 568-2475 if you have any questions.

Sincerely

Jeffrey Lindgren

Jeff Lindgren
Park Superintendent, Community Services Department, Parks Division

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

11/25/2020

City: Carpinteria - Community Development Department
Nick Bobroff
5775 Carpinteria Avenue, Carpinteria, CA 93013, USA
nickb@ci.carpinteria.ca.us

Construction Site Well Review (CSWR) ID: 1012181

Assessor Parcel Number(s): 001220100, 001010032, 001220092, 001220101

Property Owner(s): Mulitple property owners

Project Location Address: City of Carpinteria/County of Santa Barbara, California, 93013

Project Title: Carpinteria Rincon Multi-Use Trail SCH Number 2020100582

Public Resources Code (PRC) § 3208.1 establishes well reabandonment responsibility when a previously plugged and abandoned well will be impacted by planned property development or construction activities. Local permitting agencies, property owners, and/or developers should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil, gas, and geothermal wells.

The Division of Oil, Gas, and Geothermal Resources (Division) has received and reviewed the above referenced project dated 11/6/2020. To assist local permitting agencies, property owners, and developers in making wise land use decisions regarding potential development near oil, gas, or geothermal wells, the Division provides the following well evaluation.

The project is located in Santa Barbara County, within the boundaries of the following fields:

Any Field

One well is currently projected to be built over, "Dr. R. W. Hill" 1 (API: 0408304847). CalGEM recommends locating this well and leak testing it prior to any development.

Please note CalGEM well locations are approximate. "Well No." 1 (API: 0408304324) is currently shown to be under Highway 101, 150 feet northeast of the proposed project. This well may be closer to the project location.

Our records indicate there are 1 known oil or gas wells located within the project boundary as identified in the application.

- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 1
- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0

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- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0

The Division categorically advices against building over, or in any way impeding access to, oil, gas, or geothermal wells. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access including, but not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, roadways, and decking. Maintaining sufficient access is considered the ability for a well servicing unit and associated necessary equipment to reach a well from a public street or access way, solely over the parcel on which the well is located. A well servicing unit, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.

There are no guarantees a well abandoned in compliance with current Division requirements as prescribed by law will not start leaking in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. The Division acknowledges wells plugged and abandoned to the most current Division requirements as prescribed by law have a lower probability of leaking in the future, however there is no guarantees that such abandonments will not leak.

The Division advises that all wells identified on the development parcel prior to, or during, development activities be tested for liquid and gas leakage. Surveyed locations should be provided to the Division in Latitude and Longitude, NAD 83 decimal format. The Division expects any wells found leaking to be reported to it immediately.

Failure to plug and reabandon the well may result in enforcement action, including an order to perform reabandonment well work, pursuant to PRC § 3208.1, and 3224.

PRC § 3208.1 give the Division the authority to order or permit the re-abandonment of any well where it has reason to question the integrity of the previous abandonment, or if the well is not accessible or visible. Responsibility for re-abandonment costs may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general advice set forth in this letter. The PRC continues to define the person or entity responsible for reabandonment as:

1. The property owner - If the well was plugged and abandoned in conformance with Division requirements at the time of abandonment, and in its current condition does not pose an immediate danger to life, health, and property, but requires additional work solely because the owner of the property on which the well is located proposes construction on the property that would prevent or impede access to the well for purposes of remedying a currently perceived future problem, then the owner of the property on which the well is located shall obtain all

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rights necessary to reabandon the well and be responsible for the reabandonment.

2. The person or entity causing construction over or near the well - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and the property owner, developer, or local agency permitting the construction failed either to obtain an opinion from the supervisor or district deputy as to whether the previously abandoned well is required to be reabandoned, or to follow the advice of the supervisor or district deputy not to undertake the construction, then the person or entity causing the construction over or near the well shall obtain all rights necessary to reabandon the well and be responsible for the reabandonment.

3. The party or parties responsible for disturbing the integrity of the abandonment - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and after that time someone other than the operator or an affiliate of the operator disturbed the integrity of the abandonment in the course of developing the property, then the party or parties responsible for disturbing the integrity of the abandonment shall be responsible for the reabandonment.

No well work may be performed on any oil, gas, or geothermal well without written approval from the Division. Well work requiring approval includes, but is not limited to, mitigating leaking gas or other fluids from abandoned wells, modifications to well casings, and/or any other re-abandonment work. The Division also regulates the top of a plugged and abandoned well's minimum and maximum depth below final grade. CCR §1723.5 states well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this regulation, a permit from the Division is required before work can start.

The Division makes the following additional recommendations to the local permitting agency, property owner, and developer:

1. To ensure that present and future property owners are aware of (a) the existence of all wells located on the property, and (b) potentially significant issues associated with any improvements near oil or gas wells, the Division recommends that information regarding the above identified well(s), and any other pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property.

2. The Division recommends that any soil containing hydrocarbons be disposed of in accordance with local, state, and federal laws. Please notify the appropriate authorities if soil containing significant amounts of hydrocarbons is discovered during development.

As indicated in PRC § 3106, the Division has statutory authority over the drilling, operation,

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maintenance, and abandonment of oil, gas, and geothermal wells, and attendant facilities, to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil, gas, and geothermal deposits; and damage to underground and surface waters suitable for irrigation or domestic purposes. In addition to the Division's authority to order work on wells pursuant to PRC §§ 3208.1 and 3224, it has authority to issue civil and criminal penalties under PRC §§ 3236, 3236.5, and 3359 for violations within the Division's jurisdictional authority. The Division does not regulate grading, excavations, or other land use issues.

If during development activities, any wells are encountered that were not part of this review, the property owner is expected to immediately notify the Division's construction site well review engineer in the Coastal district office, and file for Division review an amended site plan with well casing diagrams. The District office will send a follow-up well evaluation letter to the property owner and local permitting agency.

Should you have any questions, please contact me at (805) 937-7246 or via email at Pat.Abel@conservation.ca.gov

Sincerely,

Pat Abel
Coastal District Deputy

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Wells Not Abandoned to Current Division Requirements as Prescribed by Law & Projected to be Built Over or Have Future Access Impeded

The wells listed below are not abandoned to current Division requirements as prescribed by law, and based upon information provided, are projected to be built over or have future access impeded. **The Division expects these wells to be reabandoned in compliance with current California law, prior to development activities.**

API	Well Designation	Operator	Well Evaluations
0408304847	1	Dr. R. W. Hill	Based on current well location and the currently planned trail location this well is projected to have the multi-use trail constructed over it. Based on well records: 1. There is no record of an oil/gas zone plug (CCR § 1723.1) 2. There is no record of a freshwater plug (CCR § 1723.2) 3. There is no record of a casing shoe plug (CCR § 1723.3) 4. There is no record of a surface plug (CCR § 1723.5)

Appendix B

Air Quality and Greenhouse Gas Emissions Calculations

Table of Contents

Carpinteria Rincon Trail

Santa Barbara-South of Santa Ynez Range County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6.15	1000sqft	0.14	6,150.00	0
City Park	1.40	Acre	1.40	60,984.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Based on project description.

Off-road Equipment - CalEEmod defaults.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Trips and VMT - CalEEMod defaults. Odd trips were rounded up to account for whole round trips.

On-road Fugitive Dust - CalEEMod defaults.

Grading - Based on City provided data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - For maintenance, assumption of one trip per week.

Energy Use - No energy use.

Water And Wastewater - CalEEMod defaults.

Solid Waste - CalEEMod defaults.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - In accordance with SBCAPCD Rule 345.

Operational Off-Road Equipment - NA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	4.00	224.00
tblConstructionPhase	NumDays	200.00	96.00

tblConstructionPhase	NumDays	200.00	10.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	10.00	20.00
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	MaterialExported	0.00	94,100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Trail Construction
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	11,763.00	11,764.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblVehicleTrips	ST_TR	22.75	1.43
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1415	2.4975	1.0291	5.3600e-003	0.2978	0.0523	0.3501	0.0862	0.0482	0.1344	0.0000	522.4596	522.4596	0.0842	0.0000	524.5635
2023	0.0706	0.8524	0.5333	1.9500e-003	0.1980	0.0253	0.2233	0.0355	0.0234	0.0589	0.0000	182.6620	182.6620	0.0359	0.0000	183.5604
Maximum	**0.1415**	**2.4975**	**1.0291**	**5.3600e-003**	**0.2978**	**0.0523**	**0.3501**	**0.0862**	**0.0482**	**0.1344**	**0.0000**	**522.4596**	**522.4596**	**0.0842**	**0.0000**	**524.5635**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1415	2.4975	1.0291	5.3600e-003	0.1899	0.0523	0.2421	0.0539	0.0482	0.1021	0.0000	522.4594	522.4594	0.0842	0.0000	524.5633
2023	0.0706	0.8524	0.5333	1.9500e-003	0.1411	0.0253	0.1664	0.0292	0.0234	0.0526	0.0000	182.6619	182.6619	0.0359	0.0000	183.5603
Maximum	**0.1415**	**2.4975**	**1.0291**	**5.3600e-003**	**0.1899**	**0.0523**	**0.2421**	**0.0539**	**0.0482**	**0.1021**	**0.0000**	**522.4594**	**522.4594**	**0.0842**	**0.0000**	**524.5633**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**33.24**	**0.00**	**28.75**	**31.72**	**0.00**	**19.97**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2022	5-31-2022	0.6833	0.6833
2	6-1-2022	8-31-2022	0.8283	0.8283
3	9-1-2022	11-30-2022	0.8209	0.8209
4	12-1-2022	2-28-2023	0.6781	0.6781
5	3-1-2023	5-31-2023	0.2380	0.2380
6	6-1-2023	8-31-2023	0.2616	0.2616
7	9-1-2023	9-30-2023	0.0200	0.0200
		Highest	0.8283	0.8283

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1900e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0000e-005	2.4000e-004	6.6000e-004	0.0000	1.7000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1656	0.1656	1.0000e-005	0.0000	0.1658
Waste						0.0000	0.0000		0.0000	0.0000	0.0249	0.0000	0.0249	1.2400e-003	0.0000	0.0558
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.8602	1.8602	8.0000e-005	2.0000e-005	1.8669
Total	**1.2600e-003**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0249**	**2.0259**	**2.0508**	**1.3300e-003**	**2.0000e-005**	**2.0886**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1900e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0000e-005	2.4000e-004	6.6000e-004	0.0000	1.7000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1656	0.1656	1.0000e-005	0.0000	0.1658
Waste						0.0000	0.0000		0.0000	0.0000	0.0249	0.0000	0.0249	1.2400e-003	0.0000	0.0558
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.8602	1.8602	8.0000e-005	2.0000e-005	1.8669
Total	**1.2600e-003**	**2.4000e-004**	**7.3000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0249**	**2.0259**	**2.0508**	**1.3300e-003**	**2.0000e-005**	**2.0886**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2022	4/13/2022	5	32	
2	Grading	Grading	4/14/2022	2/21/2023	5	224	
3	Trail Construction	Building Construction	2/22/2023	7/5/2023	5	96	
4	Bridge Construction	Building Construction	7/6/2023	7/19/2023	5	10	
5	Paving	Paving	7/20/2023	9/1/2023	5	32	
6	Architectural Coating	Architectural Coating	9/2/2023	9/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 16

Acres of Grading (Grading Phase): 182

Acres of Paving: 0.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 369 (Architectural Coating – sqft)

OffRoad Equipment

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Crawler Tractors	1	7.00	212	0.43
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trail Construction	Cranes	0	6.00	231	0.29
Trail Construction	Crawler Tractors	1	7.00	212	0.43
Trail Construction	Forklifts	0	6.00	89	0.20
Trail Construction	Generator Sets	0	8.00	84	0.74
Trail Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trail Construction	Welders	0	8.00	46	0.45
Bridge Construction	Cranes	1	8.00	231	0.29
Bridge Construction	Forklifts	0	6.00	89	0.20
Bridge Construction	Generator Sets	0	8.00	84	0.74
Bridge Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Bridge Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Crawler Tractors	1	8.00	212	0.43
Paving	Pavers	0	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	11,764.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Trail Construction	2	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Bridge Construction	5	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0928	0.0000	0.0928	0.0473	0.0000	0.0473	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.2340	0.1135	2.8000e-004		9.9600e-003	9.9600e-003		9.1600e-003	9.1600e-003	0.0000	24.1844	24.1844	7.8200e-003	0.0000	24.3800
Total	**0.0210**	**0.2340**	**0.1135**	**2.8000e-004**	**0.0928**	**9.9600e-003**	**0.1028**	**0.0473**	**9.1600e-003**	**0.0564**	**0.0000**	**24.1844**	**24.1844**	**7.8200e-003**	**0.0000**	**24.3800**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	2.5000e-003	1.0000e-005	7.9000e-004	0.0000	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6015	0.6015	2.0000e-005	0.0000	0.6019
Total	**3.5000e-004**	**2.8000e-004**	**2.5000e-003**	**1.0000e-005**	**7.9000e-004**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6015**	**0.6015**	**2.0000e-005**	**0.0000**	**0.6019**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0418	0.0000	0.0418	0.0213	0.0000	0.0213	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.2340	0.1135	2.8000e-004		9.9600e-003	9.9600e-003		9.1600e-003	9.1600e-003	0.0000	24.1844	24.1844	7.8200e-003	0.0000	24.3800
Total	**0.0210**	**0.2340**	**0.1135**	**2.8000e-004**	**0.0418**	**9.9600e-003**	**0.0517**	**0.0213**	**9.1600e-003**	**0.0304**	**0.0000**	**24.1844**	**24.1844**	**7.8200e-003**	**0.0000**	**24.3800**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.8000e-004	2.5000e-003	1.0000e-005	7.9000e-004	0.0000	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6015	0.6015	2.0000e-005	0.0000	0.6019
Total	**3.5000e-004**	**2.8000e-004**	**2.5000e-003**	**1.0000e-005**	**7.9000e-004**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6015**	**0.6015**	**2.0000e-005**	**0.0000**	**0.6019**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1035	0.0000	0.1035	0.0115	0.0000	0.0115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0828	0.9973	0.4932	1.3600e-003		0.0377	0.0377		0.0346	0.0346	0.0000	119.4881	119.4881	0.0386	0.0000	120.4543
Total	**0.0828**	**0.9973**	**0.4932**	**1.3600e-003**	**0.1035**	**0.0377**	**0.1411**	**0.0115**	**0.0346**	**0.0461**	**0.0000**	**119.4881**	**119.4881**	**0.0386**	**0.0000**	**120.4543**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0352	1.2643	0.4053	3.6700e-003	0.0962	4.6100e-003	0.1008	0.0260	4.4100e-003	0.0304	0.0000	374.6704	374.6704	0.0376	0.0000	375.6097
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0700e-003	1.6100e-003	0.0146	4.0000e-005	4.6200e-003	3.0000e-005	4.6500e-003	1.2300e-003	3.0000e-005	1.2500e-003	0.0000	3.5151	3.5151	1.0000e-004	0.0000	3.5176
Total	**0.0373**	**1.2659**	**0.4199**	**3.7100e-003**	**0.1008**	**4.6400e-003**	**0.1054**	**0.0272**	**4.4400e-003**	**0.0317**	**0.0000**	**378.1855**	**378.1855**	**0.0377**	**0.0000**	**379.1273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0466	0.0000	0.0466	5.1600e-003	0.0000	5.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0828	0.9973	0.4932	1.3600e-003		0.0377	0.0377		0.0346	0.0346	0.0000	119.4880	119.4880	0.0386	0.0000	120.4541
Total	**0.0828**	**0.9973**	**0.4932**	**1.3600e-003**	**0.0466**	**0.0377**	**0.0842**	**5.1600e-003**	**0.0346**	**0.0398**	**0.0000**	**119.4880**	**119.4880**	**0.0386**	**0.0000**	**120.4541**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0352	1.2643	0.4053	3.6700e-003	0.0962	4.6100e-003	0.1008	0.0260	4.4100e-003	0.0304	0.0000	374.6704	374.6704	0.0376	0.0000	375.6097
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0700e-003	1.6100e-003	0.0146	4.0000e-005	4.6200e-003	3.0000e-005	4.6500e-003	1.2300e-003	3.0000e-005	1.2500e-003	0.0000	3.5151	3.5151	1.0000e-004	0.0000	3.5176
Total	**0.0373**	**1.2659**	**0.4199**	**3.7100e-003**	**0.1008**	**4.6400e-003**	**0.1054**	**0.0272**	**4.4400e-003**	**0.0317**	**0.0000**	**378.1855**	**378.1855**	**0.0377**	**0.0000**	**379.1273**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1035	0.0000	0.1035	0.0115	0.0000	0.0115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1724	0.0959	2.7000e-004		6.5400e-003	6.5400e-003		6.0100e-003	6.0100e-003	0.0000	23.6305	23.6305	7.6400e-003	0.0000	23.8216
Total	**0.0150**	**0.1724**	**0.0959**	**2.7000e-004**	**0.1035**	**6.5400e-003**	**0.1100**	**0.0115**	**6.0100e-003**	**0.0175**	**0.0000**	**23.6305**	**23.6305**	**7.6400e-003**	**0.0000**	**23.8216**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.1300e-003	0.1882	0.0751	7.0000e-004	0.0798	4.6000e-004	0.0803	0.0201	4.4000e-004	0.0205	0.0000	72.2054	72.2054	7.4400e-003	0.0000	72.3913
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.9000e-004	2.6400e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.6695	0.6695	2.0000e-005	0.0000	0.6700
Total	**5.5100e-003**	**0.1885**	**0.0777**	**7.1000e-004**	**0.0807**	**4.7000e-004**	**0.0812**	**0.0203**	**4.5000e-004**	**0.0208**	**0.0000**	**72.8749**	**72.8749**	**7.4600e-003**	**0.0000**	**73.0613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0466	0.0000	0.0466	5.1600e-003	0.0000	5.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1724	0.0959	2.7000e-004		6.5400e-003	6.5400e-003		6.0100e-003	6.0100e-003	0.0000	23.6305	23.6305	7.6400e-003	0.0000	23.8215
Total	**0.0150**	**0.1724**	**0.0959**	**2.7000e-004**	**0.0466**	**6.5400e-003**	**0.0531**	**5.1600e-003**	**6.0100e-003**	**0.0112**	**0.0000**	**23.6305**	**23.6305**	**7.6400e-003**	**0.0000**	**23.8215**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.1300e-003	0.1882	0.0751	7.0000e-004	0.0798	4.6000e-004	0.0803	0.0201	4.4000e-004	0.0205	0.0000	72.2054	72.2054	7.4400e-003	0.0000	72.3913
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.9000e-004	2.6400e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.6695	0.6695	2.0000e-005	0.0000	0.6700
Total	**5.5100e-003**	**0.1885**	**0.0777**	**7.1000e-004**	**0.0807**	**4.7000e-004**	**0.0812**	**0.0203**	**4.5000e-004**	**0.0208**	**0.0000**	**72.8749**	**72.8749**	**7.4600e-003**	**0.0000**	**73.0613**

3.4 Trail Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0241	0.2705	0.1746	4.4000e-004		0.0111	0.0111		0.0102	0.0102	0.0000	38.7406	38.7406	0.0125	0.0000	39.0538
Total	**0.0241**	**0.2705**	**0.1746**	**4.4000e-004**		**0.0111**	**0.0111**		**0.0102**	**0.0102**	**0.0000**	**38.7406**	**38.7406**	**0.0125**	**0.0000**	**39.0538**

3.4 Trail Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3700e-003	0.0462	0.0165	1.3000e-004	3.3500e-003	7.0000e-005	3.4200e-003	9.7000e-004	7.0000e-005	1.0400e-003	0.0000	12.9763	12.9763	9.9000e-004	0.0000	13.0009
Worker	3.4800e-003	2.6000e-003	0.0239	7.0000e-005	8.3000e-003	5.0000e-005	8.3500e-003	2.2100e-003	5.0000e-005	2.2500e-003	0.0000	6.0798	6.0798	1.6000e-004	0.0000	6.0839
Total	**4.8500e-003**	**0.0488**	**0.0405**	**2.0000e-004**	**0.0117**	**1.2000e-004**	**0.0118**	**3.1800e-003**	**1.2000e-004**	**3.2900e-003**	**0.0000**	**19.0561**	**19.0561**	**1.1500e-003**	**0.0000**	**19.0848**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0241	0.2705	0.1746	4.4000e-004		0.0111	0.0111		0.0102	0.0102	0.0000	38.7405	38.7405	0.0125	0.0000	39.0538
Total	**0.0241**	**0.2705**	**0.1746**	**4.4000e-004**		**0.0111**	**0.0111**		**0.0102**	**0.0102**	**0.0000**	**38.7405**	**38.7405**	**0.0125**	**0.0000**	**39.0538**

3.4 Trail Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3700e-003	0.0462	0.0165	1.3000e-004	3.3500e-003	7.0000e-005	3.4200e-003	9.7000e-004	7.0000e-005	1.0400e-003	0.0000	12.9763	12.9763	9.9000e-004	0.0000	13.0009
Worker	3.4800e-003	2.6000e-003	0.0239	7.0000e-005	8.3000e-003	5.0000e-005	8.3500e-003	2.2100e-003	5.0000e-005	2.2500e-003	0.0000	6.0798	6.0798	1.6000e-004	0.0000	6.0839
Total	**4.8500e-003**	**0.0488**	**0.0405**	**2.0000e-004**	**0.0117**	**1.2000e-004**	**0.0118**	**3.1800e-003**	**1.2000e-004**	**3.2900e-003**	**0.0000**	**19.0561**	**19.0561**	**1.1500e-003**	**0.0000**	**19.0848**

3.5 Bridge Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1400e-003	0.0461	0.0427	8.0000e-005		1.9100e-003	1.9100e-003		1.8200e-003	1.8200e-003	0.0000	6.3840	6.3840	1.4600e-003	0.0000	6.4205
Total	**6.1400e-003**	**0.0461**	**0.0427**	**8.0000e-005**		**1.9100e-003**	**1.9100e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**6.3840**	**6.3840**	**1.4600e-003**	**0.0000**	**6.4205**

3.5 Bridge Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.8100e-003	1.7200e-003	1.0000e-005	3.5000e-004	1.0000e-005	3.6000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3517	1.3517	1.0000e-004	0.0000	1.3543
Worker	3.6000e-004	2.7000e-004	2.4900e-003	1.0000e-005	8.6000e-004	1.0000e-005	8.7000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6333	0.6333	2.0000e-005	0.0000	0.6337
Total	**5.0000e-004**	**5.0800e-003**	**4.2100e-003**	**2.0000e-005**	**1.2100e-003**	**2.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.9850**	**1.9850**	**1.2000e-004**	**0.0000**	**1.9880**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1400e-003	0.0461	0.0427	8.0000e-005		1.9100e-003	1.9100e-003		1.8200e-003	1.8200e-003	0.0000	6.3840	6.3840	1.4600e-003	0.0000	6.4205
Total	**6.1400e-003**	**0.0461**	**0.0427**	**8.0000e-005**		**1.9100e-003**	**1.9100e-003**		**1.8200e-003**	**1.8200e-003**	**0.0000**	**6.3840**	**6.3840**	**1.4600e-003**	**0.0000**	**6.4205**

3.5 Bridge Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	4.8100e-003	1.7200e-003	1.0000e-005	3.5000e-004	1.0000e-005	3.6000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.3517	1.3517	1.0000e-004	0.0000	1.3543
Worker	3.6000e-004	2.7000e-004	2.4900e-003	1.0000e-005	8.6000e-004	1.0000e-005	8.7000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6333	0.6333	2.0000e-005	0.0000	0.6337
Total	**5.0000e-004**	**5.0800e-003**	**4.2100e-003**	**2.0000e-005**	**1.2100e-003**	**2.0000e-005**	**1.2300e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.9850**	**1.9850**	**1.2000e-004**	**0.0000**	**1.9880**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8400e-003	0.1076	0.0768	1.9000e-004		4.4300e-003	4.4300e-003		4.0700e-003	4.0700e-003	0.0000	16.7320	16.7320	5.4100e-003	0.0000	16.8672
Paving	1.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0100**	**0.1076**	**0.0768**	**1.9000e-004**		**4.4300e-003**	**4.4300e-003**		**4.0700e-003**	**4.0700e-003**	**0.0000**	**16.7320**	**16.7320**	**5.4100e-003**	**0.0000**	**16.8672**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.7100e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4343	0.4343	1.0000e-005	0.0000	0.4346
Total	**2.5000e-004**	**1.9000e-004**	**1.7100e-003**	**0.0000**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4343**	**0.4343**	**1.0000e-005**	**0.0000**	**0.4346**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8400e-003	0.1076	0.0768	1.9000e-004		4.4300e-003	4.4300e-003		4.0700e-003	4.0700e-003	0.0000	16.7319	16.7319	5.4100e-003	0.0000	16.8672
Paving	1.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0100**	**0.1076**	**0.0768**	**1.9000e-004**		**4.4300e-003**	**4.4300e-003**		**4.0700e-003**	**4.0700e-003**	**0.0000**	**16.7319**	**16.7319**	**5.4100e-003**	**0.0000**	**16.8672**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.7100e-003	0.0000	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4343	0.4343	1.0000e-005	0.0000	0.4346
Total	**2.5000e-004**	**1.9000e-004**	**1.7100e-003**	**0.0000**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4343**	**0.4343**	**1.0000e-005**	**0.0000**	**0.4346**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**4.0600e-003**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.0700e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2714	0.2714	1.0000e-005	0.0000	0.2716
Total	**1.6000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2714**	**0.2714**	**1.0000e-005**	**0.0000**	**0.2716**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**4.0600e-003**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.0700e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2714	0.2714	1.0000e-005	0.0000	0.2716
Total	**1.6000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2714**	**0.2714**	**1.0000e-005**	**0.0000**	**0.2716**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.0000e-005	2.4000e-004	6.6000e-004	0.0000	1.7000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1656	0.1656	1.0000e-005	0.0000	0.1658
Unmitigated	7.0000e-005	2.4000e-004	6.6000e-004	0.0000	1.7000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1656	0.1656	1.0000e-005	0.0000	0.1658

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	2.00	0.00	459	459
Parking Lot	0.00	0.00	0.00		
Total	0.00	2.00	0.00	459	459

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	6.60	5.50	6.40	33.00	48.00	19.00	66	28	6
Parking Lot	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873
Parking Lot	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1900e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Unmitigated	1.1900e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**1.1900e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**1.1900e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.8602	8.0000e-005	2.0000e-005	1.8669
Unmitigated	1.8602	8.0000e-005	2.0000e-005	1.8669

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.66807	1.8602	8.0000e-005	2.0000e-005	1.8669
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8602**	**8.0000e-005**	**2.0000e-005**	**1.8669**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.66807	1.8602	8.0000e-005	2.0000e-005	1.8669
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.8602**	**8.0000e-005**	**2.0000e-005**	**1.8669**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0249	1.2400e-003	0.0000	0.0558
Unmitigated	0.0249	1.2400e-003	0.0000	0.0558

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.12	0.0249	1.2400e-003	0.0000	0.0558
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0249**	**1.2400e-003**	**0.0000**	**0.0558**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.12	0.0249	1.2400e-003	0.0000	0.0558
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0249**	**1.2400e-003**	**0.0000**	**0.0558**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Carpinteria Rincon Trail

Santa Barbara-South of Santa Ynez Range County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6.15	1000sqft	0.14	6,150.00	0
City Park	1.40	Acre	1.40	60,984.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Summer

Project Characteristics -

Land Use -

Construction Phase - Based on project description.

Off-road Equipment - CalEEmod defaults.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Trips and VMT - CalEEMod defaults. Odd trips were rounded up to account for whole round trips.

On-road Fugitive Dust - CalEEMod defaults.

Grading - Based on City provided data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - For maintenance, assumption of one trip per week.

Energy Use - No energy use.

Water And Wastewater - CalEEMod defaults.

Solid Waste - CalEEMod defaults.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - In accordance with SBCAPCD Rule 345.

Operational Off-Road Equipment - NA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	4.00	224.00
tblConstructionPhase	NumDays	200.00	96.00

tblConstructionPhase	NumDays	200.00	10.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	10.00	20.00
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	MaterialExported	0.00	94,100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Trail Construction
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	11,763.00	11,764.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblVehicleTrips	ST_TR	22.75	1.43
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3337	23.9289	9.6900	0.0545	5.8501	0.6228	6.4729	2.9671	0.5730	3.5401	0.0000	5,894.1741	5,894.1741	0.8960	0.0000	5,916.5748
2023	1.3266	19.3246	9.3649	0.0533	5.3957	0.3841	5.7738	1.2267	0.3667	1.5755	0.0000	5,776.9197	5,776.9197	0.8964	0.0000	5,799.3296
Maximum	**1.3337**	**23.9289**	**9.6900**	**0.0545**	**5.8501**	**0.6228**	**6.4729**	**2.9671**	**0.5730**	**3.5401**	**0.0000**	**5,894.1741**	**5,894.1741**	**0.8964**	**0.0000**	**5,916.5748**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3337	23.9289	9.6900	0.0545	2.6603	0.6228	3.2832	1.3426	0.5730	1.9156	0.0000	5,894.1741	5,894.1741	0.8960	0.0000	5,916.5748
2023	1.3266	19.3246	9.3649	0.0533	4.8877	0.3841	5.2658	1.1704	0.3667	1.5192	0.0000	5,776.9197	5,776.9197	0.8964	0.0000	5,799.3296
Maximum	**1.3337**	**23.9289**	**9.6900**	**0.0545**	**4.8877**	**0.6228**	**5.2658**	**1.3426**	**0.5730**	**1.9156**	**0.0000**	**5,894.1741**	**5,894.1741**	**0.8964**	**0.0000**	**5,916.5748**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.88**	**0.00**	**30.19**	**40.08**	**0.00**	**32.86**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.7600e-003	9.0100e-003	0.0243	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		7.1577	7.1577	3.4000e-004		7.1662
Total	**9.3200e-003**	**9.0200e-003**	**0.0251**	**7.0000e-005**	**6.8400e-003**	**6.0000e-005**	**6.9000e-003**	**1.8300e-003**	**6.0000e-005**	**1.8900e-003**		**7.1593**	**7.1593**	**3.4000e-004**	**0.0000**	**7.1680**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.7600e-003	9.0100e-003	0.0243	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		7.1577	7.1577	3.4000e-004		7.1662
Total	**9.3200e-003**	**9.0200e-003**	**0.0251**	**7.0000e-005**	**6.8400e-003**	**6.0000e-005**	**6.9000e-003**	**1.8300e-003**	**6.0000e-005**	**1.8900e-003**		**7.1593**	**7.1593**	**3.4000e-004**	**0.0000**	**7.1680**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2022	4/13/2022	5	32	
2	Grading	Grading	4/14/2022	2/21/2023	5	224	
3	Trail Construction	Building Construction	2/22/2023	7/5/2023	5	96	
4	Bridge Construction	Building Construction	7/6/2023	7/19/2023	5	10	
5	Paving	Paving	7/20/2023	9/1/2023	5	32	
6	Architectural Coating	Architectural Coating	9/2/2023	9/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 16

Acres of Grading (Grading Phase): 182

Acres of Paving: 0.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 369 (Architectural Coating – sqft)

OffRoad Equipment

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Crawler Tractors	1	7.00	212	0.43
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trail Construction	Cranes	0	6.00	231	0.29
Trail Construction	Crawler Tractors	1	7.00	212	0.43
Trail Construction	Forklifts	0	6.00	89	0.20
Trail Construction	Generator Sets	0	8.00	84	0.74
Trail Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trail Construction	Welders	0	8.00	46	0.45
Bridge Construction	Cranes	1	8.00	231	0.29
Bridge Construction	Forklifts	0	6.00	89	0.20
Bridge Construction	Generator Sets	0	8.00	84	0.74
Bridge Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Bridge Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Crawler Tractors	1	8.00	212	0.43
Paving	Pavers	0	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	11,764.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Trail Construction	2	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Bridge Construction	5	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0216	0.0154	0.1548	4.3000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		42.3628	42.3628	1.2000e-003		42.3929
Total	**0.0216**	**0.0154**	**0.1548**	**4.3000e-004**	**0.0505**	**3.0000e-004**	**0.0508**	**0.0134**	**2.8000e-004**	**0.0137**		**42.3628**	**42.3628**	**1.2000e-003**		**42.3929**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.6098**	**0.6225**	**3.2323**	**1.3292**	**0.5727**	**1.9019**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0216	0.0154	0.1548	4.3000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		42.3628	42.3628	1.2000e-003		42.3929
Total	**0.0216**	**0.0154**	**0.1548**	**4.3000e-004**	**0.0505**	**3.0000e-004**	**0.0508**	**0.0134**	**2.8000e-004**	**0.0137**		**42.3628**	**42.3628**	**1.2000e-003**		**42.3929**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9237	0.0000	0.9237	0.1024	0.0000	0.1024			0.0000			0.0000
Off-Road	0.8858	10.6663	5.2750	0.0146		0.4026	0.4026		0.3704	0.3704		1,408.6966	1,408.6966	0.4556		1,420.0866
Total	**0.8858**	**10.6663**	**5.2750**	**0.0146**	**0.9237**	**0.4026**	**1.3263**	**0.1024**	**0.3704**	**0.4729**		**1,408.6966**	**1,408.6966**	**0.4556**		**1,420.0866**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3727	13.2472	4.2603	0.0395	1.0497	0.0488	1.0984	0.2833	0.0467	0.3299		4,443.1147	4,443.1147	0.4392		4,454.0954
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0216	0.0154	0.1548	4.3000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		42.3628	42.3628	1.2000e-003		42.3929
Total	**0.3943**	**13.2627**	**4.4151**	**0.0400**	**1.1002**	**0.0491**	**1.1493**	**0.2967**	**0.0470**	**0.3436**		**4,485.4775**	**4,485.4775**	**0.4404**		**4,496.4882**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4157	0.0000	0.4157	0.0461	0.0000	0.0461			0.0000			0.0000
Off-Road	0.8858	10.6663	5.2750	0.0146		0.4026	0.4026		0.3704	0.3704	0.0000	1,408.6966	1,408.6966	0.4556		1,420.0866
Total	**0.8858**	**10.6663**	**5.2750**	**0.0146**	**0.4157**	**0.4026**	**0.8183**	**0.0461**	**0.3704**	**0.4165**	**0.0000**	**1,408.6966**	**1,408.6966**	**0.4556**		**1,420.0866**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3727	13.2472	4.2603	0.0395	1.0497	0.0488	1.0984	0.2833	0.0467	0.3299		4,443.1147	4,443.1147	0.4392		4,454.0954
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0216	0.0154	0.1548	4.3000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		42.3628	42.3628	1.2000e-003		42.3929
Total	**0.3943**	**13.2627**	**4.4151**	**0.0400**	**1.1002**	**0.0491**	**1.1493**	**0.2967**	**0.0470**	**0.3436**		**4,485.4775**	**4,485.4775**	**0.4404**		**4,496.4882**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9237	0.0000	0.9237	0.1024	0.0000	0.1024			0.0000			0.0000
Off-Road	0.8087	9.3175	5.1851	0.0145		0.3533	0.3533		0.3250	0.3250		1,408.0086	1,408.0086	0.4554		1,419.3930
Total	**0.8087**	**9.3175**	**5.1851**	**0.0145**	**0.9237**	**0.3533**	**1.2770**	**0.1024**	**0.3250**	**0.4275**		**1,408.0086**	**1,408.0086**	**0.4554**		**1,419.3930**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2745	9.9933	4.0031	0.0383	4.4215	0.0246	4.4461	1.1109	0.0235	1.1344		4,328.1318	4,328.1318	0.4399		4,339.1304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0201	0.0138	0.1414	4.1000e-004	0.0505	2.9000e-004	0.0508	0.0134	2.7000e-004	0.0137		40.7793	40.7793	1.0700e-003		40.8062
Total	**0.2946**	**10.0071**	**4.1446**	**0.0387**	**4.4720**	**0.0249**	**4.4969**	**1.1243**	**0.0238**	**1.1481**		**4,368.9111**	**4,368.9111**	**0.4410**		**4,379.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4157	0.0000	0.4157	0.0461	0.0000	0.0461			0.0000			0.0000
Off-Road	0.8087	9.3175	5.1851	0.0145		0.3533	0.3533		0.3250	0.3250	0.0000	1,408.0086	1,408.0086	0.4554		1,419.3930
Total	**0.8087**	**9.3175**	**5.1851**	**0.0145**	**0.4157**	**0.3533**	**0.7690**	**0.0461**	**0.3250**	**0.3711**	**0.0000**	**1,408.0086**	**1,408.0086**	**0.4554**		**1,419.3930**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2745	9.9933	4.0031	0.0383	4.4215	0.0246	4.4461	1.1109	0.0235	1.1344		4,328.1318	4,328.1318	0.4399		4,339.1304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0201	0.0138	0.1414	4.1000e-004	0.0505	2.9000e-004	0.0508	0.0134	2.7000e-004	0.0137		40.7793	40.7793	1.0700e-003		40.8062
Total	**0.2946**	**10.0071**	**4.1446**	**0.0387**	**4.4720**	**0.0249**	**4.4969**	**1.1243**	**0.0238**	**1.1481**		**4,368.9111**	**4,368.9111**	**0.4410**		**4,379.9366**

3.4 Trail Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5022	5.6358	3.6367	9.1900e-003		0.2308	0.2308		0.2123	0.2123		889.6701	889.6701	0.2877		896.8636
Total	**0.5022**	**5.6358**	**3.6367**	**9.1900e-003**		**0.2308**	**0.2308**		**0.2123**	**0.2123**		**889.6701**	**889.6701**	**0.2877**		**896.8636**

3.4 Trail Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0278	0.9535	0.3281	2.7500e-003	0.0711	1.5000e-003	0.0726	0.0204	1.4300e-003	0.0219		301.0654	301.0654	0.0222		301.6204
Worker	0.0705	0.0484	0.4950	1.4300e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		142.7277	142.7277	3.7600e-003		142.8216
Total	**0.0983**	**1.0019**	**0.8232**	**4.1800e-003**	**0.2479**	**2.5300e-003**	**0.2504**	**0.0674**	**2.3800e-003**	**0.0697**		**443.7930**	**443.7930**	**0.0260**		**444.4420**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5022	5.6358	3.6367	9.1900e-003		0.2308	0.2308		0.2123	0.2123	0.0000	889.6701	889.6701	0.2877		896.8636
Total	**0.5022**	**5.6358**	**3.6367**	**9.1900e-003**		**0.2308**	**0.2308**		**0.2123**	**0.2123**	**0.0000**	**889.6701**	**889.6701**	**0.2877**		**896.8636**

3.4 Trail Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0278	0.9535	0.3281	2.7500e-003	0.0711	1.5000e-003	0.0726	0.0204	1.4300e-003	0.0219		301.0654	301.0654	0.0222		301.6204
Worker	0.0705	0.0484	0.4950	1.4300e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		142.7277	142.7277	3.7600e-003		142.8216
Total	**0.0983**	**1.0019**	**0.8232**	**4.1800e-003**	**0.2479**	**2.5300e-003**	**0.2504**	**0.0674**	**2.3800e-003**	**0.0697**		**443.7930**	**443.7930**	**0.0260**		**444.4420**

3.5 Bridge Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2283	9.2289	8.5417	0.0158		0.3816	0.3816		0.3643	0.3643		1,407.4348	1,407.4348	0.3218		1,415.4796
Total	**1.2283**	**9.2289**	**8.5417**	**0.0158**		**0.3816**	**0.3816**		**0.3643**	**0.3643**		**1,407.4348**	**1,407.4348**	**0.3218**		**1,415.4796**

3.5 Bridge Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0278	0.9535	0.3281	2.7500e-003	0.0711	1.5000e-003	0.0726	0.0204	1.4300e-003	0.0219		301.0654	301.0654	0.0222		301.6204
Worker	0.0705	0.0484	0.4950	1.4300e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		142.7277	142.7277	3.7600e-003		142.8216
Total	**0.0983**	**1.0019**	**0.8232**	**4.1800e-003**	**0.2479**	**2.5300e-003**	**0.2504**	**0.0674**	**2.3800e-003**	**0.0697**		**443.7930**	**443.7930**	**0.0260**		**444.4420**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2283	9.2289	8.5417	0.0158		0.3816	0.3816		0.3643	0.3643	0.0000	1,407.4348	1,407.4348	0.3218		1,415.4796
Total	**1.2283**	**9.2289**	**8.5417**	**0.0158**		**0.3816**	**0.3816**		**0.3643**	**0.3643**	**0.0000**	**1,407.4348**	**1,407.4348**	**0.3218**		**1,415.4796**

3.5 Bridge Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0278	0.9535	0.3281	2.7500e-003	0.0711	1.5000e-003	0.0726	0.0204	1.4300e-003	0.0219		301.0654	301.0654	0.0222		301.6204
Worker	0.0705	0.0484	0.4950	1.4300e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		142.7277	142.7277	3.7600e-003		142.8216
Total	**0.0983**	**1.0019**	**0.8232**	**4.1800e-003**	**0.2479**	**2.5300e-003**	**0.2504**	**0.0674**	**2.3800e-003**	**0.0697**		**443.7930**	**443.7930**	**0.0260**		**444.4420**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6149	6.7275	4.8004	0.0119		0.2767	0.2767		0.2546	0.2546		1,152.7388	1,152.7388	0.3728		1,162.0593
Paving	0.0115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6263**	**6.7275**	**4.8004**	**0.0119**		**0.2767**	**0.2767**		**0.2546**	**0.2546**		**1,152.7388**	**1,152.7388**	**0.3728**		**1,162.0593**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0151	0.0104	0.1061	3.1000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		30.5845	30.5845	8.0000e-004		30.6046
Total	**0.0151**	**0.0104**	**0.1061**	**3.1000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**30.5845**	**30.5845**	**8.0000e-004**		**30.6046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6149	6.7275	4.8004	0.0119		0.2767	0.2767		0.2546	0.2546	0.0000	1,152.7388	1,152.7388	0.3728		1,162.0593
Paving	0.0115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6263**	**6.7275**	**4.8004**	**0.0119**		**0.2767**	**0.2767**		**0.2546**	**0.2546**	**0.0000**	**1,152.7388**	**1,152.7388**	**0.3728**		**1,162.0593**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0151	0.0104	0.1061	3.1000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		30.5845	30.5845	8.0000e-004		30.6046
Total	**0.0151**	**0.0104**	**0.1061**	**3.1000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**30.5845**	**30.5845**	**8.0000e-004**		**30.6046**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**0.4055**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0151	0.0104	0.1061	3.1000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		30.5845	30.5845	8.0000e-004		30.6046
Total	**0.0151**	**0.0104**	**0.1061**	**3.1000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**30.5845**	**30.5845**	**8.0000e-004**		**30.6046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**0.4055**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0151	0.0104	0.1061	3.1000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		30.5845	30.5845	8.0000e-004		30.6046
Total	**0.0151**	**0.0104**	**0.1061**	**3.1000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**30.5845**	**30.5845**	**8.0000e-004**		**30.6046**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7600e-003	9.0100e-003	0.0243	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		7.1577	7.1577	3.4000e-004		7.1662
Unmitigated	2.7600e-003	9.0100e-003	0.0243	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		7.1577	7.1577	3.4000e-004		7.1662

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	2.00	0.00	459	459
Parking Lot	0.00	0.00	0.00		
Total	0.00	2.00	0.00	459	459

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	6.60	5.50	6.40	33.00	48.00	19.00	66	28	6
Parking Lot	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873
Parking Lot	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Unmitigated	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Total	**6.5600e-003**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6500e-003**	**1.6500e-003**	**0.0000**		**1.7600e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Total	**6.5600e-003**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6500e-003**	**1.6500e-003**	**0.0000**		**1.7600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Carpinteria Rincon Trail

Santa Barbara-South of Santa Ynez Range County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6.15	1000sqft	0.14	6,150.00	0
City Park	1.40	Acre	1.40	60,984.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Winter

Project Characteristics -

Land Use -

Construction Phase - Based on project description.

