Virtual Public Open House Summary

Oklahoma Department of Transportation

SH-51/265th W. Avenue Intersection

Tulsa County, JP 31094(04)

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Garver Project No.: 18037124

Executive Summary

This document summarizes the virtual public open house conducted for the SH-51/265th W. Avenue Intersection Modification project in Tulsa County. The purpose of the public open house was to present the purpose and need for the project, present the proposed design for the intersection, inform the public on Median U-Turn (MUT) intersection operation and benefits, and obtain public input.

Due to concerns about the spread of COVID-19, ODOT held a virtual public open house. The public open house was held on-line between March 3 and March 17, 2021. Thirty-one (31) people signed in on the website. However, sign-in was not required. According to the website analytics, 629 unique users viewed the website over the 15-day period. After the home page, the interactive map was the most frequently viewed page (180 views), followed by the MUT Information page and the sign-in/pamphlet page. In total, seventy-four (74) individuals submitted written comments/questions either through mail, email, voice mail, or on the interactive map. Many people submitted multiple comments on a single form or email. In total, 275 public comments were received. Comments from three state agencies were also received.

Agency comments included the following:

- The Oklahoma Department of Environmental Quality (ODEQ) determined that no adverse environmental impacts under ODEQ jurisdiction are anticipated. All projects exceeding 1 acre of disturbance must obtain authorization under OKR10.
- The Oklahoma Aeronautics Commission (OAC) indicated that project does not appear to pose a hazard to safe and efficient use of navigable airspace.
- Keystone State Park agreed with the proposed modifications and indicated the existing intersection is dangerous.

Fifty-four (54) of the 74 individuals (73%) that submitted comments were not in favor of the MUT solution as proposed. Twenty (20) individuals (27%) submitted comments in support of the proposed design. The majority of the comments (229, or approximately 83%) expressed some sort of concern about the proposed MUT intersection. Many of these comments indicated that the proposed MUT would not fix the problem, or would make the problem worse for various reasons. Many also suggested alternative solutions. Twenty-five comments (9%) support the project, with many of these comments also including suggestions for additional proposed improvements. Twenty-one comments (8%) were classified as “other”, i.e not fitting into a clear preference for or against the project. Comments are tabulated in **Table ES1**.

Table ES1: Major Issues of Concern

Issue	# of Comments
Have Concerns with Project	***229***
Add a traffic light instead	24
Traffic light should be activated by turning vehicles only	8
Agree the intersection is problem, but this solution won't help	18
This plan is unsafe/would be more dangerous/make things worse	14
Lower the speed limit on SH-51 near the intersection	13
Concern with acceleration and merging – not enough room, too much traffic, crossing multiple lanes	11
Concern with cost/not a good use of funds	10
Include warning flashers on SH-51	9
Large vehicles are too slow and will block traffic when making a U-turn	9
Collisions are fault of drivers, not roadway – people are impatient or distracted	9
Concern about grades and sight distance on hill with high speed traffic	9
Add acceleration lanes on SH-51	8
Question the need for the project and/or the collision data	7
Concerns about turning vehicles backing up into traffic on SH-51	7
Concern about traffic making U-turns into high speed SH-51 traffic	6
Consider a 4-way stop	6
Concept is dumb/stupid/ridiculous/horrible	6
Add right turn lanes on SH-51	6
Concern the U-turns are not big enough for large vehicles	5
Clear the trees on the southwest side of SH-51/265th – they impair sight distance	4

Doing two turns is more dangerous	4
Widen the existing intersection	4
Location of the western U-turn will be a problem on the hill	3
This won't help right turns	3
Add signs at the existing intersection to explain how to use it	3
Lengthen the existing turn lanes	3
Add a turnaround bridge	2
Add a bypass bridge (for through traffic)	2
Will be inconvenient for residents	2
Will cost more in gas	2
Add right/left turn lanes on 265th	2
Eastern U-turn will conflict with storage facility drive and residents on that street	1
Bump outs will encourage trucks and busses to cross oncoming traffic	1
Keep the existing median opening at 265th	1
Include warning devices on side streets (rumble strips, flashing stop, etc)	1
Concerns about emergency vehicle access and response time	1
Don't close down the business access and access to 5 families at 262nd	1
Will reduce property values	1
Support the Project	***25***
There is a need to improve safety/have experienced or lost family members as a result of collisions	11
Should also reduce speed limit	7
Would prefer a signal but this is acceptable	6
Add right turn lanes on SH-51	3

