



SP 8 GESTIÓN DE LA CONGESTIÓN

SOLUCIONES SOSTENIBLES EN TRAMOS CONGESTIONADOS EN LA RED ESTATAL DE CARRETERAS DE ESPAÑA

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BUS - HOV LANES

WHY?

























HOV - BUS LANE AT A-6 MOTORWAY

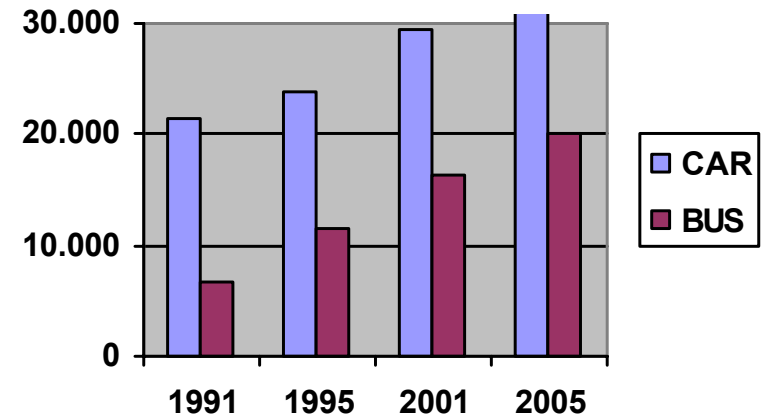
- It is an one way and reversible lane
- 17,5 km (13,5 km HOV–BUS lane)
- Entrances: at the ends and 3 intermediates ones
- Opening: december, 1994
- Ratio bus/day..... 1994..... 1260
2004..... 4000

	<u>Bus</u>	<u>Car</u>
• Growth 1995-2005 (7/10h.)		
transported people	72 %	39%
vehicles	96%	15%
• Infrastructure usage ratio (sq m/traveller)		
Bus-Vao.....		4,9
General use lanes.....		11,6

Source: Consorcio Regional de Transportes and own elaboration

HOV – BUS LANE (A-6) MADRID-LAS ROZAS (Opening 1994)

Travellers distribution at rush hour (7-10 h) direction Madrid			
YEAR	CAR	BUS	% BUS OVER TOTAL
1991	21.430	6.602	24
1995	23.842	11.600	33
2001	29409	16370	36
2005	33176	20022	38
Δ 1991-2005 %	55	203	



Source: Consorcio Regional de Transportes and own elaboration

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WHERE?

