UNIVERSITY OF CALIFORNIA, SANTA CRUZ

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BUSINESS AND ADMINISTRATIVE SERVICES SANTA CRUZ, CALIFORNIA 95064

May 20, 2014

CALTRANS
Division of Local Assistance, MS 1
P.O. Box 942874
Sacramento, CA 94274-0001

Dear CALTRANS:

Re: Active Transportation Program Cycle 1 Grant Submittal:
UCSC Great Meadow Bike Path Safety Improvement Project.
Grant Request: $383,000 Local Match: $50,000
Total Project Cost: $433,000

Dear CALTRANS:

The Regents of the University of California are pleased to submit an application for the Active Transportation Program Cycle 1 grant funding cycle (FY 14-15/FY 15-16) for the ***Great Meadow Bike Path Safety Improvement Project.*** UCSC is requesting a total of $383,000 in grant funds to be matched by $50,000 in campus funds for a project total of $433,000.

The Great Meadow Bike Path is a Class I bike path connecting the main entrance of campus to the central core of campus. This bike path traverses a one-mile length of beautiful meadow overlooking the Monterey Bay, but includes a 5% grade where cyclists can reach speeds up to 35-40 mph at times. The project proposes to realign and re-grade the bike path and realign the vehicle crossing in this section. The combination of the proposed intersection improvements and the bicycle path grade changes and realignment will greatly increase the sight distance for both cyclists traveling downhill and vehicles entering the intersection. Cyclists will also have better control of their speed and bicycle as they approach this intersection due to a longer, smoother curve. Reconstruction of this section of the bike path is a public safety improvement priority. The campus needs to make these improvements in order to reduce the number of bicycle related accidents, injuries and fatalities.

With these improvements, educational, employment and cultural opportunities will become more accessible to the members of our campus and local bicycle community. While UCSC recognizes the need for these improvements, the recent state of California's budget has left little campus funding for these improvements in the past and near future. Active Transportation Program funding would make a significant contribution to improving this major and necessary bicycle facility at the UC Santa Cruz campus.

University of California policies do not require a resolution of the governing body for this project. As the Vice Chancellor of Business and Administrative Services, I am authorized to negotiate and execute all documents which may be necessary for the completion of this project, and can certify that the university will make adequate provisions for the operation and maintenance of these projects.

We will be glad to provide any additional information you may need to expedite your favorable consideration. You may contact TAPS Director Larry Pageler or Senior Transportation Planner Teresa Buika at (831) 459-2190.

Sincerely,

Sarah C. Latham
Vice Chancellor
Business and Administrative Services

Enclosures

cc: Senior Transportation Planner Teresa Buika, UCSC Transportation and Parking Services
Director Kate Aja, UCSC Office of Sponsored Projects
Facilities Planner Erin Fitzgibbons, UCSC Capital Planning and Space Management
Business and Finance Manager Allison Johnson, UCSC Risk and Safety Services
Director Larry Pageler, UCSC Transportation and Parking Services
Associate Vice Chancellor, Jean Marie Scott, Risk and Safety Services

ACTIVE TRANSPORTATION PROGRAM

UCSC Great Meadow
Bike Path Safety Improvement Project
Project Application

SUBMITTED BY:
REGENTS OF UNIVERSITY OF CALIFORNIA, SANTA CRUZ CAMPUS
Transportation and Parking Services
1156 High Street
Santa Cruz, CA 95064

May 21, 2014

Table of Contents

I. GENERAL INFORMATION

Project name: UCSC Great Meadow Bike Path Safety Improvement Project

(fill out all of the fields below)

1. APPLICANT (Agency name, address and zip code)	2. PROJECT FUNDING
Regents of the University of California, Santa Cruz Transportation and Parking Services - TAPS Carriage House 1156 High Street, Santa Cruz, CA 95064MS	ATP funds Requested $ 383,000.00 Matching Funds (If Applicable) $ 50,000.00 Other Project funds $
3. APPLICANT CONTACT (Name, title, e-mail, phone #) Larry Pageler, Director of Transportation and Parking Services pageler@ucsc.edu 831-502-7940	TOTAL PROJECT COST $ 433,000.00
4. APPLICANT CONTACT (Address & zip code) Transportation and Parking Services - TAPS Carriage House 1156 High Street, Santa Cruz, CA 95064MS	5. PROJECT COUNTY(IES): Santa Cruz, CA
6. CALTRANS DISTRICT #- Click Drop down menu below District 5	7. Application # 1 of 1 (in order of agency priority)

Area Description:

8. Large Metropolitan Planning Organization (MPO)- Select your" MPO" or "Other" from the drop down menu>	Other
9. If "Other" was selected for #8- select your MPO or RTPA from the drop down menu>	AMBAG
10. Urbanized Area (UZA) population (pop.)- Select your UZA pop. from drop down menu>	Within a Large MPO (Pop > 200,000)

Master Agreements (MAs):

11. ☒ Yes, the applicant has a FEDERAL MA with Caltrans. 05-6171R
12. ☒ Yes, the applicant has a STATE MA with Caltrans. 00081S

13. If the applicant does not have an MA. Do you meet the Master Agreement requirements? Yes ☐ No ☐
The Applicant MUST be able to enter into MAs with Caltrans

Partner Information:

14. Partner Name*:	15. Partner Type
16. Contact Information (Name, phone # & e-mail)	17. Contact Address & zip code

☐ Click here if the project has more than one partner; attach the remaining partner information on a separate page

*If another entity agrees to assume responsibility for the ongoing operations and maintenance of the facility, documentation of the agreement must be submitted with the application, and a copy of the Memorandum of Understanding or Interagency Agreement between the parties must be submitted with the request for allocation.

Project Type: (Select only one)

18. Infrastructure (IF) ☒ 19. Non-Infrastructure (NI) ☐ 20. Combined (IF & NI) ☐

Project name: UCSC Great Meadow Bike Path Safety Improvement Project

I. GENERAL INFORMATION-continued

Sub-Project Type (Select all that apply)

21. ☐ Develop a Plan in a Disadvantaged Community (select the type(s) of plan(s) to be developed)
☐ Bicycle Plan ☐ Safe Routes to School Plan ☐ Pedestrian Plan
☐ Active Transportation Plan

(If applying for an Active Transportation Plan- check any of the following plans that your agency already has):
☐ Bike plan ☐ Pedestrian plan ☐ Safe Routes to School plan ☐ ATP plan

22. ☒ Bicycle and/or Pedestrian infrastructure
Bicycle only: ☒ Class I ☐ Class II ☐ Class III
Ped/Other: ☐ Sidewalk ☐ Crossing Improvement ☐ Multi-use facility

Other:

23. ☐ Non-Infrastructure (Non SRTS)

24. ☐ Recreational Trails*- ☐ Trail ☐ Acquisition

***Please see additional Recreational Trails instructions before proceeding**

25. ☐ Safe routes to school- ☐ Infrastructure ☐ Non-Infrastructure

If SRTS is selected, provide the following information

26. SCHOOL NAME & ADDRESS:
27. SCHOOL DISTRICT NAME & ADDRESS:

28. County-District-School Code (CDS)	29. Total Student Enrollment	30. Percentage of students eligible for free or reduced meal programs **
31. Percentage of students that currently walk or bike to school	32. Approximate # of students living along school route proposed for improvement	33. Project distance from primary or middle school

**Refer to the California Department of Education website: http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp

☐ Click here if the project involves more than one school; attach the remaining school information including school official signature and person to contact, if different, on a separate page

II. PROJECT INFORMATION

1. **Project Location** University of California, Santa Cruz (UCSC) campus, Santa Cruz, CA
   Great Meadow Class I Bike Path intersection with Village Road
2. **Project Coordinates** Latitude W122.05606 (Decimal degrees) Longitude N36.98556 degrees (Decimal degrees)

3. **Project Description**

The University of California, Santa Cruz campus occupies 2,000 acres of hilly terrain in the Santa Cruz Mountains. Buildings are usually fairly small (most under two-stories) and are scattered throughout the upper campus area, sited in the redwood forests. Separating the Main Entrance to the campus at Bay/High Streets and the core of campus is the Great Meadow. The Great Meadow Class I Bike Path on the UCSC campus was built in 1974 and is arguably one of the most beautiful bike paths, overlooking the Monterey Bay, used by both commuters to campus and recreational riders. It is approximately one mile long allowing cyclists a very pleasant route away from cars and transit buses to travel from the campus entrance to the core of the campus; however, the path also traverses a 5-7% grade through its entirety causing cyclists to reach speeds up to 40mph in the downhill direction. From bike counts, we know that approximately 1,000 cyclists per day use this bike path which is significant given the grades involved. While the construction of this path is much past its useful life having never been completely updated, this project proposes to make much needed safety improvements to the Great Meadow Bike Path where it intersects with the Village Road. Please see campus map and site diagrams attached.

