What's Down the Road?

Bus Rapid Transit
in
San Diego

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Where We've Been…

Past 30 Years

System Facts

- 53 miles of Light Rail Transit
- 42 miles Commuter Rail
- 136 fixed bus routes
- 20 Transit Centers
- Dial-A-Ride and ADA Services
- 95.5 million annual riders
  - 29 million trolley
  - 1.5 million Coaster
  - 65 million bus

Growth 1975 - Present

- Transit ridership = 150%
- County population = 75%

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Where We're Going . . .

A million new residents by 2030

A half million new jobs

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Where We're Going . . .

TransNet Projects

- Transit
- Managed/HOV Lanes
- General Purpose Lanes
- General Purpose Lanes with Environmental Enhancements
- Freeway Connectors
- HOV to HOV Connectors
- Border Access

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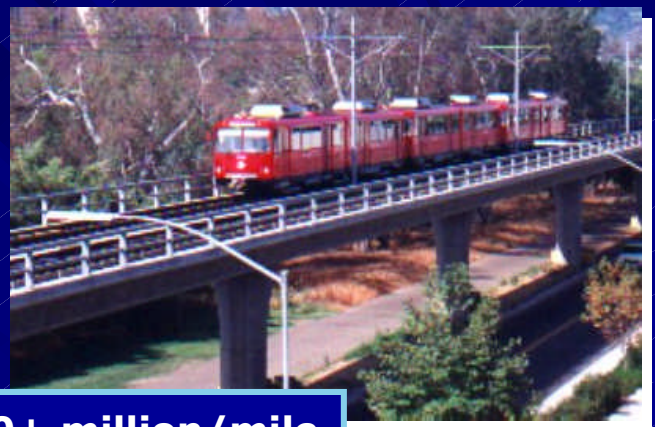
The Changing Picture in Transit

1981: $20 million/mile

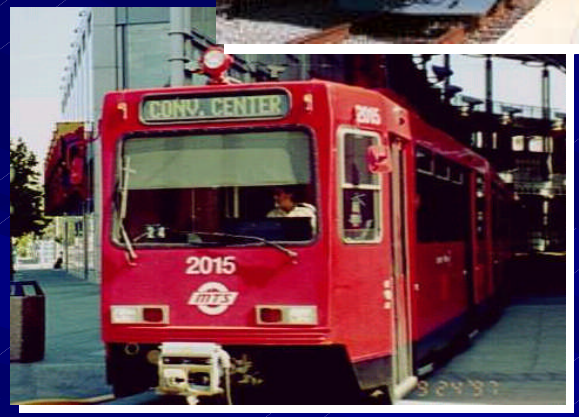


2005: $60+ million/mile

- **Most "easy" rail projects have been built**
- **Backbone urban rail system almost complete**
- **New markets harder to serve with rail**
  (more suburban, longer distances, ROW constraints)
- **More competition for funds**
- **Need to do something faster**
- **Emergence of advanced bus technologies increases options for rail-like services using buses**
- **Opportunities provided by Managed Lanes investment**

Range of Existing Transit Options

Commuter
&
Light Rail



- 100% Exclusive ROW
- High capacity
- High reliability
- Moderate-high speed
- Longer implementation
- High capital costs

- Mixed-flow traffic
- Low capacity
- Medium-low reliability
- Low speed
- Short implementation
- Low capital costs

Local Bus

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Role of Bus Rapid Transit
or
Rapid Bus

Commuter
&
Light Rail

Bus Rapid Transit

Local Bus

- **BRT can serve new markets**
- **BRT can range from "high end" to "low end" service depending on:**
  - Priority treatments
  - Vehicle types
  - Station development
  - Customer amenities

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Applications for BRT

Exclusive Guideway

- 100% exclusive right-of-way
- Major capital investment
- High reliability
- Moderate-high speed

HOV Lanes

- Shared HOV with carpools/FasTrak
- Major capital investment
- Medium-high reliability
- Moderate-high speed

Arterial Applications

- Some mixed-flow, some priority
- Low-moderate capital costs
- Medium reliability
- Moderate speed

Dedicated Transitway

Cars kept out of transit lane by barriers, striping, curbs, and signage

Park Boulevard between University Ave. and El Cajon Blvd.

Transit Lane

- Cars allowed in lane to turn or park
- Bikes allowed
- Transit vehicles stop in lane at stations

El Cajon Blvd. between Park and 43rd

Transit Route

Cars allowed, but transit vehicles stop in-lane to serve stations

El Cajon Blvd. east of 43rd and Utah to I-805

Localized Physical Treatments

- Focus: Bypass areas of traffic congestion or choke-points (not for signal delay).
- Advantages:
  - Requires less right-of-way
  - More applicable in areas already built-out.
- Disadvantage:
  - Only provides localized benefits.
  - Often needed most where it is hardest to implement.

