### 1. How would on-street parking change?

- On-street parking on the northside of W. Chestnut Street would remain where it is, but would be clearly marked in a designated 8 ft. wide parking lane.
- With installation of the cycle track, parking on the southside of W. Chestnut St. would be
  moved off the curb into a designated 8 ft. wide parking lane marked by a solid 4 in. white line.
  The distance from the south curb line to where the parking lane begins would vary from 11 to
  13 ft. due to the varying width of the street.
- Parking restrictions near intersections would be enforced to maintain clear sight distances. As used here, sight distance is how far a driver (and someone walking or riding a bicycle) can see as they are entering a street from a cross street or driveway.
- Vehicles traveling on W. Chestnut St. may be required to stop and wait for vehicles parallel parking. However, this is the current situation on intersecting one-way streets; Nevin St., Pine St., Mary St. and Lancaster Ave. as well as many other streets such as North West End Avenue.

## 2. With parking pulled off the curb, would cars be able to park in front of fire hydrants? How would fire trucks access homes on south side?

- Barriers to the bike lane would be moveable and/or flexible and would not create an obstacle or barrier in the event of emergency.
- In the event a fire truck would need access to a home, at roughly 13 ft. the bikeway would be wide enough for a fire truck to fit down it.
- Fire hydrants are located at each intersection no midblock hydrants alternating between the northside and southside of the street. Parking is currently prohibited at these locations for the sake of intersection visibility.

### 3. How would emergency vehicles reach emergencies if cars on West Chestnut cannot pull over?

Emergency vehicles will still be able to reach addresses along West Chestnut Street and the
pilot would not delay emergency response. The city's grid network allows many alternatives to
West Chestnut Street.

### 4. How would the City deal with trash pickup? Oil deliveries? UPS and Fed Ex deliveries?

- Trash pickup occurs once a week on Tuesdays Sector 11.
- Trash pickup could occur before rush hour or between peak travel times late morning, early afternoon.
- If trash pickup were fully coordinated with street cleaning, trash trucks would have pull-off space due to an empty parking lane which the city is considering as part of this pilot.
- Currently, oil trucks and other delivery vehicles park in existing loading zones, if existing, or otherwise double park in the street. Other streets listed above have similar delays due to deliveries.
- Options will be explored such as creating additional daytime loading zones and establishing procedures for residents to acquire "no parking" signs prior to deliveries and other activities that would block the street.

### 5. How would the bike lanes be cleaned/kept clear of debris, snow, etc.?

- Street Cleaning is 1<sup>st</sup> and 3<sup>rd</sup> Monday and Tuesday.
- Street sweepers and snow plows would fit down the bikeway, which would vary between 10 and 12 feet wide as wide as or wider than most vehicle travel lanes.
- The 3 ft. door buffer area would be a potential location for piling snow, which is similar to what most streets currently have for snow piling. Depending on the amount of snow, snow removal maybe necessary to allow for year-round use by commuting bicyclists.
- Chestnut St. would remain a Snow Emergency Route.

### 6. How would Chestnut function as a 'snow emergency route'?

• During snow emergencies, parked vehicles must be removed from these routes. W. Chestnut Street would still essentially have 3 lanes (27') available to emergency vehicles and snow plows.

### 7. How would bus stops be affected? How would that affect traffic?

- Route 2 Park City B/6th Ward runs on W. Chestnut St. between College Ave. and Charlotte St. 24 times on weekdays, 21 times on Saturdays, 7 times on Sundays. Existing bus stops on W. Chestnut St. are east of Nevin St. and east of Mary St. Both stops have designated pull off areas where parking is prohibited. The stop is usually short under a minute.
- RRTA's current policy for stopping to pick-up/drop-off is to not to stop in a travel lane but to pullover to the curb, berm or dedicated bus pullover.
- It's not unusual for buses to stop in the street in many cities. Buses stopping in the street has the potential to open up two or three parking spaces currently used for curbside bus pullover.
- The length of a typical pull-over stop is generally 40-45 ft. for far side stop (at intersection, stop after crossing street); 75-80 ft. for nearside stop (at intersection, stop before crossing street); and 100 ft. for mid-block stop.
- A typical full sized bus is 102" (8.5') wide.

## 8. How will the access for RRTA vans be handled in front of UUC since the lift now goes directly to sidewalk?

- The lift on the paratransit vehicles can drop down to either the road surface or curb/sidewalk. A safe, accessible path to and from the vehicle is important for either location where the lift is deployed.
- It generally takes 5-6 minutes to pick-up/drop-off a wheelchair when a lift is used. It may be 4-5 minutes on a bus with a ramp.
- **9. How wide is a typical car?** The following are widths of vehicles with mirrors: 2015 Ford F150 XL regular cab 6′ 7.9″; 2015 Chevy Suburban LS 6′ 8.5″; 2015 Cadillac ATS Coupe 6′ 0.5″.
- 11. How wide is a ladder fire truck? The widest Lancaster FD vehicle is 9' 11" mirror to mirror.

