

J&CO Engineers



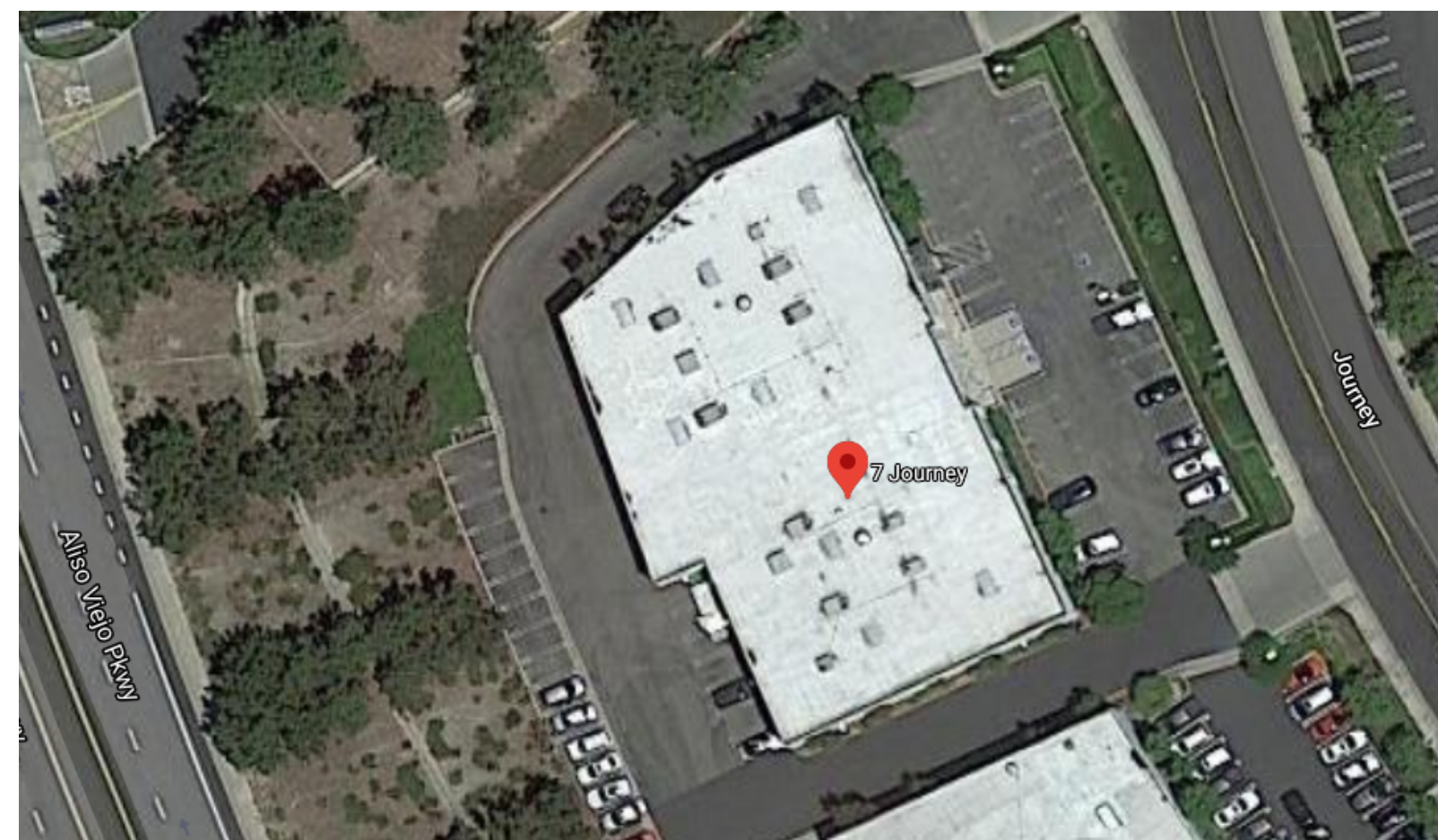
RK Engineering
Industry Advisors
Robert Khan, P.E.,
Founding Principal
Rogier Goedecke
President

UCI CEE
Faculty Advisor
Michael McNally, Ph.D.

References

U.S. Dept. of Transportation, Federal Highway Administration.
(2000). *Roundabouts: An Informational Guide*. Washington, D.C.
Institute of Transportation Engineers.
(2017). *Trip Generation Manual (10th ed.)*. Washington.

