

## FREQUENTLY ASKED QUESTIONS

### AVIATION BOULEVARD BIKE LANE

#### PRELIMINARY ENGINEERING STUDY

**OVERVIEW** (a/o June 4, 2012): In 2011, the Beach Cities communities designed the South Bay Bicycle Master Plan (SBBMP). Using an exhaustive/transparent/participatory public process, the community (particularly aerospace industry employees) identified Aviation as an arterial for which a bike lane was requested. The preliminary engineering report is a direct response to that public process request. All three city (Redondo Beach, Hermosa Beach, Manhattan Beach) councils approved the SBBMP. This Preliminary Engineering Study is going before commissions at this point as information, for public input, and to recommend further study.

The next steps are to do further parking and traffic analysis as recommended in this study, and do additional public engagement with regard to a handful of areas that need additional thought.

This FAQ responds to the issues that were raised in the initial commission meetings in Redondo Beach and Manhattan Beach and will continue to be updated as needed. Items are noted in the categories of safety, business, and other. Items marked with an “\*” have been identified to be scoped into the future studies.

#### SAFETY

##### 1. Why Aviation; isn't there a safer residential street on which to put the bike lane?

- It is not conducive as currently designed. However, with redesign, and changing the perception of Aviation from an automobile-only street, it can be conducive to bicycling. General practice for bicycle facility planning and design is to place bike lanes on arterial and collector streets, as these are the streets that connect the bicycle network.
- During the South Bay Bicycle Master Plan process, many routes were identified and each city is pursuing these. Aviation is one piece of the puzzle and was a route that was requested again and again by the public (SBBMP p. 121), especially those who work at the aerospace companies. It's a direct route that can be appropriate for more confident and experienced riders, while the less confident and less experienced can still opt to use some of the other less direct meandering neighborhood routes or “bicycle friendly streets.”

##### 2. Wouldn't a bike lane increase safety problems? It is already a dangerous street (high speeds, higher than posted speed in most corridors) with documented accidents and deaths.

- The street, if redesigned with narrow lanes and bike lanes, will likely reduce the top-end travel speeds, which should improve safety for all users, including autos and cyclists. The presence of bike lanes may also improve safety by providing better sight lines and providing room for breakdowns to take place outside of motor vehicle travel lanes.
- Cities with high bicycling rates tend to have lower crash rates for all road users.  
<http://files.meetup.com/1468133/Evidence%20on%20Why%20Bike-Friendly.pdf>

##### 3. Wouldn't bicycles be an additional distraction on an already busy street?

The presence of bicycle lanes would encourage better bicycling behavior, and also highlight the presence of bicyclists to motorists. Cyclists are already on this street. Cyclists who ride on the roadway have less separation from overtaking traffic than they would with bike lanes. Additionally, many cyclists ride on the sidewalks and/or against the flow of traffic, two behaviors which are known to dramatically reduce bicyclist safety.

**4. What about the speed issues and blind spot issue near Bataan and Aviation?\***

Nelson\Nygaard staff has not yet specifically evaluated the sight distance at this location, although there is a hill crest in this area that might limit sight lines somewhat. It is worth noting that this issue is only relevant if the alternative to eliminate southbound left turn movements at Dufour/10<sup>th</sup> is chosen, since it will increase the number of drivers making southbound left turns at Bataan Road, which is where this sight distance problem may exist.

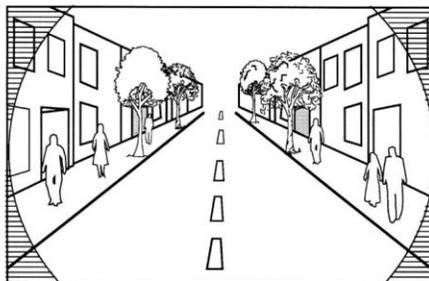
**5. What is known about safety of the lane widths?**

The best and most recent study on this issue is “*Relationship of Lane Width to Safety for Urban and Suburban Arterials*” by Potts, Harwood, and Richard. This study indicates that the optimal lane width for safety in these conditions is 10-12 feet. Narrower lanes are less safe, and wider lanes are less safe (much of the corridor currently has outside lanes that are significantly wider than 12 feet).

