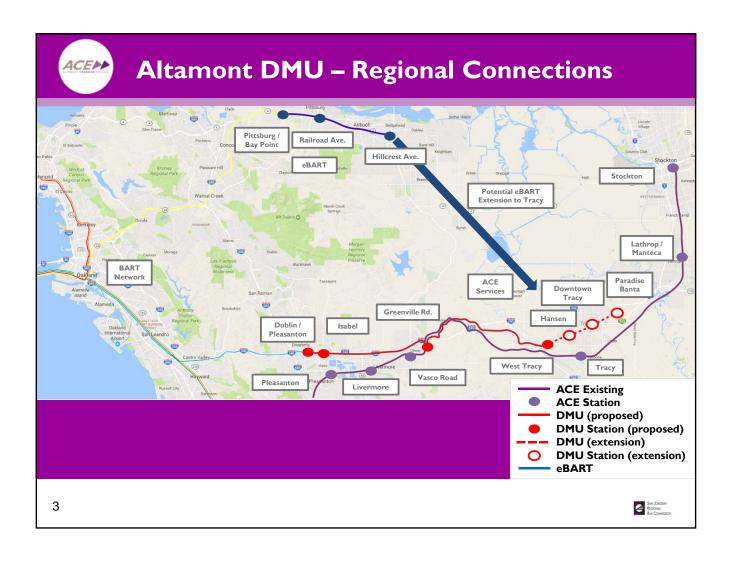
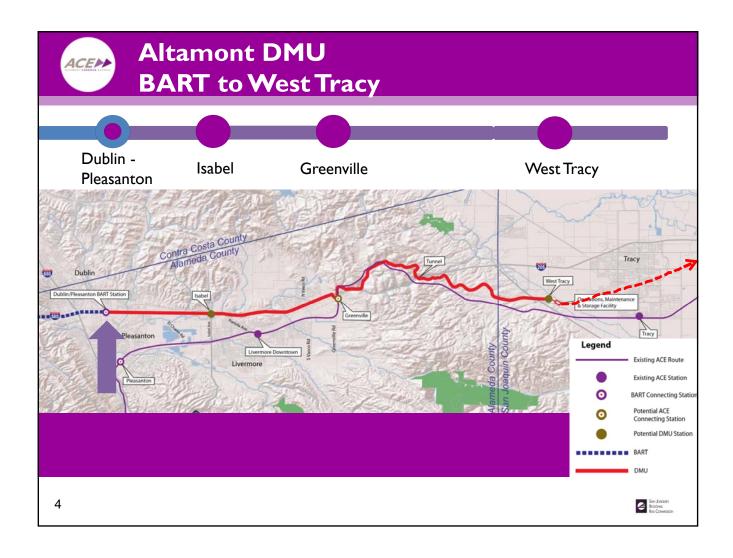
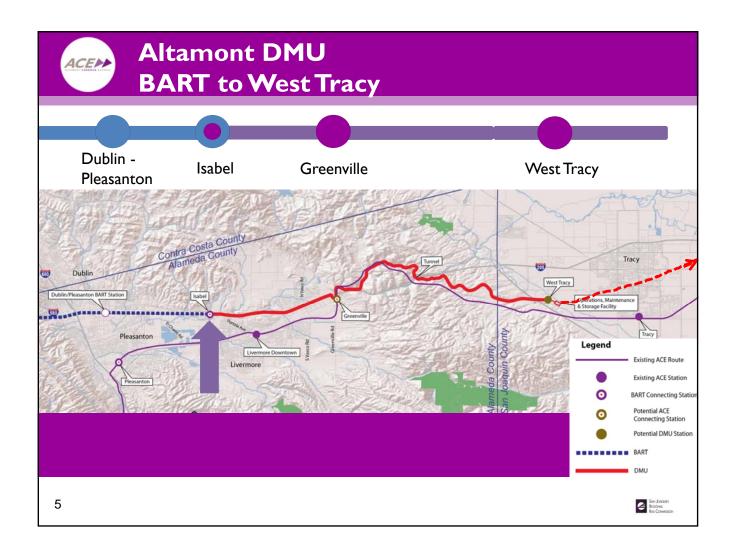