Off-road Equipment - CalEEmod defaults.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Off-road Equipment - Based on modeling from the Supplemental MND.

Trips and VMT - CalEEMod defaults. Odd trips were rounded up to account for whole round trips.

On-road Fugitive Dust - CalEEMod defaults.

Grading - Based on City provided data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - For maintenance, assumption of one trip per week.

Energy Use - No energy use.

Water And Wastewater - CalEEMod defaults.

Solid Waste - CalEEMod defaults.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - In accordance with SBCAPCD Rule 345.

Operational Off-Road Equipment - NA

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	4.00	224.00
tblConstructionPhase	NumDays	200.00	96.00

tblConstructionPhase	NumDays	200.00	10.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	10.00	20.00
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	MaterialExported	0.00	94,100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Trail Construction
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	11,763.00	11,764.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	VendorTripNumber	11.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblVehicleTrips	ST_TR	22.75	1.43
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3366	23.9918	9.8705	0.0540	5.8501	0.6228	6.4729	2.9671	0.5730	3.5401	0.0000	5,831.3715	5,831.3715	0.9046	0.0000	5,853.9863
2023	1.3377	19.3520	9.4630	0.0527	5.3957	0.3842	5.7744	1.2267	0.3667	1.5761	0.0000	5,714.5038	5,714.5038	0.9038	0.0000	5,737.0996
Maximum	**1.3377**	**23.9918**	**9.8705**	**0.0540**	**5.8501**	**0.6228**	**6.4729**	**2.9671**	**0.5730**	**3.5401**	**0.0000**	**5,831.3715**	**5,831.3715**	**0.9046**	**0.0000**	**5,853.9863**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3366	23.9918	9.8705	0.0540	2.6603	0.6228	3.2832	1.3426	0.5730	1.9156	0.0000	5,831.3715	5,831.3715	0.9046	0.0000	5,853.9863
2023	1.3377	19.3520	9.4630	0.0527	4.8877	0.3842	5.2664	1.1704	0.3667	1.5198	0.0000	5,714.5038	5,714.5038	0.9038	0.0000	5,737.0996
Maximum	**1.3377**	**23.9918**	**9.8705**	**0.0540**	**4.8877**	**0.6228**	**5.2664**	**1.3426**	**0.5730**	**1.9156**	**0.0000**	**5,831.3715**	**5,831.3715**	**0.9046**	**0.0000**	**5,853.9863**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.88**	**0.00**	**30.19**	**40.08**	**0.00**	**32.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.7000e-003	9.2800e-003	0.0263	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		6.9924	6.9924	3.5000e-004		7.0013
Total	**9.2600e-003**	**9.2900e-003**	**0.0270**	**7.0000e-005**	**6.8400e-003**	**6.0000e-005**	**6.9000e-003**	**1.8300e-003**	**6.0000e-005**	**1.8900e-003**		**6.9941**	**6.9941**	**3.5000e-004**	**0.0000**	**7.0030**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.7000e-003	9.2800e-003	0.0263	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		6.9924	6.9924	3.5000e-004		7.0013
Total	**9.2600e-003**	**9.2900e-003**	**0.0270**	**7.0000e-005**	**6.8400e-003**	**6.0000e-005**	**6.9000e-003**	**1.8300e-003**	**6.0000e-005**	**1.8900e-003**		**6.9941**	**6.9941**	**3.5000e-004**	**0.0000**	**7.0030**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2022	4/13/2022	5	32	
2	Grading	Grading	4/14/2022	2/21/2023	5	224	
3	Trail Construction	Building Construction	2/22/2023	7/5/2023	5	96	
4	Bridge Construction	Building Construction	7/6/2023	7/19/2023	5	10	
5	Paving	Paving	7/20/2023	9/1/2023	5	32	
6	Architectural Coating	Architectural Coating	9/2/2023	9/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 16

Acres of Grading (Grading Phase): 182

Acres of Paving: 0.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 369 (Architectural Coating – sqft)

OffRoad Equipment

Carpinteria Rincon Trail - Santa Barbara-South of Santa Ynez Range County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Crawler Tractors	1	7.00	212	0.43
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Trail Construction	Cranes	0	6.00	231	0.29
Trail Construction	Crawler Tractors	1	7.00	212	0.43
Trail Construction	Forklifts	0	6.00	89	0.20
Trail Construction	Generator Sets	0	8.00	84	0.74
Trail Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trail Construction	Welders	0	8.00	46	0.45
Bridge Construction	Cranes	1	8.00	231	0.29
Bridge Construction	Forklifts	0	6.00	89	0.20
Bridge Construction	Generator Sets	0	8.00	84	0.74
Bridge Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Bridge Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Crawler Tractors	1	8.00	212	0.43
Paving	Pavers	0	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	11,764.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Trail Construction	2	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Bridge Construction	5	28.00	12.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0244	0.0177	0.1600	4.2000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		41.3836	41.3836	1.2000e-003		41.4136
Total	**0.0244**	**0.0177**	**0.1600**	**4.2000e-004**	**0.0505**	**3.0000e-004**	**0.0508**	**0.0134**	**2.8000e-004**	**0.0137**		**41.3836**	**41.3836**	**1.2000e-003**		**41.4136**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.6098**	**0.6225**	**3.2323**	**1.3292**	**0.5727**	**1.9019**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0244	0.0177	0.1600	4.2000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		41.3836	41.3836	1.2000e-003		41.4136
Total	**0.0244**	**0.0177**	**0.1600**	**4.2000e-004**	**0.0505**	**3.0000e-004**	**0.0508**	**0.0134**	**2.8000e-004**	**0.0137**		**41.3836**	**41.3836**	**1.2000e-003**		**41.4136**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9237	0.0000	0.9237	0.1024	0.0000	0.1024			0.0000			0.0000
Off-Road	0.8858	10.6663	5.2750	0.0146		0.4026	0.4026		0.3704	0.3704		1,408.6966	1,408.6966	0.4556		1,420.0866
Total	**0.8858**	**10.6663**	**5.2750**	**0.0146**	**0.9237**	**0.4026**	**1.3263**	**0.1024**	**0.3704**	**0.4729**		**1,408.6966**	**1,408.6966**	**0.4556**		**1,420.0866**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3823	13.3079	4.4355	0.0390	1.0497	0.0501	1.0998	0.2833	0.0479	0.3312		4,381.2913	4,381.2913	0.4478		4,392.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0244	0.0177	0.1600	4.2000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		41.3836	41.3836	1.2000e-003		41.4136
Total	**0.4067**	**13.3255**	**4.5955**	**0.0394**	**1.1002**	**0.0504**	**1.1506**	**0.2967**	**0.0482**	**0.3449**		**4,422.6749**	**4,422.6749**	**0.4490**		**4,433.8996**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4157	0.0000	0.4157	0.0461	0.0000	0.0461			0.0000			0.0000
Off-Road	0.8858	10.6663	5.2750	0.0146		0.4026	0.4026		0.3704	0.3704	0.0000	1,408.6966	1,408.6966	0.4556		1,420.0866
Total	**0.8858**	**10.6663**	**5.2750**	**0.0146**	**0.4157**	**0.4026**	**0.8183**	**0.0461**	**0.3704**	**0.4165**	**0.0000**	**1,408.6966**	**1,408.6966**	**0.4556**		**1,420.0866**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3823	13.3079	4.4355	0.0390	1.0497	0.0501	1.0998	0.2833	0.0479	0.3312		4,381.2913	4,381.2913	0.4478		4,392.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0244	0.0177	0.1600	4.2000e-004	0.0505	3.0000e-004	0.0508	0.0134	2.8000e-004	0.0137		41.3836	41.3836	1.2000e-003		41.4136
Total	**0.4067**	**13.3255**	**4.5955**	**0.0394**	**1.1002**	**0.0504**	**1.1506**	**0.2967**	**0.0482**	**0.3449**		**4,422.6749**	**4,422.6749**	**0.4490**		**4,433.8996**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9237	0.0000	0.9237	0.1024	0.0000	0.1024			0.0000			0.0000
Off-Road	0.8087	9.3175	5.1851	0.0145		0.3533	0.3533		0.3250	0.3250		1,408.0086	1,408.0086	0.4554		1,419.3930
Total	**0.8087**	**9.3175**	**5.1851**	**0.0145**	**0.9237**	**0.3533**	**1.2770**	**0.1024**	**0.3250**	**0.4275**		**1,408.0086**	**1,408.0086**	**0.4554**		**1,419.3930**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2812	10.0187	4.1321	0.0378	4.4215	0.0252	4.4467	1.1109	0.0241	1.1350		4,266.6581	4,266.6581	0.4474		4,277.8427
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0228	0.0158	0.1458	4.0000e-004	0.0505	2.9000e-004	0.0508	0.0134	2.7000e-004	0.0137		39.8372	39.8372	1.0700e-003		39.8639
Total	**0.3041**	**10.0345**	**4.2779**	**0.0382**	**4.4720**	**0.0255**	**4.4975**	**1.1243**	**0.0244**	**1.1487**		**4,306.4952**	**4,306.4952**	**0.4485**		**4,317.7066**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4157	0.0000	0.4157	0.0461	0.0000	0.0461			0.0000			0.0000
Off-Road	0.8087	9.3175	5.1851	0.0145		0.3533	0.3533		0.3250	0.3250	0.0000	1,408.0086	1,408.0086	0.4554		1,419.3930
Total	**0.8087**	**9.3175**	**5.1851**	**0.0145**	**0.4157**	**0.3533**	**0.7690**	**0.0461**	**0.3250**	**0.3711**	**0.0000**	**1,408.0086**	**1,408.0086**	**0.4554**		**1,419.3930**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2812	10.0187	4.1321	0.0378	4.4215	0.0252	4.4467	1.1109	0.0241	1.1350		4,266.6581	4,266.6581	0.4474		4,277.8427
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0228	0.0158	0.1458	4.0000e-004	0.0505	2.9000e-004	0.0508	0.0134	2.7000e-004	0.0137		39.8372	39.8372	1.0700e-003		39.8639
Total	**0.3041**	**10.0345**	**4.2779**	**0.0382**	**4.4720**	**0.0255**	**4.4975**	**1.1243**	**0.0244**	**1.1487**		**4,306.4952**	**4,306.4952**	**0.4485**		**4,317.7066**

3.4 Trail Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5022	5.6358	3.6367	9.1900e-003		0.2308	0.2308		0.2123	0.2123		889.6701	889.6701	0.2877		896.8636
Total	**0.5022**	**5.6358**	**3.6367**	**9.1900e-003**		**0.2308**	**0.2308**		**0.2123**	**0.2123**		**889.6701**	**889.6701**	**0.2877**		**896.8636**

3.4 Trail Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0295	0.9485	0.3583	2.6800e-003	0.0711	1.5700e-003	0.0726	0.0204	1.5000e-003	0.0219		293.7724	293.7724	0.0232		294.3511
Worker	0.0799	0.0553	0.5104	1.4000e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		139.4301	139.4301	3.7400e-003		139.5237
Total	**0.1094**	**1.0038**	**0.8687**	**4.0800e-003**	**0.2479**	**2.6000e-003**	**0.2505**	**0.0674**	**2.4500e-003**	**0.0698**		**433.2025**	**433.2025**	**0.0269**		**433.8748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5022	5.6358	3.6367	9.1900e-003		0.2308	0.2308		0.2123	0.2123	0.0000	889.6701	889.6701	0.2877		896.8636
Total	**0.5022**	**5.6358**	**3.6367**	**9.1900e-003**		**0.2308**	**0.2308**		**0.2123**	**0.2123**	**0.0000**	**889.6701**	**889.6701**	**0.2877**		**896.8636**

3.4 Trail Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0295	0.9485	0.3583	2.6800e-003	0.0711	1.5700e-003	0.0726	0.0204	1.5000e-003	0.0219		293.7724	293.7724	0.0232		294.3511
Worker	0.0799	0.0553	0.5104	1.4000e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		139.4301	139.4301	3.7400e-003		139.5237
Total	**0.1094**	**1.0038**	**0.8687**	**4.0800e-003**	**0.2479**	**2.6000e-003**	**0.2505**	**0.0674**	**2.4500e-003**	**0.0698**		**433.2025**	**433.2025**	**0.0269**		**433.8748**

3.5 Bridge Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2283	9.2289	8.5417	0.0158		0.3816	0.3816		0.3643	0.3643		1,407.4348	1,407.4348	0.3218		1,415.4796
Total	**1.2283**	**9.2289**	**8.5417**	**0.0158**		**0.3816**	**0.3816**		**0.3643**	**0.3643**		**1,407.4348**	**1,407.4348**	**0.3218**		**1,415.4796**

3.5 Bridge Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0295	0.9485	0.3583	2.6800e-003	0.0711	1.5700e-003	0.0726	0.0204	1.5000e-003	0.0219		293.7724	293.7724	0.0232		294.3511
Worker	0.0799	0.0553	0.5104	1.4000e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		139.4301	139.4301	3.7400e-003		139.5237
Total	**0.1094**	**1.0038**	**0.8687**	**4.0800e-003**	**0.2479**	**2.6000e-003**	**0.2505**	**0.0674**	**2.4500e-003**	**0.0698**		**433.2025**	**433.2025**	**0.0269**		**433.8748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2283	9.2289	8.5417	0.0158		0.3816	0.3816		0.3643	0.3643	0.0000	1,407.4348	1,407.4348	0.3218		1,415.4796
Total	**1.2283**	**9.2289**	**8.5417**	**0.0158**		**0.3816**	**0.3816**		**0.3643**	**0.3643**	**0.0000**	**1,407.4348**	**1,407.4348**	**0.3218**		**1,415.4796**

3.5 Bridge Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0295	0.9485	0.3583	2.6800e-003	0.0711	1.5700e-003	0.0726	0.0204	1.5000e-003	0.0219		293.7724	293.7724	0.0232		294.3511
Worker	0.0799	0.0553	0.5104	1.4000e-003	0.1768	1.0300e-003	0.1779	0.0469	9.5000e-004	0.0479		139.4301	139.4301	3.7400e-003		139.5237
Total	**0.1094**	**1.0038**	**0.8687**	**4.0800e-003**	**0.2479**	**2.6000e-003**	**0.2505**	**0.0674**	**2.4500e-003**	**0.0698**		**433.2025**	**433.2025**	**0.0269**		**433.8748**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6149	6.7275	4.8004	0.0119		0.2767	0.2767		0.2546	0.2546		1,152.7388	1,152.7388	0.3728		1,162.0593
Paving	0.0115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6263**	**6.7275**	**4.8004**	**0.0119**		**0.2767**	**0.2767**		**0.2546**	**0.2546**		**1,152.7388**	**1,152.7388**	**0.3728**		**1,162.0593**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	0.0119	0.1094	3.0000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		29.8779	29.8779	8.0000e-004		29.8979
Total	**0.0171**	**0.0119**	**0.1094**	**3.0000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**29.8779**	**29.8779**	**8.0000e-004**		**29.8979**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6149	6.7275	4.8004	0.0119		0.2767	0.2767		0.2546	0.2546	0.0000	1,152.7388	1,152.7388	0.3728		1,162.0593
Paving	0.0115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6263**	**6.7275**	**4.8004**	**0.0119**		**0.2767**	**0.2767**		**0.2546**	**0.2546**	**0.0000**	**1,152.7388**	**1,152.7388**	**0.3728**		**1,162.0593**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	0.0119	0.1094	3.0000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		29.8779	29.8779	8.0000e-004		29.8979
Total	**0.0171**	**0.0119**	**0.1094**	**3.0000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**29.8779**	**29.8779**	**8.0000e-004**		**29.8979**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**0.4055**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	0.0119	0.1094	3.0000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		29.8779	29.8779	8.0000e-004		29.8979
Total	**0.0171**	**0.0119**	**0.1094**	**3.0000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**29.8779**	**29.8779**	**8.0000e-004**		**29.8979**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**0.4055**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	0.0119	0.1094	3.0000e-004	0.0379	2.2000e-004	0.0381	0.0101	2.0000e-004	0.0103		29.8779	29.8779	8.0000e-004		29.8979
Total	**0.0171**	**0.0119**	**0.1094**	**3.0000e-004**	**0.0379**	**2.2000e-004**	**0.0381**	**0.0101**	**2.0000e-004**	**0.0103**		**29.8779**	**29.8779**	**8.0000e-004**		**29.8979**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7000e-003	9.2800e-003	0.0263	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		6.9924	6.9924	3.5000e-004		7.0013
Unmitigated	2.7000e-003	9.2800e-003	0.0263	7.0000e-005	6.8400e-003	6.0000e-005	6.9000e-003	1.8300e-003	6.0000e-005	1.8900e-003		6.9924	6.9924	3.5000e-004		7.0013

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	2.00	0.00	459	459
Parking Lot	0.00	0.00	0.00		
Total	0.00	2.00	0.00	459	459

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	6.60	5.50	6.40	33.00	48.00	19.00	66	28	6
Parking Lot	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873
Parking Lot	0.572071	0.027190	0.206810	0.117824	0.018361	0.005136	0.017629	0.020081	0.002790	0.002084	0.006580	0.002569	0.000873

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Unmitigated	6.5600e-003	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Total	**6.5600e-003**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6500e-003**	**1.6500e-003**	**0.0000**		**1.7600e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6500e-003	1.6500e-003	0.0000		1.7600e-003
Total	**6.5600e-003**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6500e-003**	**1.6500e-003**	**0.0000**		**1.7600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Project Name

Vegetation

Land Use Change - Net Sequestered Carbon

The project's changes in land use results in changes in CO_2 sequestration from the atmosphere which would not have been captured had there been no land-type change.

Future planting of trees within the project site will sequester CO_2 and is considered to result in a one-time carbon-stock change. Trees sequester CO_2 while they are actively growing.

Summary:

Carbon Loss

Project Vegetation Land Use	Vegetation Land Use Category Subtype	Net Loss (acres)	Loss of Sequestered CO_2 (MT CO_2)
Forest Land	Scrub	10.70	153.01
Total			**153.01**

Carbon Gain

Project Vegetation Land Use	Vegetation Land Use Category Subtype	Net Loss (acres)	Loss of Sequestered CO_2 (MT CO_2)
Forest Land	Scrub	11.45	163.74
Total			**163.74**

Total CO_2E emissions released (loss) (MT)	**153.01**
CO_2E sequestered from Net New Vegetation (gain) (MT)	**163.74**
Total CO_2E Released (loss - gain) (MT)	**-10.73**
Amortized Net Change of CO_2E over 30 years (MT/year)	**-0.36**

Project Name

Vegetation

Land Use Change - Loss of Sequestered Carbon

A development which changes land use type results in changes in CO_2 sequestration from the atmosphere which would not have been captured had there been no land-type change.

Equation:

Sequestered CO_2 (MT CO_2) = Σ_f ($SeqCO_2$)$_f$ x (area)$_f$ - Σ_i (SeqCO2)$_i$ x (area)$_i$

Where:

$SeqCO_2$ = mass of sequestered CO_2 per unit area (MT CO_2/acre)

area = area of land for specific land use type (acre)

f = index for final land use type

I = index for initial land use type

Default CalEEMod Factors

The mass of sequestered CO_2 per unit area (MT CO_2/acre) is dependent on the specific land use type. The program uses default CO_2 sequestration values from the California Climate Action Registry for each land use that will be preserved or created:

Vegetation Land Use Type	Vegetation Land Use Subtype	Biogenic CO_2 Emissions (MT CO_2/Acre)
Cropland	Cropland	6.2
Forest Land	Scrub	14.3
Forest Land	Trees	111
Grassland	Grassland	4.31
Wetlands	Wetlands	0
Others	Others	0

Notes:

Based on values indicated in IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/

Reference:

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-52)

Project Name

Calculations:

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Initial Acres (acres)	Final Acres (acres)	Net Loss (acres)	Biogenic CO_2 Emissions (MT CO_2/Acre)	Sequestered CO_2 (MT CO_2)
Non-Native Woodland	Forest Land	Scrub	10.70	0.00	10.70	14.3	153.01
Total			**10.70**	**0.00**	**10.70**		**153.01**

Notes:

The default annual CO2 is calculated by multiplying total biomass (MT dry matter/acre) from IPCC data by the carbon fraction in plant material (0.47), then using the ratio of molecular weights (44/12) to convert from MT of carbon (C) to MT of carbon dioxide (CO2).

Vegetation Type

Vegetation types are defined by IPCC as follows:

Forest Land

This category includes all land with woody vegetation consistent with thresholds used to define Forest Land in the national greenhouse gas inventory. It also includes systems with a vegetation structure that currently fall below, but *in situ* could potentially reach the threshold values used by a country to define the Forest Land category.

Cropland

This category includes cropped land, including rice fields, and agro-forestry systems where the vegetation structure falls below the thresholds used for the Forest Land category.

Grassland

This category includes rangelands and pasture land that are not considered Cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the Forest Land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural and silvi-pastural systems, consistent with national definitions.

Wetlands

This category includes areas of peat extraction and land that is covered or saturated by water for all or part of the year (e.g., peatlands) and that does not fall into the Forest Land, Cropland, Grassland or Settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-divisions.

Area

The user must specify area of land in acres for specific final and initial land use types. These area changes include not only the area of land that will be converted to buildings, but also areas disrupted by the construction of utility corridors, water tank sites, and associated borrow and grading areas. Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.

This assumption facilitates the calculation as a yearly growth rate and CO2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

Project Name

Vegetation

Land Use Change - Sequestered Carbon

A development which changes land use type results in changes in CO_2 sequestration from the atmosphere which would not have been captured had there been no land-type change.

Equation:

Sequestered CO_2 (MT CO_2) = Σ_f ($SeqCO_2$)$_f$ x (area)$_f$ - Σ_i (SeqCO2)$_i$ x (area)$_i$

Where:

$SeqCO_2$ = mass of sequestered CO_2 per unit area (MT CO_2/acre)

area = area of land for specific land use type (acre)

f = index for final land use type

I = index for initial land use type

Default CalEEMod Factors

The mass of sequestered CO_2 per unit area (MT CO_2/acre) is dependent on the specific land use type. The program uses default CO_2 sequestration values from the California Climate Action Registry for each land use that will be preserved or created:

Vegetation Land Use Type	Vegetation Land Use Subtype	Biogenic CO_2 Emissions (MT CO_2/Acre)
Cropland	Cropland	6.2
Forest Land	Scrub	14.3
Forest Land	Trees	111
Grassland	Grassland	4.31
Wetlands	Wetlands	0
Others	Others	0

Notes:

Based on values indicated in IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/

Reference:

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-52)

Project Name

Calculations:

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Initial Acres (acres)	Final Acres (acres)	Net Loss (acres)	Biogenic CO_2 Emissions (MT CO_2/Acre)	Sequestered CO_2 (MT CO_2)
Non-Native Woodland	Forest Land	Scrub	11.45	0.00	11.45	14.3	163.74
Total			**11.45**	**0.00**	**11.45**		**163.74**

Notes:

The default annual CO2 is calculated by multiplying total biomass (MT dry matter/acre) from IPCC data by the carbon fraction in plant material (0.47), then using the ratio of molecular weights (44/12) to convert from MT of carbon (C) to MT of carbon dioxide (CO2).

Vegetation Type

Vegetation types are defined by IPCC as follows:

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Cropland

This category includes cropped land, including rice fields, and agro-forestry systems where the vegetation structure falls below the thresholds used for the Forest Land category.

Grassland

This category includes rangelands and pasture land that are not considered Cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the Forest Land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural and silvi-pastural systems, consistent with national definitions.

Wetlands

This category includes areas of peat extraction and land that is covered or saturated by water for all or part of the year (e.g., peatlands) and that does not fall into the Forest Land, Cropland, Grassland or Settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-divisions.

Area

The user must specify area of land in acres for specific final and initial land use types. These area changes include not only the area of land that will be converted to buildings, but also areas disrupted by the construction of utility corridors, water tank sites, and associated borrow and grading areas. Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.

This assumption facilitates the calculation as a yearly growth rate and CO2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

Appendix C1

Plant and Wildlife Compendium

Plant Species

Eudicots – Vascular Species

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra ssp. *caerulea*—blue elderberry

AIZOACEAE—FIG-MARIGOLD FAMILY

* *Carpobrotus chilensis*—sea fig
* *Carpobrotus edulis*—hottentot fig
* *Mesembryanthemum crystallinum*—common iceplant
* *Tetragonia tetragonoides*—New Zealand spinach

AMARANTHACEAE—AMARANTH FAMILY

* *Amaranthus albus*—prostrate pigweed
Amaranthus blitoides—mat amaranth

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Rhus integrifolia—lemonade berry
* *Schinus terebinthifolius*—Brazilian peppertree

APIACEAE—CARROT FAMILY

Apiastrum angustifolium—mock parsley
* *Conium maculatum*—poison hemlock
* *Foeniculum vulgare*—fennel

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia psilostachya—western ragweed
Artemisia californica—California sagebrush
Baccharis pilularis—coyote brush
Baccharis salicifolia—mulefat
Brickellia californica—California brickellbush
* *Carduus pycnocephalus*—Italian plumeless thistle
* *Centaurea melitensis*—Maltese star-thistle
Corethrogyne filaginifolia—sand-aster
* *Delairea odorata*—Cape-ivy
Encelia californica—California brittle bush
* *Erigeron bonariensis*—asthmaweed
Erigeron canadensis—Canadian horseweed
* *Erigeron sumatrensis*—asthmaweed
Eriophyllum confertiflorum—golden-yarrow
Hazardia squarrosa—sawtooth golden bush

* *Helminthotheca echioides*—bristly oxtongue
Heterotheca grandiflora—telegraphweed
Heterotheca sessiliflora—sessileflower false goldenaster
Isocoma menziesii—Menzies's golden bush
* *Lactuca serriola*—prickly lettuce
Malacothrix saxatilis var. *saxatilis*—cliff malacothrix
Pseudognaphalium beneolens—Wright's cudweed
Pseudognaphalium biolettii—two-color rabbit-tobacco
Pseudognaphalium californicum—ladies' tobacco
* *Pseudognaphalium luteoalbum*—Jersey cudweed
Pseudognaphalium ramosissimum—pink cudweed
* *Silybum marianum*—blessed milkthistle
* *Sonchus asper*—spiny sowthistle
* *Sonchus oleraceus*—common sowthistle
Venegasia carpesioides—canyon sunflower

BORAGINACEAE—BORAGE FAMILY

Amsinckia menziesii—Menzies' fiddleneck
Eriodictyon crassifolium—thick leaf yerba santa
Eucrypta chrysanthemifolia—spotted hideseed
Phacelia ramosissima var. *austrolitoralis*—south coast branching phacelia

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard
* *Brassica rapa*—field mustard
* *Brassica tournefortii*—Tournefort's mustard
* *Cakile maritima*—European searocket
* *Capsella bursa-pastoris*—shepherd's purse
Descurainia pinnata—western tansymustard
* *Hirschfeldia incana*—shortpod mustard
Lepidium nitidum—shining pepperweed
* *Lobularia maritima*—sweet alyssum
* *Raphanus sativus*—cultivated radish
* *Sisymbrium irio*—London rocket
* *Sisymbrium orientale*—Indian hedgemustard

CACTACEAE—CACTUS FAMILY

Opuntia littoralis—coast prickly pear

CARYOPHYLLACEAE—PINK FAMILY

* *Spergularia bocconi*—Boccone's sandspurry

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex lentiformis—quailbush
* *Atriplex semibaccata*—Australian saltbush
* *Bassia hyssopifolia*—fivehorn smotherweed
* *Chenopodium album*—lambsquarters
* *Chenopodium murale*—nettleleaf goosefoot
* *Salsola tragus*—prickly Russian thistle
Suaeda taxifolia—woolly seablite

CONVOLVULACEAE—MORNING-GLORY FAMILY

Calystegia macrostegia ssp. *cyclostegia*—island false bindweed
* *Convolvulus arvensis*—field bindweed

EUPHORBIACEAE—SPURGE FAMILY

Croton californicus—California croton
Croton setiger—dove weed
* *Euphorbia peplus*—petty spurge
* *Ricinus communis*—castorbean

FABACEAE—LEGUME FAMILY

Acmispon americanus—Spanish clover
Acmispon glaber—deer weed
* *Medicago polymorpha*—burclover
* *Melilotus indicus*—annual yellow sweetclover
* *Melilotus officinalis*—sweetclover

FAGACEAE—OAK FAMILY

Quercus agrifolia—coast live oak

GERANIACEAE—GERANIUM FAMILY

* *Erodium botrys*—longbeak stork's bill
* *Erodium cicutarium*—redstem stork's bill
* *Erodium moschatum*—musky stork's bill

LAMIACEAE—MINT FAMILY

* *Marrubium vulgare*—horehound
Stachys bullata—California hedgenettle

MALVACEAE—MALLOW FAMILY

* *Malva nicaeensis*—bull mallow
* *Malva parviflora*—cheeseweed mallow

MYRSINACEAE—MYRSINE FAMILY

* *Lysimachia arvensis*—scarlet pimpernel

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus camaldulensis*—river redgum

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia*—California four o'clock

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissoniopsis bistorta—southern suncup

OXALIDACEAE—OXALIS FAMILY

* *Oxalis pes-caprae*—Bermuda buttercup

PHRYMACEAE—LOPSEED FAMILY

Diplacus aurantiacus—bush monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

Plantago erecta—dwarf plantain

* *Plantago lanceolata*—narrowleaf plantain

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamore

PLUMBAGINACEAE—LEADWORT FAMILY

* *Limonium perezii*—Perez's sea lavender

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum parvifolium—seacliff buckwheat

* *Polygonum aviculare*—prostrate knotweed

RHAMNACEAE—BUCKTHORN FAMILY

Rhamnus crocea—redberry buckthorn

SALICACEAE—WILLOW FAMILY

Salix laevigata—red willow

Salix lasiolepis—arroyo willow

SCROPHULARIACEAE—FIGWORT FAMILY

* *Myoporum laetum*—myoporum

Scrophularia californica—California figwort

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple
* *Nicotiana glauca*—tree tobacco
Solanum americanum—American black nightshade
Solanum douglasii—greenspot nightshade
Solanum xanti—chaparral nightshade

TROPAEOLACEAE—NASTURTIUM FAMILY

* *Tropaeolum majus*—nasturtium

URTICACEAE—NETTLE FAMILY

* *Urtica urens*—dwarf nettle

VERBENACEAE—VERVAIN FAMILY

Verbena lasiostachys—western vervain

Gymnosperms and Gnetophytes – Vascular Species

ARAUCARIACEAE— ARAUCARIANS FAMILY

Araucaria heterophylla—Norfolk Island pine

CUPRESSACEAE—CYPRESS FAMILY

Hesperocyparis macrocarpa—Monterey cypress

PINACEAE—PINE FAMILY

Pinus sp.—Pine tree

Monocots – Vascular Species

ASPHODELACEAE—ASPHODEL FAMILY

* *Asphodelus fistulosus*—onionweed

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat
* *Brachypodium distachyon*—purple false brome
* *Bromus diandrus*—ripgut brome
* *Bromus hordeaceus*—soft brome
* *Bromus madritensis*—compact brome
* *Cortaderia jubata*—purple pampas grass
* *Cynodon dactylon*—Bermudagrass
* *Ehrharta calycina*—perennial veldtgrass
Elymus condensatus—giant wild rye

* *Festuca myuros*—rat-tail fescue
* *Festuca perennis*—perennial rye grass
* *Hordeum murinum*—mouse barley
* *Lamarckia aurea*—goldentop grass
  Melica imperfecta—smallflower melicgrass
* *Pennisetum setaceum*—fountain grass
* *Pennisetum villosum*—feathertop
* *Poa annua*—annual bluegrass
* *Polypogon monspeliensis*—annual rabbitsfoot grass
* *Schismus arabicus*—Arabian schismus
* *Stipa miliacea*—no common name

* signifies introduced (non-native) species

Wildlife Species

Birds

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

CARDINALIDAE—CARDINALS AND ALLIES

Pheucticus melanocephalus—black-headed grosbeak

FALCONIDAE—CARACARAS AND FALCONS

Falco peregrinus anatum—American peregrine falcon

Falco sparverius—American kestrel

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Spinus psaltria—lesser goldfinch

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

ACCIPITRIDAE—HAWKS, KITES, EAGLES AND ALLIES

Buteo jamaicensis—red-tailed hawk

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

CORVIDAE—CROWS AND JAYS

Corvus brachyrhynchos—American crow

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—blue-gray gnatcatcher

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Streptopelia decaocto*—Eurasian collared-dove

CUCULIDAE—CUCKOOS, ROADRUNNERS AND ANIS

Geococcyx californianus—greater roadrunner

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Toxostoma redivivum—California thrasher

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

POLIOPTILIDAE—GNATCATCHERS

Polioptila caerulea—blue-gray gnatcatcher

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

LARIDAE—GULLS, TERNS AND SKIMMERS

Larus occidentalis—western gull

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melozone crissalis—California towhee

Zonotrichia leucophrys—white-crowned sparrow

Invertebrates

LYCAENIDAE—BLUES, HAIRSTREAKS AND COPPERS

Brephidium exile—western pygmy-blue

PIERIDAE—WHITES AND SULFURS

Pieris rapae—cabbage white

Mammals

LEPORIDAE—HARES AND RABBITS

Sylvilagus bachmani—brush rabbit

SCIURIDAE—SQUIRRELS

Spermophilus (*Otospermophilus*) *beecheyi*—California ground squirrel

CRICETIDAE—RATS, MICE AND VOLES

Neotoma sp.—woodrat

Reptiles

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

Uta stansburiana—common side-blotched lizard

* signifies introduced (non-native) species

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Appendix C2

Plant and Wildlife Species Not Expected to Occur within the Biological Study Area

Special-Status Plant Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwater or brackish); sandy, openings/perennial stoloniferous herb/May–Aug/10–560	Not expected to occur. Suitable marsh or swamp habitat is not present.
Astragalus pycnostachyus var. *lanosissimus*	Ventura marsh milk-vetch	FE/SE/1B.1	Coastal dunes, Coastal scrub, Marshes and swamps (edges, coastal salt or brackish)/perennial herb/(June)Aug–Oct/3–115	Not expected to occur. While suitable coastal scrub habitat is present, this species rarely occurs on sandy bluffs as compared to within coastal salt marsh margins or coastal dunes (CDFW 2020). There is only one occurrence in the region[2] which is considered possibly extirpated (CDFW 2020).
Calochortus fimbriatus	late-flowered mariposa lily	None/None/1B.3	Chaparral, Cismontane woodland, Riparian woodland; often serpentinite/perennial bulbiferous herb/June–Aug/902–6,250	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/2,325–7,840	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. Suitable dune, marsh, or swamp habitat is not present.
Delphinium umbraculorum	umbrella larkspur	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/Apr–June/1,310–5,245	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.

Special-Status Plant Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Fritillaria ojaiensis	Ojai fritillary	None/None/1B.2	Broadleafed upland forest (mesic), Chaparral, Cismontane woodland, Lower montane coniferous forest; rocky/perennial bulbiferous herb/Feb–May/738–3,270	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/3–4,000	Not expected to occur. Suitable vernal pool, playa, marsh, or swamp habitat is not present.
Layia heterotricha	pale-yellow layia	None/None/1B.1	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; alkaline or clay/annual herb/Mar–June/984–5,590	Not expected to occur. The site is outside of the species' known elevation range. Additionally, only marginally suitable habitat is present.
Monardella hypoleuca ssp. *hypoleuca*	white-veined monardella	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/(Apr)May–Aug(Sep–Dec)/164–5,000	Not expected to occur. No suitable chaparral or woodland habitat present. Although this species is mapped along Rincon Creek all the way to the ocean just behind the project site, it is associated with the riparian habitat of the creek which is not present on site (CDFW 2020).
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr–Oct/16–1,080	Not expected to occur. Suitable marsh or swamp habitat is not present.
Navarretia fossalis	spreading navarretia	FT/None/1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/98–2,145	Not expected to occur. Although chenopod scrub habitat is present, vernal pools are absent within the project site. This species is not known to occur within the region[2] (CDFW 2020).

Special-Status Plant Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Navarretia ojaiensis	Ojai navarretia	None/None/1B.1	Chaparral (openings), Coastal scrub (openings), Valley and foothill grassland/annual herb/May–July/902–2,030	Not expected to occur. The site is outside of the species' known elevation range.
Navarretia peninsularis	Baja navarretia	None/None/1B.2	Chaparral (openings), Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; mesic/annual herb/(May)June–Aug/4,920–7,545	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.
Nolina cismontana	chaparral nolina	None/None/1B.2	Chaparral, Coastal scrub; sandstone or gabbro/perennial evergreen shrub/(Mar)May–July/459–4,180	Not expected to occur. The site is outside of the species' known elevation range.
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/49–2,165	Not expected to occur. Suitable vernal pool habitat is absent within the project site. Additionally, this species is not known to occur within the region[2] (CDFW 2020).
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,130	Not expected to occur. Suitable marsh or swamp habitat is not present. Additionally, the only one occurrence in the region[2] is considered extirpated (CDFW 2020).

