

NCHRP Project 20-24(137)

**ASSESSING AND COMMUNICATING THE ECONOMIC AND QUALITY OF
LIFE BENEFITS OF TRANSPORTATION INFRASTRUCTURE INVESTMENTS:
MESSAGE TESTING**

Final Report

Prepared For:
National Cooperative Highway
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The National Academies of Sciences, Engineering, and Medicine

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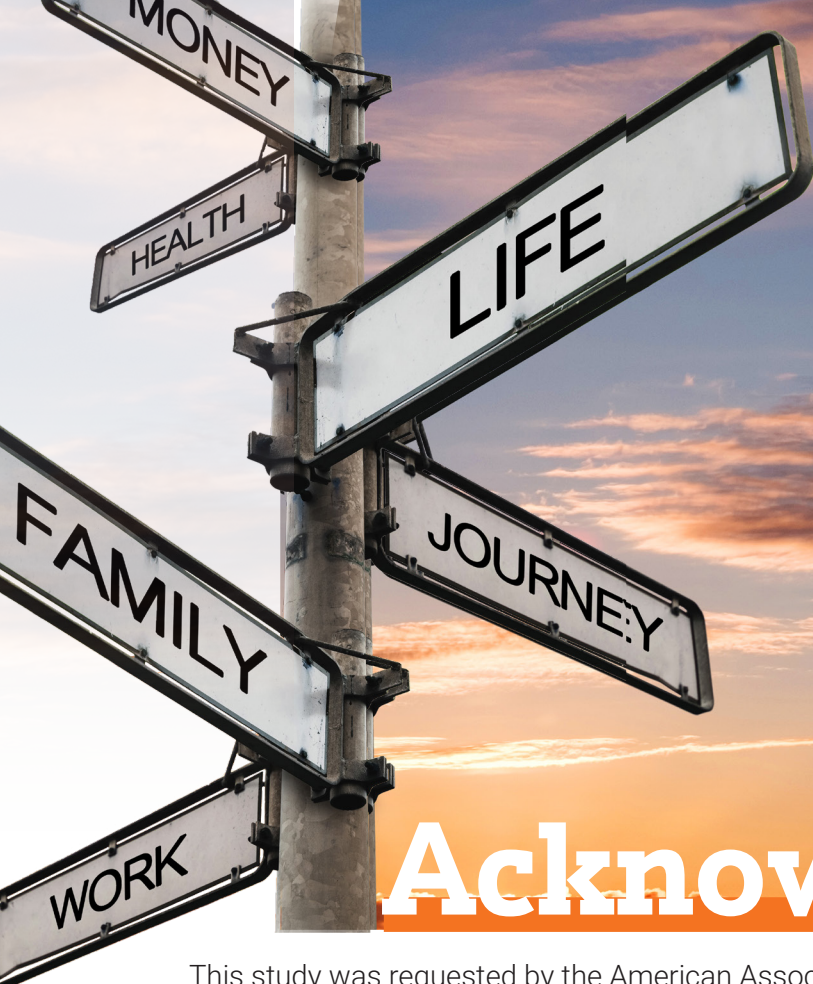
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Communicating the Connection:

NCHRP 20-24(137) – Assessing and Communicating the Economic and Quality of Life Benefits of Transportation Infrastructure Investments: Message Testing

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Executive Summary

This report presents five market-tested messages that state departments of transportation (DOTs) can use to raise public awareness of the benefits that transportation investment can provide in people's daily lives:



"Transportation that works for everyone improves all our lives." (Equity)



"Improving transportation means you can get where you need to go – quickly and easily." (Mobility)



"More reliable transportation makes your commute less stressful." (Easier Commutes)



"Time spent sitting in traffic is time away from the important things in life." (Time)



"Investing in transportation creates more jobs in your community." (Jobs)

The research undertaken in this study builds on NCHRP Project 23-01, Assessing and Communicating the Economic and Quality of Life Benefits of Transportation Infrastructure Investments, completed in March 2020. That study identified and tested a broad range of evidence-based themes and messages to determine which resonated most with the public. It included preparation of a guide, [Communicating the Economic and Quality of Life Benefits of Transportation Investment: New Approaches for State Departments of Transportation](#), with recommendations for using the messages strategically and tailoring them to varied contexts and audiences. The purpose of this follow-on study was to further test and refine the messages in the context of fully developed communications pieces with imagery.

Methodology

The research team developed two sample communications for each of the five messages: a static image suitable for use across social media platforms and a short video. These formats are representative of communication methods in common use by state DOTs. The 10 communications pieces were tested using an online bulletin board technology known as BrightBoards, which allows participants to join at their convenience to complete a series of tasks over several days.

- Two rounds of BrightBoard testing were conducted (July and September 2022), which allowed the materials to be refined slightly based on participant feedback from the first round.
- A total of 55 people participated in the BrightBoards—29 in the first round and 26 in the second round.
- Participants were recruited nationwide and included urban, suburban, and rural residents with a balanced mix of age, gender, ethnicity, income, employment, education, and political party affiliation.

Each round of testing included opportunities to evaluate the message wording, static images, and videos in detail. For both the images and videos—in addition to a question about overall likability — respondents were asked whether they agreed that “This concept really caught my attention,” “This concept shows or talks about things that are important to me personally,” and “I found this concept to be very compelling and persuasive,” as well as questions that assessed the relevance of the communications to specific themes. Respondents were also asked to describe in a sentence or two “what you specifically believe this concept is trying to communicate. What is the main message?” and to state what they found best and worst about each concept. Respondents could also indicate reactions to specific elements of each still image and video with emojis or comments. On the final day of the BrightBoard, respondents were asked to rank both the images and videos from most to least favorite.



Findings

All five messages resonated with members of the public in both rounds of testing. The most successful messages across most of the metrics tested were those on Equity and Mobility, with the Time message also performing well. While the Jobs and Easier Commutes messages were somewhat weaker overall, they still rated favorably. **Table 1** provides a summary of the average scores from the final round of testing.

In both the image and video formats, the specific imagery used had major effects on their favorability. Respondents consistently liked seeing imagery that involved people from different walks of life engaging in typical daily activities, with a clear connection to transportation. If any of these elements were missing, they tended to find the materials less interesting, less credible, and/or less persuasive. Images of individuals or families enjoying the freedom to move about were much preferred to images of highways or vehicles, and photos of highways with traffic were consistently disliked.

The study showed that through image selection, communicators have the ability to make a visual connection between transportation investment and the tangible benefits it provides. Short videos were especially powerful in communicating these direct connections through the use of positive, realistic scenes.

Five key themes perform well as messages that resonate with the public:

Key Metric 10=strongly agree, 1= did not agree at all	Theme					
	Format:	Equity	Mobility	Easier Commutes	Time	Jobs
Likable (completely liked in every way/did not like at all)	Image	8.7	7.1	7.6	7.7	8.1
	Video	8.2	8.5	8.4	8.3	7.9
Attention-getting (really caught my attention)	Image	8.3	6.6	6.0	6.9	7.2
	Video	7.6	7.9	7.7	7.9	6.5
Personally relevant (shows/talks about things that are important to me personally)	Image	7.1	7.6	6.0	7.5	7.1
	Video	8.0	8.2	8.2	8.2	7.2
Persuasive (very compelling and persuasive)	Image	8.0	6.9	6.1	7.3	7.1
	Video	7.7	8.0	7.5	7.7	6.8

Table 1. Key Metrics for Message Themes by Format



All of the messages are suitable for use in transportation agency communications. Some, such as Time and Easier Commutes, may be more relevant in urban and suburban settings where congestion and delay have the greatest impacts, while the others are appropriate for any environment.

The research provided some additional lessons learned for transportation communications:

Do...

- 👍 Lead with the positive.
- 👍 Include details on "what" transportation does for people and "how."
- 👍 Use "investing" instead of "spending money."
- 👍 Show relatable images of individuals or families enjoying the freedom to move about; include a variety of people.
- 👍 Use short videos to communicate the connection between transportation investment and benefits to people's daily lives.
- 👍 Show direct, literal connections between investments and benefits, such as construction workers making local purchases that help create more jobs.

Don't...

- 👎 Start with negative imagery, such as traffic jams, that reminds people of when transportation is bad; this sets the wrong tone when trying to rally support.
- 👎 Over-state what transportation can do, or suggest it's the key to happiness.

The report concludes with suggestions for the following future research topics:

- 👍 Real-world message testing at state DOTs.
- 👍 Research on the best messages and methods for educating specific audiences about the economic and quality of life benefits of transportation investment.
- 👍 The use of videos in short and long forms to describe the connections between transportation investment and its benefits.
- 👍 Methods for effectively demonstrating the link between transportation investment and job creation.