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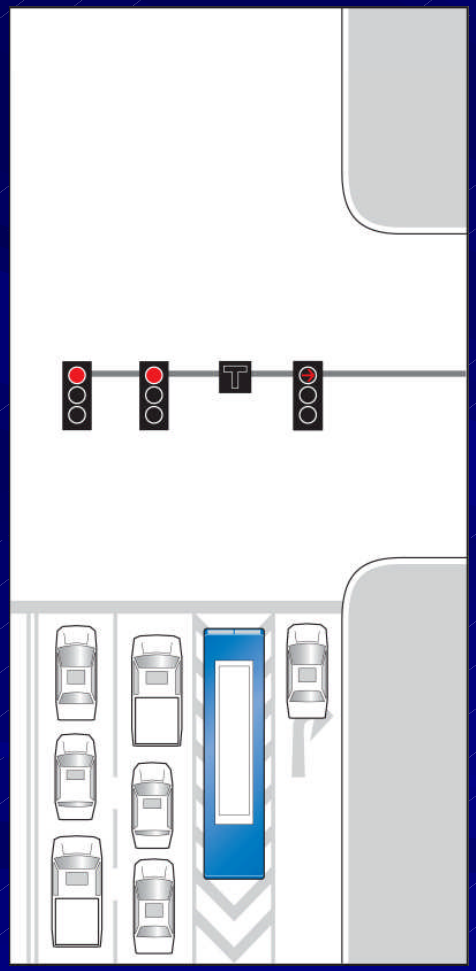
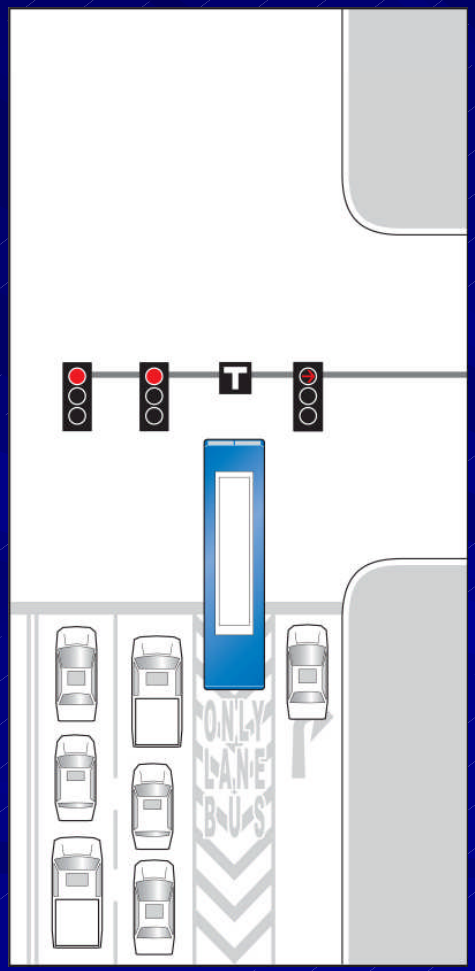
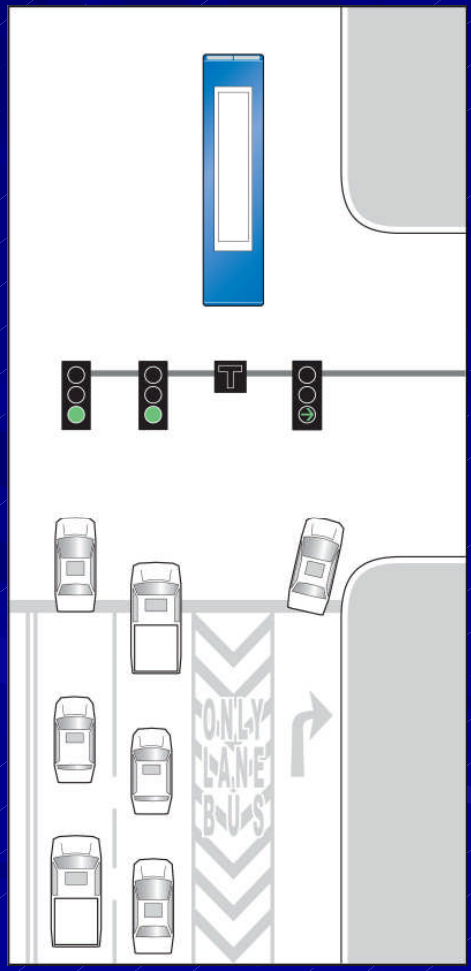
Queue Jumpers – How Do They Work?



STAGE 1: ARRIVAL
"Bypass the Queue"



STAGE 2: JUMP
"Get a Head Start"



STAGE 3: RESUME
"Back to Normal"