Special-Status Plant Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/49–5,015	Low potential to occur. Suitable coastal scrub habitat is present, however mesic habitats such as springs or marshes are absent. The only occurrence in the region[2] was last confirmed in 1962 and is located in Oak View (CDFW 2020). This species was not detected during 2018 or 2019 special-status plant species surveys.
Streptanthus campestris	southern jewelflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; rocky/perennial herb/(Apr)May–July/2,950–7,545	Not expected to occur. The site is outside of the species' known elevation range. Additionally, suitable habitat is not present.
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern	None/None/2B.2	Meadows and seeps (seeps and streams)/perennial rhizomatous herb/Jan–Sep/164–2,000	Not expected to occur. Suitable meadow or seep habitat is not present.

1 **Status Legend:**
FE: Federally listed as endangered
SE: State listed as endangered
CRPR 1A: Plants presumed extinct in California
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants rare, threatened, or endangered in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Plants about which more information is needed – a review list
CRPR 4: Plants of limited distribution – a watch list
.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 Fairly endangered in California (20% to 80% of occurrences threatened)
.3 Not very endangered in California (less than 20% of occurrences threatened or no current threats known).

2 **Region:** "Region" refers to species recorded in the USGS 7.5-minute White Ledge Peak quadrangle, as well as the surrounding coastal quadrangles including Carpinteria, Pitas Point, Ventura, and Matilija (CDFW 2020; CNPS 2020).

CDFW (California Department of Fish and Wildlife). 2020. Rarefind 5: Commercial version. Online database. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed December 2020. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CNPS (California Native Plant Society). 2020. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Sacramento, California: California Native Plant Society. Accessed December 6, 2020 at www.rareplants.cnps.org.

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable wash, riparian, or chaparral habitat present.
Rana boylii	foothill yellow-legged frog	None/SSC, SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur. No suitable stream, river, forest, or chaparral habitat present.
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. No suitable stream, wetland, woodland, or pond habitat present.
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. No suitable forest, chaparral, or grassland habitat present.
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable stream, pond, or lake habitat present.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable stream, creek, or pool habitat present.

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable freshwater wetland habitat present.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable open scrub, grassland, or agricultural habitat present.
Brachyramphus marmoratus (nesting)	marbled murrelet	FT/SE	Nests in old-growth coastal forests, forages in subtidal and pelagic habitats	Not expected to occur. No suitable old-growth forest habitat present.
Charadrius alexandrinus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable marine/estuarine sandy shore, flat, lake, pond, or reservoir habitat present.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable riparian or wetland habitat present.
Falco peregrinus anatum (nesting)	American peregrine falcon	FDL, BCC/FP, SDL	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to nest. Suitable cliff nesting habitat is present, however the slopes and cliffs within the project area are subject to a high amount of human disturbance with walking trails and popular paragliding sites. This species has been known to nest along the south coast, with former nest sites including Gaviota Pass; San Onofre Canyon near Gaviota; Las Flores

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
				Canyon; upper Mission Canyon, Santa Barbara; and Santa Monica Canyon behind Carpinteria (Lehman 2020).
Gymnogyps californianus	California condor	FE/FP, SE	Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large animal carcasses can be detected	Not expected to occur. This species is not known to occur in coastal Santa Barbara County in recent history, and since the last resident pair in the County in the early 1980s, this species is largely restricted to the rural interior of the County primarily within the San Rafael Wilderness and in Sierra Madre. (Lehman 2020).
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. No suitable saltmarsh habitat present.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. While coastal scrub habitat is present, this species is only known from one occurrence in the region[2] which was last observed in 1906 near Ventura (CDFW 2020).
Rallus obsoletus levipes	Ridgway's rail	FE/SE, FP	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable wetland present.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable riparian, woodland, forest, or chaparral habitat present.

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Sternula antillarum browni (nesting colony)	California least tern	FE/FP, SE	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable estuary or lagoon foraging habitat, or suitable beach nesting habitat present.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable riparian habitat present.
Fishes				
Eucyclogobius newberryi	tidewater goby	FE/None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. No suitable aquatic habitat present.
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. No suitable aquatic habitat present.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. While marginally suitable habitat is present, this species is known from only one occurrence in the region[2] which was recorded in 1906 (CDFW 2020).
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Not expected to occur. The site is outside this species known geographic range, and is only known to occur as west as Ojai and/or Weldon (CDFW 2020).
Choeronycteris mexicana	Mexican long-tongued bat	None/SSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable desert habitat present.

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Lasiurus cinereus	hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No suitable trees for roosting habitat or wetland, woodland, riparian, or desert habitat for foraging present.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. While marginally suitable coastal scrub is present, the species is known from only one occurrence in the region[2] which is located inland near Foster Park and not along the coast (CDFW 2020).
Invertebrates				
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Not expected to occur. No suitable vernal pool, vernal swale, or ephemeral freshwater habitat present.
Cicindela hirticollis gravida	sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Not expected to occur. No suitable non-brackish aquatic habitat present or nearby.
Coelus globosus	globose dune beetle	None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	Not expected to occur. No suitable dune habitat present.
Panoquina errans	wandering skipper	None/None	Saltmarsh	Not expected to occur. No suitable saltmarsh habitat present.

Special-Status Wildlife Species Not Expected to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1]	Habitat Requirements	Potential to Occur within the BSA
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable vernal or ephemeral pool habitat present.

1 **Federal Designations:**
FC Candidate for federal listing as threatened or endangered
(FD) Federally delisted; monitored for five years
FE Federally listed Endangered
FT Federally listed as Threatened
FDL Federally delisted
BCC Bird of Conservation Concern
State Designations:
SC Candidate for state listing as endangered
SSC Species of Special Concern
FP California Department of Fish and Game Protected and Fully Protected Species
SE State listed as Endangered
ST State listed as Threatened
SDL State delisted
WL Watch List

2 **Region:** "Region" refers to species recorded in the USGS 7.5-minute White Ledge Peak quadrangle, as well as the surrounding coastal quadrangles including Carpinteria, Pitas Point, Ventura, and Matilija (CDFW 2020; USFWS 2020).

CDFW (California Department of Fish and Wildlife). 2020. Rarefind 5: Commercial version. Online database. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed December 2020. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

USFWS (United States Fish and Wildlife Service). 2020. Information for Planning and Consulting (IPaC). Accessed December 2020: https://ecos.fws.gov/ipac/

Appendix D

Cultural Appendix – CONFIDENTIAL

Appendix E

Geotechnical Report

THIS COPY OF THE REPORT ACCOMPANIES THE EIR;
APPENDICES ARE NOT INCLUDED WITH THIS VERSION IN ORDER TO
AVOID AN EXTENSIVE LENGTH DOCUMENT, FULL COPY ON FILE AT CITY

GEOTECHNICAL REPORT

FOR

THE PROPOSED RINCON BEACH MULTI-USE TRAIL

January 11, 2019

Prepared for:

City of Carpinteria, Parks and Recreation Department
ATTN: Mr. Matthew Roberts, Parks and Recreation Director
5775 Carpinteria Avenue
Carpinteria, CA 93013

Prepared by:

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1.0 EXECUTIVE SUMMARY

Located in southeastern Santa Barbara County at the Ventura County line, the proposed Rincon Multi-Use Trail project consists of the construction of a 10-foot wide (meaning the width of travelled-way, not including paved shoulders), 2,750-foot long multi-use trail connecting the eastern terminus of Carpinteria Avenue to Rincon Beach County Park. The majority of the proposed trail route is located along and above southbound Highway 101, within the railroad track corridor, and along an existing coastal bluff bench (abandoned railroad bed) that is used as an unofficial trail on County property. Bengal explored and evaluated the subsurface soil conditions along the project trail alignment to provide geotechnical design and construction recommendations for the proposed multi-use trail improvements.

Our study focused on the following elements: field investigation, laboratory testing of soil and rock samples, remote sensing analysis, review of data from previous soils investigations within and adjacent to the project limits, data reduction, slope stability analyses, preparing design recommendations for the proposed trail, and preparation of this study report.

Site exploration was conducted by Bengal Engineering, Inc. in April, 2013 and March & August, 2018. Our field investigation consisted of geologic mapping within the project limits and subsurface investigation. A total of nine (9) backhoe test trenches, twenty-four (24) hand-dug test pits, and eight (8) large-diameter borings were excavated within the proposed Rincon Multi-Use Trail corridor. Representative samples of the earth materials encountered were obtained for subsequent laboratory testing.

The majority of the proposed trail alignment will traverse the face of relatively steep slopes consisting of a range of earth-materials, ranging from relatively high strength, granular soil or soil-like marine terrace deposits and Santa Barbara Formation to relatively low strength and slope failure prone Monterey and Sisquoc Formation bedrock.

The proposed trail will cross the surface trace of the Carpinteria fault, a high-angle, south-dipping reverse fault which trends north of west through the northern portion of the project limits. Work by others on the adjacent parcel(s) to the west suggests that additional faults may be present, though no evidence has been found to suggest that these faults or suspected faults have been active in the Holocene. The City of Carpinteria (2003) and other sources suggest that the Carpinteria Fault be considered “potentially active” (faults which show evidence of Quaternary displacement) for planning purposes. It is our opinion that the potential for fault surface rupture during the lifetime of the project is considered low.

Due to its location within a highly active seismic region with several large active faults nearby, the trail alignment is susceptible to relatively high ground motions due to earthquakes. The design PGA is estimated to be about 0.8g with a causative earthquake of moment magnitude, M_w=7.4.

Based on our field exploration and geologic mapping, the coastal bluff portion of the slope to be traversed by the proposed trail, especially the slope areas existing below the unsanctioned County trail (approx. Sta. 30+00 to 45+00) are most problematic. Areas of landslide debris and questionable landslide debris have been mapped along this section of the proposed trail corridor.

Construction of the proposed trail alignment involve cut and fill of the existing slopes. Our subsurface investigation, geologic mapping, laboratory testing and results of slope stability analyses indicate that, following the implementation of the remedial/stabilization measures recommended herein, the as-built slopes and trail alignment will be adequately stable against overall and surficial slope failures under the static or normal service conditions, in both short- and long-term conditions.

The recommended remedial/stabilization measures include: (1) cutting to flatten the slopes above the trail alignment, (2) removal and replacement of unsuitable surficial soils prior to placing new fill, (3) keying and benching the new fills into competent slope materials, (4) enhancing the stability of new fills by means of buttress and geotextile reinforcement, and (5) reducing surficial erosion hazards by controlling the collection and disposal of surface run-off via non-erosive surface drainage facilities and hydro-seeding.

Due to the relatively low shear strength of the constituent earth materials, the overall slope height, gradients and slope orientation, and the high design ground motion, the ocean-facing slope within the proposed trail alignment limits is considered susceptible to limited downslope sliding movement, estimated to be on the order of about twelve (12) inches in the event shaken by the design earthquake ground motion event.

The lower portion of the slope below the existing unsanctioned dirt trail, located outside the proposed grading area for the trail construction, is considered susceptible to further local/surficial instability in the future. Continued monitoring and maintenance of this portion of the slope, which if left unattended may progress with time and affect the stability of the subject trail in the future, is recommended.

A minimum pavement section consisting of five inches (5”) of Portland Cement Concrete (PCC) over four inches (4”) Class II Aggregate Base is recommended for the subject trail. Cast-in-drilled hole (CIDH) foundations may be used to support the proposed single-span trail bridge abutments. Hard drilling conditions may be encountered during drilling of the CIDH pile holes.

In summary, it is our opinion that the proposed project is geotechnically feasible provided the findings and recommendations included in this report are considered in the design and construction of the proposed improvements.

2.0 INTRODUCTION

This geotechnical report is prepared by Bengal Engineering, Inc. in support of the design and construction of the proposed Rincon Multi-Use Trail, located in and immediately adjacent to the southeast corner of the City of Carpinteria. The location of the project site and the approximate project limits are shown on Figures 1 and 2, respectively.

The proposed project consists of the construction of a 10-foot wide, approximately 2,750-foot long multi-use trail connecting the east end of Carpinteria Avenue to Rincon Beach County Park, located in Santa Barbara County at the Ventura County Line. As envisioned, the trail will provide critical, non-motorized access for both pedestrians and bicyclists and help eliminate many of the existing safety concerns for travel either along the Highway 101 shoulder or within the railroad corridor.

Bengal explored and evaluated the subsurface soil and bedrock conditions along the proposed trail alignment to provide geotechnical design and construction recommendations. This report is prepared as part of the scope of work to present the results of our site exploration and geotechnical analysis, and recommendations for the design and construction of the proposed improvements.

This report is for use solely by the City of Carpinteria for the specific project site and the proposed project elements or the scope of work described herein. Site exploration conducted, analysis performed, and findings, recommendations and conclusions contained in this report may not be adequate or appropriate for use by others, different project elements, and for any other project or purpose.

3.0 SCOPE OF WORK

The scope of work completed for this geotechnical report includes:

- A review of available publications, maps and reports prepared by others (see reference list).
- Review of historical aerial photos for the area on file at the University of California, Santa Barbara – Davidson Library, Map and Imagery Laboratory.
- Historical document review of railroad construction details at the Santa Barbara Historical Museum.
- Several site visits, geologic reconnaissance and mapping within the project limits.
- Excavation, logging and sampling of eight (8) large-diameter borings, twenty-four (24) hand-excavated test pits, and nine (9) backhoe-excavated test trenches along the trail alignment.
- Preparation of geologic maps (Plates A & B, Appendix A) and representative cross-sections (Plates C & D, Appendix A).
- Preparation of the site exploration boring, test pit and test trench logs (Appendix B).
- Laboratory testing of representative samples of the subsurface geomaterials (Appendix C).
- Review of subsurface geologic conditions
- Field and laboratory data evaluation and interpretation to determine geomaterial types and their generalized geologic and geotechnical characteristics.
- Performing various geotechnical engineering analyses; including slope stability analyses (Appendix D), and the
- Preparation of this geotechnical study report.

In preparing this report, we also reviewed the proposed project details shown on the latest civil engineering plans attached in Appendix E.

4.0 PROPOSED PROJECT

The proposed project consists of the construction of a 2,750-foot long multi-use trail connecting the eastern terminus of Carpinteria Avenue to Rincon Beach County Park, located in Santa Barbara County at the Ventura County Line (see Figure 1). As envisioned, the trail is to consist of 10-foot wide paved travel-way with a 3-foot wide paved shoulder along each side. The proposed trail route is located along and above the Rincon Road onramp to southbound (SB) Highway 101, within the Union Pacific Railroad (UPRR) track corridor, and along an existing bench (abandoned railroad bed) that is used as an unofficial trail on County property. Most of the area within and along the project limits, including both the bluff top and adjacent slopes, has been graded over the years.

The proposed trail will provide a dedicated connection for pedestrians and bicyclists from Carpinteria Avenue to the Ventura County line through Rincon Beach County Park. The alignment would begin just south of the intersection of Rincon Road (Hwy 150) and the Highway 101 southbound on-ramp. The trail alignment continues east/southeast above and alongside SB Highway 101, descending on a northeast-facing cut slope above the southbound 101 on-ramp towards Rincon Point. As the trail approaches the highway shoulder and the southbound 101 overhead (OH) bridge the alignment turns slightly southward to span over the depressed UPRR railroad track corridor via a proposed 160-foot span, pre-fabricated trail bridge. After crossing the railroad tracks, the trail tums and, through a combination of cut and fill grading, descends across a southwest-facing cut slope above a relatively flat bench and beach below. Up until the early 1970's the bench was the previous railroad corridor / track alignment and is currently an unsanctioned, or unofficial, trail leading from the County Park parking lot to railroad tracks. The proposed trail will terminate at the western end of the Rincon Beach County Park parking lot.

Bengal is also providing civil trail and bridge structural engineering design for the Rincon Multi-Use Trail, including the preparation of plans/profiles, grading plans and cross sections. This geotechnical report addresses the proposed improvements shown on these plans. Station call-outs in this report are based on the most recent trail alignment shown on these plans

The current design concept emphasizes a grading approach, involving mostly cut and some fill, in the design and construction of the proposed trail. The proposed construction of fill slopes along the bluff portion of the trail will require the removal and re-compaction and keying/benching into competent materials prior to the placement of compacted fill.

5.0 PHYSICAL SETTING

The proposed Rincon Multi-Use Trail is located at the southeastern end of the Carpinteria Valley, in southeastern Santa Barbara County. The Carpinteria Valley is bounded to the east, north and northwest by the foothills of the Santa Ynez Mountains and to the south and west by the Pacific Ocean. The peaks and ridges of the adjacent foothills bounding the Carpinteria Valley range from approximately 600 to 2,000 feet above mean sea level (MSL).

The approximate limits of the study area are shown on Figure 1 of this report. The coordinates for the middle of the site are: Latitude = 34.381°, Longitude = -119.483°.

5.1 Climate

The City of Carpinteria is situated along the only south-facing stretch of coastline in Southern California. Like much of coastal California, the climate is considered Mediterranean and is characterized by mild, wet winters and dry and/or very warm summers. Average high temperatures range from 65° during December and January to 76° during August. Regions with a Mediterranean climate receive almost all of their precipitation during the winter season. The rainy season generally extends from November through March or April, with the bulk of the average rainfall occurring from December to February.

5.2 Existing Topography along Proposed Trail Alignment

The project alignment is located largely in an area of coastal bluff east of the City of Carpinteria near the Santa Barbara/Ventura county line. Below the Carpinteria terrace surface, which is at an elevation of approximately two hundred feet (200') above mean sea level, a series of lower terraces interspersed with relatively steep slopes along the proposed trail route are evidence of extensive past grading to construct both Highway 101 and the Union Pacific Railroad within the project limits. The Union Pacific Railroad right-of-way corridor passes through the proposed trail alignment near its mid-point.

At the eastern end of Carpinteria Avenue, and near the beginning of the proposed trail (~Sta 10+00 to 12+00), the trail alignment is situated atop the slightly modified, through relatively minor fill placement, Carpinteria terrace surface. From ~Sta 12+00 ahead on line to ~Sta 23+00, the proposed trail will traverse a northeast-facing related cut slope constructed when the existing coast highway was realigned, reprofiled (much lower), and widened during the late 1960's to grade the Highway 101 corridor. The 1968 record drawings for the freeway realignment (Contract 05-033024) indicate that this cut slope, above the mid-slope bench, was initially graded at 1:1 h:v (45°), while the lower portion was graded at 1.5:1 (34°). The freeway was later modified, mostly by widening toward the median, in the "Mussel Shoals HOV" Project (Contract No. 07-260704; drawings are dated 2011).

After traversing the above-referenced highway cut slope and reaching a relatively flat shoulder area adjacent to Highway 101, at approximately Sta 23+50, the trail alignment turns slightly southward to span over the UPRR railroad corridor cut via a one hundred and sixty foot (160') long, pre-fabricated pedestrian bridge. In the vicinity of the proposed pedestrian bridge, the railroad cut slope on the northeast side of the tracks has an average gradient of about 1:1 h:v (45°), while the cut slope on the opposite side of the railroad corridor has an average gradient of about 1.5:1 h:v (34°). Two relatively flat bench areas are present on the north side of the railroad cut, with the lower bench having been paved with concrete. These benches drain under the railroad via drainage systems built in the 1968 project.

On the southwest side of the proposed pedestrian bridge, the trail continues onto the ocean bluff or "bluff" portion of the trail alignment. At ~Sta 26+50 the trail alignment will curve to the southeast and head downhill along a the face of an existing, sixty to one hundred-foot (60'-100') high, 1:1 to 1:¾ h:v (45°-60°) southwest (or ocean) facing cut slope that was graded for the original railroad alignment. An existing mid-slope bench serves as an existing, "unmarked" trail, as it's referred to by the Santa Barbara County Parks Dept. The proposed trail will continue downslope until it merges with the existing mid-slope bench at or near Station 35+50. It then transverses along the existing bench and ends at or near the existing parking lot at ~Sta 37+50.

Slopes below the mid-slope bench along the "bluff" portion of the alignment descend to the beach below at average gradient of 1:1 to 1.5:1 h:v (34°-45°).

6.0 SITE INVESTIGATION

6.1 Air Photo Review

The following historical air photos were reviewed at the Map and Imagery Laboratory of Davidson Library, University of California at Santa Barbara.

Photo Series	Date Flown	Scale	Photograph Numbers
C-430	1929	1:24,000	A-21, 22
C-4950	1938	1:24,000	SF-145, 146
GS-EM	8-21-1947	1:24,000	6-150, 6-151
BTM-1954	6-1-1954	1:20,000	11K-90, 91
HA-AN	5-27-1956	1:9,600	6-21, 22
HA-GN	11-23-1959	1:15,600	101, 100
BTM-1961	7-5-1961	1:20,000	7BB-113, -112
HA-VX	2-10-1964	1:12,000	53, 54
HB-QD	10-30-1969	1:12,000	64, 63
HB-SY	12-27-1971	1:6,000	64-67
HB-WL	8-23-1973	1:12,000	3, 4
HB-XQ	2-23-1975	1:12,000	134, 135
USDA-24-615070	1978	1:24,000	678-175
PW-55010	1-17-1995	1:12,000	3, 2

The Carpinteria fault is readily apparent in the early photo series (C-430 and C-4950) where a north-facing scarp and related sag or depression are apparent, unaffected by later grading in the area.

The famous "Thunderbowl" racetrack is first visible in the GS-EM photo series. Per Campos et al (2007), the track operated from the mid-1940's into the 1960's. The track appears to have been constructed within the sag, or depression, at the base of a north-facing scarp, or slope, formed by movement along the Carpinteria fault. It appears that relatively limited grading was required to construct the track, and the fault trace and sag areas are still visible south and southeast of the racetrack. Highway 101 came to Carpinteria in the 1960's, and dirt from various highway excavations ultimately filled the depression and the racetrack. Terratech (1996) indicates that the track was filled between 1969 and 1970.

A complex of small buildings (origin unknown), near the southeast edge of the modern day bluff top and cul-de-sac terminus of Carpinteria Avenue, were apparent in the HA-AN photo series.

The 1971 photo series (HB-SY) reveals slope instability, erosion, etc. to the slope below the old railroad tracks/bench trail, in the vicinity of test trenches TT 07 to TT 09 (Geologic Map, Plate A). This is a drainage corridor with an existing box culvert at the bench, i.e. trail, grade.

Grading for the existing Highway 101 alignment and corridor, which includes the existing Caltrans cut and the railroad cut, was well underway in the HB-QD (1969) photo series. By this time the "Thunderbowl" racetrack and the sag area to the southeast had been filled in. This earth work was part of the eight-mile-long Rincon Freeway project. This project was dedicated on Dec. 21, 1972.

The HB-WL photo series show a number of relatively small, surficial slope failures in the slope below the old railroad tracks/bench trail, in the vicinity of test trench TT 07 and boring DH 07 (Geologic Map, Plate A). Also shown is the construction of the western parking lot at Rincon County Beach Park. The existing path, providing beach access from the western beach park parking lot, has been graded and constructed at this time.

6.2 Summary of Previous Studies (Others)

The City of Carpinteria provided Bengal with copies of two (2) geotechnical documents or reports that were located by City staff, at the request of Bengal. Both reports, TerraTech (1996) and Dudek (2012), reference several reports of previous studies conducted within or immediately adjacent to the project limits. Most, if not all, of these studies were performed to evaluate site geologic conditions as they pertain to proposed development of the site known as "Carpinteria Bluffs Area III". This site is believed to be the vacant, bluff-top parcel(s) located immediately west/northwest of the northern portion of the proposed trail.

The 1996 report by TerraTech contains information that is particularly useful. In addition to reviewing previous site reports, TerraTech reviewed aerial photographs, mapped exposures on slopes, and excavated a ~150' long and up to thirty foot (30') deep seismic trench. The report copy on file at the City lacks maps and other attachments. Of note to the current investigation are the following details:

- TerraTech concluded that three faults crossed the property and concluded that these faults are "potentially active", given the offset of the contact between the Monterey Formation and the overlying terrace deposits.

- TerraTech addressed the issue of landsliding by reviewing the work done by previous investigators. Evidence of large-scale, deep-seated landsliding was observed, though the size and limits of the landsliding was disputed. We have noted and mapped this landslide(s), and it is located northwest and beyond the limits of the proposed trail improvements.

6.3 Summary of Bengal's 2013 Geotechnical Investigation

Site exploration for the preliminary investigation was conducted from April 23-25, 2013. The field investigation consisted of geologic mapping within the project limits and subsurface investigation. Along the existing, unofficial County trail, nine (9) backhoe test trenches were excavated to depths ranging from six feet (6') to thirteen and a half feet (13.5') below grade. Additionally, fourteen (14) hand-dug test pits were excavated within the proposed trail alignment. For reference, the locations of the exploratory test trenches and test pits are shown on the Geologic Maps, Plates A and B (Appendix A).

Subsurface conditions encountered in these explorations were logged by an Engineering Geologist from this office. The subsurface conditions encountered in these test pits and trenches are described in the boring logs included in Appendix B. Representative samples of the earth materials encountered were obtained. Explorations were backfilled with the excavated materials. However, the backfill was not compacted to relative compactions necessary to characterize as engineered compacted fill and, thus, should be monitored for future settlement and/or, if necessary, removed/replaced as compacted engineered-fill.

Within the hand-dug test pits and test trenches, a hand-held sampler (with a sliding drop weight) was used to obtain relatively undisturbed ring samples for laboratory samples. The rings are of 2½" outside and 2.42” inside diameters, and 1" in height.

6.4 Field Investigation – Detailed Design Phase

Site exploration for the detailed design phase was conducted from March 12th-14th and August 16th and 17th, 2018. The detailed design phase field investigation consisted of additional geologic mapping and subsurface investigation. Nine (9) twenty-four inch (24”) diameter borings, ranging from sixteen feet (16’) to fifty-five feet (55’) below grade, and nine (9) hand-dug test pits were drilled/dug, sampled and downhole logged. For reference, the locations of the exploratory borings (designated as DH 01 to DH 08) and test pits (TP 15 to TP 24) are shown on the Geologic Maps, Plates A and B (Appendix A).

Subsurface conditions encountered in these explorations were logged by an Engineering Geologist from this office. The subsurface conditions encountered in these borings and test pits are described in the boring logs included in Appendix B. Representative samples of the earth materials encountered were obtained. With the exception of borings DH 07a and DH 07b, which were backfilled with 2-sack concrete slurry, the borings and test pits were backfilled with the excavated materials. However, the backfill was not compacted to relative compactions generally necessary to characterize as engineered compacted fill and, thus, should be monitored for future settlement and/or, if necessary, removed/replaced as compacted fill to sufficient depths.

Undisturbed samples were obtained within the large-diameter borings with a Modified California (M.C.) ring sampler (ASTM D 3550 with a shoe similar to ASTM D 1586). The M.C. sampler has a 3" outside diameter and a 2.5" inside diameter. Samples were obtained by driving the sampler with successive drops of the Kelly bar. The soil is retained in the brass rings of 2½" outside diameter, 2.42” inside diameter and 1" in height.

Within the hand-dug test pits, a hand ring sampler (with a sliding drop weight) was used to obtain relatively undisturbed ring samples (2½" outside and 2.42” inside diameter and 1" in height) for laboratory testing.

Bulk samples were also obtained for testing and analysis. All undisturbed and bulk samples were sent to the laboratory for examination, testing, and classification, using the Unified Classification system and group symbol.

6.5 Laboratory Testing

Several laboratory tests were assigned on representative samples of the subsurface materials obtained from the exploratory test pits, trenches, and borings. These tests included:

- Moisture-Density tests
- Sieve Analysis tests
- Atterberg Limits tests
- Direct Shear tests
- Unconfined Compression (UC) tests
- R-Value testing, and
- Soil Corrosion tests

SubSurface Designs, Inc., of Sylmar, California and AP Engineering and Testing, Inc., of Pomona, California, performed the laboratory testing on the selected samples assigned by Bengal Engineering. Test results are included in Appendix C.

These tests were conducted to aid in the classification of the subsurface materials and to determine their shear strength parameters for slope stability analysis. These tests were conducted in accordance with the general procedure included in the applicable ASTM standards.

7.0 GEOLOGIC CONDITIONS

7.1 Regional Geology

The project site is located within the Western Transverse Ranges physiographic province of Southern California. The Transverse Ranges are a complex series of east-west trending mountain ranges and valleys. Mountain ranges in the Transverse Ranges province are made up of rocks that are progressively older from the west to the east. The structural orientation of this province is transverse to the general north-northwest structural trend of the other geologic provinces in California. The Western Transverse Ranges extends from the Ventura County, west to Point Arguello, and is dominated by the east-west trending Santa Ynez Mountain Range. Cretaceous-Cenozoic sedimentary marine rocks and Miocene volcanic rocks dominate the Western Transverse Ranges region.

Structurally, the Carpinteria Valley and the project site are within an area termed the Santa Barbara Fold Belt (Gurrola. et al., 1998). The Santa Barbara Fold Belt is located along the coastal piedmont (the area between the mountains and the ocean) from east of Carpinteria to west of Goleta. It is a region of active folding that is generally comprised of west to northwest trending folds and blind reverse faults deforming late Pleistocene (11,000 to 1.6 million years before present) to Holocene (11,000 years to present) marine terraces, terrace deposits, and alluvial fans (Gurrola et al., 1998). This deformation is thought to have caused localized topographic highs within the Carpinteria Valley, such as the Shepard Mesa and Summerland Hills.

The project area is located at the western end of an area termed by Dibblee (1994) as the Rincon Uplift. A block of marine, Miocene shale formations has been uplifted between the Red Mountain Fault on the south and the Rincon Creek Fault on the north. This uplifted block, which is anywhere from one to two miles wide, becomes gradually and progressively higher to the east, from Carpinteria to its high point at Rincon Mountain.

7.2 Overview of Topography and Site Geology along Proposed Trail Alignment

At the eastern end of Carpinteria Avenue and near the beginning of the proposed trail (~Sta 10+00 to 12+00), the project is situated atop the slightly modified eastern end of the Carpinteria coastal bluffs. The bluffs are eroded from complexly folded Monterey Shale and overlain by a thin, relatively flat-lying deposit of sandy, older alluvium and, adjacent to the contact with the underlying bedrock, regressive marine sand deposits. Mapping by the CGS (2003) and others suggests these marine terrace sands may be correlative with the dated (40-60kya) Punta Gorda terrace, located between the project limits and Ventura to the east/southeast.

Relatively thin amounts of earth fill have been placed atop the terrace deposits atop the Carpinteria coastal bluff. Approximately six feet (6') of fill overlaying terrace deposits, was encountered in test pit TP 01, and two feet (2') of fill was identified in boring DH 08.

As previously mentioned, east of the Carpinteria Avenue cul-de-sac, a north-facing scarp and related sag (depressed area) are visible in early aerial photos and topographic maps. The scarp/sag appear to the features associated with the potentially active Carpinteria Fault. The filling and leveling of this area appears to have occurred during the 1960's, in conjunction with the construction of nearby Highway 101.

From ~Sta 12+00 ahead on line to ~Sta 23+00, the proposed trail traverses a northeast-facing cut slope constructed when the existing roadway was realigned and widened during the late 1960's and early 1970's to create the 6-lane Highway 101. The northern portion of this cut slope is underlain by both terrace deposits and Santa Barbara Formation, as shown on the Geologic Map (Plate A, Appendix A). Relatively shallow surficial failures were observed and mapped within the terrace deposits on this cut slope, exclusively within the portion of the cut slope graded at 1:1 h:v (45°).

Near Sta 18+00, a high angle, south-dipping fault (presumably the Carpinteria Fault) brings siliceous shale of the Monterey Formation (Tm) into contact with both the Santa Barbara Formation and marine terrace sands. The fault contact was observed within Test Pits TP 04 and TP 08 (Plate A, Appendix A). To the southeast of this fault contact, thinly-bedded Monterey shale is exposed along the proposed trail alignment and on the Highway 101 cut slope. Where observed, bedding within the Monterey dips steeply south and locally north, where it is overturned. While relatively hard, the shale is closely fractured, locally jointed and weathers to a slopewash which is soft and prone to erosion and creep on the relatively steep cut slope.

After traversing the Highway 101 cut slope, the proposed trail will curve southward before crossing the UPRR tracks on a 160-foot long pre-fabricated pedestrian bridge. Aerial photo research indicates that the UPRR cut was made at the same time the Highway 101 construction was occurring, i.e. the late 1960's and into the early 1970's. At the proposed location of the northern abutment of the proposed pedestrian bridge, an analysis of the record drawings for the referenced railroad project indicates that the existing grade is approximately one hundred feet (100') lower than the original, pre-Highway 101 grade. Near-vertical beds of moderately hard

to very hard bedrock (siliceous siltstone) were mapped within borings DH 07a and DH 07b, drilled adjacent to the northern abutment of the proposed pedestrian bridge. Steeply south-dipping to overturned, locally folded and contorted, Monterey Shale is well-exposed in the railroad cut. Overall, the railroad cut slopes near the proposed pedestrian bridge location have performed relatively well, though the moderately hard, but brittle and fractured siliceous shale is prone to sloughing, and talus mantles the lower portions of the cut slopes in several areas.

On the southwest side of the proposed pedestrian bridge, the proposed trail is in cut as it crosses over a relatively sharp, northwest-trending ridgeline. An overlook is proposed at this location, approximately Sta 26+50, where trail users can rest while enjoying a panoramic and sweeping view of the Pacific Ocean. Here also the trail alignment veers southeast and descends the relatively steep (45°-±60°) southwest-facing cut slope constructed along the original railroad alignment through this area. From ~ Sta 26+50 to ~Sta 33+00 the cut slope is composed of steeply north-dipping and fractured shales of the Monterey Formation. The existing cut slope is in overall fair condition, with an area of exception being the previous slope failures and current failure scar from ~ Sta 27+50 to ~ Sta 28+75. A wedge of mixed slopewash and shallow rock fall debris was observed and encountered in test trenches TT 04 to TT 06.

Cut and fill grading is proposed as the trail will traverse and descend the cut slope at ~5% profile grade. Cut slopes are proposed at a 1:1 (45°) gradient, along with drainage measures along the top of the cut and mid-slope bench, while a 1.25:1 (h:v) geotextile-reinforced fill slope will daylight along the existing mid-slope bench or the “unmarked” trail as its referred to by the Santa Barbara County Parks Dept. Test pits and borings indicate that much of the slope below the mid-slope bench was constructed as a sliver fill embankment during grading for the original railroad alignment.

The trail alignment will cross the conformable contact between the Monterey and younger Sisquoc Formations (Tsq) at ~ Sta 33+00. Compared to the Monterey, the Sisquoc is not as well-bedded and is composed primarily of mudstone and/or siltstone that lacks the hard, siliceous intervals. Where observed in site explorations and at outcrop, bedding within the Sisquoc strikes generally east-west and dips steeply to the north. Near its contact with the Monterey Formation, slope failures have been investigated and mapped in the Sisquoc portion of the cut slope between ~Sta 33+40 and ~Sta 35+00.

After traversing the existing bluff cut slope face, the proposed trail will intersect the existing mid-slope bench at approximately Sta 36+00. From this point ahead to the end of the trail alignment and intersection with the Rincon Beach parking lot, the trail will be in a slight cut. From ~Sta 36+50 ahead, the existing cut slope above the bench/trail is comprised of terrace deposits (Qt), unconsolidated sands with occasional cobbles and small boulders which are locally weakly cemented and mantled by a relatively thick soil profile. Given their lower elevation, these terrace deposits appear to be younger than those along the top of the Carpinteria bluffs.

7.3 Faulting and Seismicity

The site is located in an active seismic region where large numbers of earthquakes occur each year. Moderate to large earthquakes, capable of generating significant ground motions at the subject site, have occurred in the region and are likely to occur again during the design life of the subject facility.

The Rincon Creek and Carpinteria faults, and the "central fault" discussed by Putnam (1942), are three south-dipping reverse faults, within and adjacent to the project limits, which bound the north side of the Rincon Mountain horst structure.

Carpinteria Fault

The Carpinteria fault, a high-angle, south-dipping reverse fault, has been mapped as trending north of west through the project limits. Dibblee (1994) mentions that the fault once formed a “low, vague, north-facing scarp in older alluvium just south of Highway 101” and immediately east of the project limits. The north-facing scarp was seen on early aerial photos and early USGS topographic maps, prior to development of the aforementioned “Thunderbowl” racetrack and subsequent placement of fill generated by the nearby grading of Highway 101. The fault is thought to possibly merge with the Rincon Creek Fault further to the west.

Bengal believes it exposed the Carpinteria Fault in test pits TP 04 and TP 08, and mapped the approximate surface trace of the fault on the Geologic Map (Plate A). The fault has displaced the 40k to 60k Punta Gorda marine terrace deposits (Qtm). Test Pit TP 04 showed clear evidence of the Monterey Formation bedrock in fault contact with sandy, unconsolidated Qtm deposits along a near-vertical fault plane parallel to bedding within the Monterey. Guptill (1981) mentioned that the total vertical separation of the bedrock wave abrasion platform measures thirty feet (30') at this location.

Guptill (1981) also described work to confirm the location of the Carpinteria fault west of the Highway 101 road cut. Bucket auger holes demonstrated about eighteen feet (18') of vertical separation of the terrace bench, and an antithetic fault south of the main trace offset the terrace contact and near-surface soils in a backhoe trench, which would appear to indicate quite youthful activity.

Rincon Creek Fault

The potentially active Rincon Creek fault (aka Rincon Creek / Mesa fault) and associated Rincon Creek Anticline are located approximately 3,500 feet and 1,800 feet north, respectively, of the northern limits of the study area. The fault is thought to be capable of a moment magnitude 6.4 to 6.6 earthquake. The fault is a reverse, south-side up that is thought to join the Mesa Fault west of Carpinteria. The Mesa fault is considered “active” by Santa Barbara County (1979), and it may be responsible for any of several notable earthquakes in the Santa Barbara area since records have been kept.

Red Mountain Fault

The steeply dipping / overturned block of Monterey and Sisquoc Formations is elevated on the Red Mountain fault, located just offshore, against the Pliocene Pico Formation to the south (Dibblee, 1994). The Red Mountain fault, a thrust fault capable of earthquakes between M_w 6.0-6.8 (SCEC) to 7.2 (Caltrans), is thought to dip steeply north in the project vicinity and strike south of east under Rincon Point and onshore about one mile east of Rincon Point. The fault splays into two main branches near the Carpinteria coast. The State of California considers the Red Mountain fault to be “active”, as evidence has been found at location(s) along the surface fault trace for ground rupture during the Holocene (i.e. the last 11,000 years).

The location of the Red Mountain fault varies depending on the source of the geologic mapping. Some workers show the queried or approximate location of the fault trending through Rincon Point (Dibblee, 1994), where an exposure of Pico Formation bedrock has been mapped, or offshore of Rincon Point (California Geological Survey, 2003).

7.4 Earth Materials

Areas of earth fill (ef) are found throughout the project limits. The areas of earth fill shown on the attached Geologic Maps (Plates A and B) are what are considered to be significant in the sense that they are large and/or relatively thick, or the fill has been placed to help minimize erosion of other slope stability issues, or that the fill is located in areas that will be subject to bluff-retreat processes. Notable areas of fill include:

- The fill placed on the bluff top, at and near the start of the proposed trail. Approximately two to six feet (2'-6') was encountered in subsurface explorations in this area.
- Fill encountered in numerous test pits excavated at the base of the bluff, above the aerial extent of the beach sands and encountered in several borings excavated along the outside edge of the mid-slope bench. It appears this fill was placed or cast in order to widen the mid-slope bench (on which the railroad ran along for several decades) and to slow the natural bluff retreat process. Along the base of the coastal bluff, the fill was placed directly atop beach sands.

With the exception of the soil profile observed near the County Park parking lot, natural soil deposits (Qns) were not encountered within the explorations, as much of the trail corridor has been extensively graded. Slopewash (Qsw) was noted in several test trenches excavated just above the existing unsanctioned County trail, at the base of this over-steepened slope, and mantling the Highway 101 cut slope. Landslide debris (Qls), both definitive and questionable, is shown on the Geologic Maps and was observed in many explorations along the ocean portion of the proposed trail alignment. Colluvium (Qc), a term for a heterogeneous mix of materials present on a slope, was mapped in several areas and observed in a few explorations. Though not mapped as a separate unit, shale rock fragments (i.e. talus) have accumulated near the base of slopes within the railroad cut. A relatively thin and transient deposit of beach sand (Qbs) mantles the modern bedrock abrasion platform along the beach.

Terrace deposits (Qt) have been mapped in the existing cut slope near the end of the proposed trail alignment. Older marine terrace deposits (Qtm), which have been mapped and correlated by others with the 40-60 kya Punta Gorda terrace, cover or veneer much of the relatively flat Carpinteria bluff area and were observed and sampled in several test pits.

From north to south across the project limits, sedimentary bedrock of the Santa Barbara Formation (Qsb), the Monterey Formation (Tm), and the Sisqouc Formation (Tsq) underlie the unconsolidated deposits.