The bike path above the Center for Agriculture and Sustainable Food Systems (CASFS) teaching Farm is split into unidirectional paths, uphill and downhill. At the Village Road crossing however, the two directional paths join into one bidirectional path. (Please see diagram) Just before a downhill cyclist reaches the Village Road crossing, there is a dip in the bike path terrain, creating very poor sight lines for both the cyclist and vehicles to see each other. As the CASFS Farm has grown over the years and has become a destination for school groups and visitors, more and more vehicles, including school buses, cross the bike path daily creating a significant hazard. In addition, a new proposal to construct the campus' recycling/compost yard just above the Farm is underway. The only way to access this site would be for heavy-duty vehicles to cross the Class I bike path on Village Road.

The combination of the speed of downhill cyclists merging into a bi-directional path with an increasing number of vehicles crossing the path on Village Road requires the reconstruction and realignment of the bike path approach at this point and the "squaring up" of the Bike Path/Village Road intersection for better sight lines and increased safety.

In addition, the current configuration of the downhill bike path just above this intersection also includes a tighter, 300-radius curve into the aforementioned "dip" in the terrain. As technology has improved and made bicycles lighter and more efficient, bicycles have the ability to reach greater speeds. This technological advancement along with the terrain and current configuration of the bike path has caused many cyclists to lose control in this curve area. In recent years, many serious injury accidents have occurred in this section of the bike path, including one death from fatal injuries on site. The proposed safety improvements will address this issue as well by reconfiguring this section of the bike path to a 500-radius curve and filling in the "dip" to allow not only better sight lines as a cyclist approaches the intersection, but will allow a cyclist to maintain much better control to avoid accidents. This project will bring this older bicycle facility up to current Caltrans code.

Scope of Work

This project proposes to realign the downhill bike path above the intersection by shifting it 40 feet to the southwest at the intersection with Village Road. The roadway will also be reconfigured so that intersection is "squared up" to improve sight lines and overall safety. This realignment will increase the downhill cyclists' stopping sight distance and will improve the sight distance for vehicles crossing the path. It will also allow vehicles entering the intersection from the north and south to stop at right angles and at a fairly level surface to the bicycle path. The intersection will feature stop signs and be striped with stop bars in both directions and will also have bicycle crossing warning signs.

Along with the improved intersection geometrics, the "dip" in the downhill bicycle path will be eliminated, and the reconstructed bicycle path will have a larger, 500-radius curve. The combination of the intersection improvements and the bicycle path grade changes and realignment will greatly increase the sight distance for both cyclists traveling downhill and vehicles entering the intersection. Cyclists will also have better control of their speed and bicycle as they approach this intersection due to a longer, smoother curve. Both the

downhill and uphill bicycle paths will post warning signs of the upcoming intersection and vehicle crossing.

Lastly, the bike path will be reconfigured to have separated directional paths at and just below (south) of the Village Road crossing allowing downhill cyclists, in particular, more time to merge safely into the bidirectional path. Downhill cyclists will be able to focus on safely crossing the intersection and then focus on the merge, rather than having the challenge of doing all that at once, sometimes at high speeds.

Improvements to the bicycle path will consist of the removal of approximately 10,000 square feet of existing bicycle path pavement and the construction of 10,000 square feet of new bicycle path pavement and 7,000 square feet of roadway/intersection pavement. Additionally, there will be some cut and fill earthwork involved with the bicycle path realignment. Unidirectional bicycle paths will be paved to 7 feet wide and two-way bicycle paths will be paved to a minimum of 12 feet wide.

4. **Project Status**
   - Conceptual designs for this project have been completed.
   - CEQA/NEPA review of this project will take place in the PS&E phase of the project. The CEQA/NEPA review is not expected to be a lengthy process.
   - UCSC owns the right-of-way for the entire project area.
   - Construction is planned for Summer, 2015 with completion by December, 2015.

III. SCREENING CRITERIA

1. **Demonstrated Needs of the Applicant**

The purpose of the proposed improvement is meant to address the known safety issues in this area of the Great Meadow bike path and to prevent future ones, especially as vehicles crossing the bike path are expected to continue to increase with future use of this campus area. Our main goal is to maintain and improve the safety of the main bike path so we can continue to provide safe bike

access to the campus and encourage more campus affiliates and visitors the opportunity to ride their bikes to campus rather than driving their personal autos.

Despite the steep 5-7% grade between downtown Santa Cruz and the core of the main campus, bicycling has become a very popular means of travel to, from, and around the campus. Bike commuting has steadily risen in recent years to now account for approximately 4% of all passenger trips to campus with over 1,000 cyclists regularly ride the Great Meadow Bike Path each day as noted in recent bike counts. (See attached Bike Count chart.) The campus has responded to this increase in bike commuting by hiring a part time Bicycle Coordinator; providing additional bike rack spaces; initiating a bike locker program in 2013; hosting a student bike lending library; and increasing the capacity of our innovative Bike Shuttle program bringing bike commuters up the steep hill so they have their bikes to travel on campus and home again. Through the local Transportation Management Association, the campus also provides no-interest loans for bicycles and related commuting equipment (racks, panniers, fenders, and safety oriented products) allowing affordable means to obtain a better quality bike. TAPS also provides a variety of bike safety classes, bike helmet and bike light giveaway programs, and participates in other campus safety events to educate the campus population on safe cycling measures.

However, while cycling has grown on campus, many significant accidents in the project area of the bike path have also occurred, including one recent fatality. In the last seven years (2006 – 2014), a total of 39 accidents have occurred in this general area of the bike path. Six (6) of these, including one with fatal injuries, were major injury accidents requiring airlift evacuation; 23 additional accidents incurred moderate injuries requiring ambulance evacuation. (Please see accident data attached.)

The campus has been aware of and actively planning for improvements to the Great Meadow Bike Path over the last few years, but funding especially has been an issue. The University, like all other public agencies, has experienced significant funding cuts during the recent economic downturn. In addition, the Transportation and Parking

Services Department at UCSC does not receive any state funding by statute and thus has very limited funds to put towards facility construction projects. While the entire bike path needs to be reconstructed due to its age, this section of the pathway is in greatest need of repair and realignment to greatly reduce known safety hazards. Of course, it is incumbent upon each cyclist to ride responsibly, but by constructing facilities up to current code and with fewer sight line and terrain issues would go a long way in improving overall facility safety.

UCSC Transportation and Parking Services has been very active and successful in promoting the use of sustainable and active modes of transportation since the early 1970s. The success is shown year after year with mode split data confirming that over 60% of all person-trips made to the campus are made via alternative modes of travel (non-SOV), including the 4% made by cyclists each day. All of these sustainable transportation programs and infrastructure needs are funded primarily through fees generated from parking permit fees; however, as TAPS is more and more successful in reducing the number of vehicles parked on campus, the fees generated to fund these alternative programs is also reduced. In fact, TAPS has seen a reduction of over $50,000 per year in recent years from parking fees. TAPS is very likely going to be operating in a deficit in the coming years and thus external grant funding like the ATP program is critical to funding these much needed safety improvements.

2. **Consistency with Regional Transportation Plan (100 words or less)**

The SCCRTC Regional Transportation Plan has a significant focus on creating a sustainable transportation network in the County with great emphasis on active transportation modes. The Great Meadow Bike Path Safety Improvement Project is listed in the current Santa Cruz County Regional Plan (RTP) as project UC-P60 (http://www.sccrtc.org/wp-content/uploads/2014/01/App-E-FULL.pdf Page E-30) This plan is set for adoption on June 26, 2014 by the SCCRTC.

IV. NARRATIVE QUESTIONS

1. **POTENTIAL FOR INCREASED WALKING AND BICYCLING, ESPECIALLY AMONG STUDENTS, INCLUDING THE IDENTIFICATION OF WALKING AND BICYCLING ROUTES TO AND FROM SCHOOLS, TRANSIT FACILITIES, COMMUNITY CENTERS, EMPLOYMENT CENTERS, AND OTHER DESTINATIONS; AND INCLUDING INCREASING AND IMPROVING CONNECTIVITY AND MOBILITY OF NON-MOTORIZED USERS.** *(0-30 POINTS)*

The Great Meadow Bike Path at UCSC provides bicycle access to the core campus areas from the main campus entrance at Bay and High Streets, as well as staff and faculty residences and some administrative buildings. This pathway goes directly from the base of campus to the Theatre Arts complex, the main campus library, main campus administration building and connects to pathways to other campus core areas such as Science Hill. This campus core contains all the academic buildings, two libraries, ten college administrative offices and residence areas and student center. Between the base of campus and along this Bike Path is the Center for Agroecology Farm, which attracts students and staff for work, classes, internships, and many public functions. (Please see campus map attached.)

In addition, as the largest employer in Santa Cruz County, this bike path provides direct access to employment for many faculty and staff working/teaching on campus. In addition, to further encourage students, staff and faculty to ride bikes for commute and transportation on campus, UCSC TAPS provides a free Bike Shuttle from downtown and Westside Santa Cruz up the steep hills so they can have their bikes for travel on campus and back home again. This innovative service provides trips for an average of 260 cyclists per day. In addition, every Santa Cruz Metropolitan Transit bus and every campus shuttle bus is equipped with a three-bike rack capacity to get cyclists up the hill with assistance. It is assumed that the majority of cyclists using the bike path are students attending class, the libraries, or attending other university life functions and events.

