Expanded Community Advisory Panel (XCAP)

THIS PACKET INCLUDES:

A compilation of emails (public comments, etc) submitted to the XCAP email box, XCAP@CityofPaloAlto.org, between **May 21 and June 3, 2020 at 12:00 pm (noon)**.

Note: This PDF contains bookmarks separating each email in this compilation. If you'd like to see the bookmarks but your internet browser doesn't show them, download this PDF from your browser, then re-open it in a PDF reader (such as Adobe Reader, Foxit, etc) and make sure your bookmarks panel is open.

From:	Gary Lindgren
To:	Shikada, Ed; Nadia Naik; Kamhi, Philip; Expanded Community Advisory Panel
Subject:	Latest XCAP Meeting
Date:	Thursday, May 21, 2020 2:12:24 PM

Hi Guys,
The presentation of the Charleston Ave. solution for grade separation was excellent. All right and left turns are possible which has to be a must for all our grade separation decisions along the rail line. The solution presented for Meadow does not allow for all turns and thus must be redone. Eliminate that down slope going west that allows a right turn to go north on Alma. Keep the west path at grade and then allow both right and left turns onto Alma. It seems that Meadow has to be widened slightly to allow all turns and this must be done. If we don't we are going to have so many angry people talking, "why did they do that?" We need to make sure this is done correctly the first time. Not everyone will be happy, but done right most will approve. Hopefully we can get approval to redo the solution for Meadow and at the same time redo the Churchill grade separation concept such that all turns are possible. The Partial Underpass solution was developed only for the Southgate and Ventura neighborhoods, we need solutions for all Palo Alto.
Also, think about underpass designs using the box jacking method. Done right, this would eliminate closing down Alma for long periods of time. One weekend closing for both Alma and the tracks could be that is needed. A company Petrucco could consult on feasibility.
Take Care,
Gary Lindgren

Gary Lindgren
585 Lincoln Ave
Palo Alto CA 94301

650-326-0655
Check Out Possible Grade Separation Solution at Churchill or
Copy and Paste http://www.paloaltoenergy.org/churchill/

Check Out Latest Seismometer Reading
@garyelindgren

Listen to Radio Around the World

Be Like Costco... do something in a different way

Don't trust Atoms...they make up everything

A part of good science is to see what everyone else can see but think what no one else has ever said.

The difference between being very smart and very foolish is often very small.

So many problems occur when people fail to be obedient when they are supposed to be obedient, and fail to be creative when they are supposed to be creative.

The secret to doing good research is always to be a little underemployed. You waste years by not being able to waste hours.

It is sometimes easier to make the world a better place than to prove you have made the world a better place.

Amos Tversky

From:	Arnout Boelens
To:	Expanded Community Advisory Panel
Cc:	Reckdahl, Keith; nicole.zoeller@gmail.com
Subject:	Bike pedestrian design comments II
Date:	Friday, May 22, 2020 7:49:50 PM
Attachments:	bikeDesign.pdf

Dear members of XCAP Rail committee,

Thank you very much for hosting last Wednesday's meeting. Based on what was discussed during this meeting I would like to amend my previous email. I attached a number of relevant pages of the Dutch design manual for bicycling.

- I would like to stress again that a first recommendation would be to have the bicycle/pedestrian tunnel at Churchill, and not Kellogg. To encourage bicycling and walking it is important that cyclist/pedestrians have the most direct route possible, which is over Churchill Ave. Car drivers do not spend extra energy when they take a detour, but cyclist and pedestrians do.
  Moving the tunnel to Kellogg is akin to the fact that instead of fixing the University Ave underpass, the Homer tunnel was build. Due to the very sharp corners, Homer tunnel is near impossible to navigate with a cargo bike, and the blind corners make it a dangerous place to ride.

- I overheard the suggestion during the meeting that less space could be allotted to the bicycle underpasses because existing infrastructure is only 12 ft wide. Considering the fact that, for example, the Embarcadero underpass is well over 80 years old and has never been updated, it is important to design these underpasses with the future in mind. All current underpasses are severely lacking capacity from a bicycle and pedestrian perspective, so I would encourage you to not skimp on capacity this time around.

- The plot on the first page shows the turn radius of a bike as a function of speed. At the bottom of the tunnel, bikes will have picked up quite some speed (easily 30 km/h (20 mph)), so any curve would need to be bigger than about 15m (50 ft). The corner of the Kellogg Tunnel with the Embarcadero bike path has a very sharp corners which would be a bad idea.

- The second page shows comfortable gradients. I could not guess the gradients from the renderings, but just something to keep in mind.

- The Netherlands is one of she safest countries to ride your bicycle, and infrastructure design is an important part of that. Two important aspects of safe design are:

  - Line of sight: Whenever pedestrians/bikes and car traffic cross, the pedestrian or cyclist should be in the full line of sight of the car driver and not just in the corner of his/her eye.
  - Slow down traffic: The attached graph in the third page shows the percentage of cyclist dying in a collision with a car as function of speed. It shows that especially for elderly bike riders the outcomes of a collision are very lethal at higher speeds. Thus, much of the Dutch infrastructure design aims to slow down car traffic.

- Typical bicycle lane width. We're looking at a lot of cyclists at most crossings, and the City of

Palo Alto has a policy to encourage more people to ride. To prevent the mess that is the California Ave, Embarcadero Ave, and University Ave tunnels, this would mean it is advised to have a bike path with a width of 15 ft, and a separate sidewalk for pedestrians of at least 3 ft (preferably more, since the sidewalk will be bidirectional as well). The current designs seems to be mixed use which could lead to conflict between pedestrian and bicycle traffic.

- The next page shows a design to go from one-way bike lanes to a bi-directional path. Bikes cross the road at 90 degrees, so you do not need to look over your shoulder to see cars coming. Cyclists can wait on an island in the middle of the road, which makes it safer to cross when there are more cars on the road. To slow down cars, the crossing is on top of a speed bump, and the island makes the road seem more narrow, which will cause drivers to slow down.

- Generally one tries to avoid bidirectional bike paths crossing other streets. Car drivers tend to only look left before turning onto the road and easily miss a cyclist coming from the right. However, sometimes a bidirectional path is the best option. In that case it is advised to have extra traffic signs to indicate that the bike path is bidirectional and to have the path on a speed bump, to slow cars down. Also, it helps to have any bike path slightly away from the main road. When a car turns the driver can properly see any cyclists, instead of cyclist ending up in the driver's blind corner.

- Another design example of a bi-directional path crossing a side street. The segregation verge is another way to slow down cars and can also be found on Bryant and Embarcadero. Again, the bike path is slightly away from the main road.

- The next two pages show how to combine a roundabout with a cycling path. The one lane roundabout is considered safer than a multi-lane roundabout.

- An example of a two-lane roundabout. Consider having one-lane exits, so cars on the outer lane do not block the view of drivers in the inner lane on crossing pedestrians and cyclists.

- Two pages on bike tunnels. One important piece of advice is "no (blind) corners". Sharp corners are difficult to navigate for older riders and people with cargo bikes/trailers, they are dangerous because of poor visibility and because bikes will have gained a lot of speed at the bottom of the downward slope.

- The last page is an idea that could be used instead of a roundabout. If there are no side streets a full roundabout is not needed. Just a turning lane should work as well. This can be combined with the transition from a bidirectional cycling path to a one-way path as seen on page 5.

Thank you for all your work on this project.

Kind regards,

Nicole, Arnout, & Ava Zoeller Boelens

P.S. please disregard the previous email. It was an unfinished draft that was send accidentally.

data is not available for this point, taking an extra width of approximately 0.50 m into account in bends is advisable, depending on velocity.

Due to the fact that cycling is not just about getting from A to B but can also be a relaxing and social activity, one general starting point for a design is that cyclists must be able to ride two abreast. Furthermore, from a road safety point of view it holds that parents must be able to ride alongside children. This has to be factored into the equation when calculating space for cyclists.

3.4 Bends and view

Horizontal bends

Bends are necessary to connect road sections with one another smoothly. The radius of a curve affects the speed at which a cyclist can ride in that location. The minimum radius of the curve (the horizontal radius) will depend on the nature of the cycle path.
The lower limit for curve radii is 5.00 m (see figure 3-4); in the case of smaller values the cycling speed will fall below 12 km/h and the cyclist will have to exert more effort to remain upright. The higher the design speed, the bigger the radius will have to be.

Research has revealed the connection between radius and cycling velocity shown in figure 3-4. Based on this figure it is possible to assert that:

- bicycle connections forming part of the basic network ought to have a radius of ≥ 10 m, fine-tuned to a design speed of 20 km/h;
- cycle routes and main cycle routes ought to have a radius of ≥ 20 m, fine-tuned to a design speed of 30 km/h.

