

Thanks for your interest in my candidacy, Lee Gilbert for Boulder City Council.

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This document provides information on my background, why I am running for city council, a critical review of Boulder's approach to road projects and why I strongly oppose it, and what I would do should I win the election.

This document is comprehensive on my positions. I've highlighted portions of each section for those that want a brief overview. I've also have included detailed information for those who may want it.

My Background

I am a long-time resident of Boulder with degrees from CU in electrical engineering with additional experience in statistics, reliability and failure analysis. I have lived in my house near Baseline for several decades and countless times have walked and biked along Baseline between 35th and Mohawk.

While I do own a car, I primarily do local errands on foot or by bicycle.

Why am I running?

My platform is simple -

A vote for me is a vote of "No Confidence" in Boulder's planning and implementation of major road projects.

Boulder's road projects are wildly unpopular but the transportation department either doesn't know or doesn't care. The city council and city manager provide no oversight, simply deferring to the transportation department "expertise". These projects need to be critically reviewed, something that is currently lacking. I will push for these reviews.

A Bit of Boulder History - The Folsom Fiasco of 2015

Bad transportation projects in Boulder are not new.

One infamous example is what I call the “**Folsom Fiasco of 2015**”. A search brings up a nice summary:

The infamous "right-sizing" pilot project on Folsom Street took place in July 2015. The city reduced vehicle lanes from four to two in each direction to widen bike lanes. Following severe public outrage and complaints of traffic jams, the Boulder City Council voted in September 2015 to revert the stretch between Spruce Street and Canyon Boulevard back to its original four-lane.

Another search has more details:

- **The Changes:** The city removed one driving lane in each direction, converting the street from a four-lane road to a single lane in each direction with a center turn lane. The reclaimed space was used to create buffered, protected bike lanes separated from traffic by plastic bollards.
- **Implementation:** The project launched in mid-July 2015 as part of Boulder's "Living Lab" experiment.
- **The Backlash:** The lane reductions immediately resulted in intense traffic congestion and significant gridlock, sparking heavy backlash from frustrated motorists and local businesses.
- **The Reversal:** Following intense public outcry, the City Council voted in late September 2015 to roll the project back. By October, crews restored the central portion of Folsom Street (between Canyon and Spruce streets) to its original four-lane configuration.

In 2015 the Boulder City Council actually listened to public complaints and exercised oversight. The idea that unpopular road projects could be reversed seems quaint nowadays.

Has Boulder learned anything from the Folsom Fiasco of 2015? Apparently not. The plans for Iris reflect the same approach as the Folsom Fiasco - reduce vehicle lanes from 4 to 2 and “improve” bike lanes.

Boulder Transportation Planners - Are they competent?

Boulder City Council routinely defers to transportation planners' expertise. There is no critical review of road projects and no effort to find out whether there is public support for these projects.

Given the trust the City Council has in Boulder Transportation Planners, how effective has Boulder's Vision Zero plan been?

Quoting from *Boulder Weekly* "Longmont hopes new Vision Zero plan will avoid Boulder's pitfalls", Nov. 20, 2024:

It's been a decade since Boulder committed to its own Vision Zero plan. While the city has reduced crashes overall, fatalities and severe injuries from car crashes haven't really fallen. In 2013 — the year before Boulder first set a goal to eliminate traffic deaths and severe injury by 2030 — the city reported 55 severe car crashes resulting in serious injury or death. According to Boulder's principal traffic engineer Devin Joslin, there were 55 of those same types of crashes in 2023, three of which were fatal, despite there being 1,300 less collisions overall.

Two data points, a decade apart, aren't proof that Boulder's Vision Zero has been a failure but it certainly raises questions about its efficacy.

The public, often busy with other issues, are skeptical that they can effectively challenge these decisions and those few that do raise objections quickly find out no one in city government, neither staff nor city manager nor city council actually cares about public feedback.

My experience contacting the transportation department about obvious problems with the Baseline Project resulted in the typical response: "We follow National and State guidelines and Best Practices". To be clear guidelines and best practices are not absolute - they are not the "10 Commandments" - and not only are they subject to change, they should not be used as a shield against criticism. My experience with the city is that they are only interested in justifying their decisions and are incapable of admitting any possibility of being wrong or that their designs may actually introduce new problems that outweigh theoretical benefits.

Boulder's Approach to Road Projects - Anything to slow vehicles

Boulder's approach to road projects is that anything that will make driving more congested, confusing and slower is a good idea, that traffic congestion is a great way to improve safety. The city has approached this in a variety of ways, including -

Approach	Location / Comment
Eliminating traffic lanes	Baseline east of Foothills was reduced from two lanes in each direction to one. The resulting design is confusing to drivers and bicyclists. Plans for Iris included reducing two vehicle lanes in each direction to one.
Making traffic lanes narrower	Baseline Project - narrowed vehicle lanes used to make bike lane buffer and slow traffic
Converting wide side street intersections into very narrow ones	Baseline Project - narrow side streets, tight turns intended to make turning cars slow down but also reduce area for cars to avoid accidents
Adopting Fully Protected Intersections	30 th and Colorado, Mohawk and Baseline, 28 th and Colorado
Adding curbs, bollards (reflective poles)	Coercive ways to force vehicles and bikes to adapt to confusing new designs
Creating Bus Only Lanes (actually "bus only plus right turns")	Arapahoe, Colorado - effectively eliminating one vehicle lane in each direction and creating confusion with little benefit for buses

Overwhelmingly local residents do not approve of Boulder's approach. And it is not clear that it improves safety. As a cyclist I don't want angry, frustrated drivers near me on the roads and I don't want drivers so confused by the road design that they are not focusing on bikes that are sharing the road or pedestrians at a crosswalk.

The City of Boulder Crash Dashboard - A Good Approach to Transparency, abandoned by Boulder

On Dec 5, 2022 the City of Boulder proudly announced the creation of a new dashboard designed to help keep the community informed about traffic crashes:

[Boulder Police Department \(BPD\) Crash Dashboard](https://boulder.maps.arcgis.com/apps/dashboards/095b1408ece3466fa2e15a4b3a8f36c1)

(<https://boulder.maps.arcgis.com/apps/dashboards/095b1408ece3466fa2e15a4b3a8f36c1>)

This was an excellent approach to transparency. I have used data from that dashboard to evaluate the Baseline Project and some intersections using 7 years of bicycle accident data.