By current bike counts on the bike path, over 1,000 cyclists regularly use the bike path each day. Periodic bike counts are conducted on the bike path by having staff counters sit at the bike path and count all cyclists on the path in both directions for one full day from 7:00am until 6:00pm in 15-minute increments. In April, 2009, approximately 400 cyclists traveled uphill, with over 600 travelling down the path. Notes are also made as to how many cyclists are wearing helmets and which direction they are traveling. Fortunately, approximately 66% of cyclists are wearing helmets, and efforts are ongoing to encourage all cyclists to wear helmets.

Planning efforts for the proposed Recycling Yard relocation, counts were conducted in December, 2013 to determine the number of vehicles crossing the bike path from Village Road. At that time, 66 vehicle crossings in occurred between 6:30am and 5:00pm in one day.

Traversing up and down the steep hills to campus can be a deterrent to commuting by bike to campus; and if someone encounters an unsafe situation in addition, they may consider not riding again. However, if the campus community knows the bike path has been improved and safety is enhanced, more cyclists will be encouraged to use this pathway for commute and recreational purposes. TAPS staff will also be able to market and advertise the safety improvements through all of our regular bike safety and bike commute promotional activities to further encourage bike use. With unstable gas prices and increased concerns about global warming and overall health of the planet, the campus anticipates even more bicyclists commuting to and on campus over the next few years.

The UCSC Campus Sustainability Plan has a goal of 35% of all person trips to campus being made by non-SOV trips, with an emphasis on human-powered modes by 2020. In addition, the campus hopes to reach 75% of all on-campus trips made by human-powered modes by 2020. An ever greater emphasis on walking and biking to and around campus will only grow through the years and having a safer bike facility will be essential.

IV. NARRATIVE QUESTIONS- continued

2. POTENTIAL FOR REDUCING THE NUMBER AND/OR RATE OF PEDESTRIAN AND BICYCLIST FATALITIES AND INJURIES, INCLUDING THE IDENTIFICATION OF SAFETY HAZARDS FOR PEDESTRIANS AND BICYCLISTS. *(0-25 POINTS)*

In the last seven and a half years (2006 – present), this section of the bike path has experienced 39 reported accidents. Six of these accidents have reported major injuries requiring the cyclist(s) to be airlifted to a medical facility, including one resulting in fatal injuries. Twenty-three (23) accidents reported resulted in moderate injuries that required the cyclist(s) to be transported to a medical facility by ambulance. An additional ten (10) accidents resulted in minor injuries in which the cyclist(s) walked away or was transported by a friend/family away from the scene. Anecdotally we know of other accidents that occur in this area that are never officially reported. (Please see accident data provided by UCSC Police)

While specific details on each accident are not available, three main accident types occur in this area:

- Solo bike accidents caused by the cyclist losing control of his/her bike in the curve and the dip just above the Village Road intersection causing the cyclist to ride off the bike path and crash;
- Bike-Vehicle collision at the intersection caused by poor sight lines; and
- Bike-Bike accident caused by poor sight lines/out-of-control downhill cyclist colliding with cyclist coming uphill on the two-way bike path merge.

Additionally, given that this bike path is in an open meadow in an undeveloped environment, a few accidents have occurred where a cyclist has collided with or lost control of the bike while avoiding animals on the bike path, whether it be deer, ground squirrels or snakes – having better sight lines and more control can only help this situation as well.

We believe the proposed change in alignment and removal of the "dip" in the curve directly above the Village Road crossing will help reduce the number of future accidents by greatly

improving sight distance and visibility and allowing cyclists to maintain better control through the area. By changing the 300-curve radius to a 500-curve radius and providing a longer, smoother curve, cyclists will maintain better control of their bikes in this area and will have much less of a curve to navigate. The project also proposes to fill in the "dip" experienced in this curve as well, also allowing cyclists to maintain better control, especially as they approach the Village Road intersection and begin to merge into the two-way bike path below the intersection. Chapter 1000 of the 2012 Caltrans Highway Design Manual specifies a minimum stopping sight distance of 230 feet for a cyclist traveling 30 miles per hour. For a cyclist traveling 35 mph and on a downhill grade of 5%, the safe stopping sight distance is about 330 feet. It appears that a stopping sight distance in excess of 330 feet for the downhill bicycle path could be achieved with the bicycle path realignment.

The "squaring up" of this intersection further enhances sight lines by making this intersection more predictable, by having all approaches generally on the same level, and by allowing for more separation of the two directions of bike path as the road crosses it. Lastly, the new design calls for separate bike paths in each direction through the Village Road intersection and for approximately 100 feet downhill of this intersection, allowing the downhill cyclist more time and better sight lines to navigate the intersection and then the merge into the two-way bike path below, rather than having to navigate all this at one time, often at high speeds. The proposed project will bring this older facility up to current Caltrans code, including stop bars in both directions and bicycle crossing warning signs.

3. PUBLIC PARTICIPATION and PLANNING *(0-15 POINTS)*

In 2010, UCSC Transportation and Parking Services held a series of focus groups with cyclists at the UCSC campus, in particular those that regularly ride the Great Meadow Bike Path to the main part of campus, to identify and discuss any and all safety issues that recreational and commuter cyclists face on the Main Bike Path. Student, staff and faculty cyclists were invited to participate and represented both recreational and commuter cyclists. Issues focused on the need to resurface most of the bike path and reconstruct portions that are in great need; reconstructing the proposed Village Road crossing/curve area of the bike path for safety and sight lines needs; ways to potentially separate the two-way bike path into separate uni-directional paths for the entire length; potential for a separate pedestrian path adjacent to the

downhill bike path to separate bikes and pedestrians; how to best handle visitor traffic to the Farm area including many school groups; and enforcement and safety education matters related to travel on the bike path. This information was later taken to a series of meetings held with campus stakeholder groups of campus department staff including Physical Planning and Construction, Physical Plant and Grounds, Environmental Assessment, Risk Services, and Police/Fire to help determine what measures would best address the issues raised. Since this time, various discussions about how best to improve the bike path have taken place at the UCSC Transportation Advisory Committee (made up of representatives from faculty, staff, and students) as well as the Sustainable Transportation Working Group. The focus of all of these discussions was to identify what improvements are needed along the entire bike path and which staff or campus community groups needed to be involved in these discussions.

TAPS staff has been working consistently since 2011 with engineers from Physical Planning and Construction to consider various alignments along the bike path to improve safety. Given the high incident rate of accidents above the Farm at the curve in the bike path and the Village Road crossing area, attention has been foused on improving this area first. In addition, in 2013, the campus has been considering an option to relocate the campus recycling and composting yard to the bowl area just above the Farm. The only access to this area is along Village Road requiring heavy-duty vehicles to be crossing the bike path in the future. It became apparent that improvements to this section of the bike path is the highest priority for safety improvements.

The total cost for the project improvements to realign the Great Meadow Bike Path and square up the Village Road intersection crossing as proposed is $433,000. Even though the project is below $1 million, the project is included in the Revised Project List of the UCSC Bike Plan and is included in the Santa Cruz County Regional Transportation Plan (to be adopted in June, 2014.)

The UCSC 2008 Bike Plan with Revised Project List, January, 2014 can be found at : http://basweb.ucsc.edu/bpr14.pdf

4. COST EFFECTIVENESS *(0-10 POINTS)*

Based on the outcomes of the discussions with the focus groups, staff stakeholder groups and other advisory groups, TAPS staff worked with Physical Planning and Construction staff over the last few years to propose various options for bike path realignment and other safety improvements. In addition, TAPS staff worked with the Farm staff and Police to see what options might be available for redirecting vehicle traffic away from the Village Road to the back entrance to the Farm to limit the bike-vehicle conflicts in the area. Over time, it became apparent that with limited access to this area of campus, Village Road would remain an active vehicle access to the Farm (and in fact, has grown over time since then.) As mentioned earlier, the campus is considering the decision to relocate its Recycling/Composting Yard to the bowl area just above the Farm, with the only access to this site being Village Road. Without a doubt, the potential for more bike-vehicle conflicts will only grow with heavy-duty vehicles crossing in the future, making it apparent that this proposed improvement is of high priority. As future plans for this project area develop and as cycling continues to grow as a viable and sustainable travel mode at UCSC, attention has focused on making improvements to the bike path to minimize any possible hazards or areas of conflict.

Early studies related to the proposed Recycling Yard started to look at creating a grade separated access to the Recycling Yard, having Village Road go under a raised bike path or vice versa. It was assumed that the cost for this work would prove to be extraordinarily high and difficult to construct in this small area making this option infeasible. At this time, the campus had design consultants look to a more simple, yet effective realignments of the bike path curve area and the intersection to provide a safer alignment and crossing. The resulting design is the proposed project at a much more reasonable cost.

The cost of the project proposed is $433,000. Using estimated costs for reduced crash injuries from the National Safety Council, the cost/benefit ratio is significant for this project. If even half of the reported injuries along this section of the Great Meadow Bike Path can be prevented in the future due to the safety improvements implemented with this project, the benefit would be very conservatively ten times the cost. We are hopeful that the proposed project improvements, along with ongoing bike safety education efforts, will greatly reduce the

accident rate in this area even further or at least minimize the severity of the injuries if accidents do occur. Certainly no price can be placed on a person's life or well-being, but this calculation shows the accident/crash reduction alone is significant.