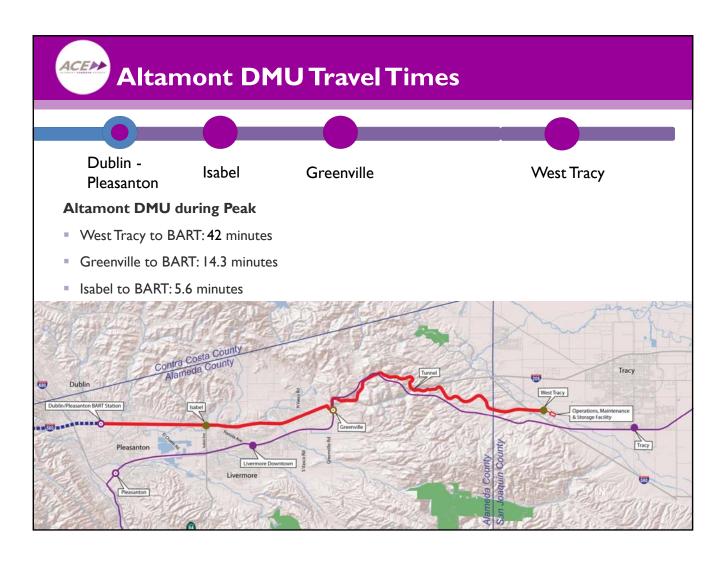
2

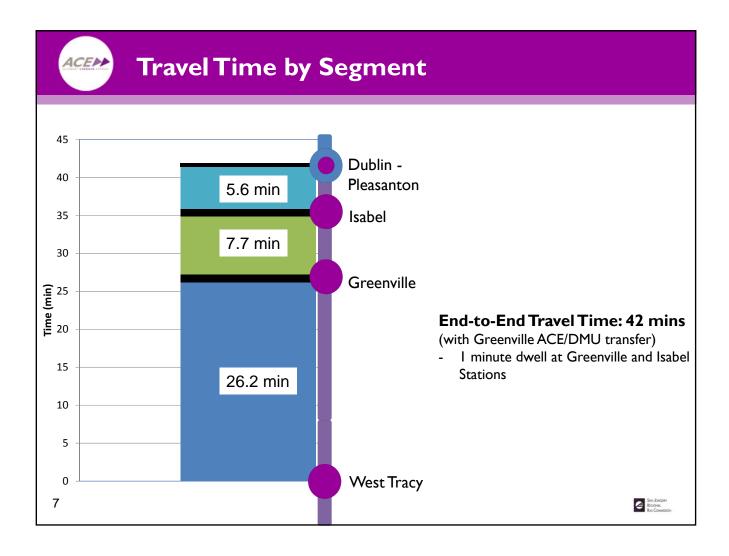
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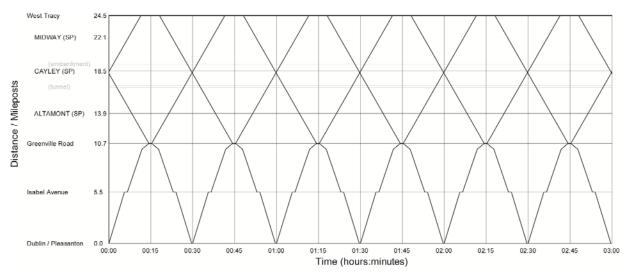




# Altamont DMU Proposed Operations

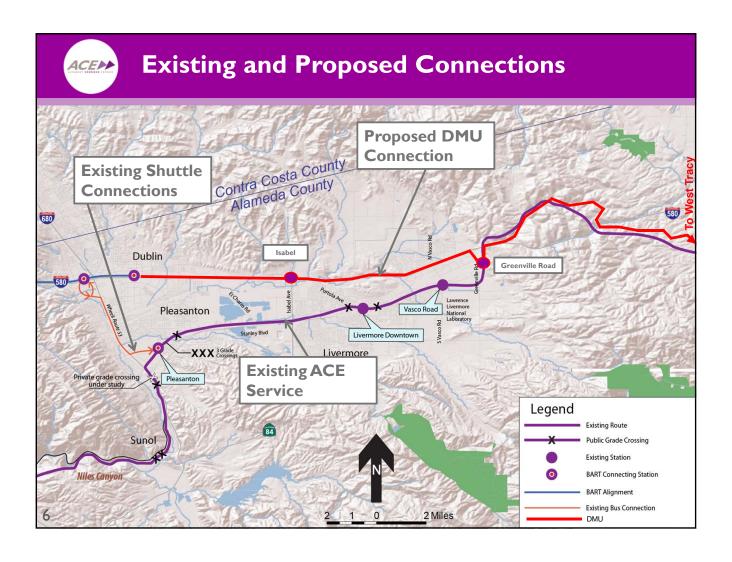
#### **Service tied to BART Schedule**

- Weekdays: half-hour service meeting every other BART train
- Weekends: hourly service meeting every 3<sup>rd</sup> BART train