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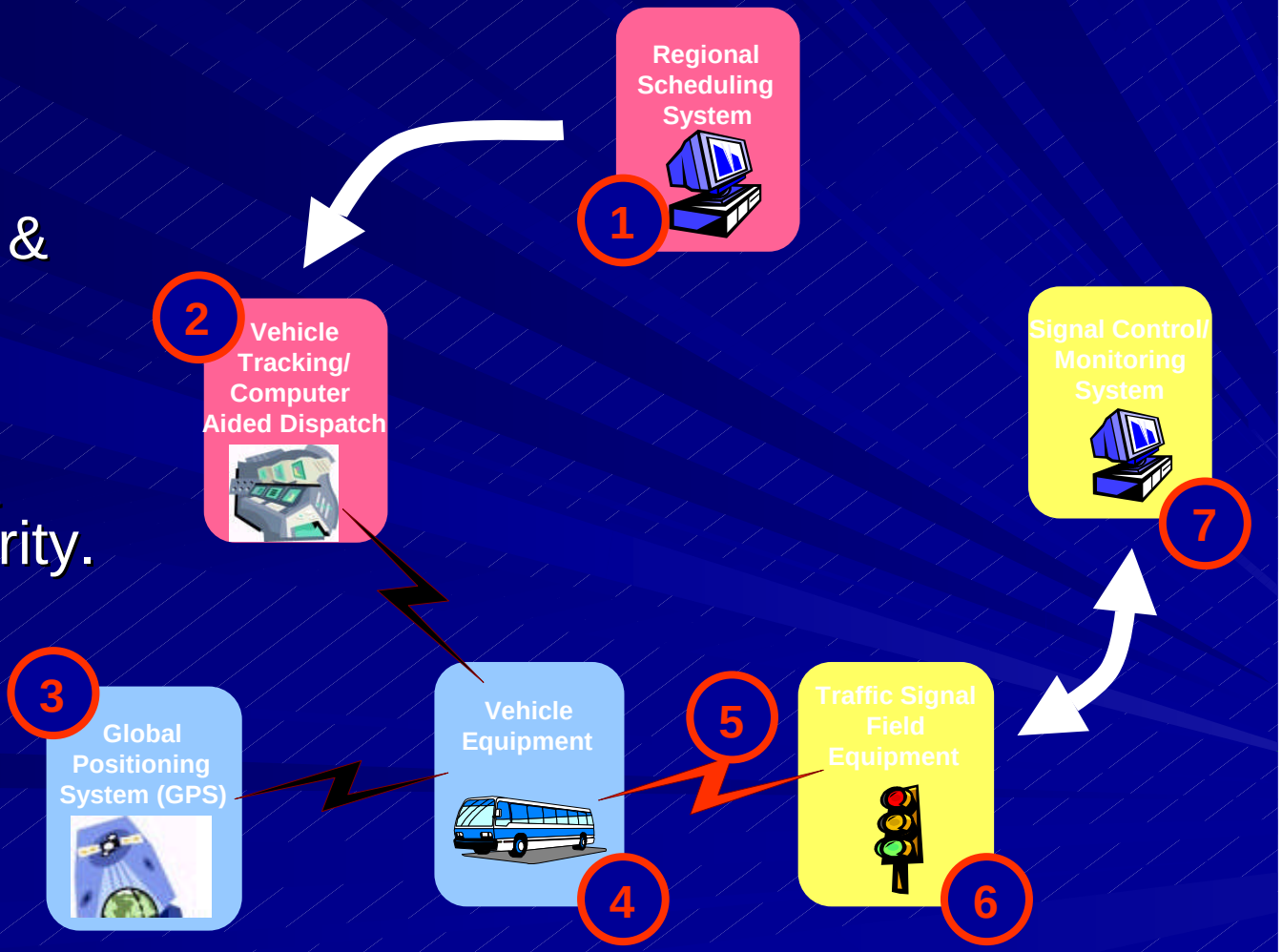
Transit Signal Priority – How Does It Work?

- Three Pieces to the Puzzle:
  - Route & schedule.
  - Bus location & request for priority.
  - Signal operations & granting priority.



