

## **Slide 1 – Title Slide**

- Welcome to the public outreach event for the I-270 Corridor Improvements project.
- We're glad you've joined us to learn more about this project.
- The Colorado Department of Transportation, also known as CDOT, is partnering with Commerce City and Adams County to study future transportation improvements in the I-270 corridor.

## **Slide 2 – Agenda**

Let's quickly review what we'll cover in this presentation.

- First, I'll provide an overview of the project including the history of the corridor
- I'll also explain why we are studying transportation improvement options for I-270
- I'll describe the existing conditions in our study area
- I'll review the project process and schedule
- And, I'll talk about the ways you can participate and provide input

## **Slide 3 – Study Area**

- This is our study area shown in yellow
- I-270 traverses unincorporated Adams County, Commerce City, and a little bit of the City and County of Denver.
- We expect that most of the I-270 transportation improvements studied will be between I-70 and I-76, but the ramps from I-270 to I-25 will also be evaluated.

## **Slide 4 – I-270 Corridor History**

- As we look at some recent drone footage of I-270, let's talk a bit about the history of the corridor.
- Construction of I-270 began in the late 1960s.
- The eastern segment opened to traffic between Vasquez Boulevard and I-70 in 1968, followed by the middle segment between Vasquez and I-76 in 1970.
- The remaining western segment from I-76 to the I-25/US 36 interchange was completed in phases in the late 1990s.

## **Slide 5 – What is NEPA**

- To help you understand the process for our study, I need to explain NEPA.
- What is NEPA?
- NEPA stands for National Environmental Policy Act.
- This Act was established in 1969 to provide a framework for environmental planning and decision-making by Federal agencies.
- An environmental assessment -- referred to as an EA -- will be prepared for this project in compliance with NEPA.
- The lead federal agency overseeing this project is the Federal Highway Administration – or FHWA.
- The primary components of the NEPA process are shown in this chart.
  - First - we collect data on existing conditions in the study area.

- We use this data to understand the issues that need to be addressed in the project corridor. This is the basis for what is called “purpose and need.” A purpose and need statement articulates the specific problems to be addressed.
- The purpose and need is the foundation for identifying what transportation improvement alternatives to consider for the project.
- Once we’ve identified an alternative or alternatives that meet the purpose and need, we’ll evaluate the benefits and impacts of the alternatives in the EA.
- At the top of the chart – and key to this process - is public involvement.
- Providing meaningful opportunities for the public to participate and provide input is essential to the NEPA decision-making process.

#### **Slide 6 – What is the purpose of the project...**

- Let’s take a look at the draft purpose and need statement that CDOT and FHWA have developed this project.
- Commerce City and Adams County have reviewed and approved this purpose and need and now we’d like your input.
- The purpose of the I-270 corridor improvements project is to implement transportation solutions which modernize the I-270 corridor to accommodate transportation demands.
- The needs include:
  - Improve safety by reducing the rate of vehicle crashes,
  - Improve travel time reliability and reduce delays,
  - Update obsolete and deficient bridges and highway infrastructure, and
  - Accommodate truck freight traffic.
- The secondary goals of the project include:
  - Accommodation of existing and planned multimodal routes,
  - Consideration of the natural and human environment, and
  - Consideration of approved local and regional transportation plans.
- I’m going to step through each of the needs in more detail, and I hope you’ll let us know if we’ve missed any of the key issues in the I-270 corridor.

#### **Slide 7 – Safety**

- Let’s talk first about the safety issues we’ve identified along I-270.
- We compiled available data on I-270 crashes during the period between 2014 and 2018.
- The data shows that most of the corridor experiences crash rates above state average for similar routes.
- There is a high incidence of rear end and sideswipe crashes, likely due to the stop-and-go traffic conditions during peak periods.

#### **Slide 8 – High Crash Locations**

- This map shows the highest crash locations in the corridor.
  - eastbound I-270 between I-76 and York Street,
  - westbound I-270 at Vasquez Boulevard, and
  - the eastbound I-270 ramp to I-70.

- CDOT completed a Safety Assessment Report in 2016 for the Vasquez Boulevard interchange.

#### **Slide 9 – Vasquez Interchange Video**

- The Vasquez interchange is an outdated tight cloverleaf design with a short distance between loop ramps.
- Drivers have a short distance to weave and merge between the entrance and exit ramps.
- We believe this condition contributes to a high number of crashes, particularly involving commercial vehicles.

#### **Slide 10 – Reliability and Delay**

- This leads me to the next topic – travel time reliability and delays.
- I-270 is a key link for commuters, and business growth in the area has produced high volumes of freight traffic.
- Daily traffic congestion patterns begin on I-270 earlier than any other freeway in Colorado.
- When you're able to drive the corridor at the posted speed limits, which we refer to as free-flow conditions, it takes about six and a half minutes to get through the corridor.
- Peak period travel times can be as long as 23 minutes.

