

# Public Satisfaction Survey of High Friction Surface Treatment



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**Final Report**

Project TR201620

**Public Satisfaction Survey  
of High Friction Surface Treatment**

Prepared for the  
Missouri Department of Transportation

By

Lance Gentry



**HEARTLAND**  
MARKET RESEARCH LLC

**March 28, 2017**

The opinions, findings, and conclusions expressed in this publication are those of the principal investigators and the Missouri Department of Transportation. They are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration. This report does not constitute a standard or regulation.

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<b>16. Abstract</b> Missouri adults in Callaway County were surveyed to capture their satisfaction with a local high friction surface treatment on westbound US 54. This treatment was implemented in Project J5P3012. The results are weighted proportionally to the county's distribution in terms of geographic, gender, and age distributions. Overall, local Missourians were very satisfied with the treatment and agreed that it made the road safer and easier to travel. Questions pertaining to the best ways to communicate with Missourians were also asked and evaluated.			
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## **Introduction**

The Missouri Department of Transportation (MoDOT) desired to know more regarding public satisfaction with a local high friction surface treatment on westbound US 54. This treatment was implemented in Project J5P3012. Following standard practice, MoDOT requested bids from qualified research organizations by posting a request for proposals on their public website. Heartland Market Research LLC was selected from this competitive process as having the best research proposal and was awarded the research contract.

## **Objective**

The primary objective of this research project was to survey adult Missourians to determine their satisfaction – or lack thereof – with a high friction surface treatment and their perceptions on if the treatment made the road safer and easier to travel. The research was designed so that in addition to providing answers to these questions, information was also obtained about the best ways for MoDOT to communicate with its constituents. The sample was weighted to ensure the results reflected Missouri’s geographic, age, and gender diversity.

## **Technical Approach**

The survey questions were developed in collaboration between MoDOT and Heartland Market Research and were largely drawn from previous research (largely the Right Transportation Solution and Statewide Report Card studies). A copy of the survey is available in Appendix A.

The research was conducted using a mailed survey instrument. After reviewing the project, all parties agreed that the residents of Auxvasse (zip code 65231), Fulton (zip code 65251), and Kingdom City (zip code 65262) would be most likely to be familiar with the treated portion of Route 54. On November 1, 2016, two thousand letters were mailed to potential respondents near the treated area. As of December 21, 2016, 277 responses had been returned. This response rate of 13.85% was lower than anticipated based on previous studies in the Central District. The reason for the relatively low response rate is unknown. Possible factors include the topic (may not have been as exciting as previous research topics in the eyes of the average respondent), election survey fatigue, an unknown factor, or a combination of all of the above.

After the holidays – January 26, 2017 – another 2,000 surveys were mailed. The data collection phase of the project was closed on February 28, 2017. A total of 466 surveys were returned from the 4,000 mailed, a response rate of 11.65%.

The survey results were weighted proportionally to the actual population in terms of geographic (Callaway County), gender, and age distributions. In compliance with the proposal, information from the 2010 Census was used for this purpose as has been the practice for MoDOT in previous research projects. In order to be weighted as described, the respondents had to answer the age, gender, and zip code questions. Respondents who did not answer these questions, or answered “Other” for the zip code question, were not considered in the analysis. 412 respondents completed these questions, which exceeded the project’s goal of 400 completed surveys.

## Results and Discussion (Evaluation)

In surveying, it is usually not reasonable to survey everyone in the population of interest. Therefore, a portion of the population is surveyed and this portion is called the sample. Since the sample is usually much smaller than the population of interest, the mean of the population may vary from the mean of the sample. The expected error depends upon the size of the sample and the desired level of confidence. As the sample size increases, the margin of error decreases. The general formula for computing the margin of error at the 95% level of confidence is .98 divided by the square root of the sample size. The following table shows the general margin of error for the range of responses in this research.

**Table 1: Survey Margin of Error**

Responses	Margin of Error
318	5.5%
400	4.9%
412	4.8%

Thus with an overall sample size of 412 we can be 95% certain that the sample mean is within 4.8% of the population mean. Thus if 50.0% of our sample is aware of any recent publicity concerning the high friction surface treatment, we can be 95% certain that between 45.2% and 54.8% of the adult population in Missouri would actually be aware of any recent publicity if all 412 people answered that question. However, many times people do not answer a question. That usually indicates that they did not have a firm opinion on the issue. In these cases, the general margin of error will also rise, simply because we have less responses to evaluate. Thus, the actual margin of error for the individual questions range from 4.8% to 5.5%.

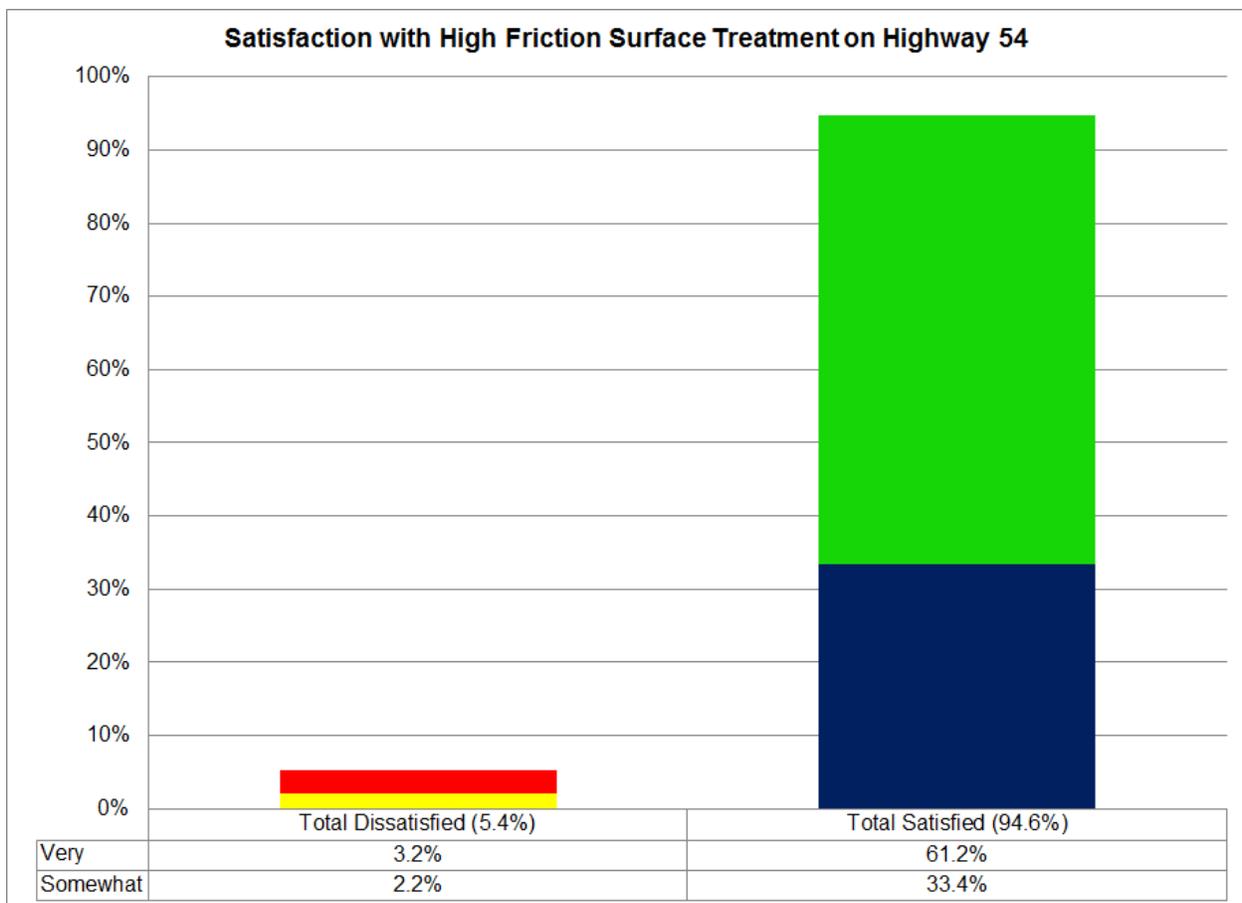
## High Friction Surface Treatment Measures and Background Information

Respondents answered three questions pertaining to their satisfaction and thoughts concerning Project J5P3012. Questions about how frequently the participants used this segment of Route 54 and when the participants learned about the project were also asked.

### Question 1: *Overall, how satisfied are you with the high friction surface treatment on Highway 54?*

94.6% of the respondents with an opinion stated they were satisfied with the treatment, with a large majority stating they were very satisfied. Only 5.4% of the respondents were dissatisfied with the treatment. 318 respondents answered this question.

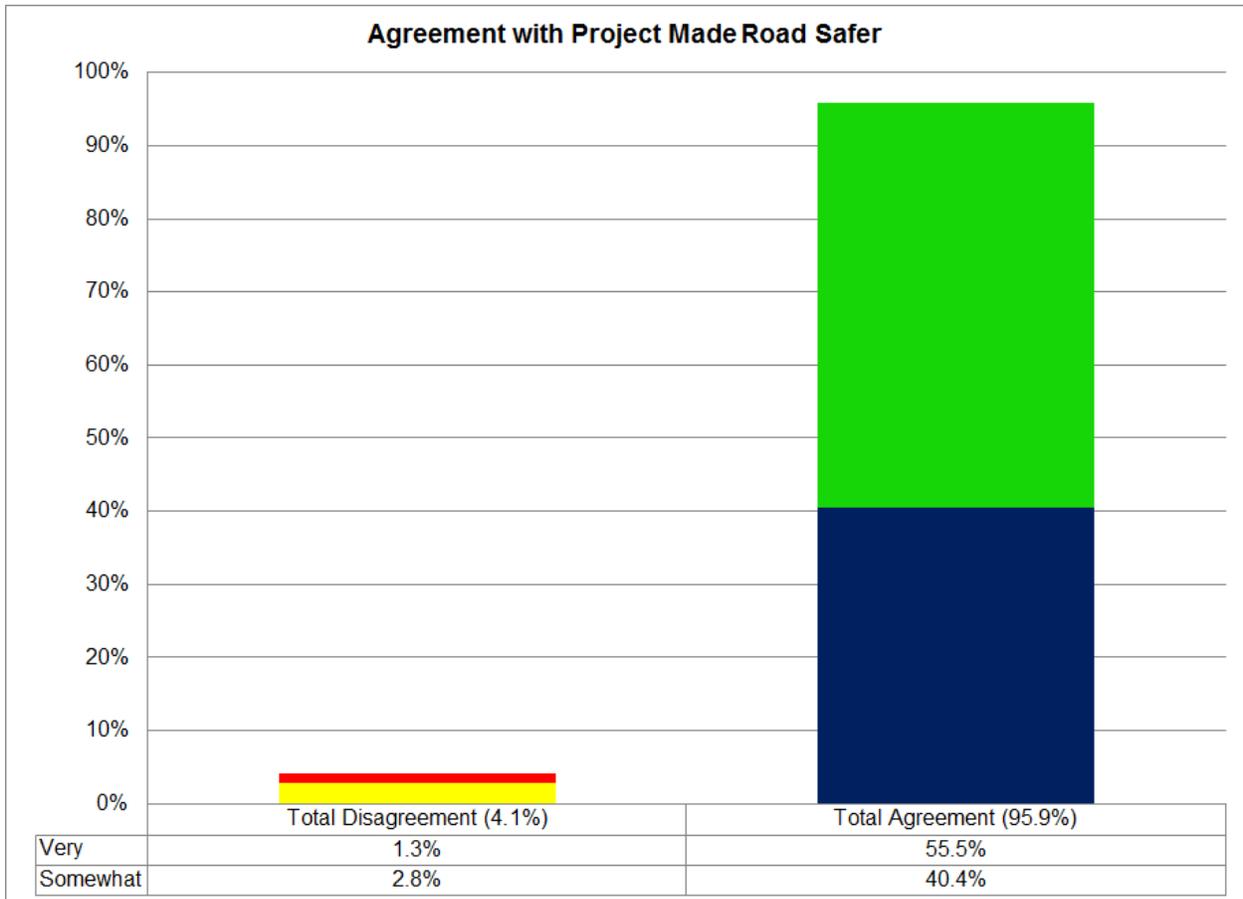
**Figure 1: High Friction Surface Satisfaction**



**Question 2: Do you agree that this project has made the road safer?**

95.9% of the respondents agreed that the project made the road safer. 318 people answered this question.