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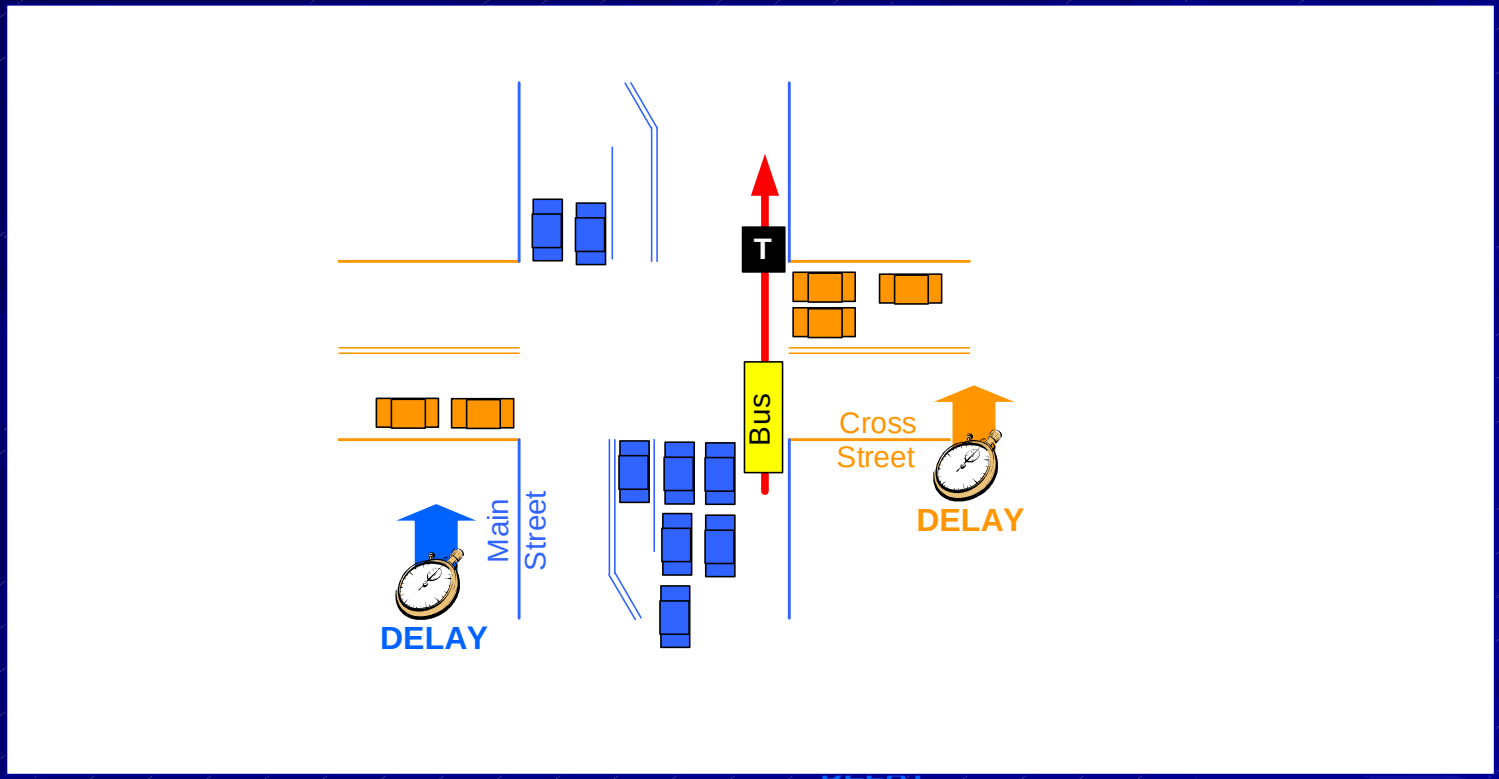
Traffic Assessment with Priority Measures



- Usually potential impacts to traffic are minimal.
- Cross-street delay is primary area of concern.
- Configuration options can be used to limit impacts.

Reasons to Pursue Multi-Modal BRT