1



Figure 1. Equity Image/Message



1. Equity

Transportation is for Everyone

The research that resulted in this report concluded that “Transportation is for everyone” is a concept that greatly appeals to members of the public across all groups. While the research team identified this as a message related to equity, as worded, it has a broader meaning that readers could also understand in different ways. The idea that everyone should have access to transportation and that it benefits everyone is popular regardless of rural, suburban or urban location; gender; ethnicity; or other demographic factors.

“Transportation that works for everyone improves all our lives” is a highly resonant message. When paired with an image of a wheelchair user exiting a public transit vehicle (**Figure 1**), the concept tested higher than any other. While this research focused on identifying messages that resonate strongly with the public, it is impossible to totally separate the message from the context within which it is presented. The image of a wheelchair elicited empathy and good feelings from most respondents. On a 10-point scale, viewers of the message and image gave it an average rating of 8.7 for overall likability (**Table 2**). Focus group participants also indicated that they strongly agreed that:

- This concept reminds me that investing in transportation infrastructure makes life better for everyone.
- This concept reminds me that investing in transportation plays an important part in the health and well-being of families.
- This concept really caught my attention.
- I found this concept to be very compelling and persuasive.
- This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.

Key Message Metrics: Equity Image

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 2. Equity Image/Message

	Total	Urban	Suburban	Rural
Overall image likability (1= Did not like it at all and 10= Completely liked the image in every way)	8.7	9.3	8.8	8.3
This concept really caught my attention.	8.3	9.3	8.2	7.8
This concept shows or talks about things that are important to me personally.	7.1	8.0	6.7	7.1
I found this concept to be very compelling and persuasive.	8.0	8.8	8.3	7.4
This concept makes me want to go to a website so I can learn and see more.	6.3	7.7	6.0	5.8
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	8.0	9.3	7.6	7.8
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	6.6	8.5	5.9	6.3
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	6.9	8.7	6.0	6.8
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.3	9.2	7.8	8.2
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	8.9	9.7	9.1	8.3

 Strong 8.0+
  Good 7.0–7.9
  Average 6.5–6.9

Equity Image Feedback:

"...if infrastructure accommodates everyone, able bodied or not, we all benefit from the lack of bottlenecks or slowdowns with those people facing physical challenges having to slow others down as the enter, exit or navigate certain public spaces or environments." – rural

"I believe that they are communicating that everyone, no matter the ability, is able to use the public transportation."
– rural

"The importance of good roads covers everyone including the disabled"
– urban

"The main idea is that if everyone has equal access to transportation it helps everyone else. I love this idea and think it is the best one that I have seen so far. I also like that it does not show a face but a concept of someone who is physically challenged and needs transportation to adapt to his situation." – suburban

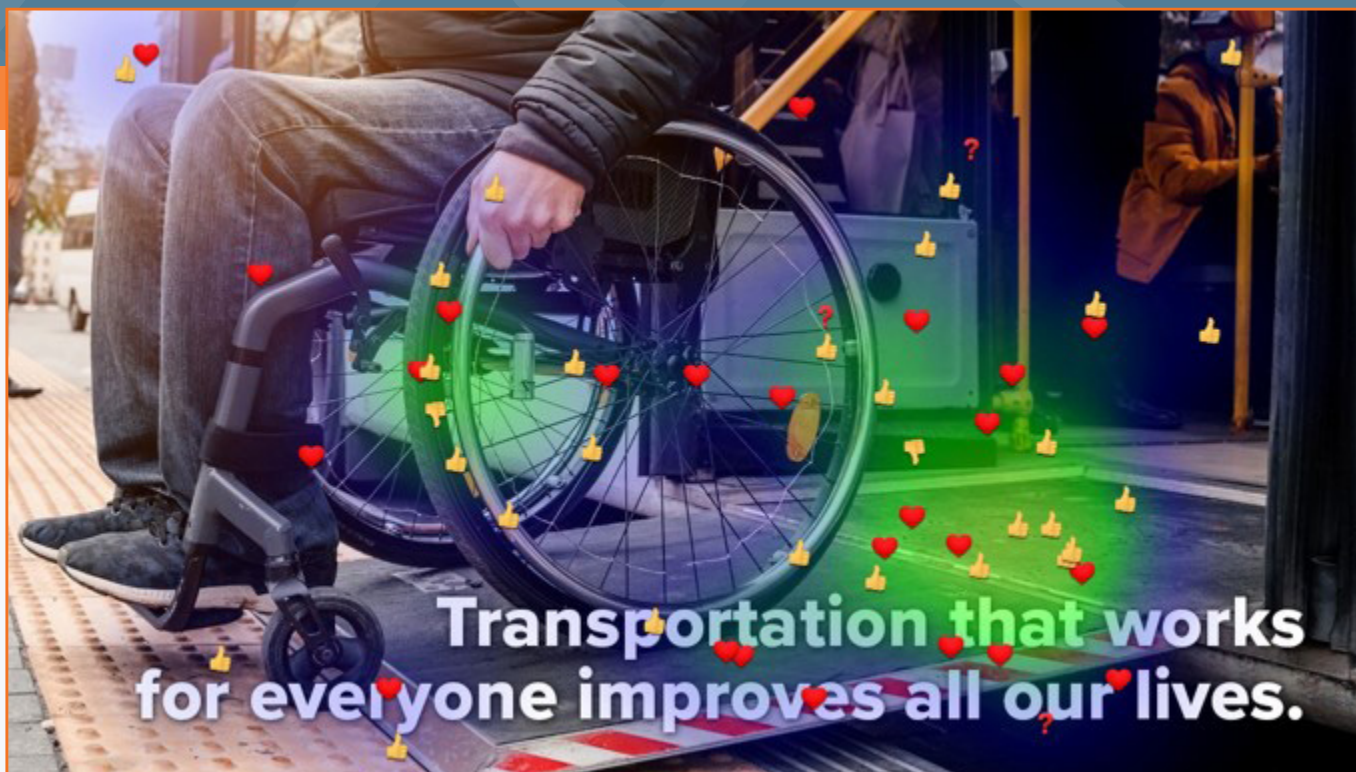


Figure 2. Equity Image Reactions

Online focus group participants could place emojis on the image indicating their reaction to any part of the photo and text. Reactions could include "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." The colored heat map indicates where a concentration of emojis occurred (**Figure 2**).

When the "Transportation is for everyone" message is presented in a video allowing for greater explanation, it is well received. The video can be viewed here: <https://vimeo.com/showcase/10208187>. The message presented in the video as read by a narrator over various images can be found on the following page.

Across all respondents the video scored well particularly in agreement with the statement, "This concept reminds me that investing in transportation infrastructure makes life better for everyone." The video was especially popular among urban residents. It scored highly across all metrics with urban focus group participants as shown in **Table 3**.



Equity Video Script:

“Everyone needs reliable, safe, and affordable transportation. Whether you drive, take the bus, or use another way to get around, being able to go where you need to when you need to is vital to your daily life. Better transportation means more time for the things that count. Transportation that works for everyone improves all our lives. Better transportation is for everyone.”

Key Message Metrics: Equity Video

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 3. Equity Video/Message

	Total	Urban	Suburban	Rural
Overall video likability (1= Did not like it at all and 10= Completely liked the video in every way)	8.2	9.3	7.9	7.8
This concept really caught my attention.	7.6	9.0	7.1	7.3
This concept shows or talks about things that are important to me personally.	8.0	9.3	7.6	7.7
I found this concept to be very compelling and persuasive.	7.7	9.2	7.7	7.0
This concept makes me want to go to a website so I can learn and see more.	5.8	8.0	4.6	5.7
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	7.6	9.2	7.1	7.1
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	7.3	8.8	6.0	7.5
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	7.4	9.0	5.9	7.7
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.0	9.2	7.2	8.0
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	8.5	9.7	8.2	8.2

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Equity Video Feedback:

"Improving all means of transportation benefits everyone. You can't just concentrate on one area of transportation because there are many ways of travel and all need to be in good status." – rural

"Better transportation is for everyone. They included all ages, gender, and abilities." – rural

"Better transportation is for everyone regardless of mode of transport." – urban

"I like how it spoke about everyone. The elderly. The young people driving. Everyone whether we drive or not benefits from using the roads. Especially in California. Everywhere we go we need a car or some sort of transportation." – suburban