#### **Slide 11 – AM Peak Period Heat Map**

- This heat map shows the travel speeds of traffic along I-270 during the morning peak period between 7:00 and 8:45 AM.
- The time of day is listed across the top – eastbound travel speeds are shown on the left and westbound travel speeds on the right.
- The location along I-270 is listed down the middle of the figure.
- The different colors represent average speeds at specific times and locations.
- Green indicates faster speeds and red indicates slower speeds.
- In the eastbound direction, the slowest travel speeds on I-270 occur between I-25 and Vasquez Boulevard.
- In the westbound direction, the slowest travel speeds on I-270 occur between I-70 and Vasquez Boulevard.

#### **Slide 12 – PM Peak Period Heat Map**

- This heat map shows the same information for the evening peak period, between 4:00 and 6:45 PM.
- The pattern is very similar to the morning peak period with the most substantial slow downs occurring eastbound between I-76 and Vasquez eastbound and westbound between I-70 and Vasquez.
- Backups of traffic at off ramps is one factor that slows down travel on I-270.
- Crashes in the corridor are another factor causing delay and reducing the reliability of travel times.
- An interesting thing we observed during the recent stay-at-home directives due to COVID-19 was that traffic volumes on I-270 were much less affected than other corridors.
- We saw traffic counts cut in half on most metro freeways.
- Daily traffic on I-270 fell about 20% in mid-March, and only about 6% by late May.

### Slide 13 – Infrastructure

- The next need I'll talk about is the condition of the infrastructure on I-270.
- As I mentioned earlier, much of this corridor was built about 50 years ago.
- CDOT has maintained I-270 through the years, but the infrastructure is obsolete and deficient compared to modern interstate standards.
- The primary infrastructure issues in the corridor include bridges, the pavement and subgrade, and the geometry at interchanges.
- Let's talk about the bridges first.
  - Four of the I-270 bridges and the Vasquez Boulevard bridge are rated as structurally deficient.
  - These include:
    - the I-270 westbound and eastbound bridges over the South Platte River,
    - the I-270 westbound bridge over the Burlington Ditch,
    - the I-270 westbound bridge over Brighton Boulevard/BNSF/UPRR, and
    - the Vasquez Boulevard bridge over Sand Creek.
  - All of these bridges were built in 1969 with the exception of the Vasquez bridge, which was built in 1940.
  - Several additional bridges along the I-270 corridor may fall into a structurally deficient category during the next bridge maintenance inspection.
- The second critical infrastructure issue in the corridor is the pavement and subgrade.
  - The pavement has been overlaid numerous times over the years and currently shows signs of distress, like cracking.
  - For those of you who drive the corridor, you may have noticed the roller coaster effect between the South Platte River and Brighton Boulevard.
  - This is where I-270 crosses over an old land fill area.
  - There is differential settlement in this area creating four distinct areas of high points and low points.
  - Ponding occurs in the low points during precipitation events.
  - These conditions are expected to worsen over time and continue to be a maintenance issue for CDOT.
- The last critical infrastructure issue is the geometry at interchanges.
- In particular, the length of acceleration and deceleration lanes at some interchanges do not meet current standards in several locations.
- This is a contributing factor in safety and delays.

### Slide 14 – Freight

- The last need I'd like to explain is the need to accommodate truck freight traffic.
- I-270 is categorized within the Primary Highway Freight System, which is a network of highways identified as the most critical highway portions of the U.S. freight transportation system.
- Trucks make up between 5.4% and 13.1% of the total traffic volume throughout the day.
- This includes trucks passing through the corridor and trucks accessing the numerous commercial and industrial sites along the corridor.

### **Slide 15 – Truck Mode Split**

- These charts give you a sense for how much truck traffic the area surrounding I-270 experiences.
- The chart on the left shows the percentage of commercial trucks versus passenger vehicles driving on local roads in the vicinity of I-270.
- About a 1/3 of the traffic is commercial trucks, which is far higher than the statewide average of 2% shown in the chart on the right.

### **Slide 16 – Vasquez Crash**

- As critical as I-270 is for truck freight movement in the region, the corridor doesn't currently accommodate trucks very well.
- The tight cloverleaf design I mentioned earlier at the Vasquez Boulevard interchange creates a challenging weaving interaction between trucks and passenger vehicles, which impacts truck operations and contributes to a high number of accidents at this location.
- This photo shows a tanker truck that rolled over in a crash on I-270 at Vasquez that shut down the interstate for several hours and resulted in injuries to the driver.
- The 2019 Colorado Freight Plan identifies Vasquez Boulevard as an "important freight, energy, and industrial corridor with significant...mobility issues affecting freight movement...."

### **Slide 17 – Narrow Shoulders**

- Another issue affecting truck freight operations is narrow shoulders.
- Adequate shoulder widths are important for trucks to address inevitable mechanical issues and tire blow outs during long journeys.
- Many stretches of I-270 have sub-standard shoulder widths for trucks.
- This cross section shows the minimum shoulder widths along the corridor, which are below the 4-foot standard for inside shoulders and 10-foot standard for outside shoulders.
- Stop and go traffic is the other primary factor affecting truck freight traffic on I-270.
- The Colorado Freight Plan lists the section of I-270 from I-76 to 56th Avenue as a "congested bottleneck area"
- Delays and crashes related to stop and go traffic impair movement of truck freight in the corridor.