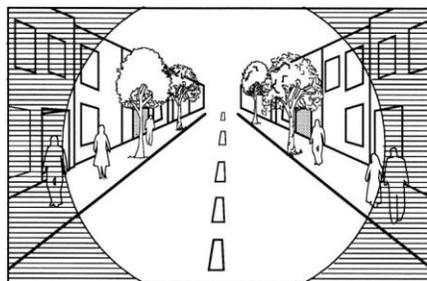
**6. What are the benefits of traffic calming?**

At slower speeds, drivers have a wider field of vision and are more likely to observe activity around them, especially things within their peripheral vision, as illustrated below:

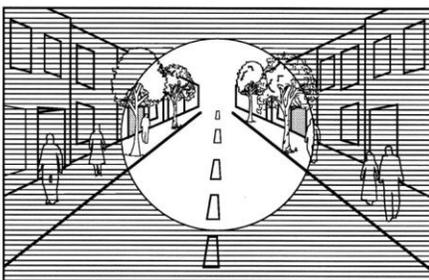
FIELDS OF VISION



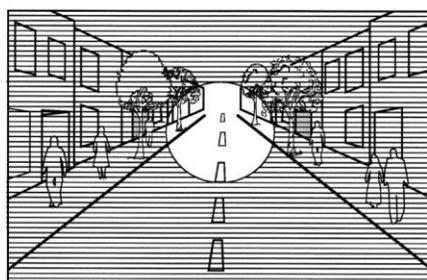
15 mph



20 mph

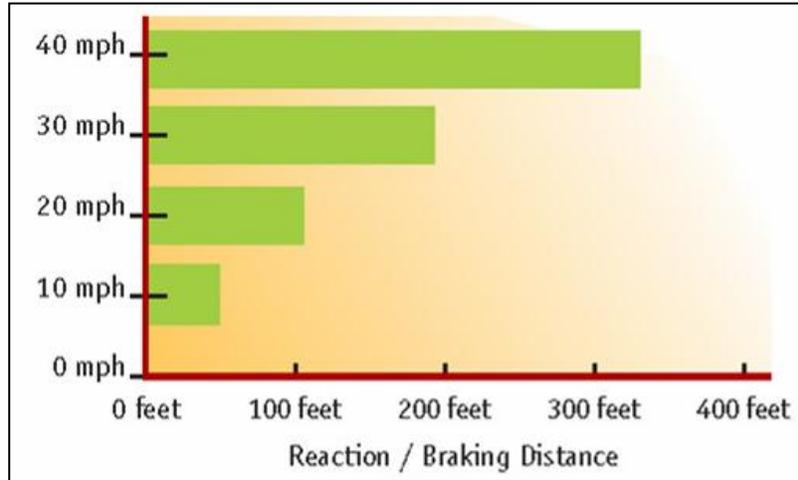


25 mph

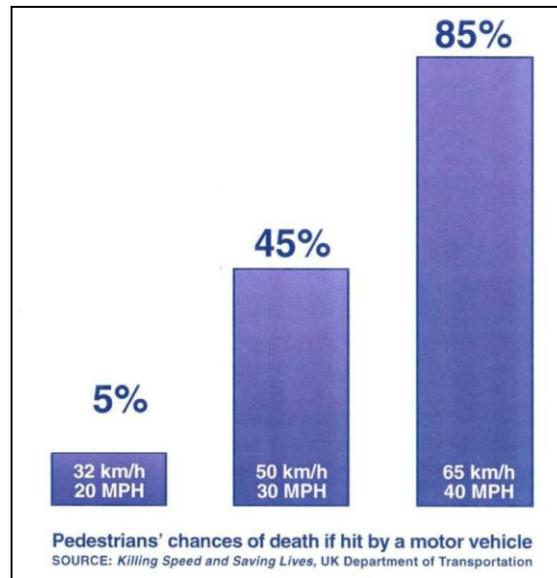


30 mph

At slower speeds, drivers are able to react and slow down to avoid a crash more easily, as illustrated in the image below:

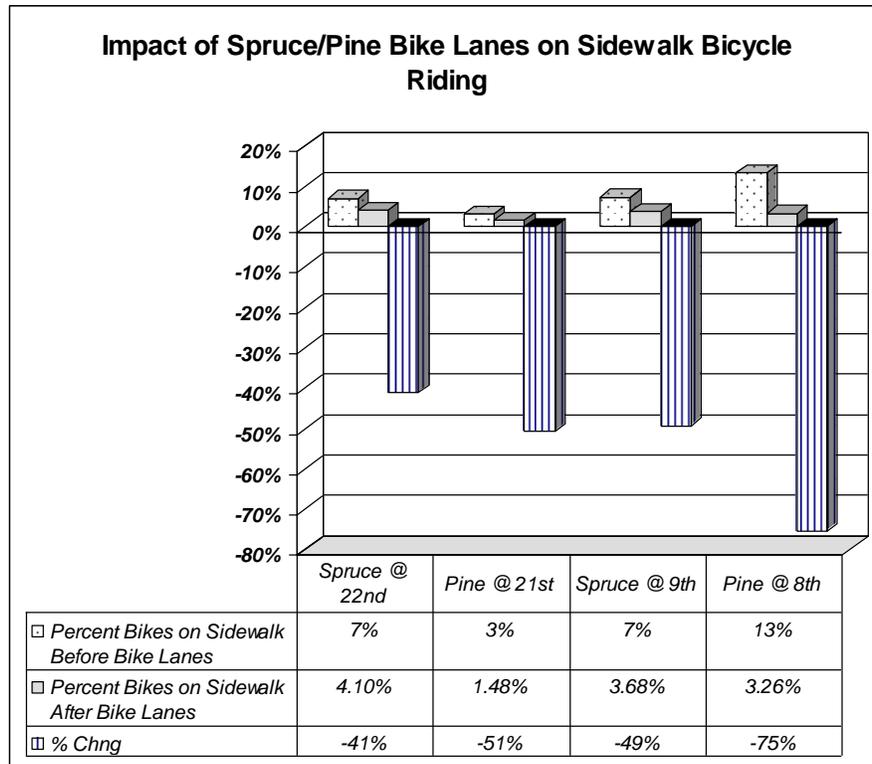


At slower speeds crashes are less severe, due to lower kinetic energy. The chart below shows how this applies to pedestrians

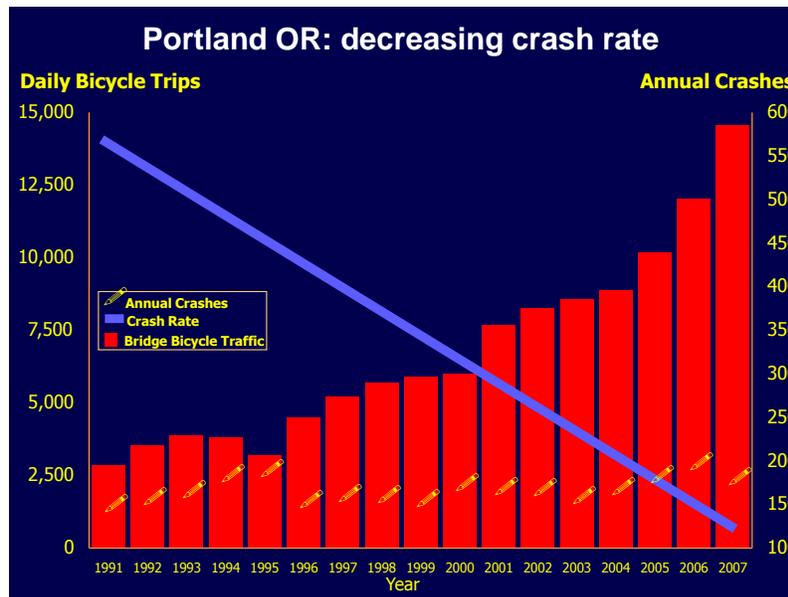


**7. Is there evidence that adding a bicycle lane has a positive effect on driver and pedestrian behavior?**

A bike lane study in Philadelphia on Spruce and Pine Streets evaluated behavior of cyclists before and after bike lanes were installed. The percent of bicyclists choosing to ride on sidewalks dropped dramatically after bike lanes were installed, as shown in the figure below.



In Portland, Oregon, as bicycle volumes have increased dramatically in the past two decades (as discussed above), the number of bicycle/motor vehicle crashes has remained roughly the same, indicating a significant reduction in the crash rate. This is illustrated in the image below. The reduction in the crash rate is almost undoubtedly due to improved motorist and bicyclist behavior as a result of the increased volume of bicyclists on the roadway, correlating with the increase in bicycle facilities.