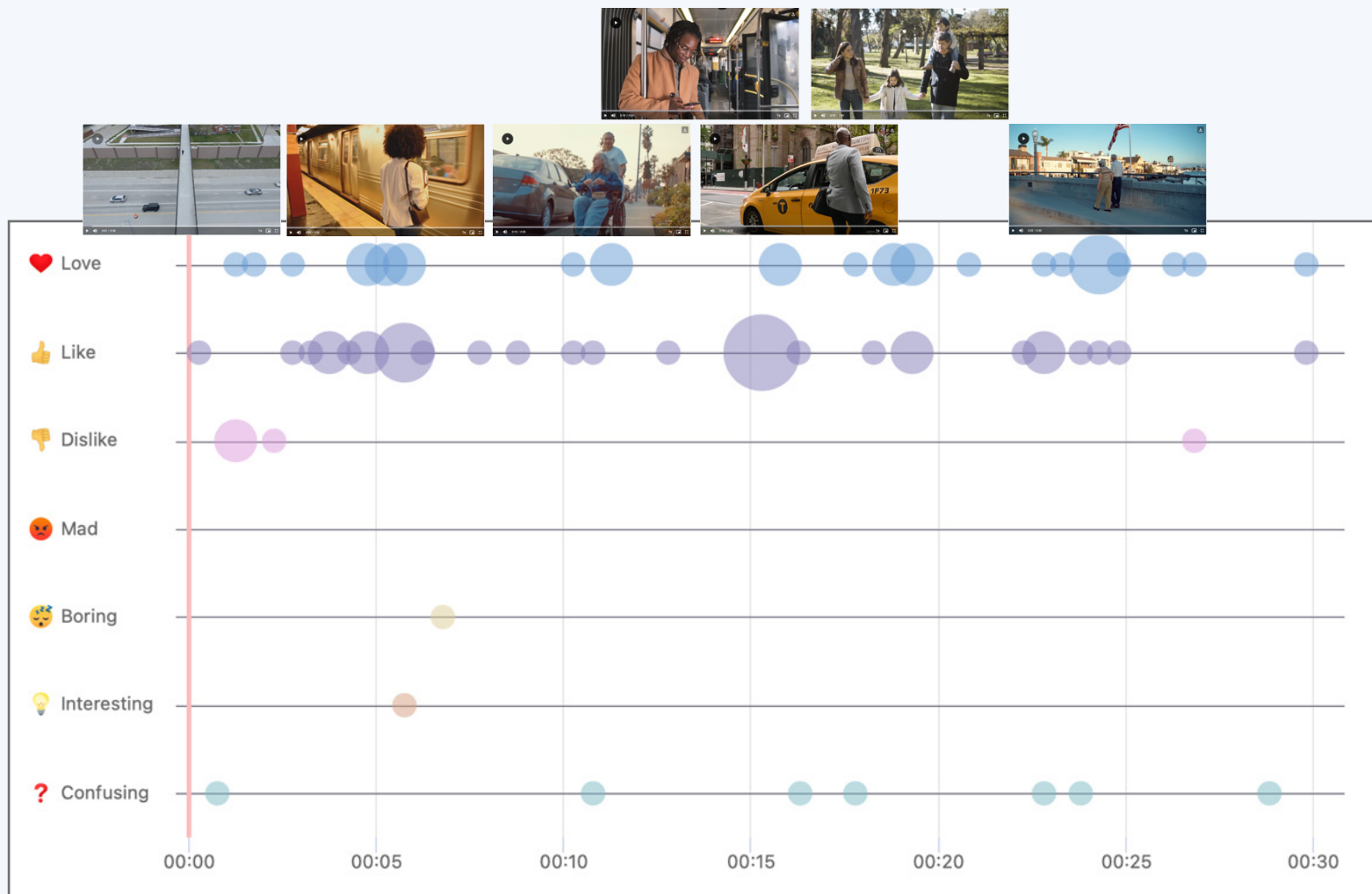
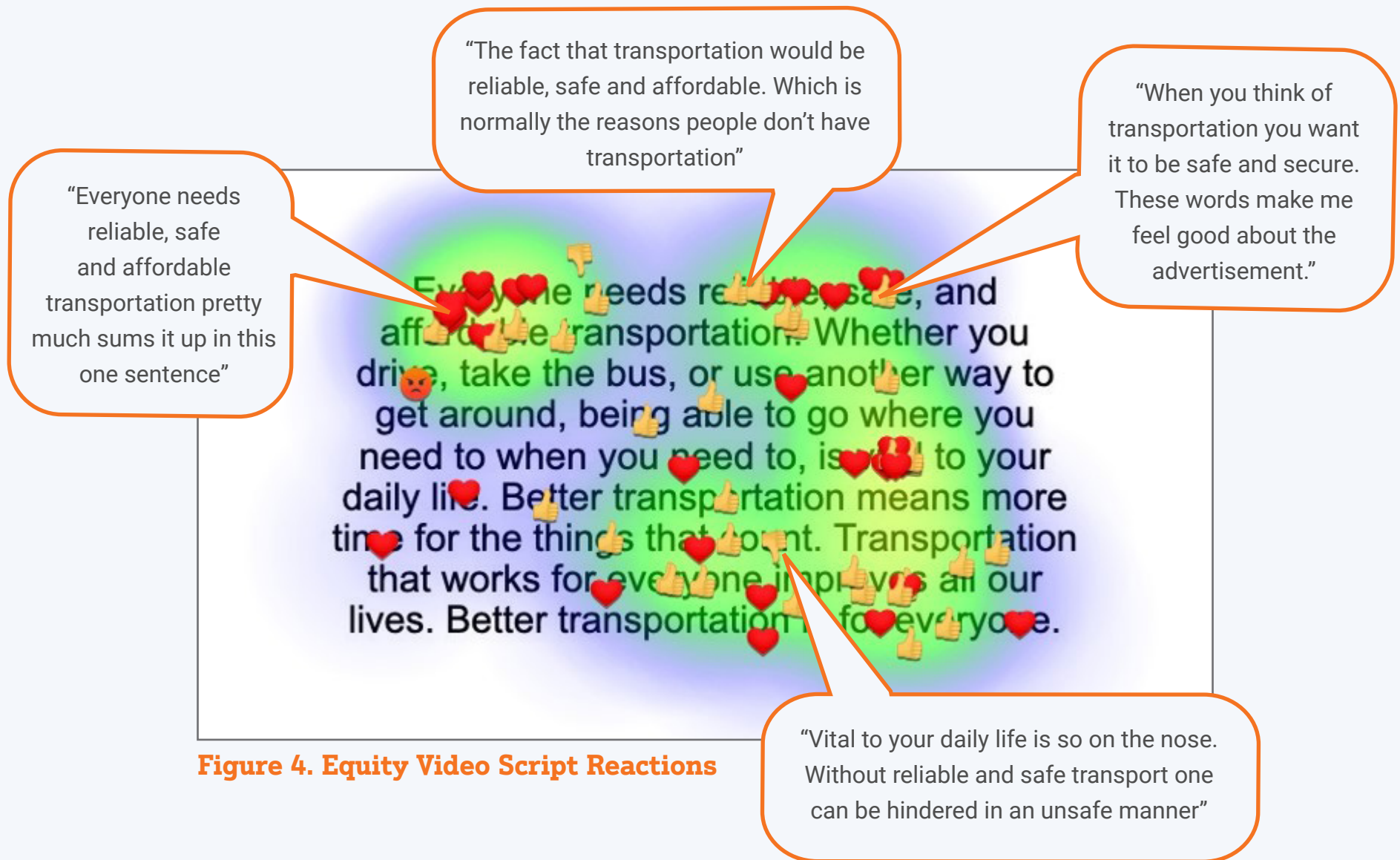


Figure 3. Equity Video Reactions

Online focus group participants were able to watch videos as many times as they chose to at a time convenient for them. As they watched videos, they could place emojis on the screen at any point in the video to indicate their reaction to the words and images being presented (Figure 3).

Emojis could be used to indicate "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." Respondents could also add written comments as indicated in Figure 4.



2



**Improving transportation means
you can get where you need to
go—quickly and easily.**

Figure 5. Mobility Image/Message



2. Mobility

Getting where you need to go

Previous research into transportation messaging has indicated that the concept of mobility is front-of-mind for the public when thinking about the benefits of transportation. Most people are focused on reaching their destinations as quickly as possible with a minimum of stress and inconvenience. **Remember that the word “mobility” is not what resonates with the public; the concept of mobility is.**

The message “Improving transportation means you can get where you need to go – quickly and easily,” is generally well received (recognizing that speed limits and traffic laws apply). When paired with an image of traffic moving freely, however, viewers largely expressed their dislike of being in traffic, which distracted from the message. Regardless the quality of the roadway, whether traffic is backed up, or the image shows a nice clear day, if it shows traffic, it elicits negative feelings. However, the image and message combination was still received favorably, scoring an average of 7.1 out of 10 for overall likability. Focus group participants also indicated that they strongly agreed that:

- This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.