$\frac{\$7,300,000 \text{ savings}}{\$366,000 \text{ project cost}} = 19.94$ $\frac{\$3,650,000 \text{ savings (half accidents experienced)}}{\$366,000 \text{ project costs}} = 9.97$

Comprehensive Costs to Reduce Accidents			
Severity of Injury	**# of Recent Accidents**	**Cost per Injury**	**Total**
Fatal Injuries	1	$4,500,000	$4,500,000
Other Major Injuries	5	$230,000	$1,150,000
Moderate Injuries	23	$58,700	$1,350,000
Minor Injuries	10	$28,000	$280,000
			$7,280,000

(http://www.nsc.org/news_resources/injury_and_death_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx)

Using figures from the Victoria Transport Institute, one can calculate the health savings from active transport along this bike path; a health savings of $1.92 per person mile traveled can be included. It is estimated that 1,000 cyclists use this one-mile bike path each day of the academic year. Conservatively, UCSC has three quarters that run 12 weeks each, with trips made five days per week, equaling 180 days of active use for commute purposes. With 1,000 cyclist each day, that totals 180,000 mile-trips @ $1.92 per person* mile totaling a health benefit of an additional $345,600 savings each year. Over the useful life of this improvement at ten years, that totals an additional savings of $3,456,000.

Of course, there are the many environmental, pollution, parking and other cost savings not included in this calculation, but by these two aspects alone – accident reduction and overall health savings by active transport – this project is very well justified in its cost. By reducing even half of the accidents we have experienced in the recent past, coupled with the health

savings benefit experienced by our current ridership, this project would expect approximately twenty (20) times the benefit of its initial cost of implementation.

$$\frac{\$3{,}650{,}000\ (1/2\ \text{accidents}) + \$3{,}456{,}000\ (\text{health savings})}{\$366{,}000\ \text{project cost}} = 19.41$$

*Victoria Transport Institute, Estimating the Benefits of Active Transportation, April, 2014, page 21.

5. IMPROVED PUBLIC HEALTH *(0-10 points)*

From the National College Health Assessment* conducted in Spring, 2013 of UCSC students, 63% of students self-report being in very good or excellent health. Only 9% report having asthma and less than one percent have been diagnosed with diabetes. 7% of students report being obese (Class I, II and III) and an additional 18% report being overweight. Similar to our own bike counts, just under 60% report always wearing a bike helmet with another 21% reportedly wearing a bike helmet sometimes. These statistics are below the general population statistics of Santa Cruz County** which report approximately 20% of adults being obese and almost 10% with asthma.

While the overall number of major health issues are relatively low at the UCSC campus, the growing emphasis on human-powered modes of travel on our beautiful campus can encourage others to become more physically active and to bike and walk for health reasons among others. By having an improved bike facility in a beautiful area, coupled with active and ongoing education and outreach efforts by TAPS, the general health and well-being of our campus population can be maintained and even improved upon over time. As this an educational institution, it is hoped that life lessons learned while here at UCSC will carry forward into their adult lives upon graduation.

*UCSC Executive Summary, American College Health Association National College Assessment II, Spring 2013

** UCLA Center for Health Policy Research, 2009

6. **BENEFIT TO DISADVANTAGED COMMUNITIES** *(0-10 points)*

I. Is the project located in a disadvantaged community? **No**

II. Does the project significantly benefit a disadvantaged community? **No**

While UCSC is not a local jurisdiction and does not fit the definition of a disadvantaged community, UCSC is proud to serve a higher number of underrepresented minorities than most other campuses. UCSC's undergraduate population of 16,500 students includes approximately 27% Hispanic students. In addition, UCSC serves a high number of first-generation (to go to college) students. For example, 2,021 (53%) of the 3,826 new frosh in 2012 were first-generation college students and 1,999 (52%) received a Pell Grant. Family income is not verified on applications to the University.

All students, staff and faculty will benefit from having access to this project as well as all the bike safety, health and well-being education programs the campus offers. In addition, students who do not have access to a bicycle can borrow a bicycle (with lock and helmet) per quarter from the Bike Lending Library.

7. **USE OF CALIFORNIA CONSERVATION CORPS (CCC) OR A CERTIFIED COMMUNITY CONSERVATION CORPS** *(0 to -5 points)*

A. The applicant has coordinated with the CCC to identify how a state conservation corps can be a partner of the project. **Yes**

B. The applicant has coordinated with a representative from the California Association of Local Conservation Corps (CALCC) to identify how a certified community conservation corps can be a partner of the project. **Yes**

C. The applicant intends to utilize the CCC or a certified community conservation corps on all items where participation is indicated? **Yes**

I have coordinated with a representative of the CCC; and the following are project items that they are qualified to partner on:

Virginia Clark, 916-341-3147, Virginia.Clark@CCC.CA.GOV Virginia Clark has stated that the CCC will not be working on this project. 5-16-14

I have coordinated with a representative of the CALCC; and the following are project items that they are qualified to partner on:

Paige Brokaw, 916-669-4797, paige@csgcalifornia.com	Submitted 4/30/14
Local group has stated they will not work on proposed project	

8. **APPLICANT'S PERFORMANCE ON PAST GRANTS** *(0 to -10 points)*

UCSC has no outstanding issues with past performance on any grant projects.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

General Instructions

☒ New Project					Date: 5/15/14
District	**EA**	**Project ID**	**PPNO**	**MPO ID**	**TCRP No.**
04					

County	**Route/Corridor**	**PM Bk**	**PM Ahd**	**Project Sponsor/Lead Agency**	
SCR				University of California, Santa Cruz	
				MPO	**Element**
				AMBAG	Local Assistance

Project Manager/Contact	**Phone**	**E-mail Address**
Larry Pageler	831-459-2190	pageler@ucsc.edu

Project Title

Great Meadow Bike Path Safety Improvements Project

Location, Project Limits, Description, Scope of Work See page 2

On the University of California, Santa Cruz campus, located in Santa Cruz, CA. Work will be completed on the Great Meadow Bike Path near and at the intersection of the bike path with Village Road on campus. Work to be completed includes the realignment of a section of the Class I Bike Path, grading changes, realignment of the Village Road intersection with the bike path.

☐ Includes ADA Improvements ☒ Includes Bike/Ped Improvements

Component	**Implementing Agency**
PA&ED	
PS&E	University of California, Santa Cruz
Right of Way	
Construction	University of California, Santa Cruz

Purpose and Need See page 2

The Great Meadow Class I Bike Path on the UCSC campus is over one mile long with a 5% grade connecting the main entrance of campus to the campus core (classrooms, residences, libraries, cultural centers, employment, etc.) and serves over 1,000 cyclists per day currently. The proposed improvements are designed to significantly reduce the high accident rate in the project by reducing a curve and making grade changes and realigning a roadway intersection to greatly improve sight lines and allow cyclists to better maintain control of their bikes in the downhill approach. The merge to the two-way bike path will be realigned lower on the bike path to allow downhill cyclists more time to prepare for the merge to avoide bike-bike accidents as well.

Project Benefits See page 2

Bike Safety improvements; significant accident reduction (solo bike; bike-bike; bike-vehicle) By improving the safety of this bike path will encourage more cautious cyclists to commute to campus by bike, improving health and lowering campus GHGs.

☒ Supports Sustainable Communities Strategy (SCS) Goals ☒ Reduces Greenhouse Gas Emissions

Project Milestone	**Proposed**
Project Study Report Approved	
Begin Environmental (PA&ED) Phase	
Circulate Draft Environmental Document — **Document Type**	
Draft Project Report	
End Environmental Phase (PA&ED Milestone)	
Begin Design (PS&E) Phase	
End Design Phase (Ready to List for Advertisement Milestone)	
Begin Right of Way Phase	
End Right of Way Phase (Right of Way Certification Milestone)	
Begin Construction Phase (Contract Award Milestone)	
End Construction Phase (Construction Contract Acceptance Milestone)	
Begin Closeout Phase	
End Closeout Phase (Closeout Report)	

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 5/15/14

District	County	Route	EA	Project ID	PPNO	TCRP No.
04	SCR					
Project Title:	Great Meadow Bike Path Safety Improvements Project					

Proposed Total Project Cost ($1,000s)									Notes
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	
E&P (PA&ED)									
PS&E		80,000						80,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			353,000					353,000	
TOTAL		80,000	353,000					433,000	

Fund No. 1:	ATP Funds							Program Code
Proposed Funding ($1,000s)								
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									
PS&E		71,000						71,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			312,000					312,000	
TOTAL		71,000	312,000					383,000	

Fund No. 2:	University of California, Santa Cruz funds							Program Code
Proposed Funding ($1,000s)								
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									
PS&E		9,000						9,000	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			41,000					41,000	
TOTAL		9,000	41,000					50,000	

Fund No. 3:								Program Code
Proposed Funding ($1,000s)								
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Project name: UCSC Great Meadow Bike Path Safety Improvement Project

VI. ADDITIONAL INFORMATION

Only fill in those fields that are applicable to your project

FUNDING SUMMARY

ATP Funds being requested by Phase (to the nearest $1000)	**Amount**
PE Phase (includes PA&ED and PS&E)	$ 80,000
Right-of-Way Phase	$
Construction Phase-Infrastructure	$ 353,000
Construction Phase-Non-infrastructure	$
Total for ALL Phases	$ 433,000

All Non-ATP fund types on this project* (to the nearest $1000)	**Amount**
	$
	$
	$
	$
	$
	$

*Must indicate which funds are matching

Total Project Cost	$ 433,000
Project is Fully Funded	Yes

ATP Work Specific Funding Breakdown (to the nearest $1000)	**Amount**
Request for funding a Plan	$
Request for Safe Routes to Schools Infrastructure work	$
Request for Safe Routes to Schools Non-Infrastructure work	$
Request for other Non-Infrastructure work (non-SRTS)	$
Request for Recreational Trails work	$

ALLOCATION/AUTHORIZATION REQUESTS SCHEDULE

	Proposed Allocation Date	**Proposed Authorization (E-76) Date**
PA&ED or E&P		
PS&E	10/01/2014	10/01/2014
Right-of-Way		
Construction	07/01/2015	07/01/2015

All project costs MUST be accounted for on this form, including elements of the overall project that will be, or have been funded by other sources.