- Offers a new option in transit and *transportation* network
- Can provide lower capital cost alternative
- Responds to resource constraints
- Successful BRT in similar contexts
- Encouraged by FTA
- Marries transit and highway mobility improvements

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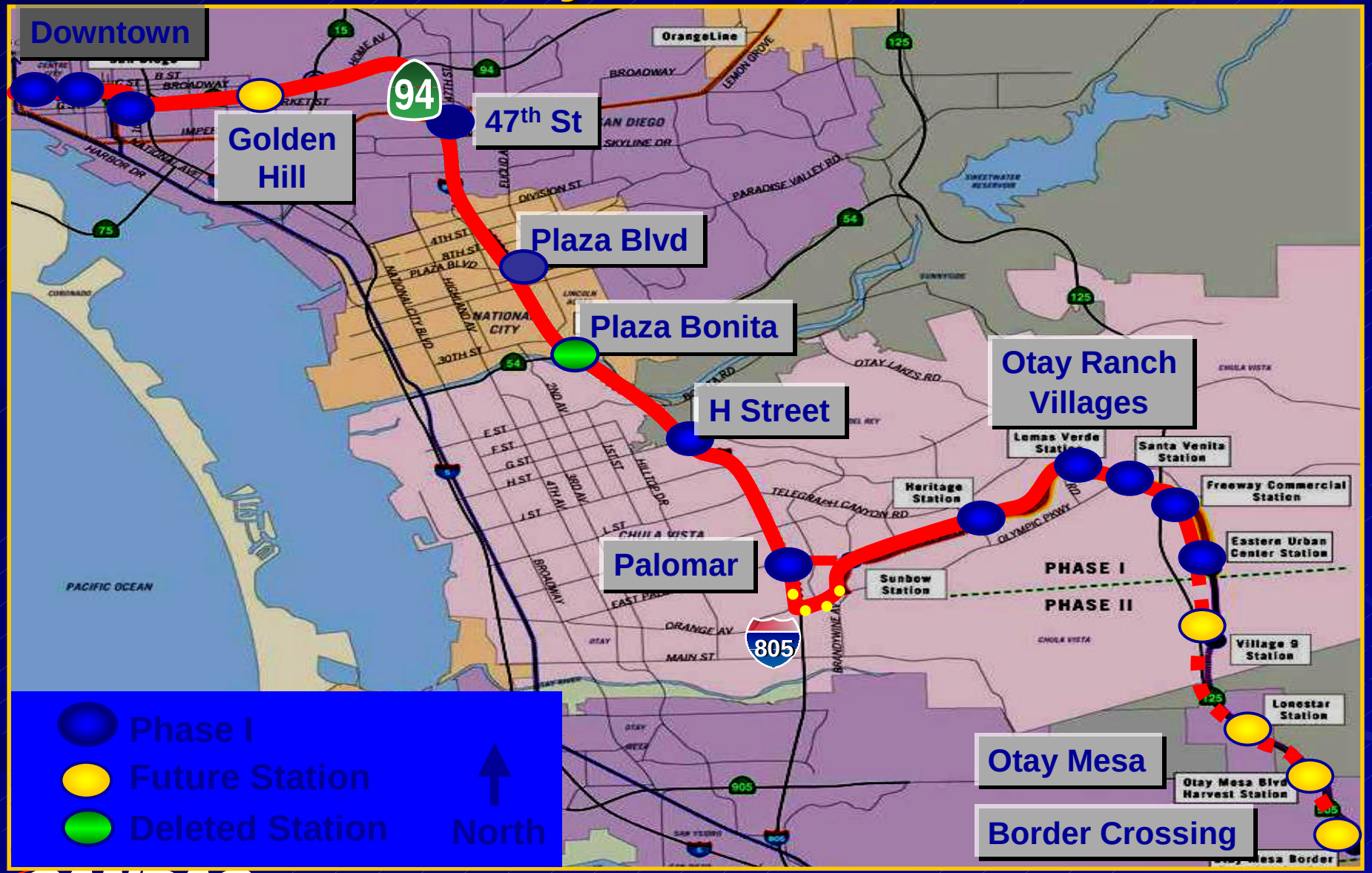
South Bay BRT Corridor