### **Current Condition during Peak\***

#### West Tracy to BART: DMU 42 min

- By Car:
  - AM Peak, traffic 35 60 min (7:00 am)
  - PM Peak, traffic 35 60 min (5:20 pm)
- By ACE and Shuttle (Tracy to BART):
  - AM Peak, 55 min
  - PM Peak, 74 min

#### Greenville to BART: DMU 14.3 min

- By Car:
  - AM Peak, traffic 16 22 min (7:20 am)
  - PM Peak, traffic 20 40 min (5:20 pm)
- By ACE (Vasco Road) and Shuttle
  - AM Peak, 26 min
  - PM Peak, 44 min

#### Isabel to BART: DMU 5.6 min

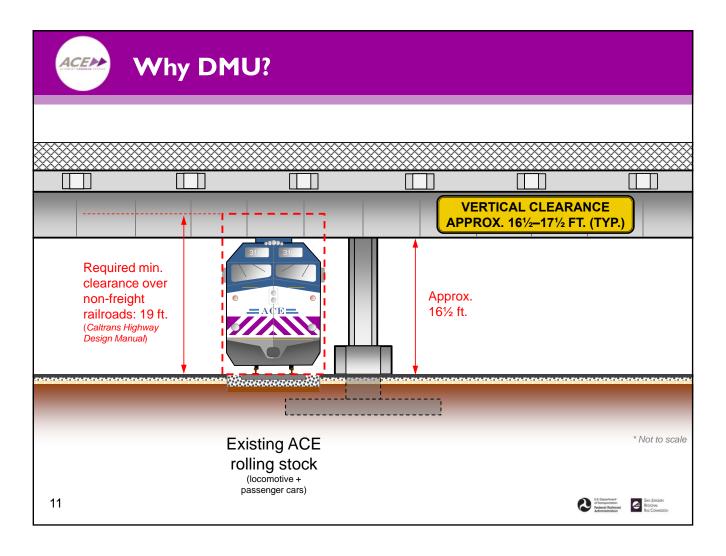
- By Car:
  - AM Peak, traffic 10-14 min (7:20 am)
  - PM Peak, traffic 9 16 min (5:10 pm)

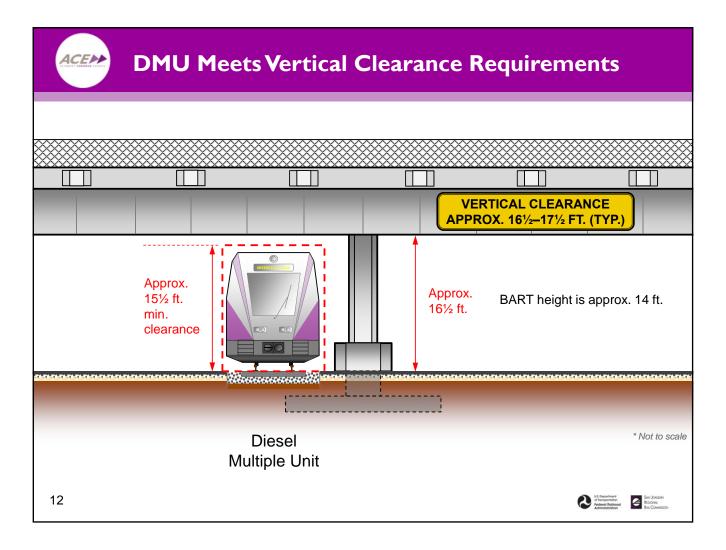


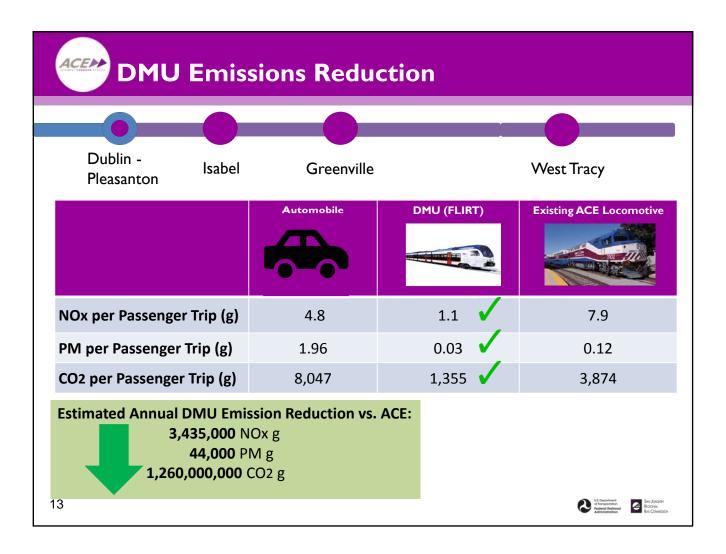
\* - Travel times current from Google maps as of 2.28.2017