Site Location



Project Description

- Traffic Analysis study conducted alongside RK Engineering for proposed Brewery design
- Project area is to be analyzed for trip generation effects on the nearby area and its impact on 4 nearby intersections
- ITE 10th edition Trip Generation Manual used to find codes for similar building types to get assumed trip generation rates that will be generated by the brewery
- Various exhibits are produced by J&Co to analyze lane geometries and intersection controls of the 4 impacted intersections, various existing traffic volumes, and estimated trip distributions
- A proposed roundabout will be incorporated for the design aspect of the project and will be introduced in the latter portion of the project
- The FHWA Roundabout Design Manual will be studied to see how traffic in the project area will be affected by the incorporation of a roundabout

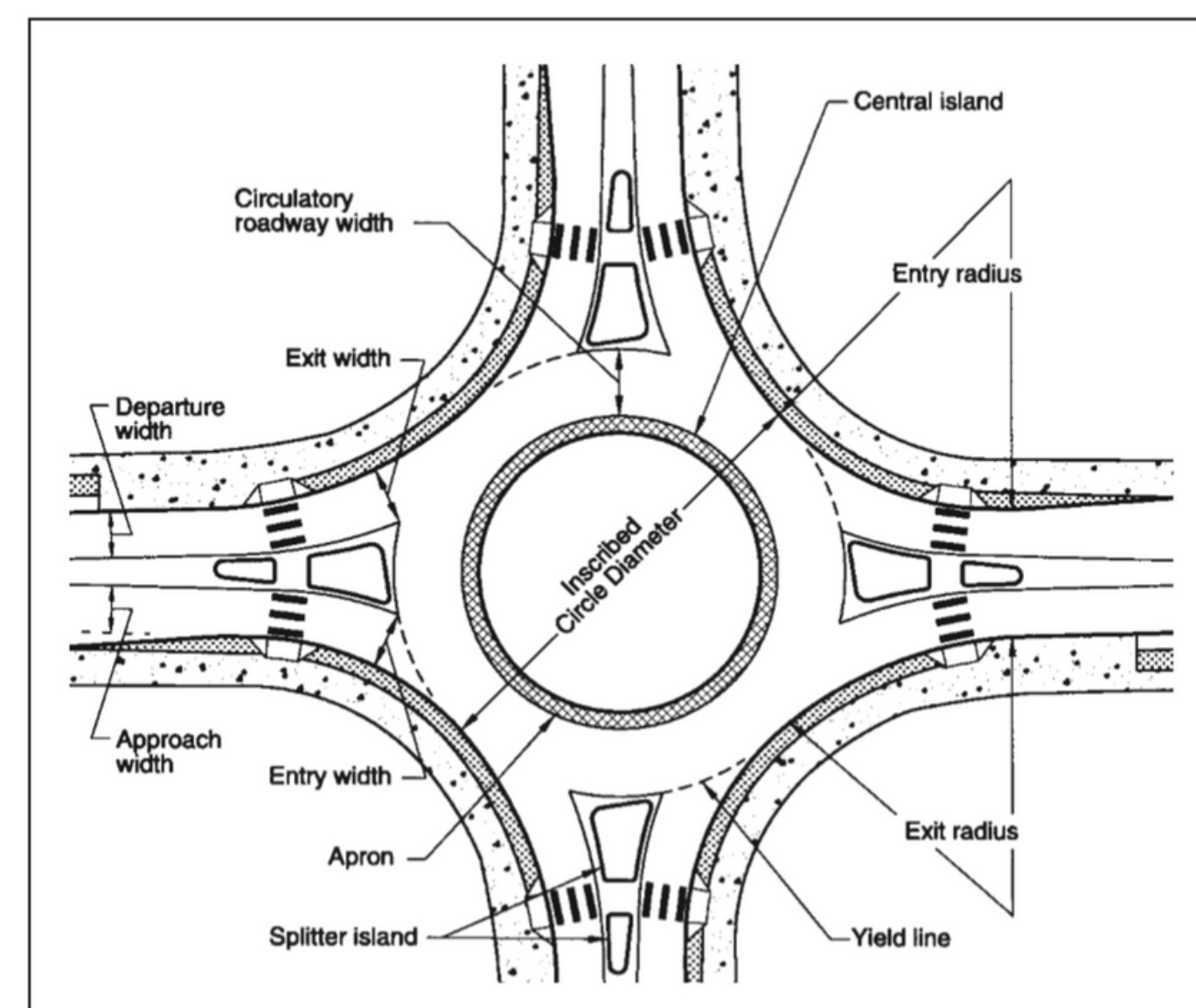


Figure 3: Roundabout Geometric Features

Table 1: Trip Generation based on ITE Code

Land Use	ITE Code	Units ²	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
General Light Industrial	110	TSF	0.62	0.08	0.70	0.08	0.55	0.63	4.96
Warehousing	150	TSF	0.13	0.04	0.17	0.05	0.14	0.19	1.74
General Office	710	TSF	1.00	0.16	0.16	0.18	0.97	1.15	9.74
Drinking Place ³	925	TSF	1.25	0.31	1.56	13.75	3.44	17.19	189.09