Project name: UCSC Great Meadow Bike Path Safety Improvement Project

VII. NON-INFRASTRUCTURE SCHEDULE INFORMATION

Start Date	End Date	Task/Deliverables
		N/A

Project name: UCSC Great Meadow Bike Path Safety Improvement Project

VIII. APPLICATION SIGNATURES

Applicant: The undersigned affirms that the statements contained in the application package are true and complete to the best of their knowledge.

Signature: Larry Pageler
Name: Larry Pageler
Title: Director, Transportation and Parking Service
Date: 5/14/14
Phone: 831-502-7940
e-mail: pageler@ucsc.edu

Local Agency Official (City Engineer or Public Works Director): The undersigned affirms that the statements contained in the application package are true and complete to the best of their knowledge.

Signature: Sarah C. Latham
Name: Sarah Latham
Title: Vice Chancellor, Business & Administrative Services
Date: 5/19/14
Phone: 831-459-3778
e-mail: sclatham@ucsc.edu

School Official: The undersigned affirms that the school(s) benefited by this application is not on a school closure list.

Signature: _____
Name: _____
Title: _____
Date: _____
Phone: _____
e-mail: _____

Person to contact for questions:

Name:
Title:
Phone: _____
e-mail: _____

Caltrans District Traffic Operations Office Approval*
If the application's project proposes improvements on a freeway or state highway that affects the safety or operations of the facility, it is required that the proposed improvements be reviewed by the district traffic operations office and either a letter of support or acknowledgement from the traffic operations office be attached (_) or the signature of the traffic personnel be secured below.

Signature: _____
Name: _____
Title: _____
Date: _____
Phone: _____
e-mail: _____

*Contact the District Local Assistance Engineer (DLAE) for the project to get Caltrans Traffic Ops contact information. DLAE contact information can be found at http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm

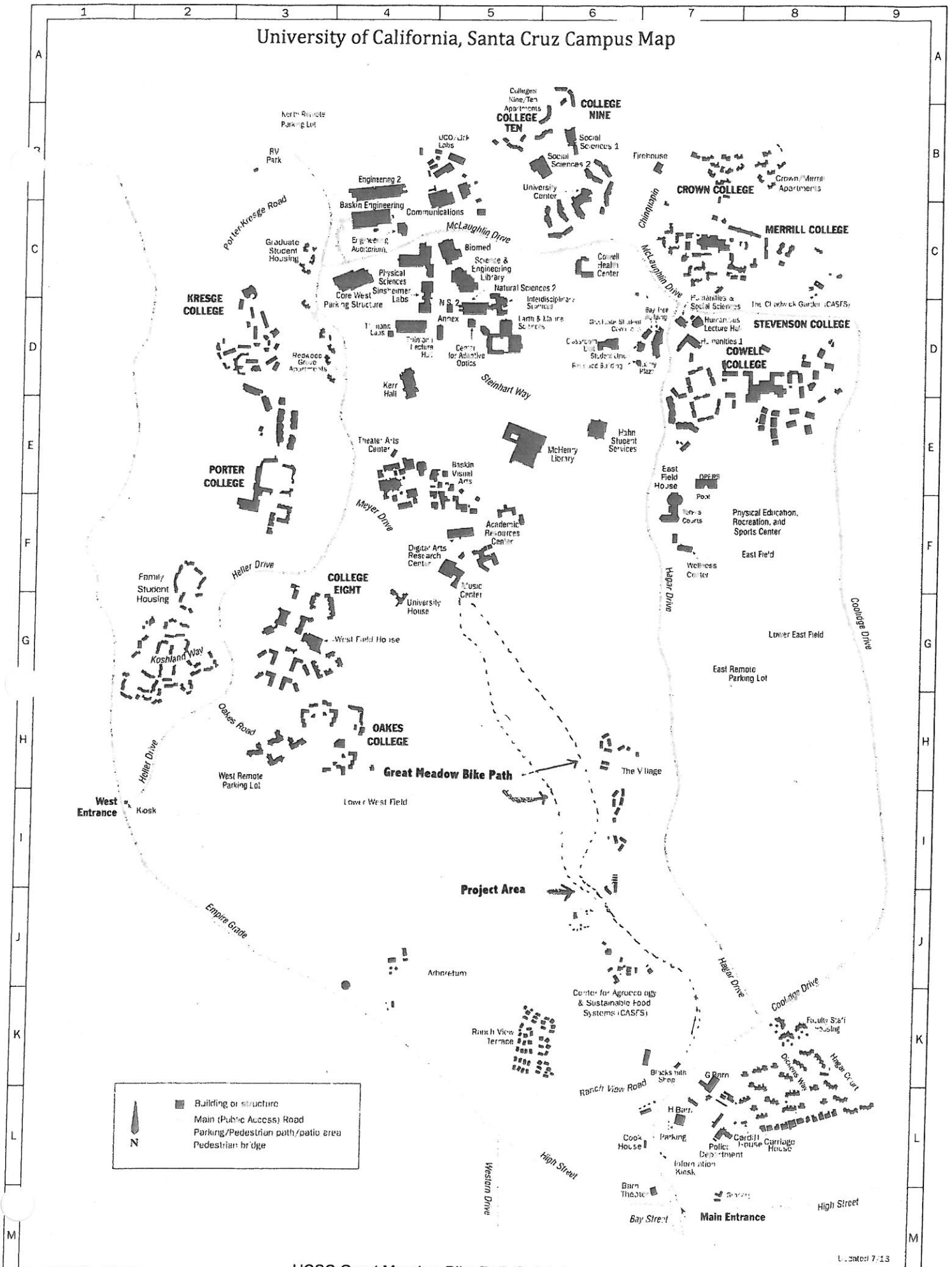
Project name:
UCSC Great Meadow Bike Path Safety Improvement Project

VIII. ADDITIONAL APPLICATION ATTACHMENTS

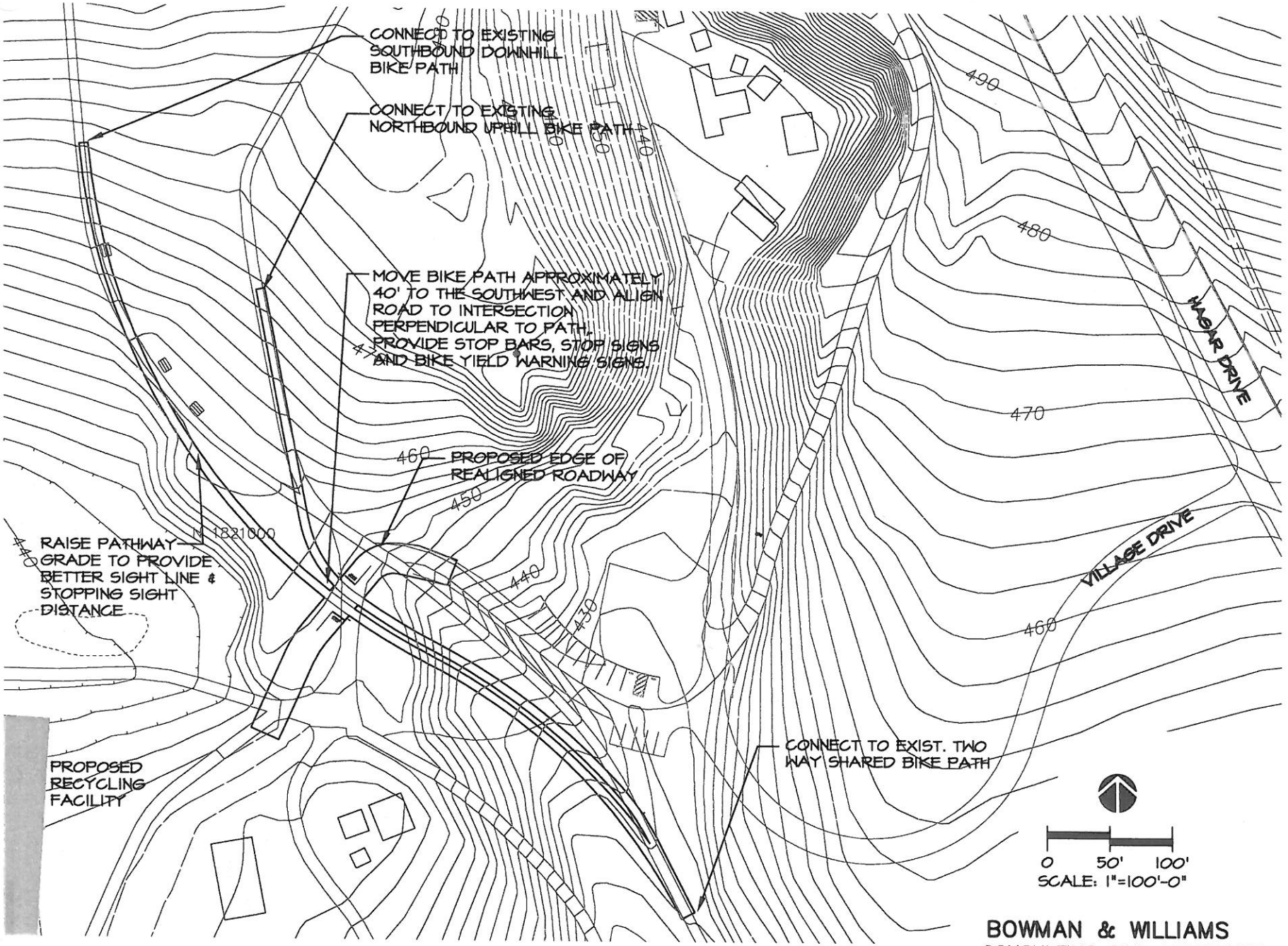
Check all attachments included with this application.