Table 3-2. Route, design speed and radius

Route	Design speed	Minimum radius
Lower limit	12 km/h	5 m
Basic network	20 km/h	10 m
(Main) cycle route	30 km/h	20 m

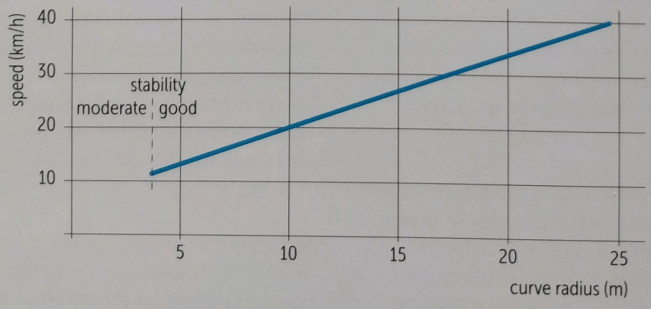


Figure 3-4. Relationship between radius and cycling speed [9]

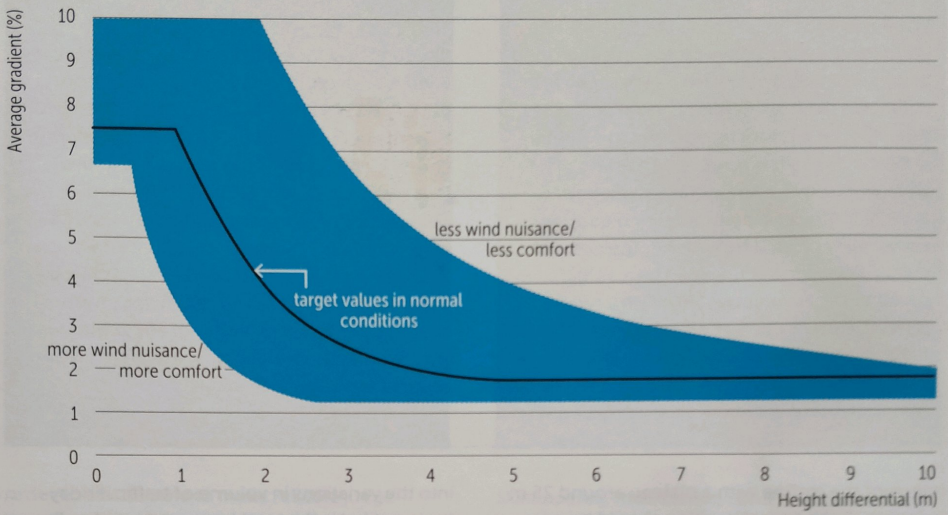


Figure 3-5. Bandwidths for gradients [8]

The following constitutes an explanatory note to figure 3-5:

- Lower limit. Delimitation of the bandwidth 'more wind nuisance / more comfort' is based on S = 0.0333, with a maximum of 6.67% and a minimum of 1.25%. Even smaller gradients would not be worthwhile, serving as a 'false flat'.
- Target values. Starting point is S = 0.075 resulting in $L = H^2/S = H^2/0.075$. In this regard, a maximum of 7.5% and a minimum of 1.75% apply.
- Upper limit. Delimitation of the bandwidth 'less wind nuisance / less comfort' is based on S = 0.200, with a maximum of 10.0%.

In order to calculate the requisite length of an incline, the level difference in centimetres can be divided by the average gradient in percent.

If a less comfortable gradient is chosen, then this could mean certain users being excluded. Consider in this regard such groups as the elderly, children, parents with child and/or shopping. It could force them to dismount or choose a different route.

Course of the incline

Aside from the average gradient, the course of the incline plays a role. Hence an upward slope might be a little steeper at the start than it is further up. The idea here is that the speed of a cyclist's approach will enable him to proceed up the first part of the slope faster due to momentum ('free height'). A descending gradient will ensure a constant cycling speed and effort overall.

Where level differences of in excess of 5 m have to be traversed, then the recommendation is to

The design of a junction should optimally support the interchange function and must be comprehensible to road users. This goal is best accomplished by creating a clear situation with a minimal number of points of conflict. The fundamental principle of having as few points of conflict as possible can be incompatible with other wishes, e.g. in terms of traffic flow. If for that reason extra traffic lanes are created, then this could result in insufficient comprehensibility and 'aids' will be required (such as traffic lights). From the perspective of this Design Manual's design philosophy, such solutions are not pursued. They are discussed, however, as these solutions are common in practice.

Minimizing the speed of the different road users is paramount when it comes to interchange. The chances of survival when being hit by a car at low speed are considerably higher than they are if the car is travelling at high speed. Research [1] shows that the probability of serious and fatal injury among cyclists starts to rise substantially when the speeds of motorized traffic go above 30 km/h.

Figure 6-1 presents the relationship between the probability of a cyclist dying as a result of being hit by a passenger car and the applicable collision speed. It will be clear that a relatively limited increase in collision speed makes the chances of a fatality considerably higher.

Aside from the speed, other important factors for interchange safety include the directions of the various road users, the clarity of the situation and the volumes of the different traffic flows.

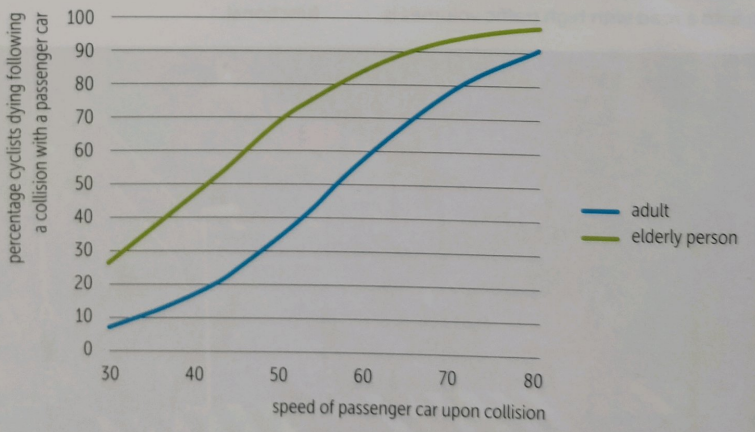


Figure 6-1. The probability of a cyclists dying as a result of a collision with a passenger car as a function of the collision speed (processed by Theo Zeegers using TNO research data [2])

V2 Solitary cycle path

Function

- providing a connection for cyclists

Application

- within and outside of built-up areas
- in recreational and utilitarian cycle networks
- rapid connection between neighbourhoods, districts, etc.
- bidirectional traffic

Implementation

- siting sign G11 ('Mandatory cycle path') or sign G13 ('Advisory cycle path'): see V1
- design speed 30 km/h for main cycle network and 20 km/h for basic structure
- centre line desirable on utilitarian paths: see V5
- edge markings if unlit: see V6
- preferably asphalt or concrete surfacing
- preferably provide lighting for utilitarian paths in built-up areas
- if need be, surfaced (or partially surfaced) verge strip/pavement on both sides (0.30-0.50 m wide)

Dimensions

rush hour volume (bidirectional) (bicycles/hour)	minimum width of path (b)
0-50	1.50 m[1)]
50-150	2.50 m[1)]
150-350	3.50 m
> 350	4.50 m

1) up to 2.50 m wide a path will have a verge or pavement on both sides which can be ridden on, giving cyclists room to swerve

- centre line: 0.30-2.70 m on straight sections; 2.70-0.30 m in bends
- width of any footpath $\geq$ 1.00 m

Considerations

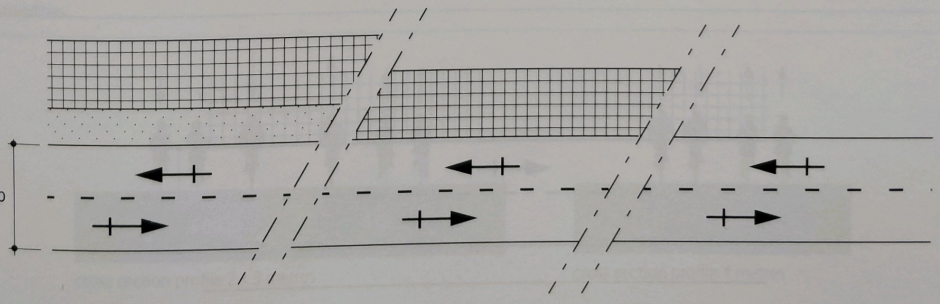
- comfortable for cyclists
- safe for cyclists
- nuisance between cyclists and pedestrians if there is no pavement or footpath
- unconducive to personal safety in the case of remote location
- nuisance due to unlawful use on the part of mopeds and motorcycles

Combination possibilities

- footpath

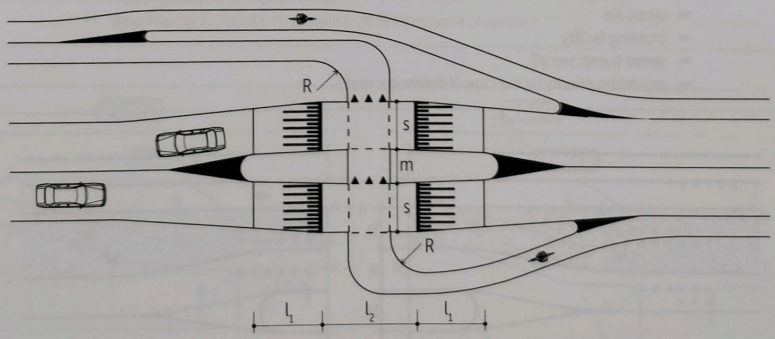
Alternatives

- solitary cycle/moped path: see V3



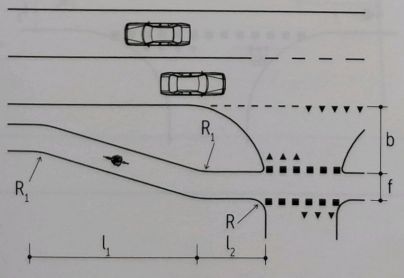
V24 Transition from bidirectional cycle path to one-way cycle path by way of crossing with transverse central island

