



STATE OF DELAWARE  
**DEPARTMENT OF TRANSPORTATION**  
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JENNIFER COHAN  
SECRETARY

**MEMORANDUM**

**To:** DelDOT staff

**From:** Brian Clarke  
Traffic Studies Engineer

**Date:** February 21, 2019

**Location:** DE Route 20/Zion Church Road at Johnson/Bayard Road

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**Project Overview:**

We studied the intersection of DE Route 20/Zion Church Road and Bayard/Johnson Road by examining crash reports, collecting turning movement counts, and recording the existing intersection geometry and signage. Based on the information we collected, we recommended the installation of an All Way Stop at this intersection.

**Public Workshop and Notice:**

The Delaware Department of Transportation (DelDOT) invited the residents in the area of the intersection of DE Route 20/Zion Church Road and Johnson/Bayard Road in Sussex County South of Bayard and the surrounding areas and all other interested parties to a Virtual Workshop to learn about the proposed All Way Stop. The purpose of the workshop was to present an overview of the proposed Traffic Control Devices with an opportunity for the public to review the project plans and solicit feedback about this project. The virtual workshop was available online beginning January 28, 2019 and was accessible for 14 days.

**Public Workshop Results:**

We received 49 responses through the virtual workshop and 8 direct responses for a total of 57 comments. General takeaways are:

1. **43% in favor of AWS (57% opposed)**
2. **Major concerns with the AWS are as follows:**
  - Queueing on DE Route 20 is going to affect nearby neighborhoods
  - Compliance on DE Route 20 is a concern
3. **Those in favor of AWS wanted to see these improvements:**
  - Permanent flashing lights at the intersection
  - Additional Warning Signage
  - Reconsider proposed lane configurations

#### 4. Additional/Alternative Solutions include:

- Traffic Signal (60% preferred this option over AWS, even if in agreement with AWS)
- Roundabout (14% preferred this option over AWS, even if in agreement with AWS)
- Truck restriction on Bayard Road needed (6 responses)
- Close Johnson Road and re-route to Johnson Store Road (3 responses)
- Reduce speed limit on DE Route 20 (3 responses)
- Install additional warning signage and channelize turn lanes (3 responses)

#### Conclusions/Recommendations

- Virtual workshop indicates that stakeholders (public and Delaware State Police) are opposed to an All Way Stop (57%) as an interim measure at the intersection of DE Route 20 and Johnson/Bayard Road
- A recent Traffic Impact Study for development activity indicates that the intersection will continue to grow from a traffic volume perspective.
- Considering the opposition, traffic growth, and our analysis of the crash trends and intersection operation, we are recommending the location be pursued as a traffic signal instead of an All Way Stop. The supporting documentation and recommendation will be submitted to our Traffic Design Section to start programming the design work. This type of effort will require a detailed design to understand right of way, drainage, utilities, soil conditions, etc.

**Table 1: Public Comments and Response**

Comment No.	Type of Comment	Responses
1	a. Does not want AWS	a. Acknowledged
2	a. Stop Signs will inhibit capacity b. Roundabout would be preferred c. Close Johnson Road and divert to Johnson Store Road	a. Acknowledged b. Acknowledged c. We analyzed this solution and found it would have minimal impacts to existing intersection function while negatively impacting Johnson Store Rd.
3	a. Traffic light would be preferred b. Fear of compliance issue on DE 20	a. Acknowledged b. We will be pursuing a traffic signal which will address compliance on DE 20
4	a. In favor of All Way Stop	a. Acknowledged
5	a. Traffic light would be preferred b. Fear of compliance issue on DE 20 c. Concern of truck traffic and speeds on Bayard Road	a. Acknowledged b. We will be pursuing a traffic signal which will address compliance on DE 20 c. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification
6	a. Traffic light would be preferred b. Wants 35 mph on DE 20	a. Acknowledged b. Acknowledged
7	a. Would prefer just signage and striping and NB left turn lane b. Concerned about speeding on DE 20	a. Acknowledged, however may not improve existing crash pattern b. Acknowledged
8	a. Would like flashing lights on Warning and Stop b. Concerned about Fox Haven during summer due to queueing	a. We will be pursuing a traffic signal which will address this concern b. Acknowledged
9	a. Would like to see permanent flashers	a. We will be pursuing a traffic signal which will address this concern
10	a. Traffic light preferred b. Reduce speed limit	a. Acknowledged b. Acknowledged
11	a. In favor of AWS	a. Acknowledged
12	a. Roundabout preferred	a. We analyzed a roundabout but requires project nomination in the Capital Transportation Program (CTP)
13	a. In favor of AWS	a. Acknowledged
14	a. In favor of AWS	a. Acknowledged
15	a. Traffic light preferred	a. Acknowledged
16	a. In favor of AWS	a. Acknowledged
17	a. Does not want AWS b. Queueing would be an issue	a. Acknowledged b. Acknowledged