Unfortunately, Boulder decided to stop updating that dashboard in late 2024 and earlier the Baseline Project webpage which originally had a link to the Crash Dashboard removed that link. Apparently, the city decided that easy access to crash data was not a good idea. **The one sure way to guarantee that no one will be able to prove that a project such as the Baseline Project is a failure is to make sure that no crash data is collected that is easily available to all.**

Boulder's crash dashboard should be reactivated, updated and include more information on each crash. Good data is critically important in deciding on what changes will be most impactful. And it allows anyone to evaluate what projects like the Baseline Project accomplish.

Boulder should also establish a similar database for "close calls", near accidents reported to the city. This would establish locations and type of accidents that the city may be able to address with simple changes. One example might be intersections where pedestrians were almost hit by left-turning vehicles during flashing-yellow left-turn arrows. I have directly experienced this myself. Flashing-yellow arrows have been implemented at many intersections where simple red left-turn arrows should be used.

Fully Protected Intersection or Dutch Design - The Latest Example of Magical Thinking

The Fully Protected Intersection or Dutch Design is a relatively recent design intended to reduce accidents between right-turning vehicles and bicycles heading through the intersection. It has two major features:

- Very tight right turns for vehicles exiting a roadway, executed in large part by changing wide side streets into very narrow side streets.
- Indented bicycle paths to cross the intersection

It often includes some separation of the bike lane from the traffic lane before the intersection by a buffer, a physical barrier or a curb

As implemented by Boulder at 30th and Colorado the design is confusing. For cars, a raised brown circular concrete platform at the intersection looks like a pedestrian island and a car is attempted to turn right before reaching that island. The city prevents this by installing bollards. Cars are expected to follow tight turns around the raised brown concrete island. The concrete has a lower section for buses that otherwise could not navigate the tight turn. Cars are expected to follow the tight turn outside the brown lower section, some do, some don't. The concrete platform also is intended to force cyclists into an indented bike path. (See photos below)

While the city claims the design is "proven to reduce accidents", in fact there was no data from Colorado about how well the design works because it was never before used in Colorado. Boulder chose to adapt it anyway. That remains a questionable decision.

The very tight right turns of the design force exiting vehicles to slow down to 10 mph or less. The design also forces bicycles to follow an indented bike lane at the intersection by physically putting up barriers, such as curbs or bollards, directly in the normal straight through bike path through the intersection. **If the cyclist fails to follow the indented path they will strike a barrier.**

On Baseline concrete islands forces right-turning vehicles to slow down for tight turns into narrowed side streets. The islands also force cyclists into an indented bike path. The design gives a driver both more time and more distance to see and stop before hitting a cyclist.

The design only addresses accidents caused by right-turning vehicles exiting the main road. It does nothing to address left-turning vehicles exiting the main road.

Left-turning vehicles entering now narrow side streets make accidents with cars or bikes exiting the side street far more likely. This was never a problem with wider side streets.

According to *Westword*, "Most Dangerous Intersections in Boulder Now" By Michael Roberts, December 6, 2022":

“The data tells us that the top causes of crashes in the city are speeding and left-hand turns, especially in our high-traffic areas,” Boulder Police Chief Maris Herold pointed out in a statement.

The theory behind the protected intersection is quite clear. Potential problems with the design are evident but never mentioned by Boulder. Here are some obvious problems:

- Cars exiting a major road at 10 mph or less will increase both the frequency and severity of rear-end accidents
- To force exiting vehicles into tight right turns, the city has intentionally made previously wide side street intersections very narrow. This means that cars that exit at speeds greater than 10 mph will cross into other traffic lanes. At the new narrow side streets this means they will cross into opposing traffic on that side street.
- Putting barriers in front of cyclists to force them into the indented path means that cyclists who should be focused on traffic around them must instead watch for and try to avoid the obstacles directly in front of them that can cause serious injury. Intentionally putting obstacles in front of bicyclists is a terrible idea, especially when many cyclists may not be acquainted with the design.
- As implemented by Boulder, protected intersections with associated measures to separate the bike lane from traffic, prevent experienced cyclists from safely doing a simple left turn by moving from the bike lane to a left turn lane and then completing the turn.

On Baseline, to achieve the safety benefit of protected intersections vehicles must make tight turns at 10 mph or less and not cross the center line of the now narrowed side streets. During Phase 1 of the Baseline Project the city never bothered to evaluate driver behavior at these intersections. This is either incredible arrogance or gross incompetence. In any case, rather than get data to validate the design, the city just assumed it was working and put all its effort into getting funding to implement Phase 2 of the project.

Fully Protected Intersections are confusing to both drivers and cyclists, requiring bollards, curbs or other coercive measures to direct them into the intended paths. They may be appropriate for cities or intersections where there are a high number of right-turning vehicle / bicycle accidents but given the problems with this confusing design, its adoption is not guaranteed to improve safety.



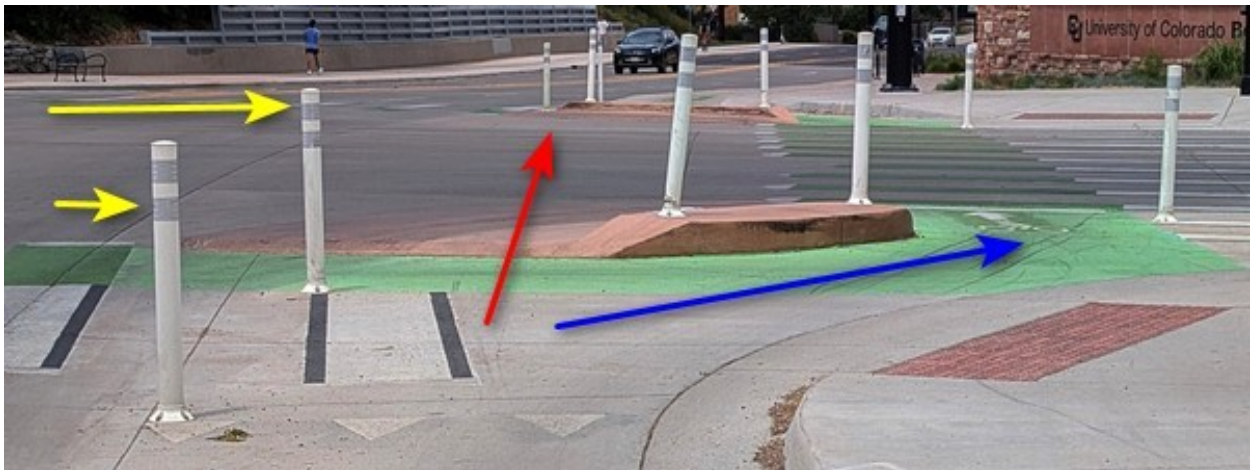
30th and Colorado as seen by a cyclist heading north.