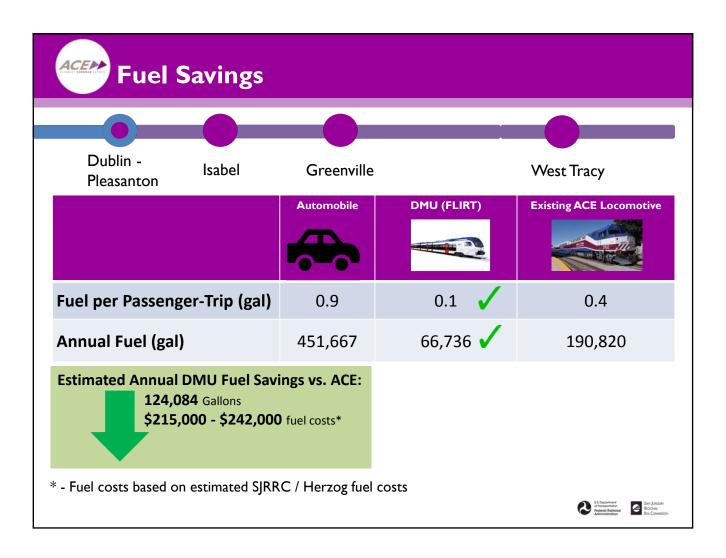














## **DMU Preliminary Capital Cost Summary Table**



Dublin -West Tracy Greenville Isabel **Pleasanton** 

Section	Segment Length (miles)	Project Cost (millions)	Project Cost Per Mile (millions)
Dublin/Pleasanton DMU Station	-	\$15.6	-
Dublin/Pleasanton to Isabel	5.5	\$425.4	\$78.I
Isabel DMU Station	-	\$48.0	-
Isabel to Greenville	5.1	\$498.3	\$98.1*
Greenville DMU Station	-	\$36.1	-
Greenville to West Tracy	15.3	\$213.9	\$14.0
West Tracy DMU Station	-	\$16.8	-
West Tracy Operations and Maintenance Facility	-	\$84.7	-
DMU Vehicles	-	\$52.5	-
Total	25.81	\$1,391	\$53.4

Note: UPRR fees not included.





<sup>\*</sup> Depends on BART extension



### Estimated Preliminary Capital Costs: Phase 1 (Dublin / **Pleasanton Option)**





Dublin -**Pleasanton** 

Greenville Isabel

West Tracy

Corridor Segment	Estimated Cost (millions)	
Altamont DMU BART Dublin/Pleasanton to Greenville (includes BART station improvements and Isabel DMU Station)	\$987.3	
Greenville Station	<b>\$36.1</b>	
Operations, Maintenance And Storage Facility (temporary)	\$60.0	
DMU Consists	\$52.5	
Total	\$1,136	







## **Estimated Preliminary Capital Costs: Phase 1 (Isabel Option)**

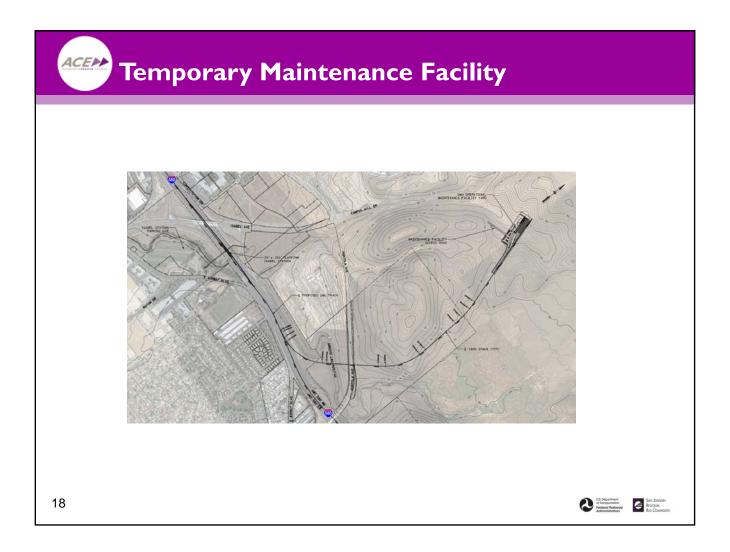


Dublin -Isabel Greenville West Tracy Pleasanton

Corridor Segment	Estimated Cost (millions)	
Altamont DMU BART Isabel to Greenville (includes BART station improvements)	\$546.3	
Greenville Station	<b>\$36.</b> I	
Operations, Maintenance And Storage Facility	\$60.0	
DMU Consists	\$52.5	
Total	\$695	









## **Estimated Preliminary Capital Costs: Phase 2**



Dublin -**Pleasanton** 

Isabel

Greenville

West Tracy

Corridor Segment	Estimated Cost (millions)	
Altamont DMU Greenville To West Tracy	\$199.7	
West Tracy Station	\$16.8	
Tunnel Rehabilitation	\$14.2	
Operations, Maintenance And Storage Facility (permanent)	\$84.7	
Total	\$315	

Note: UPRR fees not included.