#### 10. How wide is a trash truck?

 More than just trash trucks use the street - oil delivery vehicles, UPS and Fed Ex, etc., of all makes and models. The following is representative of some of the largest:

- Kenworth T800 is 113" (9' 5") mirror to mirror; International ProStar+ 6x4 is 115.5" (9' 7.5") mirror to mirror.
- Maximum width of semi freight trailers is 102" (8.5').
- o 102" (8.5') is the maximum width of all commercial vehicles established by federal statute, excluding mirrors and certain safety devices. 23 CFR Part 658; 49 USC 31111, 31112, 31113, and 31114.

# 12. Is the city considering the safety of residents? How would safety for all people on bicycles and people walking be maintained?

- The safety of all users people walking, driving and bicycling of the street is the most important factor in designing W. Chestnut Street to safely accommodate bicycling.
- A study of New York City's protected bike lanes (Protected Bicycle Lanes in NYC, New York City Department of Transportation, September 2014) showed that total injuries – pedestrians, cyclists and drivers – dropped by 20% after protected bike lanes were installed, without reducing travel times.
- A combination of nationally approved signage and pavement markings would be installed and maintained in accordance with PennDOT, FHWA, AASHTO and NACTO, as would be applicable.
- The cycle track, or bike way, would be clearly marked with painted lines, symbols and vertical barriers.
- An example of possible signage and pavement markings are shown in the attached Signage and Pavement Marking Plan for East King Street Bike Lane, City of York, prepared by the Transportation Resource Group, Inc.

### 13. Why this way and not a single bike lane with a westbound lane on Walnut Street?

- The varying width of W. Chestnut St. precludes installing an in-street, unprotected bike lane the full length of the street. The curb-to-curb width of Chestnut Street narrows to 38 feet between Concord and Prince Streets. At this width, there is not enough space to put a safe bike lane and two parking lanes and two travel lanes without reducing the latter two lanes to the absolute minimum for local streets 2 X 9' travel lanes + 2 X 7.5' parking lanes and 1 X 5' bike lane.
- In order to provide any bike lane, a travel lane or parking lane must be eliminated, regardless of the type of bike lane a single one-way unprotected bike lane or a two-way protected cycle track. Eliminating a travel lane would provide the greatest benefit to the greatest number of people.
- Furthermore, to fully encourage bicycling in any city, it is highly recommended by experts to have a high quality east-west dedicated bike route and a north-south route based on today's best practices. This is why the city decided to implement the pilot to see how this would work on West Chestnut Street

### 14. Why is the City not converting Chestnut Street to two-way traffic?

• Conversion of two-way streets are very expensive and it may be many years before such a conversion would occur on Chestnut Street.

### 15. Why was Chestnut Street striped the way that it is now, compared to before the new paving?

- Line painting such as that used on W. Chestnut St. is a form of traffic calming.
- Prior to repaving, Chestnut St. had a single, broken white line down the center of the cartway.
- The prior centerline varied from 19 ½ ft. to 21 ft. creating travel lanes that varied according to how far cars were parked from the curb, sometimes as wide as 15 ft.
- Current lines are all measured from the north curbline placing the current center line at 20 ft.
- The solid white parking lines allow the travel lane width to be a constant 11 ft.
- While this striping keeps the north curb parking at a consistent width of 8 ft., the south curb parking does vary in width from 10-14 ft. to allow for the possibility of a bike lane.
- This new marking plan was recommended by Jeff Speck in the Downtown Walkability Analysis that is available on the city's website. Visit http://cityoflancasterpa.com/walkability-analysis

# 16. Won't narrow lanes increase accidents for everyone? Do fatal accidents in the city happen primarily on wider roads?

- Before repaving and restriping, lanes widths on W. Chestnut St. varied between 13 and 15 ft. depending on how far from the curb cars are parked. The travel lanes are now a consistent 11 ft. in width.
- Studies show that narrow lanes slow speeds, which in turn increases safety and dramatically reduces crashes involving injury and death.
- A Transportation Research Board study showed that where lane widths were narrowed to below 12 ft., accident rates were reduced or unchanged. (*Effective Utilization of Street Width on Urban Arterials*, NCHRP Report 330, Transportation Research Board, 1990.)
- The TRB study as well as similar research consistently show narrower lane widths reduce travel speed.
- Between 2010 and 2014, five pedestrians were killed in collisions with motor vehicles, out of a
  total of 324 reported crashes involving injury or death. There is no clear correlation between
  street width and fatalities in Lancaster, though most reports of pedestrian being hit are on
  major streets with wide lanes.