Table 2: Trip Generation based on Building Area

Land Use	Quantity	Units ²	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
General Light Industrial	1.0200	TSF	1	0	1	0	1	1	5
Warehousing	12.0480	TSF	2	0	2	1	2	3	21
General Office	1.7930	TSF	2	0	2	0	2	2	17
Brewery	4.0200	TSF	5	1	6	55	14	69	691
TOTALS	18.8810	TSF	10	1	11	56	19	75	734

Pending Tasks

Geometric Roundabout Design

Signing and Striping Design

Traffic Analysis

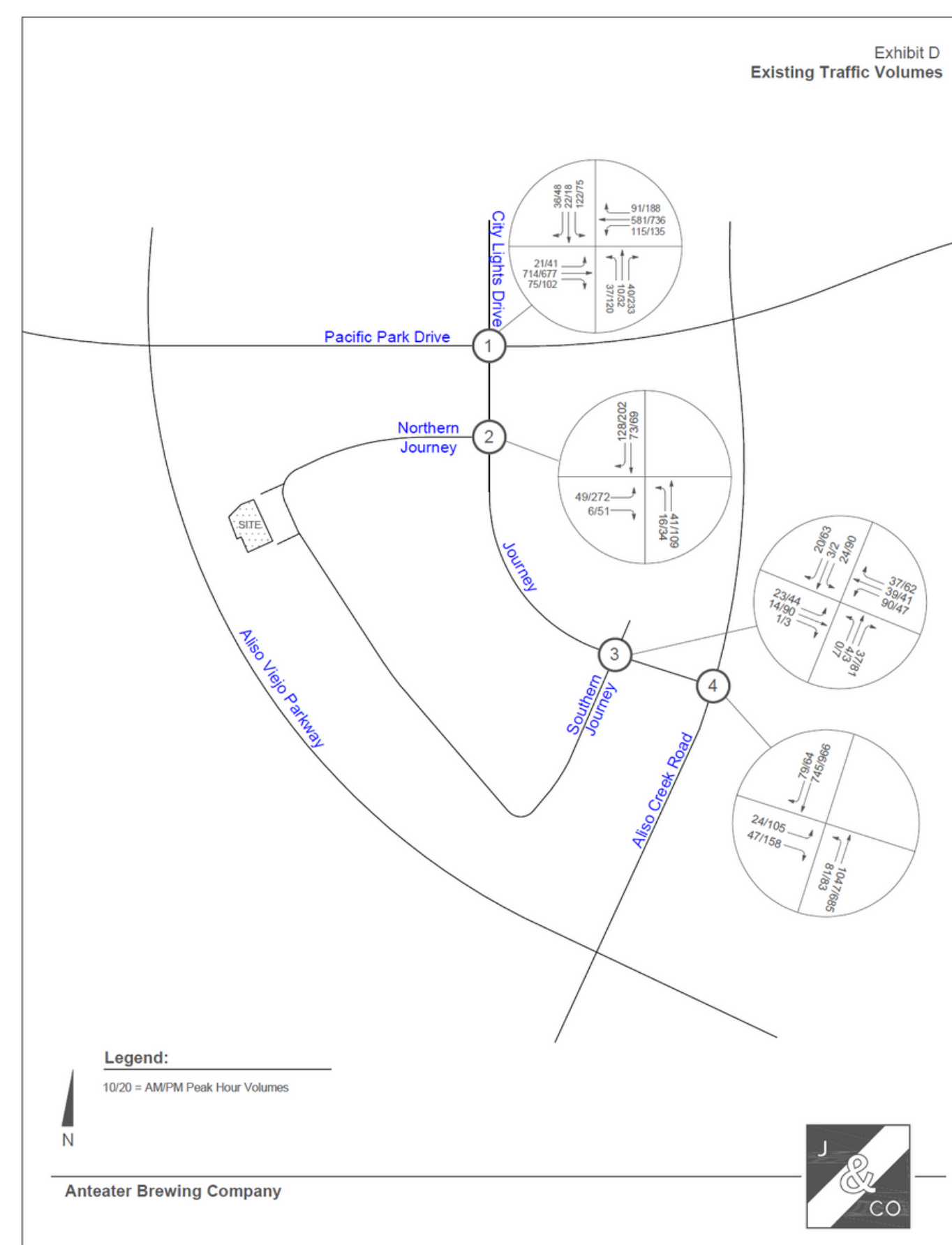


Figure 1: Exhibit D - Existing Traffic Volumes

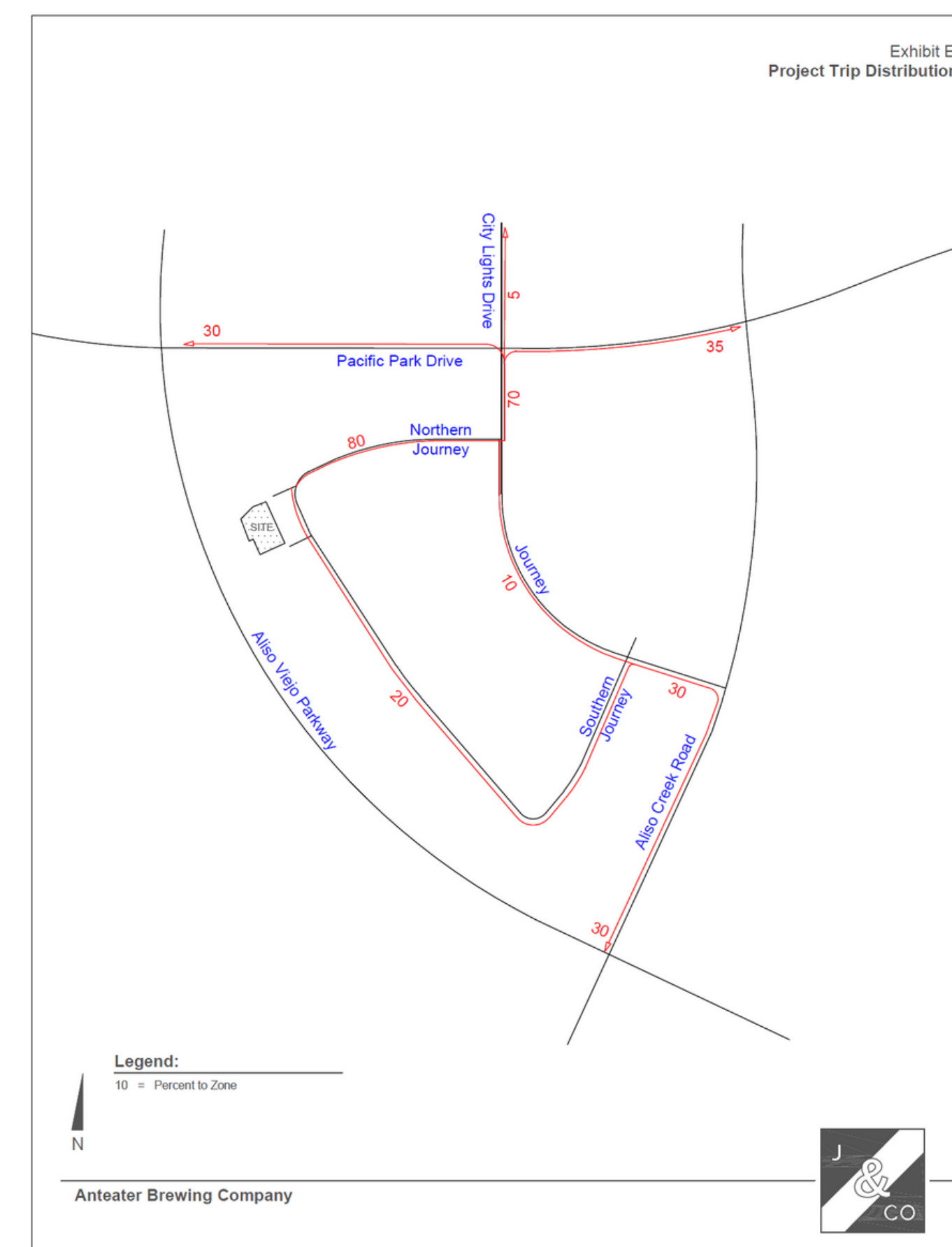


Figure 2: Exhibit E - Projected Trip Distribution