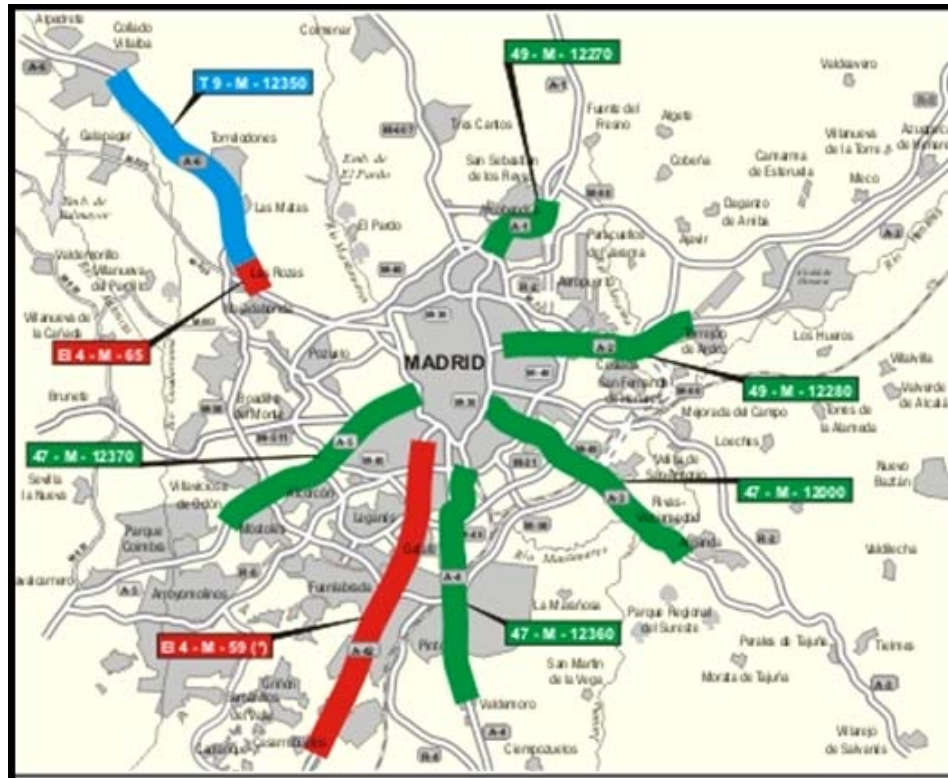




NEW HOV – BUS PLATAFORMS IN PROJECT IN SEPTEMBER 2007

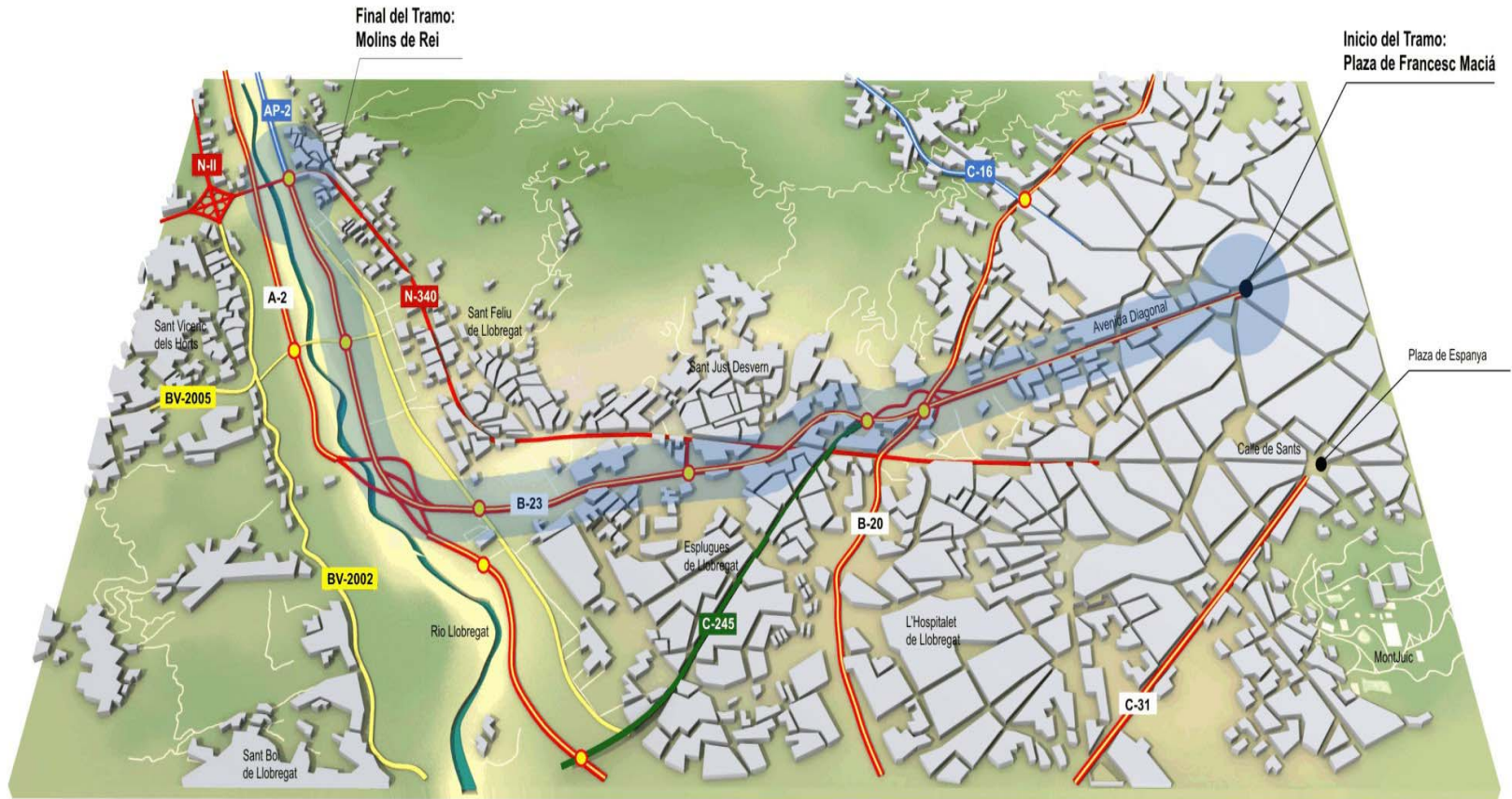
- **3 cities: Madrid, Barcelona, Málaga**
- **9 corridors**
- **190 km trunk**
- **1800 M€**
- **Favoured travellers with the opening: 165 million people/year**
- **Considered social benefit: 300-500 M€/year**
- **Execution forecast: 2008-2013**