Function	▪ securing cyclists' crossing if a crossing is not feasible at a junction
Application	▪ distributor road within and outside of built-up areas
Implementation	▪ safeguarding recognizability by means of vertical elements and public lighting ▪ safeguarding good visibility of bicycle traffic ▪ cyclists do not have right of way ▪ indicating priority situation, no block markings, no red vehicle path ▪ preferably raised
Dimensions	▪ l_1 = 4.80 m ▪ l_2 = 5.00 to 10.00 m ▪ m ≥ 2.50 m ▪ R = minimum of 5.00 m ▪ s = 2.90-3.50 m ▪ curve radii on the non-intersecting cycle path 17 m as a minimum
Considerations	▪ low speed for all traffic at crossing ▪ cyclists within field of vision of other traffic ▪ cyclists are able to cross in stages due to transverse central island ▪ use of space ▪ increase in noise nuisance and vibrations ▪ cyclists crossing diagonally
Combination possibilities	▪ area boundary

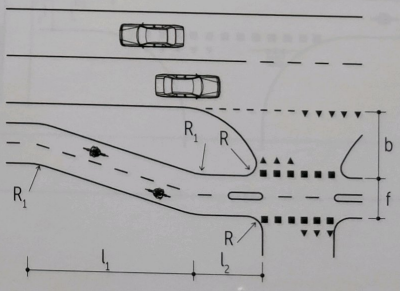


V26 Gentle outward bend of cycle path

Function	▪ improving cyclists' visibility ▪ clarifying right of way
Application	▪ cycle path alongside priority road (distributor road) ▪ if cycle path occupies less than 4.0 m of the carriageway ▪ within and outside of built-up areas
Implementation	▪ continuing surfacing on side road ▪ shark's teeth (V55) and block markings ▪ no tall plants ▪ in the case of bidirectional cycle path, apply centre line and arrow markings on the cycle path and install additional signage (underplate J24 with OB0503) for the benefit of recognizability on the part of motorists
Dimensions	▪ width of cycle path: see V16 ▪ b = 5.00 m ▪ f ≥ 2.00 m, in (1); f ≥ 2.50 m, in (2) ▪ l_1 = circa 30.00 m ▪ l_2 ≥ 5.00 m ▪ R ≥ 5.00 m ▪ R_1 ≥ 12.00 m
Considerations	▪ comfortable for cyclists ▪ stacking space for cyclists turning left on cycle paths around the junction ▪ stacking space for conflicting vehicles ▪ large-scale junction
Combination possibilities	▪ streamed cycle paths: see V35 ▪ raised cycle path (on speed hump) ▪ speed bump in coordinating branch 20 m from point of conflict



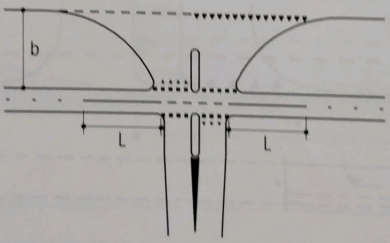
(1)



(2)

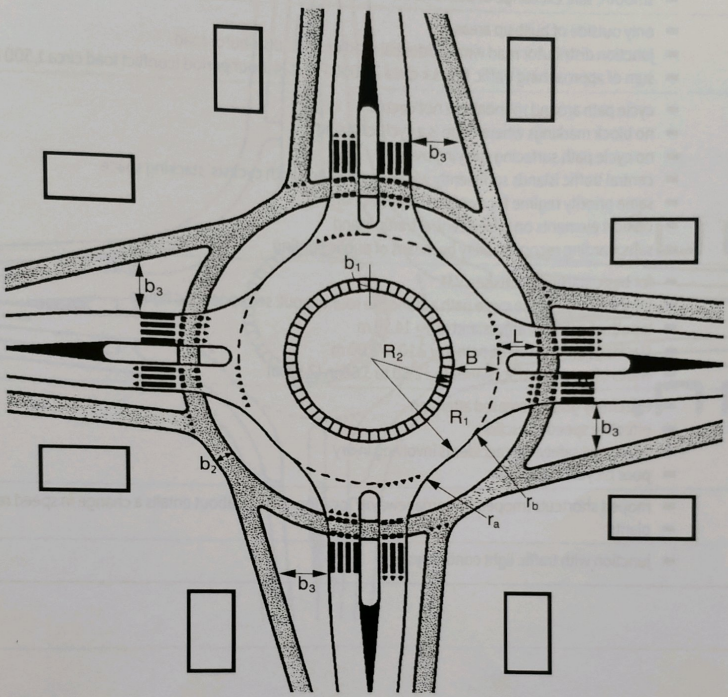
V28 Bidirectional cycle crossing over side road, in road with segregation verge

Function	- improving cyclists' visibility - clarifying right of way
Application	- priority junction - within and outside of built-up areas
Implementation	- as in V27 plus a number of 'extras' - centre line on cycle path: see V5 - drawing attention to bidirectional path - shark's teeth on both approach directions for the cycle path: see V55
Dimensions	- b = 5.00 m - L = circa 10 m
Considerations	- reasonable view of cyclists - little chance of cars blocking cycle path - generous stacking space for left-turning cyclists - motorists are sometimes not expecting any bicycle traffic from the 'wrong' direction, increasing the probability of accidents for bicycle traffic coming from this direction
Combination possibilities	- sign B7 instead of sign B6; consider accompanying stop line instead of first row of triangular markings - raised cycle crossing - arrow markings on cycle crossing to clarify bidirectional traffic



V31 Single-lane roundabout with segregated cycle path and cyclists given right of way

Function	▪ smooth, safe exchange of traffic flows
Application	▪ connection of distributor road to other distributor road or residential road ▪ in built-up areas ▪ sum of approaching traffic flows < circa 25,000 PCU/24-hour period (conflict load circa 1,500 PCU/h) ▪ even distribution of traffic over the branches
Implementation	▪ bicycle crossing provided with block markings and shark's teeth, also for traffic leaving the roundabout ▪ continue cycle path in different colour at the crossings over roundabout, parallel to the carriageway on the roundabout ▪ cycle path around roundabout circular ▪ consider gentle camber for cycle path (improved visibility) ▪ get cyclists no longer following the roundabout off cycle path as soon as possible: see indicator b_3 ▪ same priority regime for cyclists and pedestrians ▪ vertical elements on raised central traffic island ▪ safeguarding recognizability by means of public lighting ▪ consider having no central traffic island(s) on quiet branch(es)
Dimensions	▪ R_1 =12.50 to 20.00 m ▪ R_2 = 6.50 to 15.00 m ▪ r_a =12.00 m, with central traffic island; r_a = 8.00 m, without central traffic island ▪ r_b =15.00 m, with central traffic island; r_b = 12.00 m, without central traffic island ▪ B = 5.00 to 6.00 m (depending on R_1 and R_2) ▪ b_1 = 1.50 (1.00) m ▪ b_2 = 2.00 to 2.50 m ▪ b_3 = as big as possible ▪ L = 5.00 m
Considerations	▪ relatively safe: fewer points of conflict than with traditional junction ▪ relatively high capacity ▪ improved visibility of junction ▪ considerable reduction in speed ▪ good bicycle traffic flow ▪ difficult for lorries to drive on in the case of small R_1 and R_2
Combination possibilities	▪ crossing facility ▪ bidirectional cycle path ▪ bus lane on approach branch
Alternatives	▪ priority junction with central traffic island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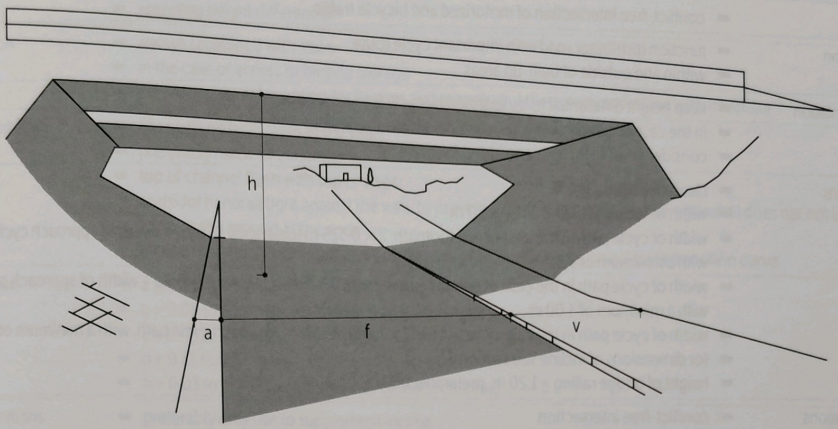
V33 Turbo roundabout with cyclists given right of way

Function	▪ smooth, safe exchange of motorized traffic
Application	▪ junction distributor roads ▪ up to 40,000 PCU/24-hour period on the roundabout, depending on implementation ▪ bicycle traffic on roundabout, only if grade-separated crossing and/or diverting are not possible
Implementation	▪ continue cycle path's red colour over the roundabout ▪ create bicycle crossings on raised junction ▪ for reasons of road safety, make all exits single lane (to prevent accidents due to obstructed view) ▪ bicycle crossings on turbo roundabouts in built-up areas are always ridden in a single direction, so never create bidirectional cycle paths around them
Dimensions	▪ highly dependent on the roundabout design ▪ the shape of the roundabout depends on traffic volumes, road safety and amount of space taken up ▪ see CROW publication 257 'Turborotondes' [10]
Considerations	▪ high capacity ▪ improved visibility of junction ▪ considerable reduction in speed ▪ easy for lorries and public transport to drive on ▪ takes up a lot of space ▪ risk of weaving accidents ▪ risk of cyclists being hidden in the case of double exit ▪ detour for cyclist due to one-way cycle path around roundabout
Combination possibilities	▪ crossing facilities
Alternatives	▪ turbo roundabout with cyclists not given right of way: see V34 ▪ junction with traffic lights