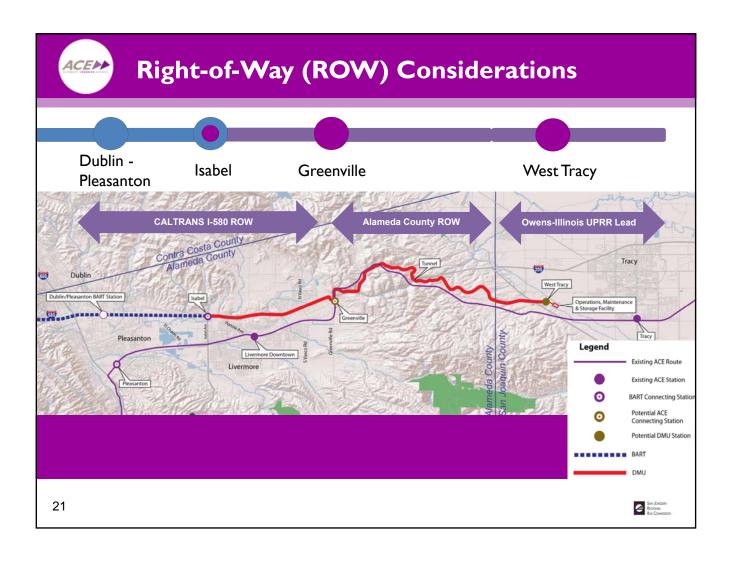
Total Project	Preliminary Cost	
Dublin/Pleasanton To Tracy	\$1.4 billion	
Isabel To Tracy	\$950 million	

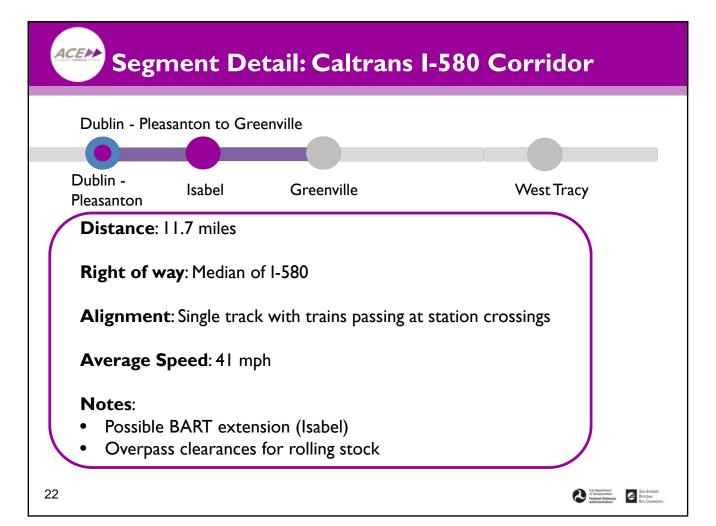
Note: UPRR fees not included.

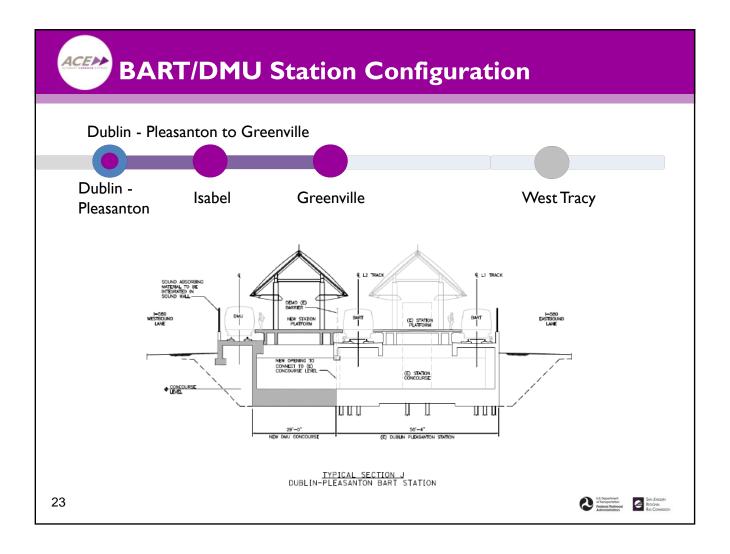
- Can complete in phases with Phase I to Isabel/Greenville (adds \$60 million)
- Cost per Rider:To Be Determined
- Cost Benefit: To Be Determined
- Cost dependent on decisions made
  - Assumes Greenville Station cross platform transfer and share track with UP
  - Capital Cost will be refined as design progresses