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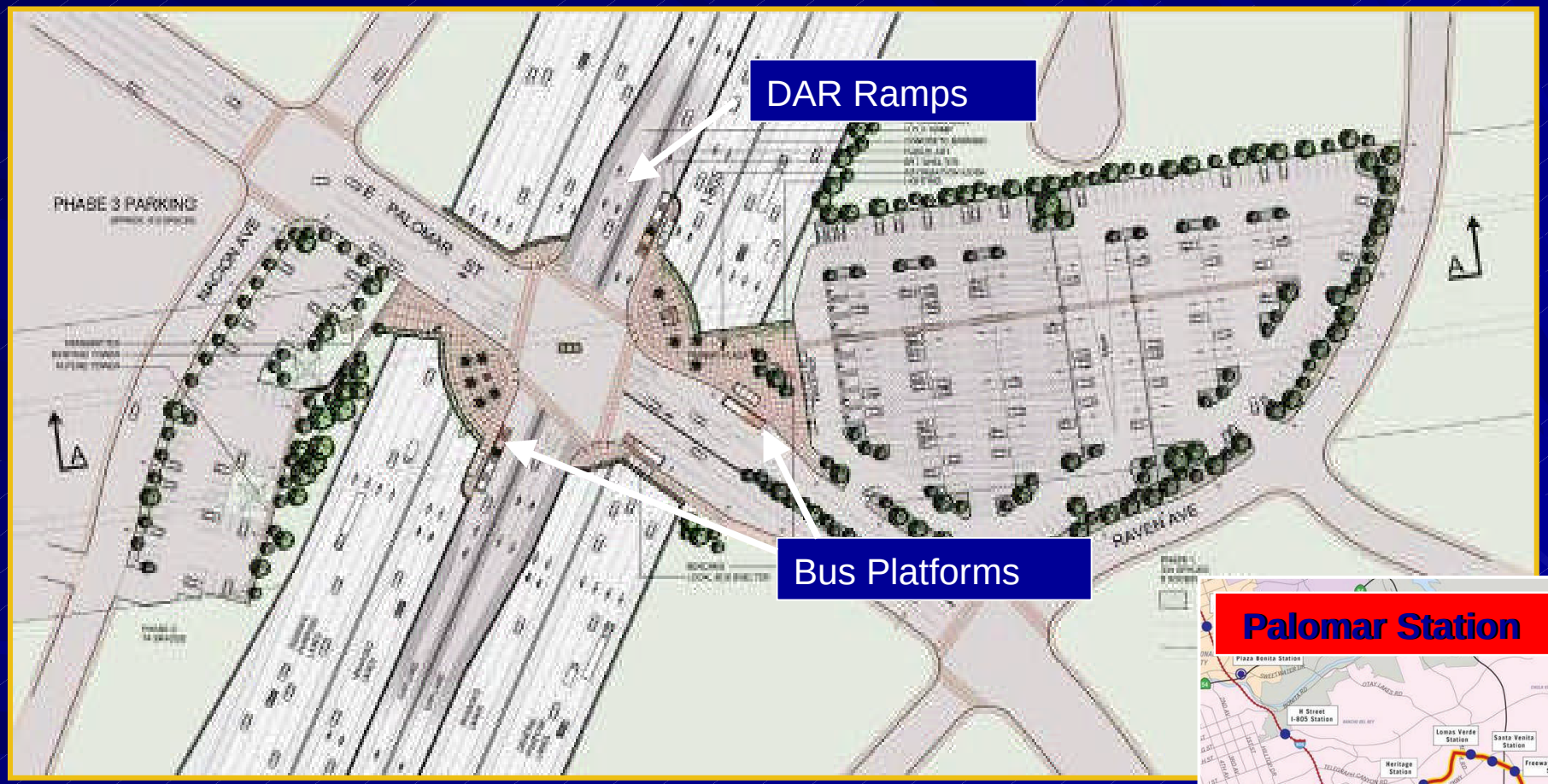
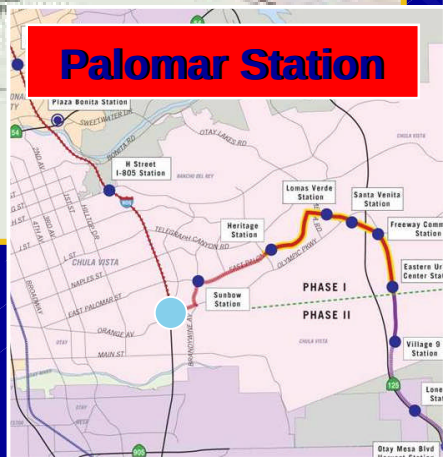
Palomar Street DAR/Park & Ride





