



Chapter 12: Conceptual Projects

CHAPTER HIGHLIGHTS

- Policy Projects
- Planning Projects
- Events Projects
- Auto Network Projects
- Bicycle Network Projects
- Bus Network Projects
- Truck Network Projects
- Walk Network Projects
- Rail System Projects
- Summary

Introduction

Previous chapters of this plan have detailed specific physical network projects which are candidates for analysis and prioritization as part of the fiscally-constrained KTMPO 2045 Metropolitan Transportation Plan (MTP). These projects all have been proposed or reviewed by KTMPO member jurisdictions or committees, or have been received through a public outreach process. All fit under one or more of the funding categories defined for MTP projects. Therefore, all these previous project may be viewed as “official” candidate projects which are directly relevant to the KTMPO 2045 MTP.

This chapter introduces a complementary set of projects that are “unofficial” in terms of their source, conceptual rather than specific, and may not fall into one of the MTP funding categories. These conceptual projects therefore may not be directly relevant to the KTMPO 2045 MTP. However, taken together with the MTP projects, these conceptual projects can contribute to developing a balanced regional multimodal network.



Policy Conceptual Projects

Project Py.1 The topic of safety is important for the KTMP region and in its transportation planning. Safety is a specified performance measure, and many of the candidate projects from previous chapters focus on safety. This plan also defined a Functional Class system for the bicycle network that emphasized how infrastructure can contribute to safety.

In spite of this ongoing activity, traffic safety continues to be an issue in the United States as a whole.

Figure 12-1: Traffic Death Rates in Ten Comparison Countries

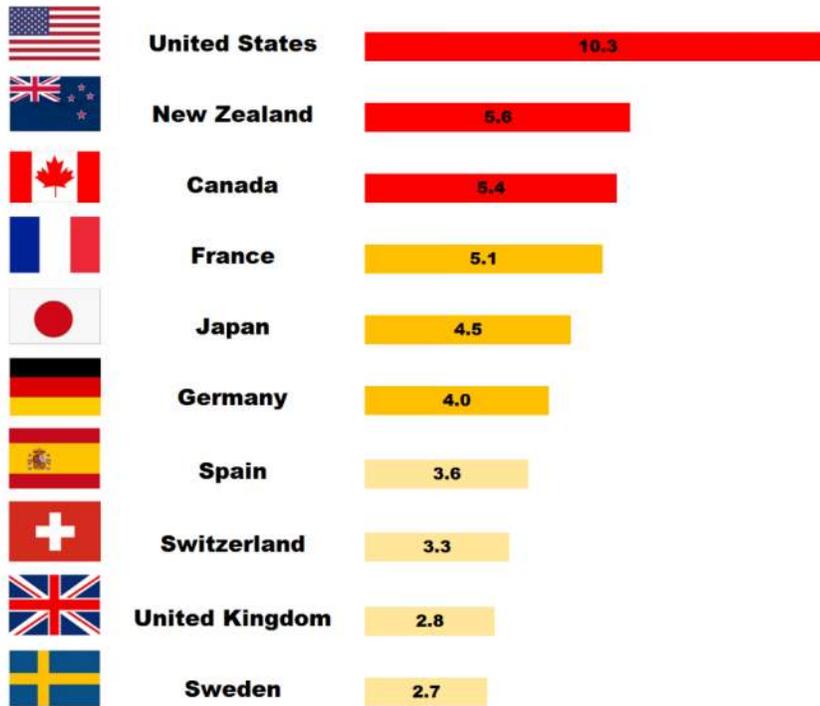


Figure 12-1 shows the fatality rate per 100,000 persons for the United States and ten peer countries, with data taken from the World Health Organization Status Report on Road Safety.

The data show a disturbing and undeniable trend of the United States leading its peer countries in Europe, Asia, and North America. Our traffic death rate is almost twice that of Canada’s, with no significant difference in culture or quality of infrastructure to explain the difference. Compared to other peer countries like the United Kingdom and Sweden, our traffic death rate is almost four times as high.

The traffic death rate and general traffic safety can be addressed through

specific safety projects, as has been done in the past. Another approach is to implement a specific **Vision Zero Policy** with the stated goal of developing infrastructure, policy, and behavioral changes to completely eliminate traffic deaths. Incidentally, the Vision Zero concept was developed in Sweden, which is shown with the lowest traffic death rate in Figure 12-1.