**8. Won't adding center turn lanes negatively impact traffic flow to neighborhoods/residential streets?\***

New center turn lanes are proposed at only a few streets, including Goodman Avenue in Redondo Beach as well as Corona Street and Owosso Avenue in Hermosa Beach. Adding center turn lanes will be beneficial to safety of all users on Aviation Boulevard. It's possible that this might result in people choosing to make left turns into a handful of cross streets that would receive new left turn lanes. However, due to the well-connected street network in areas where left turn lanes are proposed to be added, it is unlikely that this will result in a significant increase in cut-through traffic on any given street.

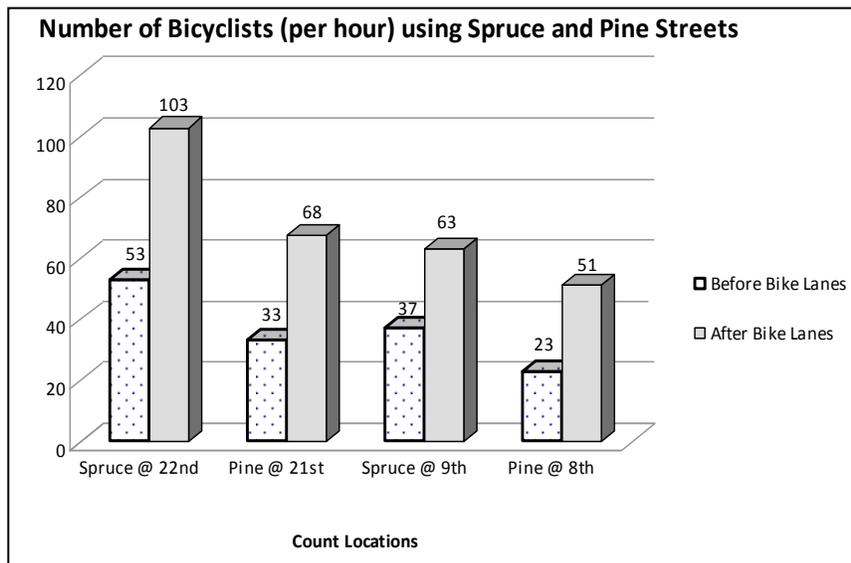
**9. Are there studies from comparable situations (urban, 40K volume, 40 mph street, arterial /commuter street)?\***

- Ocean Avenue in Santa Monica: bike lanes on a four lane road with two-way left turn lane, about 30,000 vehicles per day near PICO
- Santa Monica Boulevard: from Sepulveda Boulevard to Century Park West: bike lanes on a 6-lane road with medians and left turn lanes, with 55,000 to 66,000 vehicles per day
- Lomita Boulevard from Hawthorne Boulevard to Crenshaw Boulevard in Torrance: bike lanes on 5-lane roadway with 32,000 – 37,000 vehicles per day
- Seal Beach Boulevard from I-405 to Bolsa Avenue in Seal Beach: bike lanes on a 6-lane roadway with traffic volumes ranging from 25,000 to 47,000 vehicles per day

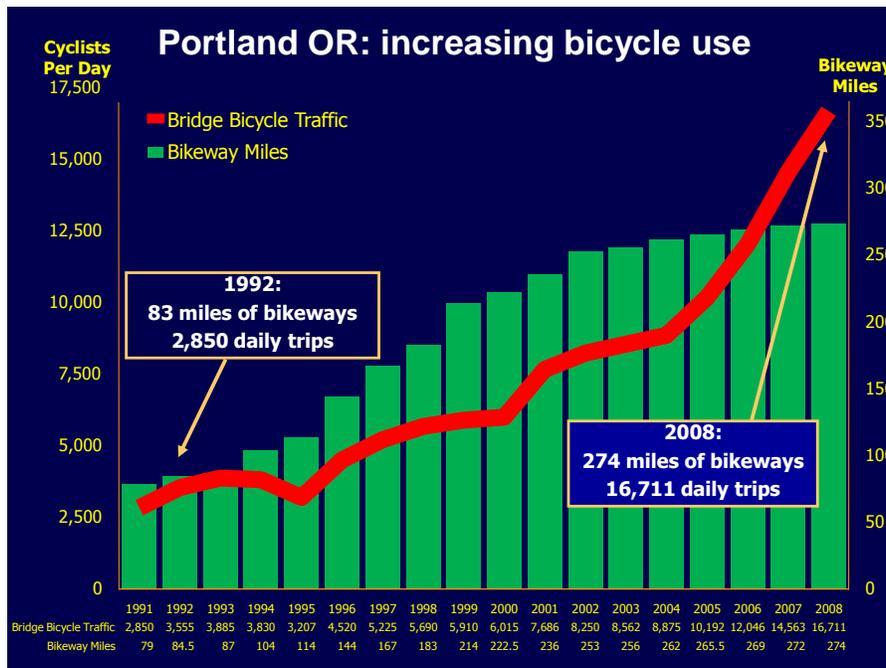
Additional examples that also show an increase in cyclists:

- Valencia Street in San Francisco; changed from four-lane undivided to two lanes with a center turn lane and bike lanes: Bike volumes increased from 88 per hour to 215 per hour.

- Edgewater Drive in Orlando; changed from four-lane undivided to two lanes with a center turn lane and bike lanes: Bike volumes increased from 375 per day to 486 per day.
- St. Claude Avenue in New Orleans; Four lane divided roadway had lanes narrowed to provide bike lanes: Bike volumes on the street increased from 120 per day to 188 per day. (This was between November 2007 and November 2008, during which time the population growth was estimated to be between 10% and 17% and gas prices dropped from \$2.65 per gallon to \$1.67 per gallon in New Orleans.)
- On Spruce and Pine Streets in Philadelphia, these two-lane streets were converted to include two lanes plus bike lanes. Bike volumes on these streets approximately doubled after bike lanes were installed, as shown in the chart below:



Portland, Oregon has seen dramatic increases in bicycle traffic throughout the city (measured by counting the number of cyclists crossing the four bridges most often used by cyclists), as shown in the following chart:

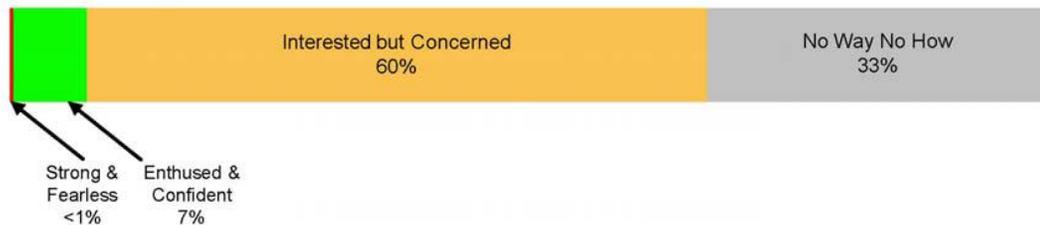


**10. What would a full proposal look like (to include a ‘best case’ scenario for bicyclists to feel fully comfortable)?**

As we explore this question it is useful to think about the different types of cyclists. The City of Portland, Oregon trying to get a better handle on the market for bicycle transportation, produced this model (more info at: <http://www.portlandonline.com/transportation/index.cfm?&a=237507&c=44597>) which, while not scientific is being more widely adopted as a useful tool throughout the cycling community. Simply described:

- **Strong and Fearless** (<1%) = those who would bike without any infrastructure improvements (examples: bicycle messengers)
- **Enthusied and Confident** (7%) = those who are attracted by ‘bare bones’ infrastructure or those who who are unable to use their bicycles because of trip distances, terrain, other obligations, or absence of facilities along their specific route.
- **Interested but Concerned** (60%) = This category is founded on this experience of other countries that have created extensive cycling systems, as well from a basic assumption that under conditions where people feel safe and where bicycling makes sense, they will ride.
- **No way. No how.** (33%) = those who may use a bicycle for recreation, but their attitude about bicycling for transportation is generally “No way. No how.”

## Four Types of Transportation Cyclists in Portland By Proportion of Population



As it applies to Aviation Blvd, the cyclists currently using the road would be categorized as “strong and fearless”. They are the minority who will ride in almost any condition. A bike lane as viewed in this current Preliminary Engineering Study would initially attract the ‘enthused and confident commuters’. If the cities’ intent is to attract the ‘interested but concerned’ (like we see today on the Strand), further study would be needed.