Note all the bollards. They are required by the confusing intersection. Bollards on the left stop cars from turning at the curb cut before the concrete island. The two bollards on the brown concrete island warn cyclists about the curb intended to force them into the indented bike path.

Cyclists who are focused on looking at traffic at the intersection and accidentally try to go straight through the intersection could easily crash at the concrete island. You can see marks on the concrete.



This detail shows that the concrete island actually has both a higher curb with bollards on top and a second lower curb. The lower curb is required because large vehicles like buses cannot make the tight turn required of cars. It allows buses to make a wider turn by going over the lower curb.



The red arrow is where a bike would normally go straight through the intersection. The small curb is intended, like the large curb, to force bikes into the indented bike path - blue arrow. Trouble is a cyclist might think they could go straight through but if they do they will hit at least the small curb and could crash.

The yellow arrows point to the bollards. These are required to prevent cars from turning where they normally expect to turn because there is a curb cut and what looks like a pedestrian island.



View from bike path heading south at 30th and Colorado. Note bollards required to prevent cars from turning before the concrete island.

The normal straight through bike path is blocked by a high curb (about 6" - 8") and a smaller low curb. A cyclist watching for traffic at the intersection that inadvertently hits the large curb would suffer a serious crash.

30th Street and Colorado Avenue Project - An Expensive Vanity Project Mohawk and Baseline - The Second Fully Protected Intersection

Colorado's first fully protected intersection at 30th Street and Colorado Avenue broke ground in March 2021. This multimodal safety and underpass project was completed in summer 2023, with an official opening ceremony on October 3, 2023.

This project has some beautiful stonework and may have won awards but at \$16 million dollars, half paid by Boulder, and more than 2 years of construction it has provided only limited benefit to cyclists with its underpass. Its fully protected intersection design has problems described above.

The underpass, trying to be all things to all people, has a main bike lane diagonally crossing the intersection. In order to increase the benefit of the underpass it has two other entrances that have poor visibility to each other. These other entrances have a downward grade and cyclists will naturally speed up as they approach the main path. There are markings telling cyclists to slow down but cyclists are tempted to ignore that and approach the main bike path faster than they should, hoping there are no other bikes around but prepared to slam on their brakes if needed. This is a design ripe for bike accidents.

Boulder proudly announced the completion this first fully protected intersection in Colorado in fall 2023. Very shortly thereafter, Boulder completed its second fully protected intersection at Baseline and Mohawk.

Both of these intersections, designed for improved safety had bicycle accidents shortly after they were completed. Somehow Boulder chose not to make any announcements about that.

Is Boulder Bicycle Friendly or Hostile?

Boulder says it wants to encourage cycling and yet is completely dismissive of concerns raised by existing cyclists about these new protected designs. Some are from faster cyclists; others are from experienced cyclists. Boulder is more concerned about trying to entice non-cyclists to ride bikes by making things “feel safer” than it is by actually improving things for existing cyclists. From the *Boulder Reporting Lab*:

“All aspects of what you see out there on Baseline we are learning from and hope to apply to future corridors,” Daniel Sheeter, a principal transportation planner for the city, told Boulder Reporting Lab.

Certain features on Baseline, like the bends in the bike lane at intersections, are unlikely to change, **even if faster cyclists disapprove.**

Protected intersections prevent experienced cyclists from safely doing left turns.

These cyclists often do a left turn in two steps - first they move from the bike lane to a left turn lane and second, finish the left turn from that lane. The various means used to separate the bike lane from traffic have the perverse effect of preventing cyclists from safely moving from the bike lane to a left turn lane.

I know the city was aware of complaints by cyclists about not being able to make left turns and chose to ignore them.

Vehicles on side streets often block bike lanes while trying to get a clear view of the traffic on the main roadway. This is made worse by the indented bike path which is even further from the intersection.

The Baseline Project uses concrete pads to force cyclists onto the indented bike lane. This creates a perverse new problem when a vehicle blocks the bike lane. A cyclist simply trying to pass in front of the vehicle is faced with another concrete pad on the other side of the side street which blocks an easy return to the bike lane. This was never a problem previously because there were no coercive concrete pads forcing the indented bike lane on a narrow side street before

Several very real problems were introduced when Boulder converted wide side street intersections into narrow ones.

Bikes on a narrow side street that want to cross or do a left turn onto on to the main road will often use a vehicle lane for visibility and safety. This holds up right turning cars on the side street, something that was never an issue with the old wide side streets where a right-turning vehicle could easily pass on the right side of the cyclist.

Left turning vehicles from the main road now pass close to the cyclist on the new narrow side street. With the old wide side streets the left turning vehicles pass far away from the cyclist near the center of the side street.

A cyclist wanting to cross a main road might be able to use a crosswalk to the right of the intersection. But the problem is that a right turning car is primarily looking at oncoming traffic to their left and may not notice pedestrians or bikes to their right at the crosswalk. And when there is a gap in oncoming traffic, the driver will begin a right turn at exactly the same time as the cyclist or pedestrian is entering the crosswalk. (At normal intersections this type of conflict is mitigated by a WALK signal that goes on a short time before a green light for vehicles.)

A different problem exists if a cyclist tries to use a crosswalk to the left of the intersection. Here the cyclist will try to cross the street during the same gap in oncoming traffic that the driver sees. So the left-turning car and cyclist are in conflict. The safer option is for the cyclist to use the vehicle lane on the side street, blocking cars that want to enter the main street.

Within days of its Phase 1 completion, the second protected intersection at Baseline and Mohawk had an accident. *Boulder Reporting Lab* on January 24, 2024 had an article, "Boulder's newest protected bike lane brings awkward, sometimes painful adjustment: 'I collided with the road'", by John Herrick. Here's an extended excerpt from that article and a picture:

On Dec. 17, while riding his bike east on Baseline, Brian Haan, 67, tried to maintain a straight line through the intersection at Mohawk. He hit two speed bumps and fell off his bike, suffering a concussion and breaking his sacrum. He is still recovering and hasn't ridden his bike since.

"When you're traveling along at 20 miles per hour, they look like paint stripes," Haan told *Boulder Reporting Lab*, referencing the speed bumps. "I collided with the road."

Even so, Haan, a recreational cyclist, considers the Baseline project overall an improvement. And following the crash, the city installed bollards to mark the location of speed bumps so cyclists don't hit them.