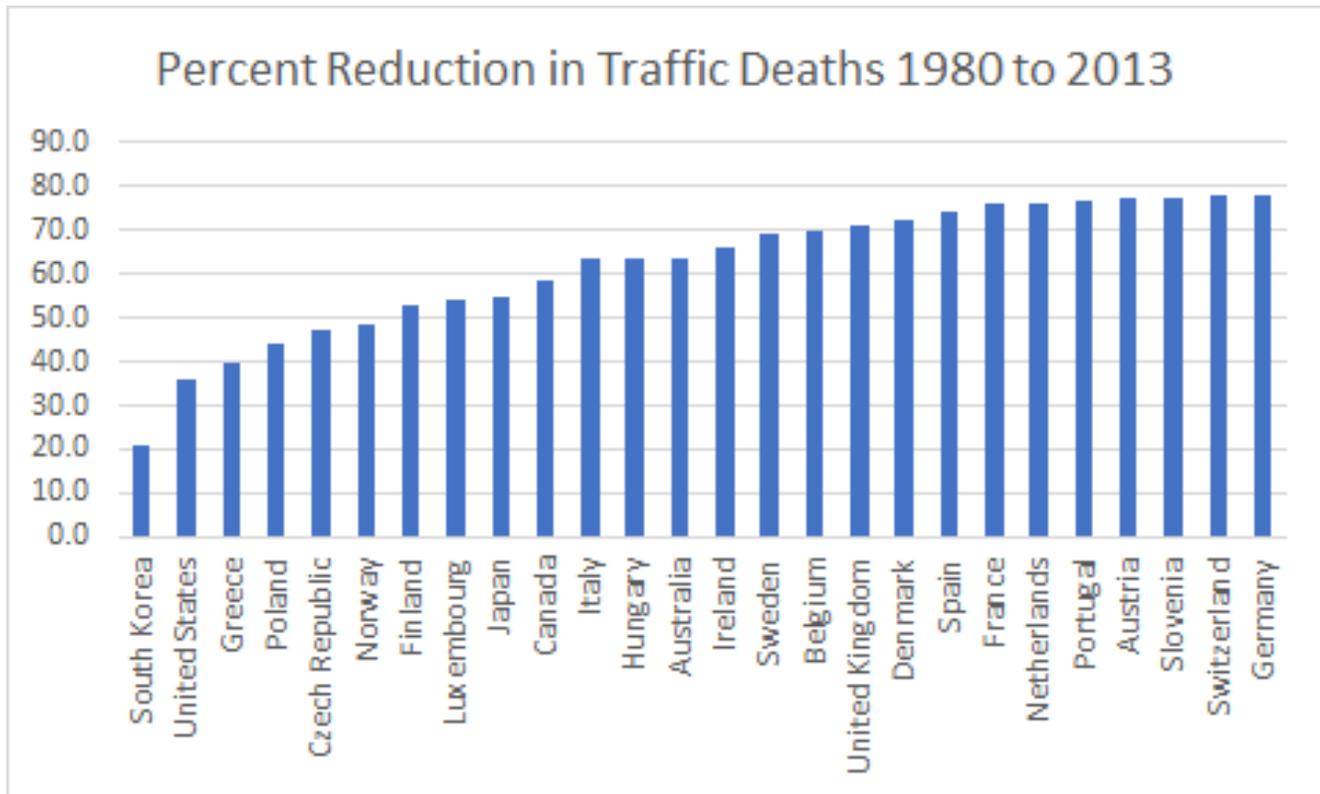
One of the core principles of Vision Zero is that road users share responsibility for traffic safety with road designers. Educational efforts to make drivers aware of safety issues are therefore an important component. Another core principle is that the road design should be forgiving; so that when crashes do occur, the risks of fatalities or serious injuries are lessened.

Since its inception in 1977, Vision Zero policies have been adopted in numerous countries worldwide and in numerous U. S. cities, with results that have been described as “outstanding”. **Figure 12-2** shows the percentage reduction in traffic deaths from 1980 to 2013. The United States is near the bottom of the chart,



but still has an impressive 36% reduction. Traffic deaths in the United States dropped from 51,100 in 1980 to 32,700 in 2013. However, the records of other countries show how significantly traffic deaths can be reduced with a more robust implementation of Vision Zero policies. Twenty countries showed a reduction of 50% or more, and seven countries showed over 75%.

Figure 12-2: Reduction In Traffic Deaths 1980 - 2013



The Federal Highway Administration (FHWA) has embraced Vision Zero as one of its policies supporting traffic safety and the development of a safety culture. Its website at <https://safety.fhwa.dot.gov/zerodeaths/> highlights FHWA’s commitment to the vision of implementing “zero deaths and serious injuries on the nation’s highways.” Likewise, the TxDOT Texas Strategic Highway Safety Plan 2017-2022 specifically lists a vision of “...a future with zero traffic fatalities and serious injuries,” and includes sample MTPs from four Texas MPOs which have implemented Vision Zero initiatives. A Vision Zero policy is therefore a conceptual project suggested for consideration for the KTMP region.

