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Shared Autonomous Vehicles Update
LAVTA Board

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Shared Autonomous Vehicles

(Complementing Mass Transit)

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Optimal Integration of Advanced Technology to Complement and Enhance Traditional Transit Services

AV Level Definitions

- At SAE Level 0, the human driver does everything;
- At SAE Level 1, an automated system on the vehicle can *sometimes assist* the human driver conduct *some parts of* the driving task;
- At SAE Level 2, an automated system on the vehicle can *actually conduct* some parts of the driving task, while the human continues to monitor the driving environment and performs the rest of the driving task;
- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment *in some instances*, but the human driver must be ready to take back control when the automated system requests;
- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

USDOT AV Policy Guidance

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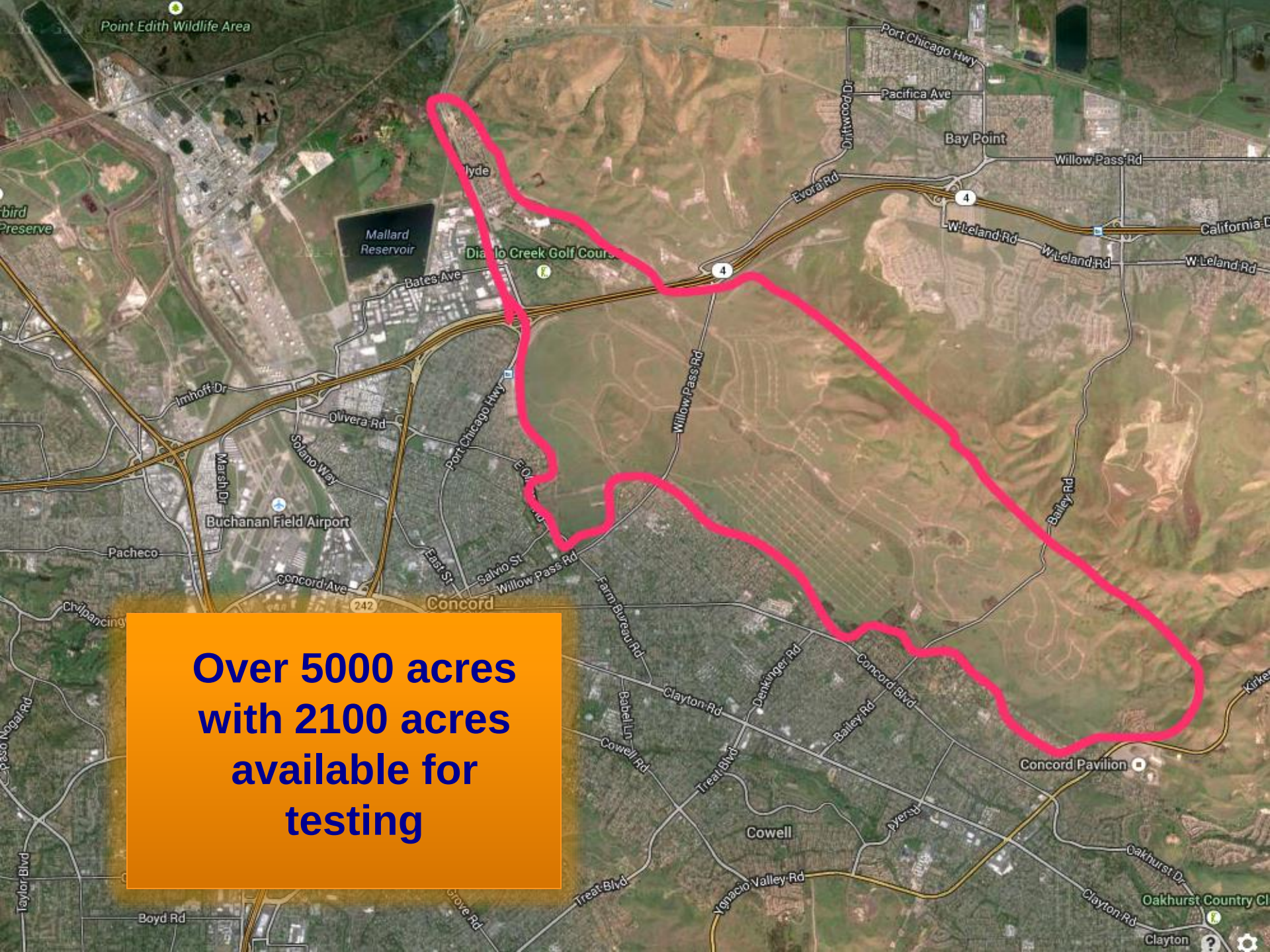
CONTRA COSTA transportation authority