Key Message Metrics: Mobility Image

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 4. Mobility Image/Message

	Total	Urban	Suburban	Rural
Overall image likability (1= Did not like it at all and 10= Completely liked the image in every way)	7.1	7.5	7.1	7.1
This concept really caught my attention.	6.6	7.8	6.6	5.9
This concept shows or talks about things that are important to me personally.	7.6	7.7	8.4	7.0
I found this concept to be very compelling and persuasive.	6.9	7.8	6.8	6.4
This concept makes me want to go to a website so I can learn and see more.	5.6	6.3	5.2	5.6
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	7.5	8.2	7.2	7.4
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	8.6	8.7	8.7	8.5
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	6.9	7.7	6.6	6.8
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	7.3	7.8	7.2	7.0
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	7.7	8.7	7.8	7.3

 Strong 8.0+
  Good 7.0–7.9
  Average 6.5–6.9

Mobility Image Feedback:

"I'm thinking of clear and easy driving experience without congestion." – urban

"If the roadways are kept in good condition, it helps traffic flow freely." – rural

"It looks like a beautiful day, and traffic is flowing nicely." – suburban

"We can get where we're going as quick as possible with the right sources put in for transportation." – rural

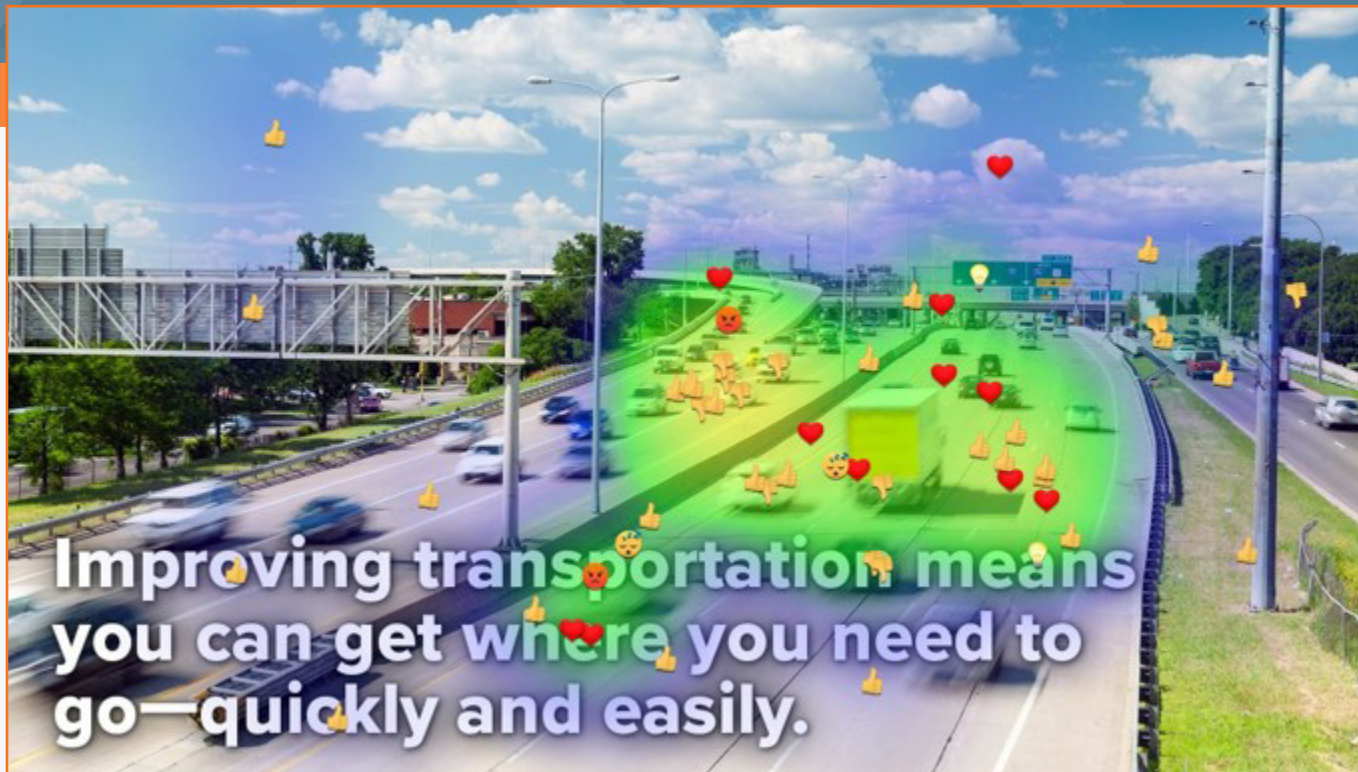


Figure 6. Mobility Image Reactions

Online focus group participants could place emojis on the image indicating their reaction to any part of the photo and text. Reactions could include “Love,” “Like,” “Dislike,” “Mad,” “Interesting,” “Boring,” and “Confusing.” The colored heat map indicates where a concentration of emojis occurred (**Figure 6**).

Additional explanation and footage beyond just traffic on a roadway was provided through a 30-second video highlighting the mobility message. The video can be viewed here: <https://vimeo.com/showcase/10208187>. The message presented in the video as read by a narrator can be found on the following page.

The video scored significantly higher than the still image. It was the highest rated video out of the five videos reviewed by the online focus group receiving, an 8.5 out of 10 for overall likability. The mobility video and message also scored the highest (8.0) among the five tested with members of the public strongly agreeing, “I found this concept to be very compelling and persuasive” as shown in **Table 5**.

Mobility Video Script:

“The ability to easily get to work, shopping, school, doctors’ appointments, and other destinations is important to your daily life. Improving transportation means you can get where you need to go more quickly and more easily. Access to reliable transportation means job security, healthier families, and more time for what really matters. Improved transportation makes life better.”

They also strongly agreed that:

- This concept shows or talks about things that are important to me personally.
- This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.
- This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.
- This concept reminds me that investing in transportation plays an important part in the health and well-being of families.
- This concept reminds me that investing in transportation infrastructure makes life better for everyone.

Key Message Metrics: Mobility Video

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 5. Mobility Video/Message

	Total	Urban	Suburban	Rural
Overall video likability (1= Did not like it at all and 10= Completely liked the video in every way)	8.5	9.3	8.0	8.5
This concept really caught my attention.	7.9	8.7	8.1	7.3
This concept shows or talks about things that are important to me personally.	8.2	9.2	8.1	7.8
I found this concept to be very compelling and persuasive.	8.0	9.5	8.1	7.1
This concept makes me want to go to a website so I can learn and see more.	6.3	8.5	5.7	5.7
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	8.1	9.0	7.6	8.1
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	8.1	8.8	8.0	7.7
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	7.9	9.3	7.0	7.9
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.3	9.0	7.9	8.3
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	8.3	9.7	8.1	7.7

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Mobility Video Feedback:

"Improved transportation makes life better, so you have job security, and getting to work on time. Also, you can easily get to appointments around the city." – urban

"People are happy when they get to where they are going easily." –rural

"Many happy people being where they need to be." –rural

"I think the most important use of imagery in this video was the use of the images in a particular order. They started off with the problem but showed a free-flowing interstate, emphasized where you are going and gave examples and then circled back to infrastructure." –suburban



Figure 7. Mobility Video Reactions

Online focus group participants were able to watch videos as many times as they chose to at a time convenient for them. As they watched videos, they could place emojis on the screen at any point in the video to indicate their reaction to the words and images being presented (Figure 7).

Emojis could be used to indicate "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." Respondents could also add written comments as indicated in Figure 8.