Project Py.2 To emphasize safety and help define, implement, and monitor safety projects, a separate **Safety Plan** is a suggested conceptual project. A separate plan is not a requirement, but has been implemented by some MPOs. The Houston-Galveston Area Council (H-GAC, the MPO for the Houston region) has developed a safety plan. It is featured as a link on the safety page of their website at <http://h-gac.com/transportation-safety/default.aspx>. H-GAC’s safety program is guided by a Regional Safety



Council. In addition to their safety plan, they monitor progress with an annual *State of Safety* report, which includes statistics, performance measures, and graphics showing locations with the highest number of crashes. Their safety planning shows how they have developed strategies for focus areas of impaired & distracted driving, bicycles & pedestrians, speeding, and intersections.

Project Py.3 Speeding is not only a leading contributor to crashes, it also makes crashes more severe and exponentially increases the risk of death for bicyclists and pedestrians struck by cars. **Slow Zones** are a suggested conceptual policy to improve safety. Slow Zones are small geographic areas of local streets with infrastructure designed to reduce vehicle speeds to 20 mph. In the implementation in London, a variety of traffic calming measures such as curb extensions, raised crosswalks, raised intersection, chicanes, pedestrian refuges, and mini-roundabouts were installed. Slow Zones have been implemented in 400 neighborhoods since 2009, with 880 more sites planned. The data show a 46% reduction in fatalities and serious injuries, with a spillover effect of an 8% reduction in the areas adjacent to the Zones. Results of the London implementation are discussed at <https://nyc.streetsblog.org/2010/03/22/how-london-is-saving-lives-with-20-mph-zones/>. In New York City, the 28 Slow Zones which have been implemented have not had the same level of positive results. Two reasons are cited for the difference: first, the London examples used a wider variety of traffic calming measures, and second, London implemented the measures more densely than New York City did. Overall, the more robust implementation in London had significantly better results.

Figure 12-3: Slow Zone in London



Although Slow Zones are intended only for local streets and include measures which may cause issues with transit buses and emergency vehicle access, they are a suggested safety conceptual project.

Project Py.4 Conventional project delivery follows the very understandable desire to “do the project right the first time”, requiring extensive studies and a complex design process before implementation. The result is that implementation is relatively slow, which can be an issue with a safety project when the desire is for



immediate action. A suggested conceptual policy is **Tactical Urbanism**, also known as **Rapid Prototyping** or **Iterative Development**. Rather than taking the conventional approach of fully implementing a perfect solution in a permanent construction, this approach emphasizes the speed of construction. It implements rapid, low-cost, temporary solutions, tests them for a limited period of time, modifies them if needed, and then implements the permanent solution after the optimal solution is determined. Tactical Urbanism is often used as a method for public involvement, as it readily allows for experimental treatments to be implemented. It is also used to very rapidly implement safety projects where the conditions are such that an immediate response is wanted.

The City of Burlington, Vermont has developed a Tactical Urbanism policy with an emphasis on community-led development of projects. The intent of the policy is to develop short-term, low-cost projects that can be implemented and tested, leading to longer-term permanent projects. Their guide to Tactical Urbanism is published by their Public Works Department website at <https://www.burlingtonvt.gov/DPW/Tactical-Urbanism-and-Demonstration-Projects>.

Planning Conceptual Projects

Project Pg.1 Chapter 4 of this plan defined new Functional Classification systems for the bicycle, bus, truck, and walk networks, followed by inventories in Chapter 5. Some of these new Functional Classifications defined new attributes for their respective networks that are not fully described in the existing inventories. A conceptual project for planning is suggested to **Update the Inventories** for all modes to capture any additional attributes which are detailed in the new systems.

Project Pg.2 The chapters also noted the need to update the sidewalk inventory to cover newly developed areas. Based on the proposed new inventory, **Inventories of Gaps and Barriers** for the bicycle and the walk networks is also a suggested conceptual project.

Figure 12-4: Gaps and Barriers in the Sidewalk Network



Figure 12-4 illustrates a gap and a barrier in the sidewalk network. An inventory to identify all the places and specifics of these types of issues is an important component of forming a plan to address them.

An inventory of gaps and barriers should be considered in the context of the severity of the issue, safety issues, any alternative routes, and the origin-to-destination paths which are served, particularly for sidewalks serving schools and activity centers. Being aware of this context will assist in setting priorities for addressing the gaps and barriers.