Keeping Contra Costa Moving

CONTRA COSTA transportation authority

GOMENTUM STATION

GoMentumstation.net



Over 5000 acres with 2100 acres available for testing

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Keeping Contra Costa Moving

Over 20 miles of paved roadways including a 7-mile long spine road for high speed testing

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Honda AV Testing

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Honda AV Testing

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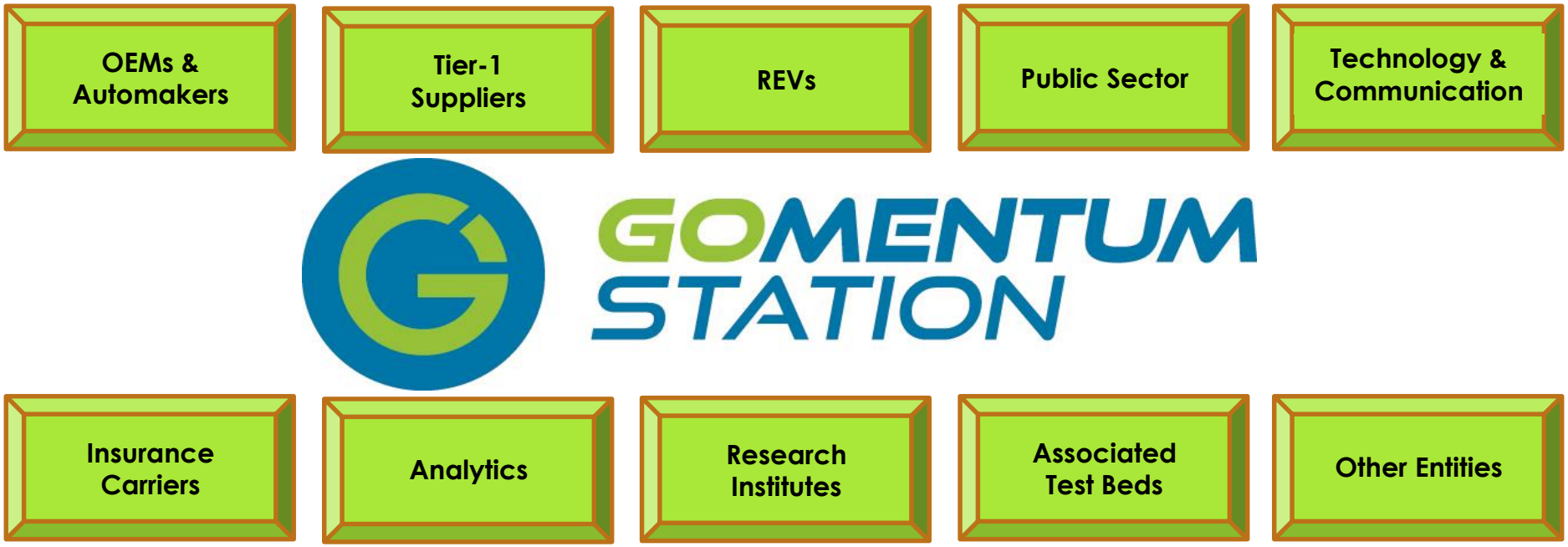
Partner Ecosystem



Proposed Countywide SAV Network Will "Unleash" the Full Potential of Transit Investments, now and into the Future

Deployment of SAVs in Contra Costa County

GoMentum Station

Deployment of SAVs in Tri-Valley

PHASE I-B = 3 SAV (2017)

PHASE I-A = 2 SAV (2017)

Dublin

Population 51,784

Pleasanton

Population 77,680

Livermore

Population 86,870

District 4

District 2

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Complementing Mass Transit via SAV* Shuttles in 2020

* SAV = Shared Autonomous Vehicle

Benefits of Implementing First Mile/Last Mile Shared Autonomous Vehicles

- Create Transit Jobs
- Increase Fixed Routes Transit Ridership
- Mode Shift from Single Occupant Vehicle to Transit
- Increase Farebox Recovery Ratio for Transit Operators
- Improve Trip Reliability, Safety and Environment

+3.76 Million

Additional RIDERS per Year

23.7% increase due to expansion of transit reach and serving unmet needs

+166

New Transit JOBS

Estimated new transit jobs created as a result of the Contra Costa and Eastern Alameda Counties SAV Network implementation due to ridership and fleet size increase.

* Source: CCTA & LAVTA SAV Network Study. Assuming a fleet size of 179 SAVs

90%

SAFETY Improvement

Due to highly redundant sensors, systems and intelligent software

Program Management

Logistics/Operations

- Branding
- Storage
- Power requirements
- Special events
- Ops and maintenance training
- SAV testing
- Insurance requirements

Funding/Regulatory/Legal

- Execute BA-AQMD funding agreement
- LAVTA funding status
- Regulatory:
  - NHTSA
  - DMV
- Legislative
  - AB 1592

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