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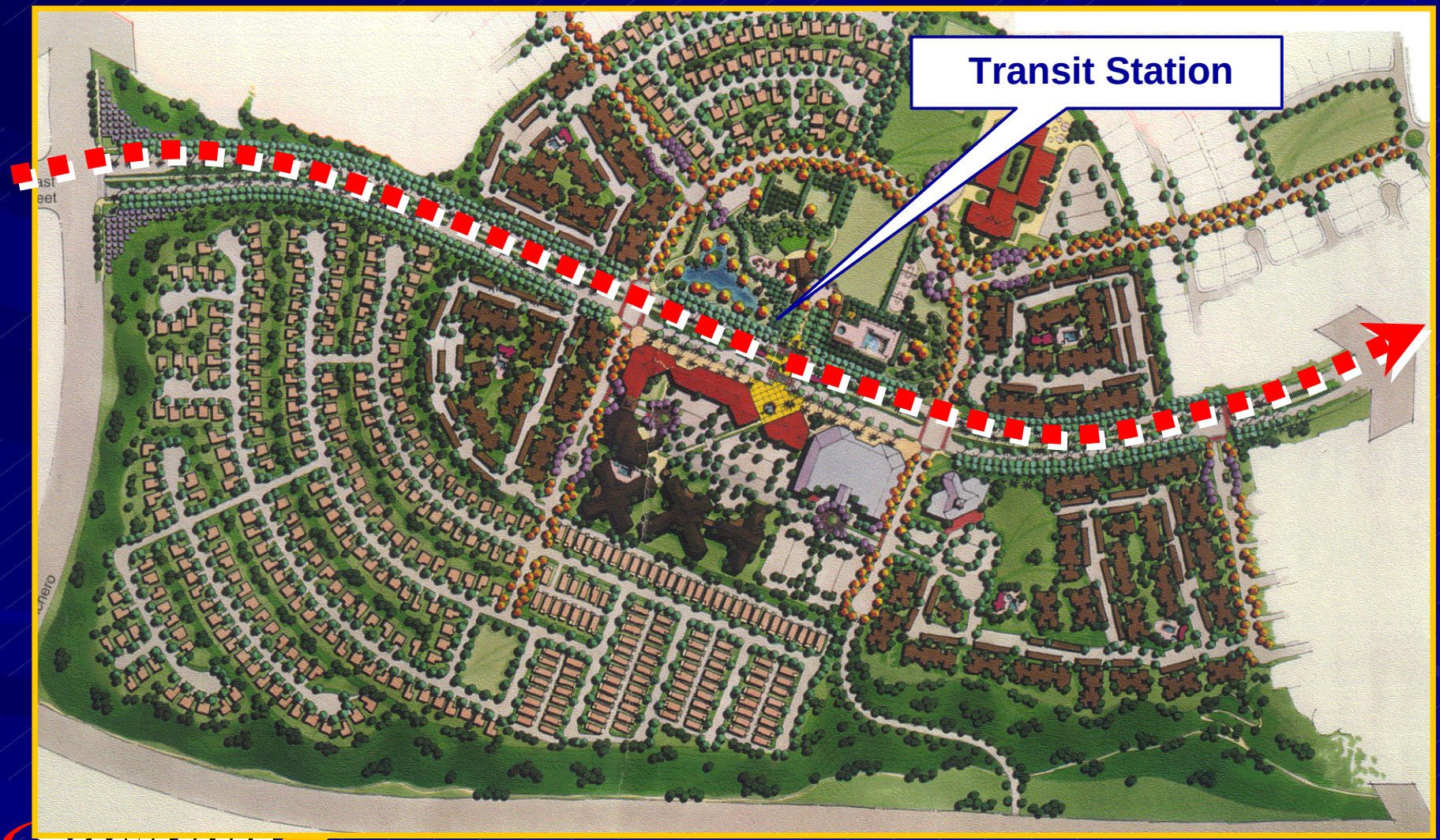
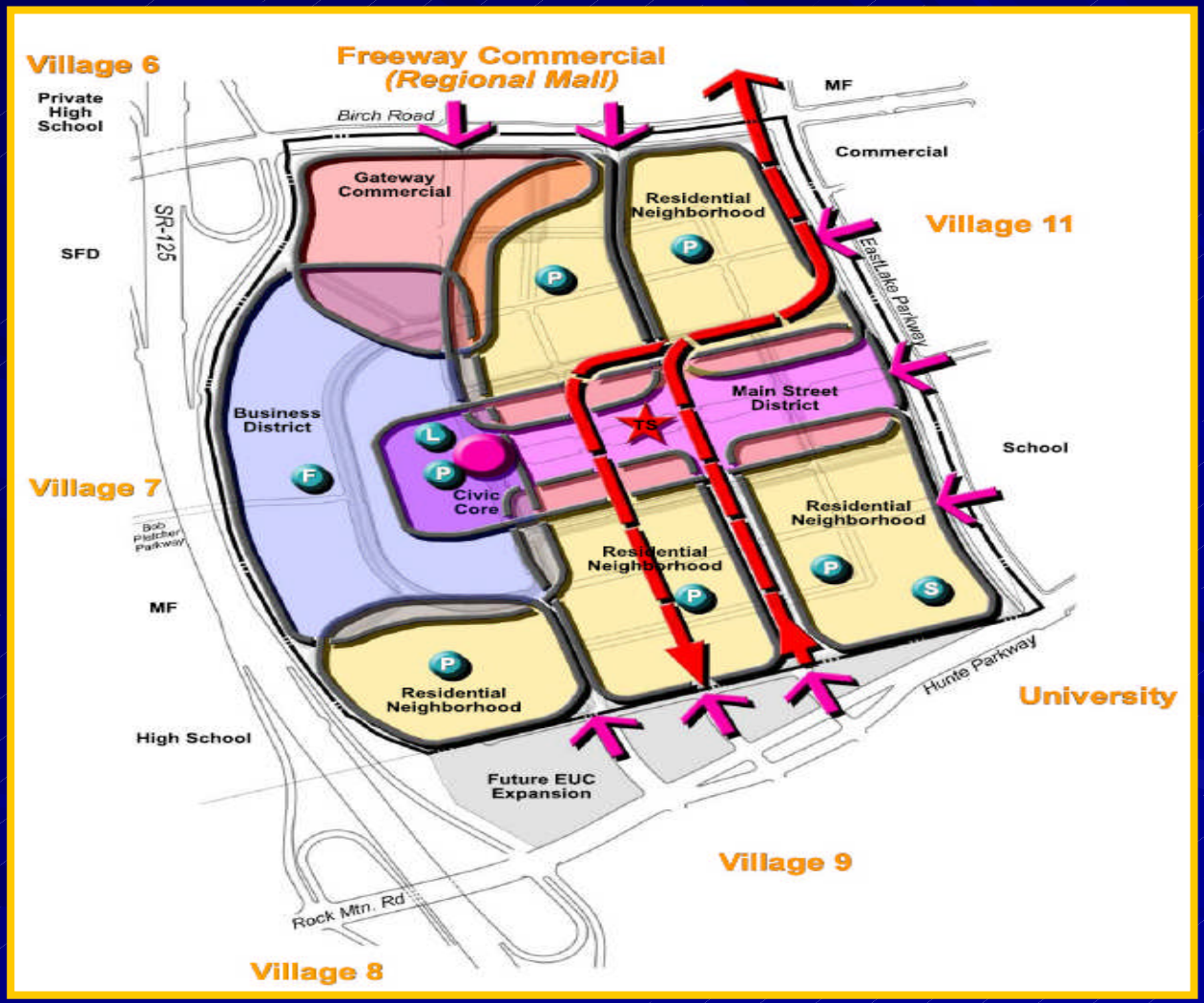
Otay Ranch Residential Villages