18	a. In favor of AWS	a. Acknowledged
19	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
20	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
21	a. In favor of AWS b. Traffic light preferred	a. Acknowledged b. Acknowledged
22	a. Does not want AWS b. Would like flashing lights on Warning and Stop	a. Acknowledged b. We will be pursuing a traffic signal which will address this concern
23	a. In favor of AWS b. Wants flashing lights on Stop	a. Acknowledged b. We will be pursuing a traffic signal which will address this concern
24	a. Traffic light preferred	a. Acknowledged
25	a. In favor of AWS	a. Acknowledged
26	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
27	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
28	a. Does not want AWS b. Wants intersection lighting c. Concern about sight distance	a. Acknowledged b. DelDOT examined the need for lighting and determined it was not justified c. Sight distances were examined during the study and determined to exceed minimum required values
29	a. Traffic light preferred	a. Acknowledged
30	a. In favor of AWS b. Roundabout preferred	a. Acknowledged b. We analyzed a roundabout but requires project nomination in the Capital Transportation Program (CTP)
31	a. In favor of AWS b. Concern proposed lane configuration	a. Acknowledged b. Acknowledged
32	a. In favor of AWS b. Traffic light preferred	a. Acknowledged b. Acknowledged
33	a. In favor of AWS b. Wants consideration for roundabout/traffic light	a. Acknowledged b. Acknowledged
34	a. Roundabout preferred b. Queueing would be an issue	a. We analyzed a roundabout but requires project nomination in the Capital Transportation Program (CTP)
35	a. Roundabout / traffic light preferred b. Concern about sight distance	a. We analyzed a roundabout but requires project nomination in the Capital Transportation Program (CTP) b. Sight distances were examined during the study and determined to exceed minimum required values
36	a. Do not want AWS b. Traffic light preferred	a. Acknowledged b. Acknowledged
37	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
38	a. Traffic light preferred b. Queueing would be an issue c. Concerned about AWS compliance	a. Acknowledged b. Acknowledged c. We will be pursuing a traffic signal which will address compliance on DE 20
39	a. Traffic light preferred b. Concern about proposed lane configuration c. Reduce speed limit	a. Acknowledged b. Acknowledged c. Acknowledged
40	a. In favor of AWS b. Reduce speed limit	a. Acknowledged b. Acknowledged
41	a. Roundabout preferred b. Queueing would be an issue c. Request to channelize turn lanes d. Truck restriction on Bayard Road e. Close Johnson Road, use Johnson Store Road	a. We analyzed a roundabout but requires project nomination in the Capital Transportation Program (CTP) b. Acknowledged c. Acknowledged d. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification
42	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
43	a. In favor of AWS	a. Acknowledged
44	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged

45	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
46	a. Traffic light preferred b. Queueing would be an issue c. Concerned about AWS compliance	a. Acknowledged b. Acknowledged c. We will be pursuing a traffic signal which will address compliance on DE 20
47	a. Traffic light preferred b. Restrict truck traffic on Bayard Rd	a. Acknowledged b. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification
48	a. Traffic light preferred	a. Acknowledged
49	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
50	a. Traffic light preferred	a. Acknowledged
51	a. Traffic light preferred b. Queueing would be an issue c. Restrict truck traffic on Bayard Rd	a. Acknowledged b. Acknowledged c. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification
52	a. Traffic light preferred b. Concerned about AWS compliance	a. Acknowledged b. We will be pursuing a traffic signal which will address compliance on DE 20
53	a. Does not want AWS b. Concerned about AWS compliance	a. Acknowledged b. We will be pursuing a traffic signal which will address compliance on DE 20
54	a. Concerned about AWS compliance/ROW b. Truck restriction on Bayard Road c. Close Johnson Road, use Johnson Store Road d. Queueing would be an issue e. Does not want AWS	a. We will be pursuing a traffic signal which will address compliance on DE 20 b. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification c. We analyzed this solution and found it would have minimal impacts to existing intersection function while negatively impacting Johnson Store Rd. d. Acknowledged. e. Acknowledged
55	a. Does not want AWS b. Truck restriction on Bayard Road	a. Acknowledged b. Speed study was conducted previously and established the proper speed limits on Bayard Road, Truck Restriction Study was conducted previously which concluded with the removal of Alt DE Route 54 classification
56	a. Traffic light preferred b. Queueing would be an issue	a. Acknowledged b. Acknowledged
57	a. Concerned about AWS compliance b. Wants permanent blinking light	a. We will be pursuing a traffic signal which will address compliance on DE 20 b. We will be pursuing a traffic signal which will address this concern