V51 Cycle underpass

Function	▪ conflict-free intersection of motorized and bicycle traffic
Application	▪ junction distributor road with important cycle route ▪ within and outside of built-up areas
Implementation	▪ cyclists preferably at ground level; where this is not possible, raise carriageway for motorized traffic by about 2.00 m, thereby reducing the height differential to be spanned by cyclists ▪ make maximum use of daylight: in the case of separating carriageways, a central opening in the overhead structure can allow extra light ingression ▪ no high plants near entrance to underpass ▪ lighting in underpass should be vandalism-resistant (recessed) ▪ no corners/niches ▪ walls recede towards top ▪ straight course: exit must be visible upon entering underpass ▪ inclines before and after underpass should not give people with malicious intent the opportunity to conceal themselves (no plants, no corners and suchlike) ▪ consider combining with pavement for pedestrians ▪ outside of built-up areas, consider combining with fauna tunnel
Dimensions	▪ width of cycle path in the absence of footpath: 2 × 0.625 m (clearance closed wall) + width of approach cycle path, with a minimum of 3.50 m ▪ f: width of cycle path in the case of one-sided footpath: 0.625 m (clearance closed wall) + width of approach cycle path, with a minimum of 3.00 m ▪ width of cycle path in the case of two-sided footpath: width of approach path, with a minimum of 3.00 m ▪ width of footpath (if present): v > 1.00 m ▪ h > 2.50 m ▪ a = 0.5 m ▪ for dimensions of incline see section 3.5 ▪ underpass floor 2% on an incline (drainage)
Considerations	▪ conflict-free intersection (safe) ▪ multiple approach routes possible ▪ cyclists on lateral connections often have to take a detour in order to get on the route of the underpass ▪ unimpeded view through underpass ▪ good lighting situation ▪ shorter inclines than in the case of bridge (due to smaller height differential) ▪ usually no groundwater problems when raising intersecting road ▪ phased construction will be necessary in current situation ▪ lack of personal safety ▪ vulnerable to vandalism
Combination possibilities	▪ tiered incline
Alternatives	▪ cycle bridge (less beneficial for cyclists than a tunnel): see V52 ▪ crossing with traffic light control system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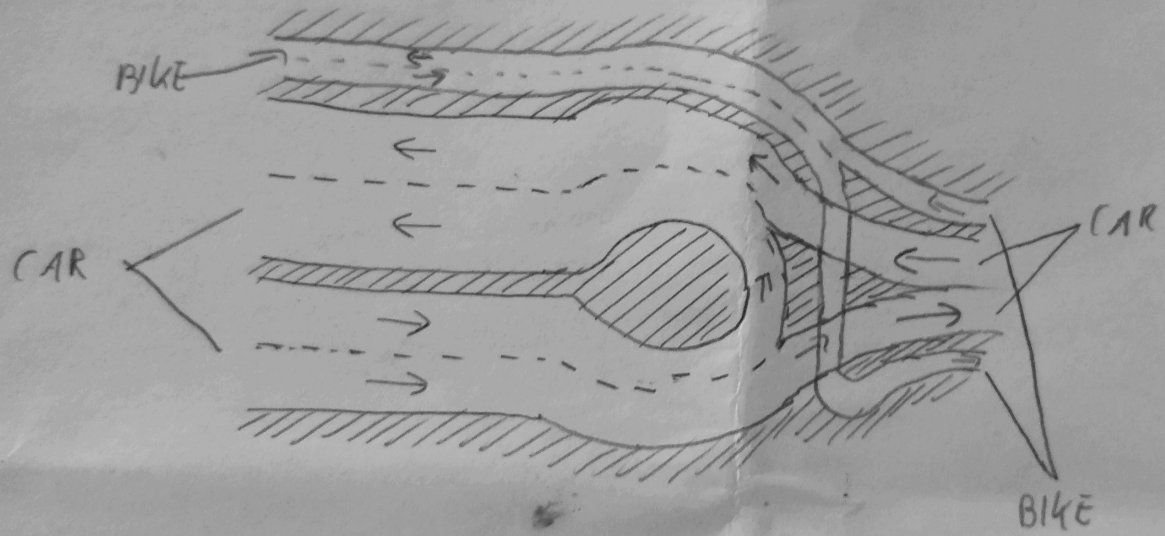
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From: Gary Lindgren
To: Shikada, Ed; Nadia Naik; Kamhi, Philip; Expanded Community Advisory Panel; "Mercurio, Etty"
Subject: Do We Need a Shoofly Track for Charleston and Meadow
Date: Friday, May 22, 2020 4:16:27 PM

Hi Guys,
The letter from Melissa Reggiardo would seem to state that a shoofly would be required for Palo Alto's grade separations. However the work that Petrucco has done in Europe would indicate other possibilities. In 2018 a project was undertaken in Bressanone Italy to go under 2 tracks and to keep full service going. A concrete box was built for the new underpass close to the tracks. They then started to push the box and when really close to the tracks, they added I-beams under the tracks and used blocking to support the rails. They had 5 hours between 11PM and 4AM when the I-beams were put in place. The idea was that as the box was push along under the tracks, the box would support the I-beams as they slid on the box as the ground below was removed. There was full rail service even as the box was being pushed under the tracks. Here is a short video: https://www.youtube.com/watch?v=_OVTV6X-B34 For Alma, I suggest that the area be opened to remove material as the box is pushed through, all the while the rails have full service. Once the box is in final position, then this area can be covered with paving material and Alma can be opened for traffic. The cross streets can then be finished with final slopes and concrete walls. The bike and pedestrian path could even be built into the same box structure. I think Caltrain would approve this process, it seems clean. This should work for Churchill, Meadow, and Charleston.
Take Care and Have a Good Weekend,
Gary Lindgren

Gary Lindgren
585 Lincoln Ave
Palo Alto CA 94301

650-326-0655
Check Out Possible Grade Separation Solution at Churchill or
Copy and Paste http://www.paloaltoenergy.org/churchill/

Check Out Latest Seismometer Reading
@garyelindgren

Don't trust Atoms...they make up everything

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The difference between being very smart and very foolish is often very small.
So many problems occur when people fail to be obedient when they are supposed to be obedient, and fail to be creative when they are supposed to be creative.
The secret to doing good research is always to be a little underemployed. You waste years by not being able to waste hours.
It is sometimes easier to make the world a better place than to prove you have made the world a better place.

Amos Tversky

From:	Arnout Boelens
To:	Expanded Community Advisory Panel
Cc:	Reckdahl, Keith
Subject:	Questions for traffic engineers for the next community meeting
Date:	Tuesday, May 26, 2020 1:45:47 PM

Dear members of the XCAP committee,

Considering the ongoing work on pedestrian and bicycle infrastructure, I have a couple of questions for the traffic engineers for the next community meeting. I was wondering whether the general public can submit requests?

• Considering how hard it is to interpret the artistic renderings, would it be possible to request 2D technical drawings for the next meeting? It would be great so see how wide sidewalks are, what are the radii of curves in the bike path, etc.

• What age group are you designing the bicycle infrastructure for? Would you feel safe having your 8 year old bike there or your 80 year old parent? Can they bike next to each other?

• What kind of bikes are you designing for? Scooters and cargo bikes are becoming more and more popular. What about tricycles?

•What speed are you designing for? Electric pedal assist goes up to 20 mph.

• What will be the PCU/hour at the various pedestrian and bicycle intersection and how are you going to make sure the intersections have good crossibility for pedestrians and bicycles?

• How many cyclist/hour are you designing for? Will the infrastructure be sufficient to promote and accommodate 10 percent of trips by bike as is a city of Palo Alto policy goal?

Thanks again for all your effort and great work.

Kind regards,

Arnout Boelens

From: pellson@pacbell.net
To: Expanded Community Advisory Panel
Subject: FW: Grade Separations Pedestrian Bicycle Connectivity And Safety
Date: Friday, May 29, 2020 12:10:29 PM

Fyi…

From: pellson@pacbell.net <pellson@pacbell.net>
Sent: Thursday, May 28, 2020 6:35 PM
To: 'Kamhi, Philip' <Philip.Kamhi@CityofPaloAlto.org>; 'Star-Lack, Sylvia' <Sylvia.Star-Lack@CityofPaloAlto.org>; 'Ken Joye' <kmjoye@gmail.com>
Cc: 'Ed.Shikada@cityofpaloalto.org' <Ed.Shikada@cityofpaloalto.org>; 'Larry Klein' <lklein40@gmail.com>; 'Nadia Naik' <nadianaik@gmail.com>; 'Mesterhazy, Rosie' <Rosie.Mesterhazy@CityofPaloAlto.org>; 'Chan, Joanna' <Joanna.Chan@CityofPaloAlto.org>; 'Ripon.bhatia@cityofpaloalto.org' <Ripon.bhatia@cityofpaloalto.org>; 'PABAC' <PABAC@CityofPaloAlto.org>
Subject: Grade Separations Pedestrian Bicycle Connectivity And Safety

Hi Philip, Ken and Sylvia,

The recent meeting on grade separations left me concerned about the bicycle/pedestrian safety aspects of this planning process. The concept renderings do not represent ped/bike facilities to the same level of detail as motor vehicle facilities. As a result, connectivity is unclear in a number of areas. All of the analysis done so far has focused on auto LOS.