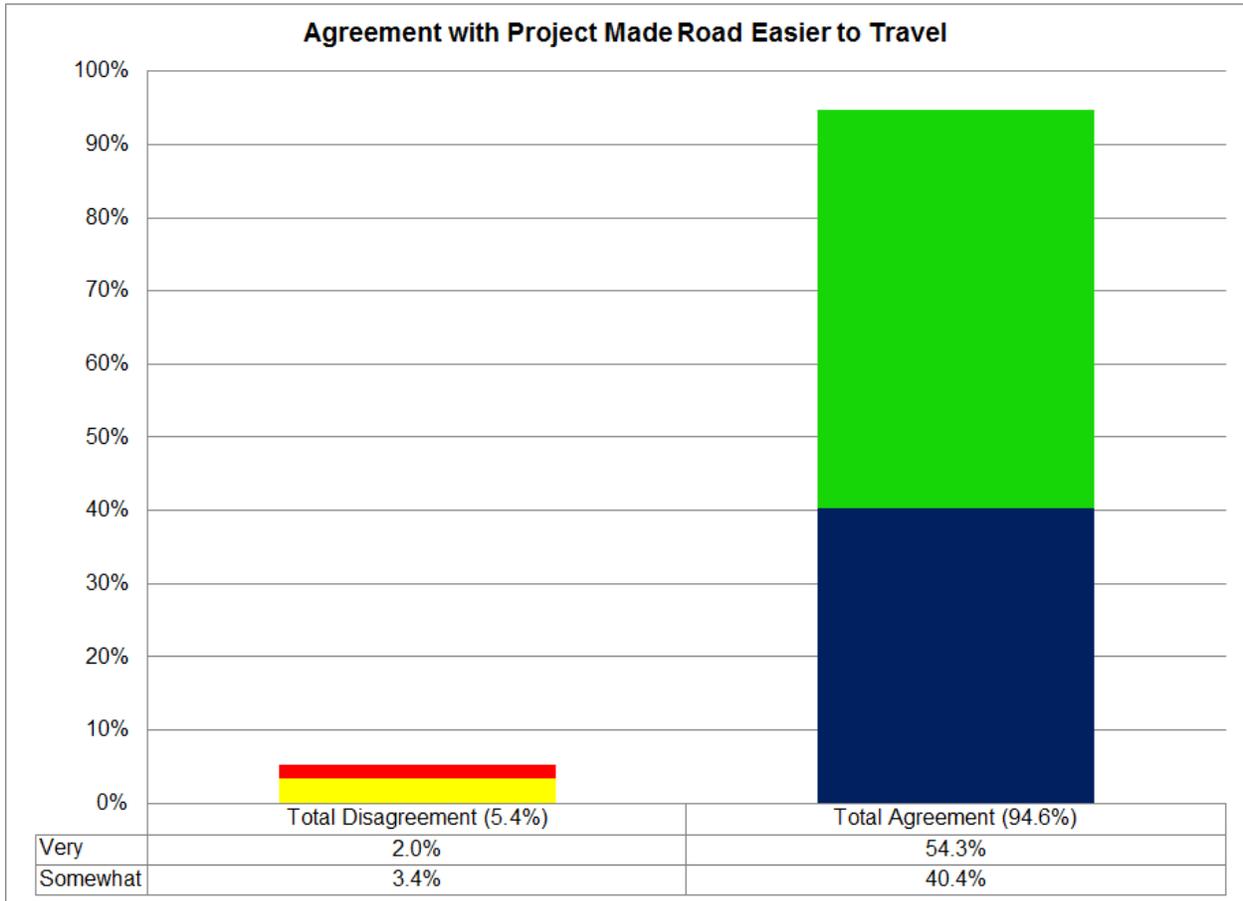
**Figure 2: Project Made Road Safer**



**Question 3: Do you agree that this project has made the road easier to travel?**

Similar to the previous two questions, the overwhelming majority (94.6%) of the respondents agreed that the project made the road easier to travel. 323 respondents answered this question.

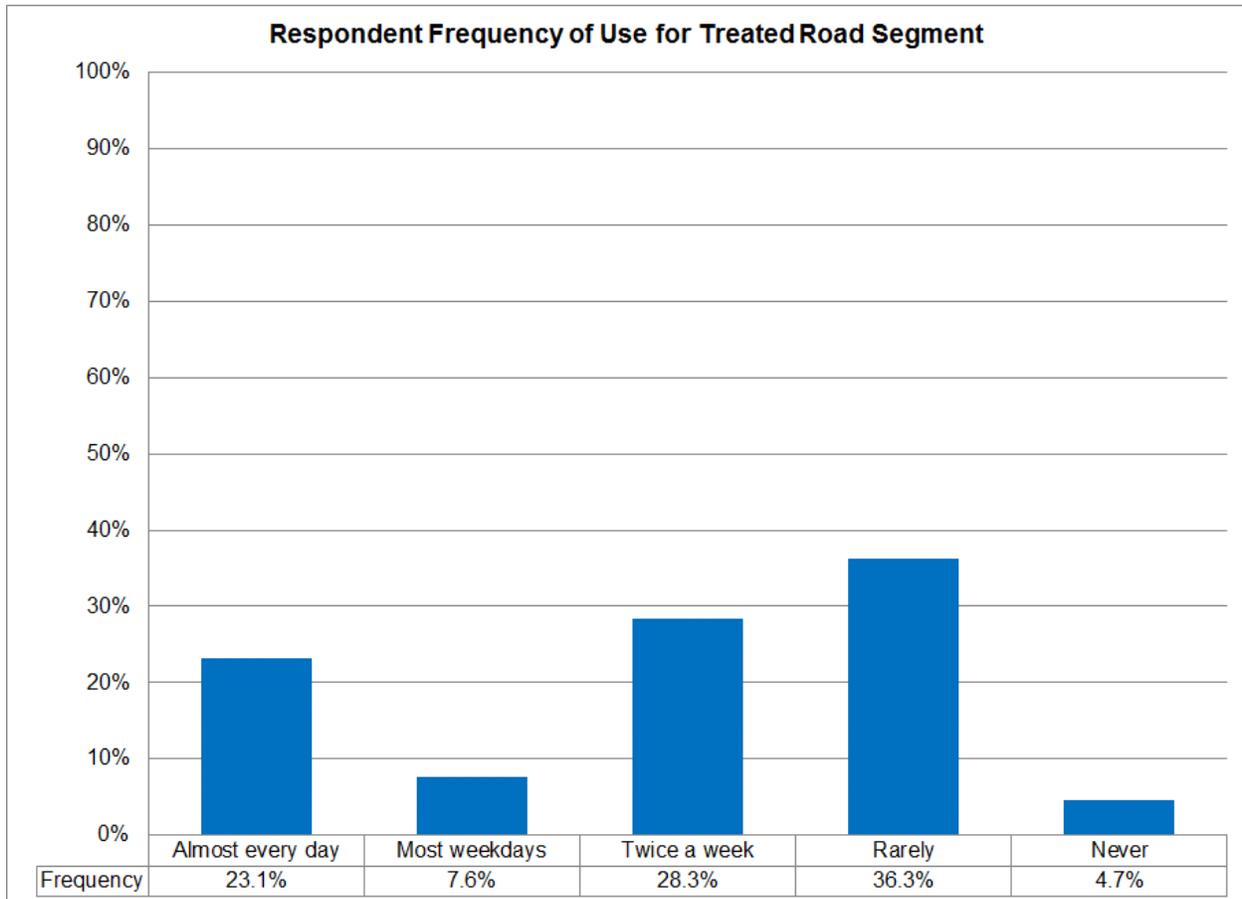
**Figure 3: Project Made Road Easier to Travel**



**Question 4: How often do you use this section of the road in a typical week?**

59.1% of the respondents traveled on the treated part of Route 54 at least twice a week. 399 respondents answered this question.

**Figure 4: Treated Road Segment Frequency of Use**



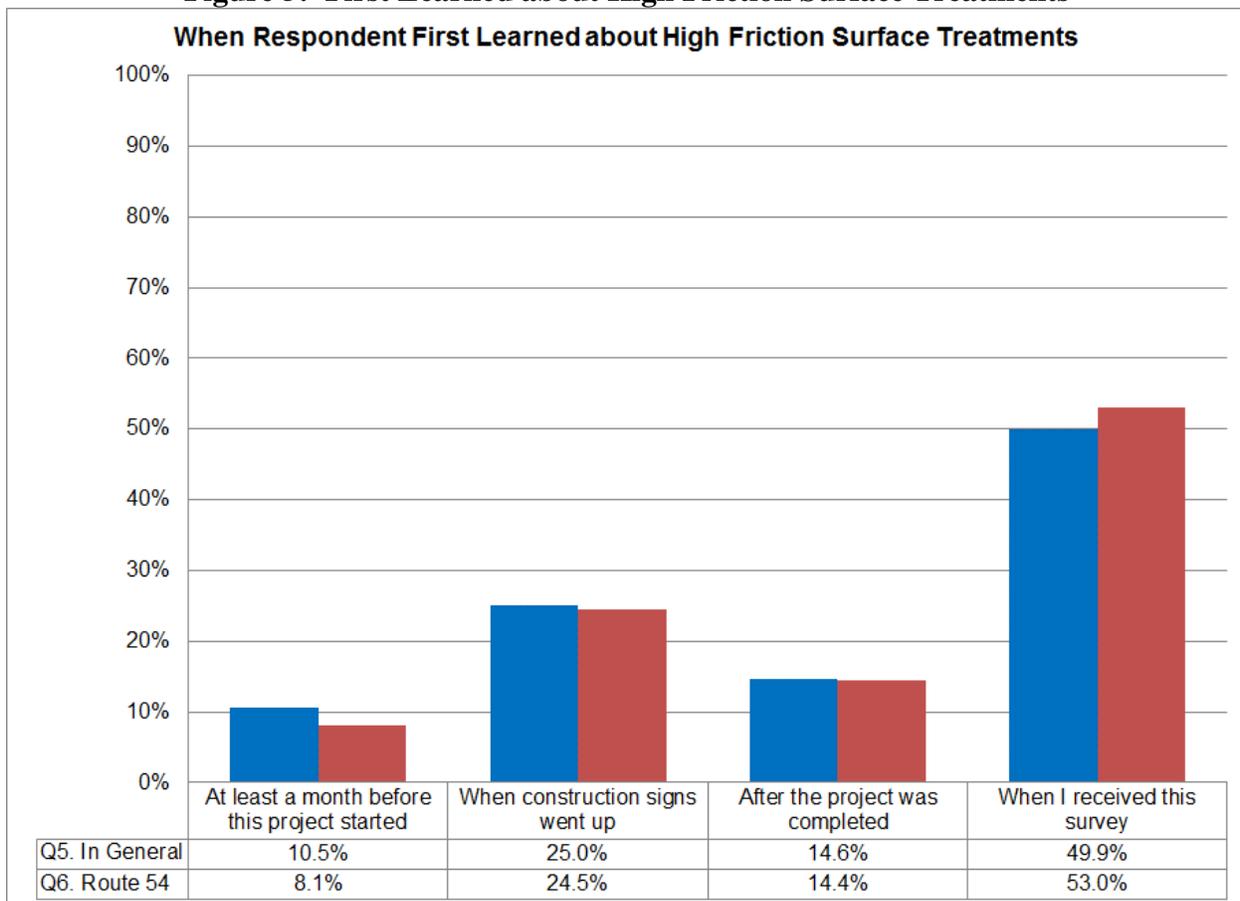
Interestingly, those who drove on Route 54 the least (Rarely, 36.3%) were more satisfied (98.9%) than those who drove on it at least twice a week (93.6%).<sup>1</sup> While exploring this finding is outside the scope of this study, it is the opinion of the principal investigator that this shows the impact of how the project was presented to the respondents in the cover letter. Those with the least experience with the road were the most influenced by the letter (which stated that the treatment increased surface friction), whereas those who were more familiar with the road depended upon their own experience.

<sup>1</sup> All of the few (4.7%) respondents who never used Route 54 did not complete the first three questions, so they have no satisfaction score to evaluate.

## Questions 5 and 6: Initial Awareness of High Friction Surface Treatments

Respondents were asked two questions to determine when they became aware of high friction surface treatments. Question 5 asked *When did you first learn about high friction surface treatments?* and Question 6 asked *When did you first learn that the west bound lanes of Route 54 just north of I-70 in Kingdom City had received a high friction surface treatment?* For most people these answers were the same. For instance, there was only a 3.1% difference between those who first learned about high friction treatments in general when they received the survey and those who first learned about the treatments to Route 54 when they received the survey. In other words, the high friction treatment on Route 54 was the first exposure to high friction treatments in general for the vast majority of respondents. Thus, it is likely that most Missourians who do not live near an area that received a high friction treatment are still unaware of high friction surface treatments. 400 respondents answered Question 5 and 401 respondents answered Question 6.