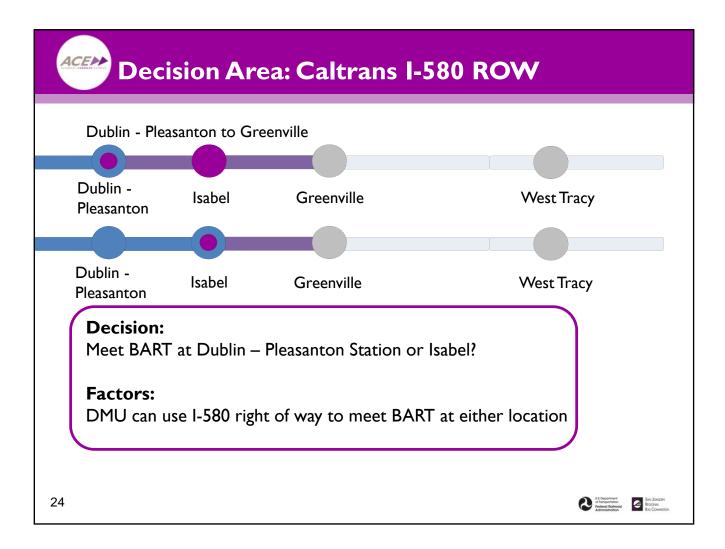














## **Segment Detail: Alameda County Corridor**

Greenville to Alameda County Line, Alameda County owned

Dublin -**Pleasanton** 

Isabel

Greenville

West Tracy

Distance: < 14.0 miles

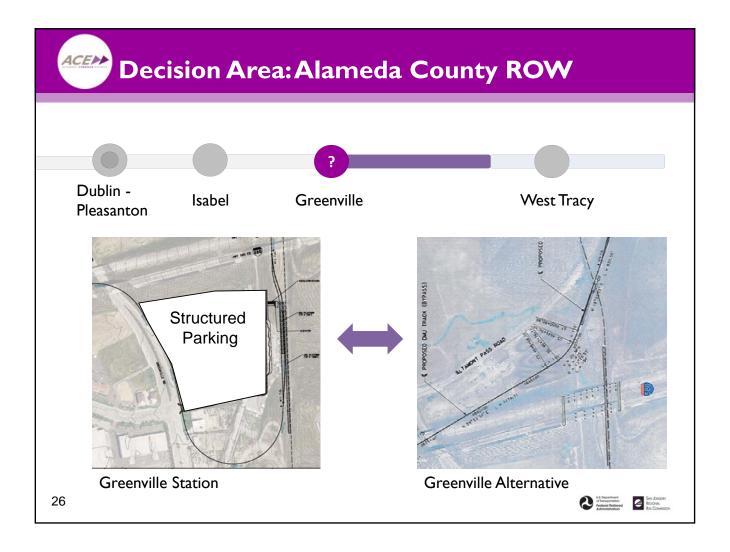
Right of way: Former UPRR right of way, owned by Alameda County

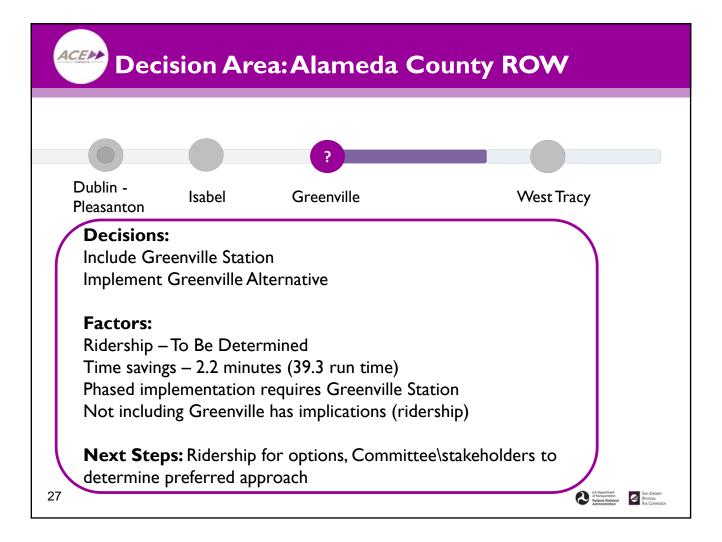
Alignment: Mainly single track with added long siding, tunnel work at Altamont Pass, and grade separation