The earth materials encountered within the explorations and exposed at the surface within the project limits are briefly described below. For approximate depths and more detailed descriptions, refer to the enclosed Logs of Subsurface Explorations (see Appendix B). The surficial distribution of geologic materials is shown on the Geologic Maps (Appendix A).

Earth Fill (ef)

In TP 01 and boring DH 08, near the northwest end of the project limits, the fill varied from yellowish brown, very dense silty gravel (GM) to dark brown silty sand (SM) to light brown fine-grained silty sand / sandy silt (ML) with scattered rock fragments. At the southeast end of the project limits, the earth fill encountered within explorations along the former railroad alignment consists of silt with some sand (ML) to fine-grained silty sand / sandy silt (SM/ML) with scattered to abundant shale fragments which is light brown to brown to light yellowish brown to light brownish gray, soft/loose to compact, and slightly moist with scattered roots and an occasional piece of construction debris.

Beach Sand (Qbs)

The beach area is mantled by a relatively thin layer of fine- to medium-grained sand (SP) with scattered cobbles which is light brown to tan, loose to medium dense, and dry to moist.

The thickness of the beach sand deposits varies considerably during the course of the year, with winter storm and wave conditions creating a thin profile of sand, as compared to the summer months.

Slopewash (Qsw)

Slopewash was observed in several test pits excavated along the base of the Highway 101 cut slope, above the southbound 101 on-ramp. The slopewash mantles the cut slope where the bedrock isn't exposed, is material derived from the bedrock, and is subject to slope processes such as creep and erosion. Where observed in the test pits in this area, the slopewash consists of light brown sandy silt (ML) with scattered rock fragments which is soft/loose to slightly dense, slightly moist and contains scattered to abundant roots.

Slopewash was also noted in several test trenches excavated along the base of the over-steepened slope above the existing, "unsanctioned" Santa Barbara County trail, i.e. the old railroad bed. These deposits accumulated at the base of the slope over time and vary from being clast- to matrix-supported and are noted for being quite loose and prone to caving/collapse.

Landslide Debris (Qls)

Landslide debris and questionable landslide debris / landslide-affected rock has been mapped in several areas within and adjacent to the proposed trail alignment. Where observed, the landslide debris consists of a heterogeneous, massive, clast- to matrix-supported mix of mudstone fragments in a matrix of light brown elastic silt to sandy silt to silt with clay (ML).

Questionable landslide-affected bedrock was encountered in boring DH 04, to a depth of seventeen feet (17') below grade, and consists of a highly fractured, dry, slightly hard mudstone and siltstone with local open fractures and discontinuous structure.

Terrace Deposits (Qt)

Where observed, these deposits consist mainly of medium- to thick-bedded, fine- to medium-grained sand (SP), occasionally laminated, with occasional gravel to gravelly sand (GP) with occasional layers with cobbles to small boulders which is brown grading light yellow to light reddish brown (with depth), slightly moist, and dense to very dense with localized areas of cementation.

Marine Terrace Deposits (Qtm)

Where observed, these deposits consist mainly of light reddish brown / light orange brown, brown to reddish tan clean, fine- to medium-grained sand (SP) with some silt, with occasional gravel. Near the Qtm/bedrock contact in boring DH 08 the generally thick-bedded to massive sands became coarser-grained with abundant cobbles.

These deposits unconformably overlie eroded bedrock on an elevated marine wave-cut platform. In some locations the basal layer consists of cobble to pebble gravel or conglomerate grading upward into laminated, massive beach sand. The upper two-thirds or more of terrace sequences typically includes non-marine, stratified fluvial and alluvial pebble-cobble gravel with fines and minor colluvial deposits.

The earth fill, beach sand, slopewash, colluvium, landslide debris, terrace and marine terrace deposits were classified visually and, where available, using results of the laboratory tests in accordance with the Unified Soils Classification System.

Bedrock (Qsb) – Santa Barbara Formation (lower Pleistocene)

The Santa Barbara Formation, consisting of fossiliferous fine-grained sandstone and siltstone, crops out along the base of the southbound Highway 101 cut slope and was observed/sampled in test pits TP 07 and TP 08. Where observed in the test pits and on the cut slope, the bedrock is typically buff to pale-yellow (where weathered), soft to moderately hard, friable, moist, consolidated and weakly to locally well-indurated (i.e. cemented). Abundant fossils, most of which are broken into a “hash”, include pectin and turritella.

Bedrock (Tsq) – Sisquoc Formation (Pliocene-Miocene)

The Sisquoc Formation generally consists of occasionally bedded to massive mudstone, siltstone and diatomaceous mudstone. The bedrock is typically light brown to light yellowish brown to olive/brownish gray grading to gray/blue-gray (unoxidized), moderately hard to hard, moist, moderately to slightly weathered, highly to slightly fractured, and occasionally jointed. The Sisquoc is generally considered a “landslide prone” formation.

Bedrock (Tm) – Monterey Formation (Miocene)

Thinly-bedded, soft to moderately hard shale, laminated siltstone, diatomaceous shale and very hard siliceous shale, with minor beds of chert, of the Miocene Monterey Formation underlies most of the project area and is exposed along the sea cliffs, within the railroad cut, and along the highway cut above the southbound Highway 101 on-ramp. The bedrock is typically gray to grayish brown to light brown to dark gray/black, slightly hard to very hard, slightly weathered, and highly to slightly fractured.

Earth material profiles can only be obtained from individual explorations placed on the subject property. Care should be exercised when using these profiles to determine changes in depth or thickness of the earth materials between explorations.

7.5 Geologic Structure

Geologic structure refers to the presence and preferred orientation of geologic features or discontinuities within the bedrock materials; such as bedding, shearing, jointing, flow banding, fracturing, etc.

Within the study limits, the Tertiary bedrock formations (Sisquoc and Monterey) have been thrust up and brought into contact with the Santa Barbara formation along the Carpinteria Fault. South of the fault, the Monterey and Sisquoc shales are together upended and partly overturned southward. In other words, north-dipping bedding is overturned. Along the beach, the Monterey is complexly folded, is generally upended or overturned, and contains numerous tar seeps.

Site sedimentary bedrock exhibits continuous and planar bedding (planar or nearly planar surfaces that visibly separate each successive layer of stratified rock). Bedding mapped in the explorations, and where bedrock is exposed at the surface, exhibits a consistent east-west strike with primarily steep dips both north and south.

7.6 Landslides

Areas of landslide debris and questionable landslide debris have been mapped (Geologic Maps, Appendix A) along the proposed trail corridor, primarily along the existing unsanctioned County trail along the present sea cliff.

Along the Caltrans cut slope, in the vicinity of Sta 16+00 to 17+00, surficial failures have occurred within the marine terrace deposits (Qtm) located above the mid-slope bench. Of note is that these failures occurred in the highest and steepest, 1:1 (h:v) portions of the cut slope where the terrace sands are exposed.

Between approximately Sta 33+40 and Sta 35+00, coalescing landslides have been mapped along the proposed trail alignment. Further evidence of slope instability includes segments of a top-of-slope retaining wall, originally constructed to support a portion of the original coast highway prior to realignment, which are now lying on the slope below. Test trenches TT 02 and TT 03 were excavated in these landslide deposits, near the base of the ascending slope. Eight feet (8') of landslide debris was encountered in TT 02, and eleven feet (11') in TT 03. These slides developed in weathered and over-steepened cut slopes of Sisquoc Formation mud/siltstone.

During the detailed design exploration phase this area was further investigated. Boring DH 04 was drilled, sampled and downhole logged to thirty-five feet (35') below grade. Questionable landslide-affected bedrock and/or poor-quality rock, characterized by open fractures, discontinuous structure and local "powdery" zones, was encountered to a depth of seventeen feet (17') below grade. A distinct shear or shear zone was not observed at 17', but rather a steeply northwest- to west-dipping fracture zone with open voids and roots below which the rock quality immediately improved.

The area between approximately Sta 33+40 to Sta 35+00, including the existing cut slope areas and the existing bench on which compacted fill will be placed, will require mitigation as part of the construction of the proposed trail. The existing, ascending slopes in this area are not stable and, unless mitigated, this is a likely area for future movement and/or distress. We recommend remedial grading of this area by way of construction of a buttress fill.

Additional areas of landslide-affected or potential landslide-affected materials have been mapped along the ocean bluff and have the potential to impact construction and long-term performance of the proposed trail (Geologic Maps, Appendix A).

1) Southwest of Sta 27+00, approximately twelve feet (12') of colluvium or landslide debris was encountered in boring DH 01, and similar colluvium and/or mudflow deposits were encountered in test pit TP 24, excavated near the toe of slope and above the beach sands. A massive and heterogeneous mix of shale fragments and light brown to light orange brown silt/clayey silt are exposed in a near-vertical slope face along the base of the bluff. In test pit TP 24, beach deposits were found at a depth of nine feet (9').

   The colluvium/mud flow deposits observed on the slope and in test pit TP 24 appear to thicken toward the northwest, where they are well-exposed in the steep slope just behind a low-height concrete sea wall.

2) Highly fractured and locally contorted and thermally altered shale is exposed in the scar of coalescing, relatively shallow landslides on the existing cut slope between ~ Sta 27+50 to ~ Sta 28+75. The proposed 1:1 (h:v) cut slope should help mitigate the potential for future shallow sliding/rock fall events. Trail construction below the trail surface and the descending fill slope will require close construction monitoring to ensure that all loose debris had been removed prior to the placement of compacted fill in keyway(s) and atop cut benches.

3) Underlying fill along the beach and at the toe of the sliver fill slope, three feet (3') of landslide debris overlying beach sand was encountered in test pit TP 21. Given the location, this failure is analogous to the common type of slope failure seen as a result of wave-attack at the base of the sea cliff. It is likely that additional areas of landslide debris are found along the base of the sea cliff within the project limits.

   Relatively recent tension cracks, indicative of an incipient shallow (?) failure developed in colluvium and/or landslide debris, have developed near the top of the descending slope in the vicinity of Sta 35+50 (Geologic Map, Plate B).

4) The fill materials comprising the afore-mentioned sliver fill slope below the County trail and mid-slope bench are, in general, prone to surficial erosion and occasional shallow slope failures.

Air photo analysis and field mapping indicate the presence of a relatively large and deep-seated landslide present within the coastal bluff slope, west of the project limits. Guptill (1981) mentioned that this landslide moved slightly during the 1978-79 winter rains, with open fissures, offset culverts and a pronounced sag along a portion of the railroad tracks observed. Subsurface exploration at a point just north of the railroad tracks indicated a suspected slide zone located approximately forty to fifty feet (40'-50') below grade (Guptill, 1981).

7.7 Sea-Cliff or Bluff Retreat Rates

Long term rates of cliff or bluff erosion along the "South Coast" region, which includes the Carpinteria area, have been calculated by many and this remains an area of active research. This includes site-specific, and regional, studies, including a 2007 study by the United States Geological Survey (USGS), which quantitatively assessed bluff retreat rates along the entire California coastline.

The coastal portion of the proposed trail will be affected by the various processes of sea-cliff retreat. Evidence for this can clearly be seen in the landslide and/or debris/mud flow deposits mapped along the sea-cliff (Geologic Maps, Appendix A) and areas of surficial erosion that have required remedial measures in an attempt to stop or slow down the bluff retreat process. These measures include the past construction of two seawall segments at the base of the bluff, and the placement of concrete rubble fill. The seawall protection is for the bluffs located northwest and outside the project limits.

The City of Carpinteria's General Plan (2003) suggests for planning purposes the use of a "conservative" rate of an average long-term, bluff retreat of 6.0 inches/year.

8.0 GEOTECHNICAL CONDITIONS AND RECOMMENDATIONS

This section presents our review of the pertinent geotechnical conditions along the proposed trail alignment. The existing surface grade and the proposed finish grade elevations along the centerline of the proposed trail alignment, the proposed cut/fill details and recommended remedial/stabilization excavation/backfill limits are shown on Plates A through D (Appendix A) and the Typical Cross Section and Layout Plans (Appendix E).

8.1 Subsurface Soil/Bedrock Conditions

Based on the review of existing relevant information and the results of field exploration and laboratory testing conducted as part of this study, subsurface materials underlying the project site can be divided into seven (7) broad units for the purpose of geotechnical analysis and design. These units include:

1. Artificial fill consisting of mainly dry to moist, loose to medium dense silty sand (SM) and elastic silt/sandy silt (MH).
2. Marine Terrace Deposits (Qtm) consisting mainly of fine- to medium-grained sand (SP) and silt (ML) layers with interbedded layers of silty/clayey sand (SM/SC) and gravelly sand (GP).
3. Santa Barbara Formation (Qsb) consisting of locally well-cemented dense to very dense sand and silty sand soil-like bedrock materials.
4. Monterey Formation (Tm) – slightly to moderately hard, well-bedded, moderately weathered sandy silt/silt-like (MH) siliceous shale and shale bedrock.

5. Sisquoc Formation (Tsq) consisting of mainly slightly to moderately hard, highly fractured and moderately weathered elastic silt-like (MH) siltstone/mudstone bedrock.
6. Slopewash/colluvium/landslide debris (Qsw/Qc/Qls) consisting of mainly loose, sandy silt with little or no clay (MH) and rock fragments, and silty sand (SM), and
7. Beach Deposit (Qbs) consisting of loose to medium dense sand (SP) with cobbles.

For more detailed description of the subsurface materials, including their area exposure and spatial distributions along the alignment and the bedrock bedding orientations, where present, please refer to the Plates A through D in Appendix A and the exploration logs in Appendix B.

Based on the subsurface materials encountered at the locations of the field explorations, the proposed trail alignment can be broadly divided into five (5) geotechnical segments:

Segment 1: Station 10+00 to Approx. Station 17+70

This segment is located north of the Carpinteria Fault, which intersects the proposed trail alignment at approximately Station 17+70. This segment of the alignment is underlain, at the locations of the field exploration, by about two (2) to six (6) feet of fill soils (ef) consisting of mainly silty sand (SM) to silty gravel (GM). About two (2) feet of slopewash (Qsw) soil was encountered on the north-east (or freeway) side of the trail alignment. Fill or slopewash soils are underlain by up to about thirty (30) feet of Marine Terrance Deposit (Qtm), which consist of dense to very dense sand (SP), which in turn is underlain by moderately hard to hard, cemented, sand (SP) to silty sand (SM) bedrock of the Santa Barbara Formation (Qsb).

Segment 2: Approx. Station 17+70 to Approx. Station 24+00

This segment of the trail alignment is underlain by about one (1) to two (2) feet of fill soils (ef) or slopewash (Qsw) over Monterey Formation (Tm) bedrock consisting of moist to slightly moist, slightly weathered, tightly fractured, well-bedded, and very stiff to moderately hard siliceous shale and shale.

Segment 3: Approx. Station 24+00 to Approx. Station 26+50

This segment of the trail alignment is within the UPRR railroad corridor cut and underlain by moist to slightly moist, moderately to slightly weathered, laminated and well-bedded, stiff to moderately hard to hard Monterey Formation (Tm) bedrock consisting of siliceous shale and shale with little or no overlying overburden soils. This segment of the trail alignment will be carried over the railroad cut by a proposed single-span trail bridge. The proposed pile-supported bridge abutments are located at Stations 24+50 (Abutment 1) and Station 26+10 (Abutment 2). The southern part of this trail segment, past Abutment 2, traverses along the bottom of a proposed cut through the middle of a steeply rising ridge before daylighting on the face of the ocean-facing steep slope or coastal bluff.

Segment 4: Approx. Station 26+50 to Approx. Station 33+00

This portion of the trail alignment traverses across and down the modified, relatively steep cut face of the bluff from its top to an existing, unsanctioned dirt trail located at mid-height of the overall slope. The slope materials beneath the trail consists of mainly moist, stiff to moderately hard, thinly bedded, highly to moderately weathered siliceous siltstone and shale of the Monterey Formation (Tm). The bedrock material (Tm) within the lower part of the slope, below the existing dirt trail, is overlain by up to ten (10) to fifteen (15) feet of mixed earth fill/slopewash/colluvium (ef/Qsw/Qc) materials. A number of localized surficial landslides (Qls) were also mapped on this area of the slope. These surficial materials are considered potentially unstable, compressible under static loads (i.e. new fill), and susceptible to new or reactivated landsliding.

Segment 5: Approx. Station 33+00 to Station 37+50

This segment of the trail alignment is underlain by mainly moist to slightly moist, weathered to slightly weathered, locally jointed, massive to locally bedded, and slightly to moderately hard mudstone/siltstone bedrock of the Sisqouc Formation (Tsq). The lower part of the slope, below the merged segment of the existing dirt trail and the proposed trail alignment, is overlain by about four (4) to seven (7) feet of fill (ef) over two (2) to five (5) feet of colluvium/landslide debris, which in turn is underlain by beach sand near the toe of slope. An approximately one hundred fifty (150) foot wide, minimum ten (10) to twelve (12) foot deep landslide is mapped along this trail segment between approximately Stations 33+20 and 34+70.

8.2 Groundwater Conditions

Groundwater and/or seepage were not encountered within the subsurface explorations. Evidence of surface seeps, i.e. springs, within or adjacent to the project limits was not observed. Additionally we have seen no mention of historical springs within the reviewed documents.

Though groundwater was not encountered, there are two settings where transient groundwater or seepage may occur at various times (dependent mostly on seasonal rainfall): (1) at the interface between the unconsolidated marine terrace deposits and the shale bedrock and (2) at or near the base of the coastal bluff, i.e. behind the beach. These groundwater regimes are noted along many other stretches of coastline along southern Santa Barbara County.

It must be noted that fluctuations in groundwater conditions or levels will occur. The depth to groundwater, if encountered in the explorations, is only valid for the date of exploration. Changes may occur in this groundwater level due to climatic conditions and/or alterations in the existing groundwater recharge area (i.e. surface drainage and surface water infiltration conditions).

8.3 Engineering Parameters for Soil/Bedrock Materials

Laboratory tests were performed to evaluate soil/bedrock parameters necessary for the geotechnical engineering evaluation of the existing and proposed site conditions, and evaluation, design and construction of the proposed improvements. Results of the laboratory testing are included in Appendix C, and results of the direct shear tests are also plotted on Figures 4-1 through 4-22 attached in Appendix A. Design soil parameters, developed based on the interpretation/evaluation of the laboratory test results, are summarized in Table 1 below.

Table 1. Summary of Selected Design Soil/Bedrock Parameters

Soil/Bedrock	In-situ		Atterberg Limits		Peak Shear Strength Parameters	
	Moisture Content (%)	Dry Density (pcf)	Liquid Limit (LL)	Plasticity Index (PI)	Cohesion, c (psf)	Effective Friction Angle, ϕ (degrees)
Earth Fill (ef)	14.0-19.0	74-103	0-37	0-22	300-450	27-28
Terrace Deposit (Qtm)	2.5 - 5.0	102-110	-	-	100-180	28-44
Monterey Formation (Tm)	13.0-38.0	67-107	45-67	5-26	300-1650	26-54
Santa Barbara Formation (Qsb)	11.0-13.0	98-112	NP	NP	300	38
Sisquoc Formation (Tsq)	9.0-18.0	103-108	46-50	1-15	340-800	22-32
Slopewash / Colluvium / Landslide Debris (Qsw/Qc/Qls)	10.0-1.07	92-108	44-56	2-28	0-300(1)	27-38(1)
Beach Deposit (Qbs)	-	106	-	-	0	28

8.4 Seismic Hazards

8.4.1 Primary Seismic Hazards

The project site is located within a seismically active region of Southern California. The general area has experienced moderate to strong ground motions due to earthquakes in the past and is likely to experience similar earthquake-induced ground motions during the design life of the of the proposed improvements.

8.4.1.1 Fault Rupture Hazards

The proposed trail alignment is not located within any currently identified Alquist-Priolo Earthquake Fault Zone (EFZ), as defined by the California Geological Survey (CGS, 2011b).

The Carpinteria fault crosses the alignment at or near Station 17+70, as shown on Plate A (Appendix A). However at this time, neither the California Geological Survey (CGS, 2008) nor the California Department of Transportation (Caltrans, 2012) considers this fault as a source for seismic hazards. Therefore, the potential for fault surface rupture due to movement of the Carpinteria Fault at the site is considered low.

8.4.1.2 Ground Motion Hazards

The general area around the site is underlain by numerous active and potentially active faults, including the Mesa-Rincon Creek fault and the Red Mountain fault. Based on the Caltrans' 2012 fault database (Caltrans, 2012), the Mesa-Rincon Fault is the nearest active fault from the alignment. This reverse fault, located about 0.5 km northeast from the proposed trail bridge location, as shown on Figure 5, is capable of generating a maximum earthquake of moment magnitude, M_{max}= 6.6 . The Red Mountain fault is located about 2.2 km south of the proposed trail bridge. This reverse fault is capable of generating a maximum earthquake of moment magnitude, M_{max}=7.4.

A seismic ground motion hazard analysis was performed using the Caltrans ARS Online (Caltrans, 2018) tool to evaluate design ground motion for the subject trail bridge. The design ground motion, as per Caltrans SDC (Caltrans, 2013), is defined as the envelope of the deterministic ARS and probabilistic ARS based on a return period of 975 years. For ground motion analysis, the soil profile at the site can be categorized as Type C. Therefore, this ground motion hazard analysis was performed based on an average, $(V_s)_{30}$ = 560 m/sec.

The recommended ARS curve and the corresponding data points developed based on the above analysis are presented in Figure 6 (Appendix A). The design ARS from period T=0.05 to 0.40 sec is controlled by the probabilistic hazard. The design PGA≈0.8g and the ARS curve for T>0.40 sec is controlled by the deterministic hazard. The moment magnitude of the design earthquake (M) associated with the design PGA=0.8g is 7.4 (i.e., M=7.4).

8.4.2 Secondary Seismic Hazards

8.4.2.1 Liquefaction

Formation materials present along the trail alignment are not of the type that are susceptible to liquefaction. In the absence of groundwater, soils present along the alignment are not considered liquefiable during earthquakes.

8.4.2.2 Seismic Slope Failure/Lateral Spreading

The design peak ground acceleration, PGA=0.80g, at the site is relatively high. Results of our seismic slope stability analyses are presented in Appendix D and discussed later in this report.

It should be noted that much of the artificial fill, especially fills associated with early 20th century road and railroad construction, may not be properly engineered. Non-engineered surficial existing fills, slopewash, colluvium and landslide debris, particularly those below the existing dirt trail on the ocean-facing bluff slope, are considered prone to lateral/downslope movements during strong seismic events. All new fills proposed as part of the trail construction along this segment of the trail are recommended to be: (1) keyed into competent slope material by removing surficially unsuitable soils, and (b) placed as geotextile-reinforced engineered fill to prevent surficial instability during future earthquakes.

8.4.2.3 Rockfall Potential

Steeper slopes, particularly those on the ocean side, are composed of shales of the Monterey and Sisquoc Formations. These materials are slightly to moderately hard, well-bedded (Monterey) and locally highly fractured. Some rock falls are to be anticipated during seismic events. The potential for this will be of a limited nature and size.

8.4.2.4 Ground Settlement

Ground settlement along the subject trail, if any, during seismic events should be small and of no consequence to the proposed improvements.

8.4.2.5 Tsunami

Hazards due to tsunami-generated flooding exist along the California coastline. Distant and local offshore earthquake faults, and aseismic as well as co-seismic submarine landslides within the Santa Barbara Channel are potential sources of tsunami waves that can reach the Carpinteria coastline.

The California Emergency Management Agency (CalEMA, 2009) has published a map designed as the “Tsunami Inundation Map” that shows the location and limits of the areas along the California coast that are subject to inundation during the worst-case scenario tsunami associated with realistic as well as hypothetical tsunami sources. It should, however, be emphasized that the referenced tsunami hazard map is to be used only for local agency emergency planning and evacuation. This tsunami hazard depicted in this map is very conservative and not suitable for development planning. Tsunamis are rare events. Tsunamis that can generate waves in height that can significantly impact the subject trail alignment should be extremely rare.

8.5 Cut/Fill Recommendations

The proposed trail construction will involve mostly cut into and along the existing slopes for the majority of the alignment in order to achieve a mildly sloped trail, both transversely and longitudinally. As shown on the attached Typical Cross Sections included in Appendix E, the subject trail will be about 16 feet wide, with a 5 feet wide travel way and a 3 foot shoulder in each direction. In the longitudinal direction, the proposed trail will be constructed at a profile gradient ranging from about 2% to 5%. The trail will also have a cross-slope of 1% to 2%.

Construction of the trail segment from Station 10+00 to 23+00 will include cut to flatten the portion of the existing cut slope above the trail alignment to a 1.4:1 (h:v) gradient. The maximum depth of cut along the centerline of this segment of the trail is about twelve and a half (12.5) feet. Immediately south of the proposed bridge site, portions of the trail will traverse a small steeply rising ridge where the maximum depth of cut along the trail centerline will be about thirty (30) feet. For the next segment of the trail, to about Station 33+30, the maximum depth of cut along the trail centerline is about fifteen (15) feet. Along this segment of trail the existing slope above the trail alignment is proposed to be cut back to a gradient of 1:1 (h:v) with one or more benches. Construction of this segment of the trail alignment will also involve fill placement on the existing slope directly below the trail alignment, but above the existing dirt trail.

The segment of the trail from approximate Station 33+30 to about Station 36+00 will be constructed on fills placed on the existing slope. The maximum depth of fill, excluding any remedial over-excavation and backfilling, along this trail alignment will be on the order of about six (6) to seven (7) feet. Being located on fill sections, construction of this segment of the trail will also include new fill placement on the existing slope both above and below the trail alignment.

The proposed new fills will be placed at a gradient of 1:1(h:v) or less. We recommend that these fills be placed as compacted, geotextile-reinforced fill to prevent erosion and local/surficial slope instability.

The reminder of the proposed trail south of approximate Station 36+00 will involve cut of up to about two (2) feet along the trail centerline

As shown on the Plates C and D included in Appendix A, new fill placed along the ocean-facing slope shall be buttressed at the bottom and keyed/benched into competent slope materials by removing and re-compacting unsuitable surficial soils, including existing landslide debris, where present.

On-site cut soils consisting of cohesionless or low plasticity soils (PI<4) may be used as new fill material. Cut material from the highway-facing segment of the trail slope (north of the bridge site) consisting of Terrace Deposits (Qtm) and Santa Barbara Formation (Qsb) should be suitable for placement as compacted/reinforced fills.

All fill material should be provided with adequate back/subsurface drainage systems consisting of geo-composite or geotextile wrapped burrito-type sand drains placed against the excavated/remedial removal surfaces and prior to placing any fills.

8.6 Slope Stability Analyses

This section presents the results of our analyses performed to evaluate the stability of the slopes that may affect the service and stability conditions of the as-built trail. The topographic and geologic information shown on the Plates A through D in Appendix A, the soil/rock parameters in Table 1 and the design ground motion parameters presented above (Section 8.4.1.2) were used as the basis for these analyses.

The appropriate soil parameter types and their values, in particular those for shear strengths, depend on many factors including soil/bedrock characteristics such as constituent mineral types, particle sizes/characteristics, past deposition and stress history; moisture content or degree of saturation, permeability and the rate of loading, as well as the slope failure mechanisms being investigated.

Four (4) cross sections considered representative of the conditions along the proposed trail alignment were selected for the slope stability analysis. These cross sections are located at trail centerline Stations 16+10, 18+00, 28+56 and 33+90. Representative subsurface profiles with recommended soil/bedrock parameters were developed for each cross section based on the results of subsurface exploration. For slope stability analyses, the required soil/rock parameters included soil density and shear strength parameters, which were developed based on the results of the laboratory density and direct shear tests.

Slope stability analyses include limit equilibrium based soil slope stability analyses for all slopes and, a kinematic rock slope stability analysis for the highway-facing slope.

8.6.1 Limit Equilibrium Based Slope Stability Analyses

All limit equilibrium based slope stability analyses were performed using the software SLIDE, Version 6.0 (Rocscience, 2016). These slope stability analyses were performed considering circular types of rotational failures.

8.6.1.1 Static Slope Stability Analyses

The slope cross section models with geologic profile and geotechnical soil parameters, and the results of the static slope stability analyses are presented in Appendix D. In addition to the four (4) representative cross sections for the proposed grading conditions, a back analysis was performed for the mapped local landslide between approximate Sta 33+30 to Sta 35+00. Results of these analyses which indicated a factor of safety (FS) of about 1.0 for the mapped landslide mass, verified the accuracy of selected design soil density and shear strength parameters used in our slope stability analyses for the two sections located within the ocean-facing slope which are characterized by similar geologic conditions.

In general, a minimum static factor of safety of 1.3 is considered adequate (Caltrans 2014) for roadside slopes. The minimum static factors of safeties against slope failures obtained from our analysis for the four (4) representative locations along the trail alignment are summarized in Table 2 below:

Table 2. Results of Static Slope Stability Analyses

Location	Approximate Minimum Factor of Safety (FS)
Station 16+10	1.7
Station 18+00	1.9
Station 28+56	1.8
Station 33+90	1.4

Based on the above results, the subject slopes supporting the proposed trail alignment are considered to have adequate static slope stability conditions against overall or global failures.

8.6.1.2 Seismic Slope Stability

Based on Caltrans (2014), seismic stability of roadway slopes requires a minimum factor of safety of 1.1, using an equivalent coefficient of horizontal peak ground acceleration, k_h =1/3(PGA/g) or 0.2, whichever is greater. Thus, for the design peak ground acceleration, PGA=0.8g at the site, the design k_h is taken as equal to 0.2. Results of our seismic overall slope stability analyses are presented in Appendix D following the results of the static stability for each of the four (4) sections analyzed. These results are summarized in Table 3 below:

Table 3. Results of Seismic Slope Stability Analyses

Location	Approximate Minimum Factor of Safety (FS)
Station 16+10	1.2
Station 18+00	1.3
Station 28+56	1.3
Station 33+90	0.97

Based on the above results, the subject slopes, except the segment of the ocean-facing slope at or adjacent to the Station 33+90, for the as-built conditions of the proposed trail can be considered as adequately stable during the design seismic ground motion event.

For the cross section at Station 33+90, results of our seismic slope stability analysis indicated a FS=0.97, as compared with the required minimum FS=1.1. Based on these results, the portion of the ocean-facing slope from approximate Station 33+00 to the south end of the proposed trail is considered susceptible to lateral/downslope sliding when subjected to the design ground motion. Additional seismic slope stability and Newmark's rigid-body type deformation analyses (Newmark, 1965) was thus performed to evaluate the likely lateral displacements that this section of the slope may experience in the event shaken by a design ground motion generating earthquake event.

These analyses consisted of additional seismic slope stability analyses to evaluate the coefficient of yield acceleration (k_y) of the subject as-built slope. Results of these analyses are presented in Figure 7 (Appendix A), which shows k_y =0.175 for the subject slope. The yield acceleration is the seismic capacity of the slope in that the slope is stable (FS>1.0) for $k_h < k_y$. The slope is likely to experience incremental lateral displacement during ground shaking every time ground motion represented by k_h exceeds that represented by k_y.

Once the coefficient of yield acceleration (k_y) is known a slope, the seismic displacement due to the design ground motion, expressed in terms of the design PGA and the causative earthquake moment magnitude Mw, can be estimated based on published empirical corrections. Results of such an analyses performed based on the empirical correlation presented by Bray and Travasarou (2007) are presented in Figure 8. Based on this figure and a k_y =0.175, the estimated median seismic settlement is about 12.0 inches for the ocean-facing slope.

8.6.2 Kinematic Slope Stability Analysis

A kinematic slope stability analysis was also performed for the proposed cut slope adjacent to Highway 101, particularly from Station 18+00 to Station 24+00. Results of this analysis were presented in the referenced Technical Memorandum, dated October 16, 2018.

8.6.3 Surficial Slope Stability/Slope Erosion

Signs of localized soil erosion and surficial slope failures have be observed along portions of the existing slopes along the proposed trail alignment. Based on these field observations, the existing relatively steep slope areas containing highly weathered, near-surface formation materials or mantled by earth fill, slopewash, colluvium, landslide debris, and relatively cohesionless terrace and marine terrace deposits are prone to the effects of erosion and surficial instability.

8.6.3.1 Station 10+00 to Approx. Station 26+50 (Segments 1-3)

Along the trail alignment, from Station 10+00 to approximately Station 26+50, soil erosion and relatively shallow surficial failures were observed only on the upper part of the existing slope that was cut in the past to a 1:1 (h:v) gradient. No distress was observed on lower part of the existing slopes that were cut to a 1.5:1 (h:v) gradient. The proposed trail construction along this segment will involve cutting the upper portion of the slope to a flatter 1.4:1 (h:v) gradient.

Additionally, the following measures included in the current design of the cut slope should provide additional protection of the proposed multi-use trail and the existing highway facilities below.

- Alongside the trail alignment and at the base of the proposed 1.4:1 (h:v) cut slope, a six-foot (6') wide drainage swale is to be constructed. The drainage swale is to be lined with concrete for erosion/scour protection and to provide rock fall protection to both the trail and the existing highway facilities below.

- The proposed sixteen (16) foot wide trail with 5% cross slope will act as a bench on the slope providing both erosion and rock fall protection to existing highway facilities below, and aid maintenance crews in the removal of accumulated sediment and debris, if any, from the concrete-lined drainage swale, and long-term maintenance.

- Landscaping along the trail alignment are proposed at or near the end of the construction phase. Landscaping is expected to consist primarily of hydro-seeding using a native seed mix, and should provide additional erosion protection measures.

- The proposed cut will remove near surface weaker material exposing harder materials to the surface, and flatten the existing 1:1(h:v) upper part of the existing cut slope. This will result in an improvement to the existing stability conditions of the subject slope.

Based on the above, it is our opinion the proposed project will result in an improvement to conditions of the existing slope, and reduced potential hazard to the trail and the existing highway facilities below due to slope erosion, rock-fall and/or surficial failures.

8.6.3.2 Station 26+50 to Station 37+50 (Segments 4 and 5)

This segment of the trail begins near the top of the ocean-facing slope and traverses down and across the slope face. The southern portion this trail segment merges with an existing dirt trail located at about the mid-height of the overall slope.

Localized areas of shallow landslide debris, questionable landslide-affected materials, loose earth fill, slopewash and colluvial soil are present on the portion of the existing ocean facing slope located below the existing dirt trail. The conditions of these potentially unstable localized existing slope soils should be periodically observed during the service life of the proposed trail, and if necessary maintained/stabilized, to prevent significant deterioration which can affect the stability of the overall slope, including the subject multi-use trail located above.

The mapped landslides area between approximate Station 33+40 and Station 35+00 extend from below the existing dirt trail to above the proposed new trail alignment. It is affecting the stability of the existing dirt trail/bench and the ascending part of the slope at this location which will contain/support the proposed new trail and the associated proposed new fill to be placed above the existing bench. Therefore, this landslide area will require mitigation as part of the construction of the proposed trail. We recommend remedial grading of this area by way of construction of a buttress fill and keying into existing slope surface as shown on the Section at Station 33+90, Plate D, included in Appendix A.

Additionally, to prevent soil erosion and surficial slope instabilities, we recommend that all new fills, including the landslide remedial fills between Station 33+40 and Station 35+00, be placed as geotextile-reinforced engineered fill.

Based on the above discussion, it is our opinion that the potential hazards associated with erosion and localized/surficial instability of the areas of the slope containing and above the trail alignment should be low provided the grading recommendations are incorporated in design and construction of the project.

8.7 Bridge Foundation Design Recommendations

The proposed trail project includes a new bridge over the depressed UPRR rail corridor. For convenience, a copy of the proposed plan view and cross section profile along the bridge centerline are reproduced in Figure 9, as attached in Appendix A.

Based on the exploration borings DH 07a and DH 07b, drilled near the proposed bridge Abutment 1, and our observation of the surface conditions, the proposed bridge site, as shown on Figure 8, is underlain by moist to slightly moist, well-bedded, slightly to moderately hard diatomaceous shale/siltstone and hard siliceous shale of the Monterey Formation (Tm).

Based on the relatively hard subsurface conditions and high design ground motion (PGA=0.8g), we recommend using drilled shafts as the bridge foundation. Based on the relative short bridge length and anticipated low support loads, we recommend using Caltrans Standard Plan 24" Cast-in-Drilled-Hole (CIDH) Concrete Pile with a 200-kip design capacity.

Based on Caltrans current practice the bridge abutment foundations need to be designed for the Service and Strength Limit States in accordance AASHTO LRFD BDS (2012), 6th Edition with California Amendments (Caltrans, 2014).

8.7.1 Axially Loaded Pile Design Parameters

Based on Caltrans current practice abutment piles need to be designed to support axial load based on the LRFD Service Limit State 1 Load Combination without exceeding 2.0 inches of settlement.

For LRFD Strength Limit State, piles in axial compression are required to be designed with a side (or skin) resistance factor of 0.7 or less and a tip resistance factor of 0.5 or less. The nominal structure resistance of the Standard Plan 24" CIDH piles is 400 kips. It is assumed that the factored load per pile from the Strength Limit State load combination will not exceed 280 kips.

Based on the results of an axially loaded pile analysis, presented as Figure 10 included in Appendix A, the recommended design pile length is forty-three (43) feet to support a factored load of 280 kips per pile.

8.7.2 Lateral Loaded Pile Design

Recommended soil parameters for laterally loaded pile analysis using the p-y method are presented in Table 4 below:

Table 4. Recommend Design Soil Parameters for p-y Type Laterally Loaded Pile Analysis

Depth below Cut-off Elevation (ft)	Soil Type	Total Unit Weight (pcf)	Shear Strength Parameters		k_s/k_c (pci)	ε_{50}
			Cohesion, c (psf)	Friction Angle, ϕ(degrees)		
0-20	Silt (ML/MH)	95.0	850	43	150/280	0.009
20-60	Silt (ML/MH)	100.0	1500	43	500/280	0.007

8.7.3 Foundation Settlement

Based on the subsurface conditions, the pile diameter (24") and the anticipated service load per pile (e.g., 200 kips or less), abutment support settlement should be less than the permissible support settlement of two (2) inches for single span bridges.

8.8 Retaining Walls

The proposed project includes construction of an approximately seven (7) to eight (8) foot high, seventy-five (75) to eighty (80) foot long retaining wall along the existing mid-slope bench, from ~Sta 30+71 to ~ Sta 31+46, as shown on Plate D in Appendix A. Based on the location and relatively small height, we recommend construction of a geo-synthetic reinforced, mechanically stabilized wall at this location. Such a wall can be designed based on the following foundation soil parameters:

- Total Unit Weigh = 100 pcf
- Cohesion = 300 psf
- Friction Angle = 27 degrees
- Coefficient of Active Earth Pressure = 0.38
- Coefficient of Passive Earth Pressure = 2.7

For a minimum wall width of five (5) feet and two (2) feet of soil embedment, the allowable bearing capacity of the in-situ soils may be taken as 1,500 psf. The wall should be founded on firm, undisturbed native earth materials, or engineered fill placed on firm native earth materials. Existing unstable subgrade (i.e. soft/weak, disturbed soil or undocumented fill soils), if any, should be removed and re-compacted prior to wall construction.

8.9 Pavement Design Recommendations

Results of R-value tests performed on two soil samples retrieved from the ocean-facing slope (Boring DH-01 and DH-02) are included in Appendix C. The two samples tested consisted of sandy clay with gravel. Based on these results, the R-value of the soils tested may be taken as equal to 45. This R-value may be also for the anticipated subgrade soils along the highway-facing slope.

The trail structural section is designed assuming occasional access need for maintenance and emergency vehicles. For the purpose of Portland Cement Concrete (PCC) pavement design, the subgrade soils along the trail alignment can be classified as Type II, as defined in Table 623.1A of the Caltrans Highway Design Manual (Caltrans, 2017). The PCC pavement design and construction need to consider the corrosive nature of the subgrade soils and the close proximately of the subject trail to salt water

A minimum structural section consisting of 5.0 inches Jointed Plain Concrete Pavement (JPCP) over 4.0 inches of Class II aggregate base is recommended for the subject trail. Portland Cement Type IV should be used. Plate dowels, ¼- to ½-inch in thickness, should be considered, instead of bars, for load transfer across the joints.

We recommend that, prior to the placement of the AB layer, at least the upper eight (8) inches of exposed subgrade soils should be scarified, moisture conditioned to within ±2.5 percent of the optimum and compacted to relative compaction of at least 90% maximum dry density determined as per ASTM Standard D1557.

Unless specified otherwise herein, pavement section detailing, material selection and construction should meet the requirements for JPCP specified in the Caltrans Highway Design Manual (Caltrans, 2017) and Standard Specifications (Caltrans, 2015a).