**Figure 5: First Learned about High Friction Surface Treatments**



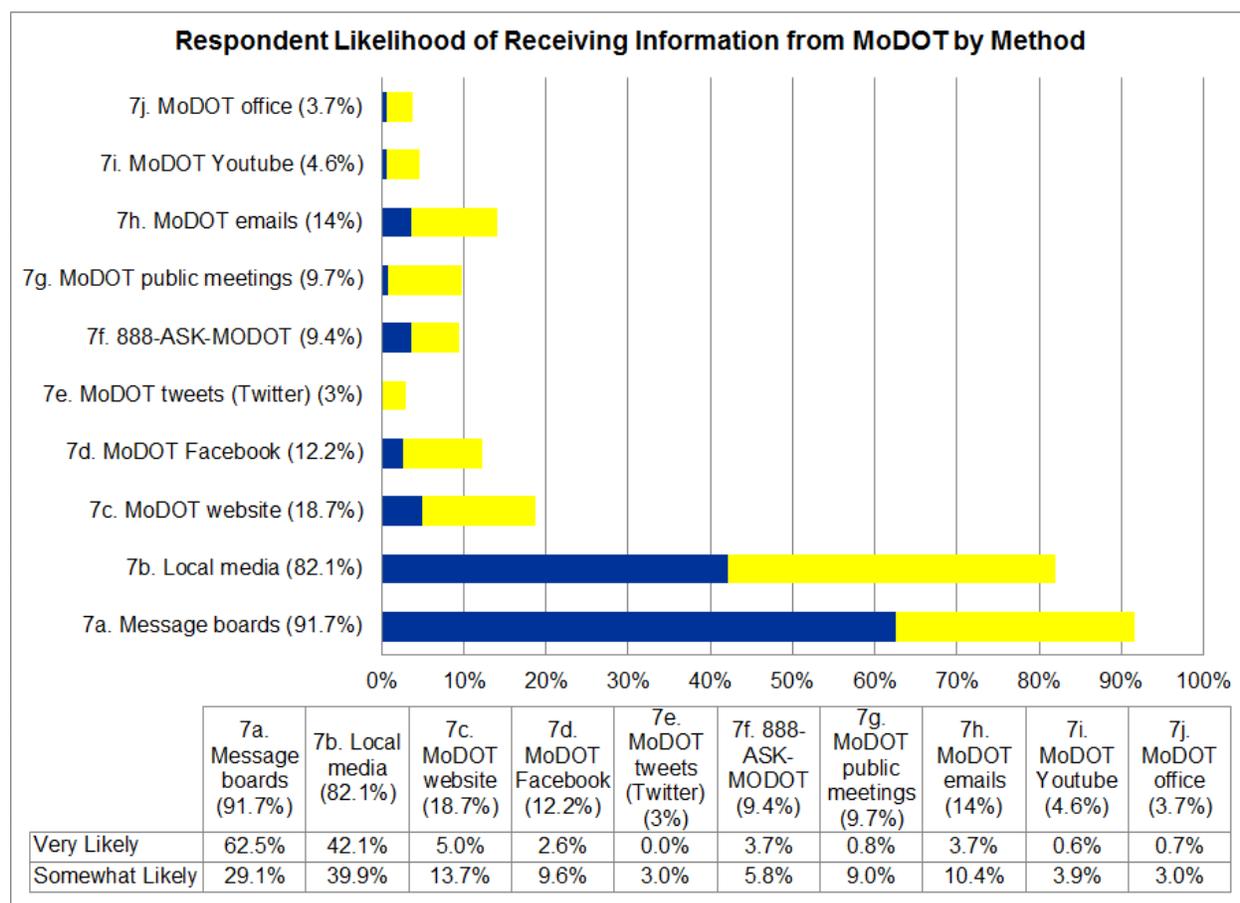
## Communication Habits and Preferences

Respondents answered two multi-part questions about their communication habits and preferences. The first question focused on how Missourians obtained information from MoDOT and the second focused on respondent preferences for contacting MoDOT.

**Question 7: How likely are you to receive information about MoDOT’s projects and activities from these sources?**

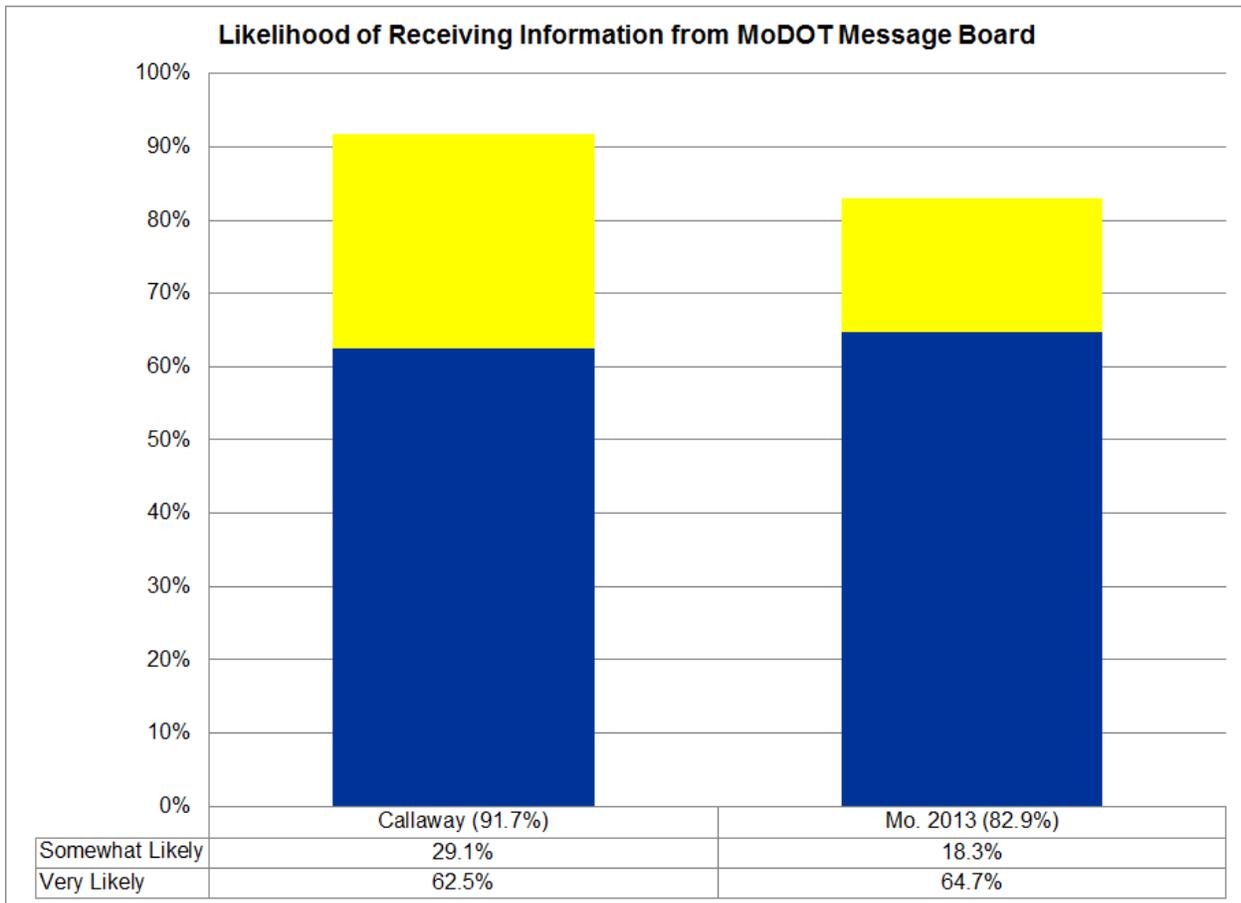
Missourians in Callaway County were most likely to receive information about MoDOT’s projects and activities through message boards (91.7%) and local media (82.1%).

**Figure 6: Likelihood of Receiving Information from MoDOT by Method**

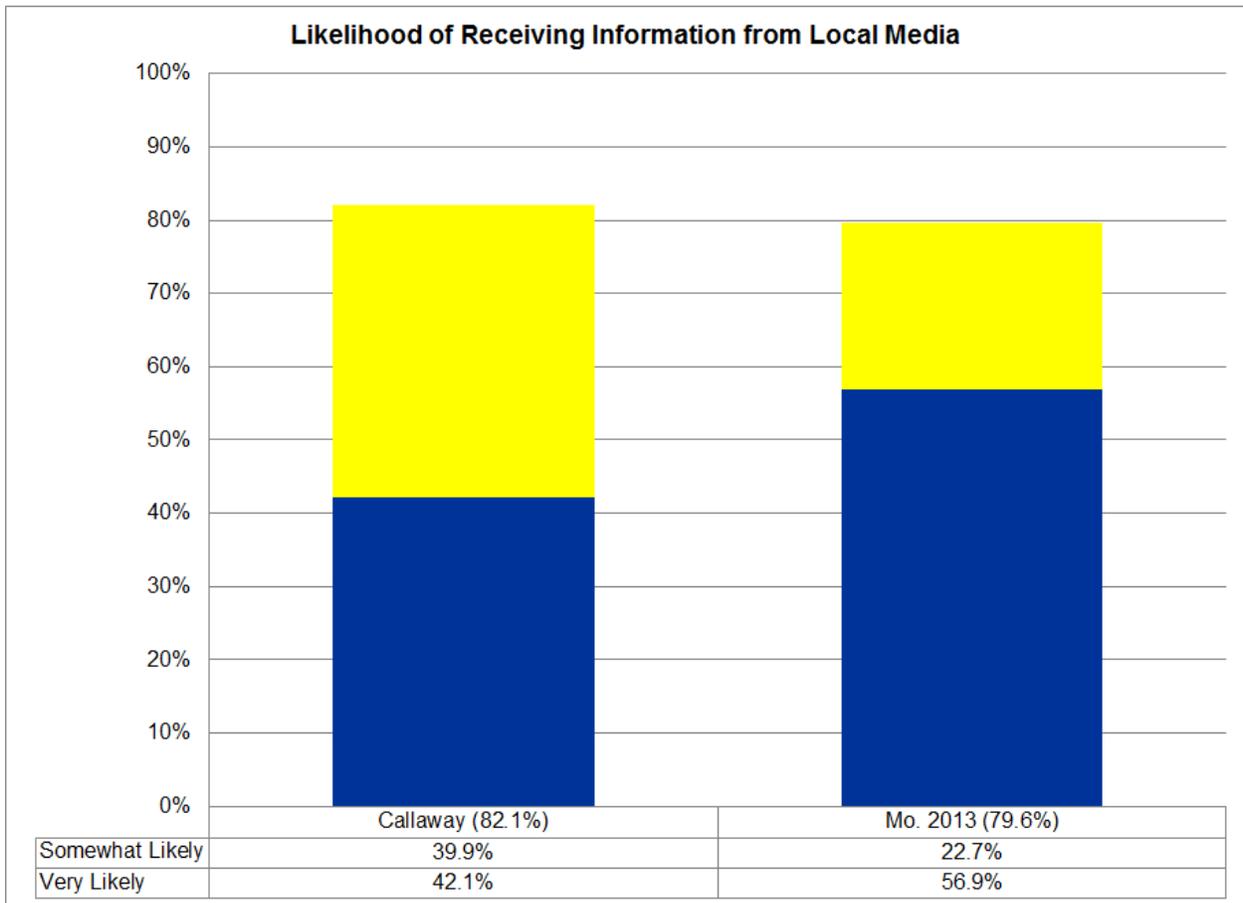


Respondents were much more likely to receive information through one of these two methods than any of the other options. The third most common method, visiting one of MoDOT’s websites, was a distant third at 18.7%. This does not mean that the other methods are not useful, in fact the use of these other methods has grown significantly since the 2013 Statewide Report Card study that asked the same questions. The next set of figures shows the results from this research (Callaway) alongside the 2013 results (Mo. 2013). When comparing the figures, the reader should note that the Callaway results cover three zip codes in a mostly rural county whereas the 2013 results represent the entire state of Missouri.

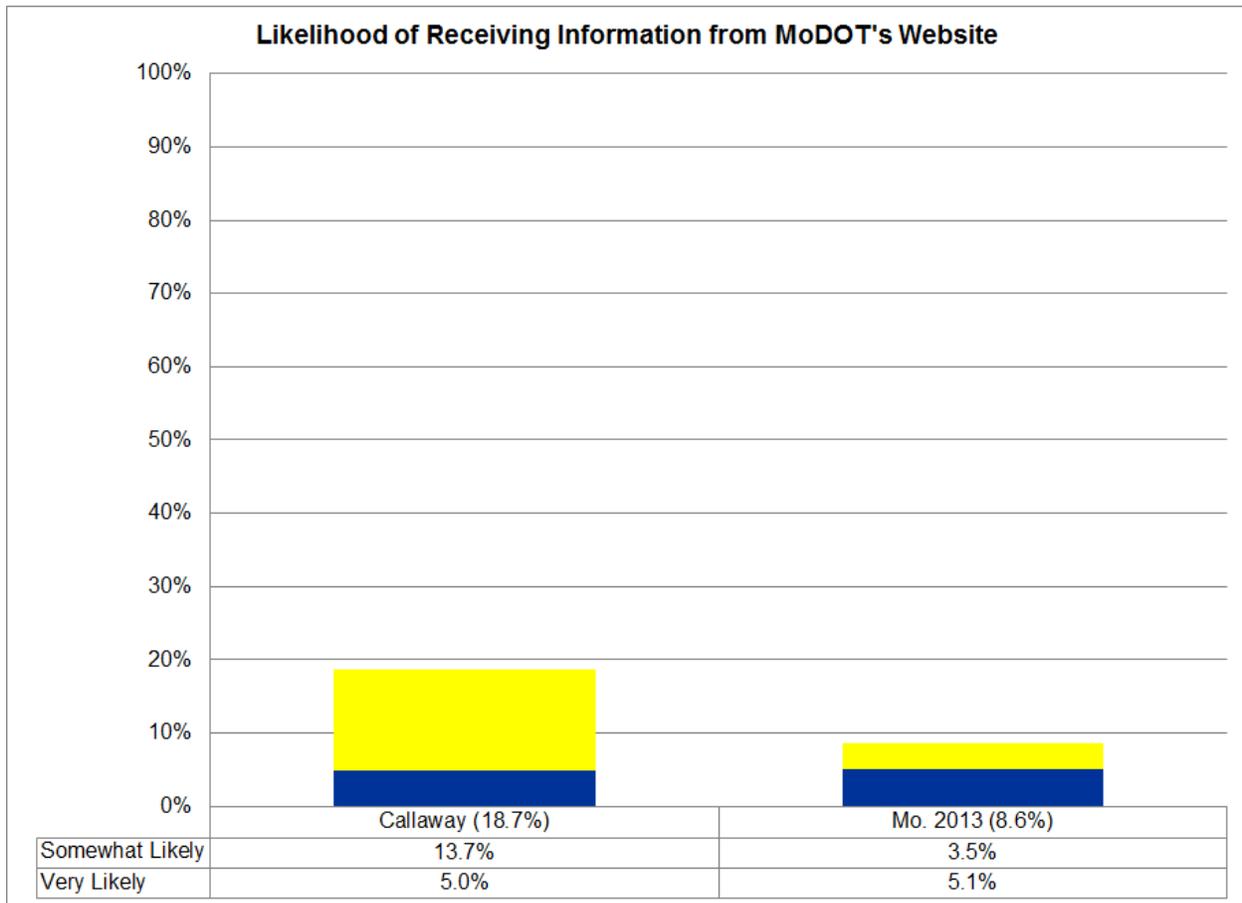
**Figure 7: Likelihood of Receiving Information from MoDOT by Message Board**