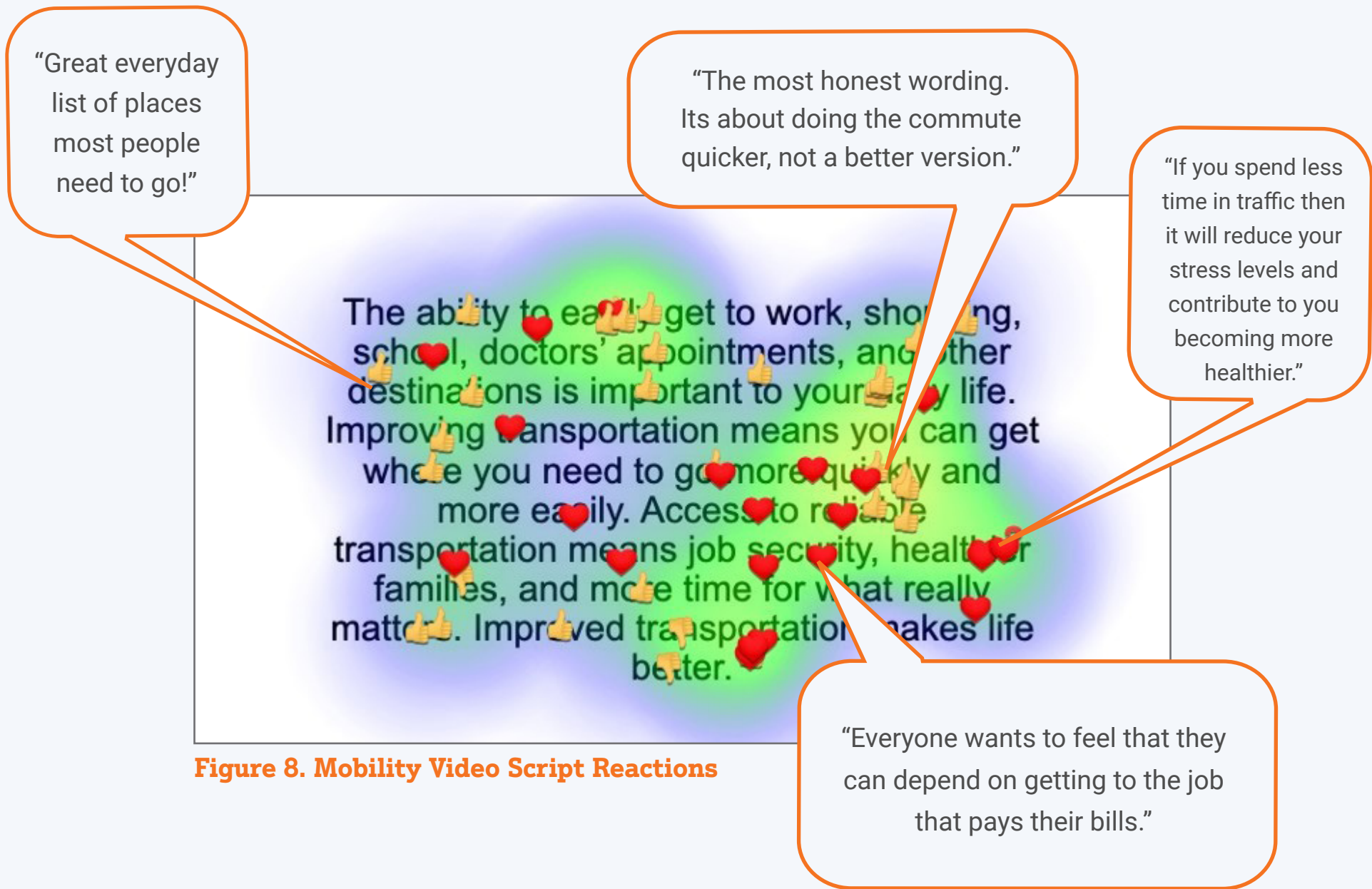


Figure 8. Mobility Video Script Reactions

3



Figure 9. Easier Commutes Image/Message

A photograph of a person with dark skin, dreadlocks, and glasses, wearing a tan jacket, looking down at a mobile device. They are inside a transit vehicle, with metal poles and windows visible in the background. The image is dimly lit with a blue tint.

3. Easier Commutes

Quicker and less stressful

Members of the public generally think of going to and from work when hearing the word “commute.” Like with mobility, commuters are focused on getting where they are going on time. This particularly applies to getting to work on time, which can be a factor affecting job security. Worries about being late, stuck in traffic, or experiencing undue hassles make commutes stressful. Reducing stress is an appealing benefit of better transportation for commuters.

The message “More reliable transportation makes your commute less stressful” was appealing to focus group participants, but scored lower than other messages. The message was shown as text over an image of a transit passenger looking at his phone. The lack of other passengers and the need for a more extensive explanation of how commutes would be made more reliable resulted in a somewhat lukewarm response. The image and message combination received a positive 7.1 out of 10 score for overall likability. There was wide variation, depending on where focus group participants live. Urban respondents gave it an overall score of 8.7, rural 7.6, and suburban 6.8.

Urban focus group participants were the only ones to indicate strong positive reactions across a variety of categories. Two categories in which urban residents scored the image and message highly were strongly agreeing that, “This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier,” and “This concept reminds me that investing in transportation infrastructure makes life better for everyone.”

Key Message Metrics: Easier Commutes Image

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 6. Easier Commutes Image/Message

	Total	Urban	Suburban	Rural
Overall image likability (1= Did not like it at all and 10= Completely liked the image in every way)	7.6	8.7	6.8	7.6
This concept really caught my attention.	6.0	7.8	4.7	6.1
This concept shows or talks about things that are important to me personally.	6.0	7.8	5.2	5.7
I found this concept to be very compelling and persuasive.	6.1	7.8	4.8	6.3
This concept makes me want to go to a website so I can learn and see more.	4.9	7.2	3.0	5.2
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	7.5	7.7	7.2	7.6
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	7.4	8.3	6.4	7.7
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	6.5	7.3	5.1	7.2
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	7.1	7.5	6.4	7.4
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	7.4	8.0	6.6	7.8

 Strong 8.0+
  Good 7.0–7.9
  Average 6.5–6.9

Easier Commutes Image Feedback:

“Investing in transportation means less crowded trains and buses and therefore less stressful commutes.” – urban

“That reliable transportation makes life easier, but doesn’t show that it is reliable.” – suburban

“Yes, he looks happy, but why is he standing on an empty train?” – rural

“Reliable transportation greatly reduces stress for the passengers. Anyone who relies on public transportation wants it to arrive on time.” – suburban



Figure 10. Easier Commutes Image Reactions

Online focus group participants could place emojis on the image indicating their reaction to any part of the photo and text. Reactions could include “Love,” “Like,” “Dislike,” “Mad,” “Interesting,” “Confusing,” and “Boring.” The colored heat map indicates where a concentration of emojis occurred (**Figure 10**).

Presenting the easier commutes message in a 30-second video resulted in a big improvement in how the message was received. It scored particularly high with urban and suburban residents. The video can be viewed here: <https://vimeo.com/showcase/10208187>. The message presented in the

video as read by a narrator over various images can be found on the following page.

The easier commutes video was the second-highest rated video out of the five videos reviewed by the online focus group, receiving an 8.4 out of 10 for overall likability. It scored higher among suburban residents than any of the videos getting an 8.4 with that group. Urban residents reacted very strongly, giving it a 9.3 overall as shown in **Table 7**.

Easier Commutes Video Script:

“Easier commutes mean less time going to and from work—helping ensure job security, reducing stress, and getting you back to the important things in life. Transportation improvements that reduce traffic jams and make buses and trains more reliable mean you get where you need to be with fewer hassles. Better transportation means easier commutes.”

In the aggregate averaged across all groups, focus group participants strongly agreed that:

- This concept shows or talks about things that are important to me personally.
- This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.
- This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.
- This concept reminds me that investing in transportation plays an important part in the health and well-being of families.
- This concept reminds me that investing in transportation infrastructure makes life better for everyone.

