



WALKER
CONSULTANTS



PARKING PLANNING FOR AUTONOMOUS VEHICLES

Joint Texas and Western District Annual Meeting
June 25, 2018

BUILDING ENVELOPE

CONSULTING

FORENSIC RESTORATION

PARKING DESIGN

PLANNING

OVERVIEW

Autonomous vehicles (AVs) will have an impact on the transportation industry in the years to come. There has been much discussion about what these impacts may potentially be, including impacts on roadway networks. But what about parking? And in what way may this disruption affect parking and what should we do as transportation professionals to plan for it? This session will discuss two primary areas, planning and design. The planning section of the presentation will discuss what research has been conducted by notable and recognized international consulting firms, as well as academia, in the area of predicting how parking demand may be reduced as a result AVs. Based on this research, the presentation will discuss what triggers will cause the greatest impacts on parking demand related to AVs. Designing for the future will also be discussed including the design strategies that should be considered when there is a need for infrastructure today. The strategies discussed will include the design considerations related to future adaptive reuse of parking facilities and infrastructure planning for the future.

WHAT WE'LL ANSWER ABOUT AUTONOMOUS VEHICLES IN PARKING

What We
Know

What Are
The Impacts
On Parking
Demand

What To Do
Now

What To Plan
For

TRANSPORTATION PROFESSIONALS ALREADY KNOW A LOT



Mobility For All



The Investment in AV is Staggering

- GM paid \$1bn to acquire driverless startup, Cruise
- Ford investing \$1bn in Argo, its new driverless car unit
- Toyota committed to \$1bn in self-driving research in Silicon Valley
- Qualcomm's pending \$47bn acquisition of automotive chip outfit NXP Semiconductors
- Intel buys Mobileye for \$15bn
- Feds investing \$4bn in developing standards
- Worldwide market for AV semiconductors grew to \$30 bn in 2016



Image: Bloomberg

Its' Coming...

The Impacts will Vary Depending on the Industry
– For Better or Worse

NOTABLE RESEARCH ON AUTONOMOUS VEHICLE IMPACTS

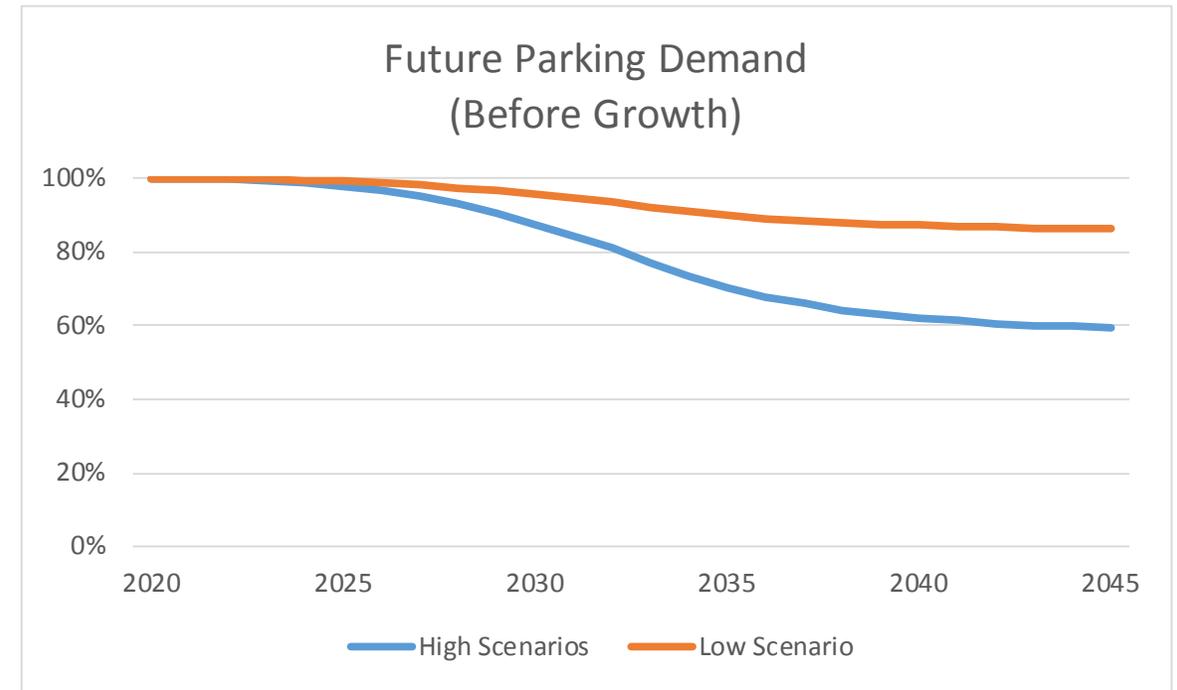


WALKER'S CONCLUSIONS OF PARKING DEMAND IMPACT

15% -40%

Decrease in Parking Demand*

Greatest penetration in dense urban markets and those with high parking costs



2020-2040

Market Penetration Timeline

Demand variability a projection*

WHAT TO DO NOW

TNC MANAGEMENT



PICK-UP / DROP-OFF



CURBSIDE MANAGEMENT



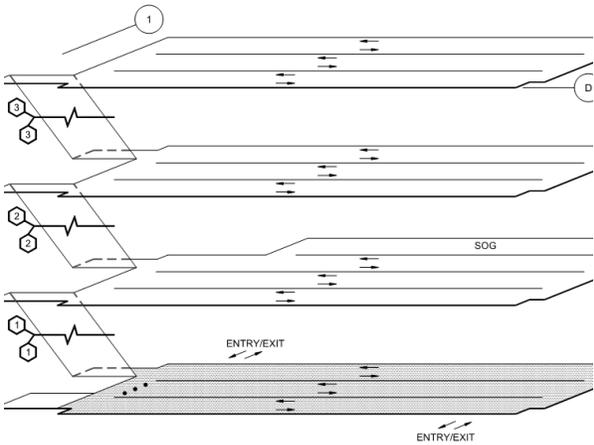
PLANNING FOR ADAPTIVE REUSE

10% - 25% Construction Cost Premium

- Charging Stations
- Taller floor-to-ceiling heights.
- Place ramps on the edge of the floor plan.
- Increase durability design of key structural elements, for a longer service life.
- Build internal cores for future stairs or elevators.

duct banks and bank panels.

- Build oversized or additional mechanical, electrical, and plumbing rooms.
- Build wider stairways to accommodate more occupants in the future.
- Flat Floors



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