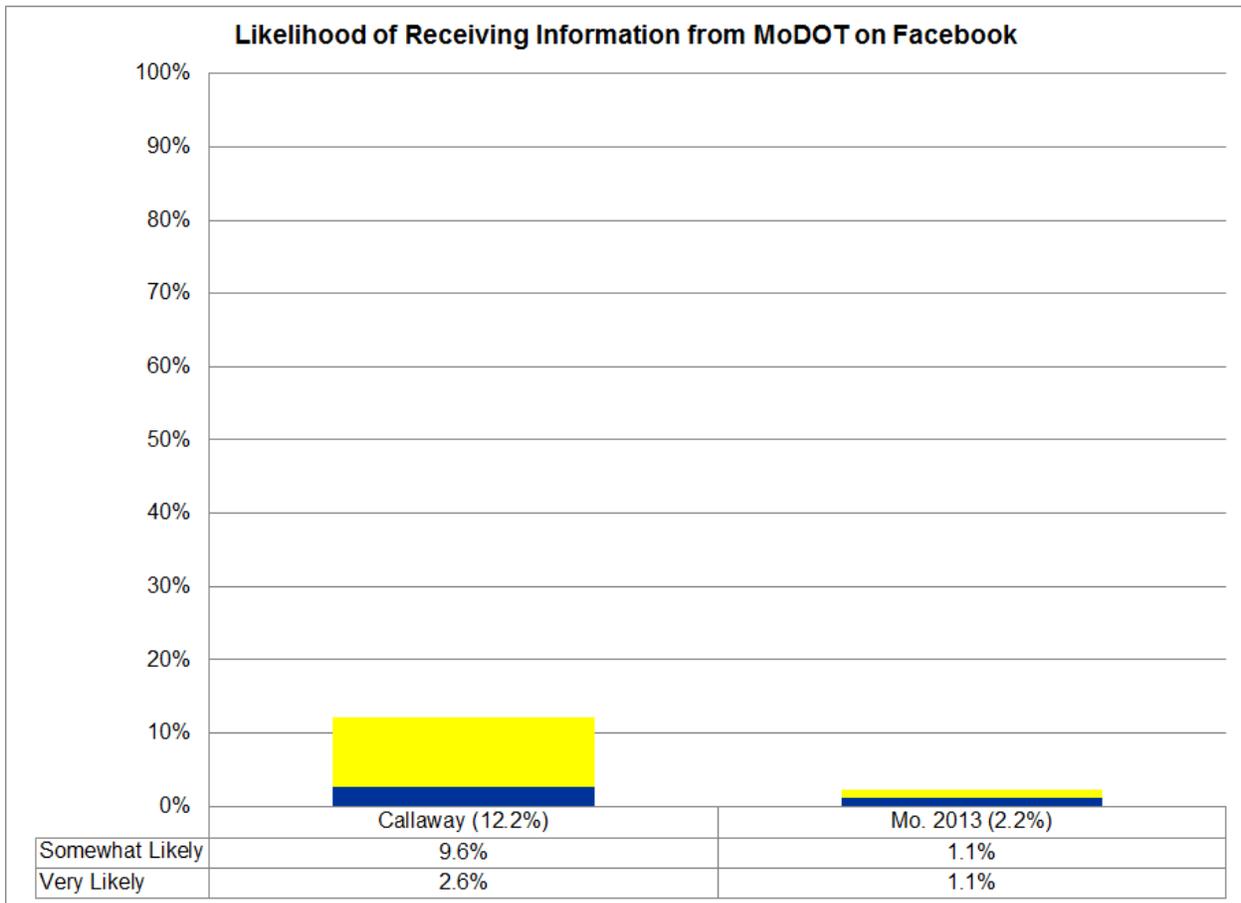
**Figure 8: Likelihood of Receiving Information from MoDOT by Local Media**



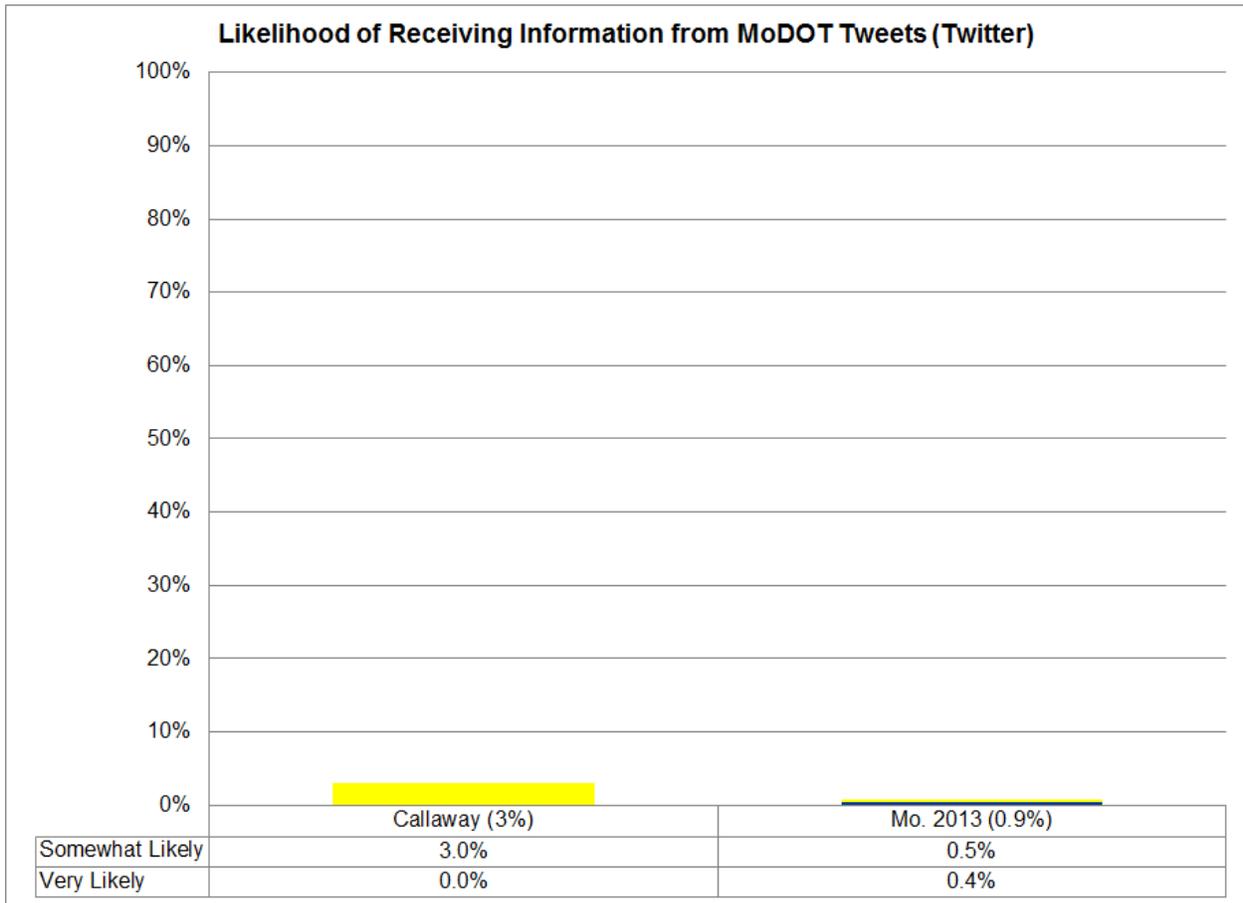
**Figure 9: Likelihood of Receiving Information from MoDOT by MoDOT Website**



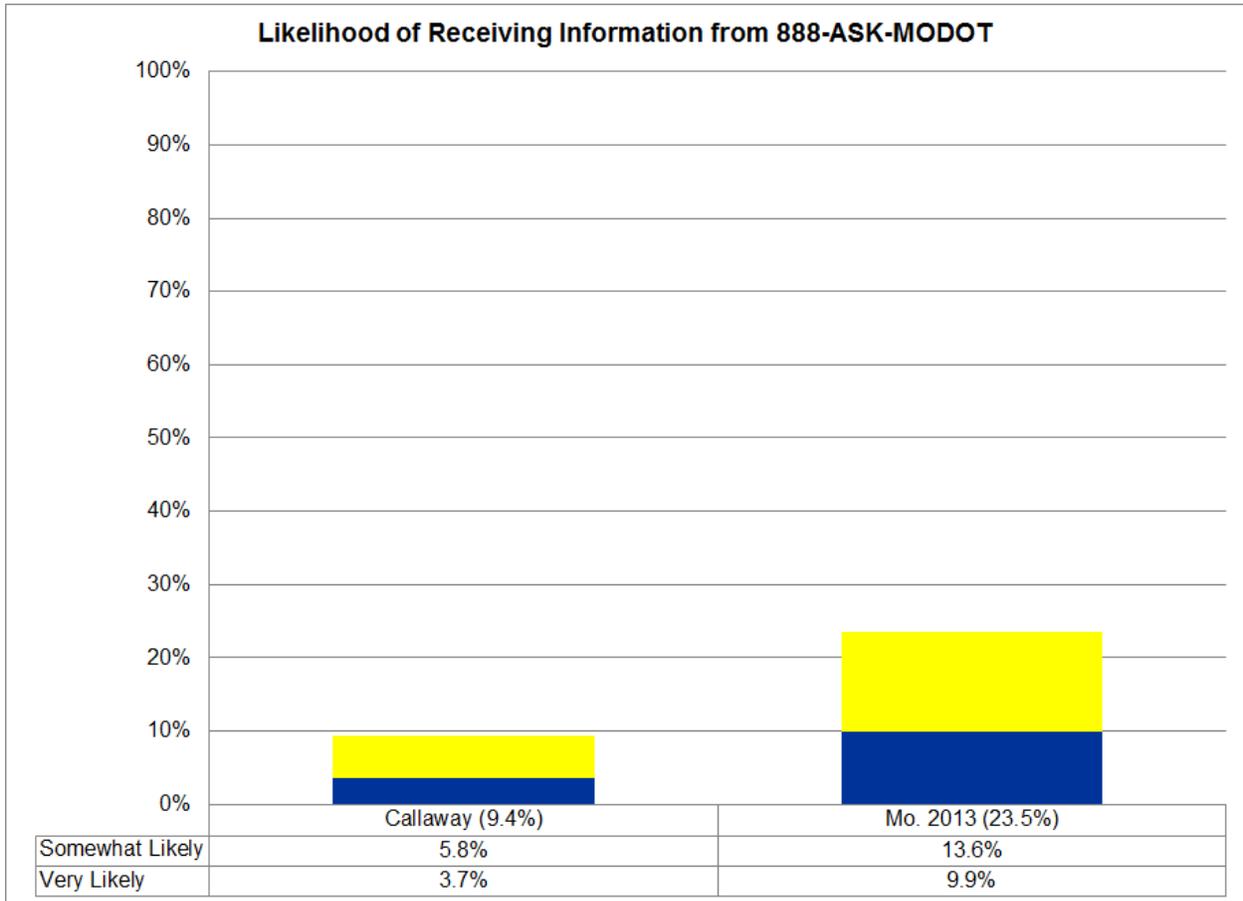
**Figure 10: Likelihood of Receiving Information from MoDOT by Facebook**



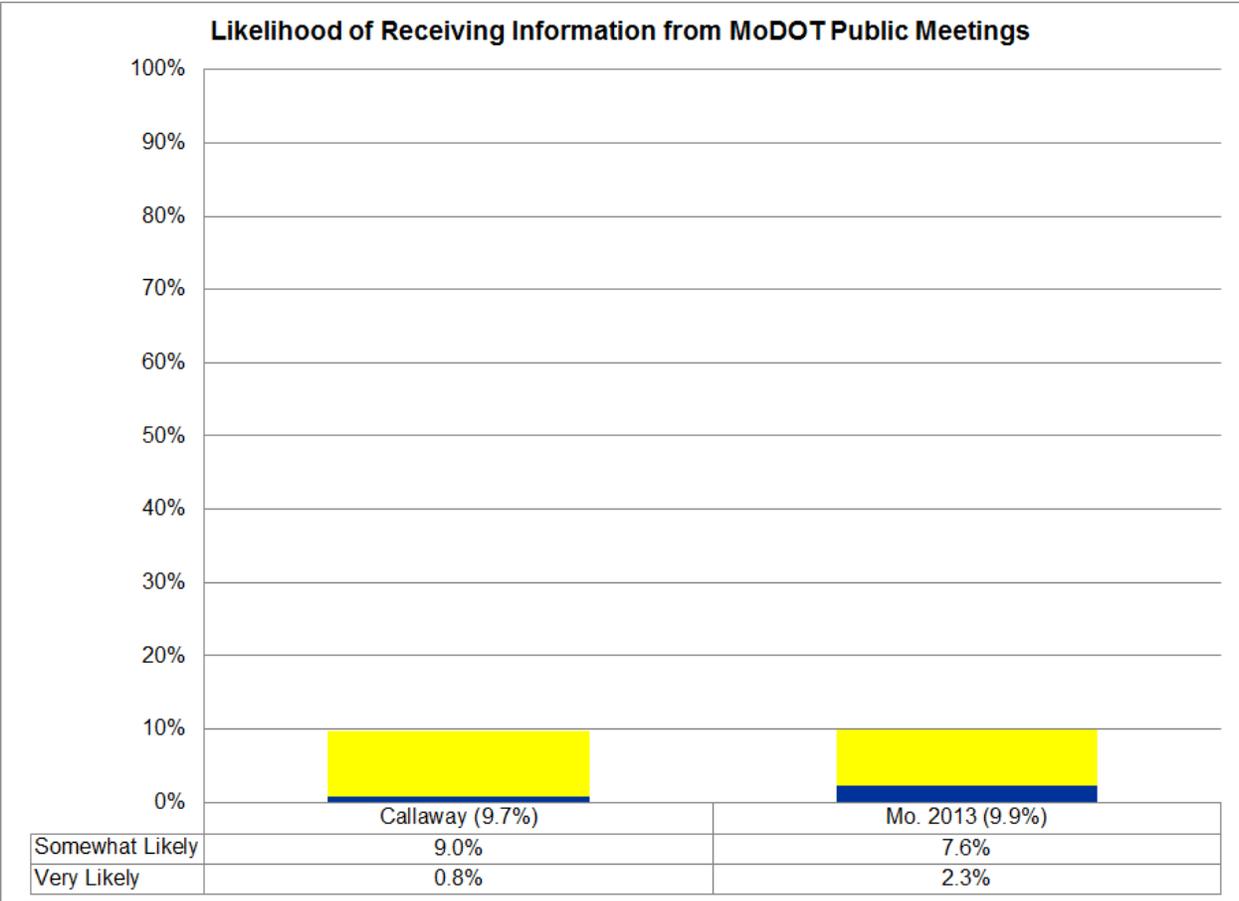
**Figure 11: Likelihood of Receiving Information from MoDOT by Tweets (Twitter)**