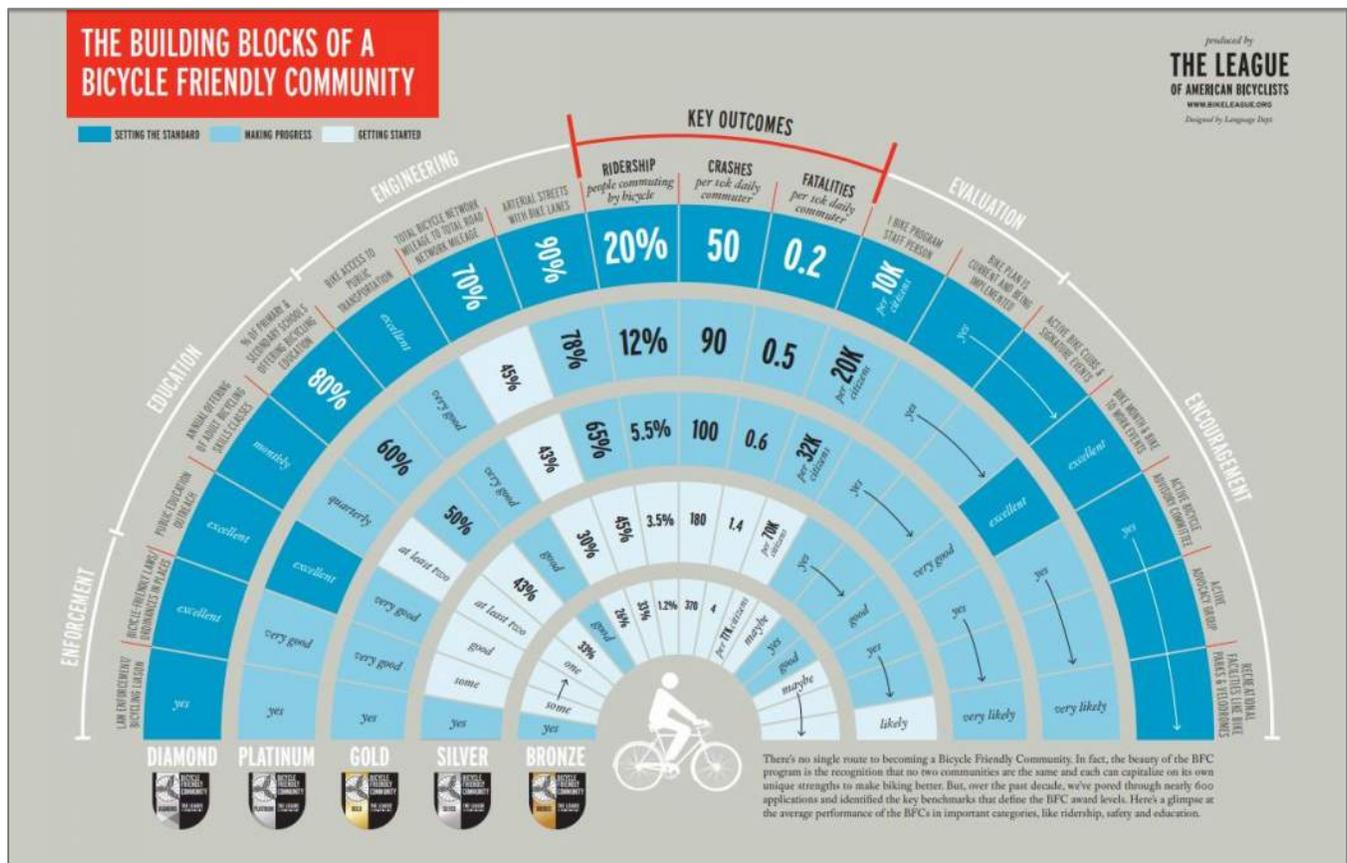
Project Pg.3 A **GIS Analysis of Priority Demographics Areas, Social Service Destinations, and Job Centers** is a conceptual project suggested to inform the process of evaluating walk, bike, and transit connectivity.

Project Pg.4 The GIS analysis can be supplemented by a related **Inventory of ADA Compliance** to describe paths between vital origins and destinations which have barriers for persons with disabilities. An additional layer of detail in the Inventory of ADA Compliance would specifically describe ADA compliance issues at bus stops and stations.

Project Pg.5 Plans for pursuing the **Bicycle Friendly Community Designation** is a conceptual project that has a well-organized path. The program was developed by the League of American Bicyclists in 1995, and currently has 450 designated communities. The designation follows a discrete chart with five attainment levels. Information is found on the League’s website at www.bikeleague.org/community.

Figure 12-5 shows the chart of criteria and thresholds for qualification under the five levels of a Bicycle Friendly Community, ranging from Bronze Level to Diamond Level. The five categories include three items that are common to other implementation plans: Engineering, Enforcement, and Education.

