

SH-28 Pensacola Dam Bridge Widening and Rehabilitation

Project Name: GRDA SH-28 Widening over Pensacola Dam

Project Number: GRDA: 41806

Benham #: 1400204

Location: Division 8 Conference Room

Date: July 7 through July 9, 2018

Subject: Traffic Analysis Review & Opinion Letter

This letter and attachments are provided to share our professional opinion of existing traffic operations along the Pensacola Dam Bridge.

A study of Average Daily Traffic (ADT) and speed were conducted from July 7, 2018 through July 9, 2018 across the Pensacola Dam to evaluate operations during a holiday weekend and on a typical week day. Traffic counter tubes were placed on the east end of the dam to continuously record ADT and vehicle speeds. The results in **Appendix A** indicate a significantly higher ADT on the weekend (approximately 4,400 vpd) compared to the weekday (3,121 vpd).

Capacity and Level of Service (LOS) analysis were conducted separately for the weekend and weekday time periods. Both weekend and weekday analysis indicate undesirable results of LOS F and LOS E, respectively. Results indicate both the weekend and weekday time periods warrant immediate improvements. Like the previous results, the 2017 AADT approximation for the dam was 2600, resulting in a LOS of E. Although the weekend period analysis results may appear abnormal due to the holiday, site observations indicate heavy vehicular traffic on weekends throughout the year, especially during the summer months. It is anticipated that even if seasonally adjusted, forecasted traffic data to future design years will only degrade the LOS further and thus the need for improvements.

Most of the speeds recorded had a consistent pattern of staying between 25 mph and 45 mph. The posted speed limit on the dam is currently 45 mph. As shown in **Appendix B**, 90 percent of the traffic crossing the dam stayed below 45 mph. This was true for both the weekend and weekday. To increase the speed or operate closer to the 45-mph posted limit, the LOS will need to be higher. This can be done by widening the lanes. A proposed widening of lanes from approximately 10 feet to 12 feet with curb would be ideal to improve existing operations.

Please give us a call if you have questions about our opinions or any other details discussed. Thank you for choosing Benham for your traffic engineering services.

Sincerely,



Robert Powell, PE



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APPENDIX A

AVERAGE DAILY TRAFFIC				
TIME	7/7/2018	7/8/2018	7/9/2018	AVG. WEEKEND
00:00	26	51	13	40
01:00	37	26	4	30
02:00	15	23	8	20
03:00	17	18	8	20
04:00	24	18	17	20
05:00	29	22	50	30
06:00	52	30	102	40
07:00	104	97	154	100
08:00	214	186	172	200
09:00	283	259	195	270
10:00	366	291	245	330
11:00	365	380	247	370
12:00	335	426	224	380
13:00	322	342	215	330
14:00	284	357	214	320
15:00	301	285	216	290
16:00	316	305	236	310
17:00	304	279	240	290
18:00	288	234	180	260
19:00	293	199	126	250
20:00	256	148	111	200
21:00	175	108	75	140
22:00	143	57	43	100
23:00	85	27	26	60
TOTAL	4634	4168	3121	4400

APPENDIX B

AVERAGE DAILY SPEED							
DATE	< 25 MPH	25 ≤ TO < 35 MPH	35 ≤ TO < 45 MPH	45 ≤ TO < 50 MPH	≥ 50 MPH	TOTAL	PERCENT UNDER 45 MPH
7-Jul-18	323	2389	1677	102	143	4634	94.71%
8-Jul-18	246	2002	1751	73	96	4168	95.95%
9-Jul-18	44	756	2013	152	156	3121	90.13%
TOTALS	613	5147	5441	327	395	11923	93.94%