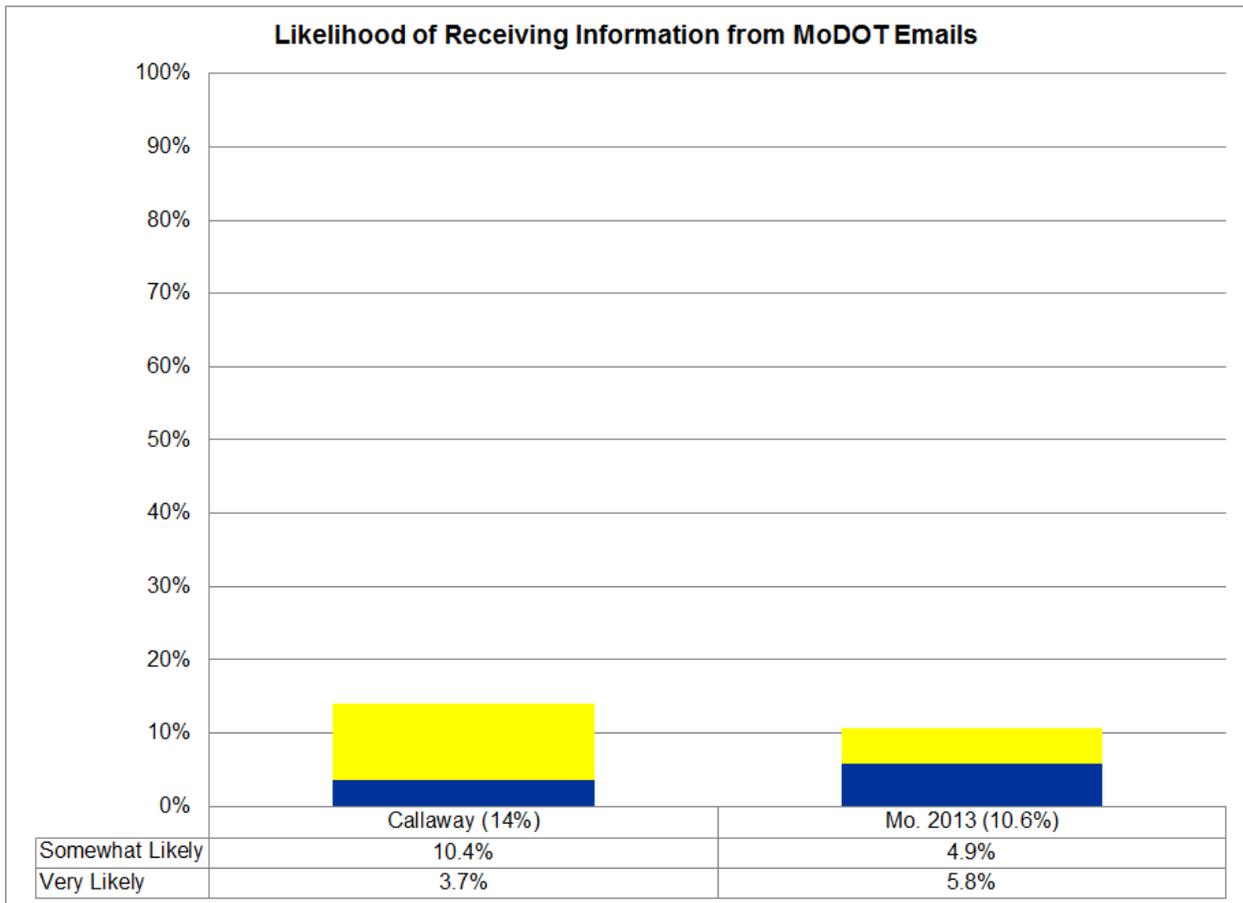
**Figure 12: Likelihood of Receiving Information from MoDOT by 888-ASK-MODOT**



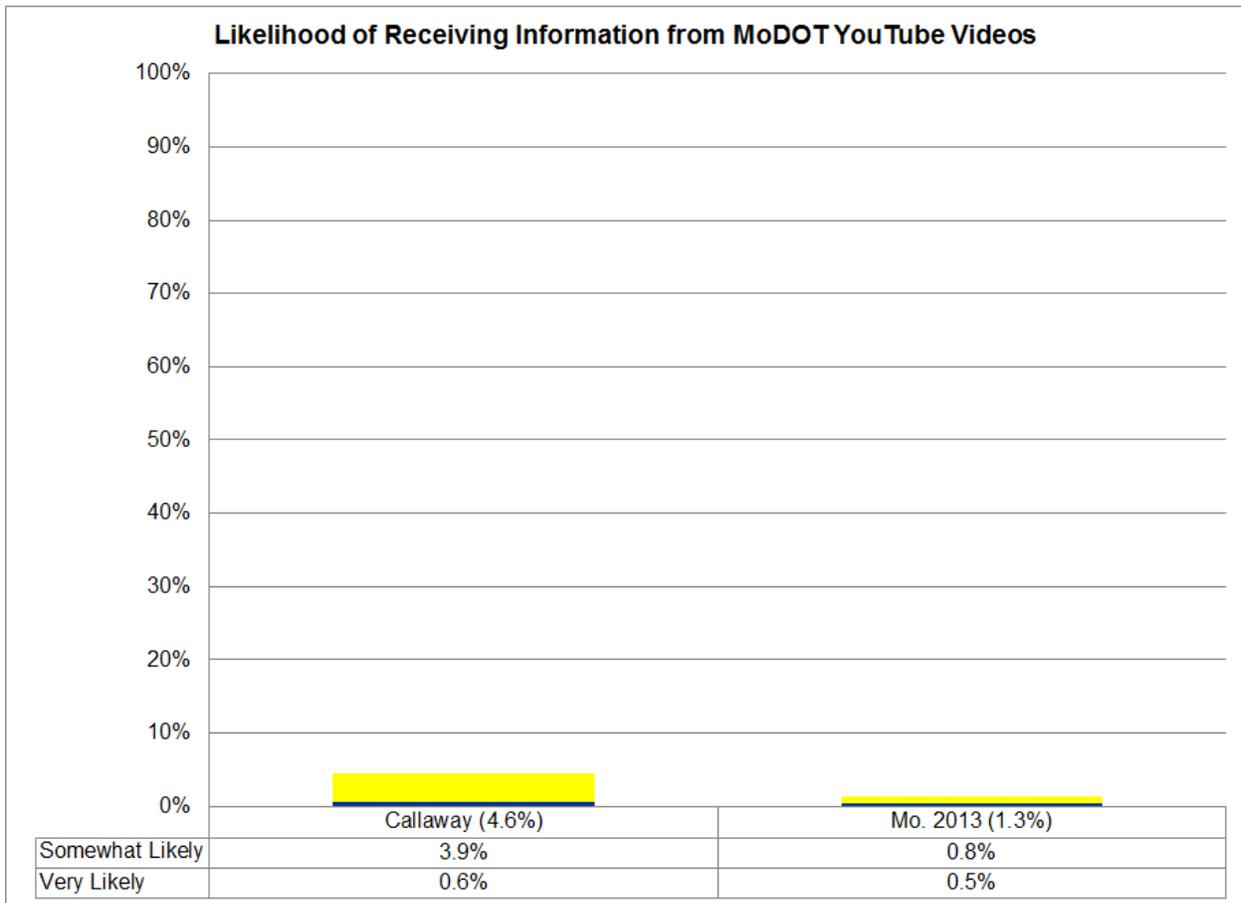
**Figure 13: Likelihood of Receiving Information from MoDOT by Public Meetings**



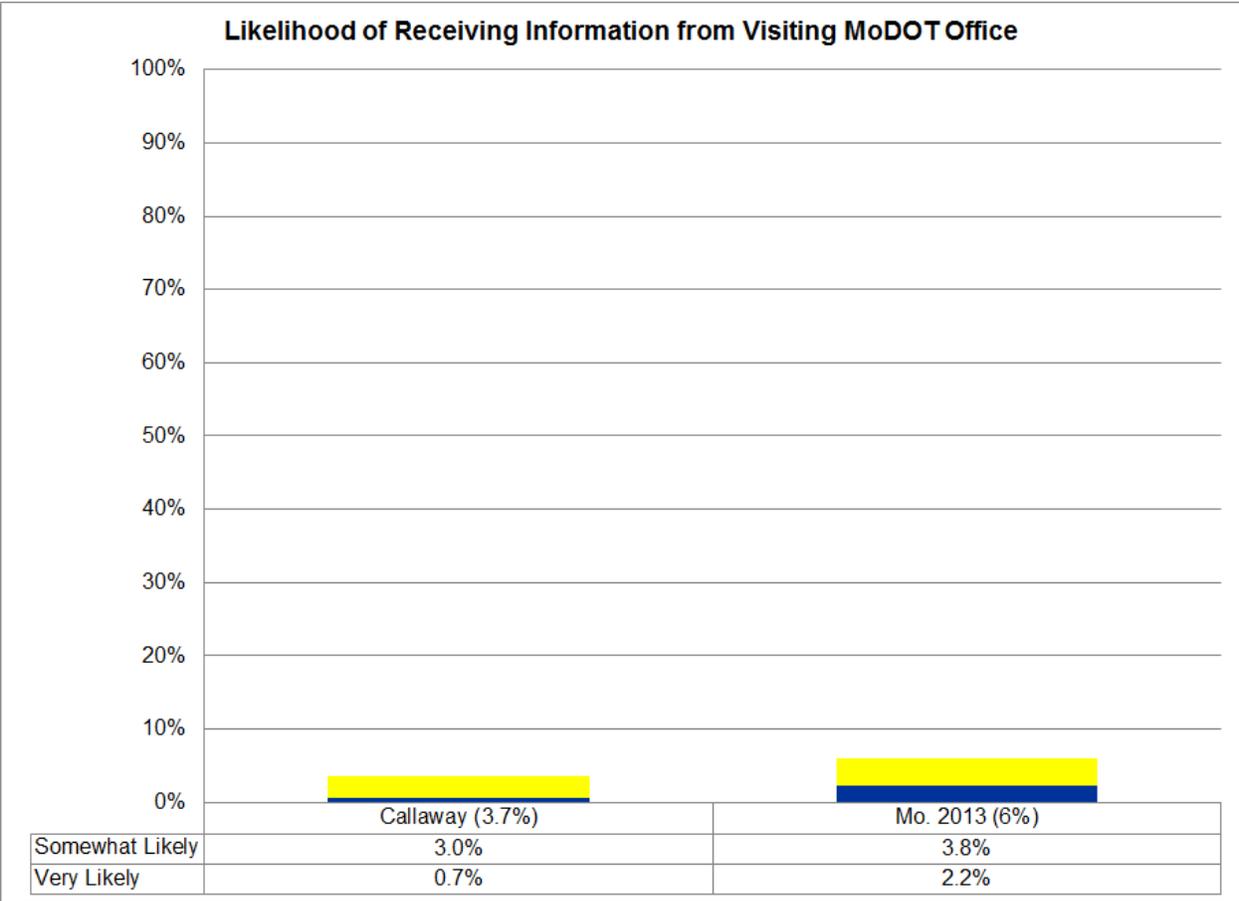
**Figure 14: Likelihood of Receiving Information from MoDOT by MoDOT Emails**