Figure 12-5: Bicycle Friendly Community Chart





Events Conceptual Projects

Project E.1 Of the three criteria of Engineering, Enforcement, and Education which are designated as important for successfully implementing new projects and new modes in the region, Education to promote awareness and change drivers' attitudes can be seen as the most vital. Conceptual projects for various events are therefore suggested to highlight the possibilities to Educate the public.

One of the most prominent types of events promoting multimodal transportation is a **Ciclovía**. The event closes city street to motorized traffic and permits only active transportation. The original Ciclovía in Bogotá, Colombia, is held every Sunday on 75 miles of city streets. Other Ciclovía events, such as in San Antonio, are held once every two years on select streets in the downtown area.



The power of the Ciclovía event is how vividly it demonstrates the wide range of activities that can take place in the streetscape once it is free of the danger of motorized traffic. The issue with implementing a Ciclovía is that motorized traffic comprises about 92% of all trips in the KTMPO region. Closing even a small portion of streets to 92% of traffic is a dramatic undertaking, which should be carefully planned.

The suggested conceptual project for holding a Ciclovía in the KTMPO region is to implement it at two different scales. If only a small portion of streets at the core area of the Ciclovía were closed to motorized traffic and a larger selection of streets were involved while remaining open, the event would simultaneously be large enough to make be noticeable, but small enough to not seriously impede traffic.

The configuration of downtown Belton supports this strategy with a central courthouse square and a surrounding series of rings on streets with relatively low traffic volumes and speeds. **Figure 12-6** illustrates the concept. To hold a Ciclovía event, the inner red ring immediately surrounding the courthouse could be closed to motorized traffic, with all street space opened to bicycle and pedestrian traffic and an intense variety of events. One or more of the surrounding green, yellow, and blue rings and cross streets connecting the rings could host less intense activities, while remaining open to all traffic. The ring-and-spoke system would also serve to orient specific activity sites on the rings. Ciclovía event signs throughout the area would alert motorists to drive with caution.

The San Antonio Ciclovía is predominantly themed to active transportation, and so captures only a limited interest group. A suggested conceptual project for the KTMPO region would layer wider-ranging themes onto the event to generate interest from a broader group of people, and to integrate and publicize active transportation modes within the greater theme.



Figure 12-6: Ciclovía Rings in Downtown Belton



The Ciclovía conceptual project would use different themes each year to present the public with new events, include a wider range of people and interests, and to keep the event fresh in the public’s mind. Possible ring themes and approaches include:



- Class Rings – a theme with heavy involvement from local high schools. Specific events and booths may include sports, games, contests between schools, marching band events, and alumni events for different graduation years.
- Culinary Rings – focusing on different cooking styles. The theme may include food trucks and local restaurants.
- Tree Rings – extension courses and materials on gardening, landscaping, composting, and xeriscaping would bring in people who are not normally associated with transportation. The regularly-scheduled farmer’s market could contribute to this theme.
- Bell Rings – local history, people, and events would be the theme. Contacts with local museums, including the Fort Hood museums, would broaden this theme.
- Birding Rings – the Texas Parks & Wildlife Department sponsors several bird watching events in Central Texas, and these could be integrated into a theme.
- Piston Rings – extending the theme of transportation would be an obvious choice, with the Rodchopperz Car Show already a regularly scheduled calendar event. Transportation-related events in the main ring could include basic car and bicycle mechanics’ courses, and car washes. Driver’s education seminars could be held for specific topics such as driving in congestion, driving in the presence of bicycles and pedestrians, safety tips, and avoiding distractions.
- Planetary Rings – local high schools could contribute to this theme emphasizing STEM education and fun events such as a scale model solar system, a physics circus, and competitive knowledge-based events.
- Der Nibelungen – Wagner’s ring cycle of operas could introduce a general musical theme, with local bands as featured on the regularly-scheduled calendar of events. Local high schools could also compete in a “battle of the bands”.
- Lord of the Rings – a fantasy & science fiction theme could include themed obstacle courses and costumed races.
- Book Rings – events could focus on authors, plots, or places from literature.





Regardless of the theme chosen for the Ciclovía, it could include core events such as a Safety City for children as shown in **Figure 12-7**, an obstacle course of unsafe infrastructure and practices, demonstration setups of bike lanes and protected intersections, scavenger hunts, contests, and other events designed to educate people on the balanced multimodal network.