These plans are not ready for prime time. They are ready for a first round of PABAC comment, and there is an opportunity to do that on June 2. There is urgency. Churchill, Meadow and Charleston are all well-used school commute routes. The CSTSC has closed shop for the summer without having looked at this. It looks like City Council will be getting an XCAP update on June 8. The XCAP expects to complete their work by the last week of August with their recommendations report being completed sometime before that this summer. Given the schedule, it seems to me we are lagging on ped/bike design and ped/bike review.

1). I hope that bike/ped facilities will be much better developed before the latest alternative is released for a Virtual Town Hall meeting or Council review.

2). I hope that PABAC will have opportunity for a first round of comment on these alternatives on June 2 at PABAC's meeting. Philip, Ken and Sylvia, and Rosie, Joanna, would that be possible?

Here are some links that might be helpful for Ken and other PABAC members in the interim:

Agenda for XCAP is here which has links to AECOM docs. Note the exhibits show the bike/ped improvements but the renderings don't show them.
https://connectingpaloalto.com/wp-content/uploads/2020/05/2020-05-20_XCAP-Agenda.pdf

Hexagon report is here:
https://connectingpaloalto.com/wp-content/uploads/2020/05/2020-05-20_item-3_Churchill-Meadow-and-Charleston-Grade-Separation-Traffic-Analysis.pdf

Penny Ellson

From:	Nadia Naik
To:	Expanded Community Advisory Panel
Subject:	Fwd: Upcoming Virtual XCAP Meeting - June 3, 2020
Date:	Friday, May 29, 2020 2:48:33 PM
Attachments:	2020-06-03_XCAP Agenda.pdf

Please note - the Noise and Vibration memo is long (41 pages) so please be sure to read it ahead of the meeting and come with questions.

Also - don't forget to respond to the Doodle poll.

Thanks
Nadia

---------- Forwarded message ---------
From: **Wilson, Sarah** <Sarah.Wilson@cityofpaloalto.org>
Date: Fri, May 29, 2020 at 9:34 AM
Subject: Upcoming Virtual XCAP Meeting - June 3, 2020
To: Shikada, Ed <Ed.Shikada@cityofpaloalto.org>, Bhatia, Ripon <Ripon.Bhatia@cityofpaloalto.org>
Cc: Kamhi, Philip <Philip.Kamhi@cityofpaloalto.org>, Horrigan-Taylor, Meghan <Meghan.Horrigan-Taylor@cityofpaloalto.org>, Litzinger, Millette <millette.litzinger@aecom.com>

Hello XCAP members,

Greetings! The next XCAP meeting will be on Wednesday, June 3, at 4:00 pm.

The meeting agenda is attached to this email and online here: https://connectingpaloalto.com/presentations-and-reports/.

Like all meetings since April 22, this will be a Zoom webinar. On the morning of the meeting, you'll get an email from "Office of Transportation" (me) with the subject line, "Panelist for XCAP Meeting June 3." The body of the email will contain the all-important hyperlink (blue text) that says "Click Here to Join."

That is your unique link for you to join the meeting as a "Panelist." Please do not forward your link to someone else as it is tied to you. The public can join the meeting (as "Attendees") with the public information shared on the agenda/website/etc.

You are welcome to join the meeting before the start time of 4:00 pm -- as early as say 3:30 pm. We just want to make sure everyone is successfully connected and comfortable before the meeting begins. Please let me know if you have any questions about Zoom.

Thank you,

Sarah Wilson
Administrative Assistant, Office of Transportation
City of Palo Alto
Sarah.Wilson@CityofPaloAlto.org
(650) 329-2552

From:	Gary Lindgren
To:	Shikada, Ed; Nadia Naik; Kamhi, Philip; Expanded Community Advisory Panel; "Mercurio, Etty"
Subject:	The Box Jacking Method
Date:	Friday, May 29, 2020 3:24:09 PM
Attachments:	box_jack_method_5_27_2020.pdf

Hi Gang,

At the time of the Churchill design solution XCAP meeting, there was some discussion of Box Jacking. That term was all new to me, I had to learn more. I have put together a PowerPoint presentation that describes everything about Petrucco's Box Jacking methods. See attached. With Box Jacking, there would be no need for a shoofly bypass for the rails. The letter that Philip Kamhi received from CalTrain was quite explicit that a shoofly would almost certainly be required. But the process that Petrucco has developed should satisfy CalTrain as I have outlined in the attached file. Also with this method, Alma would be closed down only for one weekend.

Have a Good Weekend,

Gary

Gary Lindgren
585 Lincoln Ave
Palo Alto CA 94301

650-326-0655

Check Out Possible Grade Separation Solution at Churchill or
Copy and Paste http://www.paloaltoenergy.org/churchill/

Check Out Latest Seismometer Reading
@garyelindgren

Listen to Radio Around the World

Be Like Costco... do something in a different way

Don't trust Atoms...they make up everything

A part of good science is to see what everyone else can see but think what no one else has ever said.

The difference between being very smart and very foolish is often very small.

So many problems occur when people fail to be obedient when they are supposed to be obedient, and fail to be creative when they are supposed to be creative.

The secret to doing good research is always to be a little underemployed. You waste years by not being able to waste hours.

It is sometimes easier to make the world a better place than to prove you have made the world a better place.

Amos Tversky

BOX JACKING METHOD

A faster way to build an underpass below railroad tracks

Gary Lindgren
gel@theconnection.com
650-326-0655

WHAT IS THE BOX JACKING METHOD

- Box jacking is a construction process where a concrete box is either assembled or constructed on-site and then pushed under the rail tracks or road above.
- The concrete box becomes the new underpass.
- A powerful array of hydraulic cylinders slowly push the box ahead.
- The cylinders can only push about one foot at a time and then the cylinders are retracked and new spacers are put in back of the cylinders and then the cylinders push again, just one step at a time.
- Here is an example: https://www.youtube.com/watch?v=_OVTV6X-B34

WHY USE JACK BOXING METHOD

- The Jack Box method eliminates the need for the shoofly temporary tracks which allow full service during construction.
- The train tracks have full service even as the box is being pushed under the tracks.

STEP BY STEP (1)

- The first step is to prepare area for dewatering.
- On the west side the tracks for Churchill, Meadow and Charleston closely spaced holes will be drilled and then filled with concrete reinforced with rebar.
- The holes must be deep enough for the concrete piers to hold back the soil when dirt is removed 20 feet below.
- The purpose is to prepare a working space to build the box.
- Excess water is then pumped out.

STEP BY STEP (2)

- Once the dewatering is complete, then the next step is to lay down a concrete pad.
- The pad is first the work site to construct the concrete box.
- Second it becomes the launching pad for pushing the box forward.
- The rear part of the pad must be reinforced as the pressure cylinders will push against this back area and push the box forward.

STEP BY STEP (3)

- The next step is to build the concrete box that becomes the flat part of the underpass going under the tracks and Alma.
- This box must be designed and built to carry the load for the tracks and for the road Alma and to carry 2 lanes of traffic and a path for bikes and pedestrians in the underpass.
- This construction will take several weeks to complete.

STEP BY STEP (4)

- The jacking process can start by pushing the box ahead a few feet.
- As is it gets close to the tracks, the concrete piers that were installed for the dewatering and next to the tracks must now be removed in order to unblock the path.
- When the box reaches the track ballast, work now is to stabilize the tracks and make sure that they are not moved in any way as the box moves under the tracks.

- To stabilize the tracks, long I-beams are placed on top of the box and then at several spots along the length of the track span, the ballast is removed and the I-beams are pushed under the tracks and blocking used secure the downward pressure of the rails and load above.
- The ballast removed is put back and tamped in place.
- Remember at this point all the earth and ballast is still in place to receive the full load of the rail traffic.
- The process of pushing the I-beams in place is done at night during off traffic hours.

STEP BY STEP (5)

STEP BY STEP (6)

- A steel girder is laid across the steel I-beams in order to prevent the box pushing from moving the rail tracks.
- Notice the rail cars going by, this is an active railroad.
- The steel girder is anchored at each end by a concrete pier. In our case this could be one of the piers installed for the dewatering and was left exposed by a couple feet.

STEP BY STEP (7)

- Steel I-beams are laid next to the rails and on top of the I-beams underneath the rails.
- These I-beams on top of the rail bed form a temporary bridge.
- The picture on the right shows that the box has now been pushed through to the other side.

STEP BY STEP (8)

- Notice that the I-beams parallel to the tracks rest on the I-beams under the tracks.
- Between each rail tie is a steel box beam that slides into slots of the I-beam next to the rails.
- The steel box beams fasten to the rails much like rails are fasten to the rail tie.
- Heavy duty chains connect the steel girder to the I-beam parallel to the rails to keep the rails from moving.

STEP BY STEP (9)

- As the box is pushed forward, dirt and soil is removed to the rear area and removed.
- The hydraulic cylinders are shown in the picture, notice the shiny cylinders in the lower middle area.

STEP BY STEP (10)

- Once the box has passed under the tracks, then the area is opened up and soil is removed from the top also.
- At this point Alma would be closed down for a long weekend.
- Soil would be removed as the box is pushed forward.
- When the box is in the final position, then Alma can be paved over the box area and traffic can resume.
- The next step is to complete the approaches to the underpass.