Key Message Metrics: Easier Commutes Video

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 7. Easier Commutes Video/Message

	Total	Urban	Suburban	Rural
Overall video likability (1= Did not like it at all and 10= Completely liked the video in every way)	8.4	9.3	8.4	7.9
This concept really caught my attention.	7.7	9.3	7.4	6.9
This concept shows or talks about things that are important to me personally.	8.2	9.2	8.7	7.2
I found this concept to be very compelling and persuasive.	7.5	9.2	7.0	6.9
This concept makes me want to go to a website so I can learn and see more.	5.7	8.2	4.8	5.0
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	8.3	9.3	8.3	7.7
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	8.2	9.3	8.1	7.5
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	7.2	8.8	6.0	7.2
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.1	9.0	8.2	7.5
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	8.2	9.2	8.4	7.5

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Easier Commutes Video Feedback:

"It showed a lot of happy people working, playing, enjoying life, and roads that were unimaginably traffic free." – rural

**"You want less traffic, right? Support better transportation."
– urban**

**"Better transportation makes for easier commutes and more time for you and family."
– urban**

**"Improving transportation can help people have less stress and a shorter, better commute, and have more time to spend time doing things they enjoy."
– suburban**

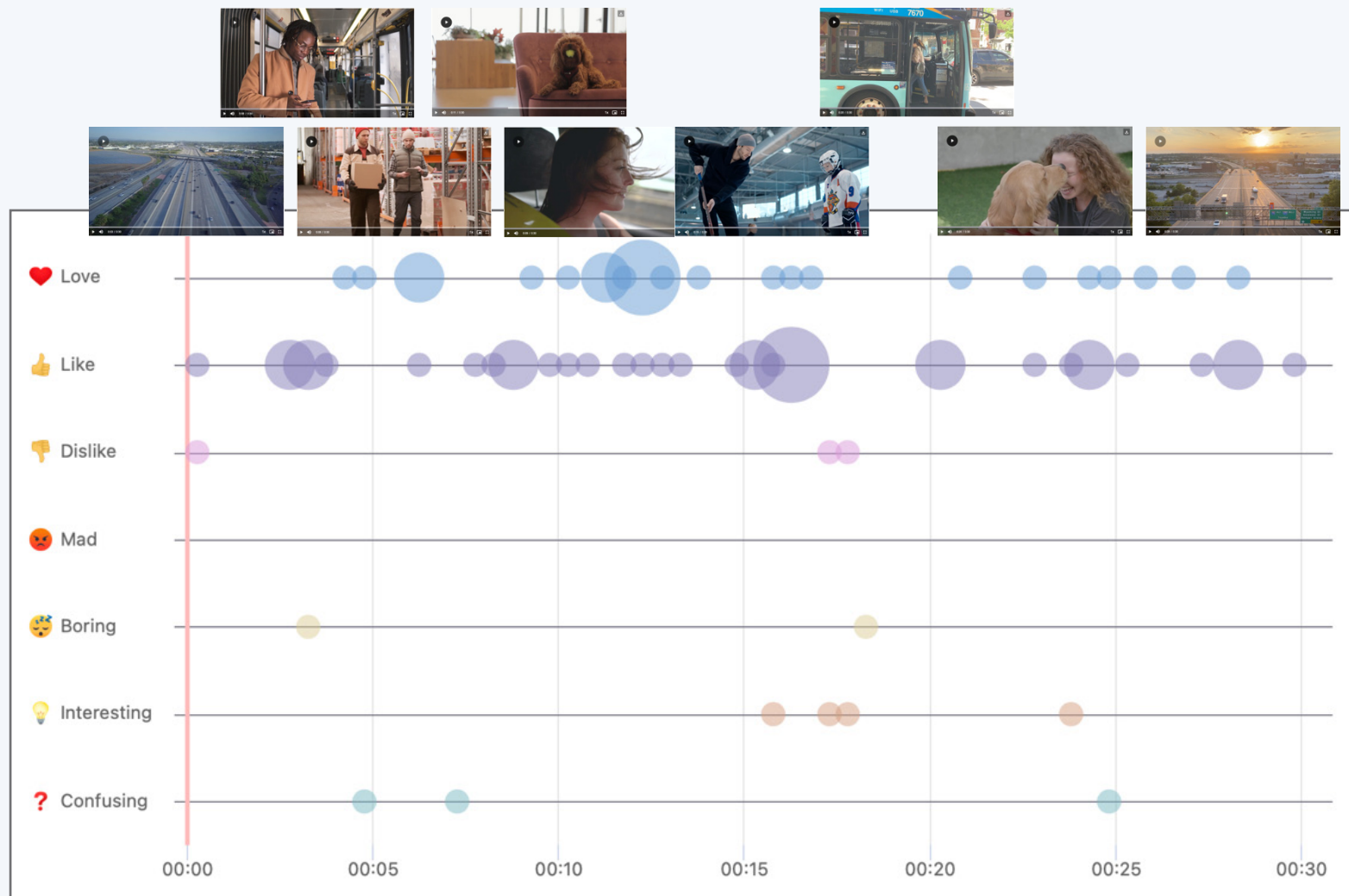


Figure 11. Easier Commutes Video Reactions

Online focus group participants were able to watch videos as many times as they chose to at a time convenient for them. As they watched videos, they could place emojis on the screen at any point in the video to indicate their reaction to the words and images being presented (Figure 11).

Emojis could be used to indicate "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." Respondents could also add written comments as indicated in Figure 12.



Figure 12. Easier Commutes Video Script Reactions

4



Figure 13. Time Image/Message



4. Time

More moments that matter

Saving time is popular across multiple themes and messages. When tested as a concept unto itself, the idea of being able to get around more quickly, with fewer delays and more time to focus on family, relaxation, and recreation appeals to diverse audiences.

The message “Time spent sitting in traffic is time away from the important things in life,” resonated with focus group participants when overlaid on an appealing image. It was presented as part of a photo showing a mother and father lifting up a smiling baby in an outdoor area. The image and message combination scored 7.7 out of 10 for overall likability. Focus group participants also indicated that they strongly agreed that:

- This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.
- This concept reminds me that investing in transportation plays an important part in the health and well-being of families.

Key Message Metrics: Time Image

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 8. Time Image/Message

	Total	Urban	Suburban	Rural
Overall image likability (1= Did not like it at all and 10= Completely liked the image in every way)	7.7	9.0	7.2	7.4
This concept really caught my attention.	6.9	8.7	6.2	6.6
This concept shows or talks about things that are important to me personally.	7.5	7.5	8.1	7.1
I found this concept to be very compelling and persuasive.	7.3	8.8	6.8	6.8
This concept makes me want to go to a website so I can learn and see more.	5.5	6.7	5.2	5.1
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	8.0	9.2	7.8	7.7
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	7.2	9.0	6.8	6.6
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	6.3	8.2	5.7	5.9
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.0	9.2	7.8	7.6
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	7.4	9.0	7.3	6.6

 Strong 8.0+
  Good 7.0–7.9
  Average 6.5–6.9

Time Image Feedback:

"Family time is important. You should be there to experience the joy of a child laughing and not spending time in traffic" – rural

"Better infrastructure leads to more leisure time with your family." –suburban

"When you are not sitting in traffic you have more time to spend with family or whatever you love to do." – urban

"It emphasizes the importance of cherishing every moment spent with loved ones and how less traffic helps you spend more time with family and friends." – urban



Figure 14. Time Image Reactions

Online focus group participants could place emojis on the image indicating their reaction to any part of the photo and text. Reactions could include “Love,” “Like,” “Dislike,” “Mad,” “Interesting,” “Boring,” and “Confusing.” The colored heat map indicates where a concentration of emojis occurred (**Figure 14**).

Additional explanation and footage beyond just the happy family was provided through a 30-second video highlighting the message related to time. The video can be viewed here: <https://vimeo.com/showcase/10208187>. The message presented in the video as read by a narrator over various images can be found on the following page.

The video was scored 8.3 out of 10 for overall likability averaged across all respondents. Urban participants scored it highest at 9.3 and suburban scored it highly as well at 8.1 as shown in **Table 9**.

Time Video Script:

“Time spent sitting in traffic is time away from the important things in life. Investing in improvements that reduce traffic jams gives you more time in your day by helping you get to where you need to go more quickly with fewer hassles. Better transportation means time for what matters—time for work, time for family, and time for yourself.”

Focus group participants also strongly agreed that:

- This concept shows or talks about things that are important to me personally.
- This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.
- This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.
- This concept reminds me that investing in transportation plays an important part in the health and well-being of families.
- This concept reminds me that investing in transportation infrastructure makes life better for everyone.