There needs to be lighting	1
Keep the median opening at 265th	1
Add warning devices (flashing lights)	1
Project is long overdue	1
Other	***21***
Setting sun affects visibility	2
Concern with mailboxes for residents on 262nd	2
MUT seems extreme without trying other things first	2
Add a truck lane on SH-51	2
Need better enforcement of speed limits	2
Packet was well put together	1
Safety is worse than the data indicates – there have been lots of near misses	1
Why is the MUT called the Gauntlet?	1
9000 vehicles from Mannford and beyond use SH-51 including oversize vehicles	1
Will you be changing the intersections like this on Hwy 412 and 75?	1
With this intersection there are 2 opportunities for crashes when vehicles make left turns from 265th	1
Don't do a band-aid fix	1
You can already do a U-turn at Dollar General – let people decide to use this if they want	1
We should have a venue allowing discussion	1

Responses to Comments

The existing intersection at SH-51 and 265th W. Avenue is on a steep grade and has limited sight distance. Existing traffic volumes on SH-51 are currently 11,600 vehicles per day (vpd), and are projected to increase to 16,240 vpd by 2040. The existing speed limit on SH-51 is 60 miles per hour (mph), and often traffic is traveling faster than the posted limit. Traffic on 265th/263rd W. Avenue is also relatively

high, with 2,300 vpd today and a projected 3,220 vpd in the future. Close to 1,000 vehicles per hour pass through the intersection from 265th/263rd W. Avenue during peak periods. There were 34 documented collisions at the SH-51/265th W. Avenue intersection between 2009 and 2018. These collisions tend to be severe, with all but four involving injury and including one fatality. The majority (95%) of the collisions were cited as either "failure to yield" or "improper turn" in the accident reports. The combination of the limited sight distance and high volumes of traffic on SH-51 traveling at high speed have all contributed to the collision rate.

The Median U-Turn (MUT) intersection is a type of innovative intersection that has been shown to significantly improve the safety of intersections on rural, 4-lane divided highways such as SH-51. The goal of a MUT is to restrict or redirect certain movements to improve a road's overall safety and reduce delays. The basic MUT restricts the incoming and outgoing side street movements to right turns only. Vehicles that want to turn left, or cross to the opposite side street, must do so indirectly by first turning right onto the mainline, maneuvering to the left most lane to complete a U-turn, and then traveling back to the intersection in question to complete their desired movement. Some MUT intersections, like the one proposed for SH-51 and 265th W. Avenue, also relocate the mainline left turns, directing those movements beyond the intersection to the U-turn location. Lighting is not currently included.

A conventional two-way stop intersection on a 4-lane divided highway has 42 conflict points, or potential collision locations. The MUT simplifies the intersection and reduces the number of conflict points to 18 and eliminates the most dangerous crossing conflict points. Per the Federal Highway Administration (FHWA), studies have shown that the design can reduce fatal and injury crashes by 54% and reduce all crashes by 34%. Installing the MUT intersection at SH-51 and 265th W. Avenue is expected to reduce the number of accidents, the severity of accidents, and improve traffic flow.

Improve the Existing Intersection

Some comments requested that ODOT consider improving the existing intersection, leaving the intersection in its current configuration. Suggested changes included widening (adding more lanes to SH-51 and or 265th/263rd), keeping and lengthening the existing turn lanes, adding right turn lanes, adding signage, clearing trees within the right-of-way, or adding flashing beacons. While some of these changes could result in some improvements, maintaining the existing intersection does not reduce the number of conflict points and the potential for severe collisions remains high. Improving the existing intersection (including keeping all the existing left-turn movements) does not meet the project goal of improving safety. Widening the intersection would require additional right-of-way, which would mean cutting into the existing hillslopes and potentially relocating utilities. Widening would increase the cost and impacts of the project. The MUT improvements do not preclude the use of warning flashers or other similar advanced warning devices.

One frequent suggestion was to reduce the speed limit on SH-51. As several people noted, the area around 265th W. Avenue is already posted with speed warning signs to reduce speeds to 45 mph. These

signs do serve to warn drivers of the upcoming intersection but are not often effective at reducing overall traffic speed. Changing the official posted speed would allow law enforcement to issue citations to violators. However, relying on drivers to follow the posted speed limit is not always a successful safety strategy. Drives tend to travel at the speed the roadway allows, and the speed of other drivers. A rural 4-lane highway such as SH-51 is designed to safely carry traffic at 60 mph. Enforcement is the responsibility of law enforcement, not ODOT.