### **Slide 18 – Existing Conditions – Infrastructure**

- Now that you have an understanding of why the project is needed, let's talk about the existing conditions along the I-270 corridor.
- It's important to understand the context of the corridor because the improvements we propose will be evaluated as to how they impact property and resources surrounding the corridor.
- This map of our study area shows the existing infrastructure.
- This includes I-270 which you can see spanning the length of the map.
- Three other interstates connect with this corridor including I-25, I-76, and I-70.
- Other connecting routes include Vasquez Boulevard and Quebec Street.

- There is also major infrastructure crossing under I-270 near the center of the corridor, including the Union Pacific and Burlington Northern railroads, the Burlington Ditch, and Brighton Boulevard.

#### **Slide 19 – Existing Conditions – Historic Resources**

- The Burlington Ditch, Brighton Boulevard, and the railroads also happen to be either listed or eligible for listing on the National Register of Historic Resources.
- Gardener Ditch is also eligible historic resource in the study area.
- These are highlighted in red on the map.
- As part of the NEPA process, we will comply with Section 106 of the National Historic Preservation Act.
- To comply with this Act, we must consider the effects of the project on these and other historic properties identified during our data collection process.

#### **Slide 20 – Existing Conditions – Land Use**

- Looking at the surrounding land uses in the corridor, we have a lot of industrial areas with pockets of commercial, mixed use, and residential.
- This map shows industrial uses in purple, commercial in red, mixed use in orange, and residential in yellow.
- A few of the major industries include the Suncor refinery, Metro Wastewater, and the 56<sup>th</sup> Avenue and Stapleton industrial parks.
- Residential uses adjacent to the corridor include the Rose Hill neighborhood located north of I-270 between Newport Street and Kearny Street.

#### **Slide 21 – Existing Conditions – Natural Resources**

- While this is a fairly urban corridor, we also have some natural resources.
- Clear Creek and the South Platte River both cross under I-270, and Sand Creek parallels the south side of the corridor east of I-76.
- These waterways have associated floodplains shown in green, which are regulated by the Federal Emergency Management Agency and the County.
- They also have wetland areas shown in aqua blue, which are regulated by the US Army Corps of Engineers.
- These features create some constraints that we will consider as we look at transportation improvements for I-270.

#### **Slide 22 – Existing Conditions – Recreation Resources**

- Recreational amenities are another resource in our study area that we need to consider.
- All three of the waterways in our study area have adjacent trails, greenways, and parks.

- The Clear Creek Trail and the South Platte River Trail cross under I-270 in the west half of the corridor.
- The Sand Creek Trail parallels the south side of I-270 for most of the way east of I-76.
- We are coordinating with the Greenway Foundation and the Sand Creek Greenway to understand the use patterns on each of these facilities and the planned recreation improvements and long-term goals for these facilities.
- These recreation amenities are an important part of the context of our study area that we need to consider as we plan transportation improvements for I-270.

### **Slide 23 – Key Steps and Timeline**

- Before I wrap up, I'd like to talk about the key steps in the Environmental Assessment process for our project and our anticipated timeline.
- The key steps in the process are listed down the left side of this chart.
- The years and months are shown across the top.
- There is a horizontal bar for each step showing when that activity is expected to occur.
- And, there are stars showing when we are planning to have public outreach events like this one.
- You can see that we expect the Environmental Assessment process to be completed late in 2021.
- We have mostly finished our data collection at this point and we are firming up the purpose and need for the project.
- This is part of the reason we're holding this event.
- We want to hear from you before we finalize our purpose and need.
- What issues in the corridor are most critical to you?
- What problems in the corridor do you think need to be addressed?
- We'll be considering input from the public as we identify alternatives for transportation improvements on I-270.
- We're aiming to complete the alternatives development process this fall and will hold another outreach event to share what we came up with.
- We'll do a detailed evaluation on the benefits and impacts of the alternatives for improvements to I-270.
- This will all be documented in the Environmental Assessment and we're planning to make that available for you to review in the fall of 2021.
- After we get input from stakeholders and the public on the EA, FHWA will make a final decision on how to move forward.
- There are three potential outcomes:
  - One - FHWA will sign a Finding of No Significant Impact for the selected alternative and the project will proceed into final design and construction.
  - Two – FHWA could determine the project has significant impacts and requires more detailed evaluation in an Environmental Impact Statement.
  - Or, three – FHWA could determine that the project should not move forward.

- While we don't anticipate the second or third scenarios, these are the potential outcomes of an Environmental Assessment.

**Slide 24 – CDOT Requests Your Feedback**

- Thank you for watching this presentation on the I-270 Corridor Improvements project.
- I hope it's been informative.
- We would appreciate your feedback and input on the project.
- Please take the time to communicate with us using any of the four methods shown here.
- There is a comment button in this virtual room.
- You can also visit our website at [www.codot.gov/projects/i270](http://www.codot.gov/projects/i270) to submit a comment
- Or, you can call our project hotline at 303-512-4270
- Lastly, you can email us at [cdot\\_i270@state.co.us](mailto:cdot_i270@state.co.us)
- Thanks for participating and helping CDOT to identify the best transportation solutions for I-270.