**Figure 15: Likelihood of Receiving Information from MoDOT by YouTube Videos**



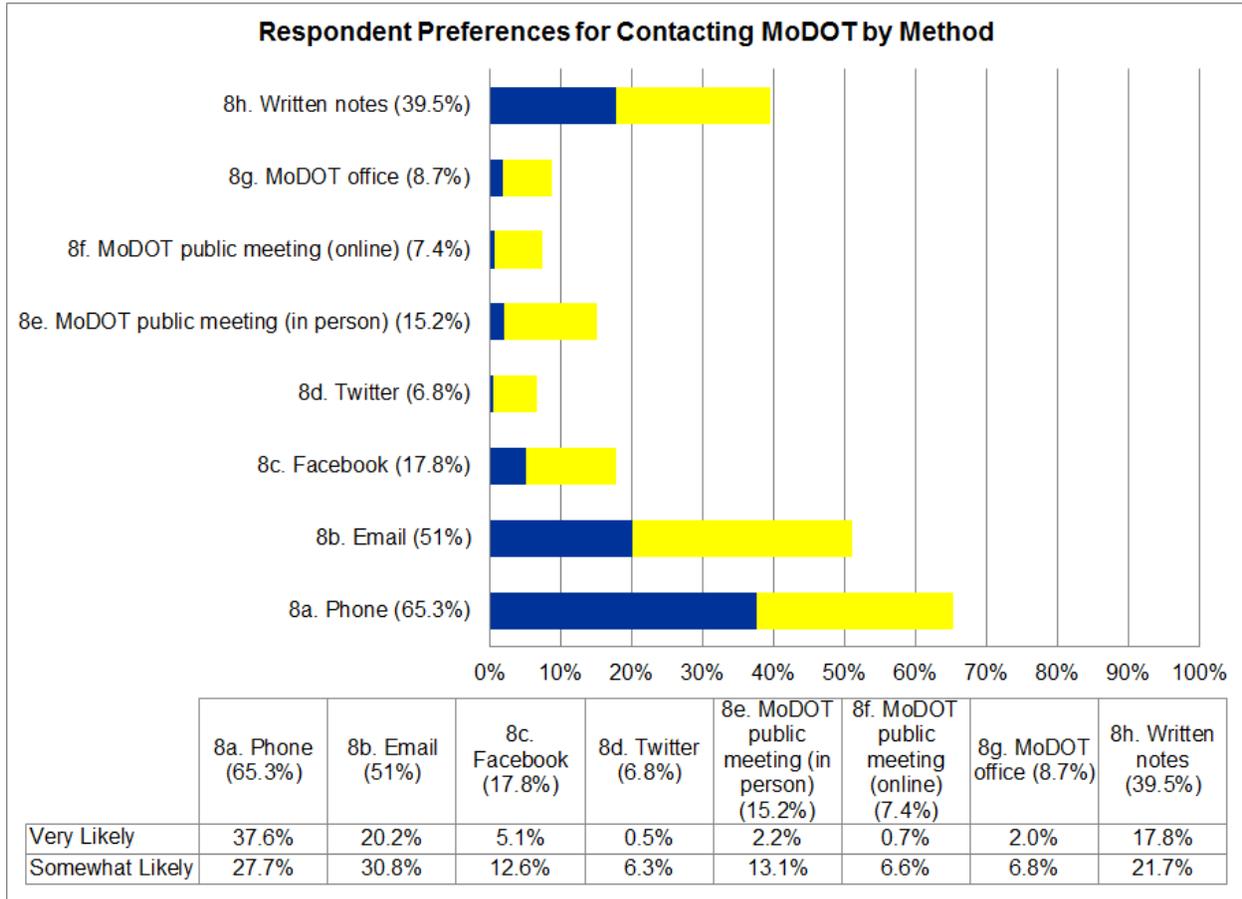
**Figure 16: Likelihood of Receiving Information from MoDOT by Visiting MoDOT Office**



**Question 8: We are also interested in learning your preferred method of contacting MoDOT. How likely are you to use the following methods to communicate with MoDOT?**

65.3% of the respondents preferred to contact MoDOT via phone, followed by email (51.0%) and written correspondence (39.5%).

**Figure 17: Likelihood of Contacting MoDOT by Method**



These findings are similar to those from the 2013 Statewide Report Card Study. A direct comparison of percentages is not possible because the previous study asked respondents to list their top three preferences of contacting MoDOT instead of ranking them as was done in this study. Under the previous methodology, the phone was first choice of most, followed by email, and then “other”.

## **Appendix A: Cover Letter and Survey**

In all mailings, a cover letter and a double-sided single-page letter was sent to each potential respondent along with a postage-paid return envelope. Copies of the cover letter and the survey follow.



105 West Capitol Avenue  
P.O. Box 270  
Jefferson City, Missouri 65102

Missouri Department of Transportation

1.888.ASK MODOT (275.6636)

*Patrick K. McKenna, Director*

Dear Resident,

Please help us. We know you expect MoDOT (Missouri Department of Transportation) to get the best value for your transportation investment, and the best way to measure our progress is to ask our customers. On October 10th and 11th, a special high friction surface treatment was applied to the westbound lanes of Route 54, just north of I-70 in Kingdom City. This treatment was designed to provide motorists with more traction on curves and intersections in rain, ice, and snow, so it was applied to the curviest parts of the road where it will be most effective. These are the areas highlighted in red in the picture below:



This project was largely funded through a federal grant designed to accelerate innovative technologies. Surveying residents is also a requirement for us to use federal dollars for this project. We are working with Heartland Market Research LLC to develop and conduct this research. **Your participation is voluntary and there is no tracking information on the survey.** You will be completely anonymous unless you choose to identify yourself in the comments section. If you prefer to not answer a question, please leave it blank and continue to the next question. The survey should take about 5 minutes to complete, and you can return the survey to us in the postage paid envelope that is enclosed. We appreciate you taking the time to let us know how we are doing.

Sincerely,

Patrick K. McKenna  
Director, Missouri Department of Transportation



*Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.*

[www.modot.org](http://www.modot.org)

# High Friction Treatment Survey



Please use a pencil or a blue or a black pen to complete the survey.



Correct Mark = ●      Incorrect Mark = ✗    ✓    ⊖

We would appreciate your thoughts about the high friction surface treatment applied to Route 54 (as described in the cover letter) and how MoDOT may best communicate with you.

**1. Overall, how satisfied are you with the high friction surface treatment on Highway 54?**

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

**2. Do you agree that this project has made the road safer?**

- Strongly agree
- Slightly agree
- Slightly disagree
- Strongly disagree

**3. Do you agree that this project has made the road easier to travel?**

- Strongly agree
- Slightly agree
- Slightly disagree
- Strongly disagree

**4. How often do you use this section of the road in a typical week?**

- Almost every day
- Most weekdays
- Twice a week
- Rarely
- Never

**5. When did you first learn about high friction surface treatments?**

- At least a month before this project started
- When construction signs went up
- After the project was completed
- When I received this survey

**6. When did you first learn that the west bound lanes of Route 54 just north of I-70 in Kingdom City had received a high friction surface treatment?**

- At least a month before this project started
- When construction signs went up
- After the project was completed
- When I received this survey

**7. How likely are you to receive information about MoDOT's projects and activities from these sources?**

	Very Likely	Somewhat Likely	Somewhat Unlikely	Very Unlikely
a. MoDOT message boards along roadways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Local media (television, radio, newspaper)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. MoDOT website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. MoDOT on Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. MoDOT tweets (Twitter)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. MoDOT customer service number (888-ASK-MODOT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. MoDOT public meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. MoDOT emails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. MoDOT YouTube videos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Visit MoDOT office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional questions on other side ►

8. We are also interested in learning your preferred method of contacting MoDOT. How likely are you to use the following methods to communicate with MoDOT?

	Very Likely	Somewhat Likely	Somewhat Unlikely	Very Unlikely
a. Phone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. MoDOT public meeting (attend in person)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. MoDOT public meeting (online)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Visit MoDOT office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Written correspondence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*The following demographic questions are asked so we can determine how well MoDOT communicates with various groups of people.*

9. Are you male or female?  
 Male  
 Female

11. What is your zip code?  
 65231  
 65251  
 65262  
 Other

12. Is the vehicle you drive most often a:  
 Car  
 Van or minivan  
 Motorcycle  
 Sport utility vehicle or crossover  
 Pickup truck  
 Other type of truck  
 N/A—I do not drive

10. What is your age?  
 18-29 years old  
 30-39 years old  
 40-49 years old  
 50-64 years old  
 65+ years old

*Keep all comments within the thick red lines. If you need more space, please write it on an additional piece of paper and include it with your survey.*

13. Please provide comments about MoDOT applying high friction surface treatments to westbound Route 54.

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14. Please provide thoughts on how MoDOT can best communicate information to you.

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## Appendix B: Demographic Questions

### Questions 9 and 10: Gender and Age Group

Questions 9 (gender) and 10 (age group) were asked in order to weight the results proportionately for the age and gender representation of Callaway County.

### Question 11: *What is your zip code?*

As described in the Technical Approach section of this report, 412 respondents from Callaway County completed the gender and age range questions required to weight the sample in accordance with MoDOT's requirements.

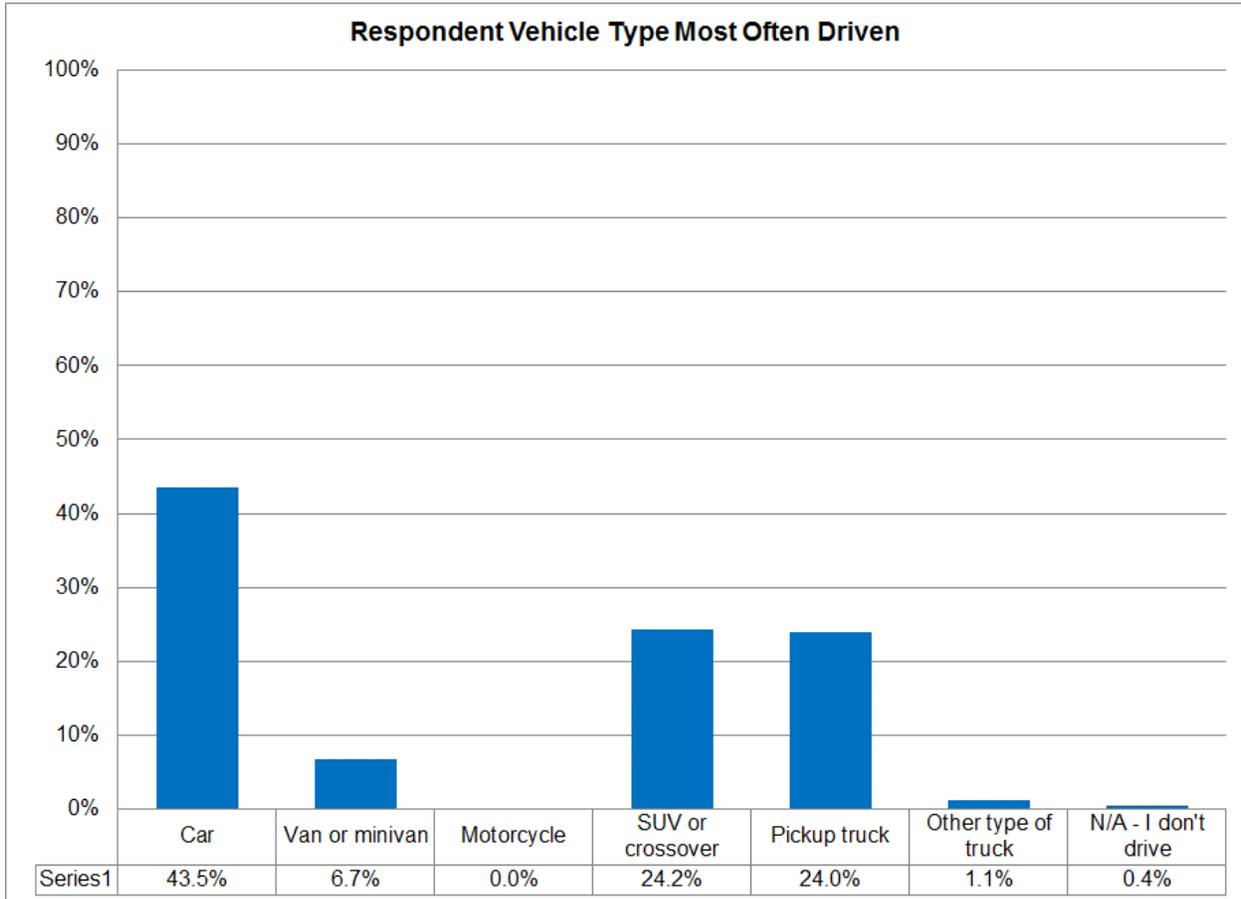
**Table 2: Zip Code Distribution of Respondents**

Zip Code	City	Frequency	Percent
65231	Auxvasse	100	24.3%
65251	Fulton	271	65.8%
65262	Kingdom City	41	10.0%
Total		412	100.0%

**Question 12: *Is the vehicle you drive most often a:***

In Callaway County, the car was the most common vehicle type with 43.5% of the respondents utilizing it as their primary method of driving. Less than one percent (0.4%) of the sample did not drive.

**Figure 18: Vehicle Type Most Often Driven**



## **Appendix C: Comments**

Respondents were given the opportunity to provide additional comments about the high friction surface treatment on westbound Route 54 (Question 13) and thoughts on how MoDOT could best communicate information to them (Question 14).

The respondent comments were transcribed exactly as they were written other than correcting obvious minor mistakes such as misspelled words.

Since comments involve no weighting, all comments were included (not just comments from the 412 used in the weighted results).