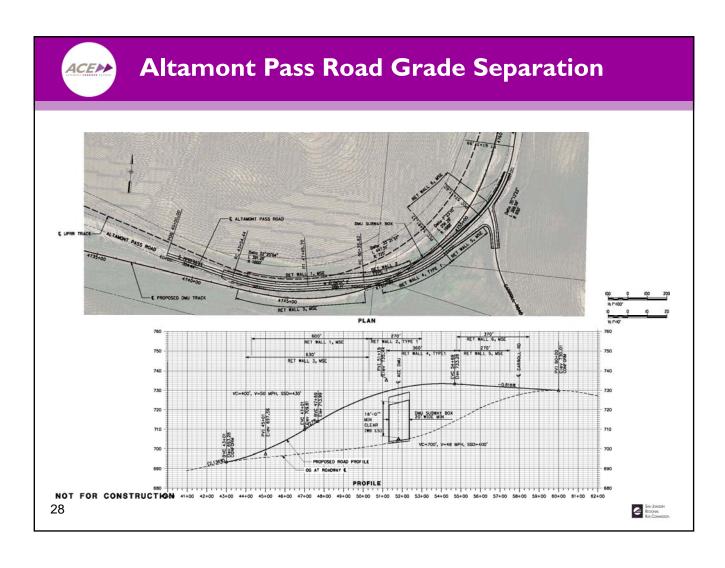
Average Speed: 32 mph (Greenville – West Tracy)















## Segment Detail: Owens-Illinois UPRR Lead

West Tracy

Dublin -**Pleasanton** 

Isabel

Greenville

West Tracy

**Distance**: < I mile

Right of way: Current UPRR freight right of way

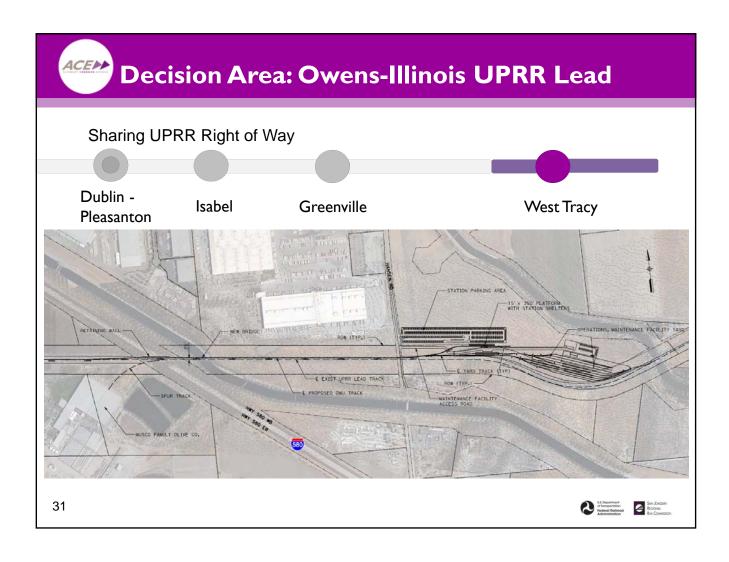
**Alignment**: Shared right of way corridor with UPRR freight

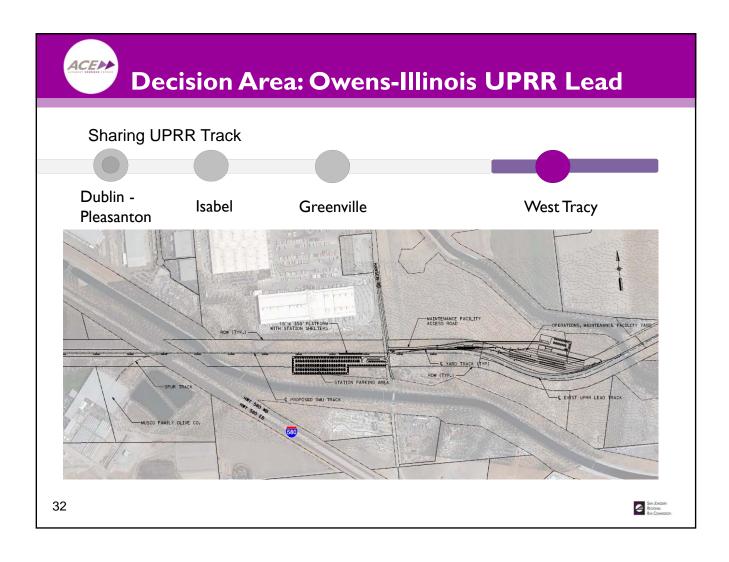
Average Speed: Dependent on alignment and track improvements

Notes: Negotiations with UPRR over sharing tracks or sharing right of way impacts rolling stock selection. Musco Olive Plant appears to have one freight movement a month.