MADRID

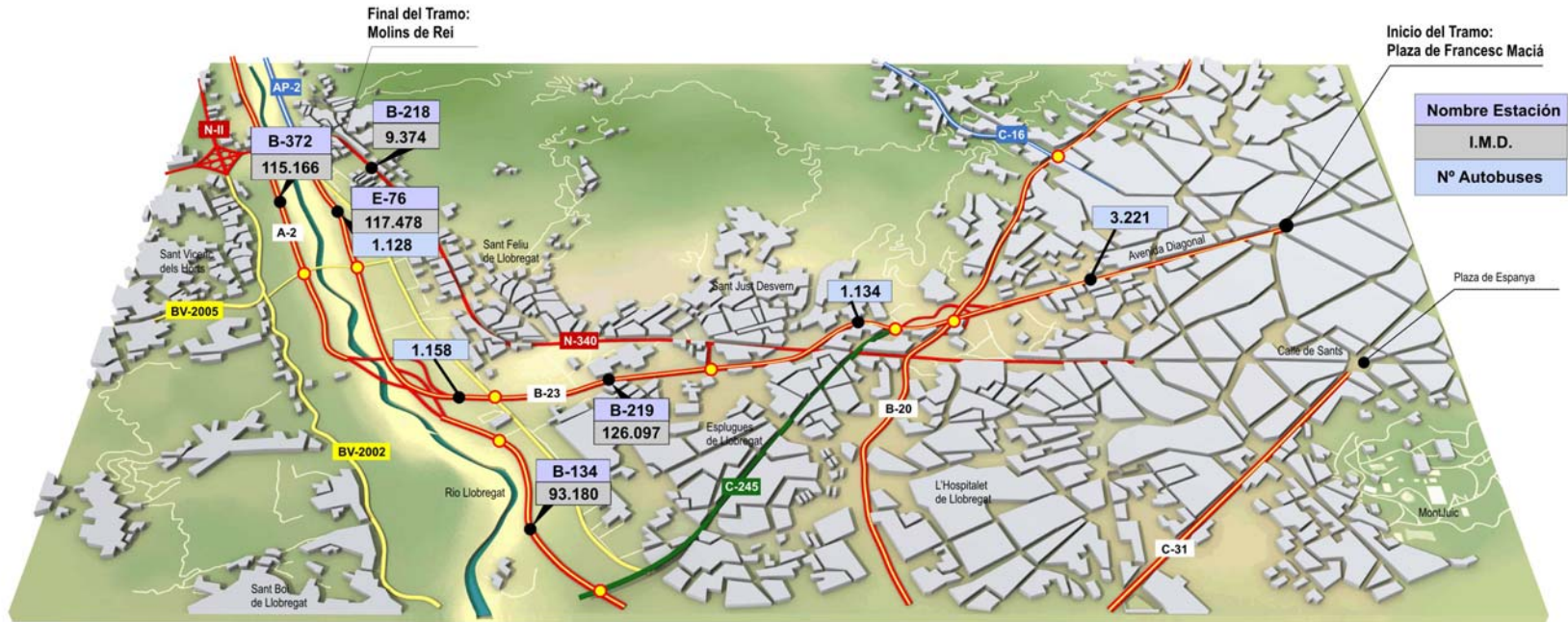


MOTORWAY	LENGTH (km)
A-1	7,00
A-2	15,00
A-3	21,70
A-4	28,00
A-5	13,70
A-6	20,00
A-42	26,50

BARCELONA



BARCELONA. DEMAND



- ADT > 110.000 veh/day, with **1.100-1.200 buses/day** (figures similars to registered in other corridors with HOV – BUS lanes working)