Otay Ranch Town Center

Eastern Urban Center



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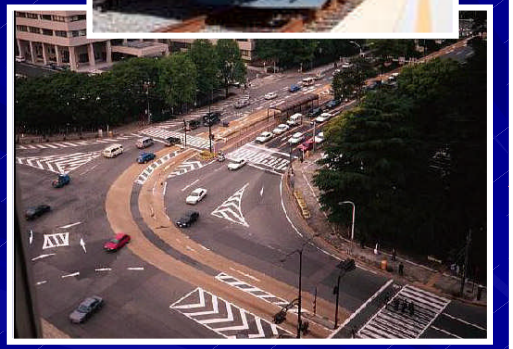
- BRT is Key Component of Multi-Modal Transportation Solution
- Choose the Right BRT Application for the Situation
- Transportation System Needs to Provide a Variety of Options

When transit is a choice…. people might choose transit first.



Thank You

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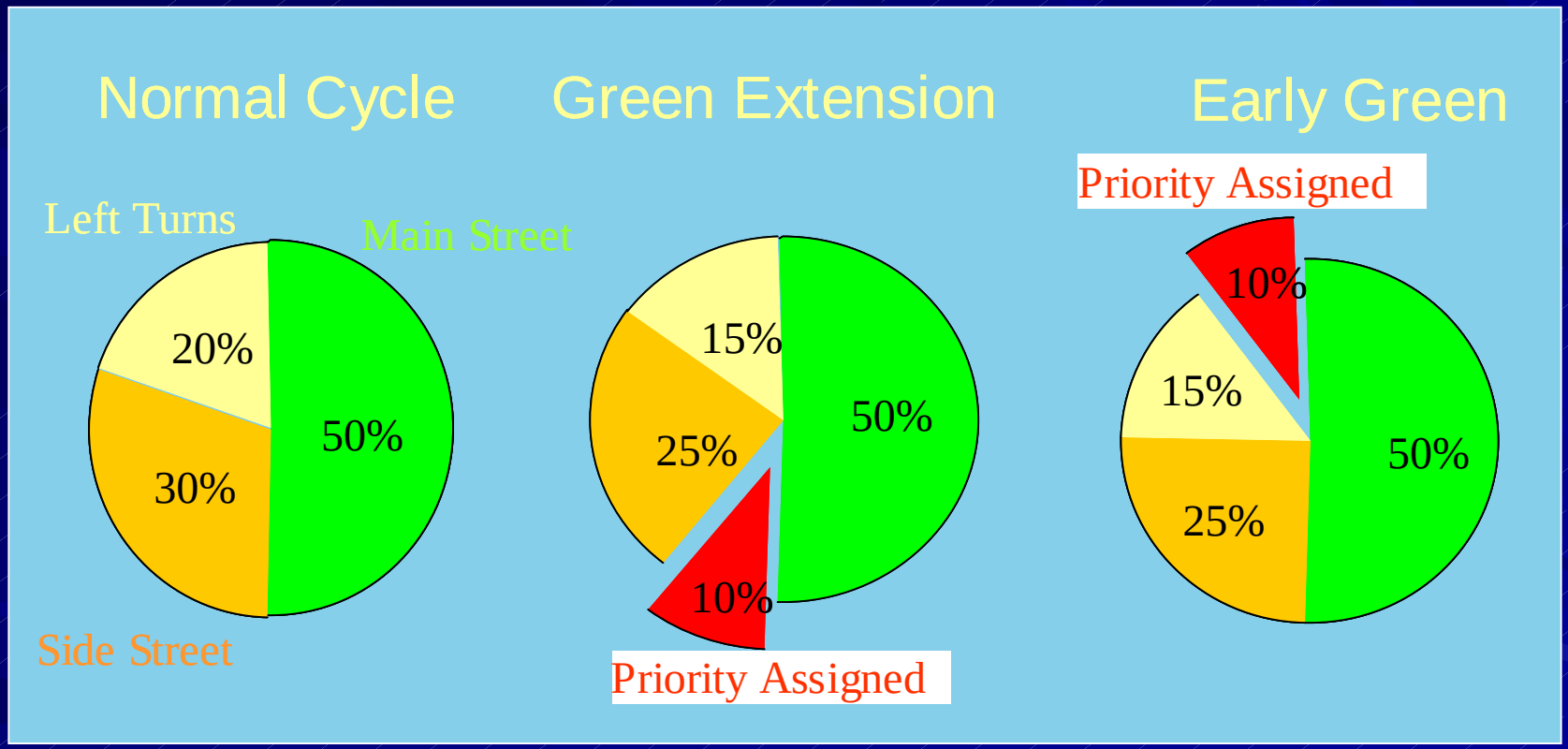
Extra slides for Q/A

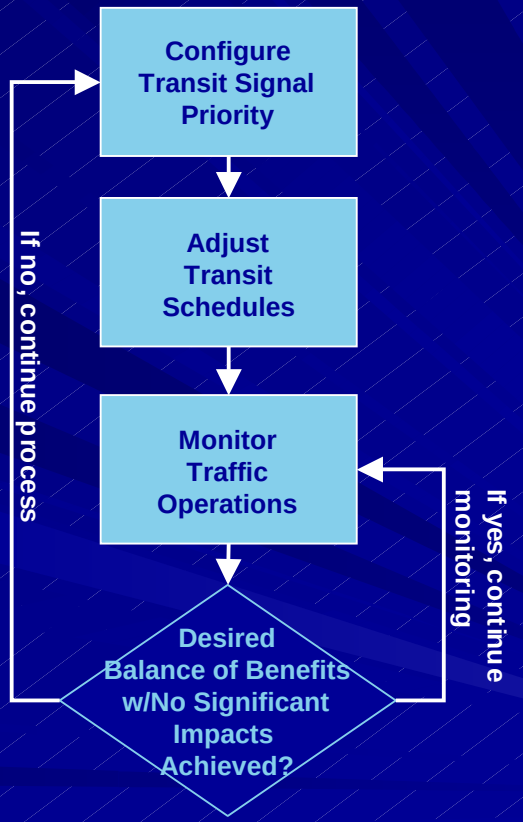
Common Signal Priority Approaches



Transit Signal Priority Management

Transit Signal Priority Control Factors:

- Vehicle Location
- Schedule Adherence
- Time of Day/Day of Week
- Duration/Cycles Since Last TSP
- Phase of the Signal
- Presence of Emergency Vehicles



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