Similar delineators were installed at the intersection of 30th and Colorado, the city's first protected intersection. The intersection features a narrow chicane for through cyclists. Skid marks suggest some have hit the curb inside the intersection.

...

"All aspects of what you see out there on Baseline we are learning from and hope to apply to future corridors," Daniel Sheeter, a principal transportation planner for the city, told *Boulder Reporting Lab*.

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...

Some transportation advocates bristle at the idea of putting the responsibility to slow down on cyclists, historically the more vulnerable road users compared to drivers. But in the context of Baseline, they generally support the recent infrastructure changes.

“That said, if a specific street design creates new risks, it’s also reasonable to evaluate how the design could be adjusted further to support everyone’s safe travel,” she [Rebecca Davies] added.



The city’s first “protected intersection” is located at 30th and Colorado. Credit: John Herrick

I quoted at length from the article to highlight several points. Even after this serious accident:

- The city could have removed the speed bumps at Baseline and Mohawk, the immediate cause of the accident. It chose not to, instead the city chose its go-to cure for any traffic problem: Install more bollards.

- The city refused to consider that the design feature, “bends in the bike lane at intersections” might actually be a problem. It chose to double down on this design feature, “even if faster cyclists disapprove”. This dismissive attitude toward “faster cyclists” is stupid. These are people who are actually riding their bikes as opposed to the hypothetical new cyclists enticed to ride because of the new designs.
- The intersection of 30th and Colorado, the city's first protected intersection, “features a narrow chicane for through cyclists. Skid marks suggest some have hit the curb inside the intersection.” When curbs weren't enough to force cyclists to follow the indented bike lane, the city again resorted to the cure-all, more bollards, rather than considering that the indented bike lane might be a bad idea.
- Not mentioned in the article, the bollards installed at 30th and Colorado were needed because drivers were confused about where they were supposed to turn or more accurately where they were NOT supposed to turn.

Baseline Project - Complicated, Confusing, Unnecessary, Less Safe

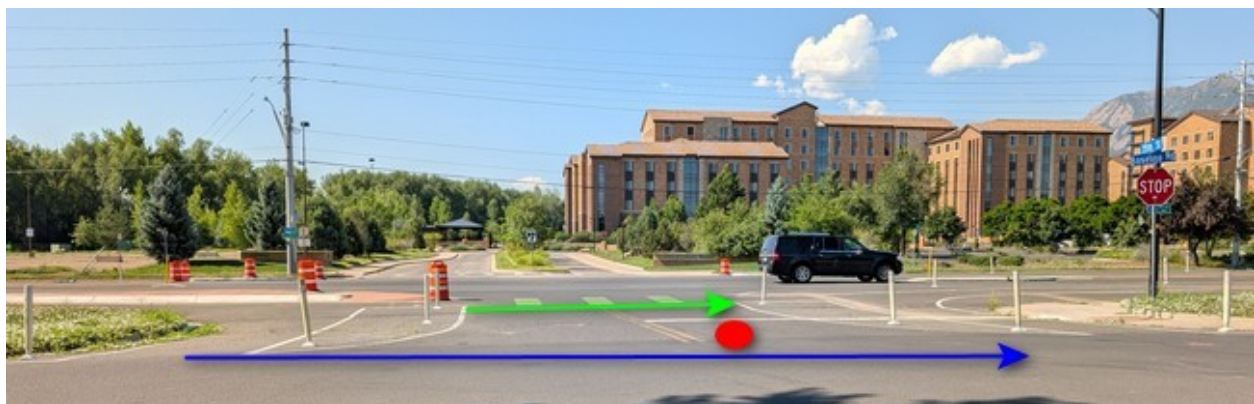
The Baseline Project has achieved a rare combination - an unnecessary, poorly designed and confusing approach that is less convenient and less safe for both bikes and vehicles.

The Baseline Project seems to be the result of a transportation department that does not bother to examine actual accident data but simply assumes that if they follow “National and State Guidelines and Best Practices” that they will not only have great talking points but they will actually have great outcomes. They are wrong.

One “Best Practice” they have adopted is the fully protected intersection which the city says “has been proven to reduce accidents”. This simple talking point never mentions that it is only designed to reduce accidents caused by right-turning vehicles. If that type of accident is rare or non-existent in a traffic area, adopting that new design will not improve safety and actually increases the risk of new types of accidents, discussed previously, that the city conveniently never mentions.

This is where the city planners got it wrong; they ignored accident data showing where accidents were occurring. They adopted protected intersections but didn't know if accidents addressed by that design were actually happening on Baseline. They glossed over any new problems the protected intersection might introduce, assuming simply that there is no downside risk to the design. They totally ignored the massive congestion and confusion the new design would cause, to say nothing about the cost, time and waste of engineering talent to design and implement the changes.

Traffic congestion for vehicles entering Baseline and safety for bikes turning left onto Baseline is worth mentioning. All the wide side street intersections were changed to very narrow intersections.



Green Arrow - New narrow side street
Blue Arrow - Old wide side street
Red Oval - Vehicle or Bike trying to turn left

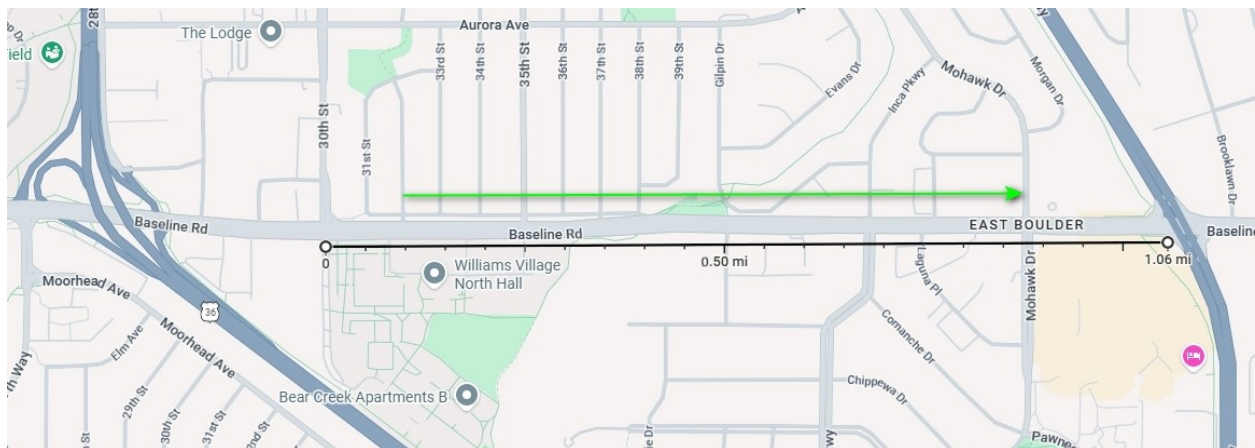
Because of that change left-turning cars or bikes hold up all other traffic behind them. Previously they did not; right-turning cars could easily pass on the right and turn. For a

left-turning bike, vehicles exiting Baseline pass close to the them; previously there was lots of space to the left of the bike on the wide side street and vehicles did not pass close to the bike.