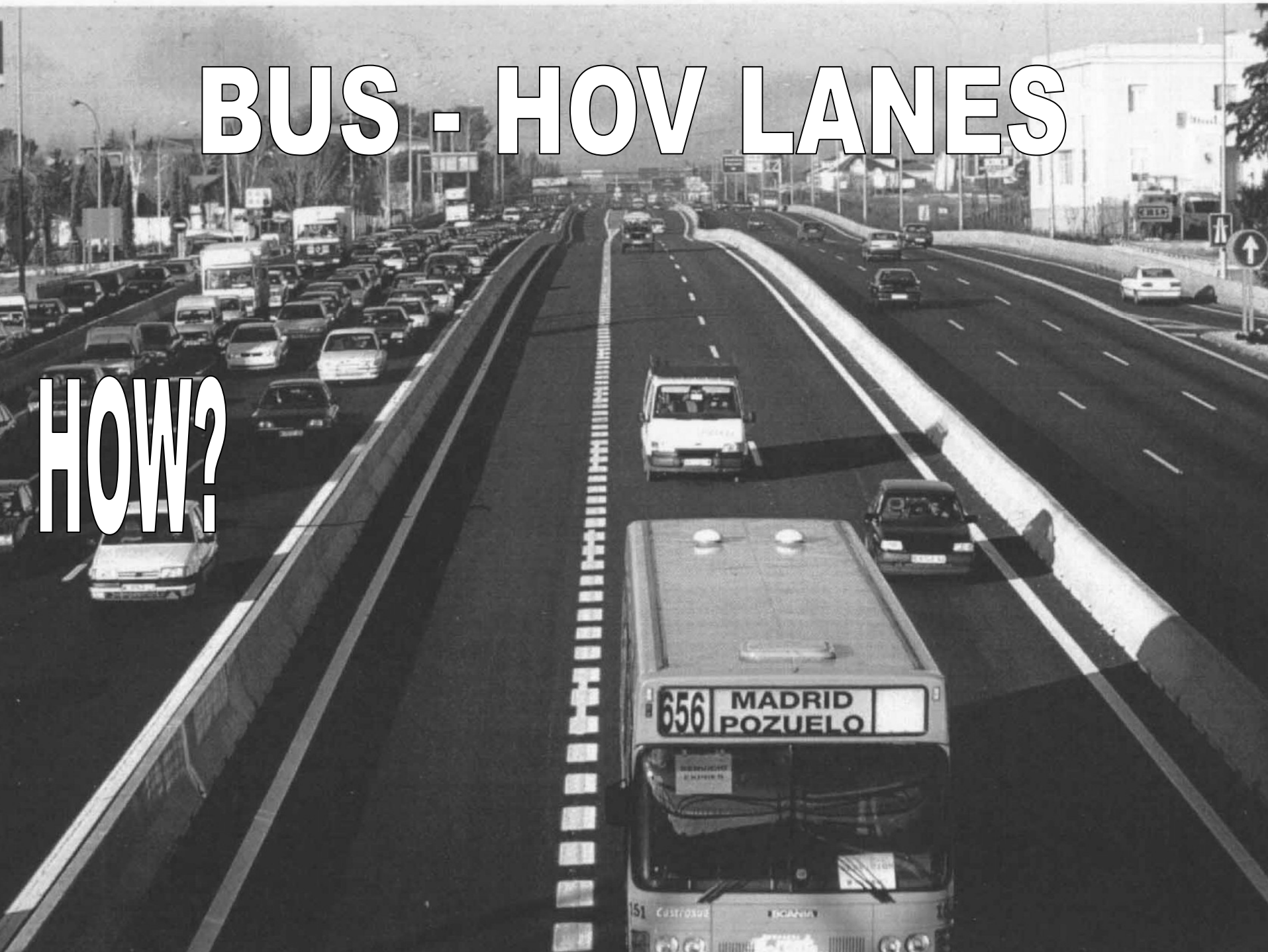
(Note: ADT= Average Daily Traffic.)