As a result of public feedback and additional investigation, ODOT is adding a deceleration lane for eastbound SH-51 turning right (southbound) on 265th W. Avenue (see attached exhibit). This can be accomplished within existing right-of-way. This deceleration lane will also serve westbound SH-51 traffic that uses the U-turn to go south on 265th W. Avenue. ODOT will investigate clearing vegetation within ODOT right-of-way that may be impeding sight distance at the intersection.

Concerns with the MUT Intersection

Concerns with the proposed MUT intersection included a lack of sight distance, particularly to the west on the hill, insufficient distance to merge as needed to make the U-turns, making turns (including U-turns) into high-speed traffic, large vehicles making slow turns, insufficient U-turn lane lengths, and a lack of right turn lanes. The proposed MUT intersection was designed to provide adequate sight distance for through and turning vehicles. The location of the western U-turn is located at the top of the hill, so that turning vehicles will be able to see oncoming traffic and judge an adequate gap. The U-turn is located approximately 2,000 feet west of 265th/263rd W. Avenue, which provides more than adequate distance for cars entering SH-51 to merge into the left lane in order to make the U-turn. Keeping the U-turn location separate from the Dollar General will reduce confusion and conflicts between traffic turning into/out of the store and traffic making a U-turn on SH-51.

The eastern U-turn location is also located in an area with sufficient sight distance in both directions and with more than adequate merge length. The eastern U-turn was also designed to accommodate vehicles that are wanting to enter or exit the 51 West Storage facility and the homes to the north. Coordination with the U.S. Postal Service will be required to move the existing mailbox on the south side of SH-51. No access will be cut off and property values are not expected to be affected. The U-turn bays are designed to be long enough to accommodate the peak hour turning volumes, both today and in the future.

Additional pavement is provided at both U-turn locations to accommodate the larger turn radii of trucks and vehicles hauling trailers. The additional pavement also provides a refuge for these large vehicles if needed to wait for gap in traffic in order to complete the turn. The MUT configuration is an improvement over today's condition, where large trucks and/or trailers must wait for gaps in both directions of traffic on SH-51 before turning. The existing median is not wide enough to provide a refuge for these vehicles. Larger vehicles waiting for gaps in the median can block traffic in the through lanes and increases collision exposure. The MUT allows all vehicles, including trucks, to focus on one direction of traffic at a time while making turns.

While the MUT would increase the distance that vehicles would need to travel to cross SH-51 or make a left turn, this distance is very small (less than 1 mile for all trips). Due to less delay in waiting for traffic gaps, the total travel time may improve. Emergency vehicles will use the MUT in the same way as other vehicles. The MUT will provide a safer intersection for emergency vehicles and is not expected to significantly affect response times. The additional inconvenience, travel distance and vehicle operating costs (e.g. gasoline) are expected to be small, and are outweighed by the safety benefit the project provides.

Other Intersection Suggestions

Many comments were received suggested alternative intersection configurations. The most common suggestion was a traffic signal. Some suggestions also included flashing signal warning devices. While a traffic signal would provide a defined window for turning traffic, a signal would have negative impacts on traffic mobility on SH-51. As a state highway intended to connect regional and statewide destinations, drivers on SH-51 expect to maintain a relatively high and consistent speed outside of towns and cities. Stopping traffic on SH-51 is inconsistent with this expectation and would be expected to increase delay. The MUT intersection would improve mobility, as traffic wanting to cross SH-51 or make a left turn is no longer required to wait for gaps in both directions of traffic. This would lead to less delay for vehicles on 265th /263rd W. Avenue, as all vehicles would be turning right. While a signal could improve safety of turning movements, it would also likely contribute to more high speed rear-end collisions, as vehicles slow or stop at the intersection. A signal could also create back-ups on SH-51 while traffic is stopped, which could be difficult to see and stop in time, particularly for eastbound traffic coming over the hill. A signal would likely be more expensive to install than the MUT and would require more annual maintenance.

Another suggestion was to make the intersection a 4-way stop. Similar to a signal, converting the intersection to a 4-way stop would negatively impact mobility on SH-51 and would cause increased delay and congestion on the highway.

The MUT is a low-cost option that has been proven to substantially reduce serious crashes without creating major delays along the high-speed road. Research by the FHWA shows that simplifying the movements and eliminating the two-way median reduces severe crash exposure by up to 54% by removing the "T-bone" collision potential. Other intersection options such as widening or a traffic signal would have higher cost and would either not meet the goal of improving safety or would negatively impact mobility on SH-51. Options such as interchanges with ramps and overpass bridges are expensive and not warranted by the volume of traffic using the intersection.