Figure 12-7: Children's Safety City



Auto Network Conceptual Projects

Project A.1 Excessively wide streets in some locations, coupled with changing demographics trends, has sometimes resulted in roads that operate significantly under their design capacities. This presents an issue of costly maintenance for unneeded road surface, balanced with the opportunity for re-purposing the street right-of-way for other uses. The concept of a **Road Diet** takes advantage of this opportunity to “right size” a road. A typical Road Diet converts an underutilized 4-lane undivided road into a 2-lane road with a center turn lane and bicycle and pedestrian facilities. The turn lane often improves traffic flow, so Level of Service (LOS) can be better after the Road Diet. A conceptual project for Road Diet planning would inventory streets with an existing LOS lower than a defined threshold in both the base year and forecast year and a potential need for bicycle and pedestrian facilities. The project would then perform analyses to determine Road Diet candidates.

Project A.2 Resiliency planning prepares for natural disasters with designated evacuation routes and identified floodplains. An additional area of resiliency planning would **Identify Critical Infrastructure** that forms choke points. A threshold level of detour mileage or time would have to be defined in order to select infrastructure whose failure would have a significant impact on the network.



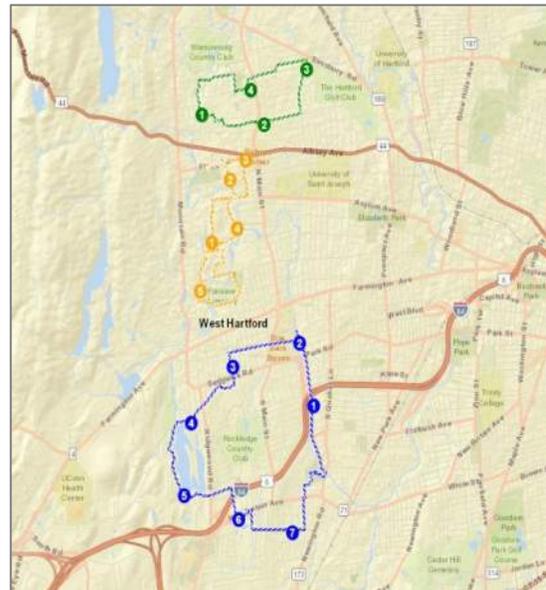
Project A.3 Complete Streets treatments, Slow Zones, and other safety and livability treatments draw from a range of design techniques that often result in narrower travel lanes and tighter turning radii at intersections. A conceptual project to **Define a Hierarchy of Emergency Access Routes** would identify a network for which emergency vehicle access would have priority. The planning may define preferred and prohibited traffic calming treatments for the hierarchy of routes.

Bicycle Network Conceptual Projects

Project By.1 The bicycle Functional Classification system defined the Bicycle Boulevard as a low speed, low volume, low stress route where bicycles would have priority over automobiles. A conceptual project for **Bicycle Boulevard Branding** would follow the precedent of routes implemented in Hartford, CT. As shown in **Figure 12-8**, the Hartford example brands three separate Bicycle Boulevards with colors, similar to the way that transit routes are coded. Wayfinding and route marking signs are also color-coded to heighten awareness of the routes.

These Bicycle Boulevards follow the recommendations to define routes on local streets within neighborhoods where a 25 mph speed limit is practical. They are less than optimum in that the three loops are totally separate, not connecting to each other or to other bicycle infrastructure for practical trip making. However, the precedent of high-profile branding with reference to higher-status transit systems is practical for raising awareness and identity of the Bicycle Boulevards. This is an important consideration for introducing a new Functional Class to the KTMP region.

Figure 12-8: Bicycle Boulevards in Hartford, CT





Project By.2 The city of Seville, Spain increased its bicycle ridership to eleven times its previous levels in just a few years by a **Lightening Implementation of Protected Bike Lanes**. It is referenced as proof that any city can boost ridership significantly by building connected, safe bicycle infrastructure. The core of the implementation in Seville is that the infrastructure was built robustly and rapidly throughout the city. The implementation constructed forty miles of protected bike lanes in one year, with another forty-six miles added over the next six years. The bicycle mode share rose from 0.5% of all trips to 6% almost overnight, or from 6,000 daily trips to over 70,000. An study of Seville’s new bike lanes found a direct correlation between the mileage of protected bike lanes and total ridership. Conversely, the connectivity of the protected bike lanes in a comprehensive system was found to be directly correlated to safety.

Following this successful precedent, a conceptual project would be to identify priority routes, right-of-way, and design elements for a full-fledged protected bike lane network for Lightening Implementation on a robust scale.

Project By.3 Even the most extensive public transit system fall shorts of providing door-to-door connectivity that covers the complex transportation needs of its riders. This first-mile, last-mile issue has been partially addressed in the KTMP region. This concept may be extended further with a **Dockless Bike Share System**, similar to that already implemented on a limited scale on the Temple College Campus.

One recent option introduced in the industry is integrated fare cards with common payment for transit and bike share. This option eases the process of registering for the bike share system as well as the daily use of both systems.