## 17. Will this slow traffic for commuters and people driving into the city?

- Road diets and other traffic calming techniques including bike lanes, are intended to slow traffic. The speed limit on Chestnut St is 25 mph. With the wide lanes vehicles tend to exceed the speed limit.
- A traffic speed and volume study was conducted between November 30 and December 4, 2015 on Marietta Ave. (between College Ave. and West End Ave.) and W. Chestnut St. (before Elm St.)
- The speed results shows that about ½ of all drivers were exceeding 25 mph as they entered Chestnut St from the College Ave intersection, with about 15% driving faster than 31 mph.
- The peak traffic volume on W. Chestnut St. was 508 vehicles between 7:00 and 8:00 am on December 2. The highest one-hour count on eastbound Marietta Ave. was 620 vehicles between 9:00 and 10:00 am on December 1. Marietta Ave. is two-way traffic with one travel lane in each direction.

- The average weekly traffic volume on eastbound Marietta Ave. is 5,410 and is 4,757 on W. Chestnut St.
- A report by the U. S. Department of Transportation National Highway Traffic Safety
  Administration (DOT HS 809 021 October 1999, Final Report) on speeds and pedestrian injuries
  found that "only 5 percent of pedestrians would die when struck by a vehicle traveling at 20
  miles per hour or less. This compares with fatality rates of 40, 80, and nearly 100 percent for
  striking speeds of 30, 40, and 50 miles per hour or more respectively."

### 18. Speed of cyclists on eastbound Chestnut Street without signals could go as fast as 25 mph.

- The cycle track is not for racing. Riders who want to ride fast to keep up with motor vehicles should use the travel lanes for cars.
- The average cyclist rides less than 15 mph, young children and older folks ride slower.

### 19. Will speed bumps be used to control speeds for cyclists and alert drivers?

- At this time, speed bumps are not proposed.
- Raised cross walks and cycle track are recommended by NACTO at cross streets to improve pedestrian and cyclist safety by further slowing turning motor vehicles.

### 20. What would the buffer consist of and who would maintain the buffered areas?

- A 3-ft. wide buffer consisting of two white 4 in. parallel lines and some sort of vertical treatment would be installed between the bicycle lanes and the on-street parking. The vertical treatment could be flexible bollards or other more permanent treatment such as planter boxes, concrete (jersey) barriers, concrete curb (wheel) stops or a combination of these and other similar products. The flexible bollards are the least restrictive and least expensive.
- The paint and any city-installed buffer treatments would be maintained by the City.

### 21. How many bikes actually use these cycle tracks?

- While unprotected bike lanes tend to increase bicycle ridership from 5% 7%, protected bike lanes (cycle tracks) can increase ridership by 18% to 20%.
- According to the Bicycle Coalition of Greater Philadelphia, streets with buffered bike lanes carry 131% more bicyclists than streets without bike lanes.
- The second annual bike counts were conducted between September 12<sup>th</sup> and 19<sup>th</sup>. The highest single count was more than 50 cyclists passing through the Queen and Chestnut Streets intersection between 5 pm and 7 pm on Tuesday, September 15.
- Further bicycle counts will be conducted if the pilot is approved for implementation.

## 22. Is this to increase safety for bicycle commuters now or to increase the number of cyclists commuting?

• Both.

### 23. How will bikes handle cars pulling out from south?

• The following is from NACTO:

Variant of MUTCD R10-15 to include helmeted bicycle rider symbol (MUTCD figure 9C-3 B).
 Alternate sign in common use, similar to MUTCD R1-5, 1-5a.



- Motor vehicle traffic crossing the cycle track should be constrained or channelized to make turns at sharp angles to reduce travel speed prior to the crossing.
- The crossing should be raised, in which the sidewalk and cycle track maintain their elevation through the crossing. Sharp inclines on either side from road to sidewalk level serve as a speed hump for motor vehicles.

### 24. What types of signage will be used on side streets?

• NACTO and FHWA recommend a variety of MUTCD signage. The City could also create its own signage.



# 25. Why have yield signs at intersections since cyclists in street don't need to yield? The yield signs would send a mixed message. How do we get children to obey the yield sign?

- This is just a suggestion. Typically, cycle tracks and protected bike lanes include signage requiring cars to yield to bikes just as they would to pedestrians.
- Children need to be taught about all signage and should be watched until they are old enough to play and walk on the sidewalk unsupervised.
- If adults obey signs, children will also.