Other comments not specifically related to the SH-51/265th W. Avenue intersection project are not addressed here.

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED R/W

08-19-21

NE/4 SEC 18
T19N R10E

330+00 | 335+00 | 340+00 | 345+00

1-WIRE
PRESENT R/W
F0
CIMARRON
CITY OF SAND SPRINGS
(APPROX. LOCATION, DRAWN FROM ATLAS)
BM #210
4-BARB
STA 335+91.53 CL OVERHEAD WIRE CROSSING 4 WIRE N-S OHE
CIMARRON TELEPHONE U.G. FIBER LINE CROSSING
STA. 336+94.36 CL 74.51' LT. 30"X18"X40.44' ARCHED CGMP SD W. FL ELEV = 818.23' E. FL ELEV = 817.20' REMOVE
STA. 337+07.33 CL 33.89' RT. 18"X102.21' CGMP CD NW. FL ELEV = 817.13' SE FL ELEV = 814.04' NOTE: NW. END IS AREA INLET (T.G. = 820.33') PLUG & COVER
STA. 337+02.99 CL 69.24' RT. 30"X18"X40.71' ARCHED CGMP SD W. FL ELEV = 818.78' E. FL ELEV = 816.75' REMOVE
CITY OF SAND SPRINGS WATER LINE CROSSING (APPROX. LOCATION, DRAWN FROM ATLAS)
CIMARRON TELEPHONE U.G. FIBER LINE CROSSING
KEYSTONE RURAL GAS DISTRICT GAS LINE CROSSING
BM #211
VENT PIPE
INDIAN ELECTRIC CO-OP
4-WIRE
BM #212
PRESENT R/W
STA. 344+90.65 CL 6'X5'X274.43' RCB CD NW. FL ELEV = 744.41' SE FL ELEV = 740.56'
BM #213
℄ SURVEY STA. 337+00.00
CONST. 26' ASPH. ℄ RETURN
W/ 30" RCP W/ CET
STA. 336+38.00
162.00'
S. 265TH W. AVE
ASPHALT
℄ SURVEY STA. 337+00.00
CONST. 14' TBSC DR.
W/ 18" RCP W/ CET
STA. 337+27.11
STA. 342+10.00
TOC/TOS
℄ SURVEY
SH-51
NORTH SOUTH
STA. 331+92.00
176.00'
STA. 336+78.49
STA. 337+78.00
STA. 338+80.00
℄ SURVEY STA. 337+00.00
CONST. 22' ASPH. DR.
AS DIKE
℄ SURVEY STA. 337+00.00
CONST. 25' ASPH. ℄ RETURN
W/ 30" RCP W/ CET
PAVEMENT REMOVAL

Proposed
Deceleration Lane

BM 210 - BM SET 5/8 IN IRON PIN AT FENCE-LINE; STA. 334+44.97 159.62' LT

BM 211 - BM SET 5/8 IN IRON PIN; STA. 337+33.04 167.67' LT

BM 212 - BM SET 5/8 IN IRON PIN AT FENCE-LINE; STA. 340+92.39 160.05' LT

BM 213 - BM CUT XIN EAST CORNER OF NORTH END HEADWALL; STA. 344+94.27 128.79' LT

860 | 850 | 840 | 830 | 820 | 810 | 800 | 790 | 780 | 770

SP. DITCH MEDIAN
EXISTING GROUND
INLET ℄ = 822.00'
EXIST. LT. ℄ = 817.13'
EXIST. RT. ℄ = 814.04'
RT. ℄ = 812.00'
EB EXISTING INSIDE EDGE OF DRIVE
WB EXISTING INSIDE EDGE OF DRIVE

STR. 2
℄ SURVEY STA. 336+62.81
CONST. SMD DES. NO. 2
0.00' LG. LT., 80.27' LG. RT.
W/ 24" X 80.00' LG. RCP
STUBBED INTO STR. 3

STR. 3
℄ SURVEY STA. 336+52.25
82.27' RT.
W/ 30" X 86.00' LG. RCP W/ CET

330+00 | 331+00 | 332+00 | 333+00 | 334+00 | 335+00 | 336+00 | 337+00 | 338+00 | 339+00 | 340+00 | 341+00 | 342+00 | 343+00 | 344+00 | 345+00

08-19-21

COUNTY _____ HIGHWAY _____ STATE JOB NO. 31094(04) SHEET NO. R003