Traffic Engineering Challenges and Solutions

Leslie Hart
Traffic Engineering Manager

Fast-growing hometown city

did you know?

ANKENY IS THE
Largest Suburb
IN THE DES MOINES METRO
70,287
POPULATION
ANKENY IS THE
6th
LARGEST CITY IN IOWA

The point is: we're bigger than West Des Moines.

• Growing by an average of 6 people per day
• Population Growth 23,000 in past 10 years
• Population projection 130,000 by 2040

Land Development

• $498.7 million total investment in new construction projects in 2021
• $222 million in total non-residential investment
• 1,175 new residential dwelling units

Over the past eight years, the City of Ankeny has permitted more than $3 billion worth of projects.

Long-term traffic engineering challenges
New development on NE 36th Street

April 1, 2022

November 1, 2022

New Elementary Schools

• 12th elementary school will open in 2024
• Last SRTS was in 2009 for then-8 elementary schools
• Walkability Study observations in spring 2021
• Update of 2015 policy on school crosswalks & special speed zones

Collaboration with Police Department and School District

Elementary School Walkability

• New all-way STOP controlled intersections
• New pedestrian-actuated warning beacon
• Relocation of school zone flashing beacons to guard-controlled crosswalks
• Implementation of 15 mph school zone at school crosswalks on collector streets
• No part-time/roll-out/flip-down STOP control
• Parking restrictions during elementary school arrival & dismissal periods

High Trestle Trail

11/30/2022
Diverging Diamond Interchange (DDI)

2008 - Interchange Justification Report (IJR)
2013 - NE 36th Street interchange constructed
2014 – IJR Amended to review alternatives for E 1st Street interchange
2018 – Interchange Reconstruction begins
E 1st Street Interchange fully closed April 2020
DDI opened August 2020

Operation of the DDI

Fiber Optic Network

Began traffic signal interconnect to Signal Shop in mid-1990’s
City operational network rode on unused fibers
In & out of every cabinet & building
2019 – Began transferring signal network to single mode, and installing separate cables for signal & City networks
Security and bandwidth benefits
Fiber Optic Network Inventory & Master Plan

New Technologies

Traffic Management Center (TMC)

- Web-based Advanced Traffic Signal Management system (ATMS)
- Remote viewing and programming of video detection
- Real-time observation of traffic conditions
- Automated Traffic Signal Performance Measures (ATSPM)

Freeway Diversions
Low-tech solution

• Diagonal parking in business districts limit driver sight lines
• Generally tied to Farmer’s Market and other special events
• Otherwise, not a favorable location for all-way STOP control
• We took a broader look at on-street parking along these blocks and found another need...

Safety Concerns

Thank you.

Leslie Hart, P.E., PTOE
Traffic Engineering Manager
515-963-3548
lhart@ankenyiowa.gov