The narrow side streets and tight right turns of the protected intersections prevent larger vehicles or vehicles with trailers from negotiating those turns. Designers had to add lower concrete sections of the concrete islands to mitigate the problem at some intersections.

In the discussion below I focus on a long section of Baseline I know well having lived within a block of Baseline for decades. This analysis does not include Mohawk, also redesigned, but does include all other streets that connect residential areas to Baseline.

The Baseline Project extends from 30th Street to Foothills Parkway, about 1.06 miles, shown below. The green arrow covers the area of interest including Inca Parkway.



Green Arrow - Baseline, 32nd to Mohawk

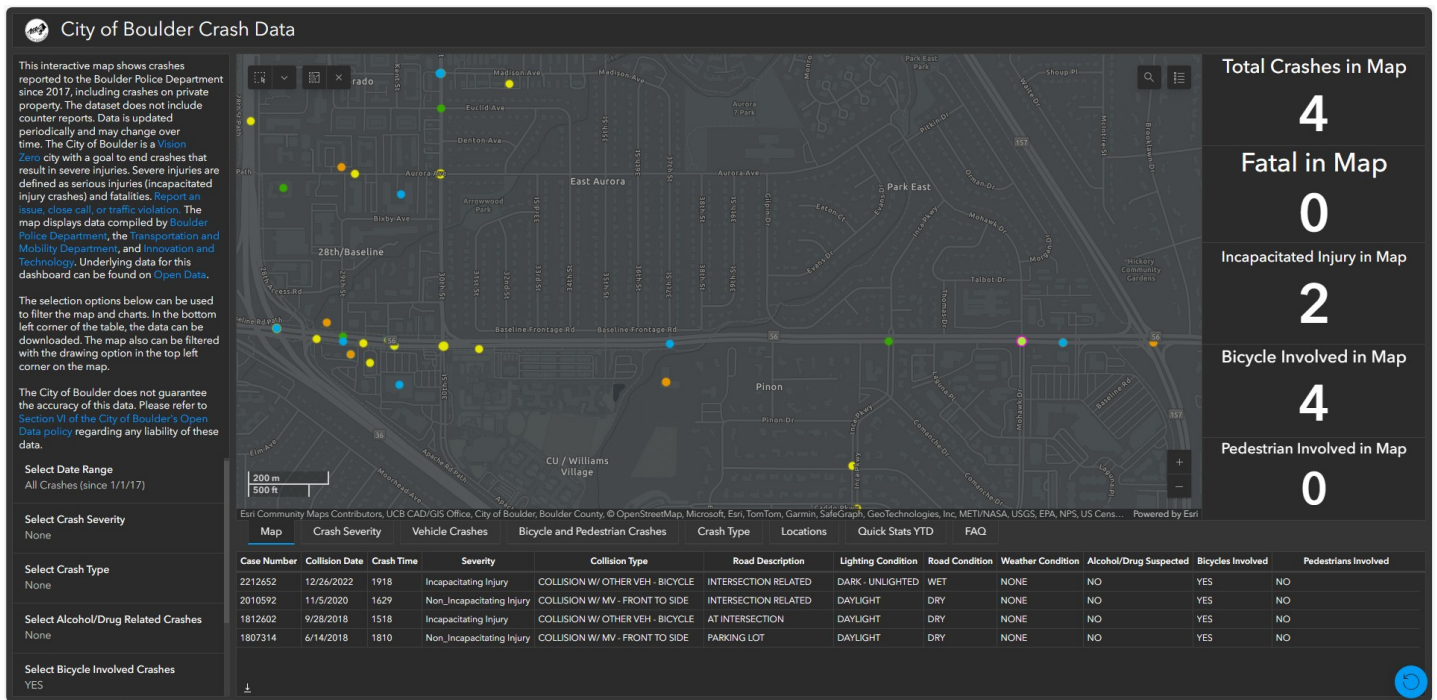
The Baseline Project web page justifies the project by claiming that Baseline has high accident rate and that people mention safety as a reason they don't bike.

The claim that Baseline has a high accident rate is grossly misleading. Overwhelmingly Baseline bicycle accidents occur at 30th and further west toward campus, areas that are not part of the Baseline Project. This also raises an interesting question, why is the bicycle accident rate so low over much of the Baseline Project, specifically the residential area marked in green? I'm guessing the city never thought to ask that question even though all the side street intersections were wide, the traffic lanes were wider than now and there were not any concrete barriers or much of a buffer between the bike lane and traffic lanes. My guess is that the wide traffic lanes, wide bike lanes and great visibility where everyone could see everyone else is part of the answer.