Project By.4 Another conceptual project for bike share is to **Identify First-Mile, Last-Mile Opportunities**. Integrating bicycles with the transit system is largely complete with bike racks on all The HOP’s buses, but the locations for shared ride stations and corrals needs to be determined. An analysis of the ultimate trip origins and destinations of transit riders will help in that placement. It can also provide insight on whether a docked or a dockless ride share system is most appropriate for a given area.

Project By.5 Parking for dockless bike share systems is a major concern. A new option couples the bikes’ GPS with a Radio Frequency Identification (RFID) to define set areas for bike parking. Users simply scan the parking QR code in defined areas, as shown in **Figure 12-9** for a **Bike Corral** in Washington DC.



Figure 12- 9: Bike Corral in Washington DC



Project By.6 The undeniable maintenance and clutter issues associated with the systems have been addressed in several areas with the conceptual project of **Dockless Bike Share Fees**, which are often supported by the bike share providers. The City of Seattle collects a \$250,000 annual fee from each provider, while other systems such as Dallas charge per bike. The electric scooter company Bird has offered to pay \$1 per scooter per day to fund dedicated bike lanes.

Project By.7 A conceptual project to **Identify Locations for Protected Intersections** would serve to help prioritize the locations where this important new infrastructure type can be introduced into the KTMPO region. Locations may be evaluated based on forecast ridership, safety need, and available right-of-way. In the Oakland, CA example illustrated in **Figure 12-10**, the treatment includes curb bulb-outs, protected bike lanes, pedestrian refuges, and permanent bollards.

Figure 12-10: Protected Intersection in Oakland, CA





An interesting aspect of the Oakland implementation is that they are constructing their protected intersections before their protected bike lanes. Crash data show that intersections are more dangerous for bicyclists than travel along the streets, so they see the safety treatments of the intersections first as more effective.

Project By.8 Themed Bike Rides are a conceptual project suggested to increase ridership with fun events and to promote awareness of bicycling by aggregating a larger and more visible group of riders. They may include intense races or training runs for the advanced and serious rider, or fun events for the more general rider.

Examples of Themed Bike Rides include the 15-mile tour of taco restaurants held in Chicago and the annual Bike Houston Moonlight Ramble. The Moonlight Ramble is held on the Saturday before Halloween and features costumes, music, and prizes. It has a 10-mile route and a 20-mile option, with rest stops along both routes that distribute water and snacks.



Project By.9 Additional conceptual projects for bicycles are **Previous Bicycle Network Projects** which were included in the previous *Regional Thoroughfare and Pedestrian/Bicycle Plan*, but which were not re-submitted in the latest call for projects or noted in other public outreach or city sources. While these projects are therefore “unofficial”, they contain valuable information and demonstrate the desire for projects in specific locations. There projects are listed in Appendix A as conceptual projects.

Bus Network Conceptual Projects

Project Bu.1 The HOP has proportionally more stops with shelters than what is typical, providing for passenger comfort and establishing the system’s presence. This can be augmented with a conceptual project to **Develop Bus Shelters** with enhanced treatments. Corporate sponsors could be given the opportunity to customize their stops, and community groups could decorate stops and add their own amenities such as landscaping, bulletin boards, or lending libraries.

Project Bu.2 The transit system in Nashville, TN uses numbers and colors to identify their routes. A proposal for a conceptual project for that system has been to **Name Transit Routes** reflecting local features or history. Nashville proposed route names that are related to country music stars; KTMP could name routes after local figures such as Captain Waskow, historic routes such as the M-K-T line, or local references such as the 1st Cavalry route.



Truck Network Conceptual Projects

Project T.1 A suggested conceptual project to expand an inventory for a transportation mode is a **Truck Barrier Inventory**. This is to identify areas where trucks are not legally excluded, but where local conditions such as rough roads, narrow clearances, and lines of sight make truck operations troublesome.

Project T.2 An **Inventory of Hazardous Materials Origins and Destinations** is a suggested conceptual project that would provide information to plan for truck operations and possible Hazmat Route designations.

Project T.3 A conceptual project for an **Inventory of Truck Parking Areas** would locate higher-volume truck locations that are independent of employment-based freight origins and destinations. Identifying these sites would help for planning street projects to accommodate trucks.

Project T.4 The regional truck network is generally identified by higher-Functional Class streets and local industrial parks. A conceptual project for a **Definition of the Regional Truck Network** would refine the truck network with more precise evaluations of truck movements based on actual truck counts. This project may identify truck movements and needs which have been overlooked.