- [x] Vicinity/Location Map- **REQUIRED for all IF Projects**
  - [x] North Arrow
  - [x] Label street names and highway route numbers
  - [x] Scale
- [x] Photos and/or Video of Existing Location- **REQUIRED for all IF Projects**
  - [x] Minimum of one labeled color photo of the existing project location
  - [x] Minimum photo size 3 x 5 inches
  - [ ] Optional video and/or time-lapse
- [ ] Preliminary Plans- **REQUIRED for Construction phase only**
  - [ ] Must include a north arrow
  - [ ] Label the scale of the drawing
  - [ ] Typical Cross sections where applicable with property or right-of-way lines
  - [ ] Label street names, highway route numbers and easements
- [ ] Detailed Engineer's Estimate- **REQUIRED for Construction phase only**
  - [ ] Estimate must be true and accurate. Applicant is responsible for verifying costs prior to submittal
  - [ ] Must show a breakdown of all bid items by unit and cost. Lump Sum may only be used per industry standards
  - [ ] Must identify all items that ATP will be funding
  - [ ] Contingency is limited to 10% of funds being requested
  - [ ] Evaluation required under the ATP guidelines is not a reimbursable item
- [ ] Documentation of the partnering maintenance agreement- Required with the application if an entity, other than the applicant, is going to assume responsibility for the operation and maintenance of the facility
- [ ] Documentation of the partnering implementation agreement-Required with the application if an entity, other than the applicant, is going to implement the project.
- [ ] Letters of Support from Caltrans (Required for projects on the State Highway System(SHS))
- [x] Digital copy of or an online link to an approved plan (bicycle, pedestrian, safe routes to school, active transportation, general, recreation, trails, city/county or regional master plan(s), technical studies, and/or environmental studies (with environmental commitment record or list of mitigation measures), if applicable. Include/highlight portions that are applicable to the proposed project.
- [x] Documentation of the public participation process (required)
- [ ] Letter of Support from impacted school- when the school isn't the applicant or partner on the application (required)
- [ ] Additional documentation, letters of support, etc (optional)

University of California, Santa Cruz Campus Map



Updated 7/13



UCSC GREAT MEADOW BIKE PATH SAFETY IMPROVEMENT PROJECT

BOWMAN & WILLIAMS
CONSULTING CIVIL ENGINEERS
JONI L. JANECKI & ASSOC
4.30.14

Photos of UCSC Great Meadow Bike Path Safety Improvement Project
5-13-14

Bike Path from Village Road crossing to Farm (Farm side): Looking up to see the split directional bike paths (downhill path on the left) Please note steep terrain approach as well as curve and "dip" in the path.

Bike Path From Village Road crossing (roadway side- across bike path from previous photo): Looking up the downhill path on the left. Given the existing terrain and "dip" you can see how the bikes are not visible to approaching vehicles. Please note that the roadway approach also dips down on a slight slope. Project would "square up" the intersection and re-grade the intersection so that it is relatively level with the bike path at this point, plus the dip and curve will be realigned to improve sight lines.

Photos of UCSC Great Meadow Bike Path Safety Improvement Project
5-13-14

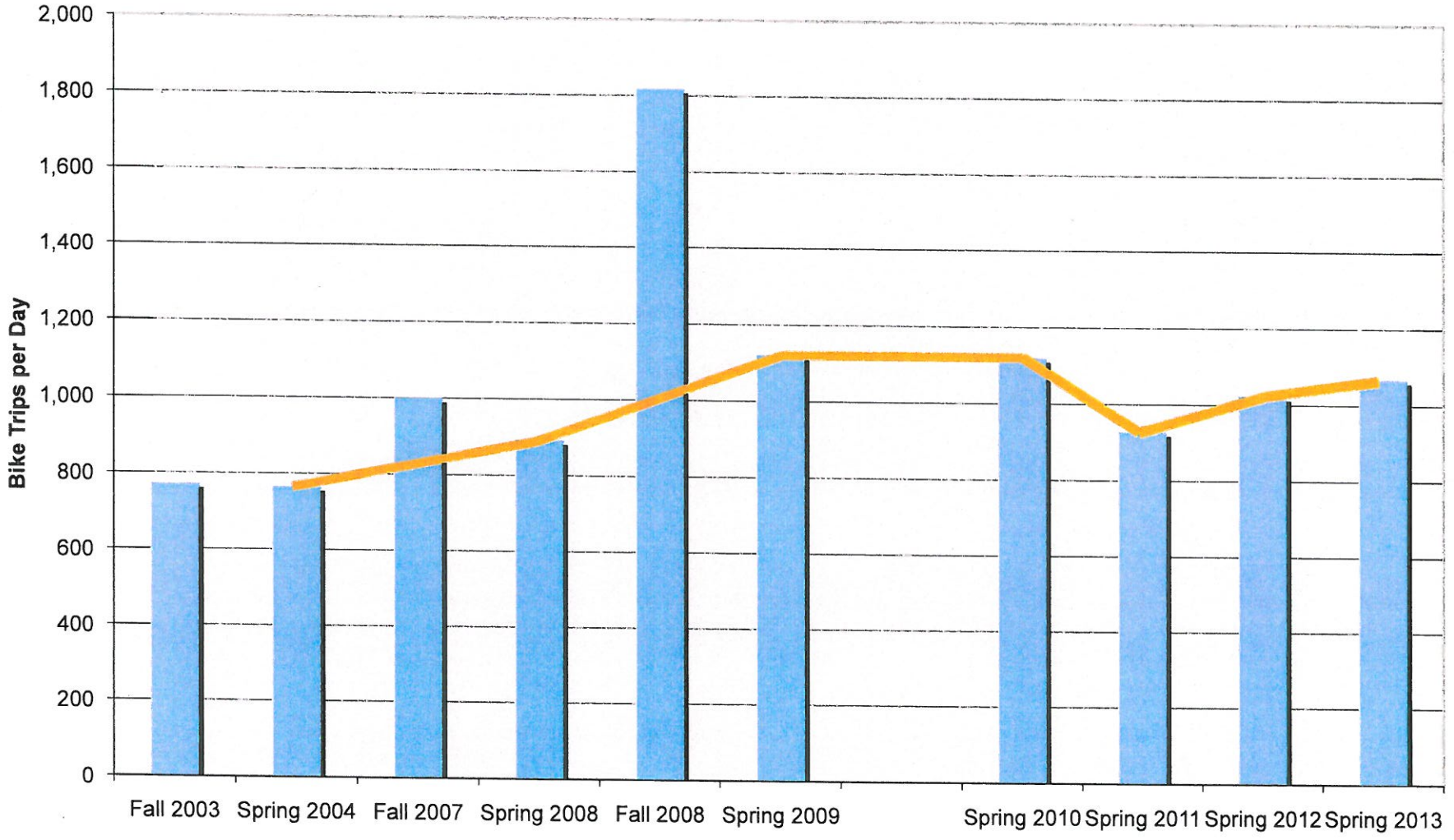
Bike Path from the "dip" and curve in the downhill bike path approaching Village Road crossing. Please note that a bike cannot see the Village Road approach and if a vehicle is present attempting to cross from the left. Reminder that bikes often approach at speeds of 35-40 mph.

Photos of UCSC Great Meadow Bike Path Safety Improvement Project
5-13-14

Downhill bike path coming out of the "dip" approaching Village Road at the point when a cyclist can see approaching vehicles. Please note that existing path is two-way at this point, but proposed realignment will have two separated directional paths at the crossing. See conceptual plan.