### 26. How will sight distances be handled for cars pulling out of cross streets?

- According to NACTO:
  - o If the cycle track is parking protected, parking should be prohibited near the intersection to improve visibility. The desirable no-parking area is 30 feet from each side of the crossing.
  - For motor vehicles attempting to cross the cycle track from the side-street or driveway, street and sidewalk furnishings and/or other features should accommodate a sight triangle of 20 feet to the cycle track from minor street crossings, and 10 feet from driveway crossing.
  - O Color, yield lines, and "Yield to Bikes" signage should be used to identify the conflict area and make it clear that the cycle track has priority over entering and exiting traffic.
- The following is from Section 285-15 of the Code of the City of Lancaster:
  - o A. No vehicle shall be parked within 15 feet from any fire hydrant

- o B. No vehicle shall be parked within 20 feet from any crosswalk at a street intersection
- C. No vehicle shall be parked within 30 feet upon the approach to any flashing signal, stop sign, yield sign or traffic-control signal located at the side of a roadway

### 27. How will the College Avenue intersection be handled? With signals?

- The College Avenue intersection is currently a fully signalized five-way intersection.
- A variety of signage and pavement markings can be used to direct cyclists that the bike lane end and they should use the crosswalk.
- Signals may be added at signalized intersections to direct bicycle traffic.









### 28. This is going to be difficult for drivers to navigate.

Basic Instructions from the Seattle Department of Transportation:

#### Riding a bike

- Yield to pedestrians and wheelchair users who may be crossing the road and protected bike lane and give an audible signal before overtaking and passing any pedestrian.
- Watch for turning vehicles when approaching intersections, driveways and alleys.
- Be alert for passing bicyclists within the bike lane and for pedestrians crossing the bike lane to access parked motor vehicles.
- Be aware that the bike lane may weave as it approaches intersections to make bicyclists more visible to motorists.
- Stay to the right and allow faster users to pass safely.

## Walking

- Watch and listen for protected bike lane users traveling from either direction just as you would when crossing a street.
- Cross protected bike lane at crosswalks.
- Be alert for nearby cyclists when crossing a protected bike lane to access a parked vehicle.

### Using a wheelchair

• Travelers in wheelchairs are allowed to use bicycle lanes and public roads that have speed limits below 35 miles per hour. Individuals determine what is most comfortable and must follow the same rules as other protected bike lane users.

#### Driving

- Park in the marked lane between the travel lane and the bike lane in instances where on-street parking is available.
- Take extra caution and look both ways before turning across the bike lane at intersections, driveways and alleys, especially when the barrier protected bike lane is protected by on-street parking.
- Watch for people on bikes traveling in both directions in two-way protected bike lanes.

- Remember through bicyclists have the right-of-way at uncontrolled intersections, driveways and alleys.
- Don't drive in a protected bike lane. You can turn across a protected bike lane, but must yield to people riding bicycles.

### 29. How will backing out of driveways be handled?

- Extreme caution should be exhibited when backing out of driveways on W. Chestnut St. regardless of a cycle track or not.
- The following is from the U.S. Department of Transportation Federal Highway Administration Separated Bike Lane Planning and Design Guide, 2015
  - 1. Parking should be prohibited at least 20 ft. from the edge of a driveway, dependent on vehicle speeds and volumes. Paint alone may not be enough to keep vehicles from parking in prohibited spaces without frequent enforcement efforts. Additional elements such as delineator posts, parking stops, or concrete curb extensions can be included to ensure that this area remains clear. (Note: Section 285-16 of the Code of the City of Lancaster prohibits vehicles from parking in front of any public or private driveway or garage entrance, but does not set a distance.)
  - 2. To avoid separated bike lane encroachment of vehicles exiting driveways into the street, landscaping and other street-side elements that obscure sight distance should not be included within 15 ft. of a driveway edge.
  - 3. Floating parking design downstream of driveways on one-way streets do not require parking restrictions for visibility since no conflicting traffic is approaching.
  - 4. A variety of pavement marking treatments can be used to improve the visibility of the separated bike lane and reinforce expected bicyclist behaviors toward motorists. For further guidance on paint and striping in conflict areas, see page 114.
  - 5. Signs on side streets or driveways can alert drivers to expect two-way bicycle traffic, especially on one-way streets.
  - 6. Given the additional width of a two-way separated bike lane, additional measures may be used to reduce the likelihood of accidental entrance by motor vehicles:
    - o A "Do Not Enter" with a supplementary "Except Bicycles" plaque may be used.
    - o Or, a BIKE LANE sign (MUTCD R3-17) may be used.