- The Petrucco Company developed the box jacking process in 1978 and has completed 1500 projects.
- Last summer the Petrucco process was used in the United States for the first time for the Long Island Railroad. It is part of 6 underpasses to be completed.
- Several projects are in the process in North America.
- Local contact is in Miami Beach FL, petruccousa@petruccousa.com

- Video Credits: https://www.youtube.com/watch?v=_OVTV6X-B34 https://www.youtube.com/watch?v=kugSgmMv8DY

From: Stephen Rock
To: Robinson, William
Cc: PABAC; Expanded Community Advisory Panel
Subject: Re: Role of PABAC regarding Grade separation
Date: Saturday, May 30, 2020 11:58:44 AM

Thanks Rob,
Whatever happened to the connection between Emerson and the market/shops (Grocery Outlet). I thought that was promised when the housing project was complete.
-Steve

On Sat, May 30, 2020 at 11:33 AM William Robinson <williamrobinson@goldenworld.com> wrote:

During the May 20, 2020 online meeting of the XCAP committee, a new proposal alarmed me.

I think PABAC should have an advisory role in evaluating the various proposals for separating the rail from roadways, bikeways and sidewalks. Recent ideas have emerged. They "deeply" tunnel Meadow and Charleston under the tracks. A 20' wide two way path protected from vehicles is proposed on one side of the Meadow tunnel.

I am opposed using a ped-bike path on only one side, particularly at Meadow. I think bicycle and pedestrian safety would be increased.

Opposition to paths on only one side is informed by my service as a School Safety Crossing Guard at Meadow and Charleston intersections. Bicyclists are instructed by law to ride in the direction of vehicle traffic. The one side ped-cycle track proposed at Meadow-Alma would bring special danger to morning rush hour Gunn and Fletcher cyclists. They would have to make crossing maneuvers at entrance and exit.

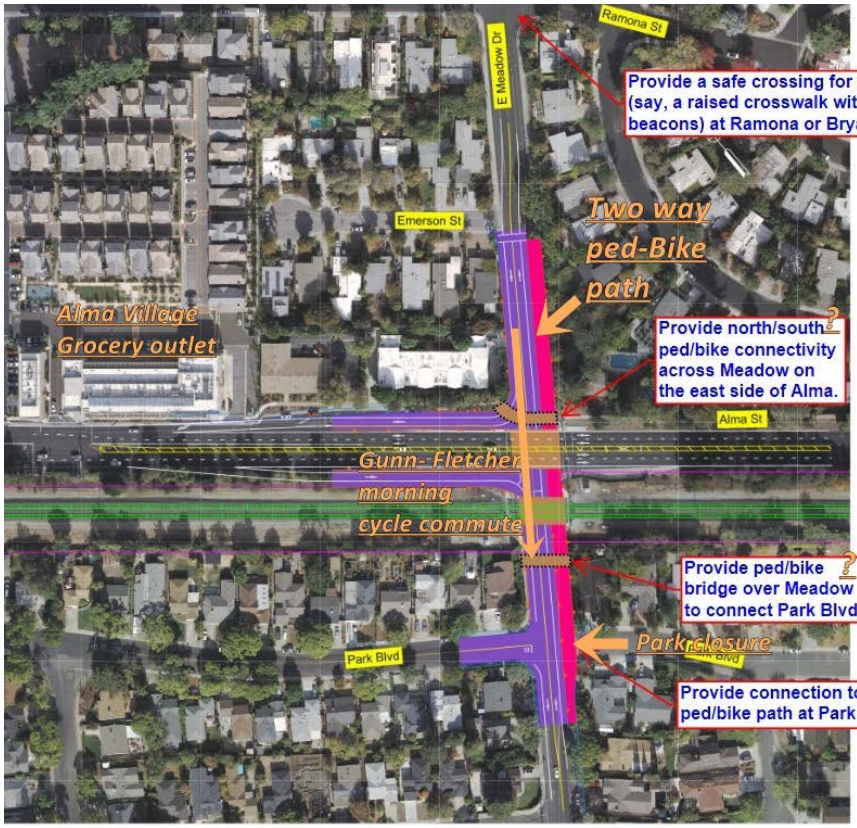
Additionally, pedestrians would walk further and have fewer places to safely cross. Car, bike and pedestrian access to Alma Village Grocery Outlet is not indicated. A closure of Park (because of the path) would increase the use of cars to backtrack out of that neighborhood. Please see the *orange comments on the images below.*

XCAP and the professional consultants at this time are still gathering input and digesting these late ideas. I believe they need help in understanding walking and cycling needs.

Source document May 20, 2020 meeting: https://connectingpaloalto.com/wp-content/uploads/2020/05/2020-05-20_XCAP-Agenda.pdf

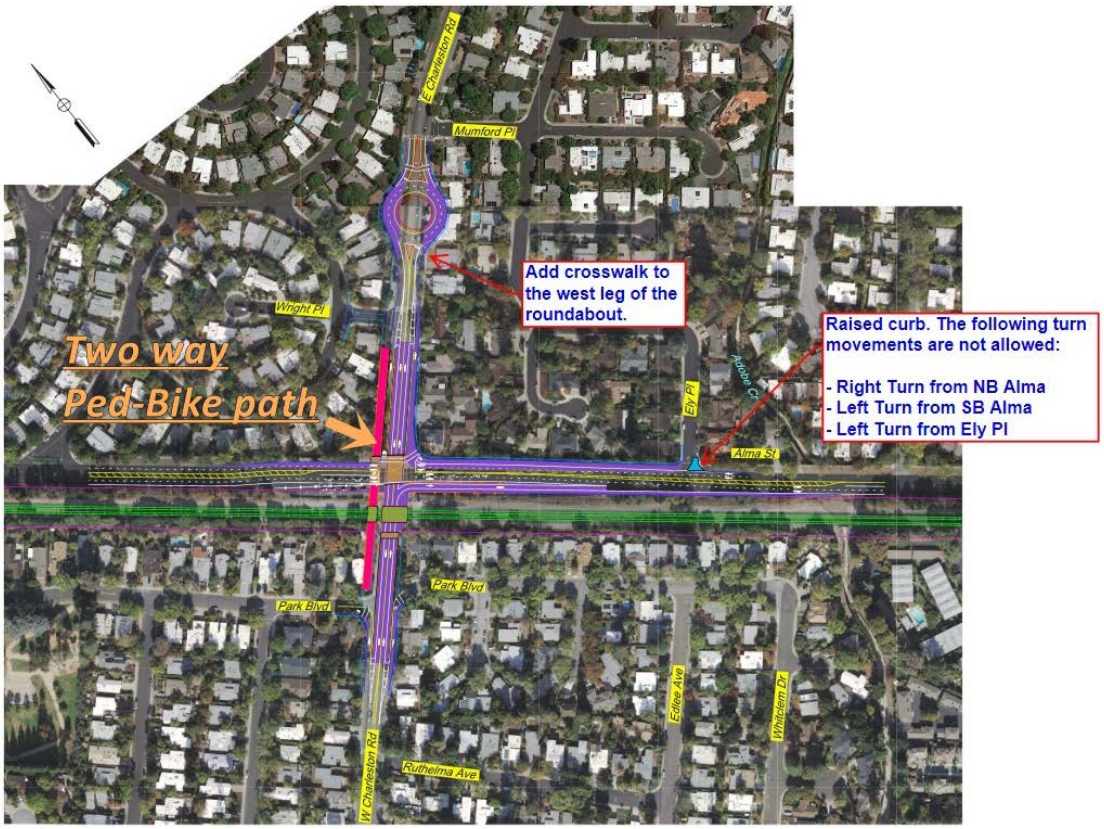
4. Presentation by AECOM of Layout and Typical Sections for Meadow/Charleston Underpasses (60 min)
    a. Attachment: Combined Charleston Meadow Exhibits (Preliminary)

☐ Received Before Meeting



Meadow Drive Aerial View (Plan)

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY



Charleston Road Aerial View (Plan)

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY

> *William'Rob' Robinson, member PABAC (Pedestrian and Bicycle Advisory Committee), Palo Alto since 2005*

--
Stephen Rock
3872 Nathan Way, Palo Alto, CA 94303

From:	Darrell Duffie
To:	Expanded Community Advisory Panel; citycouncil@cityofpaloalto.org
Subject:	XCAP Churchill Crossing opinion
Date:	Sunday, May 31, 2020 3:20:30 PM

I have reviewed the options under consideration. Thanks for the opportunity to comment.

My first choice would be to allow the Churchill crossing to close.

My second choice is the partial underpass approach. This is a clever partial solution, but strikes me as disruptive, expensive, and ultimately allowing excessive traffic on Churchill, not to mention the effect on traffic in the area east of Alma near Churchill.

Thanks very much.

Darrell Duffie
Southgate resident

From:	Brian Kilgore
To:	Expanded Community Advisory Panel
Subject:	June 3 XCAP meeting
Date:	Tuesday, June 2, 2020 1:10:59 PM

Hi,

I note that the AECOM "Noise and Vibration Comparative Analysis" report to be discussed at the June 3 2020 XCAP meeting study assumes that rail traffic will operate at the speed of 50 mph. Using 50 mph in these simulations appears to conform with the Federal Transit Admin's Transit Noise and Vibration Impact Assessment Manual. However, for those estimates to have any significant meaning in Palo Alto, simulations using actual expected train speeds in Palo Alto should be performed for comparison.