Key Message Metrics: Time Video

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 9. Time Video/Message

	Total	Urban	Suburban	Rural
Overall video likability (1= Did not like it at all and 10= Completely liked the video in every way)	8.3	9.3	8.1	7.9
This concept really caught my attention.	7.9	9.3	8.0	7.0
This concept shows or talks about things that are important to me personally.	8.2	9.3	8.4	7.4
I found this concept to be very compelling and persuasive.	7.7	9.3	8.0	6.5
This concept makes me want to go to a website so I can learn and see more.	5.5	8.2	4.8	4.7
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	8.4	9.3	8.6	7.7
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	8.0	9.2	7.9	7.4
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	7.2	8.5	6.0	7.4
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	8.0	8.8	7.6	8.0
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	8.4	9.5	8.3	7.9

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Time Video Feedback:

"It's a reminder that better roadways, public transportation is essential for your daily life activities outside the home." – urban

"Traffic wastes important time"
– rural

"Importance of getting around so your able to take care of business."
– urban

"Transportation helps us all get around to do the things we like to do or need to do. Reliable transportation can help us get there more quickly." – suburban

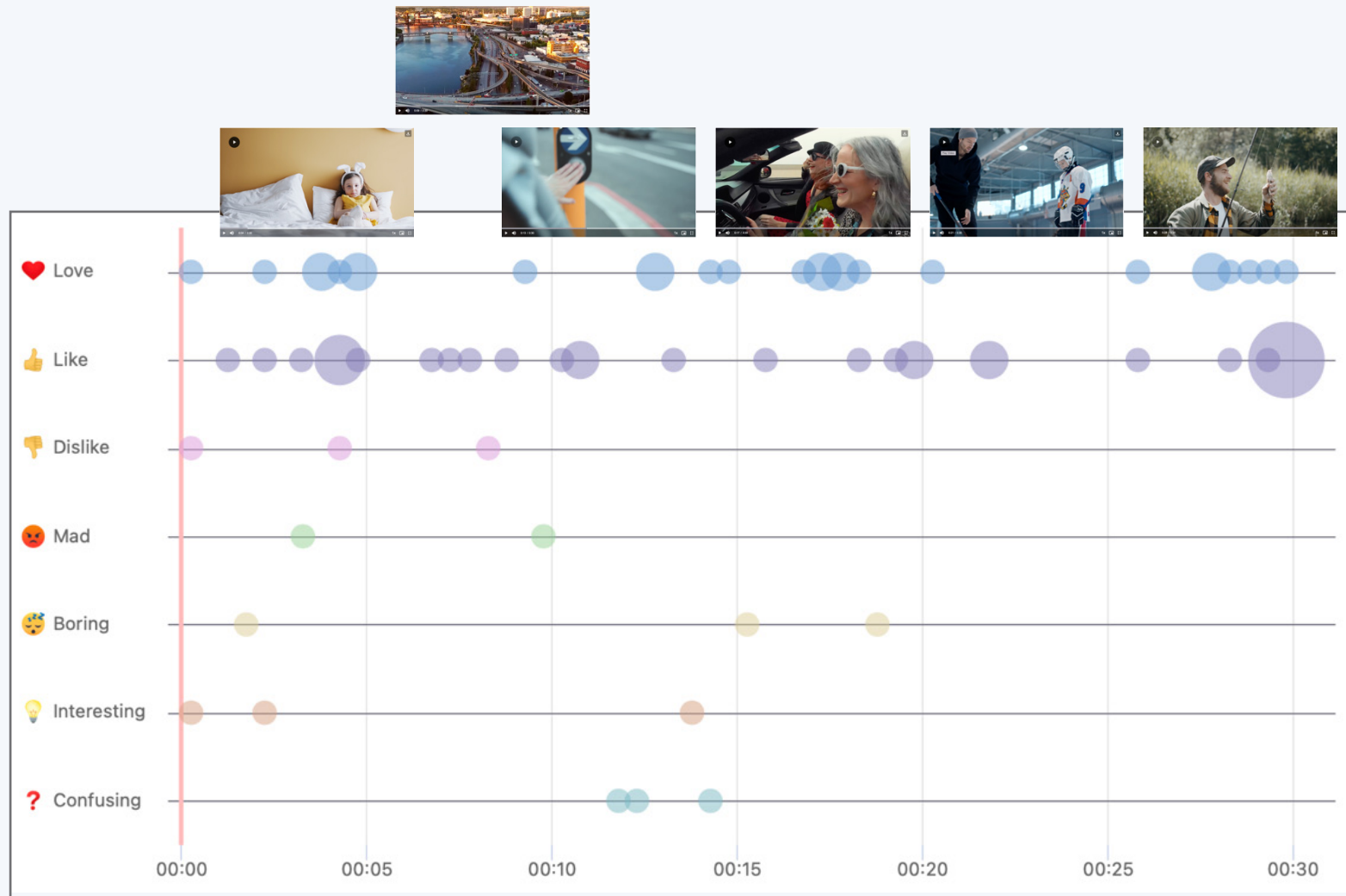


Figure 15. Time Video Reactions

Online focus group participants were able to watch videos as many times as they chose to at a time convenient for them. As they watched videos, they could place emojis on the screen at any point in the video to indicate their reaction to the words and images being presented (Figure 15).

Emojis could be used to indicate "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." Respondents could also add written comments as indicated in Figure 16.



Figure 16. Time Video Script Reactions

5



Figure 17. Jobs Image/Message



5. Jobs

Making the connection clear

Prior research into effective messaging has found it difficult to make the connection between transportation infrastructure investment and jobs beyond construction workers directly on improvement projects. Members of the public do not tend to think of transportation as the key driver of the economy. Indirect jobs such as those created through suppliers, shippers, retail, restaurants, hotels, or other businesses that benefit from transportation investment do not typically come to mind for average Americans. Construction workers, however, could be key to making that connection.

The message “Investing in transportation means more jobs in your community,” was the second highest scoring when combined with a photo of construction workers buying food from smiling vendors. The words and image presented made a literal connection between the investment in infrastructure and the jobs it supports beyond those directly on improvement projects. The image and message combination scored 8.1 out of 10 for overall likability. Focus group participants also indicated that they strongly agreed that:

- This concept reminds me that investing in transportation creates jobs and a more vibrant economy.

Key Message Metrics: Jobs Image

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 10. Jobs Image/Message

	Total	Urban	Suburban	Rural
Overall image likability (1= Did not like it at all and 10= Completely liked the image in every way)	8.1	8.7	7.6	8.3
This concept really caught my attention.	7.2	7.2	7.6	6.9
This concept shows or talks about things that are important to me personally.	7.1	7.3	7.8	6.4
I found this concept to be very compelling and persuasive.	7.1	7.2	7.4	6.9
This concept makes me want to go to a website so I can learn and see more.	5.3	6.3	4.6	5.3
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	6.8	7.2	6.2	7.0
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	6.3	6.0	6.3	6.5
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	8.5	7.7	9.1	8.5
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	7.4	7.3	7.8	7.3
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	7.7	7.5	8.1	7.5

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Jobs Image Feedback:

"The main message is that if we invest in transportation, it creates construction jobs which in turn creates a need for food workers."

– rural

"This concept is simple trying to say if more infrastructure is channeled to transportation, more job opportunities."

– urban

"Infrastructure and construction gives a viable boost to employment and the economy."

– rural

"Everyone wins is what I take from this. When there is money flowing to jobs, then there is money flowing into the pockets of small business owners as well because of the ecosystem of jobs and commerce."

– suburban



Figure 18. Jobs Image Reactions

Online focus group participants could place emojis on the image indicating their reaction to any part of the photo and text. Reactions could include “Love,” “Like,” “Dislike,” “Mad,” “Interesting,” “Boring,” and “Confusing.” The colored heat map indicates where a concentration of emojis occurred (**Figure 18**).

The jobs concept and message was presented in a 30-second video. The video can be viewed here: <https://vimeo.com/showcase/10208187>. The message presented in the video as read by a narrator over various images can be found on the following page.

The jobs video was well-received, but scored the lowest of the five videos reviewed by focus group participants. It was given a 7.9 out of 10 for overall likability averaged across all respondents. The video and corresponding messaging related to jobs were very popular with urban respondents who gave it an average score of 9.2. Urban residents agreed very strongly (9.8) that “This concept reminds me that investing in transportation infrastructure makes life better for everyone,” and “This concept reminds me that investing in transportation creates jobs and a more vibrant economy,” (9.7) as shown in **Table 11**.



Jobs Video Script:

“Good jobs are key to a thriving lifestyle, a vibrant economy, and the well-being of our families. Investing in transportation creates not only construction jobs but jobs in local restaurants, stores, offices, and all the other businesses that support a thriving community. Access to reliable transportation means more job security, healthier families, and more time for the things you really enjoy.”

