



ALDRIDGE TRANSPORTATION CONSULTANTS, LLC

Advanced Transportation Planning and Traffic Engineering

John M.W. Aldridge, P.E.
Colorado Licensed Professional Engineer

January 25, 2023

Ted Swan
Were Malcomb
900 S. Broadway, #320
Denver, CO 80209

6.8.23:
Needed updates to
queue length analysis
table/section for
consistency.

082 Chimney Rock Road
Highlands Ranch, CO 80126
303-703-9112

Storage Lengths Revised

RE: Transportation Impact Study - Revised
SEC Smith Road and Picadilly Road., Aurora, CO

Dear Mr. Swan:

Aldridge Transportation Consultants (ATC) is pleased to present this traffic impact study for the proposed Prologis on the southeast corner of Smith Road and Picadilly Road in Aurora.

ATC is professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,000 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.

We acknowledge that City of Aurora's review of this study is only for general performance with submittal requirements, current design criteria, and standard engineering principles and practice.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be reached at 303-703-9112.



Respectfully submitted,
Aldridge Transportation Consultants, LLC

John M.W. Aldridge, P.E.
Principal



Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	No
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	No
Warrant 3: Peak Hour Volume	No
Warrant 4: Pedestrian Volume	N/A
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	N/A
Warrant 6: Coordinated Signal System	N/A
Warrant 7: Crash Experience	N/A
Warrant 8: Roadway Network	Yes
Warrant 9: Intersection Near a Grade Crossing	N/A

QUEUING ANALYSIS

A review of the 95th percentile queue length at each of the unsignalized intersections and access locations reveals no queue length measured in vehicles exceeds one vehicle length. At the signalized intersections no queues exceed capacity at the Picadilly Road/19th Ave. intersection. The Synchro Queuing and Blocking reports are attached for reference. The table below presents a summary of the turn bay storage and 95th percentile queue length.

on 95th%ile Queuing Summary						
Intersection	Analysis Period	Length in Feet	EBL	WBL	NBL	SBL
Picadilly/Smith		Storage	500	500	500	200
	20-year AM BKG	95th%ile Queue	160	196	170	284
		95th%ile Queue	128	158	170	226
		95th%ile Queue	160	196	170	284
	20-year PM TOTAL	95th%ile Queue	126	169	180	243
Intersection	Analysis Period	Length in Feet		WBL	NBR	SBL
Picadilly/19th Ave.		Storage		1000	150	150
	20-year AM BKG	95th%ile Queue		176	41	78
	20-year PM BKG	95th%ile Queue		176	41	70
	20-year AM TOTAL	95th%ile Queue		176	41	78
	20-year PM TOTAL	95th%ile Queue		184	42	73

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Inadequate storage for projected queue

Storage Lengths Revised

Update table.

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