## **Decision Area: Owens-Illinois UPRR Lead**



Dublin -Pleasanton

Greenville Isabel

West Tracy

#### **Decision:**

Should future service run adjacent or share track with UPRR?

#### **Factors:**

Sharing track requires vehicle to be FRA compliant or waiver capable Rolling stock, capital cost implications

Negotiations with UPRR required for either option

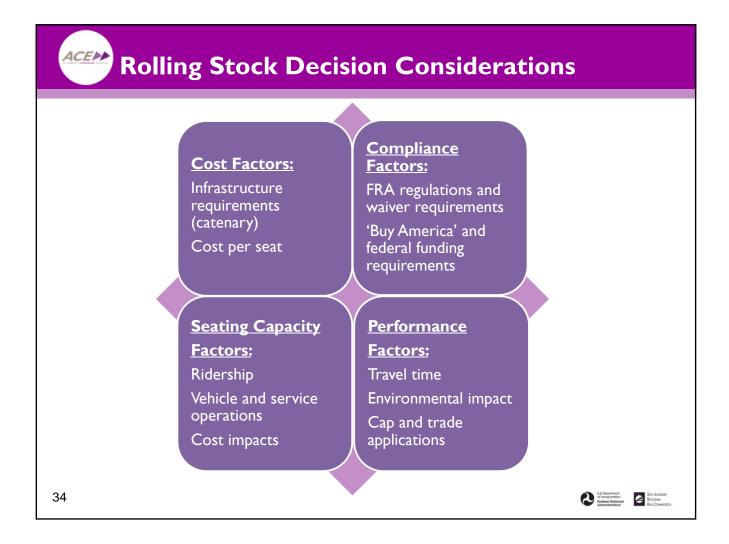
New Bridge over aqueduct for shared corridor

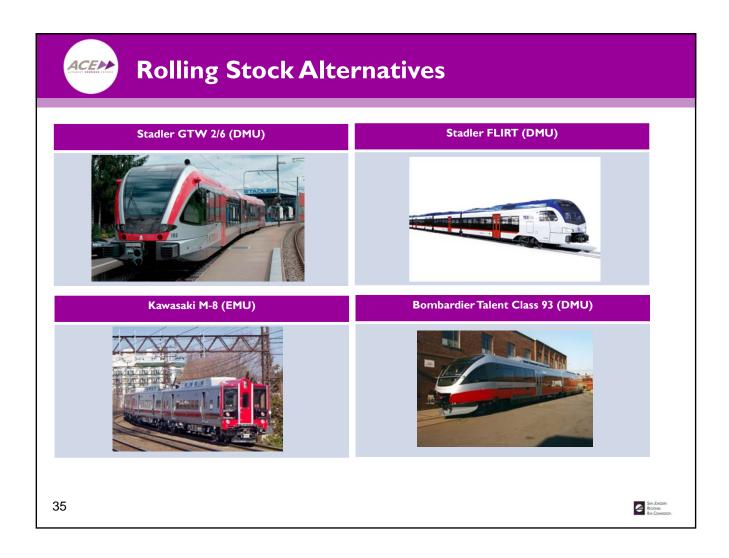
Station moves to maintenance facility site for shared corridor option

Next Steps: Further design on shared corridor option











## **Rolling Stock Comparison\***

	Stadler GTW 2/6 (DMU)	Stadler FLIRT (DMU)	Kawasaki M-8 (EMU)	Bombardier Talent Class 93 (DMU)
FRA Compliant	(with waiver)			•
<b>Buy America Compliant</b>				
Compatible Clearance				
Top Speed	75 mph	79 mph	100 mph	87 mph (tilt technology)
Cost	\$16 million (\$8 million)	\$13 million	\$8 million +\$6 million per mile	\$8 million
Seated Capacity	208 (104)***	224	212	164
Standees (estimated)	192 (96)***	254	230	160
<b>Total Capacity</b>	400***	478	442	324
In Service	Texas eBART	Texas**, Europe, Africa, and Central Asia	Connecticut New York	Norway

st - Other manufacturers exist, select sample presented above for major distinctions and decision points



<sup>\*\* -</sup> Planned service late 2018

<sup>\*\*\* -</sup> Assumes double trainset

# Next Steps

- Ridership
- Operations and Maintenance Cost