### **Question 13: Route 54 Surface Treatment**

*About 2 miles north of Fulton at the mobile home park is a bridge that isn't resurfaced. Traveling on this short area isn't resurfaced yet!*

*All for it.*

*Any improvements that will make the road safer is good. We often travel this highway with our truck, pulling a large fifth wheel (warm months) to Mark Twain Lake.*

*Any improvements to road surface and bridges is appreciated. I70 needs to be a toll road.*

*Anything to reduce crashes is a good thing. Hopefully, the high friction is the answer.*

*Anything you do to improve the roads is outstanding.*

*Applied to old 63 in Columbia near Stephens Park -- first knowledge. Would like to see it on roundabouts in Columbia.*

*Appreciate the heads up prior to implementation. Would like to know more ahead of time, just assumed MoDOT was re-surfacing versus applying a particular treatment.*

*At first looked like loose gravel on a motorcycle caused me to slow down more than usual into a curve. No problems after I realized it wasn't loose.*

*At first you could tell when you drove over it. Now it's mostly wore off.*

*At this time, the product has not been tested as we have not had inclement weather.*

*Best money ever spent for resurfacing.*

*Daughter totaled auto where this has been put down a couple of years ago. BAD spot, good to see this.*

*Dear Sir; Any surface applied to the highway to make it safer is what we need. You keep the highways in good order. Thank you for safe roads.*

*Did not know about project.*

*Didn't know it was being done.*

*Do a great deal of driving. Have not noticed a difference.*

*Don't drive in that area very often so can't comment on the treatment.*

*Don't use the road often so when I did go over it I really didn't notice a difference.*

*Drive Hwy 54 North I-70 maybe one time a year.*

*Everything is great.*

*Excellent choice!*

*Good idea to give it a try to improve road friction.*

*Good idea.*

*Good Idea.*

*Good idea. Do more of it.*

*Great idea and will save a lot of accidents.*

*Great idea. Continue in other areas.*

*Great improvement.*

*Great job but now need to address the new stop light in Kingdom City (North Callaway High School). It's unclear who has the right away and vehicles will turn in front of oncoming traffic, needs an arrow for turns or extra lanes.*

*Great job.*

*Great job. Keep up the good work along Hwy 54. Robert Pauley*

*Has it rained enough to provide any data? Have not received freezing rain to know. Send this out when there has been ample enough time for and/or seasons to justify a survey.*

*Hasn't really rained yet for me to make an opinion one way or the other. Trusting in what you say that it will do.*

*Have not driven on it but the results of East and West lane is great.*

*Hope it works to keep accidents down, when winter hits.*

*How do we know if application is effective, by test or recommendation from engineers. We have not tested on winter roads or high heat in summer.*

*I am 84 years old and do not drive but what I read sounds great.*

*I am a group leader for The Compassionate Friends, a group for parents who have lost a child. The teenage students from Jefferson City HS were killed between Holts Summit and Jeff City this past Fall due to apparent loss of traction. Seeing (and knowing) firsthand how the loss of a child affects parents, I believe that anything you can do to prevent accidents also helps prevent heartache!*

*I am concerned how freezing precipitation will affect the surface. Expansion and contraction in the larger openings.*

*I believe it was a good idea. A lot of crazy drivers out there that don't pay attention to signs and more.*

*I believe that would be a good idea.*

*I believe the treatment will help reduce accidents in the locations it was placed. Over the years, I have seen many accidents in the two locations it was applied.*

*I can see that it has helped on the curves especially on the curves going into Kingdom City from Auxvasse when it is wet.*

*I can't judge. I have not driven this route recently. Sounds like a good idea. Sorry I can't be of more help! Jean Aura, 7 E 8th, Fulton*

*I did not know this was a "special treatment" until I received this survey. Now I will pay more attention to the conditions. If I find them extremely good or bad I will contact MoDOT in the future.*

*I do not use this road very much. I have not driven it in the rain.*

*I don't care for the road work on 70, the times you have chosen to go down to one lane suck. (signed with a "heart")*

*I don't travel those roads very often and this is the first I have heard about it.*

*I drive a low-profile car and it have made my daily commute a rough unpleasant ride.*

*I drive this route very rarely. To me it looked like a regular asphalt.*

*I feel like funding should be used to get the smoothest road per mile and not use for traction.*

*I feel the treatment on this section was warranted. I have driven this road over 45 years and I have seen several vehicles leave the roadway during inclement weather. There has been little wet weather since application for me to give more info.*

*I find the road is easier to travel when there is ice on the road.*

*I have not noticed it. I've only driven over it once. I'll try it out next time we get some snow, sleet, or ice. How fast can we go on this high friction surface during inclement weather?*

*I haven't driven on it yet.*

*I haven't noticed a difference. Maybe when winter comes.*

*I hope it will achieve its goal of improving traction in wet/icy conditions.*

*I knew nothing about it.*

*I know of the construction but did not know of the "High Friction Surface Treatments".*

*I like everything about the highway :)*

*I like it fine so far. I think it's great.*

*I like that is friction treated but it is extremely wavy, uncomfortable in a 3/4 ton pickup.*

*I like the idea but if the speed limit is not obeyed, nothing will stop wrecks. Hwy 54 N of 70 @ 6:00AM is a race track!*

*I like the idea of making the roadways safer, and if this accomplishes that goal -- so be it. I recall hearing about the project once before it began then I forgot about it until this survey. I can't really evaluate the road surface since I have only been on it once or twice.*

*I like the surface, but the number of times they closed the road was ridiculous.*

*I love the high friction treatment and would hope that many more highways will have it in the future.*

*I rarely use this part of the highway so unable to answer questions 1-3.*

*I think it is a good idea if this works. Too early to tell (but sounds good).*

*I think it is a good idea!*

*I think it is a great idea. I would to see MoDOT do more of it.*

*I think it is a very good project. The high friction should be very good when highway is slick. I hope MoDOT can afford to do more projects.*

*I think it is a waste of money because of high traffic of eighteen wheel trucks tearing up roads. No longer than you repair they tear them up. Old Hwy 54 is a mess going South of Auxcasse past Baumgartners. On right is County Mo. On right side is a mess. Niches washed out for years. Parents mailbox held up by a stick. Reported it for 1 1/2 years. Nothing done!*

*I think it is great.*

*I think it will be harder on wear on tires and when ice settles in between coarse roadway it will be there. The surface won't last long when bladed. Cheap way of making road look repaved.*

*I think it will improve that area. It seems MoDOT is concerned about the high amount of crashes in the area. Thank you!*

*I think its great, but I'm sorry that I didn't know more about it -- it's me, not you.*

*I think the resurfacing is great because in the past I have observed people skidding on the curve and some go off the road, especially on the curve going down to the 54 and Hwy 40 interchange.*

*I think the true test will be this winter when the roads are slick. Anything to improve roads and make them safer is a good idea and money well spent.*

*I think you do a very nice job, just not many black people all over Missouri.*

*I travel Route 54 towards Mexico 3 times a week -- toward Kingdom City -- maybe once a week.*

*I was aware of this type of surface but was not aware it was put on HWY 54 in the Kingdom City area until I received this survey.*

*I was not aware this had been applied and do not travel on this route frequently enough to observe a change.*

*I was not on it while it was wet, but I have noticed the application and I thought it helped even dry. I think you should put it on all of Rt. F and J!*

*I was very impressed with the way they applied the surface. It seemed very efficient!!! Good job!*

*I wasn't aware that MoDOT applied the high friction surface treatment. News on TV said to stay off roads if possible so I did.*

*I wish I knew this earlier to pay attention to it. However, I noticed a change in the road but I could not tell what may have taken place. I saw signs and I contributed to the change to road being worked on.*

*I wish that more of the highways provide these treatments.*

*I wish this was done on a section of Route 54 that I routinely drive so that (a) I could experience driving on a high friction surface treated road and (b) so that I could have provided feedback to you regarding that experience.*

*I would know more after a winter.*

*If it works I think its great. Really no inconvenience while applying.*

*If the treatment makes the highway safer it is a wise investment.*

*If this is found effective it sounds like a great idea for other high risk areas.*

*I'm for it! Anything to make road surfaces safer (or more safe) is needed as traffic increases especially trucks!*

*Improvement on roadways is always a positive for me. A job well done. Taking care of making sure roadways are safe is very important.*

*It has not been there during icy weather, yet. Hope it makes it safer.*

*It is great. Nice, smooth, quiet rides.*

*It is very smooth driving.*

*It looks good. Hope holds up good. Real smooth.*

*It needs to be applied at the westbound lane of 54 at the sharp curve by the Mel Ray Motors. (90 degree curve from Center Street exit in Holts Summit toward Mo. River bridge)*

*It seems smooth.*

*It should be a great thing for everyone, so glad it was done, just thought it was construction going on.*

*It sounds like a good idea -- need more weather conditions to evaluate.*

*Its a good safe surface.*

*Its great to have on that spot where several accidents happen each year.*

*Its ok where you did this on 54.*

*Its ok. Time will tell.*

*Knew nothing about it, generally do not use that section of highway.*

*Knew nothing of the application until reading this letter.*

*Know very little about it.*

*Looks good.*

*Love it!*

*Makes roadway safer in bad weather.*

*Much quieter and smoother.*

*Need to wait and see if it works and how it holds up.*

*Neither my husband nor I have been through Kingdom City exchange for months. We avoid I-70 as much as possible, using the old Columbia road or Hwy 2 when necessary. Any improvements to US 54 are welcome as we travel that a lot to the Lake. Road work near Eldon is wonderful. Thanks!*

*Nice job!*

*No knowledge about it.*

*Noisy and dangerously rough on motorcycle. Smooth roads and less salt and chemicals, more cinders.*

*Not happy about all the segment bumps. Also we (lots of us) are very disappointed with the rough/poor quality application on Route C -- not sure if it is the same stuff. A couple rollers following do a much better job than the furrows created by cars packing down after freshly spreading. There have been a lot of fixed windshields from loose gravel. Twice for me. Now it's like driving on an oiled gravel road!! Goodwill and money from taxes are earned.*

*Not knowing of treatments before this survey I haven't given that portion of 54 anymore thought than the rest of 54, so I couldn't give an opinion on much of the treatment.*

*Not sure there has been enough time lapse to decide on effectiveness yet.*

*Please test the life of the high friction in related to maintaining this section of road. Lou Fritz, 6895 State Rd C, Fulton, MO, 65251*

*Prior to receipt of this letter I was not aware of the high friction road treatment applied to Hwy 54. Therefore, I cannot speak to the effectiveness of such.*

*Question 1,2 and 3. Ask me next year after trial by use.*

*Questions 1,2, and 3 do not apply to me since I never use that Hwy.*

*Rarely drive that way.*

*Really didn't know -- just glad the rough pavement in the area has been smoothed.*

*Re-ask after a year.*

*Road is smooth quiet and the striping shows up very good.*

*Seems good. But I do notice irregularities and unevenness along the area closest to Kingdom City.*

*Seems like a good thing. We have not yet had enough bad weather to evaluate though.*

*Seems like a great safety measure.*

*Seems like it might be hard on tires, but safety is more important.*

*Seems smooth, better riding. Have driven 54 to Kingdom City from Dec 15 - July 16. Now just drive it a couple of times a week.*

*Seems very smooth driving.*

*Should be on all bridges and overpasses.*

*Since I knew nothing about it (no internet) no comments.*

*Since I rarely use that section of 54, I didn't even know about it and haven't driven on it.*

*Since resurfacing 54 from Auxvasse to Kingdom City I've noticed that the high surface treatment is no longer.*

*Smooth. Need this on all hways.*

*Sorry I don't know more. I've read about these surfaces and work well up North. Thank you!*

*Sorry, I have not driven on this section since it was applied.*

*Sounds good, haven't used it.*

*Sounds good.*

*Sounds like a good idea and process. I'm not familiar with this process so I only answered the questions as "slightly agree". Perhaps survey again after 12 months to gauge effectiveness?*

*Sounds like a good idea.*

*Surface is very rippled. Poorly executed installation. Road feels like its 20 years old.*

*Survey might be better sent out after some winter/slick conditions.*

*Thank you for making our roadways safer !!*

*Thank you for trying to make the roads my family drives on as safe as possible!*

*Thank you!*

*Thank you!*

*Thank you.*

*Thanks for trying this! I am one of those rare people who think we should pay MORE taxes to support projects like this.*

*That area needed something done 5 to 6 years ago. Had several slide offs when it rained, surface was worn out -- used to work for MoDOT and told them about this area. This is a great improvement for the public.*

*That is a slippery part of the road -- Glad to see you try something on this area. There is an area of I70 East of the 54 interchange that also needs this.*

*That would be fine with me, and good for people's tires.*

*The high friction surface is safe, quiet, and gives a smooth ride. I am grateful.*

*The High Friction Surface is smoother. Better to drive on.*

*The job was well done. The road is very smooth.*

*The only problem I had was it wasn't marked farther down the road. I came upon it at kinda just in a wrong lane. It had to come out of somewhere to get where I was going. Needs to mark farther down the road.*

*The real test will be this winter when there is freezing rain and snow.*

*The road is very smooth to drive on.*

*The surface is much louder to drive on compared to regular blacktop.*

*There seems to be less wrecks along that hwy since it was applied. it's not so slipping when wet now.*

*This same treatment needs to be applied to the left turn lane on Hwy 54 North at the County Rd 240. It is very short and hard to slow down in inclement weather.*

*This seems like a great idea, especially given the high rate of speed through this area. How will you measure rates of success and let us know?*

*This treatment appears to be effective and it is not "noisy" as I expected. Am curious about winter (freezing and thawing) durability. Would be useful in variety of curved roads around the state.*

*Too early to tell how effective it is.*

*Traveled on this section of highway last Saturday. Seemed a good improvement.*

*Until we have snow, ice, a downpour, its hard to judge how well the new surface works. Hydroplaning happens on the south bound curve next to Nostalgiaville when the road's wet.*