8.10 Drainage Recommendations

All surfaces should be graded to direct runoff to non-erosive collection, distribution and discharge drainage devices. Run-off should not be permitted to flow uncontrolled on-site or off-site.

All new fills placed against existing slope surfaces should be provided with adequate subsurface drainages consisting of geo-composite or geotextile wrapped burrito-type drainages placed on the final slope surfaces prior to the placement of any fill. Sub drains should be installed where necessary to facilitate drainage or percolation of water from the trail pavement base and subgrade materials.

8.11 Corrosion

Results of a number of chemical test performed on samples retrieved from ocean-facing slope are included in Appendix C. Based on these results, the sulfate and chloride content of the soils tested ranged from 462 to 3042 ppm and 280 to 2900 ppm, respectively.

Based on the Caltrans' current corrosion guidelines (Caltrans, 2015b), a site is considered corrosive to structure elements if one or more of the following exists for the representative site soil and/or water.

Chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater, or the pH is 5.5 or less.

Therefore, based on the results of the chemical tests soils along the subject trail alignment should be considered corrosive to common construction materials, including both steel and concrete.

9.0 HAZARDOUS WASTE POTENTIAL

It is our understanding that there are no known hazardous wastes along the proposed trail alignment. We also know of no existing hazardous waste studies or reports within and adjacent to the trail alignment.

10.0 CONSTRUCTION RECOMMENDATIONS

This section presents construction recommendations for the proposed improvements.

- All construction activities should be performed in conformance with the applicable requirements of the US Federal and California Occupational Safety and Health Administration (OSHA/Cal-OSHA).

- All construction shall conform to the requirements of the Caltrans Standard Specifications (Caltrans, 2015), except as specified otherwise herein.

- All earthwork and foundation construction activities, including but not limited to clearing and grubbing, removal/replacement of unsuitable/landslide debris, slope cut, fill placement/compaction, backfilling, drainage installation, subgrade preparation, placement and compaction of pavement materials, and bridge foundation installation, should be performed under the observation of the owner's geotechnical representative.

- All surfaces to receive fills, pavement or foundations should be scarified to a depth of at least eight (8) inches, moisture conditioned, if necessary, and re-compacted to at least 90% of the maximum density determined as per ASTM Test Method D1557.

- If subgrade or subsurface conditions different that those encountered during the field exploration, as documented in this report, are encountered during construction, this office should be contacted immediately so that actual ground conditions can be evaluated and, if necessary, revised or modified recommendations can be provided.

- Select excavated site soils consisting of silts (ML) with PI<4, silty sand (SM) and sand (SM/SP) may be used compacted fill.

- Wet, soft/weak, pumping or yielding subgrade soils, if any, should be stabilized prior to additional construction activities. Stabilization may include removal and replacement of wet or soft materials to depths determined based on field conditions.

- When new fills are to be placed on natural or existing ground steeper than 5:1(h:v), compacted fill should be keyed and benched into firm materials. Back drains should be installed, where necessary, to intercept water entering into new fills.

- Oversize materials such as rock greater than eight (8”) inches in largest dimension should not be buried or placed in fills. Rocks larger than three (3”) inches should not be placed within the upper five (5) feet of fills placed directly beneath the trail pavement section.

- Fill and cut slopes should be graded and hydro-seeded to reduce water-induced surficial erosion and sloughing. Permanent erosion control measures should be implemented immediately after the completion of slope construction.

- All surfaces should be graded to direct runoff to non-erosive drainage devices and should not flow uncontrolled off-site.

- Sub drains should be installed where necessary to facilitate drainage or percolation of water from trail base materials.

- All compacted fill should be placed in horizontal lifts 8 inches or less in un-compacted thickness and compacted to at least 90% of the maximum dry density and at moisture contents within ±2.5% percent of the optimum as per ASTM D1557 method.

- All pavement materials should be selected, and construction works should be performed, in accordance with Caltrans Standard Specifications (2015a) and/or the Green Book- Standard Specifications for Public Works Construction (BNI, 2018).

- Cast-in-drilled-hole (CIDH) piles for the proposed trail bridge should be constructed in dry conditions.

- Hard excavation/drilling conditions should be anticipated during the CIDH pile installation.

- Groundwater seepage may be encountered in the CIDH pile holes. If encountered, seepage water shall be pumped out of the hole to maintain dry conditions until the placement of reinforcement and concrete.

- The bottom of the CIDH holes must be clean and free of any loose//soft soil or other debris prior to placing reinforcement and concrete.

- The embedded CIDH pile length recommended herein should not be shortened during construction.

- Unless specified otherwise here, CIDH pile materials and construction shall meet the requirements specified in the Caltrans Standard Specifications (2015).

11.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on the results of our current geotechnical exploration as discussed above and presented in the various attached appendices:

- The proposed trail alignment traverses through and located on the face of relatively steep hill sides with variable subsurface conditions.

- The portion of the trail alignment located on the hill slope facing the Rincon Road on-ramp to Southbound Highway 101, directly underlain by marine terrace formation (Qtm) consisting of sand, and bedrock of the Santa Barbara Formation (Qsb) consisting of silty sand and sand-like material, and bedrock of the Monterey Formation(Tm) consisting mainly sandy silt/silt (MH/ML) like siltstone/shale.

- The reminder of the trail alignment, including the proposed bridge and the trail alignment traversing through and located on the face of the ocean facing hill side is underlain directly by bedrock of the Monterey Formation (Tm) siltstone/shale and Sisquoc Formation (Tsq) siltstone/mudstone both consisting mainly sandy silt/silt-like (MH/ML) materials.

- To construction the trail on the slope faces with mild cross slope (2 to 5%) and maintain mild longitudinal gradient (≤5%), cut both along the trail centerline alignment and the slope portion above the trail alignment are necessary for the majority of the alignment.

- The proposed trail will cross the surface trace of the Carpinteria fault, a high-angle, south-dipping reverse fault which trends north of west through the project limits. Work by others on the adjacent parcel(s) to the west suggests that additional faults may be present, though no evidence has been found to suggest that these faults or suspected faults have been active in the Holocene. The City of Carpinteria (2003) and other sources suggest that the Carpinteria Fault be considered “potentially active” (faults which show evidence of Quaternary displacement) for planning purposes. Neither USGS nor CGS considers the Carpinteria Fault to be “potentially active”. Caltrans (2012) does not include this fault in its fault database for consideration in the design of highway facilities. Therefore, the potential for fault surface rupture within the project limits is considered low.

- However, due to its location in a highly active seismic regions with numerous nearby active and potentially active large faults, e.g., Mesa-Rincon and Red Mountain faults, , the trail alignment is susceptible to relatively high design ground motion as defined by Caltrans (2013). Based on our analysis, he design PGA at the site is about 0.8g generated by an earthquake of moment magnitude M_w=7.4.

- Our subsurface investigation and geologic mapping indicates that, from a slope stability perspective, the slopes along the coastal bluff, both above and below the existing unsanctioned County trail (approx. Sta. 27+00 to 37+50) are most problematic, mainly with respect to local/surficial slope instability. Areas of landslide debris, colluvium and questionable landslide debris have been mapped along this section of the proposed trail corridor.

- The proposed grading plans was reviewed and existing slopes and proposed cut slopes were analyzed for gross stability. Shear strength test results were obtained and both limit equilibrium and kinematic based slope stability analyses were performed to evaluate the global or overall static as well as seismic loading conditions.

- Based on our slope stability analysis, the subject slopes containing the proposed trail alignment are considered to have adequate stability against static loading or under normal, short and long term service conditions.

- Due to the relatively low shear strength of the Monterey and Sisquoc Formation (Tm and Tsq) and the slope face orientation, the existing ocean-facing slope south of the proposed trail bridge is considered to be susceptible to surficial/local instability under static conditions. This portion of the slope is also considered susceptible to both surficial and overall slope movements during the design seismic ground motion event.

- We recommend that all new fills placed along the trail alignment be placed as engineered geotextile-reinforced soils with subsurface/back drains. Additional recommendations include constructing adequate surface drainage facilities to collect and disposing of surface-run off properly and hydro-seeding the exposed newly cut and fill surfaces. These measures, in conjunction of the slope flattening and load reduction resulting from the proposed slope cut backs, should significantly reduce the hazards associated with both slope erosion and local/surficial slope instability under both static and seismic loading conditions.

- Due to the relatively low shear strength and steep gradient, the portion of the ocean facing slope between Station 33+90 and the south end of the proposed trail is considered susceptible to seismically induced limited lateral deformation, estimated to be on the order of about 12 inches, in the event shaken by the design seismic ground motion event.

- In addition, the portion of the existing slope located below the existing dirt trail and beyond the limit of the proposed trail construction is considered susceptible to local/surficial slope instability. This portion of the slope should be monitored and, if necessary, stabilized periodically to prevent affecting the stability of the trail and the overall slope.

- Due to relatively low strength of the underlying Monterey Formation (Tm) siltstone/shale bedrock, deep foundation is recommended for supporting the proposed single-span trail bridge abutments. Due to relatively hard excavation conditions, cast-in-drilled holes (CIDH) pile type is recommended. Based on the anticipated loadings, Caltrans Standard Plan 24" Cast-in-Drilled-Hole (CIDH) Concrete Pile with 200 kips design capacity is recommended.

- Subsurface exploration was performed utilizing hand labor, backhoe and drill rig. Extremely hard layers of bedrock were locally encountered. Thus, excavating into the bedrock during construction may be difficult. Should hard cemented bedrock be encountered during the installation of the CIDH piles, coring may be necessary.

- A qualified professional from Bengal Engineering should be present at all times during construction to observe and document actual field conditions and construction of the recommended improvements and, if necessary, provide updated recommendations.

- Finally, it is our opinion the proposed project is feasible, from the geotechnical point of view, provided findings and recommendations included in this report are considered in both the design and construction of the proposed improvements.

12.0 LIMITATIONS

Subsurface conditions at the site were determined on the basis of our field explorations at limited locations and review of the available and pertinent existing information. Our scope of work was limited to the study area along and adjacent to the proposed trail alignment. It does not extend beyond the proposed graded slope areas shown on the attached civil layout plans.

Due to the location of the trail alignment, slope areas located outside the grading plan may influence the stability of the as-built trail in the future. Evaluation of the current or future conditions of and/or design for the stability of these slope areas outside the proposed grading limits and their future impacts on the stability of the as-built trail, if any, is outside our scope of work for the subject project.

Many recommendations presented herein are for the specific soil/bedrock conditions encountered at specific locations. They may not have any applicability to other situations or conditions, or construction types. Bengal Engineering, Inc. accepts no liability for use or reuse of the content of this report for other purposes or by others.

Conclusions and recommendations presented herein are based on our experience and professional judgment. Therefore, the conclusions and recommendations are professional opinions and are not meant to indicate a control of nature.

Services provided by Bengal Engineering, Inc., have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the area under similar conditions. Bengal Engineering makes no other warranty or guarantee, either expressed or implied, concerning the content of this report.

This report has been prepared by the registered professionals whose seals and signatures appear hereon.

Ed Pongracz-Bartha, CEG 2370
Engineering Geologist

Md. Wahiduzzaman, P.E.
Civil Engineer

REFERENCES

Site References

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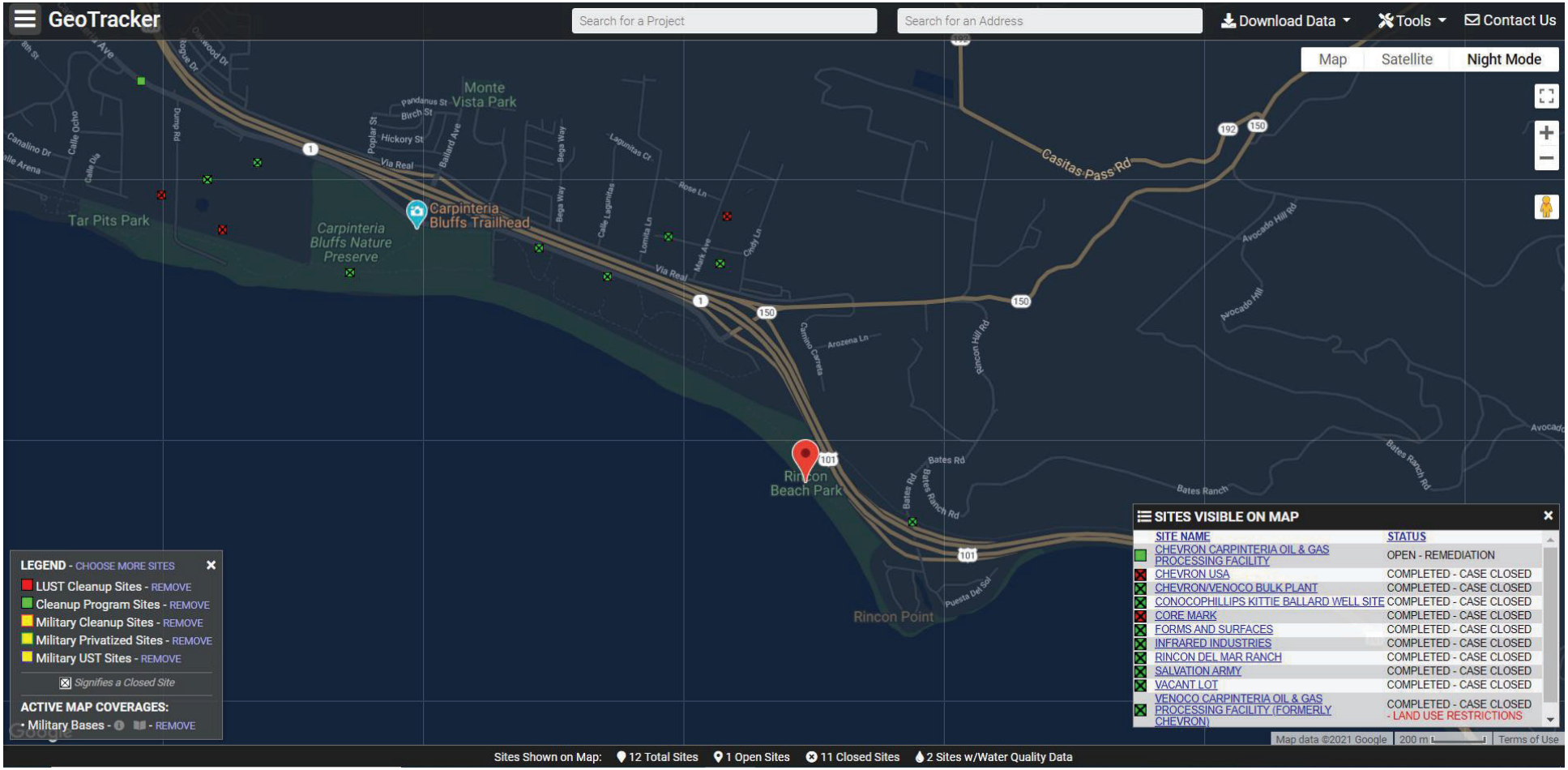
APPENDIX A

FIGURES AND PLATES

Appendix F

EnviroStor and GeoTracker Database Maps



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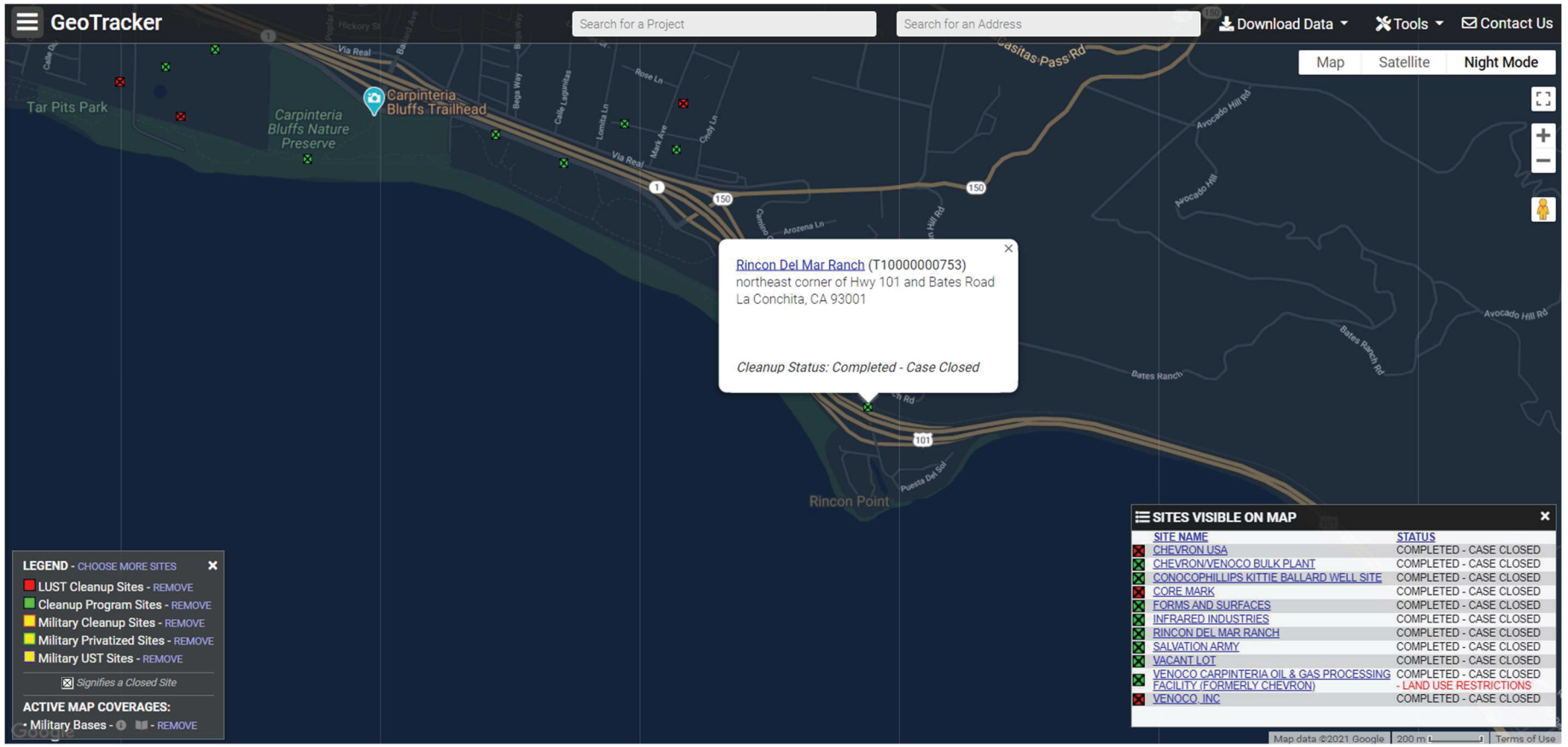
Accessed: January 14, 2021



GeoTracker Web-Site https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Rincon+Beach+County+Park#

Accessed: January 14, 2021

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME

Rincon Del Mar Ranch

FACILITY ID

FACILITY ADDRESS

northeast corner of Hwy 101 and Bates Road
La Conchita, CA 93001
VENTURA COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

OTHER PETROLEUM

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED	HOW DISCOVERED	DESCRIPTION
DATE STOPPED	STOP METHOD	DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

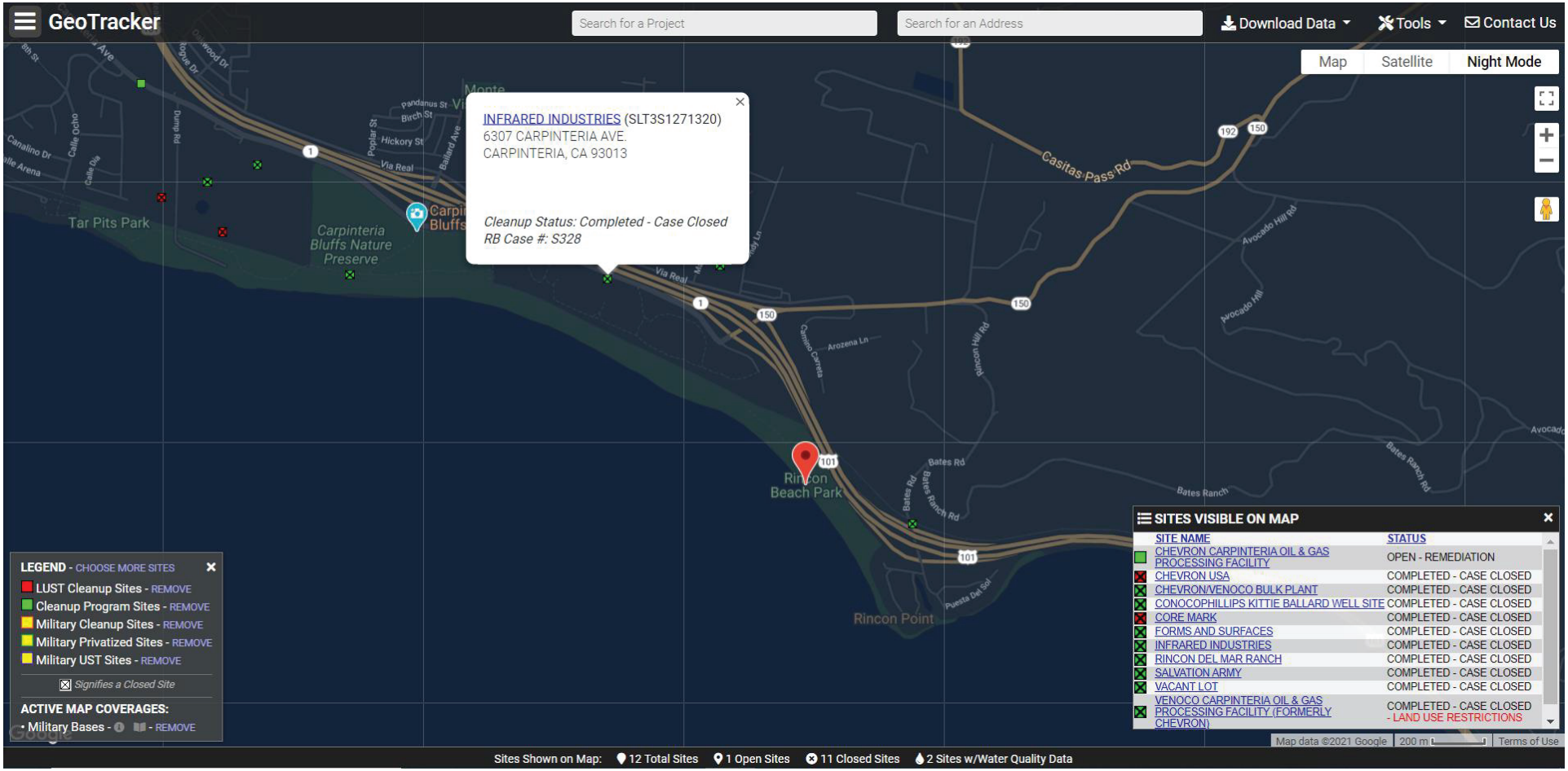
SR3146549

REGIONAL BOARD CASE NUMBER

LOCAL AGENCY

UNKNOWN

REGIONAL BOARD
UNKNOWN



GeoTracker Web-Site https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Rincon+Beach+County+Park#

Accessed: January 14, 2021

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE
12/1/1987

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?
N

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME
INFRARED INDUSTRIES

FACILITY ID

FACILITY ADDRESS
6307 CARPINTERIA AVE.
CARPINTERIA, CA 93013
SANTA BARBARA COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET
none

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

VOC

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED
Tank Closure
* GOV

DESCRIPTION
Tank removal

DATE STOPPED
12/1/1987

STOP METHOD
Close and Remove Tank

DESCRIPTION
Tanks removed in December 1987

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE
Tank

CAUSE OF DISCHARGE
Unknown

DISCHARGE DESCRIPTION
Solvents and used oil

VIII. CASE TYPE

CASE TYPE
Other Groundwater (uses other than drinking water)

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

Discharge of TCE to soil and groundwater from USTs. This case was also worked on my Santa Barbara County and was formerly in GeoTracker as Infrared Industries UST case (T0608300037) SB case #50288. This was not a typical UST case because the USTs contained solvents and was therefore not part of the Tank Fund. To avoid confusion, all of the files from the UST case were merged into this Infrared Cleanup Case and the former UST case was deleted.

08-08-2017: ALL HARD COPY FILES FROM REGION 3 RECORD STORAGE HAVE BEEN UPLOADED TO GEOTRACKER FOR THIS SITE.

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER	REGIONAL BOARD CASE NUMBER
	S328

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
HISTORIC CLOSED SANTA BARBARA COUNTY SITE	CSS	SANTA BARBARA COUNTY	

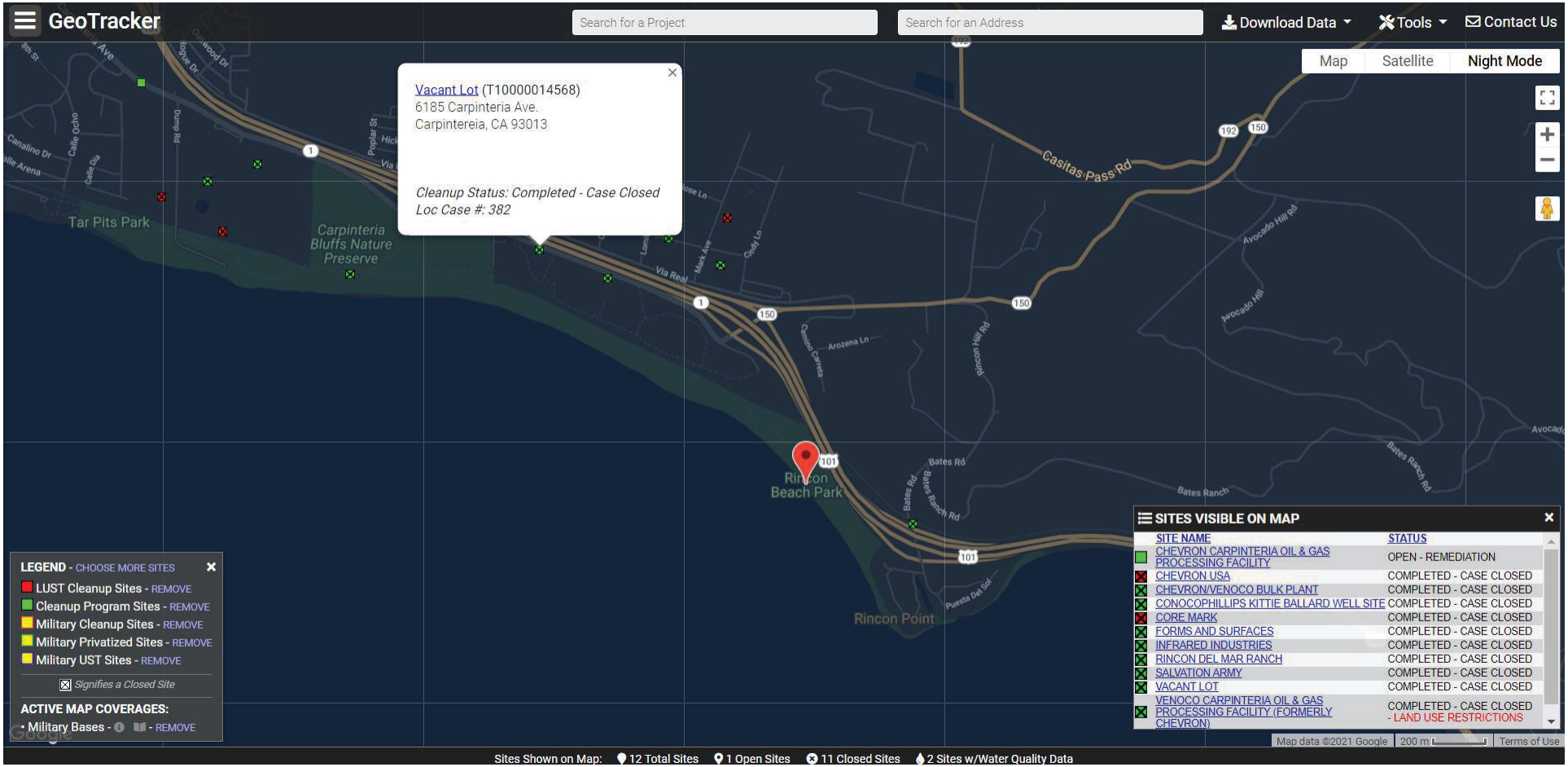
ADDRESS
2125 S CENTERPOINTE PARKWAY ROOM 333
SANTA MARIA, CA 93455

CONTACT DESCRIPTION
Closed SMU Sites

PHONE TYPE	PHONE NUMBER	EXTENSION
General Office	(805)-346-8460	

REGIONAL BOARD

UNKNOWN



GeoTracker Web-Site https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Rincon+Beach+County+Park#

Accessed: January 14, 2021

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME

Vacant Lot

FACILITY ADDRESS

6185 Carpinteria Ave.
Carpintereia, CA 93013
SANTA BARBARA COUNTY

FACILITY ID

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

382

REGIONAL BOARD CASE NUMBER

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
HISTORIC CLOSED SANTA BARBARA COUNTY SITE	CSS	SANTA BARBARA COUNTY	

ADDRESS

CONTACT DESCRIPTION

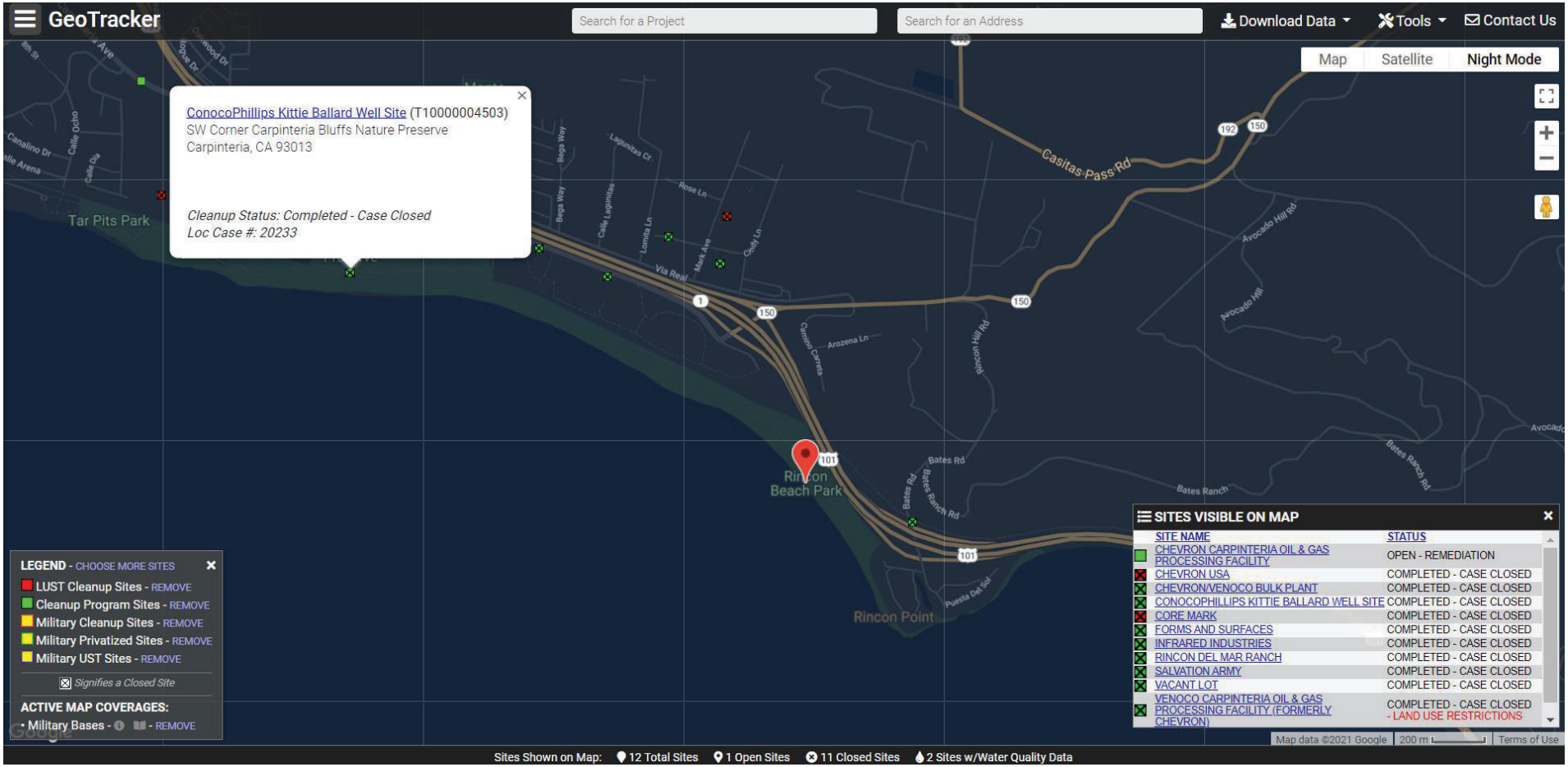
2125 S CENTERPOINTE PARKWAY ROOM 333
SANTA MARIA, CA 93455

Closed SMU Sites

PHONE TYPE	PHONE NUMBER	EXTENSION
General Office	(805)-346-8460	

REGIONAL BOARD

UNKNOWN



GeoTracker Web-Site https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Rincon+Beach+County+Park#

Accessed: January 14, 2021

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE
12/19/2011

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?
Y

I. REPORTED BY -
DOGGR

CREATED BY
SANTA BARBARA COUNTY FIRE, SITE MITIGATION UNIT

III. SITE LOCATION

FACILITY NAME
ConocoPhillips Kittie Ballard Well Site

FACILITY ADDRESS
SW Corner Carpinteria Bluffs Nature Preserve
Carpinteria, CA 93013
SANTA BARBARA COUNTY

FACILITY ID

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

BENZENE
CRUDE OIL
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)
TOLUENE
XYLENE
ETHYLBENZENE
TOTAL PETROLEUM HYDROCARBONS (TPH)
NAPHTHALENE

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED	HOW DISCOVERED	DESCRIPTION
12/19/2011	Visual	surface seep reported by public users

DATE STOPPED	STOP METHOD	DESCRIPTION
12/19/2012		re-plugging/abandonment of well completed

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE
Physc / Mech Damage

DISCHARGE DESCRIPTION
well confirmed as source of leak. start date unknown

VIII. CASE TYPE

CASE TYPE
Soil

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

Site was originally opened in 2012 following identification that the plugged and abandoned oil well, Kittie Bailard #1, located on the Carpinteria Bluffs preserve, appeared to be seeping oil. The well was originally plugged and abandoned under DOGGR oversight

in 1929. Also of note is that there are a number of natural oil seeps in the immediate vicinity including oil that seeps out of the sea bluff immediately to the south of the well. Following environmental review by the City of Carpinteria, ConocoPhillips excavated the well head and confirmed that oil was seeping up around the inner well casing. The work was performed with oversight by DOGGR, the City of Carpinteria and Santa Barbara County Environmental Health Services, Site Mitigation Unit (EHS-SMU). C/P proceeded to replug and abandon the well to current standards under DOGGR oversight. C/P performed a remedial excavation of nearly 74 tons of oil contaminated soil in 2013 and submitted the remedial action completion report and request for closure on May 20, 2013. EHS-SMU issued a closure letter to ConocoPhillips on August 26, 2013.

In January 2017, ConocoPhillips was notified that an oil seep had again been observed near the Kittie Bailard oil well and returned to the site to contain the seep and investigate. C/P contractor, ATC, installed straw wattles, high visibility fencing, signs, and protective bird block fabric mesh around the oil seep. C/P subsequently excavated the wellhead for inspection by various stakeholders and regulatory agencies including the City of Carpinteria, DOGGR and EHS-SMU. No oil was observed seeping around the wellhead and the existing seep was noted to be east of the wellhead with surface dimensions of 6-feet long by 3/8 inches wide and oriented east to west. Additionally, ATC performed leak-check investigation for volatile organic hydrocarbons, hydrogen sulfide and carbon dioxide. The field monitors did not detect any gases leaking from the well. All stakeholders concurred the current seep did not originate from the well but appeared to be a natural seep. While the surface seep was not C/P's responsibility, they proceeded to remove, transport and properly dispose of the oil-impacted soil. Cleanup of visually impacted soil was completed but no verification sampling was required and the case closed on November 15, 2018.

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER	REGIONAL BOARD CASE NUMBER
20233	

LOCAL AGENCY

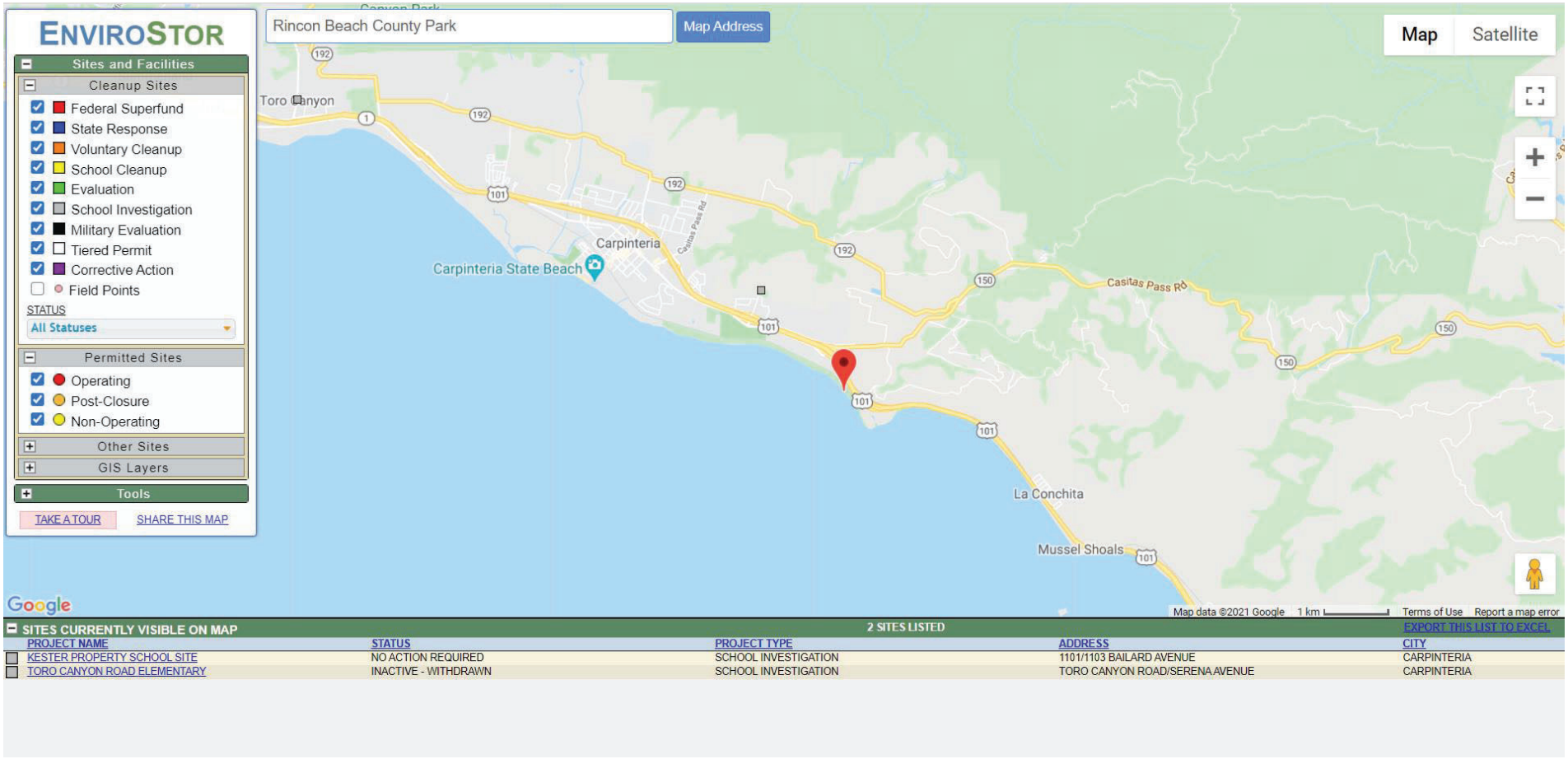
CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
JASON JOHNSTON	JJ	SANTA BARBARA COUNTY	jason.johnston@sbcphd.org

ADDRESS	CONTACT DESCRIPTION
2125 SOUTH CENTERPOINTE PARKWAY, ROOM 333 SANTA MARIA, CA 93455	Program Supervisor

PHONE TYPE	PHONE NUMBER	EXTENSION
Office	(805)-346-7348	

REGIONAL BOARD

UNKNOWN



EnviroStor Web-Site https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Rincon+Beach+County+Park

Accessed: January 14, 2021

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
ENVIROSTOR

KESTER PROPERTY SCHOOL SITE (42010003)

SIGN UP FOR EMAIL

1101/1103 BAILARD AVENUE
CARPINTERIA, CA 93013-2637
SANTA BARBARA COUNTY
SITE TYPE: SCHOOL

SUPERVISOR: THOMAS COT
OFFICE: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELD OUTREACH
SCHOOL DISTRICT: CARPINTERIA UNIFIED SCHO DISTRICT
CENSUS TRACT: 6083001704
CALENVIROSCREEN PERCENTILE SCORE: 41-45%

Summary | Activities | Site/Facility Docs | Map | Related Sites | CalEnviroScreen

Site Information

CLEANUP STATUS
NO ACTION REQUIRED AS OF 9/7/1999

SITE TYPE: SCHOOL
NATIONAL PRIORITIES LIST: NO
ACRES: 6.98 ACRES
APN: NONE SPECIFIED
CLEANUP OVERSIGHT AGENCIES:
DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY

SCHOOL DISTRICT: CARPINTERIA UNIFIED SCHOOL DISTRICT
ENVIROSTOR ID: 42010003
SITE CODE: 300764
SPECIAL PROGRAM:
FUNDING: SCHOOL DISTRICT
ASSEMBLY DISTRICT: 37
SENATE DISTRICT: 19

Regulatory Profile

PAST USE(S) THAT CAUSED CONTAMINATION
RESIDENTIAL AREA

POTENTIAL CONTAMINANTS OF CONCERN
NO CONTAMINANTS FOUND

POTENTIAL MEDIA AFFECTED
NO MEDIA AFFECTED

Site History

2 parcels; 2 single family homes; vacant agricultural land and avocado orchards; all would be demolished for school. Phase I was completed with a no action required determination mad

2.412109 seconds

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
ENVIROSTOR

TORO CANYON ROAD ELEMENTARY (36010037)

SIGN UP FOR EMAIL

TORO CANYON ROAD/SERENA AVENUE
CARPINTERIA, CA 93013
SAN BERNARDINO COUNTY
SITE TYPE: SCHOOL

SUPERVISOR: MARK MALINC
OFFICE: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELD OUTREACH
SCHOOL DISTRICT: CARPINTERIA UNIFIED SCH DISTRICT
CENSUS TRACT: 6083001706
CALENVIROSCREEN PERCENTILE SCORE: 6-10%

Summary | Activities | Site/Facility Docs | Map | Related Sites | CalEnviroScreen

Site Information

CLEANUP STATUS
INACTIVE - WITHDRAWN AS OF 11/29/1999

SITE TYPE: SCHOOL
NATIONAL PRIORITIES LIST: NO
ACRES: 9.05 ACRES
APN: NONE SPECIFIED
CLEANUP OVERSIGHT AGENCIES:
DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY

SCHOOL DISTRICT: CARPINTERIA UNIFIED SCHOOL DISTRICT
ENVIROSTOR ID: 36010037
SITE CODE: 300826
SPECIAL PROGRAM:
FUNDING: SCHOOL DISTRICT
ASSEMBLY DISTRICT: 37
SENATE DISTRICT: 19

Regulatory Profile

PAST USE(S) THAT CAUSED CONTAMINATION
AGRICULTURAL - ROW CROPS

POTENTIAL CONTAMINANTS OF CONCERN
ARSENIC
DDD
DDE
DDT

POTENTIAL MEDIA AFFECTED
SOIL

Site History

This site has been historically used for agricultural purposes from 1928 to 1989, the property was used for citrus orchards. The property was cleared and used for the cultivation of flowe the time of the site assessment in 1996, the site was still planted in flower.