Caltrain plans to operate their commuter trains at speeds up to 79mph https://www.sfcta.org/projects/caltrain-electrification CA High Speed Rail is planning to operating their trains at 125 mph along the Caltrain corridor, if that happens. Ultimately, the maximum speed of passenger rail is regulated in the USA by the Federal Railroad Administration and is a function of the 'track type' https://en.wikipedia.org/wiki/Rail_speed_limits_in_the_United_States I do not know what the current track type is, or what it may be upgraded to, but it may be a relevant and key part of any rail traffic noise estimates along the Caltrain corridor.

Per the CARRD, https://calhsr.com/environmental-review/noise-pollution/ the speed of the train has a direct impact on the noise it generates. The faster the train, the more noise it generates. This passage from the CARRD report, from a HRS EIR report, summarizes the Palo Alto rail noise situation nicely; "In the speed range from 60 mph to about 150 mph (98–241 kph), mechanical noise resulting from wheel-rail interactions and structural vibrations dominate the noise emission from trains. In the existing rail corridors in California, conventional trains seldom exceed 79 mph (127 kph), so this speed range, which represents a medium range for HST, is the top end of noise characteristics for trains with which most people are familiar. Speed has a strong influence on noise in the medium speed range."

CA HSR released a "High-Speed Train Sound Fact Sheet" document in 2010 https://www.hsr.ca.gov/docs/programs/eir_memos/Proj_Guidelines_SoundFactSht.pdf or https://www.hsr.ca.gov/docs/communication/info_center/factsheets/Noise_Factsheet.pdf Figure 1 of both documents show the noise levels CA HRS anticipates from high speed, conventional and freight trains. They anticipated that at 100' distances, that those trains would generate similar levels of noise between 80 to 90+ dBA traveling at top speeds of 50mph (freight) 79mph (commuter rail) and 125mph (high speed rail). The recent AECOM report is expecting peak noise levels of about 66 to 71 dBA for similar types of rail service.

The difference between the CA HRS noise estimates and the AECOM noise estimates is about 10 dBA, a significant and at a bare minimum doubling of the noise we can expect along the Caltrain corridor compared to the AECOM report. This issue should be resolved before accepting this draft report as authoritative.

Respectfully,

Brian Kilgore

From:	Ken Joye
To:	Expanded Community Advisory Panel
Cc:	Kamhi, Philip; PABAC; Bhatia, Ripon
Subject:	pedestrian & bicycle issues
Date:	Tuesday, June 2, 2020 10:38:16 PM

The Pedestrian and Bicycle Advisory Committee for the City of Palo Alto (PABAC) received a presentation on Tuesday, 2 June 2020, regarding some of the options for grade separation. I have appended some comments based upon a cursory examination of a small subset of the materials you have been studying. I freely acknowledge that I have not spent much time examining the wealth of materials on the XCAP www site, so what I suggest might benefit from a more considered approach.

Thank you for your attention to the matter of grade separation,
Ken Joye
PABAC Chair

MEADOW UNDERPASS
==========
In any alternative where there is a 2-Way Bike/Ped Path, a key consideration must be how users of that facility safely enter/exit. In the exhibits document we examined, a crosswalk is depicted at Emerson but not at Second; a controlled crossing would be warranted at both.

The 3-D renderings appear to show that the sidewalk on the "east" side of Alma will be a dead end, implying that cyclists would be forced to ride on Alma itself. Conversely, 3-D renderings do not depict the “crossings” depicted on page 1-of-4 of the exhibits ("Provide ped/bike bridge over Meadow to connect Park Blvd.”). If those crossings are part of the project, how would they be accessed (where are sidewalks to be constructed to reach them)? How would they affect the grade of the 2-way bike/ped path allowing for the 10'0" minimum vertical clearance?

On page 4-of-8 of the 3-D renderings, the 2-way bike/ped path narrows from 20’ to something less than that at the side yard of 225 W. Meadow Dr. How are pedestrians and cyclists expected to behave in that narrowed space? Exactly how wide is that narrowing?

Green, striped thermoplastic paint should be included in the 3-D renderings (particularly where “westbound” motorists would make a right-turn to ascend to Alma St, page 2-of-8 in the 3-D renderings).

If the motorist roadway plus 2-way bike/ped path is constructed as depicted on page 1-of-4 of the exhibits, where does the sidewalk end on W. Meadow Dr?

On page 8-of-8 of the 3-D renderings, the retaining wall is quite close to the “north” wall of the dwelling at 4104 Park Blvd. Are there any documents which show the clearance between the wall of the home and the fence above the retaining wall?

Is a cycle track such as that installed at Greene M.S. to be constructed along E. Meadow Dr?

Is the width of the rail bridge enough to allow Caltrain maintenance vehicles to drive onto the "west" side of the tracks? I.e., would the rail bridge need to be wider and if so how would that affect the 15'6" minimum vertical clearance and roadway grade?

CHARLESTON UNDERPASS
==========
Expecting an "eastbound" cyclist to make two 180-degree hairpin turns to access a 2-Way bike/ped path is unrealistic.

The 3-D renderings (page 10-of-10) shows a 2-Way bike/ped path but does not depict how "westbound" cyclists access that path nor how "eastbound" cyclists return to the roadway. (Do "westbound" cyclists ride through the two-lane roundabout then exit the roadway to the path?) The tan path narrows "east" of the dashed white line, what is the width after that narrowing?

One PABAC member asserted that "A 20-ft path is also far too wide[...]", while I envision something like the Homer tunnel, which is wide enough to easily accommodate pedestrians and cyclists in separate "lanes" (which are separated vertically and by paving treatment). I see a 20-ft wide path as an advantage, not a disadvantage.

Hexagon's traffic report Figure 9A, page 24-of-77, Figure 9C, page 26-of-77, and Figure 9E, page 28-of-77, discounts possibility that any automobile traffic would be diverted onto Wilkie Way, a bicycle boulevard. NOTE: some existing turns from Meadow onto Alma come from the Ventura neighborhood

Hexagon's traffic report page 62-of-77 shows that ~30% of existing "northbound" traffic on Alma turns left onto "westbound" Charleston; if that traffic has right-of-way in a roundabout just before Mumford, what is the impact upon "westbound" Charleston traffic arriving at that roundabout? Also, existing "eastbound" traffic on Charleston which currently turns left onto "northbound" Alma would have similar right-of-way at roundabout, compounding the impact upon "westbound" Charleston traffic. Is this discussed at any point in the Hexagon report?

Hexagon's traffic report page 19-of-77 states: "The analysis shows that the two-lane roundabout at Charleston/Mumford would operate at acceptable levels of service during both the AM and PM peak hours under existing and future conditions"--what is the impact upon cyclist traffic through this two-lane roundabout?

3-D rendering (page 2-of-10) shows a very short left-turn lane from "southbound" Alma onto Charleston; that left turn lane would have to serve traffic headed both "westbound" and "eastbound" on Charleston, the former using the roundabout just before Mumford; currently on "southbound" Alma there are two turn lanes of greater length, suggesting this rendering should be more generous.

3-D rendering (page 9-of-10) shows the 2-Way Bike/Ped Path constructed where current electrical lines are located, but the 3-D renderings do not depict where replacement electrical lines would be located.

CHURCHILL CLOSURE
==========
It would be highly advantageous for cyclists to pass below Alma and the rail, so option 1 is

suboptimal.

Could there be an “Option 3" for Churchill Closure, where no automobile traffic was permitted to/from Churchill on *both* sides of Alma? The value that would be that the underpass could be widened to reduce bicycle/pedestrian conflicts, still allowing for access to driveways closest to the intersection of Alma & Churchill. Perhaps access to those driveways closest to the intersection of Alma & Churchill could be treated similar to a “One-Way Bridge” (only one lane of motor traffic around the entrance/exit of the bike/ped underpass…).

CHURCHILL UNDERPASS
==========
Hexagon’s traffic report page 8-of-77 shows a bike/ped underpass descending below Alma and rail from Kellogg, before Alma returns to grade "north" of Kellogg; what is the profile of this bike/ped underpass? (profile missing from Item4-REVISEDattachmentA-4.22.20-sm.pdf)

Can the ’T’ on the “west” side of the rail from Kellogg have a wide turning radius, i.e., can that end of the underpass widen before the “north” and “south” ramps begin? The geometry at this point seems very challenging. As for a possible Option 3 of the Churchill Closure (see above), could Kellogg be closed at Alma so as to widen the underpass to avoid bicycle/pedestrian conflicts?

From:	Mohamed T. Hadidi
To:	Expanded Community Advisory Panel
Cc:	youngjoh; Omar Hadidi; Mohamed Hadidi
Subject:	Churchill Grade Separation
Date:	Wednesday, June 3, 2020 12:02:57 PM

Dear XCAP members,

First thank you for all your dedication and tireless work.

I would like to begin by stepping back from whole process and urging the XCAP to recommend that the City Council engages in discussions with the concerned entities on whether proceeding with grade separation still makes sense in the post-pandemic world.

However, if grade separation is to proceed, my family strongly support Churchill Closure with
a bike/pedestrian underpass and mitigations at Embarcadero & Oregon Expressway. We, as strongly, oppose the 2 other proposed alternatives, namely the Partial Underpass and the Viaduct.

We support Churchill Closure for the following reasons:

1. It serves as Phase 1 of a phased approach to grade separation at Churchill. If necessary, either of the other 2 options can be implemented later in a Phase 2.
2. Much less costly: $50-65M
3. Traffic-friendly: Better traffic flow than current, as confirmed by the Hexagon analysis of May 5th.
4. Safety: By incorporating a bike/pedestrian underpass and reducing traffic backups on Churchill.