### BUSINESSES

#### 11. Wouldn't adding a bike lane have a negative financial impact to businesses?

- Most of this concern is based on the potential loss of access with the proposed alternative that removes some left turn movements, as well as the loss of parking proposed in the corridor. These issues have been addressed above.
- When San Francisco made its Valencia Street less conducive to automobile travel and better for bicyclists and pedestrians, nearly 40% of merchants reported increased sales and 60% reported more area residents shopping locally due to reduced travel time and convenience. Two-thirds of merchants said the increased levels of bicycling and walking improved business.  
<http://www.completestreets.org/webdocs/factsheets/cs-revitalize.pdf>
- Local businesses can also benefit greatly when they support and embrace / entice bicyclists by offering incentives, events and infrastructure. For instance, more customers can park bikes in what used to be a single car parking space.



- In Portland, Oregon where there exists an extensive bicycling network, a \$40-million-a-year bicycle industry is growing, providing between 850 and 1,150 jobs for area families.  
[http://www.altaplanning.com/App\\_Content/files/fp\\_docs/2008%20Portland%20Bicycle-Related%20Economy%20Report.pdf](http://www.altaplanning.com/App_Content/files/fp_docs/2008%20Portland%20Bicycle-Related%20Economy%20Report.pdf)
- By 2017, Portland, Oregon residents will have saved \$64 million in health care costs thanks to bicycling. By 2040, the city will have invested \$138-605 million in bicycling yet saved \$388-594 million in health care costs and \$143-218 million in fuel costs, a benefit-cost ratio of up to 4 to 1.  
<http://journals.humankinetics.com/jpah-supplements-special-issues/jpah-volume-8-supplement-january/costs-and-benefits-of-bicycling-investments-in-portland-oregon>
- Research in 2007 sought to identify the economic value of replacing car parking with bike parking in shopping strips. The case study in Lygon Street Carlton in Melbourne, Australia showed that cycling generates 3.6 times more expenditure. Even though a car user spends more per hour on average compared to a bike rider, the small area of public space required for bike parking suggests that each square meter allocated to bike parking generates \$31 per hour, compared to \$6 generated for each square meter used for a car parking space, with food/drink and clothing retailers benefiting the most from bike riders. [http://colabradio.mit.edu/wp-content/uploads/2010/12/Final\\_Thesis\\_Alison\\_Lee.pdf](http://colabradio.mit.edu/wp-content/uploads/2010/12/Final_Thesis_Alison_Lee.pdf)

#### **12. Won't a bike lane decrease access in and out of businesses?\***

- In general, bike lanes actually increase safety and line of sight for automobiles exiting businesses. As bicycles travel more slowly than autos, cars can see oncoming bicycles and cars easier due to the addition of 5-6' of buffer.
- The concern in this case is mostly a result of specific design options (not final decisions) that are included in the report. Most notably, an option that included a continuous raised median for two blocks on Aviation Boulevard, just south of Manhattan Beach Boulevard. The raised median would prevent direct left turns to some businesses and streets leading to residences. It is important to note that the design with the median is just one of several options for this section of roadway.
- Direct left turns have also been proposed to be eliminated from Aviation Boulevard to 19<sup>th</sup> Street in Manhattan Beach, north of Space Park Drive. However, in this case, the proposed project provides an alternative method of making this left turn that involves continuing past 19<sup>th</sup>, making a U-turn, and then making a right turn into 19<sup>th</sup> Street. This maneuver is safer than the direct left turn, and it would likely be possible to allow this maneuver 24 hours a day, without the existing ban on left turns between 3 PM and 7 PM.

#### **13. Wouldn't adding a center turn lane between Goodman and Grant be problematic to businesses?**

Adding turn lanes should have a positive effect on businesses, as motorists will feel more comfortable making left turns off of Aviation Boulevard.