2.085938 seconds

Appendix G

Drainage System Feaibility Discsusion

Drainage Overview

This project is located in a coastal setting where heavy rains are likely to occur regularly. These rains will bring some sediment and perhaps rockfalls, which will likely be heavier in the earlier years, diminishing as vegetation becomes established.

In order to minimize maintenance and to protect the substantial investment in the project, along with concern for the safety of the users, designers feel it is important to provide adequate drainage systems including graded drainage benches where feasible. Such was the concept used during the original construction of the railroad and Hwy 101.

Aerial view looking south: Bengal photo

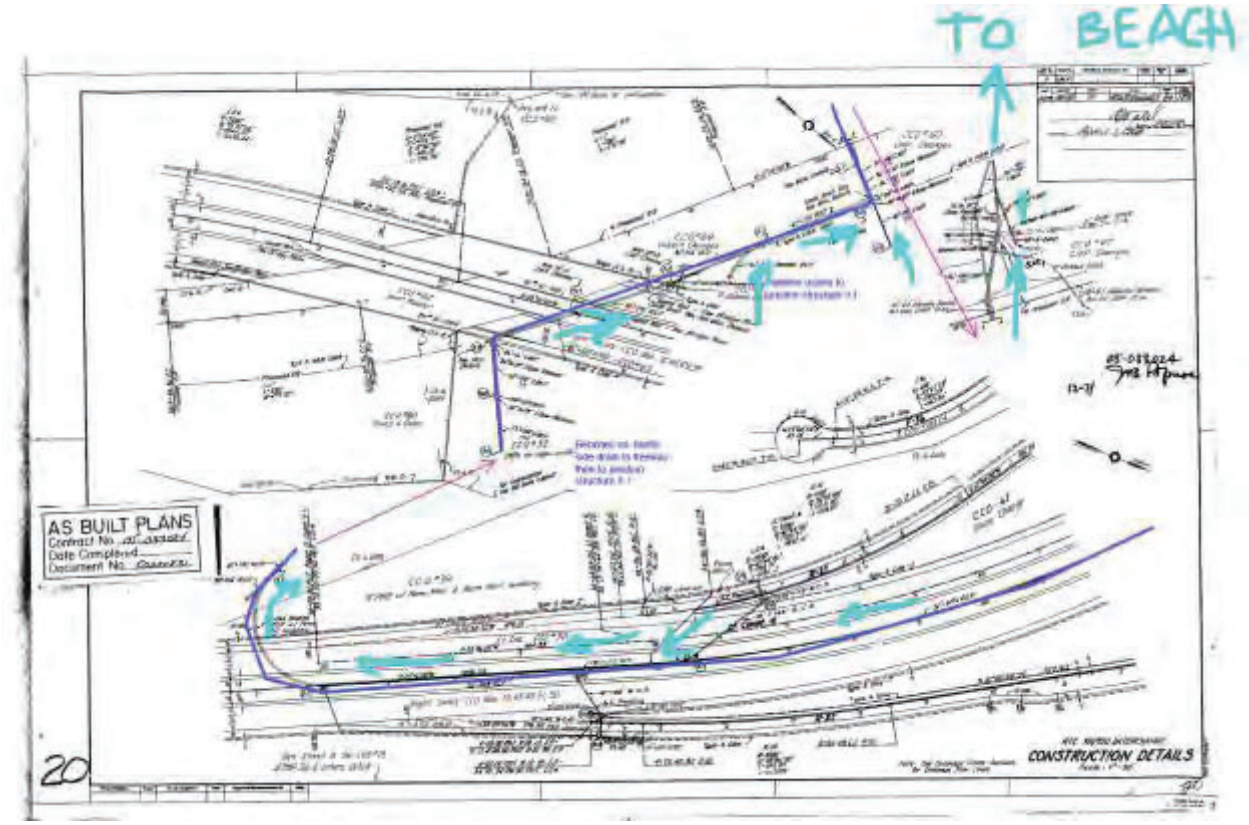
Note the benches built to control drainage on the cut slopes above the US 101 Highway to protect these facilities.

Drainage on Freeway Side of the Project

Designers of Hwy 101 routed all the drainage west of the “wave overhead” (the freeway bridge crossing the UPRR) down the median of the freeway then sweeping along the lower bench above the railroad, then descending to the beach (light blue arrows below). Note this existing system passes under the Union Pacific railroad tracks before it descends to the beach.

Above: Existing Drainage Paths (light blue); Proposed Drainage Path (yellow) . Note that on the freeway side of the UPRR, because the new trail will intercept the water which currently drains either to the existing mid-slope bench or to the southbound ramp below, engineers will include a drainage v-ditch along the trail. This v-ditch will convey water to the existing drainage system, as shown in the yellow arrows above.

As-Built Drawings of Hwy 101 Drainage



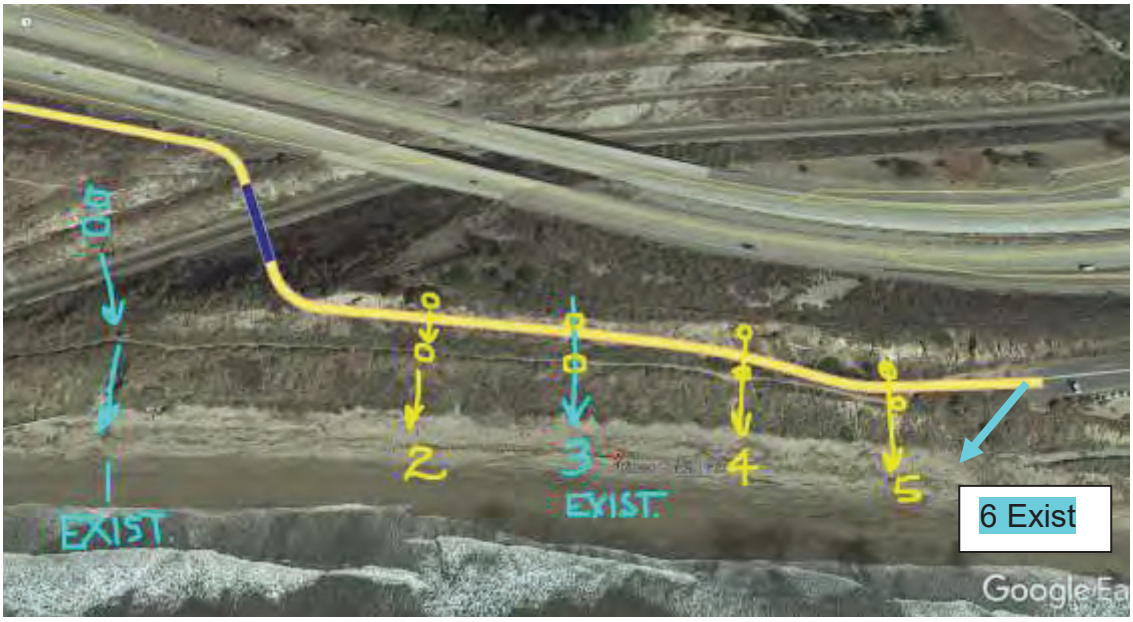
As-built construction plan showing drainage system. Note the freeway drains to the beach.

It is important to understand that as part of the construction of the Rincon Trail, neither the volume of water entering the system, nor the point of discharge on the beach would be changed.

Description of Proposed Drainage on Ocean-side of Project

South of the railroad, Bengal anticipates the need for at least 6 drains to the beach.

[existing drain 6 shown below was discovered in 2019]



View of the Ocean-side of the project: The first drain at the left (west) is the existing system from the freeway, mentioned previously, and shown in the as-built drawings.

View of Drainage Stystem #1 from ocean side of UPRR. Note this drain accepts all the drainage from both sides of the freeway, including the down-drains far in the distance (photo, top right).

View of the outfall of drainage system Number 1 as seen from the beach. Note old concrete sea wall and broken concrete “rip rap” along with remains of the corrugated metal pipe down-drain. The proposed project would not affect this existing facility.

Drainage systems 2, 4 and 5 are proposed as part of the project. These are important design features because they will capture water before it becomes concentrated and flows into the parking lot. Note that if this water is unchecked, it could flow through the Rincon Beach parking lot, and all the way to Bates Road. Designers believe that these vertical drains are imperative for the success of the project and underscore the need to obtain the permits to build them.

Drainage system #3 will replace an existing drainage system which has rusted out.

A view of drainage system #3 as seen from beach. Note that it drains not only the old rail bed, but it originally drained the old state highway. It has since rusted away due to lack of maintenance.

View of the existing drainage system #3, looking westerly along the old Southern Pacific Railroad rail bed. Note the rusty pipe visible at the left, oriented parallel with the old rail bed, is an old communications line, now abandoned. Drainage system #3 passes under it, in-line with the yellow tape measure shown in the photo.

Space Limitations for "Infiltration" Systems

Current engineering practices are evolving to include the use of infiltration measures to limit both the volume of run-off and the amount of sediment.

This project faces the same narrow footprint available for grading which faced the engineers who built both the railroad and the freeway in the past. Because of these space limitations, and because implementation of an infiltration system will add water to the soils, likely reducing their stability, such methods do not appear to be a practical fit for the project as it is currently proposed.

Factors Guiding the Suggested Approach for Drainage Design

The proposed drainage design includes multiple down drains leading to the beach. This approach has been selected based on careful consideration, described next.

Performance of Past Projects

If one visits the site, one can see past projects including both the new and old railroad alignments, the old State Highway 2 (which existed on the ridgeline before Hwy 101 was constructed), the County Park, and Hwy 101, all included drainage systems to protect their investments. Some still function—some are rusty metal skeletons and crumbling concrete relics. These systems have had varying degrees of success. Most were built as “downdrains”, as we suggest in the proposed project.

But one these systems is a complicated trunk line storm drain: the Caltrans-constructed “Drainage System Number 3” (mentioned in the record drawings above). Today, the difficulties facing Caltrans maintenance crews for such a complicated trunk line are evident to the designers of the Rincon Trail. This system has no maintenance openings for hundreds of feet—including the railroad crossing. This system cannot easily reached from the old railroad bench or from the beach. And this system also provides no redundancy—no ancillary inlets to accommodate blockage. So should any part of it become blocked, we can expect damage which will be difficult to repair.

Rainfall Intensity: the Future May be Harsher than the Past

Today, engineers expect rain, including heavy rain, at this location. Growing concerns regarding changing climate may prove that heavier rains will be a “new normal”. For example, the nearby 2018 flooding in Montecito, was caused not only because of the Thomas fire, but also because of freakishly high rainfall intensity. The results from the plugged drainage systems near Olive Mill Road, which closed the freeway for weeks, are still fresh in our minds.

As it turned out, the existing storm drains which functioned OK for years, failed during the time of greatest need. Rob Lewin, OEM Director, said, “The storm we got was not the storm we prepared for.”

Rockfalls could plug an individual downdrain

Because of the nature of the soil in the area, engineers expect that historic rock falls, which are partially-driven by rain, will continue to occur in spite of the proposed cut slopes which are less-steep than those which exist. Such rock falls could plug any drainage system. Therefore engineers have provided redundancy to avoid “having all our eggs in one basket”.

Access to remove rockfall.

Designers believe that the project should provide access to remove rockfall debris especially the upper slopes during in the early years of service. Designers envision that rockfall will decrease with time as slopes mature and perhaps some vegetation takes purchase. But given the low organic content in the soils, along with the southern exposure to the sun, designers do not expect to see well-vegetated slopes, based on what we see in the old cuts made by Southern Pacific Railroad.

However new "fills" which will be made below the path will be reinforced with geosynthetic materials, and we envision using a mantle of topsoil on the daylight face of the fill slope to provide better soil vegetation in the zone below the bike path and above the old railroad bench.

Project Engineers Strive to Simplify Maintenance

The designers (engineers) anticipate that agencies like the City of Carpinteria and Santa Barbara County will have shrinking resources: less staff and budget: available to maintain any infrastructure. Therefore the designers prefer designs which avoid the need for specialized equipment or staff; "simpler is better". Even if staff and budget are generous, experience has shown that complicated designs generate complicated maintenance scenarios, and are difficult to understand by emergency crews who will likely be responding in bad weather often at night (like the 2018 Montecito Flood).

Other Drainage Design Concepts Which Were Considered

Facing the challenges mentioned, engineers implemented a design with multiple down drains. However engineers also considered several other ideas, described next:

A) **A trunk line storm drain following the old railroad bench**
We considered a trunk line like the Caltrans "Drainage System 3". This trunk line could descend to the beach near the west end of the County park in a single down drain. The driving force for this concept was considered to minimize the number of drains to the beach.

This concept was disregarded because:

- Likely this trunk line would conflict with a Frontier Fiber Opitic line which already occupies this area in a dedicated easement; this fiber optic line runs the full length of the bench and then into the parking lot.
- Such a storm drain will be much more difficult to maintain. Access below the paved trail would be particularly limited, unless the trail alignment is shifted toward the freeway, generating more cut in the process.

- The existing bench is narrow in places. There is not much room for such a storm drain.
- This bench has areas which will be stabilized by engineering (reinforced fills). Construction will be difficult as the storm drain will conflict with the reinforced fills, a situation we seek to avoid.
- The system has no redundancy—which leads to the next point.
- Should any part of this drain fail, greater damage is expected as "all our eggs will be in one basket".

View of the proposed west end of the trail, near Rincon Park, March 2018.
Note gate, demarking the end of the paved parking lot.
Note muddy conditions which develop due to lack of drainage systems.

B) A trunk line storm drain following the proposed "trail" bench, buried below proposed trail

This concept was disregarded because:

- As mentioned, Rain and rockfalls seem to be certainty, therefore a design which allows for them seems best.
- We envision the upper trunk line B will be plugged at some point. In worse case it could flow off the paved path, uncontrolled.
- Because the slopes *below* the paved trail will not be protected by a drainage system, therefore we'd still need trunk line A, and likely face most of the detriments already mentioned.

C) A combination of 2 trunk lines—A+B, combined.

We considered 2 smaller trunk lines, combining the ideas of A) and B). This idea was disregarded because:

- The detriments of each trunk line: still remain, likely in spite of much higher cost.

View of old retaining walls which remain from State Hwy 2, near Rincon Park, March 2018.

Note that these old walls will be removed as part of the project to make room for the trail and drainage improvements. Drainage at this location appears to have been a problem since construction in 1929.

NOTES

1. FOR COMPLETE RIGHT OF WAY INFORMATION, SEE MAPS IN THE CITY OFFICES.
2. THESE PLANS ARE FOR THE LAYOUT AND CONSTRUCTION OF THE DRAINAGE FACILITIES.
3. EXISTING DRAINAGE SYSTEMS ARE GIVEN IDENTIFICATION FROM CAL TRANS 1968 DRAINAGE PLANS
4. APPROX 10-FOOT X 10-FOOT PAD OF 2 TON RIP RAP AT OUTFALL OF DRAINAGE SYSTEMS 3,5,6,7&8

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER * STATE OF CALIFORNIA * S. Onishuk No. C48052 CIVIL

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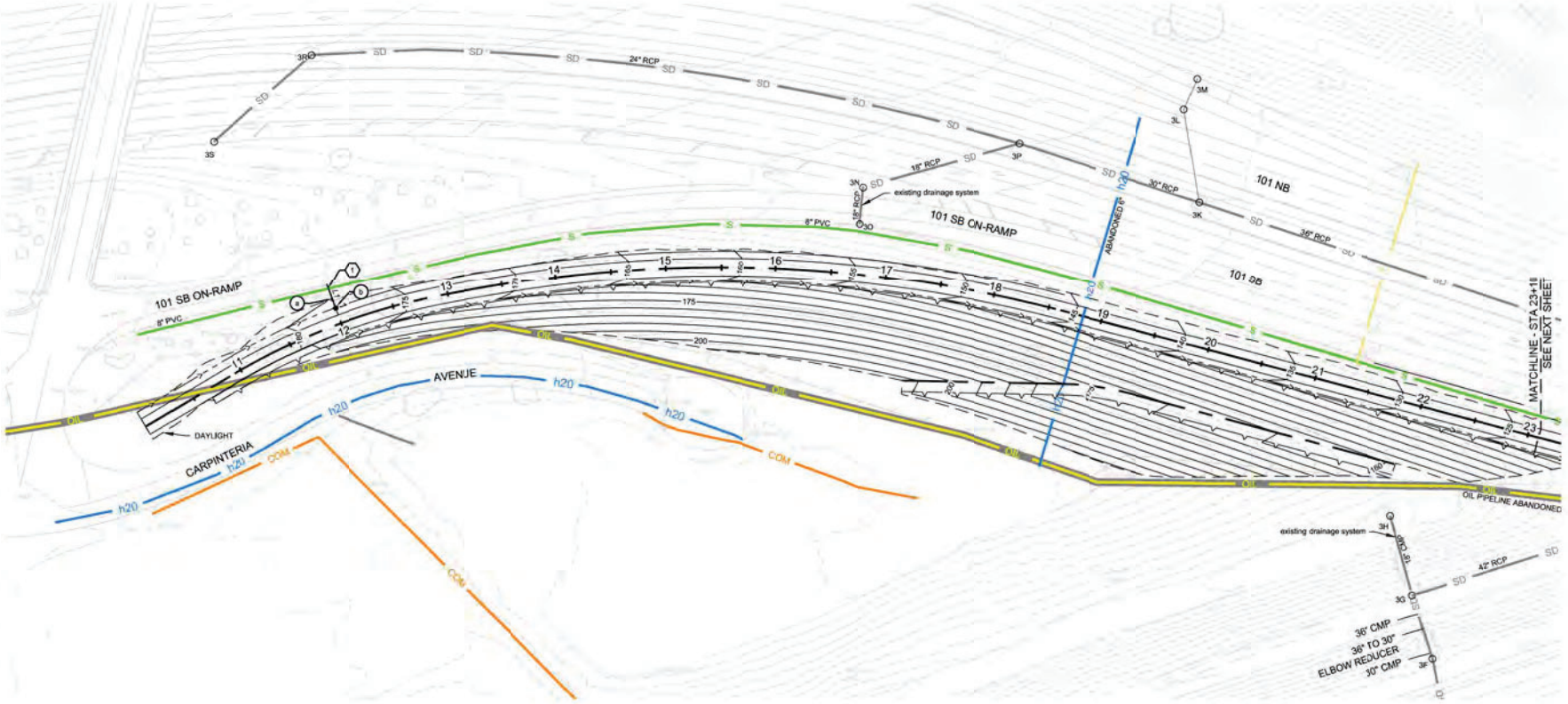

NORTH

DRAINAGE - 1

SCALE 1"=50' H

CITY OF CARPINTERIA, CALIFORNIA

PROJECT ENGINEER
Scott Onishuk, FE

Matt Roberts, Project Manager

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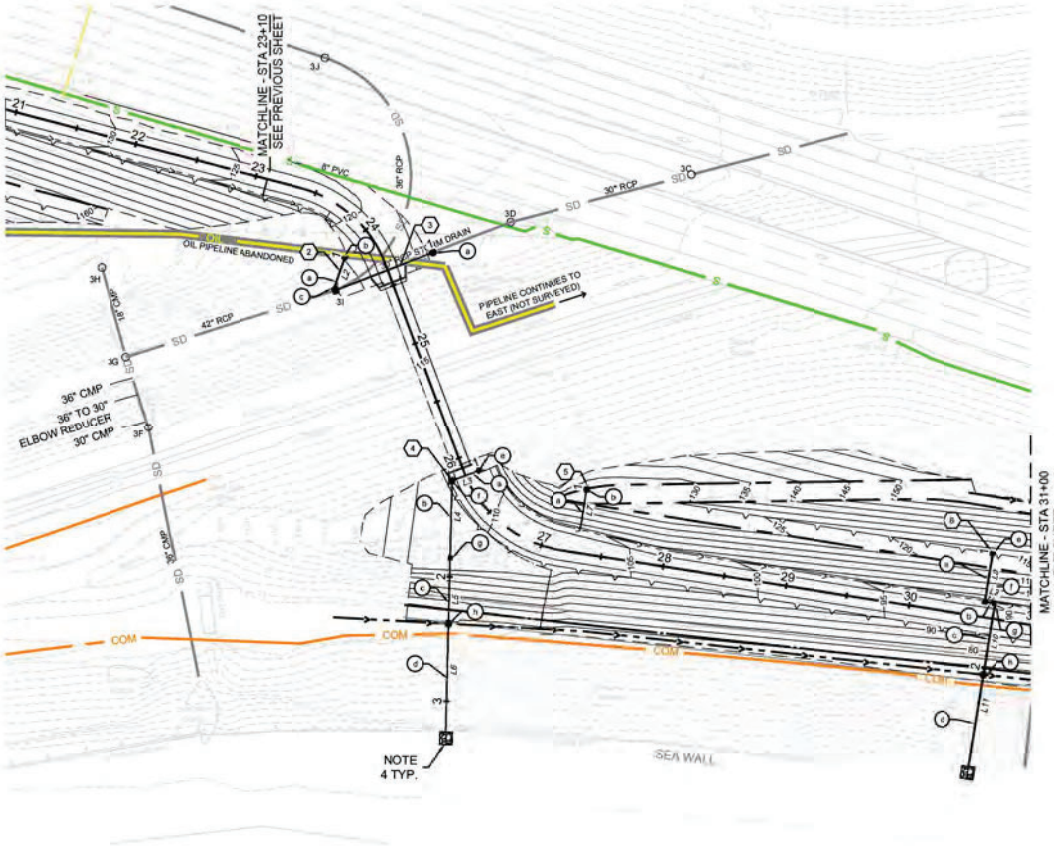

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Scott Onishuk, FE

CITY OF CARPINTERIA, CALIFORNIA
Matt Roberts, Project Manager

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DRAINAGE - 2

NORTH

SCALE 1"=50' H

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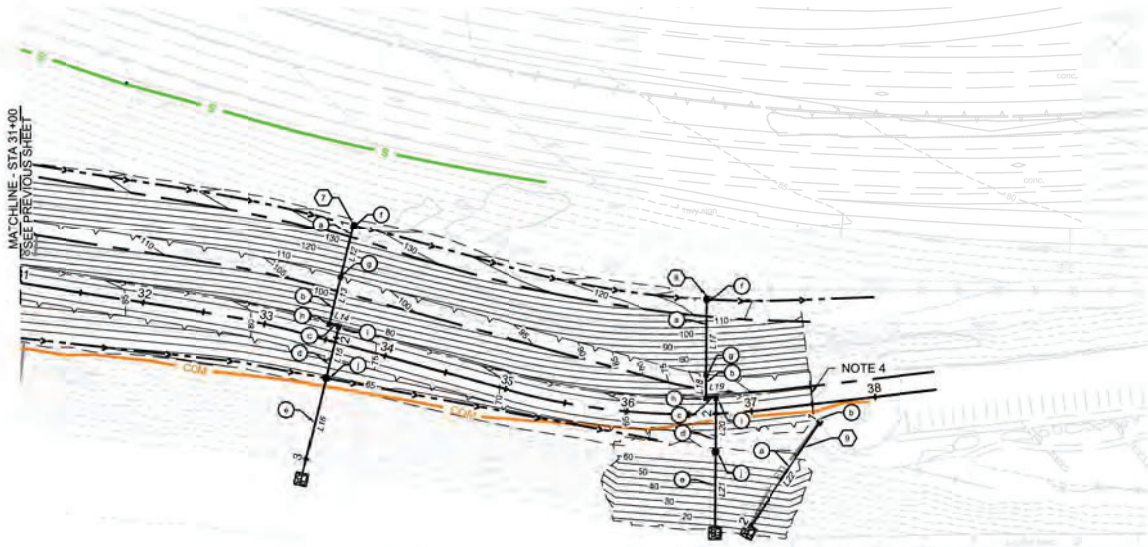

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Scott Onishuk, FE

Matt Roberts, Project Manager

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DRAINAGE - 3

NORTH

SCALE 1"=50' H

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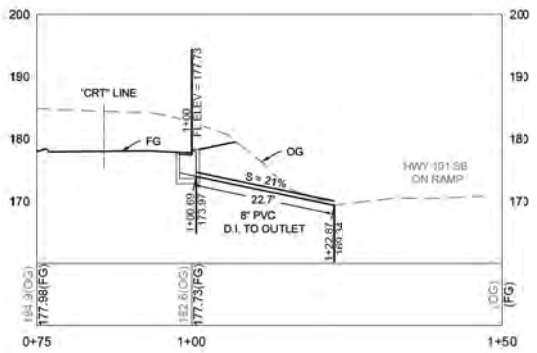
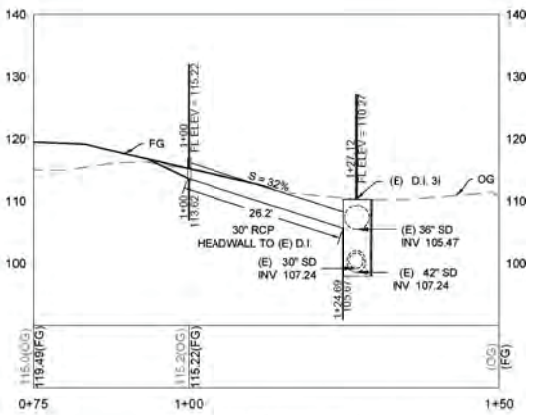
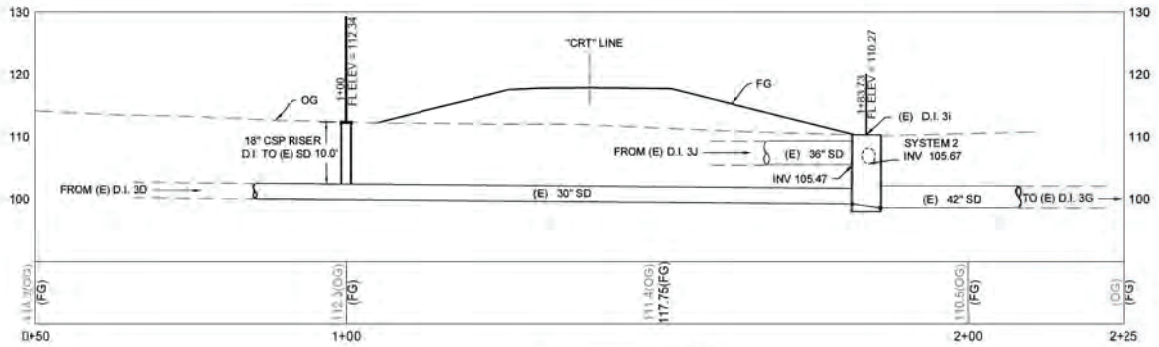


DRAINAGE SYSTEM 1 PROFILE



DRAINAGE SYSTEM 2 PROFILE



DRAINAGE SYSTEM 3 PROFILE

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DRAINAGE - 4

SCALE 1"=10' H&V

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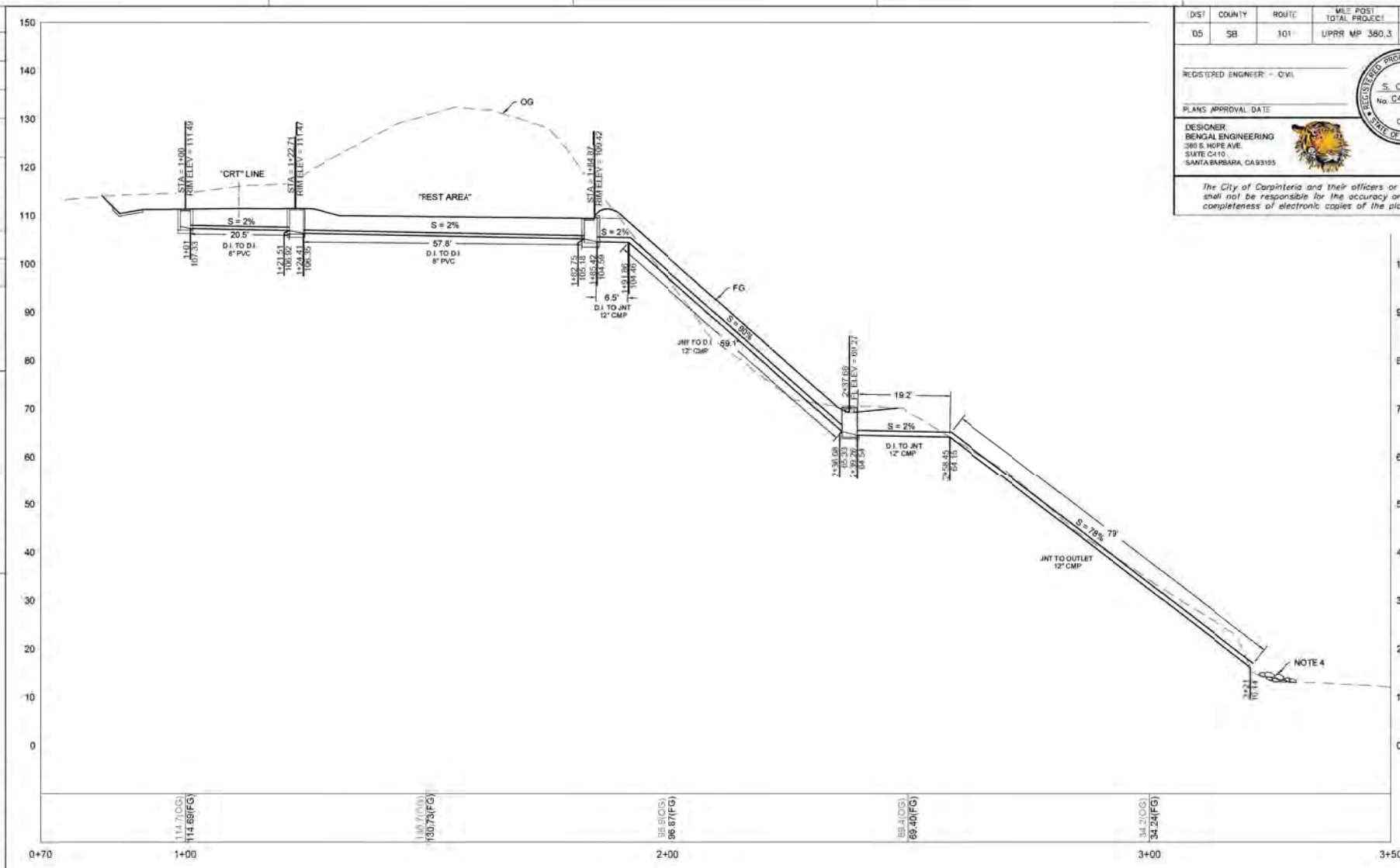

DRAINAGE SYSTEM 4 PROFILE

DRAINAGE - 5

SCALE 1"=10' H&V

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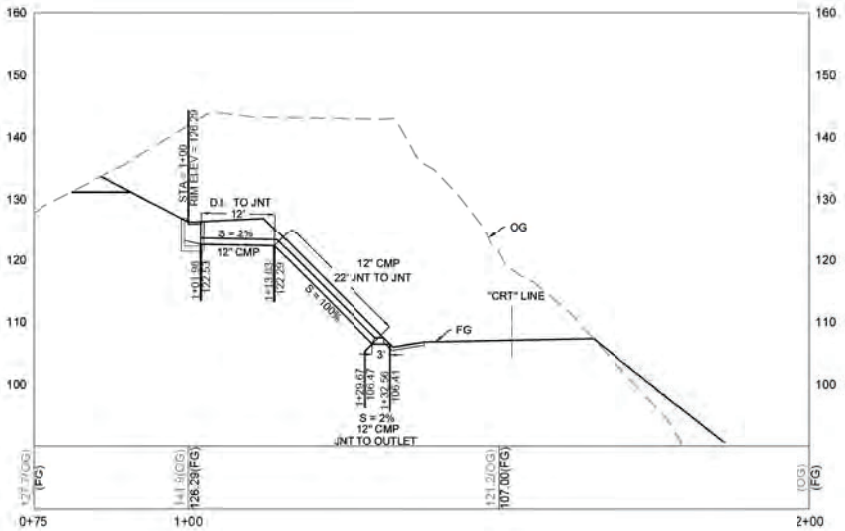

DRAINAGE SYSTEM 5 PROFILE

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DRAINAGE - 6

SCALE 1"=10' H&V

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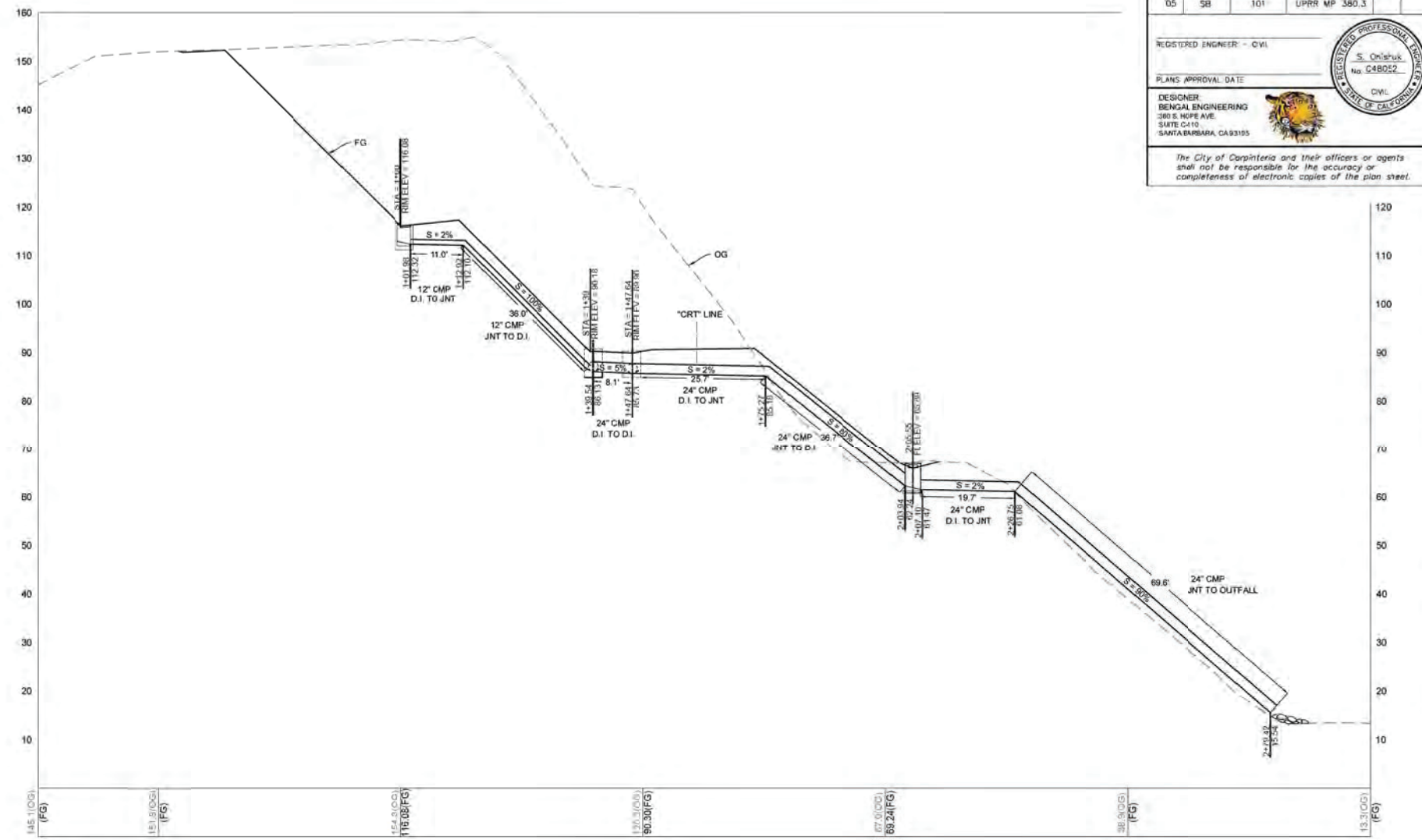