*Very beneficial. Man on project very considerate and professional.*

*Very good idea. Let's do more.*

*Very good. Should have been done long time ago.*

*Very pleased.*

*Very rough and made travel unenjoyable. Appears it was a rush job and have been done better.*

*Very smooth. I like the continuous surface to the edge, no "shoulder" difference.*

*Was never aware of any difference. Questions 1-3 should have one possible answer of unsure or don't know. Could not answer truthfully without other valid possible answers.*

*We are always happy to see the roads resurfaced. That job on 54 is really great. Job well done.*

*We knew it was resurfaced, didn't know it was for friction, but it is much smoother!*

*We never use that area.*

*We rarely travel outside our city; therefore, decided not to participate.*

*We rarely travel that way. We mainly go towards Jefferson City and Hwy C/Mokane Rd in Fulton. If this is the same treatment you put on Hwy C/Mokane road, then road is very rough. It created a lot of dust and I am not a fan of it on our road.*

*We rarely use Hwy 54 north of Kingdom City.*

*Well organized. Performed quickly.*

*We'll see what happens -- if it ever rains!*

*We'll see when there is ice and snow.*

*What about a question about traffic-backup, especially in Kingdom City? Very dissatisfied, and Missouri River bridge.*

*Works well -- many years ago saw a car "speed pass me" and ended up in median right before the new stoplight -- Of course I was driving the 45 mph and just shook my head!*

*Would be nice.*

*Would like to see more.*

*Yes.*

**Question 14: Communication from MoDOT**

*(1) MoDOT surveys, such as this one. (2) Phone Thanks, Harley Garete  
5713 Co. Rd. 240; Kingdom City, MO 65262 573-220-4203  
robbiesalmonsconstruction@gmail.com*

*A comment on how concrete pavement is laid!! Laying in square sections causes thumping. Should be laid with seams on diagonals so it would sound smooth.*

*Advertise Twitter account so more people will follow. Set up auto texts regarding specific roadways.*

*An ad in the newspaper with instructions of where to go for more information. An ad on TV with info on where to go for more info.*

*Apps. Mail.*

*At my age as since I'm not too familiar too much with electronic communicating devices such as computer, iPhone, etc then mail is best communication for me! Just old fashion "on paper"!*

*Best would be by mail.*

*By mail is very good, or phone. Plus would be interested in a forum about a bus route 3 or 4 times from Holts Summit to the Columbia postal and doctors offices. Martha Broetz  
503 Dale Street Fulton, MO 65251*

*By mail or email.*

*By mail or newspaper.*

*By mail.*

*By mail.*

*By phone or letter. Lived in same location almost 40 years and have never heard anything from MoDOT.*

*Certainly, receiving a mailing gets my attention. Newspaper, TV, internet in that order, with internet being less likely than mail.*

*Channel 13 news and Facebook.*

*Chester E Cooper. 1925 Old Hwy 54 Auxvasse, MO 65231 By mail.*

*Columbia Tribune.*

*Communicating to me via email or mail is the best way for me to get the information.*

*ConnieO64@charter.net Local network news, TV, and radio.*

*Contact local government leaders. Lou Fritz, 6895 State Rd C, Fulton, MO, 65251*

*Continue w/ road signs, updates on website/emails. More advertisements on radio.*

*Do You Job! Communicate better with city to tell county to do job, vice versa. Waste of taxpayers' money. Sad! GO TRUMP!*

*Do you sign up for emails on your website? CathyCallaway@hotmail.com  
Newspapers notice work for me though.*

*Don't put the signs up so long and we see nothing until we all just stumble on you all working. That was unplanned for us and other travelers when lanes where all of a sudden change.*

*email*

*Email -- shooter4069@yahoo.com*

*Email - nick@myrichland.org Any chance you'll put in a left-turn lane on northbound Hwy 54 south of Kingdom City to turn left on County Road 220? It's 70 mph there and very unsafe to turn towards Richland Baptist Church.*

*Email and local media.*

*Email and public announcements on KNMU TV news.*

*Email or get to the news sooner.*

*Email, news releases, mailings.*

*Email.*

*Email.*

*Email: geraldspires@yahoo.com We drive south of I-70 on 54 weekly.*

*Emails are good. Mark V. Fischer 1007 Mohawk Drive Fulton, MO 65251*

*Facebook, email, road signs.*

*Facebook, Media, Newspaper.*

*Facebook, signs.*

*Facebook. Email.*

*Facebook/mail*

*Gary Westerman PO Box 256 Auxvasse, MO 65231 garymexico1@charter.net*

*Highway Electronic Billboard, radio, television, and local newspapers. How do you plan on communicating to our disabled motorists who are deaf or blind? It might be good for you to learn sign language and Braille!*

*Highway signs and TV news.*

*I am happy, through this survey, to learn about how AskMoDOT phone service can help me in the future.*

*I didn't know you were on Facebook. I do now. Like the road signs.*

*I do like your Marquees along the highway. I also like the little tin man you use.*

*I do not have internet - no comp. So mail is best way. SO much solicitation on phone, I only answer when I recognize the number showing on my phone. Same thing with mail. Sorry.*

*I don't do social media. The info signs work well plus newspaper articles.*

*I don't know where the MoDOT office is and I don't have access to a computer, so telephone or written correspondence works best for me. I appreciate the info I received about this surface treatment. Thanks.*

*I don't mind this type of survey as highway safety is a big deal. Jim McLaughlin 6135  
Red Bun Fulton, MO 65251 jimmc13@rocket.net*

*I like mail correspondence or newspaper.*

*I read the Fulton Sun and this is the way I get info or word of mouth.*

*I use MoDOT App mostly in winter.*

*I would like to see all blacktop roads (state or county) have white stripes on outer edge of road. So much better either at night or in bad weather.*

*I'm 85 and too old to help much. Thanks very much for doing the good job you are.*

*In 2016 MoDOT employees were laying asphalt on Silver Drive which runs parallel to Hwy 54 from "H" in Callaway County. They (employees) didn't know that so many people lived on Silver Drive. The whole of the asphalt was laid "piece meal". All of the drive should have been resurfaced.*

*It doesn't matter how you communicate. Oiling sand shoulders that will wash away first flooding on 94, rough FURROWED surfaces that make us wonder if we have a flat tire ARE NOT making us feel we are getting much for our money. County bridges worn out at the edges and we no longer get to see the scenery. Things could be done better and safer and still get your high friction surface.*

*Just like now.*

*KDMU 8 and highway signs.*

*Keep up what you are already doing.*

*KRCG-TV*

*Letter in mail. Newspaper articles with updates. On nightly local news. Monthly or quarterly newsletter via email. Wouldn't think to check website. No texting. Signs on highway are good.*

*Letters -- road signs -- or local paper -- the Fulton Sun Marc Catalina P.O.  
Box 542 Fulton, MO 65251*

*Letters, email. When will you surface County Rd 156 in Callaway Country? Used by lots of people and heavy equipment. Dust is unbearable. I pay \$300 yearly for dust control.*

*Local evening news, informing agencies to send the information in groups for internal use about road closing, changes, or work. Thank you for keeping roads safe with innovating ideas. Lahra Dashtaki, Fulton, MO.*

*Local Fulton Sun newspaper or roadside signs.*

*Local media (television, radio, newspaper)*

*Local media.*

*Local media. TV and newspaper work best for me.*

*Local news coverage is always good (if you can get the station to cover it)! If I'm traveling, the electronic signs are good to see.*

*local news on TV, local newspapers*

*Local TV news coverage and local newspaper articles work best for me.*

*Mail*

*Mail :)*

*Mail for projects in and around 65262. Dale Ross 65262-1303*

*Mail or email.*

*Mail or email.*

*Mail or phone.*

*Mail, email, twitter.*

*Mail, television, highway message boards.*

*Mail, TV.*

*Mail.*

*Mail.*

*Mail.*

*Mail.*

*Mail.*

*Mail. R.E. Perkins, Jr. 550 Gregory Lane Fulton, MO 65251*

*Thank You!*

*Mail. Facebook.*

*Mail/email.*

*Mailing.*

*Message boards and local media (paper and tv).*

*MoDOT App*

*MoDOT could fix more roads with money wasted when mowing with \$100,000 tractor with GPS and truck driver driving behind in a \$150,000 truck watching. MoDOT is taxpayer cost for their luxury. All the unnecessary billboards, say buckle-up, etc.*

*MoDOT message boards, television, radio, newspaper.*

*MoDOT received funding for message boards that were to be used for Amber alerts. Why have they not been used as promised? Knowing how long it will take to get to a certain location is a waste of taxpayers' money and not as promised usage.*

*MoDOT signage helps identify roadwork and road conditions. I ride with others when I am on the highway.*

*Mr. phixit@hotmail.com (email)*

*New media, traffic reports, and public meetings.*

*News media needs to communicate improvements and need for more funds for MoDOT. This survey is a good idea, send results to politicians.*

*News media, particularly radio. Focus on morning shows.*

*News on TV or email.*

*News reports -- letters like this -- During snow and ice storms, on weekends and holidays -- we are told on the TV news to call MoDOT for highway conditions. But, all of those numbers said they were closed for the weekend. There was no way to contact you!*

*News sources.*

*Newspaper*

*Newspaper and message boards along highway directing us to the website for more detailed info.*

*Newspaper, road signs, website.*

*Newspaper, TV.*

*Newspaper.*

*No consistent way.*

*No internet. TV or newspaper.*

*No need. I have friends who work there, if I see an issue I'll call. Thanks.*

*On the news.*

*on-line*

*Our son works for MoDOT and we get the paper. Keep putting the schedule in there.*

*P.S. Kind of bigoted question for #9; think about including everyone next time.*

*Phone -- landline.*

*Phone 575-642-5600. We need work on 54 at the overpass to JC.*

*Phone or email.*

*Phone.*

*Please put my name right. It is Iola Thomas, not Iola Deere.*

*Prefer email or MoDOT website. We do not use ANY social media sites, video, tweets by choice. Also use MoDOT signs/message boards.*

*Probably by e-mail or text message.*

*Public news - KMIZ, KMOV*

*Put it back down. Less accidents when it was there.*

*Put on the digital construction signs.*

*Radio announcements, newspaper, TV.*

*Radio or TV news.*

*Radio, TV, highway signs are most effective for me.*

*Regular (snail) mail.*

*Road message boards.*

*Road side signs work well.*

*Road signs, TV, Radio.*

*Send a letter out telling people where MoDOT is working (dates - times - areas) before work is started.*

*Send out a written notice and have more written signs advising of the closure.*

*Signs and in paper work for me.*

*Signs on roadside, TV news.*

*Signs on the roadway only. Often surveys and possible answers are designed without proper questions or valid answers in order to get desired answers instead of honest answers.*

*Signs, tv, and mail. Keep up the good work!!! P.S. I think we should add 5 cents to our gas tax.*

*Social media -- Channel 8 or 13*

*Social media helps a lot! I would send out a letter to inform people about your social media.*

*Television news, we consistently watch main local news.*

*Television, radio.*

*Television.*

*Text message?*

*Texting. Generic email address for MoDOT. Thank you for asking.*

*Thanks for your hard work. LB*

*The best thing I've seen or heard is on the news channels -- local.*

*The best way for me to for sure get communication from MoDOT to me is through the postal system. Slow process but guaranteed to get it.*

*This is not related to the resurfacing project but a big thank you to MoDOT on changing the entry way to the North Callaway High School, T-bird learning Center and Central Office. Safety is the utmost importance for both students and drivers. By relocating the entry way to the school district's property, traffic accidents have been greatly decreased (prior location caused so many cross-over accidents) and slowed down the west bound 54 at the intersection 54 and Old Highway 40. The added 54 east bound acceleration lane by central office eases the volume of traffic going down to the 54/Old Highway 40 interchange along with getting the high school students out in record time ... there used to be such a traffic jam after school was let out. As a retired North Callaway district employee using the new interchange, I have experienced the dangers of the old cross over and appreciate the time and money MoDOT spent to make this possible. Again, Thank You.*

*This survey is great. We do not have cell phones nor a computer so paper and snail mail are good for us. As a personal comment on the 54-40 interchange -- a right turn lane for both North and South bound traffic turning onto 40 from 54 would be a great help. We locals use 40 daily from 54. We use 40 all the way to Columbia.*

*This way was good.*

*Through mail.*

*Through the news or Facebook.*

*Through TV, and correspondence. Sincerely, Flara Delle Clayton, God Belss*

*TV*

*TV and construction signs.*

*TV and road signs.*

*TV and signs on the roads also radio.*

*TV new, MoDOT website, message boards.*

*TV news.*

*TV news.*

*TV news.*

*TV or radio.*

*TV, like this survey. Also our FABULOUS son-in-law's website!*

*TV, newspaper.*

*TV, radio stations, email.*

*TV, radio, email, newspaper, roadside signs.*

*TV, radio.*

*TV, road signs.*

*US mail, Media, MoDOT website. I use the MoDOT app.*

*US Post office mass mail, local news networks, roadside electronic messaging, internet if you had my email address.*

*Via emails.*

*Visit to website or Facebook post.*

*Website and media.*

*We're not too tech-savy, so email or phone is our mode -- yes, we have a landline, too!*

*Written correspondence.*

*You can send me an email at : Judy Haldeman*

*mike\_judy\_77@yahoo.com*

*Thank you!*

*You wouldn't know they even cared.*

*Your website was used during this past year's ice storm -- Thank you.*