Walk Network Conceptual Projects

Project W.1 To be practical, the walk network is dependent on direct routings. A suggested conceptual project to **Verify Efficient Paths** for the walk network would be to develop a general street connectivity policy, which could be based on a walkability index. Several indices are in popular use, such as the one developed by the Environmental Protection Agency at <https://catalog.data.gov/dataset/walkability-index>. A walkability program for KTMPPO may identify areas with connectivity issues at the scale of the walk network, and identify priority locations for alleys and cut-throughs.

Project W.2 Many of the sidewalks in the KTMPPO region are three to four feet wide. This is perfectly adequate for the occasional person walking a short distance, but is less fit for longer walks, for shared use with more people, for multi-use paths, or for a pleasant walking experience. It may also be inadequate for downtown areas where more intense activity make a wider sidewalk necessary. A conceptual project would review the sidewalk inventory with all its attributes, and determine the appropriate **Design of the Sidewalk** in specific locations. Sidewalk design may reference the area type in the transect from rural to urban core areas, the expected levels of activity, and the origins and destinations which are served. Design may include attributes of width, landscaping, shade, street furniture, lighting, and pavement.

Project W.3 Artistic designs on the pavement can be considered as part of this conceptual project for sidewalk design. **Figure 12-11** shows a sidewalk in Montreal, Canada. The simple painted decorations and maze attract activity to the sidewalk.



Figure 12-11: Sidewalk in Montreal



Figure 12-8 shows a sidewalk in Eindhoven, the Netherlands, which was inspired by Van Gogh’s painting *Starry Night*. The half-mile long installation is powered by LED lights, but other similar installations use treated luminescent pebbles that glow in the dark. As with the painted sidewalk, this type of installation heightens awareness, increases livability, and promotes activity.

Figure 12-12: Glow-in-the-Dark Sidewalk





Project W.4 Prioritization of the walk network is an important issue. A conceptual project to **Connect Parks and Schools** with low stress, pleasant, and barrier-free paths that avoid circuitous routes would define a high priority network for planning.

Project W.5 Additional conceptual projects to stimulate activity include **Pocket Parks** in the place of one or two parking spaces. As shown in **Figure 12-13**, Pocket Parks repurpose one or two parking spaces on the edge of the street to extend the sidewalk and create small livable spaces. The concept is both an item of infrastructure and an event; there is an annual Park(ing) Day event held in cities throughout the nation to promote Pocket Parks by constructing temporary installations. The event is promoted by the American Society of Landscape Architects (ASLA). Information on the ASLA website at <https://www.asla.org/contentdetail.aspx?id=46872> includes background, information on insurance and licensing, and an implementation manual.

Figure 12-13: Pocket Parks





Project W.6 Walkability increases when people have some pleasant path and destination where they would actually want to walk. A conceptual project to increase walkability would **Discover Hidden Places** in the KTMPPO region that could be developed and publicized for walkability. **Figure 12-14** shows a Hidden Place at Buffalo Bayou in Houston. The area was previously described as a “trash-soaked eyesore under a near-impossible mess of freeways”, but the potential of the Hidden Place was recognized. The Buffalo Bayou Promenade was developed as a path 1.2 miles long in twenty-three acres of park. It now connects the Buffalo Bayou Park to the downtown and the Theater District with a pleasant and walkable multi-use path. The development received the 2009 Professional Award of Excellence from the American Society of Landscape Architects.

Figure 12-14: Buffalo Bayou Hidden Place



Other potential Hidden Places which can be developed into walkable paths or destinations include historic structures, significant trees, and short alleyways connecting activity centers.

Rail System Conceptual Projects

Project R.1 The Federal Railroad Administration (FRA) promotes safety at all at-grade railroad crossings through their regulations requiring trains to sound their horns at least fifteen seconds before the crossing. Recognizing that this may be an annoyance in some residential areas, there is a provision for establishing **Rail Quiet Zones**. Designation requires the use of the FRA Quiet Zone Calculator, which calculates the risk of the crossing and the Supplemental Safety Measures (SSMs) which mitigate the risk. Development and designation of Rail Quiet Zones are overseen by FRA and monitored by the TxDOT Rail Division.



Supplemental Safety Measures for a Rail Quiet Zone most often include four-quadrant gates which block both sides of the road in both directions. Median barriers may also be implemented to help prevent cars from going around the gates.



Summary

The specific physical network projects which are candidates for analysis and prioritization as part of the fiscally-constrained KTMP 2045 Metropolitan Transportation Plan (MTP), which are listed for the various transportation modes in Chapters 6 through 9, are complemented by the conceptual projects listed in this Chapter. These projects are “unofficial” in terms of their source, conceptual rather than specific, and may not fall into one of the MTP funding categories. These conceptual projects therefore may not be directly relevant to the KTMP 2045 MTP. However, taken together with the MTP projects, these conceptual projects can contribute to developing a balanced regional multimodal network.