#### **14. Will supporting/encouraging cycling to work (aerospace employees) along Aviation make a difference?**

There are people at the major employers who are requesting cycling facilities to get to work. Of approximately 200 employees (Northrup Grumman, Aerospace Corp and Raytheon Corp) surveyed at various

health, commuter, earth day and bike to work fairs, people overwhelming said they would like to see a bike lane on Aviation Blvd. The most common reasons fell into two categories:

- People living in the South Bay and south or west of Aviation Blvd said “they would like to have a safe option to walk or ride their bicycle to work, but Aviation Blvd scares them; the cars drive way too fast and currently they would not feel safe walk or riding a bike to work.”
- People living north or east of Aviation Blvd said they would like to have the opportunity to take the Metro Green Line and have a safe route to walk or ride a bicycle to work to/from the Metro stations.”

**15. Why recommend eliminating parking when parking is limited already?\***

Based on the parking study completed, the parking in much of the corridor is underutilized. In the most heavily-used areas, no parking removal is recommended. In the less heavily-used areas where parking removal is recommended, there are alternative parking locations in off-street parking lots and/or on side streets. More details are provided in the report.

**16. Once parking is taken away, isn't it gone for good?**

No. Parking can be returned.

**17. Would the need for parking reduce with increase in cycling?**

It depends on the business and their customers. There are already some cyclists on the corridor as observed and photographed by Nelson\Nygaard staff. Some of these cyclists were observed entering businesses on Aviation Boulevard where on-street parking is located, thus there is already some reduction in parking demand due to bicycling. When this cycling activity increases, there will likely be a resulting reduction in parking demand. However, the reduction in parking demand is likely to be small.

**OTHER**

**18. Can you provide impact studies on reducing parking and left turn lanes?\***

- The report suggests that a full parking study could be conducted that would take a comprehensive look at alternative parking areas (including off-street parking). However, this comprehensive look is not within the scope of the current report.
- The report also recommends that a detailed traffic study should be performed prior to implementing the recommendations. This study would look at the signalized intersections where lane use changes are recommended by the report.

**19. Why do this when bikes/cyclists are a small minority?**

Community identified bicycle lanes have proven the mantra “If you build it they will come.” Portland, OR and Long Beach, CA both have triple-digit percentage increases in their bike ridership since making their improvements.

**20. What are the estimated bicycle counts before and after?\***

- After bicycle lanes were installed post-Katrina on a New Orleans, Louisiana street, there was a 57% increase in the number of cyclists. The number of female cyclists increased 133%, and the percentage of cyclists riding in the correct direction increased from 73% to 82%.
- Other studies were noted above in earlier questions.

**21. Isn't this project too expensive – the costs are likely to actually be double what is noted in the study?**

It seemed that there was a general misunderstanding of the scope and scale of the project. The project primarily involves restriping, so the expenses are mainly removing and adding pavement markings and signs, with a relatively minor amount of physical construction of curbs, utilities, and other features.

**22. Why are we building a bike lane for very few cyclists and inconveniencing 40,000 motorists? 100 cyclists vs. 40,000 motorists.**

There are few cyclists today due to the design. Improved design can accommodate both auto and bicycle commuters. It is unsustainable to continue to build, improve and widen our streets for the exclusive use of cars. Between environmental concerns and climbing gas prices, alternative modes of transportation will become a necessity rather than a fringe culture. This is already happening in other cities much larger than any of the beach cities here and those locations are seeing a marked increase in their commuting ridership as infrastructure improvements are made. In addition, the proposed project is intended to minimize any inconvenience for motorists, by maintaining through travel lanes and turn lanes wherever possible. A detailed traffic study is recommended in order to determine the estimated effects of the proposed changes, but none of the proposed modifications are expected to have significant negative effect on motor vehicle capacity and level of service.

**23. Won't a bicycle lane lead to a decrease in property values?**

Bicycle infrastructure has been shown to either increase or have no impact on property values. A model developed as part of research that examined factors affecting property values in Delaware, showed that there is no information to suggest that a bike path designated as such by only the presence of a shoulder in the road would impact property values in Delaware as they are for the most part indistinguishable from the road corridor itself and are more a feature of the existing road rather than the neighboring properties. Additionally, property owners were concerned that a bicycle path (frequently put in through or directly adjacent to individual property) would decrease property values. In this case, bicycle path would be expected to increase property values by about \$8,800. The research indicated that the presence of a bike path either increased property values and ease of sale slightly or had no effect.

<http://128.175.63.72/projects/DOCUMENTS/bikepathfinal.pdf>

**QUESTIONS OR COMMENTS?**

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