ACCIDENTS ON THE UCSC BIKE PATH,Near the Farm/Village Road 2006-2014					
CALENDAR YEAR	ANNUAL TOTAL	INJURY MAJOR	INJURY MOD	INJURY MINOR	LOCATION DETAIL (IF AVAILABLE)
2006	5*			x	Near the Farm
2006	*		x		Above the Farm
2006	*			x	Great Meadow
2006	*		x		Near the Farm
2006	*		x		Above the Farm
2007	6*		x		Near the Village
2007	*		x		Near the Village
2007	*		x		Near the Farm
2007	*		x		Near the Village
2007	*	x-air lifted			Near the Village
2007	*			x	Above the Farm
2008	5*	x-air lifted			Near the Farm
2008	*		x		South of the Farm
2008	*		x		Near the Farm
2008	*	x-air lifted			Near the Farm
2008	*	x-air lifted			South of the Village
2009	5*		x		Above the Farm
2009	*	x-air lifted			Between Village and Farm
2009	*		x		Near the Farm
2009	*		x		Near the Village
2009	*			x	Near the Farm
2010	1		x		South of the Village
2011	5*	x-air lifted			Near the Farm
2011	*			x	North of the Farm
2011	*		x		Near the Farm
2011	*		x		South of the Farm
2011	*			x	Below the Farm
2012	5*			x	Near the Farm
2012	*		x		Near the Farm
2012	*		x		Near the Farm
2012	*		x		Near the Farm
2012	*			x	Near the Farm
2013	5*		x		South of the Farm
2013	*		x		Near the Village
2013	*		x		Near the Farm
2013	*		x		Near the Farm
2013	*		x		North of the Farm
2014	2*			x	Near the Village
2014	*			x	Above the Farm
	39	6	23	10	

UCSC Bike Ridership: Average Daily Riders At Both Campus Entrances



Main Bike Path Improvements Discussion
Grant Opportunity – HSIP

September 16, 2010
10:00 – 11:00am

AGENDA

1. Introductions

2. Highway Safety Improvement Program Grant Opportunity
    a. Due December 9th
    b. Project Limit: $1,000,000; $900,000 federal; $100,000 local match
    c. Safety improvements
    d. Federal program and requirements; NEPA

3. Identified Safety Problems to Date
    a. Accident Record: Fatalities v. Injuries?
    b. Unsafe Speeds – various locations
    c. Bike Path Maintenance Issues
        i. Shoulder issues
        ii. Drainage
        iii. Gravel issues near RVT and upper Farm
    d. Bike/Pedestrian Conflicts
    e. Deer Conflicts
    f. Vehicles Crossing at Farm Road
    g. Others?

4. Possible Solutions
    a. Creating Parallel Pedestrian Path
    b. Deer Fencing on West Side (issues of wildlife corridors; night)
    c. Re-engineering
        i. Thicker base/wider paths?
        ii. More stable shoulders
        iii. Drainage/erosion control
            1. Lime treat soils/shoulders
        iv. Re-engineer Curve near Farm to improve safety
        v. Re-engineer to slow down? Where? How?
        vi. Resurfacing path
        vii. Is two-way lower section current to Caltrans standards?

5. Environmental Issues
    a. Prairie Grass
    b. Wildlife Corridors
    c. Construction Impacts

6. Next Steps:
    a. Application Due December 9th
    b. Need Current Accident Data (5 years?)
    c. Need Basic Design Concept for Improvements
    d. Need Engineer's Estimate of Improvements
    e. Need to highlight safety improvements
    f. PP&C involvement at early level
    g. Others?

Main Bike Path Improvements
Focus Group Discussions
9/16/2010

Present:
Mike Veglia, David Alexander, Piet Canin, Tim Bustos, Joel Kubby, Andrew Szeto, Matt Miller, Tom Auerbach, Cathy Crowe, Teresa Buika, Connie Croker, Kim Hughes, (one more guy)

General Notes:

Upper Bike Path (above the Farm):

- Downhill Path:
- Widen downhill path or provide some amenities for pedestrians
- Crosswind is an issue closer to the Farm – high tailwinds at the top of the path
- Suggestion: Some sort of wind conditions sign at the top of the path
- People walking downhill on the downhill path (backs to bicyclists and peds are not aware of cyclists)
- Deteriorated edges of path due to eroision – add 2 feet of Decomposed granite on each side
- Do not re-engineer path to deal with unsafe speeds – that is an education issue. We cannot regulate the path based on the few who ride with no hands, etc.
- People stopping on downhill; hard to get around
- Signs other than on 4x4 pots – something safer and on the uphill side of the path – use breakaway poles of some sort

Uphill path –

- midway up last straight stretch toward top – tends to get gravel on path during the rainy season

Farm/Village Road Crossing

- Some sort of sign that warms bikes of vehicles in the crossing
- (Touchplate for vehicles to trigger red light – or warning signal)
- Bikes cannot see cars at the Farm crossing as they approach –
- Engineer some sort of bike tunnel/bikes under the road solution
- Major visibility issues
- Eliminate car crossing here?
- Problem with vehicles not yielding to bikes on path
- Pedestrian issues here as well

Pedestrian Issues:

- Need to provide better diretions/signage to keep peds on farm road, not bike path
- Strollers on bike path – if farm road was improved, keep strollers on ped path
- Direct peds to where we want them to go
- Offer Peds incentives to walk a certain way like lookout points, benches, amenities...

Lower – Two-way section of Bike path

- Could be widened to 8-10' minimum – very narrow with poor visibility in spots/corners
- Better management or elimination of ad hoc mountain bike jumps and paths between gravel farm road and bike path or on banks of the path
- Make improvements to the farm gravel road to make it more appealing to keep peds on that path and not on the bike path (Improved DG path along farm road for peds)
- Make farm road the downhill bike path?

Merge of Bike Path on to Coolidge

- Area between the merge and the area on Coolidge across from the kiosk is a hot spot (peds/too many driveways)
- This area needs more separation of peds/bikes on designated pathways
- Re-route path around RVT out to Western Drive

Accident Reporting Issues:

- Have Police/Fire use GPS on path accidents
- Have Police write more detailed info on injuries/cause of accident
- Mark bike path with trail markers painted on the path so people can self-identify where they are on the path for faster response
- Method to text in accidents that are not reported
- Hot line to report activity, accidents, or other communications

Farm Visitor Issues:

- De facto pedestrian path from parking across lower section of path (two way section), especially chalked in section for summer program
- Farm CSA visitors crossing the path in vehicles
    - "Police will not cite here as this roadway is an "unregulated driveway"
- Better directions to visitors of the farm- consider parking at the barn and having ped access up to entrance with signage
    -

Wildlife:

- Add raptor poles as natural control of ground squirrels
- A wider path would allow for more room to go around wildlife and not get off path
- Night wildlife: Bobcats, deer, rabbits