- A delineator post may be placed on the centerline between the two directions of bicycle travel.
- Section 285-16 of the Code of the City of Lancaster prohibits vehicles from parking in front of any public or private driveway or garage entrance.

## 30. Will there be improved lighting at intersections?

• Lighting at intersections will be evaluated and increased if determined necessary.

### 31. Were traffic counts done in the morning when commuters are coming into the city?

- Traffic counts were conducted according to DOT standards over a 24 hour period.
- Peak travel times were identified including morning and evening.
- The highest volumes were between 3:30 and 4:30 pm 651, and 4:30 and 5:30 pm 626

### 32. When would the bikeway be completed?

 What is being proposed at this time is a one-year pilot program that could be installed in Spring 2016.

## 33. How far will the bikeway go?

- The W. Chestnut St. Bikeway Pilot would extend from College Avenue to Mulberry St.
- If proved to be successful, the Bikeway could be extended eastward to Ranck Mill Road.

### 34. Will joggers be allowed in the bike lane?

Pedestrians, including joggers, should not use bicycle lanes.

## 35. Will school buses that turn onto Nevin St be able to make this turn safely? And will parking be lost at this intersection to maintain turning radius?

• Turning onto Nevin St. from W. Chestnut St. should not be impacted by the cycle track.

### 36. What do the downtown merchants think of the bikeway?

- Merchants were not queried as to their thoughts or feelings on a cycle track at this time.
- If the cycle track pilot is installed on W. Chestnut St., a survey will be developed for residents, cyclists and others including business and property owners downtown.
- Following the pilot and before a cycle track would be extended eastward through downtown, merchants and E. Chestnut St. residents and property owners will be surveyed.

## 37. Will the police department, fire department, and other emergency services get to review this pilot before it's installed?

YES

### 38. Is the cycle track favoring bikes over cars?

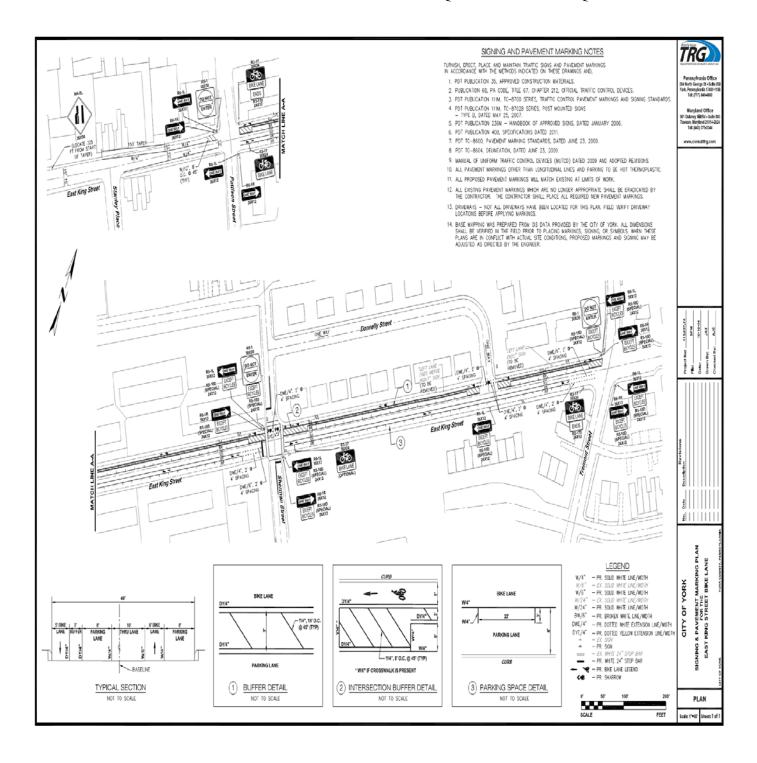
 There are currently more than 111 miles of city streets and 11 miles of state roads in the City and 0.0 miles of bike lanes. The only existing on-street bicycle infrastructure in the city are the sharrows (shared lane markings) on W. Liberty St. between Prince St. and Armstrong Blvd., and the signed PA Bike Route S that follows King and Orange Streets.

#### 39. How would the success of the cycle track be measured?

Success of the cyle track would be measured by safety pre- and post-pilot: rate of accidents or
injuries for pedestrians, cyclists, and motor vehicles; traffic volume – both cars and bicycles;
speeding; impact on parking availability; and neighborhood input.

### 40. If the pilot is not successful, will it be removed?

YES

















BICYCLE CROSSING



WATCH FOR BICYCLES