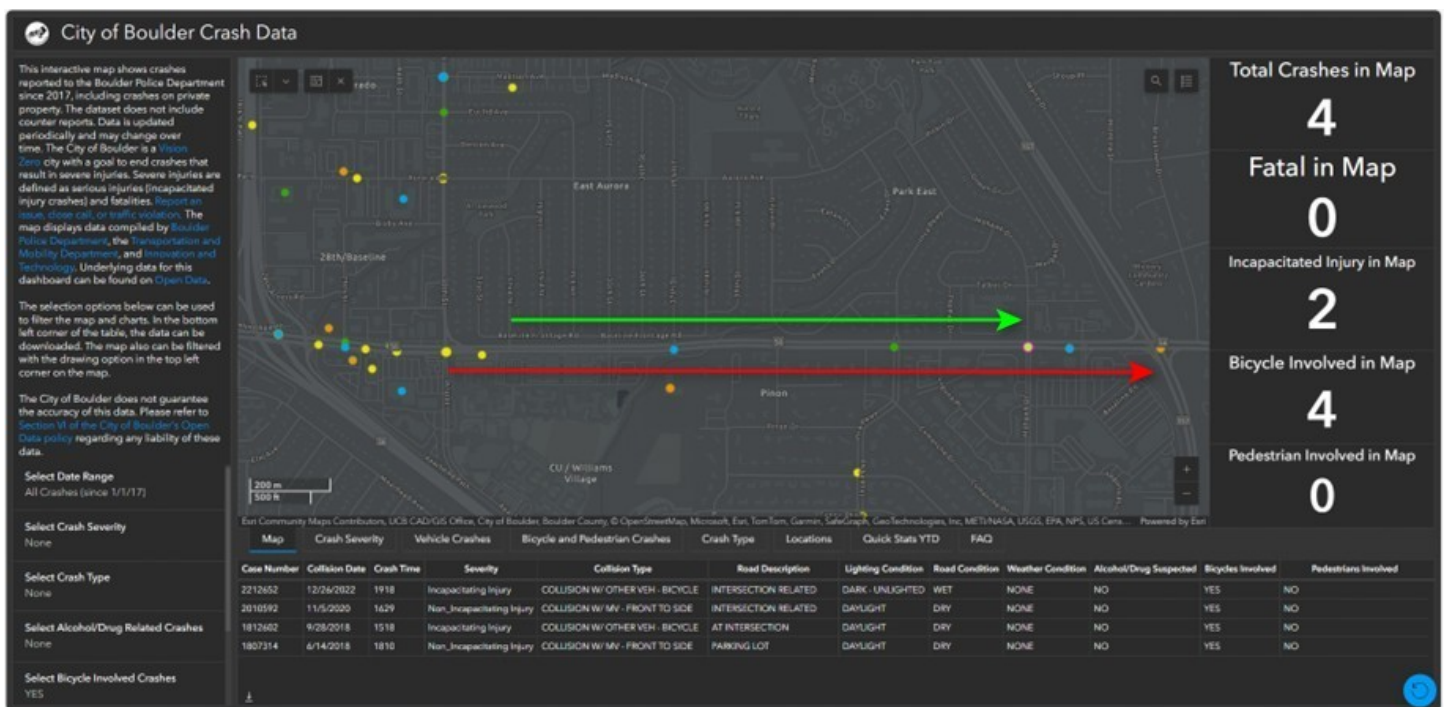
I looked at bicycle accidents because the Baseline Project was focused on improving bicycle safety and perceived safety on Baseline. I used Boulder's Crash Dashboard to evaluate 7 years of bicycle accident data. That data is shown below.

I specifically looked at bicycle accident data between 32nd Street and Mohawk because every side street intersection over that distance was completely redesigned using the protected intersection approach to improve safety. That distance represents about 70% of the length of Baseline Project. The changes included making wide side street intersections very narrow. Over 7 years there were only 2 bicycle accidents between 32nd and Mohawk. And only one of those involved “possible injury”. This means that that even if bicycle accidents could be reduced to zero it would have an almost negligible effect on bicycle accidents overall on Baseline since almost all the accidents occur elsewhere on Baseline.

The Fully Protected Intersection as previously discussed addresses only one type of accident, caused by right-turning vehicles. It is not clear whether that type of accident even occurred on Baseline and, as explained previously, the design introduces a variety of new accident risks.



Bicycle accidents over 7 years, notice accidents clustered at 30th Street and west



Red Arrow

Green Arrow

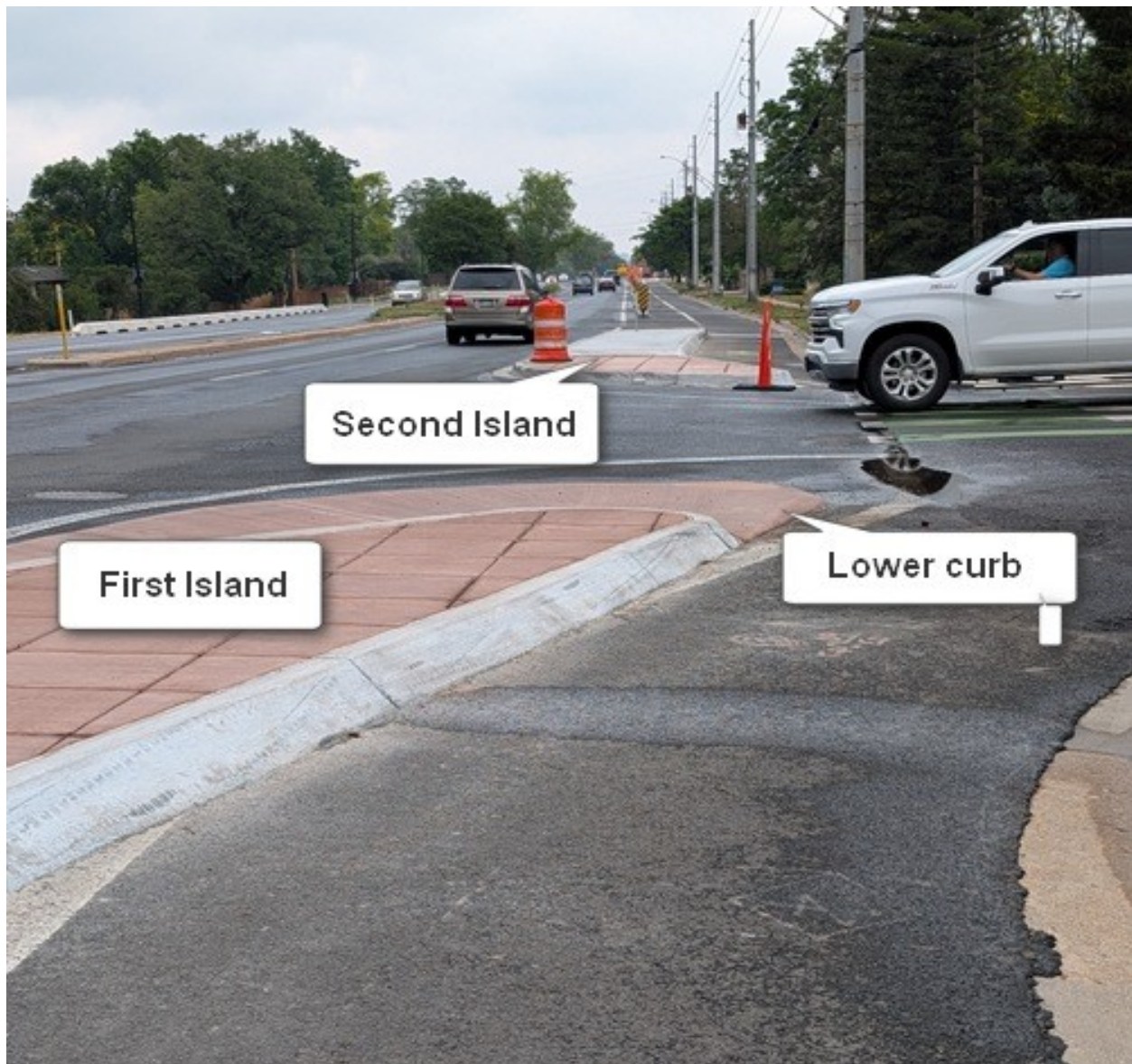
Baseline Project, 30th to Foothills

Baseline, 32nd to Mohawk, every side street intersection redesigned in the Baseline Project