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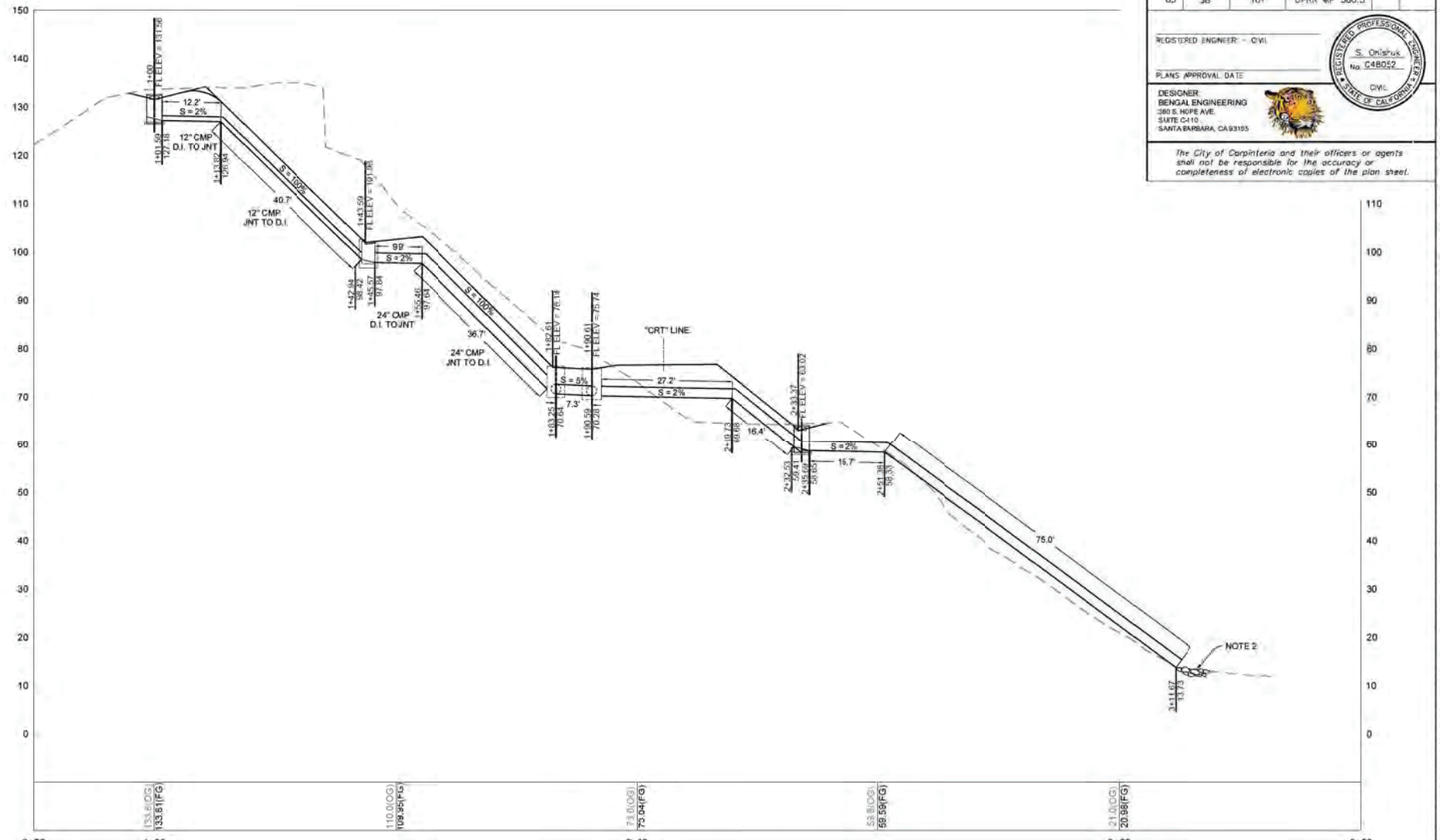

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DRAINAGE - 8

SCALE 1"=10' H&V

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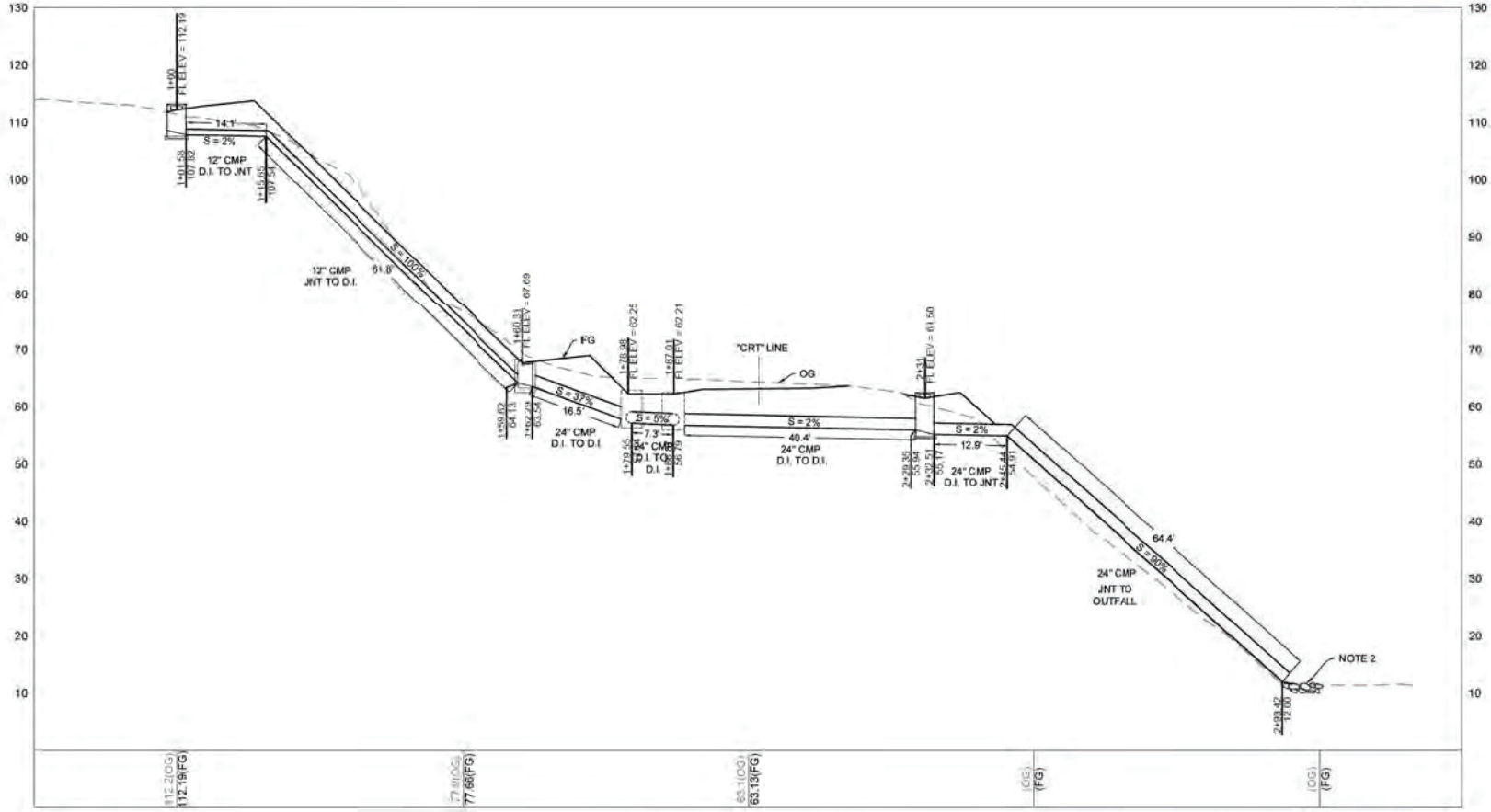
Matt Roberts, Project Manager



DRAINAGE SYSTEM 8 PROFILE

DRAINAGE - 9

SCALE 1"=10' H&V

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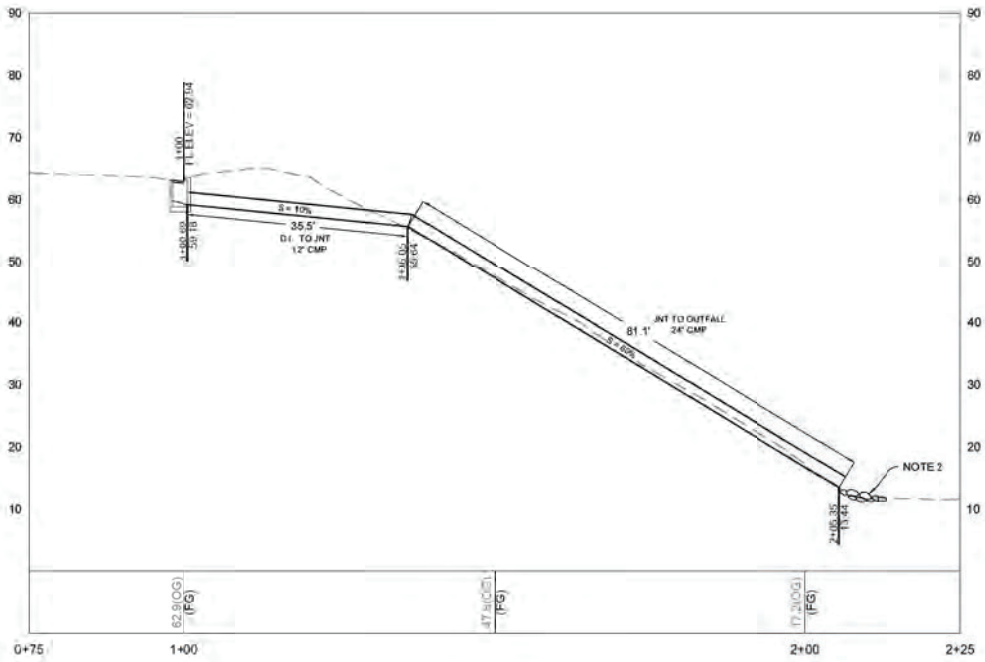

DRAINAGE SYSTEM 9 PROFILE

DRAINAGE - 10

SCALE 1"=10' H&V

CITY OF CARPINTERIA, CALIFORNIA

PROJECT ENGINEER: Scott Onishuk, FE

CALCULATED/DESIGNED BY: MB

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DATE REVISED:

REVISED BY:

Matt Roberts, Project Manager

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SANTA BARBARA, CA 93105

DRAINAGE SYSTEM 1

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L1	1+00.00	1965057.54	6113746.24	22.87'	N26° 12' 28.25"E	1+22.87	1965078.06	6113756.34

DRAINAGE SYSTEM 2

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L2	1+00.00	1964097.14	6114409.17	24.69'	S65° 44' 03.32"W	1+24.69	1964086.99	6114386.66

DRAINAGE SYSTEM 3

START STATION	START NORTHING	START EASTING
1+00.00	1964049.15	6114461.32

DRAINAGE SYSTEM 4

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L3	1+00.00	1963900.67	6114358.40	22.71'	N63° 58' 19.73"W	1+22.71	1963910.63	6114338.00
L4	1+22.71	1963910.63	6114338.00	62.73'	S47° 55' 44.35"W	1+85.44	1963868.60	6114291.43
L5	1+85.44	1963868.60	6114291.43	52.24'	S47° 55' 19.66"W	2+37.68	1963833.59	6114252.66
L6	2+37.68	1963833.59	6114252.66	83.32'	S47° 55' 32.67"W	3+21.00	1963777.76	6114190.81

DRAINAGE SYSTEM 5

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L7	1+00.00	1963827.28	6114408.15	32.56'	S55° 25' 11.63"W	1+32.56	1963808.80	6114381.34

DRAINAGE SYSTEM 6

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L8	1+00.00	1963555.43	6114595.23	39.67'	S55° 27' 24.04"W	1+39.67	1963532.93	6114562.55
L9	1+39.67	1963532.93	6114562.55	8.00'	S34° 32' 48.53"E	1+47.67	1963526.34	6114567.09
L10	1+47.67	1963526.34	6114567.09	57.91'	S55° 26' 14.58"W	2+05.58	1963493.49	6114519.40
L11	2+05.58	1963493.49	6114519.40	73.84'	S55° 29' 19.80"W	2+79.42	1963451.65	6114458.55

DRAINAGE SYSTEM 7

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L12	1+00.00	1963331.16	6114794.35	43.59'	S60° 11' 37.43"W	1+43.59	1963309.49	6114756.52
L13	1+43.59	1963309.49	6114756.52	39.02'	S60° 11' 37.43"W	1+82.61	1963290.10	6114722.67
L14	1+82.61	1963290.10	6114722.67	8.00'	S28° 09' 54.77"E	1+90.61	1963283.04	6114726.45
L15	1+90.61	1963283.04	6114726.45	42.76'	S60° 10' 16.26"W	2+33.37	1963261.78	6114689.36
L16	2+33.37	1963261.78	6114689.36	78.30'	S60° 12' 09.30"W	3+11.67	1963222.87	6114621.41

DRAINAGE SYSTEM 8

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L12	1+00.00	1963331.16	6114794.35	43.59'	S60° 11' 37.43"W	1+43.59	1963309.49	6114756.52
L13	1+43.59	1963309.49	6114756.52	39.02'	S60° 11' 37.43"W	1+82.61	1963290.10	6114722.67
L14	1+82.61	1963290.10	6114722.67	8.00'	S28° 09' 54.77"E	1+90.61	1963283.04	6114726.45
L15	1+90.61	1963283.04	6114726.45	42.76'	S60° 10' 16.26"W	2+33.37	1963261.78	6114689.36
L16	2+33.37	1963261.78	6114689.36	78.30'	S60° 12' 09.30"W	3+11.67	1963222.87	6114621.41

DRAINAGE SYSTEM 9

SEGMENT ID	START STATION	START NORTHING	START EASTING	LENGTH	DIRECTION/ DELTA	END STATION	END NORTHING	END EASTING
L22	0+75.00	1962953.56	6114961.84	151.10'	S80° 08' 26.36"W	2+26.10	1962927.69	6114812.97

DRAINAGE - 11
LAYOUT

CITY OF CARPINTERIA, CALIFORNIA
Matt Roberts, Project Manager

PROJECT ENGINEER
Scott Onishuk, FE

CALCULATED/ DESIGNED BY
CHECKED BY
DATE
REVISED BY:
DATE REVISED:

LAST REVISION

CARPINTERIA RINCON TRAIL - Ped Bridge, RR Under, Carpinteria CA, Santa Barbara Sub, M.P. 380.49, DOT 441148Y

FOR REDUCE PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DWG FILE: Progress Print: August 6, 2019 9:15AM

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EA 05-tbd

DRAINAGE QUANTITIES

DRAINAGE SYSTEM NUMBER	DRAINAGE UNIT	8" PVC	12" CMP	24" CMP	30" RCP	18" CSP RISER CAL TRANS STD D93B	12" CMP DOWNDRAIN CAL TRANS STD D87B	24" CMP DOWNDRAIN CAL TRANS STD D87B	30" SINGLE HEADWALL CAL TRANDS STD D89	24" GCP CAL TRANS STD D75B	TYPE G- 1DROP INLET TYPE 24-12X CALTRANS D72B	TYPE GT- 4 DROP INLET Type 24-12X CALTRANS D72D	TYPE OMP CALTRANS D75A	CONNECT TO EXISTING RCP	CONNECT TO EXISTING JUNCTION STRUCTURE
					LF	LF	LF	LF	EA	EA	EA	EA	EA	LS	LS
1	a	25													
	b											1			
2	a				30										
	b								1						
	c													1	
3	a					12				1					1
4	a	24													
	b	62													
	c *						70								
	d *						96								
	e										1				
	f										1				
	g											1			
	h												1		
5	a *						30								
	b											1			
6	a *						50								
	b			12											
	c *							66							
	d *							92							
	e											1			
	f											1			
	g											1			
	h												1		
7	a *						54								
	b *						50								
	c			12											
	d *							48							
	e *							94							
	f												1		
	g											1			
	h											1			
	i											1			
	j												1		
8	a *						76								
	b			20											
	c			12											
	d			44											
	e *							82							
	f												1		
	g											1			
	h											1			
	i											1			
	j												1		
9	a *							120							
	b											1			
TOTALS		111	0	100	30	12	426	502	1	1	2	13	6	1	1

*ELBOW USED & INCLUDED IN LENGTH

DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
05	SB	101	UPRR MP 380.3		

REGISTERED ENGINEER: - CIVIL

S. Onishuk
No. C48052
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

PLANS APPROVAL DATE

DESIGNER:
BENGAL ENGINEERING
380 E. HOPE AVE.
SUITE C-110
SANTA BARBARA, CA 93105

CALCULATED/ DESIGNED BY

CHECKED BY

MB

DATE

DATE REVISED:

REVISED BY:

PROJECT ENGINEER
Scott Onishuk, FE

CITY OF CARPINTERIA, CALIFORNIA
Matt Roberts, Project Manager

CARPINTERIA RINCON TRAIL - Ped Bridge, RR Under, Carpinteria CA, Santa Barbara Sub, M.P. 380.49, DOT 441148Y

DRAINAGE - 12
QUANTITIES

LAST REVISION

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Appendix H

Noise

NOISE APPENDIX

Published Noise Contour Maps

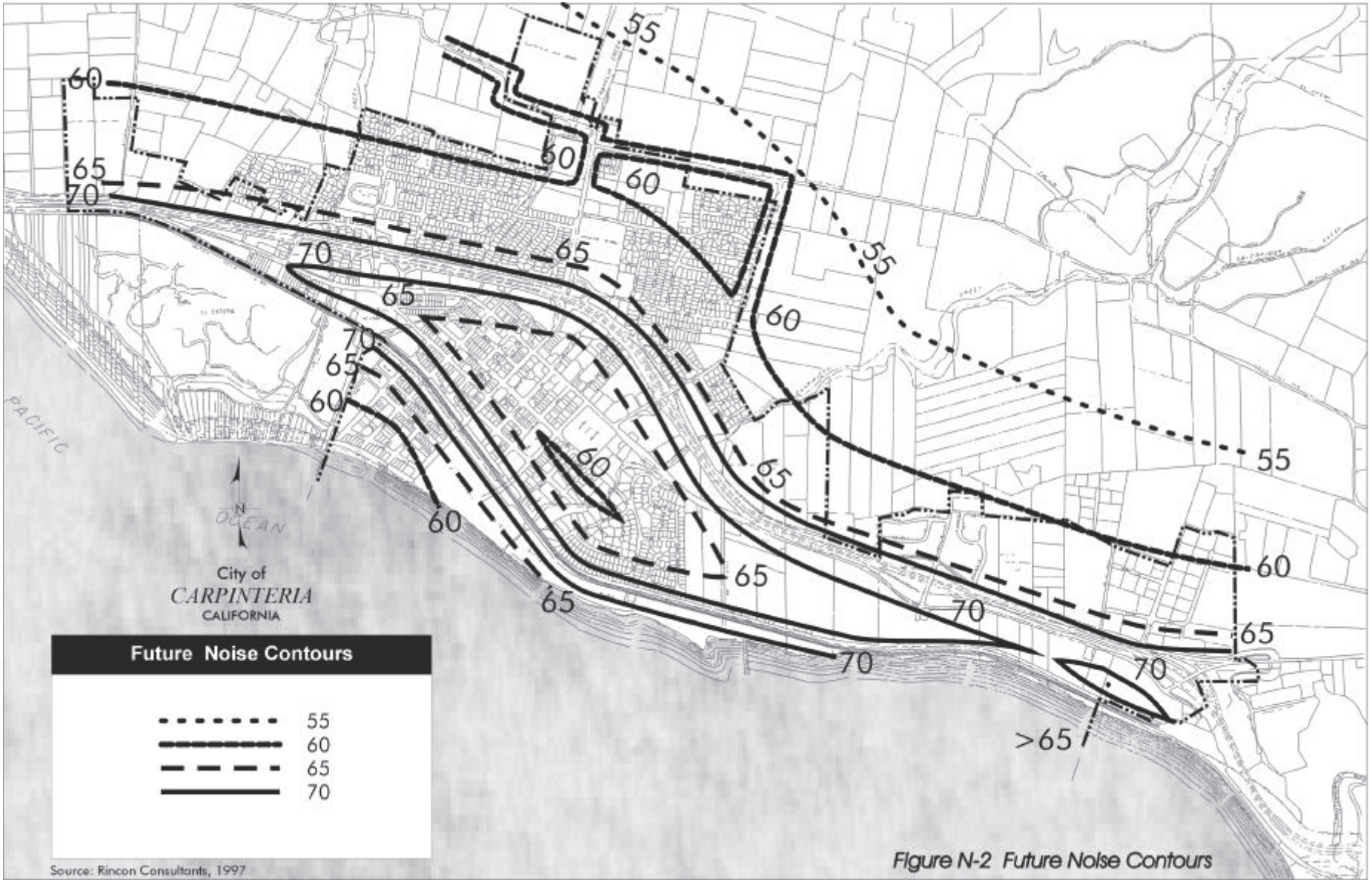
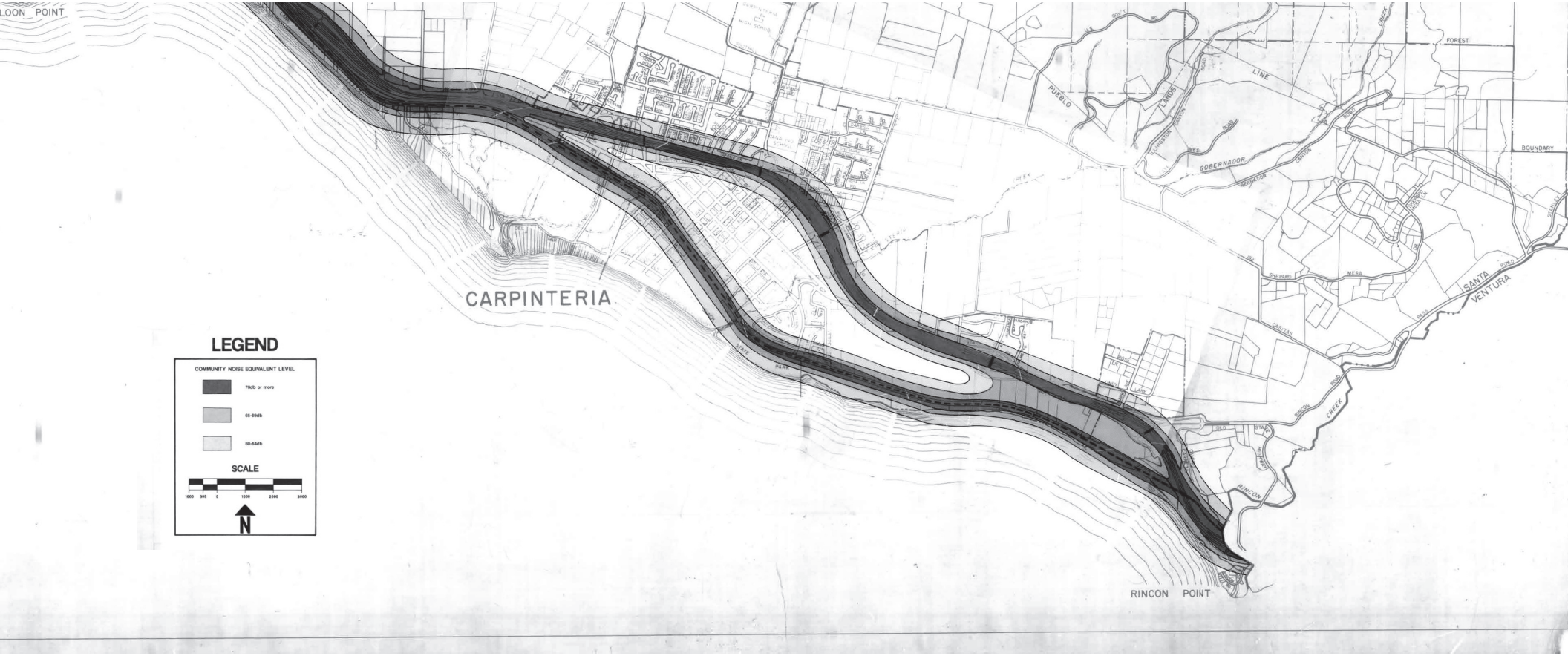


Figure N-2 Future Noise Contours

Santa Barbara County Comprehensive Plan Noise Element - Carpinteria Area Noise Contours (2009)



NOISE APPENDIX

Construction Noise Modeling Data

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase, per County = 70
allowable hours over which Leq is to be averaged (example: 8 for County of San Diego, FTA guidance) = 8

Construction Phase	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	Grader	1	40	85		775	61.2	8	480	57
	Dozer	1	40	82		775	58.2	7	420	54
	Front End Loader	1	40	79		775	55.2	8	480	51
								Total for Site Preparation Phase:		**59.5**
Grading	Grader	1	40	85		775	61.2	7	420	57
	Tractor	1	40	84	Crawler Tractor	775	60.2	6	360	55
	Front End Loader	1	40	79		775	55.2	7	420	51
								Total for Grading Phase:		**59.5**
Trail Construction	Tractor	1	40	84	Crawler Tractor	775	60.2	7	420	56
	Backhoe	1	40	78		775	54.2	6	360	49
								Total for Trail Construction Phase:		**56.5**
Bridge Construction	Crane	1	16	81		775	57.2	8	480	49
	Backhoe	1	40	78		775	54.2	6	360	49
	Welder / Torch	3	40	73		775	49.2	8	480	50
								Total for Bridge Construction Phase:		**54.2**
Paving	Tractor	1	40	84		775	60.2	8	480	56
	Dump Truck	2	40	76		775	52.2	8	480	51
								Total for Paving Phase:		**57.4**

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase, per County = 70

allowable hours over which Leq is to be averaged (example: 8 for County of San Diego, FTA guidance) = 8

Construction Phase	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	Grader	1	40	85		600	63.4	8	480	59
	Dozer	1	40	82		600	60.4	7	420	56
	Front End Loader	1	40	79		600	57.4	8	480	53
								Total for Site Preparation Phase:		**61.7**
Grading	Grader	1	40	85		600	63.4	7	420	59
	Tractor	1	40	84	Crawler Tractor	600	62.4	6	360	57
	Front End Loader	1	40	79		600	57.4	7	420	53
								Total for Grading Phase:		**61.7**
Trail Construction	Tractor	1	40	84	Crawler Tractor	600	62.4	7	420	58
	Backhoe	1	40	78		600	56.4	6	360	51
								Total for Trail Construction Phase:		**58.7**
Bridge Construction	Crane	1	16	81		600	59.4	8	480	51
	Backhoe	1	40	78		600	56.4	6	360	51
	Welder / Torch	3	40	73		600	51.4	8	480	52
								Total for Bridge Construction Phase:		**56.4**
Paving	Tractor	1	40	84		600	62.4	8	480	58
	Dump Truck	2	40	76		600	54.4	8	480	53
								Total for Paving Phase:		**59.6**

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase, per County = 75

allowable hours over which Leq is to be averaged (example: 8 for County of San Diego, FTA guidance) = 8

Construction Phase	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	Grader	1	40	85		655	62.7	8	480	59
	Dozer	1	40	82		655	59.7	7	420	55
	Front End Loader	1	40	79		655	56.7	8	480	53
							Total for Site Preparation Phase:			**61.0**
Grading	Grader	1	40	85		655	62.7	7	420	58
	Tractor	1	40	84	Crawler Tractor	655	61.7	6	360	56
	Front End Loader	1	40	79		655	56.7	7	420	52
							Total for Grading Phase:			**61.0**
Trail Construction	Tractor	1	40	84	Crawler Tractor	655	61.7	7	420	57
	Backhoe	1	40	78		655	55.7	6	360	50
							Total for Trail Construction Phase:			**57.9**
Bridge Construction	Crane	1	16	81		655	58.7	8	480	51
	Backhoe	1	40	78		655	55.7	6	360	50
	Welder / Torch	3	40	73		655	50.7	8	480	51
							Total for Bridge Construction Phase:			**55.6**
Paving	Tractor	1	40	84		655	61.7	8	480	58
	Dump Truck	2	40	76		655	53.7	8	480	53
							Total for Paving Phase:			**58.9**

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Lesser of or available Lmax	Spec. 721 Lmax	Measured L_{max} @50ft (dBA, slow)
All Other Equipment > 5 HP	No	50	85	85	-- N/A --
Auger Drill Rig	No	20	84	85	84
Backhoe	No	40	78	80	78
Bar Bender	No	20	80	80	-- N/A --
Blasting	Yes	-- N/A --	94	94	-- N/A --
Boring Jack Power Unit	No	50	80	80	83
Chain Saw	No	20	84	85	84
Clam Shovel (dropping)	Yes	20	87	93	87
Compactor (ground)	No	20	80	80	83
Compressor (air)	No	40	78	80	78
Concrete Batch Plant	No	15	83	83	-- N/A --
Concrete Mixer Truck	No	40	79	85	79
Concrete Pump Truck	No	20	81	82	81
Concrete Saw	No	20	90	90	90
Crane	No	16	81	85	81
Dozer	No	40	82	85	82
Drill Rig Truck	No	20	79	84	79
Drum Mixer	No	50	80	80	80
Dump Truck	No	40	76	84	76
Excavator	No	40	81	85	81
Flat Bed Truck	No	40	74	84	74
Front End Loader	No	40	79	80	79
Generator	No	50	72	72	81
Generator (<25KVA, VMS signs)	No	50	70	70	73
Gradall	No	40	83	85	83
Grader	No	40	85	85	-- N/A --
Grapple (on backhoe)	No	40	85	85	87
Horizontal Boring Hydr. Jack	No	25	80	80	82
Hydra Break Ram	Yes	10	90	90	-- N/A --
Impact Pile Driver	Yes	20	95	95	101
Jackhammer	Yes	20	85	85	89
Man Lift	No	20	75	85	75
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	90
Pavement Scarafier	No	20	85	85	90
Paver	No	50	77	85	77
Pickup Truck	No	40	55	55	75
Pneumatic Tools	No	50	85	85	85
Pumps	No	50	77	77	81
Refrigerator Unit	No	100	73	82	73
Rivit Buster/chipping gun	Yes	20	79	85	79
Rock Drill	No	20	81	85	81
Roller	No	20	80	85	80
Sand Blasting (Single Nozzle)	No	20	85	85	96
Scraper	No	40	84	85	84
Shears (on backhoe)	No	40	85	85	96
Slurry Plant	No	100	78	78	78
Slurry Trenching Machine	No	50	80	82	80
Soil Mix Drill Rig	No	50	80	80	-- N/A --
Tractor	No	40	84	84	-- N/A --
Vacuum Excavator (Vac-truck)	No	40	85	85	85
Vacuum Street Sweeper	No	10	80	80	82
Ventilation Fan	No	100	79	85	79
Vibrating Hopper	No	50	85	85	87
Vibratory Concrete Mixer	No	20	80	80	80
Vibratory Pile Driver	No	20	95	95	101
Warning Horn	No	5	83	85	83
Welder / Torch	No	40	73	73	74

Appendix I

Airflow Analysis

Airflow analysis for the proposed regrading of the Rincon bluffs

Paolo Luzzatto-Fegiz, PhD

January 22, 2021

Summary

This report provides an estimate of the change in vertical air velocity over the Rincon bluffs, as a consequence of the regrading associated with the proposed Rincon trail project. The analysis uses methodologies informed by a review of published scientific studies, civil engineering codes, as well well as practices from the paragliding and soaring communities. The analysis focuses on the specific case where wind is approaching perpendicular to the bluff, which is the case of greatest practical relevance.

As a consequence of the proposed regrading, the vertical wind velocity above the front of the bluff is expected to decrease by an amount between 10% and 30%. The addition of horizontal sections (that is, benches) in the bluff profile is likely to introduce some additional turbulence, which however is expected to remain close to the surface of the bluff, without significantly affecting altitudes greater than approximately 75ft above the bluff. A regrading involving one fewer bench near the bluff top is estimated to provide a reduction in vertical wind velocity between 10% and 20%.

Contents

1 Relevant prior work on topographic amplification and ridge lift

Although numerous studies have examined the effect of topography on local wind velocity, the focus in the literature has been predominantly on developing predictions for wind loads on buildings. Studies have therefore typically focused on horizontal wind speeds and on gust velocities near the surface. By contrast, the vertical wind velocities induced by topography have received little attention. A review of relevant studies follows below.

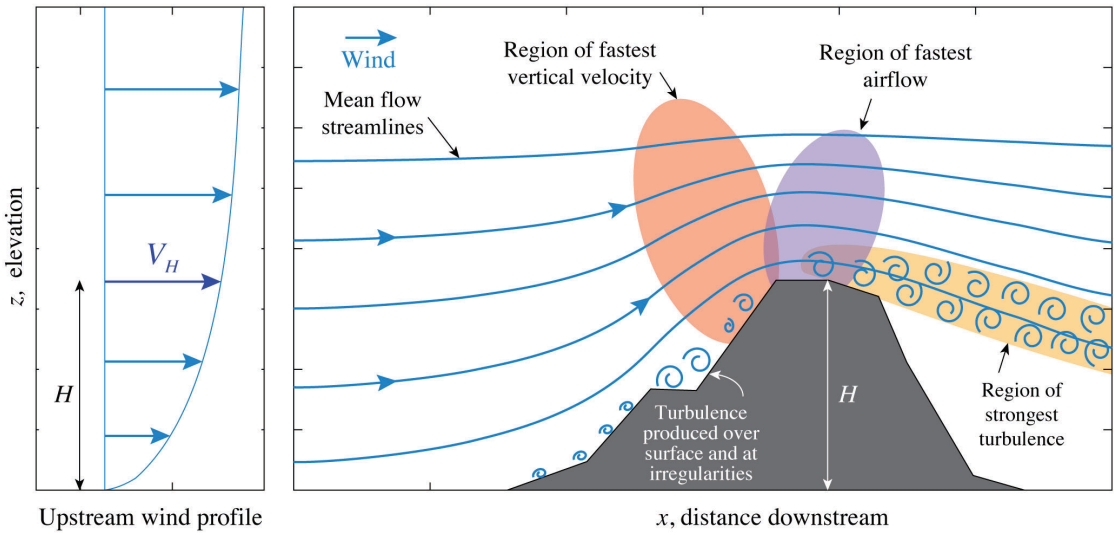


Figure 1: Sketch of the key aerodynamic features of flow over topography, based on academic literature (e.g. Jackson and Hunt, 1975), engineering codes (e.g. American Society of Civil Engineers, 2017) as well as soaring literature (e.g. Crawley and Schmanske, 1994; Pagen, 1992, 2001). The left-hand panel shows the definition of the reference velocity V_H, which is the velocity of the undisturbed flow at the elevation of the top of the topography.

1.1 Wind amplification over topography

The study of wind acceleration over topography received its formal foundation in the theoretical modeling work of Jackson and Hunt (1975); this and subsequent efforts are summarized in the review of Belcher and Hunt (1998). Although their quantitative predictions are limited to gentle hills (and are therefore inapplicable here), their qualitative analysis of the aerodynamics of complex terrain remains relevant even for steep topography, and is illustrated in figure 1. The airflow accelerates over the terrain, as the flow is essentially forced to move through a smaller area; this is associated with a contraction of the streamlines in figure 1 (here, streamlines are used to illustrate the time-averaged path of the airflow). The region of fastest airflow occurs at the top of the topography, where the distance between the streamlines is smallest; this region is shown by the purple shaded region in the figure. The region of fastest vertical velocity (which is of relevance to soaring activities) occurs at the front of the topography, and is highlighted by the orange region in the figure.

Over the front of the topography, the interaction between airflow and surface roughness (such as vegetation, structures, or uneven terrain) and with more significant irregularities (such as benches) produces turbulence. This turbulence is transported by the mean airflow, and therefore moves essentially along the streamlines. As a result, at the front of the topography, the turbulence remains confined to a relatively thin layer near the surface. At the top of the topography, this layer grows in thickness, forming a region of stronger turbulence that can separate from the topography and is transported downstream; this is represented by the yellow region in figure 1. This qualitative overview of the flow is consistent with experiments, field measurements, recent engineering standards, as well as with the literature on soaring, as described below.

Bowen and Lindley (1977) performed wind tunnel experiments that systematically investigated the effect of steep topography on airflow. They measured horizontal velocities around topographies with front slopes varying from 4:1 to a vertical cliff; some of their results are shown later in figure 3. Bowen and Lindley (1977) found that, for small slope angles, an increase in slope yields a

corresponding increase in the maximum velocity above the topography. However, once the slope angle is increased past approximately 2:1, the maximum flow velocity no longer increases significantly, and instead remains around 1.8 times the wind velocity upstream of the topography. Bowen (1980) later showed that, for the front and top regions of the topography, field measurements at full scale agreed closely with the wind tunnel experiments of Bowen and Lindley (1977). For the region behind the topography, differences between wind tunnel and field measurements were found for front slopes steeper than 1:1. Bowen and Lindley (1977) and Bowen (1980) found that surface-generated turbulence remained confined to the near-surface region over the front of the topography, as it was essentially transported by the mean flow. Several other laboratory and field measurements have also supported these findings (including Hauf and Neumann-Hauf, 1982; Lange et al., 2016; Liu et al., 2016).

Theoretical predictions of the airflow over steep topography are challenging. Bowen (1983) summarized available theories for the "outer" flow (which is unaffected by the turbulence), noting that theories perform poorly once the slope exceeds 2:1. This was also confirmed by Jensen (1983) and Glanville and Kwok (1997), who compared theory to field data and reduced-scale experiments. In addition, Bowen (1983) and Jensen (1983) discussed the difficult question of choosing approximate representations for complex topographies; these works inform our choices of approximate bluff profiles later in section 2. Overall, this review of past efforts suggests that, for topographies steeper than 2:1, it is best to rely on empirical or semi-empirical modeling approaches, rather than on theoretical analyses attempting to model the overall flow.

The results from wind tunnel experiments and field measurements reviewed above have been effectively implemented in engineering codes, such as ASCE 7-16, which provides semi-empirical relations for the maximum horizontal wind and gust velocities (American Society of Civil Engineers, 2017, p. 266; other engineering codes for flow over steep topography have been reviewed by Safaei Pirooz and Flay, 2018).

1.2 Vertical wind velocity over topography

To the best of our knowledge, current engineering codes do not provide relations for predicting vertical wind velocity at the front of steep topography; vertical wind velocities are rarely reported in experiments or field measurements.

In the soaring literature, a common approach for estimating vertical velocity over topography is to assume that the airflow is locally parallel to the surface (Crawley and Schmanske, 1994; Pagen, 1992). The vertical wind velocity is therefore obtained by multiplying a reference wind velocity V_{wind} by the sine of the slope angle α,

$$V_z = V_{\text{wind}} \sin \alpha. \tag{1}$$

This approach, involving equation 1, is used for example in the book by Pagen (1992) to prepare their figure 139 on p. 158, although this does not appear to be made explicit in their presentation.

If the reference wind velocity V_{wind} is based on the flow upstream of the topography, equation 1 underestimates the actual vertical velocity V_z, as it neglects flow amplification, which is significant near the top of the topography. To address this issue, Crawley and Schmanske (1994) proposed a semi-empirical expression accounting for amplification, based on wind tunnel experiments. They tuned their expression to estimate vertical velocity at an altitude $H/8$ above the topography (which has maximum elevation H; in their specific experiments, this corresponded to a soaring altitude of 150 ft above the surface). Their expression is

$$V_z = V_{\text{wind}} \frac{cH}{cH - z_{\text{topo}}(x)} \sin \alpha(x), \tag{2}$$

where H is the maximum elevation of the topography (see figure 1), $z_{\text{topo}}(x)$ is the local elevation of the topography at a horizontal coordinate x, $\alpha(x)$ is the local slope angle, and c is an empirical constant, which they estimate between 3.5 and 4.0. The predictions of equation 2 are compared to our analysis in section 2 below. A significant limitation of equation 2 is that it is intended to only provide predictions at a fixed altitude of $H/8$ above the slope, and cannot be used at other altitudes.

1.3 Effect of introducing horizontal sections (benches) in the topographic profile

Introducing a horizontal segment (a "bench") on the topography has two main effects. First, if the highest elevation of the topography is shifted downstream, the average slope angle will be effectively reduced. This will reduce the vertical velocity. Second, the bench may introduce turbulence, which is associated with flow separation and unsteadiness that occurs at the front of the bench, where the topography rapidly curves away from the incoming flow (figure 1). For small benches, a local region of recirculating flow may form, with the outer airflow effectively 'skipping' over the bench, and continuing to follow the topography at a higher elevation.

The only formal study of the effect of a significant bench appears to be the wind tunnel experiment of Zheng et al. (2018), who examined the effect of a large bench (of horizontal extent H/2) on a 1:1 slope. They measured flow velocities and turbulence at an altitude of $0.2H$ from the surface and above. Zheng et al. (2018) found that the bench had a negligible effect on flow amplification near the top of the topography. The turbulence generated over the bench followed the surface of the topography; for an altitude of more than $0.5H$ above the surface, there was no measurable increase in turbulence intensity. At $0.2H$ above the surface, a small increase in turbulence intensity was found, corresponding to an increase of approximately 4% in gust velocity. An increase in turbulence intensity was found close to the top surface of the topography (consistently with the sketch shown earlier in figure 1).

Although Zheng et al. (2018) appear to provide the only targeted investigation of the effect of benches, several studies have examined complex, realistic topographies featuring irregularities (e.g. Cuerva-Tejero et al., 2018; Glanville and Kwok, 1997); a common finding is that the turbulence generated over the surface does not significantly affect the outer flow on the front of the topography.