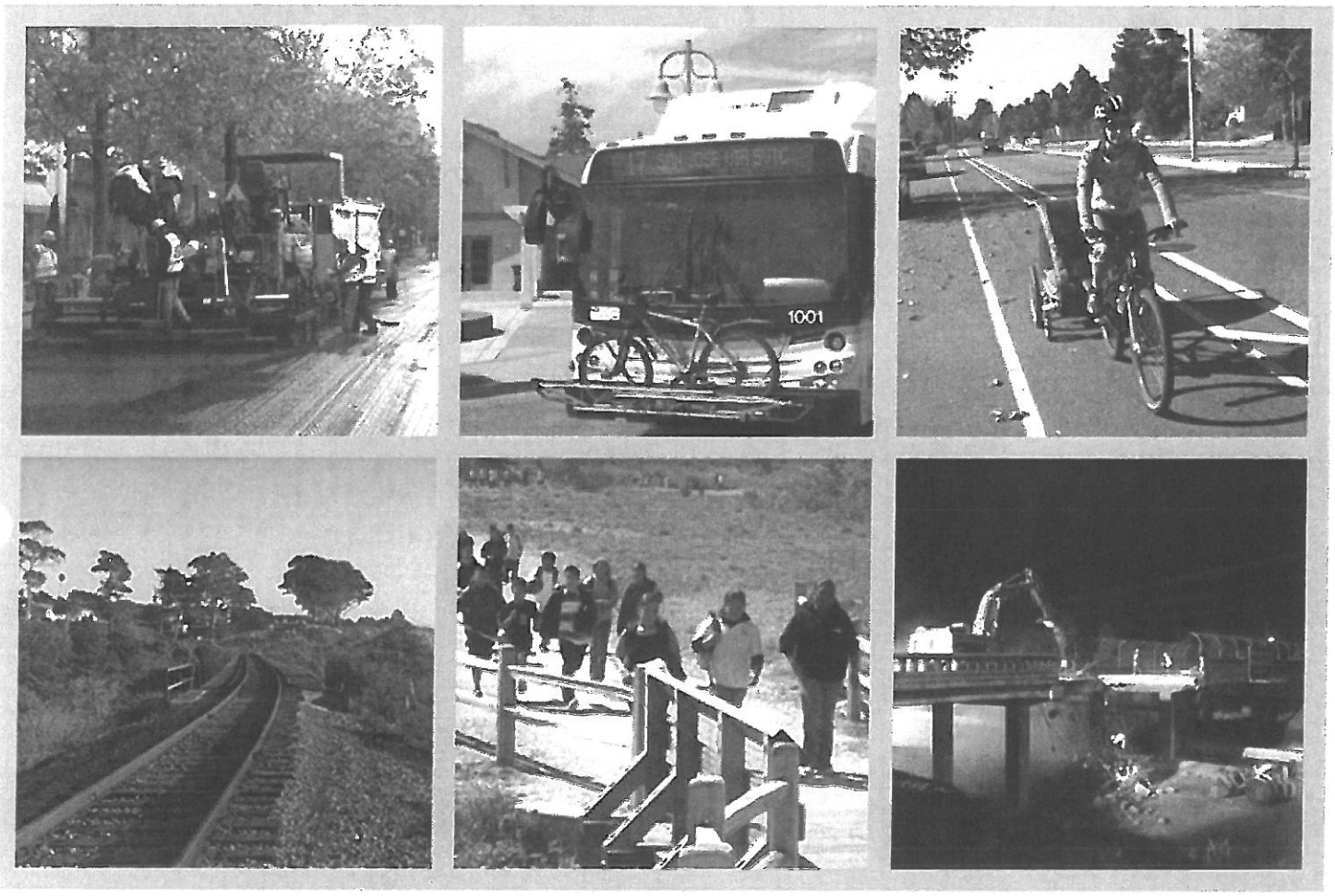
Education/Enforcement

- Educate about wind conditions and crosswind issue as a safety topic
- Put in a windsock that is not too colorful

- Crash Data signs along path to warn people/educate them to slow down
- Unsafe speeds – information on crashes of fellow colleague's help to slow others' down
- Hold more community Bike rides/monthly rides/beginner rides
- Consider "Critical NICE Rides" instead of "MASS"

- MBOSC education issues in their newsletter
- Try some incentives like Gault school's Voltage program (about $8,000 for 2 years?)
- Safe Speed Mechanism – how fast are you travelling?
- Bike path is closed at night- need more education
- Police response to accidents (example where the driver was hit by the bicyclist), and enforcement of the bike path (concerted focused efforts will go far to educate the rest of the community)
- "Driveway" vs Roadway/Street designation requires different Police response
- Communicate with MBOSC, Bike Shops in town, UCSC Bicycle Teams (and others?), about concerns
- Incentivize people to get out of the bike shuttles and ride their bikes up the hill
- Use a radar detector to inform people of their speeds, and post unsafe speeds
- Education should also be focused on drivers
- Include drivers taking the bicycle lane when turning right
- Post notices of accidents at the locations of incidents
- Build in an incentive program to attend the safety presentations (as part of another outreach/health/sustainable effort)

2014 | Santa Cruz County REGIONAL TRANSPORTATION PLAN



DRAFT

Santa Cruz County
Regional Transportation Commission
SCCRTC FEBRUARY 2014

All Figures in year 2013, '000s (thousands of dollars)

Project Title	ID	Project Description/Scope	Est total cost	Constrained	Uncon-strained
Alternative Fuel/Electric Shuttle Vehicles	UC-P22	Capital acquisition of vehicles.	$10,000	$0	$10,000
Bike Shuttle Vehicle Acquisition	UC-P51	Acquire more alt fueled vehicles for bike shuttle (and possible expansion).	$500	$0	$500
Bus Tracking and AVL Transit Programs	UC-P62	GPS bus tracking and Automatic Vehicle Locator programs inform travelling population of transit locations so they can make informed mode choices.	$250	$250	$0
Coastal Marine Campus Bike Improvements	UC-P49b	Includes covered bike parking, racks, and showers.	$300	$300	$0
Coastal Marine Campus Pedestrian Improvements	UC-P49c	Includes covered bike parking, racks, and showers.	$2,000	$2,000	$0
Coastal Marine Campus Roadway and Transit Improvements	UC-P49a	New Central Roadway/transit shelters and amenities, parking.	$7,000	$4,000	$3,000
College Nine/Communications Pedestrian Bridge	UC-P39	Construct pedestrian bridge.	$1,000	$0	$1,000
College Nine/Crown College Pedestrian Bridge	UC-P37	Construct pedestrian bridge.	$1,500	$0	$1,500
Coolidge Overlook	UC-P42	Improve overlook for parking, benches and signage for Sanctuary.	$600	$0	$600
Disability Van Service	UC-P75	Operate disability van service ($240k/yr).	$5,280	$5,280	$0
East Collector Transit Hub	UC-P46	New transit hub at East Collector (East Remote) lot.	$5,000	$0	$5,000
Electric Vehicle Charging Stations	UC-P65	Add additional electrical infrastructure and install electric vehicle charging stations around campus.	$300	$300	$0
* Great Meadow Bike Path Safety Improvements	UC-P60	Bikeway safetyand maintenance improvements; potential for separate pedestrian improvements to minimize conflicts.	$3,000	$900	$2,100
Hagar/McLaughlin Intersection Improvements	UC-P10	Signal, pedestrian safety improvements(including new crosswalk) and roadway improvements.	$500	$0	$500
Hagar/Steinhart Intersection Improvements	UC-P14	Signal, pedestrian safety improvements, roadway improvements.	$1,000	$0	$1,000
Hagar-Coolidge Connector Road/Hagar/East Remote Intersection Improvements	UC-P47	New roadway connector, including bicycle lanes, between Hagar Drive and Coolidge, plus Hagar/East Remote Intersection Improvements: signal, pedestrian safety improvements and roadway improvements.	$3,000	$0	$3,000
Heller Drive Bicycle Lanes (Empire Grade to Porter College)	UC-P56	Add Class II bicycle lanes in downhill direction as feasible.	$800	$0	$800
Kerr/Porter Rd Pedestrian Bridge ADA Upgrades	UC-P72	Modify bridge to improve access.	$3,000	$0	$3,000
Kresge/Core West Pedestrian Bridge: ADA Upgrades	UC-P57	Modify bridge to enhance ADA access.	$3,000	$0	$3,000
McLaughlin Drive Bike Lanes/Pedestrian Enhancements	UC-P30	Install Class 2 bike lanes and enhance pedestrian circulation on University campus roadway.	$2,500	$0	$2,500
Meyer Drive Extension/Jordan Gulch Bridges	UC-P04	Extension of Meyer Drive from existing Meyer Drive to Hagar Drive. Includes construction of two bridges, pedestrian, and bicycle facilities.	$20,000	$0	$20,000

Appendix E

		Cost Estimate				
Project:		**Intersection Improvement, Great Meadow Bike Path and Farm Service Road**				
UCSC Project Number:					TBD	
Prepared By:					EGM 04.28.2014	
		Based on AECOM Site Analysis Cost Plan dated 04/14/2014				
1	**CONSTRUCTION**					
		Item	**Unit**	**QTY**	**Unit Price**	**Total**
6. SITE CONSTRUCTION						
	Site Preparation & Demolition					
		Site protection				
		Erosion Control	SF	45,000	0.30	$13,500
		Protect Existing Features	LS	1	5,000.00	$5,000
		Construction Fencing	LF	1,200	12.00	$14,400
		Site Clearing and Grading				
		Demolish Existing AC Surfacing	SF	10,000	1.00	$10,000
		Rough Grading	SF	45,000	0.75	$33,750
		Fine Grading	SF	45,000	0.25	$11,250
		Surveying	LS	1	10000.00	$10,000
		Miscellaneous Site Clearing	LS	1	3000.00	$3,000
	Subtotal					**$100,900**
	Vehicular Paving					
		Asphalt Paving				
		Access Road	SF	5,700	5.50	$31,350
		Bike Paths, 2" Asphalt	SF	10,000	2.75	$27,500
		Signage				
		Striping, Stop Signs, Warning Signs	LS	1	4000.00	$4,000
		Structures				
		Fill Retaining System at Detention Basin	SF	200	30.00	$6,000
		Landscaping, allow native species				
		Alongside Realigned Pathway	SF	14,000	3.00	$42,000
		Temporary Irrigation	SF	14,000	1.50	$21,000
	Subtotal					**$131,850**
	Combined Subtotal					**$232,750**
		General Conditions/Overhead and Profit	% Subtotal		10%	$23,275
	Subtotal					**$256,025**
		Construction Contingency	% Combined Subtotal		10%	$25,603
		Design Contingency	% Combined Subtotal		20%	$46,550
	Construction Subtotal (1)					**$328,178**
2	**SOFT COSTS**					
		Task				
		Surveying	LS			$15,000
		Project Design Engineering	% Construction Subtotal		10%	$32,818
		UCSC Physical Planning & Construction	% Construction Subtotal		10%	$32,818
		Archeological Monitoring	LS			$5,000
		Environmental Pre-Construction Surveys	LS			$5,000
		Construction Administration	hours	120	$80	$9,600
		Inspection	hours	80	$60	$4,800
	Soft Costs Subtotal (2)					**$105,036**
PROJECT TOTAL (1, 2)						**$433,213**