Crashes on Baseline between 32nd and Mohawk

Collision Date	Crash Time	Severity	Collision Type	Road Description	Lighting Condition	Road Condition
11/5/2021	1429	Property Damage Only	COLLISION W/ OTHER VEH - BICYCLE	AT INTERSECTION	DAYLIGHT	DRY
2/9/2018	1410	Possible Injury	COLLISION W/ OTHER VEH - BICYCLE	NON-INTERSECTION	DAYLIGHT	DRY

One example of problems with the new design.



The First Island forces the cyclist into the indented bike path. Since cars often stop over the bike path to view traffic they can block the bike path. If a cyclist tries to go around the front of the car they have difficulty returning to the bike path because of the Second Island. Before installing these concrete islands this was never a problem.

The picture also shows another problem. Because large vehicles like buses cannot negotiate the tight right turn of the design, the First Island is extended by a lower concrete section allowing the bus to pass over that lower section. Cars are not supposed to do this but some do anyway.

At night the First Island white curb should be easily visible to cyclists but the lower brown part of the island extension may not be and can result in a crash.

Where do we go from here?

Boulder should stop its Magical Thinking, that simply adopting "national and state guidelines and best practices" will result in good outcomes. It assumes only the best possible outcomes and fails to recognize the risks and undesired outcomes that may occur. Unanticipated problems often accompany new designs, especially when they aren't critically examined and aren't evaluated in relation to local conditions. The Baseline project clearly illustrates the problems with magical thinking.

When national guidelines said that the traffic lanes on Baseline were too wide, the city simply narrowed them and put the freed space into a bike lane buffer. This may have had some limited impact on speed but it also resulted in the bike + buffer becoming wider than a traffic lane and caused all sorts of confusion at the start of Phase 1 such as cars mistaking the bike lane + buffer for an exit lane from Baseline. It also made the traffic lanes very tight for larger vehicles like buses, ambulances and trash collection trucks - making it more likely those vehicles would wander out of their lanes.

Boulder also has unquestioningly adopted the magical thinking that simply slowing down vehicles will definitely reduce accidents. As a result we get a proliferation of ways to slow traffic - narrowed traffic lanes, reduced number of lanes, "Bus Only" lanes and endless approaches that increase traffic congestion and increase confusion. Boulder has been devoted to CAN, Core Arterial Network, but what it's implementing is more accurately described as BAP, Blocked Arterial Program, anything to slow down traffic regardless of problems that creates.

More than a decade of Vision Zero has failed to show progress toward its goals. We need to rethink our approach to major road projects. Both safety AND efficient traffic flow should be the goal.

Traffic planners should be knowledgeable about guidelines and "best practices" as well as new innovative approaches. But projects to improve safety should be based on comprehensive local data about accidents and close calls. That data should include extensive details allowing analysis that identifies patterns. The data should include specifics, the what, where, when and how of the accidents. The analysis might identify simple steps that improve outcomes such as improved lighting where pedestrians cross a slip lane for right-turning vehicles.

Designing arterial roads that are safe and efficient is not an easy task. There are likely no new magical approaches guaranteed to work.

Over many years, I have only seen a few innovations that have improved safety. Green striping highlighting bike lanes at intersections is helpful. Perhaps the best innovation is a simple one illuminating the WALK light for pedestrians shortly before the green light for vehicles. This prevents the race between turning cars and people using the crosswalk.

Boulder traffic planners routinely assume they know how a new design will work. Unfortunately they rarely check to see how the designs work in practice. I earlier pointed out that during Phase 1 of the Baseline Project the city never bothered to evaluate driver behavior at the new protected intersections even though new designs only deliver the projected safety benefits if actual driver behavior is exactly what the designers anticipated.

It is critical that major changes be evaluated on-site on a regular basis to see what drivers and cyclists actually do and if it changes over time. Those doing the evaluation may well be surprised to find that actual driver and cyclist behavior is not what the planners expected. As an example, if the city went to 30th and Arapahoe after “Bus Only” lanes were implemented they would have quickly observed the clearly confused behavior of drivers simply trying to enter Home Depot. They might also have observed that the “Bus Only” message painted on the road was logically inconsistent with the posted sign at the same location explaining the right lane is reserved for “Bus and Right Turns Only”.

Bike Lanes

Boulder has generally done a good job with new bike paths.

New bike paths are mostly separate from and raised above roads but occasionally have sections at street level adjacent to traffic lanes. The bike path along 30th between Colorado and Arapahoe is an example. The bike path designer intended to create a bike lane near 30th where cyclists would move in the same direction as traffic thus allowing the bike path to turn into a bike lane at street level where the path crosses Boulder Creek. (The return to street level was required because the bridge would not support widening the existing sidewalk over Boulder Creek). This new bike path would have an adjacent sidewalk.

The designer did not realize that a bike lane next to 30th with an adjacent sidewalk also looks like a two-way bike path. And when you have a two-way bike path, cyclists are expected to stay to the right. But designer wanted and expected cyclists to stay to left, moving in the same direction as traffic in a bike lane whether that bike lane was at street level or raised and separated from the road. The result is confusion.

Cyclists heading north from Colorado on the east side of 30th generally do stay to the left, because of the design of the protected intersection and arrows for the bike lane. This not true for cyclists using the bike path from other places such as the bicycle rack at Marine and 30th. People renting those bikes and heading south routinely stay to the right on the bike path, directly in conflict with cyclists heading north.

Fortunately, the confusion about whether to stay to the right or left is generally not much of a problem because cyclists can see each other and move out of each other's way. The one exception is at the bridge over Boulder Creek where bikes are supposed to go in the same direction as the traffic at street level. Simple signage can clarify this, which I suggested and which did work, but that signage was removed after construction was finished.