We oppose the Partial Underpass (Michael Price's Proposal) for the following reasons:

1. Dependence on acquiring Caltrain's Right-of-Way, which seems unlikely. Would also require some eminent domain seizures.
2. Huge cost ($200-250M).
3. Would significantly change the character of the neighborhood.

We oppose the Viaduct for the following reasons:

1. Huge cost: $300-400M
2. Less traffic-friendly: Worse LOS than Churchill Closure (see Hexagon analysis).
3. A permanent eyesore to the neighborhood.

Regrettably some opponents of Churchill Closure have resorted to underhanded devices of illegally placing placards advocating for their position on public and private properties, including our own front yard. Some have even encouraged property takings in the service of their favored proposals without any empathy for their affected neighbors. And all that just to maintain access to Alma and shave off a few minutes from their commutes. Careful scrutiny of their statements reveal no other credible reasons for their position.

We urge you to recommnded Closure as the best alternative for grade separation at the Churchill/Alma intersection, in the event that grade separation projects in the Bay Area are to proceed.

Thank you for your time and consideration!

Best regards,
Mohamed Hadidi, Young-Jeh Oh, Omar Hadidi

From:	Mohamed T. Hadidi
To:	Expanded Community Advisory Panel
Cc:	youngjoh; Omar Hadidi; Mohamed Hadidi
Subject:	Grade Separation at Churchill Ave - XCAP Meeting on June 3, 2020
Date:	Wednesday, June 3, 2020 8:40:04 AM

Dear XCAP members,

First thank you for your dedication and tireless work scrutinizing and even surfacing new alternatives for grade separation in Palo Alto.

To start with and stepping back from the details of grade separations at the various Alma intersections, we urge the XCAP to recommend that the City Council engages in discussions with the concerned entities on whether proceeding with grade separation still makes sense in the post-pandemic world of budget deficits, declining train ridership and the shift to working from home.

However, if grade separation is to proceed, our family strongly support Churchill Closure with
a bike/pedestrian underpass and mitigations at Embarcadero & Oregon Expressway. We as strongly oppose the 2 other proposed alternatives, namely the Partial Underpass and the Viaduct. Contrary to what had been insinuated at previous meetings, we would be quite happy with the status quo and are not looking for Churchill closure at any cost. Churchill Closure is simply a better and more cost effective solution than the 2 alternatives of the Partial Underpass and the Viaduct.

We support Churchill Closure for the following reasons:

1. Serves as Phase 1 of a phased approach to grade separation at Churchill. If necessary, either of the other 2 options can be implemented in a Phase 2. It keeps our options open, so that we can make the right decision after we have gathered more data and information.
2. Much less costly: $50-65M
3. Traffic-friendly: See Hexagon Traffic Analysis dated May 5, 2020 which was presented to the XCAP on May20th. Table 1 shows current LOS at Churchill to be F/E (during AM/PM respectively), and with Closure Plus Mitigations to be C/C, even better than with the Viaduct proposal.
4. Safety: In addition to improved safety by incorporating a bike/pedestrian underpass, the proposal would reduce traffic backups on Churchill which have caused accidents to our Southgate neighbors who live on the west side of Churchill and have at times prevented them from getting out of their driveways.

We oppose the Partial Underpass (Michael Price's Proposal) for the following reasons:

1. Faces the potential show-stopper of inability to acquire needed Caltrain Right-of-Way. In addition, it would require the eminent domain seizure of at least one property.
2. Huge cost ($200-250M) for a minor benefit (slight traffic improvement).
3. Would present a permanent eyesore to the neighborhood.

We oppose the Viaduct for the following reasons:

1. Huge cost: $300-400M
2. Less traffic-friendly: Worse LOS than Churchill Closure (see Hexagon analysis).
3. Would present a permanent eyesore to the neighborhood.

We regret that some opponents of Churchill Closure have resorted to underhanded devices of placing placards advocating for their position on public and private properties, including on our own front yard, without permission. Some have even cheered property takings in the service of their favored proposals without the slightest empathy for their affected neighbors. And all that just to maintain access to Alma and shave off a few minutes from their commutes. No other credible reason for their position has been proffered.

We urge you to recommnded Closure as the best alternative for grade separation at the Churchill/Alma intersection, in the event that grade separation projects in the Bay Area are to proceed.

Thank you for your time and consideration!

Best regards,
Moaned Hadidi, Young-Jeh Oh, Omar Hadidi

From:	Gary Lindgren
To:	Council, City; Expanded Community Advisory Panel
Cc:	Nadia Naik
Subject:	The Churchill Ave. Grade Separation
Date:	Wednesday, June 3, 2020 10:55:25 AM
Attachments:	Churchill Grade Separation_5_24_2020.pdf

Dear City Council,

At this time, one of the favorite solutions for the Churchill Ave. grade separation is the so-called **Partial Underpass**. It was designed by and for Ventura and Southgate residents west of the tracks at Churchill. The proposed solution would close off left turns at Alma for residents east of Alma, only right turns would be allowed. Also construction would tie up Alma for several weeks. I suggest that the City Council allow our engineering consultant AECOM to study the grade separation outlined in the attached file. We need a grade separation solution for residents on both sides of the tracks at Churchill.

Sincerely,

Gary Lindgren

Gary Lindgren
585 Lincoln Ave
Palo Alto CA 94301

650-326-0655
Check Out Possible Grade Separation Solution at Churchill or
Copy and Paste http://www.paloaltoenergy.org/churchill/

Check Out Latest Seismometer Reading
@garyelindgren

Listen to Radio Around the World

Be Like Costco... do something in a different way

Don't trust Atoms...they make up everything

A part of good science is to see what everyone else can see but think what no one else has ever said.
The difference between being very smart and very foolish is often very small.
So many problems occur when people fail to be obedient when they are supposed to be obedient, and fail to be creative when they are supposed to be creative.

The secret to doing good research is always to be a little underemployed. You waste years by not being able to waste hours.

It is sometimes easier to make the world a better place than to prove you have made the world a better place.

Amos Tversky

CHURCHILL GRADE SEPARATION,

THE PARTIAL UNDERPASS

AND

A 4th Idea

- Would be a big problem for me.
- I use Churchill to make left turns on to Alma going South.
- The Partial Underpass blocks left turns.
- Only right turns allowed when heading west on Churchill.
- Right turns onto Alma are easy at any cross street.
- Construction would halt traffic on Alma.

THE PARTIAL UNDERPASS

- The U-Turn Bay concept works for Charleston and it's 56 foot width.
- Then it could work for Churchill with changes made.
- Churchill is now 36 feet wide and we would need to add 20 feet in width.
- That's 10 feet on each side.
- Property on each side would need to be acquired.

A 4TH IDEA

- The round-about would be at Emerson.
- The underpass for the tracks and Alma would be one lane each way.
- East of Alma there would be one lane each way next to the underpass to handle cars going west and make either a left or right turn onto Alma.
- Cars going east coming off Alma can continue east or use the roundabout to go west.

CONCEPT FEATURES FOR CARS

- Bikes and pedestrians would enter a tunnel near the sidewalk on Churchill.
- The bike and pedestrian path would then drop down and go under the right lane for left and right turns onto Alma.
- The path would then open next to but above the traffic going under Alma and the tracks.

CONCEPT FEATURES FOR BIKES AND PEDESTRIANS

PLAN FEATURES

Benefits

- No viaduct next to homes.
- People could turn both left and right onto Alma.
- People could drive straight through Churchill and under both Alma and the tracks at anytime of the day.
- No more “left-turn only” on school days.
- Railroad tracks would stay at grade.

Jefferson Ave. Underpass in Redwood City

- Traffic interruption should be minimal for Alma.
- Box Jacking is a construction technique that allows minimal traffic interruption on both roads and rail lines and can be used to build the underpass for Churchill.
- Alma would be shutdown for only one weekend.
- Required modifications to the tracks would be completed at night during off-hours.
- Churchill would be closed for 6 months for underpass excavation and building the permanent underpass.

PLAN FEATURES DURING CONSTRUCTION

NEIGHBORHOOD BENEFITS

- The Ventura and Southgate neighborhoods or those living on the west side of the tracks at Churchill see an upside with the Partial Underpass.
- They can turn left or right onto Alma and also enter Churchill with ease from Alma.
- Residents on the east side of Alma have limited movement as only right turns are allowed.
- The needed solution must benefit those living on both sides of the tracks.

THE DECISION

- Suggest that the final decision for the Churchill Ave. grade separation be delayed while plan details are worked out.

From:	Richard Swent
To:	Expanded Community Advisory Panel
Cc:	Kamhi, Philip; PABAC; Bhatia, Ripon
Subject:	XCAP presentation to PABAC
Date:	Wednesday, June 3, 2020 12:09:57 PM

Dear XCAP,
Looking at the plans we were given and listening to Nadia, I get the impression that the automobile design was performed first and the bike/ped design is now being shoe-horned into that. This is a flawed process and will almost always produce unacceptable results. It may be too late to fix the process this time but I hope that this does not happen again in the future. A Complete Streets approach would consider all modes from the outset and produce an integrated and harmonious plan that does not force all the inconvenience or danger onto one subset of users.

We were told that one-way bike/ped paths on both sides of Meadow and Charleston could not be built because of conflicts with the roadway turn layout (a result of the process failure). I suggest that if the bike/ped path goes UNDER the tracks and the autos go OVER the tracks (the opposite of what I said last night), then these conflicts go away. The only remaining challenge for the bike/ped paths would be to integrate them into traffic flow at the ends, but that should be much easier than with the current plans.

Richard Swent