1.4 Connection to literature on soaring

As already noted above, the findings from the scientific and engineering literature are consistent with the qualitative discussions found in the soaring literature. Two key references are Pagen's books "The Art of Paragliding" and "Understanding the Sky" (Pagen, 1992, 2001). The regions highlighted in figure 1 match those discussed for example in figures 13-3, 13-6, 13-11, 13-12 and 13-13 of Pagen (2001). The region of strongest vertical velocity in figure 1 corresponds to the "soarable envelope", whereas the region of maximum velocity corresponds to Pagen's "Venturi area". In addition, figures 105, 106 and 115 of Pagen (1992) indicate that airflow above the slope can be largely unaffected by turbulence produced on the slope surface, consistently with the measurements summarized in the previous section.

2 Analysis

As noted earlier, theoretical models that attempt to describe the complete flow can be inaccurate for steep topographies. Civil engineering codes provide semi-empirical formulas for horizontal wind velocity, but do not appear to consider vertical wind velocities. For this reason, the analysis

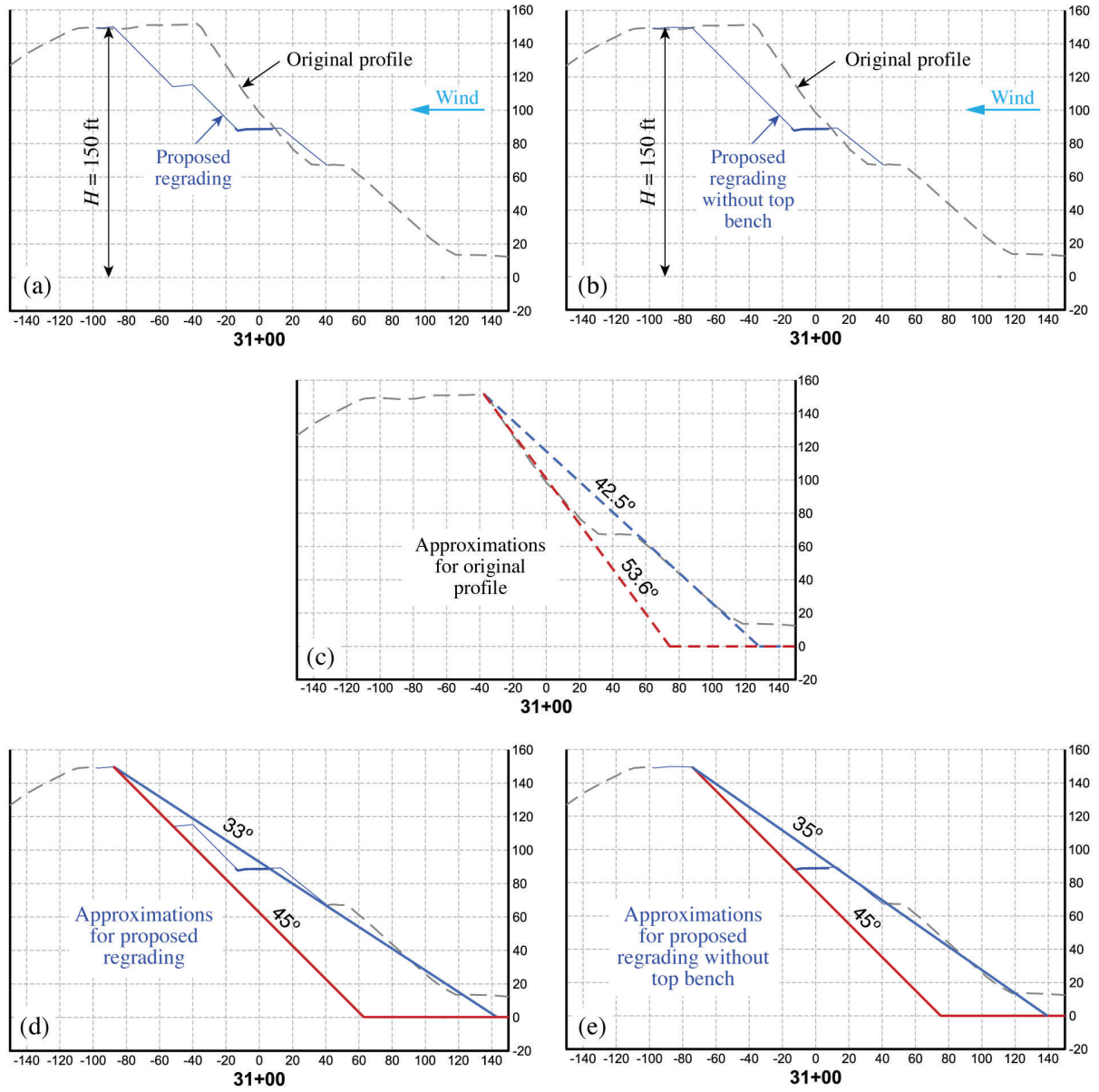


Figure 2: (a): comparison of original bluff profile and proposed regrading. (b): proposed regrading without top bench. (c) Approximations to the original profile, based on mean slope (blue) and near-top slope (red). (d): approximations for proposed regrading, and (e) approximations for proposed regrading without top bench.

presented here employs several semi-empirical approaches, relying also on the well-established data set of Bowen and Lindley (1977), who measured flow over topographies with different slope angles.

2.1 Approximate representations of the topography

The analysis is based on a representative two-dimensional section of the Rincon bluffs, shown in figure 2(a). To approximate the topography, two approaches are used and compared. The first approximation defines a mean slope, which joins the foot of the bluffs (where the topography rapidly departs from horizontal) to the top of the topography; this approach is consistent with

approximations used in the academic literature (e.g. Jensen, 1983), and is expected to approximate the airflow at an altitude larger than the lengthscale of the benches. This mean slope is shown by the blue lines in figure 2(c,d). The second approximation uses a slope based on the bluff shape near the top, where the maximum air velocity is expected. This approximation may be more representative of local flow conditions experienced very close to the ridge, and is shown by the red lines in figure 2(c,d). Quantities referring to the original bluffs and to the proposed regrading are represented using dashed and continuous lines, respectively. The slope angles associated with each approximation are shown in the figure.

An alternative proposed regrading was also considered, which essentially removed the bench closest to the top of the topography. This is sketched in figure 2(b,e), and only implies a change in the mean slope.

The analysis does not consider other effects, such as changes in vegetation patterns, and addition or removal of other structures. As noted earlier, the incoming wind direction is assumed perpendicular to the bluffs. A neutrally stratified atmosphere is assumed.

2.2 Wind amplification

To estimate wind amplification, the data of Bowen and Lindley (1977) for the wind amplification factor A_z are digitized. The quantity A_z is defined as the ratio between the wind speed measured at a point over the topography and the wind speed found upstream of the topography, at the same altitude (for example, a point 30 ft above the bluff is compared to an upstream point that is 30 ft above the ocean surface). Figure 3 shows maps of A_z for topographies ranging from a 2:1 slope to a vertical cliff. Lengths are normalized by the maximum elevation H of the topography. These maps of wind amplification are used to calculate vertical wind velocity in the next section.

2.3 Vertical wind velocity

To obtain a first estimate of the change in vertical velocity due to the regrading, we note that the wind amplification at a given elevation is not expected to change significantly after the regrading, since the mean slope remains significantly steeper than 2:1. Noting that the vertical velocity near the surface will be equal to the wind magnitude times $\sin(\alpha)$, the ratio of the vertical velocities before and after the regrading may be approximated as

$$\frac{V_w|_{\text{regrading}}}{V_w|_{\text{original}}} = \frac{\sin(\alpha_{\text{regrading}})}{\sin(\alpha_{\text{original}})}. \tag{3}$$

This expression can also be obtained from equation 2 (due to Crawley and Schmanske, 1994), as long as one compares slope locations with the same elevation. Using the slopes in figure 2, equation 3 implies a reduction in V_z between 12% and 20% for the proposed regrading, and a reduction between 12% and 15% for the regrading without the top bench. This simple prediction is expected to be reasonable at an altitude that is small compared to H (say, around $0.1\,H$, corresponding to approximately 15 ft).

To obtain an estimate of the change in V_z at greater altitudes, we return to the data set of Bowen and Lindley (1977). As noted in section 1, Bowen and Lindley (1977) did not measure vertical velocities; for this reason, we deduce the vertical velocity V_z from the horizontal velocity V_x over the topography, which is calculated from A_z. Since the time-averaged flow is exclusively in the $x-z$ plane, mass conservation implies $\frac{\partial V_x}{\partial x} + \frac{\partial V_z}{\partial z} = 0$ (e.g. Batchelor, 2000). We calculate $\frac{\partial V_x}{\partial x}$ and integrate the equation for mass conservation to find $V_z(z) = V_z(z_1) - \int_{z_1}^{z} \frac{\partial V_x}{\partial x}\, dz$, where z_1 is an

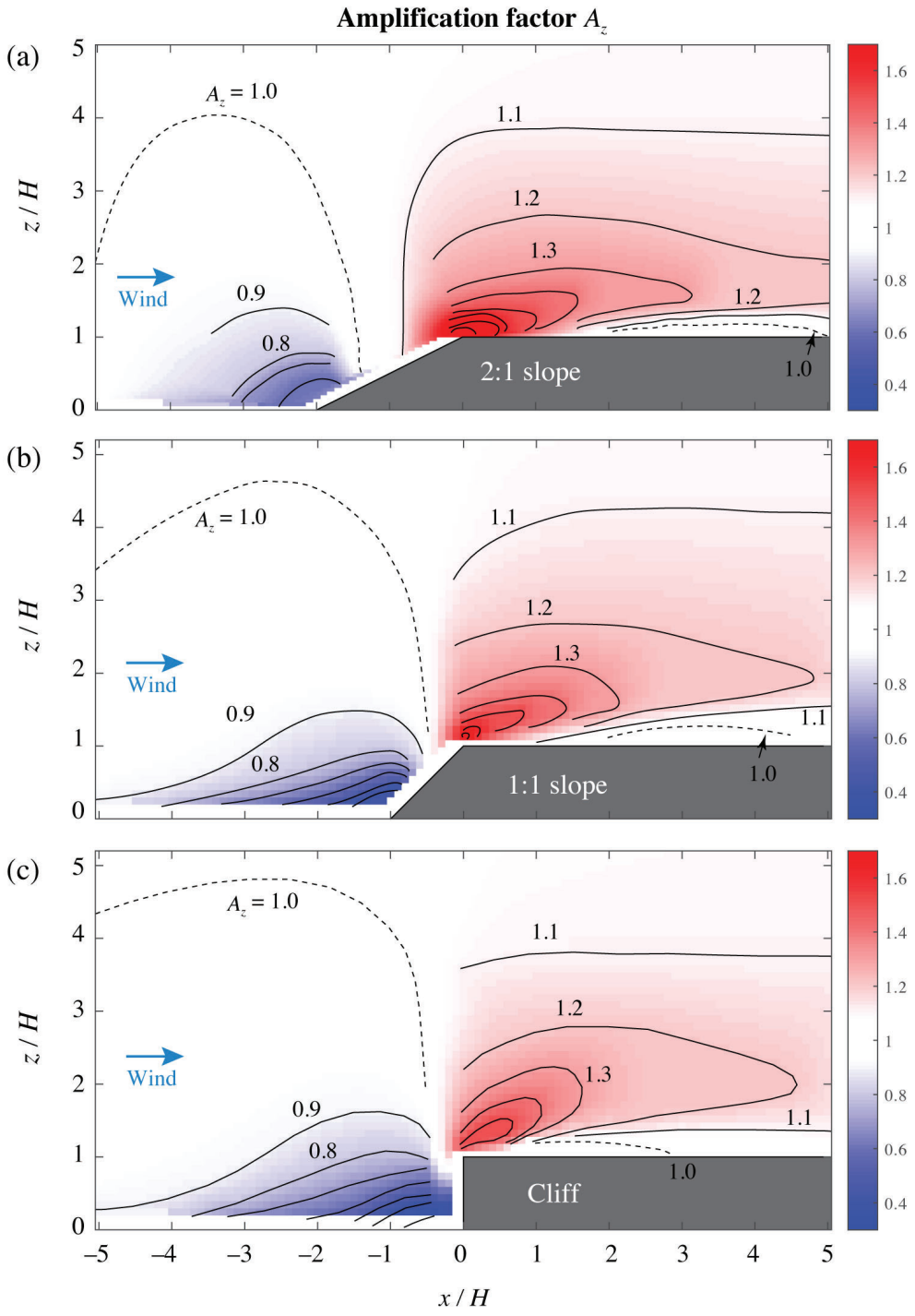


Figure 3: Acceleration of flow over slopes of varying steepness, for a given altitude, expressed by the amplification factor A_z, such that $A_z > 1$ represents accelerated flow relative to the undisturbed conditions upstream. Contours are shown at intervals of 0.1. The $A_z = 1.0$ contours are shown by dotted lines. Each panel shows: (a) 2:1 slope, (b) 1:1 slope, and (c) a vertical bluff. Data adapted from the wind tunnel experiments of Bowen and Lindley (1977).

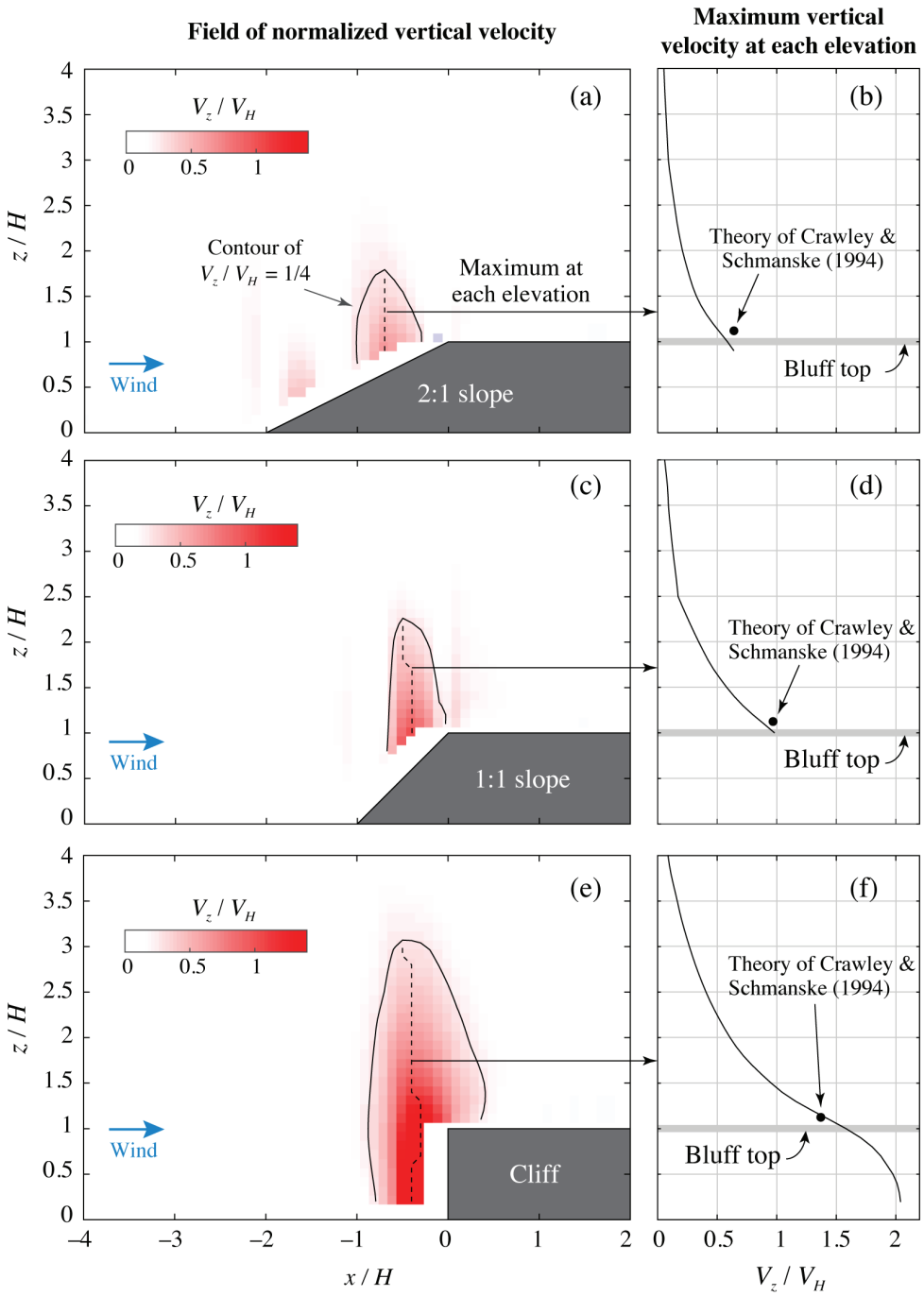


Figure 4: Vertical wind velocities over slopes of varying steepness, deduced from the wind tunnel experiments of Bowen and Lindley (1977). The theory of Crawley and Schmanske (1994) (corresponding to equation 2, valid only for $z/H = 1.125$) is shown for comparison.

elevation at which $V_z(z_1)$ is known; we take $z_1 = 5.5H$, where the vertical flow is small compared to the vertical velocities induced near the topography, such that $V_z(z_1) \simeq 0$.

The calculated vertical velocities V_z for each of the experiments of Bowen and Lindley (1977) are shown in figure 4. The left-hand panels show fields of vertical velocity over each topography, normalized by V_H, which is the wind velocity of the upstream flow at an elevation $z = H$ (se

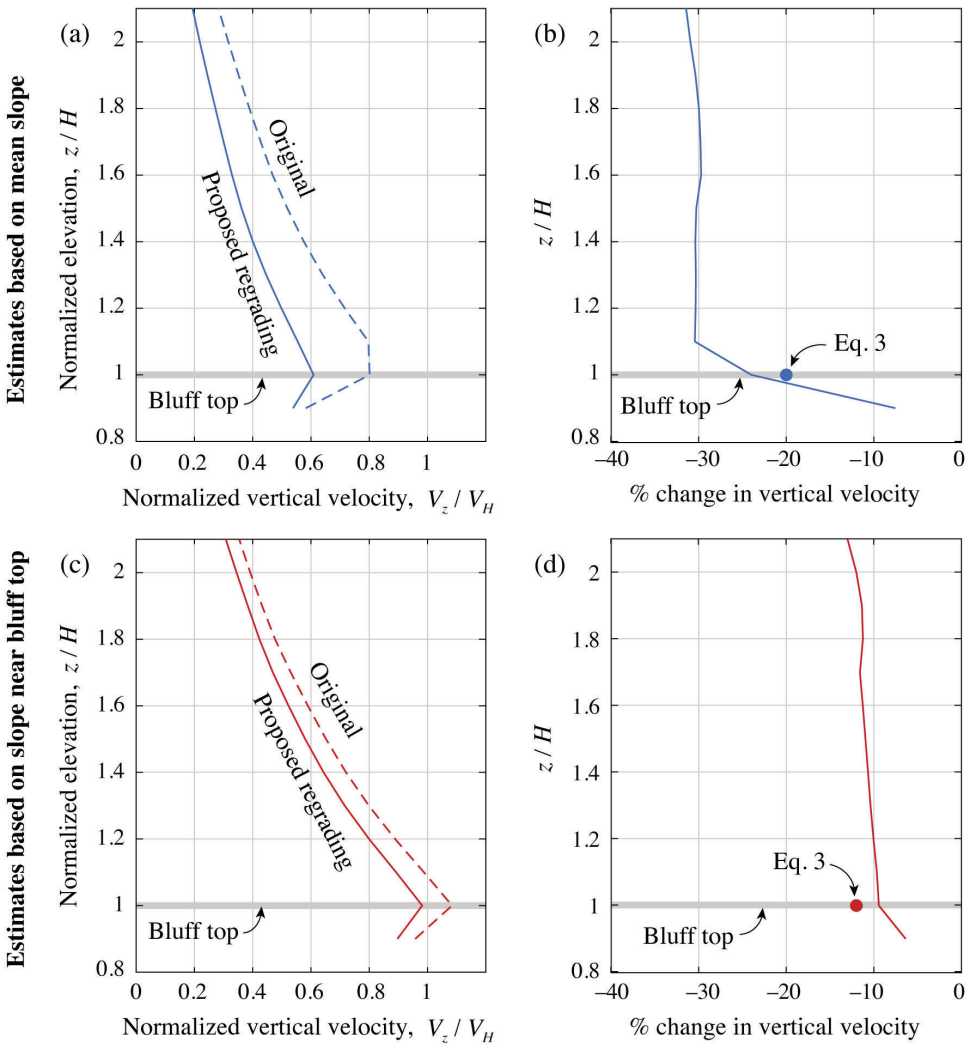


Figure 5: Change in vertical velocity associated with the proposed regrading. (a) and (c) show estimated vertical velocities, whereas (b) and (d) show percentage changes. The top two panels (a) and (b) use the mean slope, whereas the bottom two panels (c) and (d) use the maximum slope near the bluff top. The circles in (b) and (d) show the prediction of the simple approximation in equation 3, which is valid close to the slope surface.

figure 1). The contour corresponding to the arbitrary value $V_z = V_H/4$ is drawn to convey the extent of the region where uplift is experienced (uplift is experienced also outside of this region, although with lower intensity). Within this contour, the line showing the x-location of highest vertical velocity at each z is shown by by a dashed line. The vertical velocity along this line is plotted in the right-hand panels. As a check on our calculation, we compared our calculated V_z for the 2:1 slope with the wind tunnel data of Liu et al. (2016), who measured V_z at selected locations over a similar topography, finding consistent predictions. We also compare our results with the theory of Crawley and Schmanske (1994), which predicts V_z only at an altitude of $H/8$ above the slope, finding good agreement for this altitude, as shown in the right-hand panels of figure 4.

To predict V_z for the slopes relevant to the Rincon bluffs, we interpolate the horizontal velocities of Bowen and Lindley (1977) with respect to slope angle, thereby obtaining approximate horizontal velocities for the slopes shown earlier in figure 2. We then use the same approach described above to

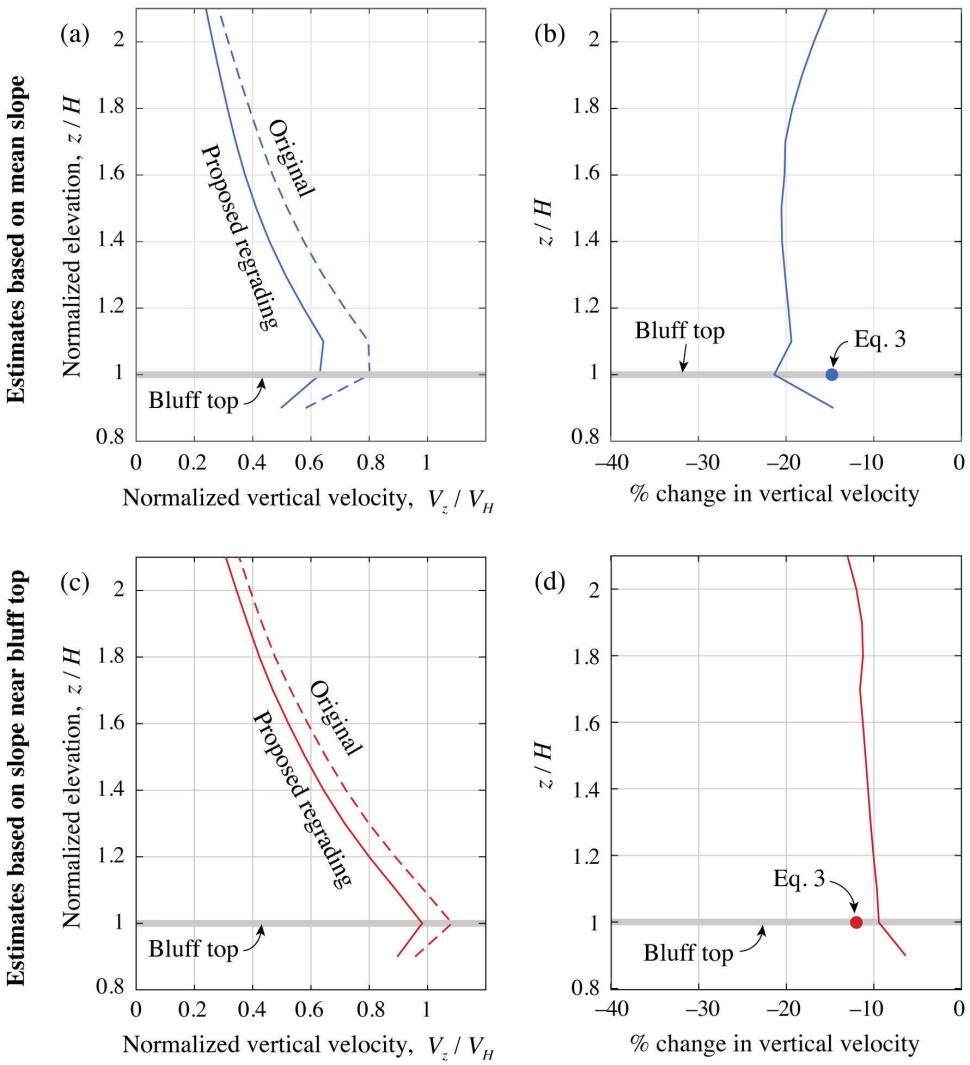


Figure 6: Change in vertical velocity associated with the proposed regrading, for the case involving one fewer bench near the bluff top. (a) and (c) show estimated vertical velocities, whereas (b) and (d) show percentage changes. The top two panels (a) and (b) use the mean slope, whereas the bottom two panels (c) and (d) use the maximum slope near the bluff top. The circles in (b) and (d) show the prediction of the simple approximation in equation 3, which is valid close to the slope surface.

deduce vertical velocities V_z. The maximum vertical velocities at each z are shown in the left-hand panels of figure 5, for both the original bluff and the proposed regrading. The right-hand panels show the percentage change at each z. The analysis based on the mean slope predicts that the vertical velocity will be reduced by approximately 30%, whereas the analysis based on the near-top slope predicts a reduction of around 10%. Panels (b) and (d) also show the simple prediction from equation 3; since this result is valid only close to the slope surface, we display it using circles placed at the bluff top.

For the regrading that involves one fewer bench, the mean slope increases relative to the initially proposed regrading, which brings the predicted reduction in V_z to around 20%, as shown in panel (d) of figure 6. For completeness, predictions for the near-top slope analysis are also reported, although they are the same as in figure 5.

2.4 Effect of introducing horizontal sections (benches) in the topographic profile

As discussed earlier in section 1.3, the introduction of a bench through regrading implies a reduction in the mean slope, and therefore a reduction in vertical velocity; this effect is already accounted for in the mean-slope analysis in section 2.3. To estimate the additional turbulence introduced by the bench, we refer to the wind-tunnel study of Zheng et al. (2018); accoordingly, one may expect that introducing a bench would result in increase in turbulence of the order of 5% at an altitude of around $0.2\,H$ above the topography, corresponding to an altitude of approximately 30 ft above the Rincon bluffs. Based on the data of Zheng et al. (2018), this additional turbulence is expected to become negligible by an altitude of $0.5\,H$ above the topography, corresponding to approximately 75 ft above the Rincon bluffs. Turbulence on the top surface of the bluffs (in the high-turbulence region highlighted in figure 1) is likely to be increased more significantly.

3 Conclusions

Based on a review of the scientific, engineering and soaring literature, the change in vertical airflow associated with a proposed regrading of the Rincon bluffs has been estimated. The approach used simplified slope profiles, together with a re-analysis of published experimental data for slopes of various angles. It is estimated that the proposed regrading would reduce the vertical airflow velocity by 10% to 30% relative to current conditions; for altitudes relevant to soaring activities, the reduction is expected to be closer to 30%. An alternative proposed regrading, involving one fewer bench near the bluff top, would reduce the airflow velocity by 10% to 20%. Based on available experimental results, the introduction of a bench is expected to provide a small increase in turbulence (of the order of 5%) at an altitude of 30 ft above the front of the bluffs, becoming negligible by an altitude of approximately 75 ft.

Disclaimer

The aerodynamics of wind over complex topography are the subject of ongoing research, and no standard engineering approach exists for the calculations reported here. While every effort has been made to ensure accuracy of the predictions, within the constraints associated with the assumptions and methodologies used, no warranties are made or implied with regards to the predictions obtained from this study.

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List of Figures

Appendix J

Transportation Memorandum

February 18, 2021

John Ilasin, Public Works Director/City Engineer
City of Carpinteria
Public Works Department
5775 Carpinteria Avenue
Carpinteria, CA 93013

Re: Evaluation of Rincon Multi-Use Trail Preliminary Design

Dear Mr. Ilasin,

I have completed my review of the Rincon Multi-Use Trail Project plans. The City asked that I review the preliminary plans with regards to potential conflicts between the trail termini and adjacent roadway or parking areas. I reviewed sheets 10, 21, and 37-39 that show layout, signage, and delineation. My comments are as follows:

1. The termination of the trailhead at the Rincon Park parking area cul-de-sac does not appear to be a conflict between bicyclists and motorists. This is a slow speed and mixed vehicle environment, and the vehicle types should mix safely. Many State and County parks along the coast have this type of interaction (i.e. Refugio State Beach).

2. I have a concern about a driver of a motor vehicle believing they can drive on the trail from the parking lot since the entrance to the trail is fairly wide. Although there is going to be a “No Motor Vehicles” sign I would recommend adding a 4’ edgeline around the cul-de-sac to help deter movement onto the trail.

3. The project should consider installing guide signs that indicates where the trail goes or what the name of the trail is for improved user experience. This is extremely helpful for out-of-town tourists.

4. There are more striping details on the detail sheet than the delineation plan such as the hatching, stop legend, and stop bar. These should be added to the delineation plans so the contractor has installation notes and it is clear what they are bidding on and installing.

5. There may end up being a parking issue with the other end of the trail at Carpinteria Ave. Because the trail comes out near the intersection with Hwy 150, there is no place for trail users to park and get directly to the trail. Consider moving the terminus of the trail so that it connects at the cul-de-sac. This would provide more parking for trail users.

Let me know if you have any questions.

Sincerely,

Thomas Mericle, PE, TE
Traffic Engineering
Municipal Services
Interwest Consulting Group, Inc.

Appendix K

County Connector Trail Proposal – Rincon Park Project Components Study

November 19, 2020

County Connector Trail Proposal – Rincon Park Project Components Study:

County of Santa Barbara, California

To Whom It May Concern,

Bengal Engineering is pleased to present this proposal to provide component feasibility associated with the County Connector Trail – Rincon Park Project.

The trail is proposed to run through/near Rincon Park, to the existing Bike Path at Bates Road and Highway 101. We understand a safe route through the County's Rincon Park is of importance. We also understand the engineering challenges involved in investigating the design.

The attached project scope was developed based on discussions during meetings held on 29 September, 1 October, and 5 November with County and SBCAG officials.

Regards,

Scott Onishuk, P.E.

Bengal Engineering

Scope of Work:

Project Administration

This item provides budget for Bengal's internal project administration along with some effort to coordinate with others.

Project Components:

Bengal will investigate project components and determine their feasibility – Components are broken up into West-End and East-End components.

Exhibit 1: various alignments to be studied

West-End Components

This is a new option, based on November 5 meeting:

Project will investigate using 2 trail connections simultaneously—for two different types of users:

1. "Yellow line" trail on ocean side of parking lot for recreational users stopping at park
2. "Orange line" trail on freeway side of parking lot: for "pass though" users

Components of Ocean Side Recreational User Segment

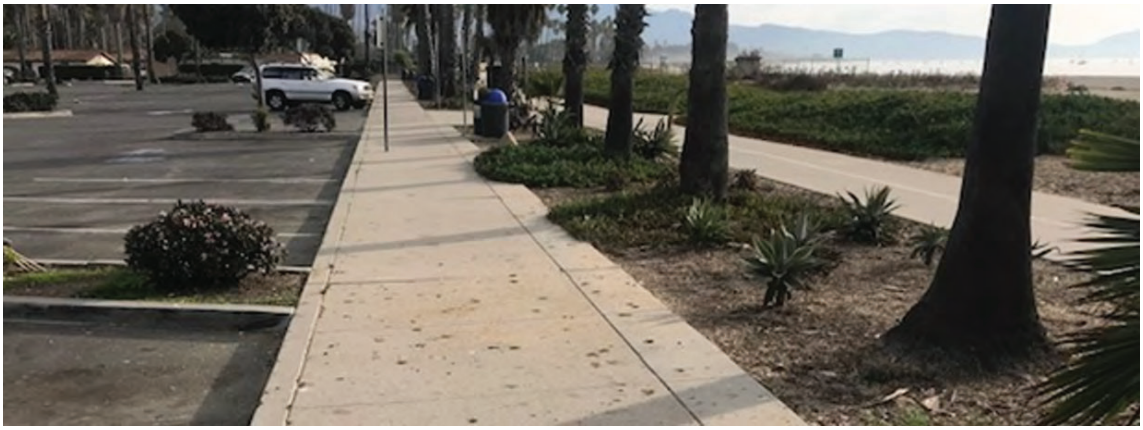

Photo 1: Example provided by Jeff Lindgren: Cabrillo Blvd. Application at Rincon Park would allow recreational users to stop in the park:
Note: sidewalk adjacent to parking lot and separate beach way trail on ocean side of planter

The trail will be 8-feet wide with two 2-foot wide shoulders for a total paved width of 12-feet; this compares to the 16-foot paved width for the rest of the trail to the west. This is a "mixed use path" not a dedicated Class 1 bike path.

On the ocean side of the parked cars, a 5-foot wide sidewalk and a planter strip will separate the mixed-use trail. Because the park is small, the planter strip will likely be narrow: 6 to 8-feet wide is envisioned.

Photo 2: Rincon County Park, looking east from west end of parking lot

Note:

- "yellow line" multi-user path, on a new alignment will replace winding sidewalk in park
- A new raised sidewalk will replace bioswale

Photo 3: Rincon County Park, looking near restroom; note sewer lift station. This area will likely be a "pinch point". Current restroom appears be a potential conflict. Parking may be affected here too.

Photo 4: looking West from Rest Room

Parking Lot Configuration

The project design will preserve parking to the extent possible.

- Preserve head-in parking stall geometry (90-degree stalls): Parking lot will remain generally unchanged to preserve parking spaces and minimize loss of Park space.

- As previously mentioned, behind the cars (on freeway side) separate vehicle drive aisle, between parking lot and trail, using S.B. harbor chain fencing concept.

- Provide new sidewalk adjacent to parking stalls.
- Provide concept to replace the open bioswale and gravel-filled pavers that exist west of the restrooms with current generation permeable pavers or permeable pavement.

Photo 5: "orange line" on freeway side of parking lot: looking east; location of possible "pass-through alignment".

On Freeway side of parking lot, a "pass through" alignment could be provided for users who will not likely stop in the park. Room for this trail will be created by regrading the cut-slope, shifting the toe-of-slope back toward the freeway. Use of a retaining wall to support the cut slope was discussed, but considering 1) the amount of grading which is already required for the project, 2) the opportunity to remove more of the old bridge piers which are buried inside the slope, and 3) the chance to provide a vegetated slope to reduce erosion, the regrading option seems a cheaper and better solution.

This trail will include two 4-foot wide travel lanes, a 2-foot wide paved shoulder on the freeway side and a 3-foot wide paved shoulder on the ocean side (adjacent to the chain-and-post) barrier) for a total paved width of 13-feet.

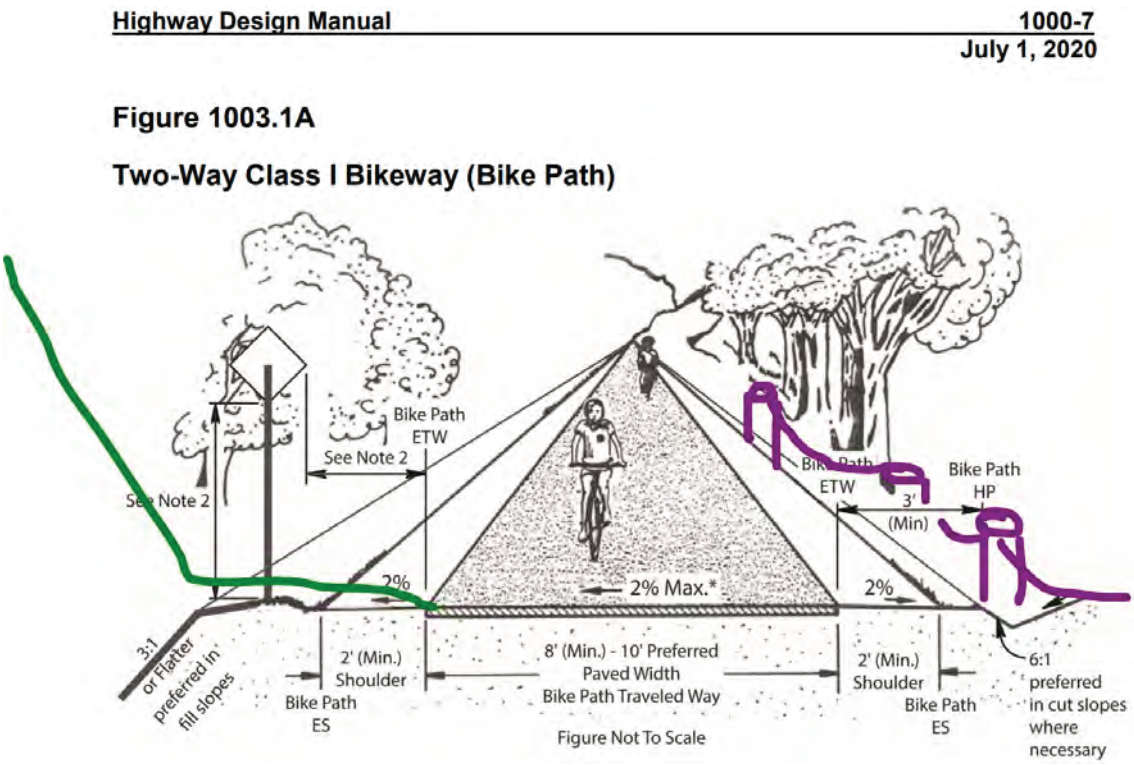

Exhibit 2: Typical Cross section from Caltrans Highway Design Manual with some items of interest for 'Orange Line' alignment.

Photo 6: Santa Barbara Harbor: Chain-and-post barrier concept for use at Rincon County Park

The chain-and-post barrier will require a width on the ocean side of 5-feet (2-feet for the barrier and 3-foot buffer on ocean / traffic side).

Exhibit 1: various alignments to be studied

East-End Components

1. “Pink line” trail, beginning east of sewer lift station, running along southbound off-ramp terminating at Bates Road.

2. “Green line” trail, beginning east of sewer lift station, running outside of the existing parking lot. Trail to terminate at Bates Road.

3. New component, based on 5 November meeting: provide a crossing across the parking lot to the ocean side “yellow line” east of the sewer lift station.

Photo 7: "Green line" alignment will pass along the mountain side of the parking lot

This view is looking easterly

Photo 8: "Green line" alignment looking westerly. Note utility pole and guy wires will be impacted. Sewer lift station is highlighted by yellow circle.

Photo 9: "Pink Line" alignment looking westerly.

Photo 10: Looking easterly from proposed end of "Pink Line" alignment

Deliverable:

1. Draft Project Component Memo - Bengal will provide a summation of the components as noted above. Memo will highlight “pros-and-cons”.
2. Draft Cost Estimates for each alignment
3. Support for a Project Study Workshop – Bengal will create exhibits necessary to present the components for discussion by the project team: Bengal will document the decisions made in the workshop for use in the next item.
4. Using the Project Component Memo and the comments from the workshop, we will create a Preferred Project Component Memo to document the team’s decisions for future use.
5. Updated Cost Estimates: The draft cost estimates provided at the project study workshop will be updated to accommodate the components included in the Preferred Project Component Memo.

Fee:

Bengal Engineering has provided a not-to-exceed budget shown on the attached spreadsheet.

Assumptions/Exclusions:

1. This project will develop planning-level concept plans for future design and consideration provided by the limited budget shown in the Fee Estimate.
2. Because of budget restrictions, we will not be able to include much detail of the areas which will require more engineering effort; specifically the termini of the alignments and the intersection of Bates Road.
3. The concept designs for the alignments will focus on grading, rather than using retaining walls. No walls will be investigated.
4. No subsurface exploration or laboratory testing will be performed.
5. Budget for survey is rough, fill-in topo for planning purposes. This does not include details such as the trees.
6. We assume stakeholders will participate proactively in the project.
7. We assume that the project will proceed uninterrupted.

Appendix L

Tribal Cultural Resources – CONFIDENTIAL