Key Message Metrics: Jobs Video

1=DO NOT AGREE AT ALL AND 10=STRONGLY AGREE

Table 11. Jobs Video/Message

	Total	Urban	Suburban	Rural
Overall video likability (1= Did not like it at all and 10= Completely liked the video in every way)	7.9	9.2	7.9	7.2
This concept really caught my attention.	6.5	8.8	6.2	5.5
This concept shows or talks about things that are important to me personally.	7.2	9.3	6.7	6.5
I found this concept to be very compelling and persuasive.	6.8	9.0	6.3	6.1
This concept makes me want to go to a website so I can learn and see more.	5.2	7.7	4.4	4.5
This concept reminds me that investing in transportation infrastructure saves time for what makes life worth living.	7.2	9.3	6.8	6.5
This concept reminds me that investing in transportation reduces traffic jams and makes commuting easier.	6.3	8.8	4.9	6.2
This concept reminds me that investing in transportation creates jobs and a more vibrant economy.	7.8	9.7	6.9	7.5
This concept reminds me that investing in transportation plays an important part in the health and well-being of families.	6.9	9.3	6.3	6.1
This concept reminds me that investing in transportation infrastructure makes life better for everyone.	7.7	9.8	7.2	7.0

Strong 8.0+
 Good 7.0–7.9
 Average 6.5–6.9

Jobs Video Feedback:

“Better transportation = better economy, happier people and stronger families, more vibrant communities” – urban

“It shows how investing in transport infrastructure can create jobs and job security not only for construction workers” – urban

“The positive message of more jobs” – suburban

“The concept tells a story about the benefits good transportation will add to the lives of the people by giving them job opportunities and also security...it also shows how good transportation can improve the quality of time you spend on the things you love.” – urban



Figure 19. Jobs Video Reactions

Online focus group participants were able to watch videos as many times as they chose to at a time convenient for them. As they watched videos, they could place emojis on the screen at any point in the video to indicate their reaction to the words and images being presented (Figure 19).

Emojis could be used to indicate "Love," "Like," "Dislike," "Mad," "Boring," "Interesting," and "Confusing." Respondents could also add written comments as indicated in Figure 20.

"Getting to and from work requires reliable transportation. This means that employees can get to their places of employment, which generates revenue."

"Investing in transportation creates not only construction jobs but jobs in local restaurants, stores, offices and all the other businesses that support a thriving community. I was actually attracted to this content more."

Good jobs are key to a thriving lifestyle, a vibrant economy, and the well-being of our families. Investing in transportation creates not only construction jobs but jobs in local restaurants, stores, offices and all the other businesses that support a thriving community. Access to reliable transportation means more job security, healthier families and more time for the things you really enjoy.

"I am all for healthier and happy families."

"Everyone needs access to some form of transportation to get to work, go to medical appointments, visit family, etc."

Figure 20. Jobs Video Script Reactions

Conclusions

This study helped to validate five messages that transportation agencies can use to raise awareness of the benefits of transportation infrastructure investment:

- 1 "Transportation that works for everyone improves all our lives." (Equity)
- 2 "Improving transportation means you can get where you need to go – quickly and easily." (Mobility)
- 3 "More reliable transportation makes your commute less stressful." (Easier Commutes)
- 4 "Time spent sitting in traffic is time away from the important things in life." (Time)
- 5 "Investing in transportation creates more jobs in your community." (Jobs)

When placed in the context of communications pieces with imagery, all five messages resonated with members of the public in two rounds of detailed qualitative message testing. The most successful messages across most of the metrics tested were on **Equity** and **Mobility**, with the **Time** message also performing well. While the Jobs and Easier Commutes messages were somewhat weaker overall, they still rated favorably.



Importance of Specific Graphics/Images/Media

In both the static image and video formats, the specific imagery used had major effects on the scores and qualitative comments provided by participants, independent of their reactions to the message themes and wording. Respondents consistently liked seeing imagery that involved people from different walks of life engaging in typical daily activities, with a clear connection to transportation. If any of these elements were missing, they tended to find the materials less interesting, less credible, and/or less persuasive.

- Participants found certain scenes unrelatable (for example, two women on a leisure drive in a convertible) and would rather see working women doing everyday things like picking up children from school or doing other activities.
- Some images included in the videos during the first round of testing were perceived negatively, distracting attention from the messaging. An example was a transit passenger wearing a mask.
- Photos of highways with traffic were consistently disliked.

Participants especially liked **images with a personal touch**—such as scenes of families enjoying time together—but they needed to see a direct connection to transportation for the communication to be meaningful.

Sample Comments:

“Love the scene of a family preparing to go somewhere in the car.”

“Like the portrayal of an everyday family and what they deal with.”

“A few too many scenes used your typical person smiling in a random setting with no context. I understand trying to show average people and families being happy, but I would show it with them stepping off a form of transportation that you’re trying to fund and showing them go somewhere the transportation could bring you that wouldn’t have been easily available before.”

Through image selection, communicators have the ability to **make a visual connection between transportation investment and the tangible benefits it provides**. An example is the image for the Jobs message, which showed construction workers contributing to the local economy by purchasing food at a local restaurant.

Impact of Message Format

The message format also affected participants' perceptions. For example, the Equity message was somewhat more successful as a still image (depicting a wheelchair user) than as a video, while the Jobs message benefited from the additional time and narration of a video to develop the connection between transportation investment and job creation. The video format was also particularly effective for the Mobility message, showing how good transportation helps people in various ways in their daily lives.

For videos, the study revealed the importance of starting with positive images and wording—even if the purpose of the communication is to show that investment will reduce negative conditions, such as traffic delays. The first round video for Time began with images of traffic jams and late arriving buses that “make your commute longer, adding more stress to your day.” Negative reactions to this start led the team to restructure the video for the second round—starting with positive messaging and images—and the revised video received a more favorable response.

Implications for State DOT Communications

All of the themes and messages tested in this study are suitable for use in transportation agency communications. Some, such as Time and Easier Commutes, will likely be more relevant in urban and suburban settings where congestion and delay have the greatest impacts, while the others are appropriate for any environment. As described in the AASHTO guide [Communicating the Economic and Quality of Life Benefits of Transportation Investment: New Approaches for State Departments of Transportation](#), benefits-related messages can be adapted to the local context and used in a wide range of communications, from routine project updates to specialized campaigns. The guide suggests strategies and tactics for message delivery that are relevant for the messages tested in this study.

The follow-up research described in this report provided some additional lessons learned for transportation communications:

Do ...

- 👍 Lead with the positive.
- 👍 Include details on “how” and “what” transportation does for people.
- 👍 Use “investing” instead of “spending money.”
- 👍 Show relatable images of individuals or families enjoying the freedom to move about; include a variety of people.
- 👍 Use short videos to communicate the connection between transportation investment and benefits to people’s daily lives.
- 👍 Show direct, literal connections between investments and benefits, such as construction workers making local purchases that help create more jobs.

Don’t...

- 👎 Start with negative imagery, such as traffic jams, that reminds people of when transportation is bad; this sets the wrong tone when trying to rally support.
- 👎 Overstate what transportation can do, or suggest it’s the key to happiness.

Topics for Future Research

This study relied on general concepts and images that were not associated with any particular transportation initiative. Because the messages were not tied to specific agencies, locations, projects, or programs, it was not possible to include details about the type of investment in question, how that investment would generate benefits (such as expanded mobility or time savings), or specifics about the outcomes (such as the number of jobs that would be created).

These kinds of details are essential to establish credibility, but they could change the impact of the messages in ways that are hard to predict. For this reason, the next logical step for research on this topic would be to pilot-test the use of the messages in a real-world context at one or more state DOTs. This would allow researchers to capture practical measures of effectiveness (such as clicks on social media posts, views of videos, or other responses) to a call to action embedded in the communications.

Real-world testing would also help evaluate the best ways for state DOTs to incorporate benefits messaging into communications for transportation projects being funded through the Bipartisan Infrastructure Law passed in 2021. Research has shown that transportation funding initiatives are most successful when accompanied by commitments to use the funds for specific projects. With substantial funding now available, messaging will likely need to stress accountability for the responsible use of these funds. Real-world testing would provide an opportunity to assess communications that combine messaging about personal benefits with funding commitments.

Additional follow-up research could also include the following:

- **The best use of videos in short and long forms to describe the connections between transportation investment and the economy and quality of life.** Some message concepts (such as Time, Mobility, and Easier Commutes) benefited from additional explanation and images allowed through video that are not possible through a single still image with a text overlay.
- **Effectively communicating the economic benefits of transportation investment including job creation.** Demonstrating the connections between transportation investment and the economy has proven difficult in multiple research studies. This research showed that communications methods need to make the connection plainly and explicitly. For example, using construction workers as a link between transportation investment and positive local economic impact by showing them buying food at a restaurant.
- **Best messages and methods for educating specific audiences about the economic and quality of life benefits of transportation investment.** This research and previous studies have shown a variation in how different audiences reacted to messages. For example, urban residents reacted positively to specific communications pieces presented. More in-depth research into what resonates with specific groups (such as by age, place of residence, gender, ethnicity and other characteristics) would be helpful for targeting messages and methods.