Had the designers who planned the 30th Street bike path actually visited and used the path or even if they placed air lines to measure cyclist directions they would have observed and addressed the confusion caused by the design. I pointed out all this to the city but they chose to simply ignore the issue.

The bike path does have some indented sections, a design feature borrowed from protected intersections to improve safety. But here there are no coercive poles or curbs, the indent is done naturally as the bike path gently zigzags.

Flashing Yellow Left-turn Arrows

Use of flashing yellow left-turn arrows needs to be reevaluated.

Originally flashing yellow left-turn arrows were adopted to reduce confusion associated with plain green lights. They both mean the same thing, that cars must yield to oncoming traffic and people in the crosswalk.

Over time these flashing yellow arrows became the default at intersections. They are seen as a way to ease traffic flow by allowing left turns when there are gaps in oncoming traffic.

Green left-turn arrows give the right-of-way to left-turning cars. When green arrows are immediately followed by a flashing yellow arrow and a WALK light there is a tendency for cars to continue turning left as long as there is no oncoming traffic. They are not looking for people in the crosswalk or those wanting to enter the crosswalk even though the WALK light is on. Interestingly, cars are required to stop for pedestrians in a crosswalk but are not required to stop for those that want to enter the crosswalk.

For safety a WALK light should never come on when there is a flashing yellow turn arrow. Flashing yellow arrows are only appropriate where no pedestrians or cyclists use the intersection.

I was pleased a while back to see that someone responsible for traffic signals understands the safety issue. The traffic light at the southeast corner of 30th and Arapahoe for people heading across Arapahoe went through a series of changes of timing and eventually settled on green, yellow, red arrow sequencing. Previously it used a green arrow, followed by a flashing yellow arrow and WALK light. Apparently realizing that cars continued turning left during the flashing yellow arrows the timing was changed so that the green arrow was followed by a red arrow before going to flashing yellow arrow and WALK light. The hope was that the brief red arrow would stop cars from continuing left turns after the green arrow. Recognizing there was still a problem, the timing was changed to green, yellow, red arrow with WALK light, the only way to make the WALK light safe for pedestrians and cyclists.

If I am elected

If elected, I will work to get the Boulder City Council to critically evaluate, oversee and change Boulder's approach to major road projects. The city council has shown a reluctance to do this. As only one voice on the council achieving this change may be difficult.

My approach:

- **Pause feasibility, engineering work and grant proposals related to new major road projects** until those projects are reevaluated based on new goals that balance safety and traffic efficiency. Risks of new designs must be weighed as well as potential benefits.
- **Reverse some or all protected intersections from 32nd to Mohawk on Baseline.** These redesigns were not justifiable based on bicycle accident data and have caused major traffic congestion because of the narrowed side streets where a single car or bike attempting to do a left turn onto Baseline holds up all other traffic from that side street. The original wide side streets did not have this problem. The congestion for residential areas south of Baseline is unacceptable.
- **A redesign at Mohawk/Baseline was needed;** a pedestrian was killed at that intersection. **Based on personal experience as a pedestrian and cyclist (but not having detailed accident data at that intersection), the major problem seems to be left turning vehicles not yielding to pedestrians/cyclists.** A limited redesign with red/yellow/green left turn arrows and definitely no flashing yellow arrows while a WALK light is on would have been sufficient. A WALK light for pedestrians and cyclists followed by a delayed green light for vehicles also helps. The confusing islands to separate dedicated pedestrian and bike lanes and the tight right turns of the protected intersection are overkill likely diverting driver's attention from pedestrians and cyclists at the crosswalk and as well as creating a maintenance headache. A simple painted buffer was to separate vehicles and cyclists on Mohawk with a shared lane for bikes and right turning vehicles near the intersection worked well. This would have also allowed a cyclist to move to a dedicated bicycle left turn area on Mohawk.
- **The redesigned intersection at 30th/Baseline, still in progress, should be kept for now.** This intersection has been problematic for a long time. While I think a simpler, more limited redesign could have achieved good safety benefits, the new design should be kept and evaluated over time to see if accidents are actually reduced. The projects should be reviewed to see if driver, cyclist and pedestrian behavior is as designers expected and how well these complicated designs can be maintained including street cleaning and snow removal.
- **The "Bus Only" lanes should be reverted to normal traffic lanes.** These are not needed and simply increase traffic congestion and confusion.

- **Undo the changes on Baseline east of Foothills**, returning that section of Baseline to two-lane in each direction with a straight through bike lane and eliminating all the bollards that were installed.
- **Flashing yellow left-turn arrows should not be the default at intersections.** They are great for cars, not for people in crosswalks. Simple green, yellow, red arrows should be the default.

General Guidelines

Boulder road projects should emphasize excellent visibility, straightforward, intuitive design and reduced visual clutter with no bollards and only truly necessary signs. Good designs should not require bollards.

Road maintenance and clear markings should be a major priority.

Reasonable vehicle speed limits should be enforced.

Road projects must balance efficient traffic flow AND safety. Actual accident and close-call data is needed so projects target where safety improvements are most needed and target the type of accidents that are most frequent or severe at those locations.

Major road projects need to get buy-in from the public before they are undertaken and must include post construction analysis of public reaction to the changes as well as collection of data showing how well projects have performed over time.

People in the transportation department need to routinely speak to people in affected neighborhoods before, during and after each project. And designers need to evaluate on-site whether projects are working as expected. It is unacceptable to simply assume that projects will work as expected.

While the transportation department may well have competent people, it also has a culture of hubris and an absence of humility. That culture prevents it from truly listening and learning from the local community and being able to acknowledge mistakes and make course corrections.

Addendum

While Boulder has adopted the fully protected intersection also known as a Dutch design, it turns out a Dutch designer, a generation or two earlier actually took completely different approach towards safety. That designer, Monderman, believed that visibility and simplicity rather than signs and confusing intersections was the key to safety. Here are two articles about him.

[The Traffic Guru | Wilson Quarterly](https://www.wilsonquarterly.com/quarterly/summer-2008-saving-the-world/the-traffic-guru)

<https://www.wilsonquarterly.com/quarterly/summer-2008-saving-the-world/the-traffic-guru>

[Hans Monderman's People-Friendly Dutch "squareabout" | ThinkBicycling](https://thinkbicyclingblog.wordpress.com/2013/06/13/hans-montermans-people-friendly-dutch-squareabout/)

<https://thinkbicyclingblog.wordpress.com/2013/06/13/hans-montermans-people-friendly-dutch-squareabout/>