MÁLAGA



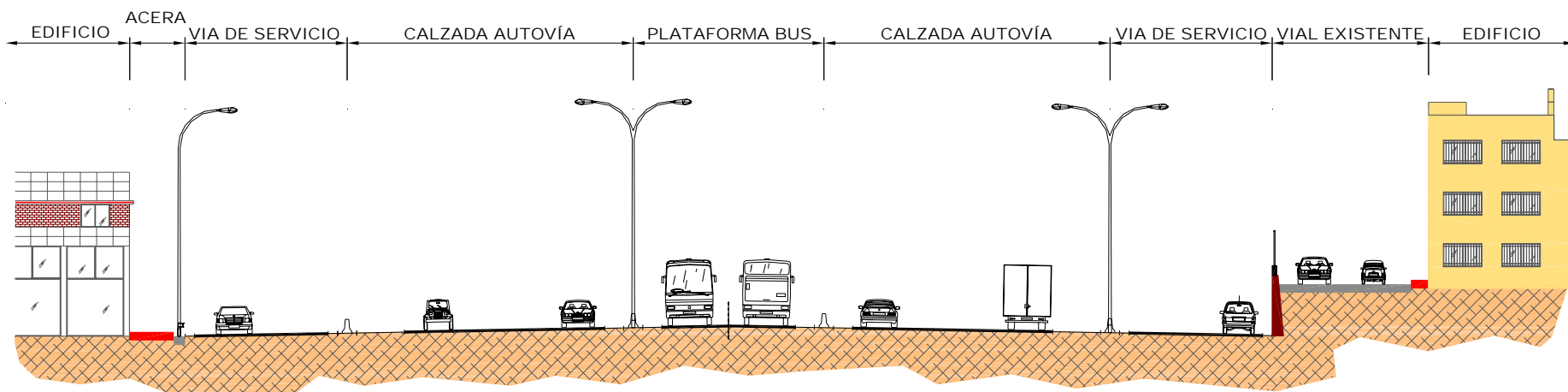
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HOW?



DEFINITIONS OF ACTIONS TO EXECUTE

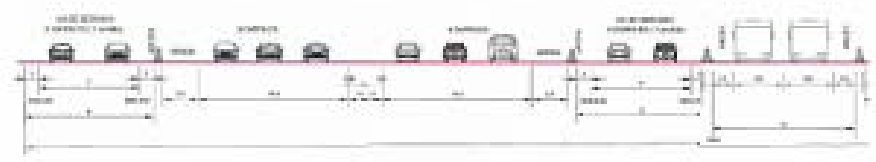
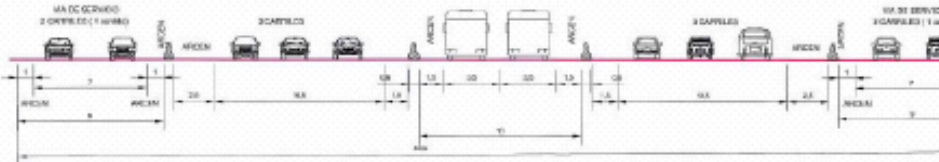
- **ENLARGEMENT OF LANES.**
- **CONTINUE SERVICE ROADS**
- **JUNCTIONS REMODELLING.**
- **EXCLUSIVE ROADWAY FOR HOV – BUS LANE .**
- **ENTRANCES IN THE ENDS AND INTERMEDIATE POINTS.**
- **IMPROVEMENTS ON CLOSE ENVIRONMENT (NOISE BARRIERS,...)**



Cross section types: independent, central and lateral carriageway

- Independent lanes
- Lanes by central carriageways
 - One-way direction
 - Two-way direction
- Lane by lateral carriageway
 - One-way direction
 - Two-way direction

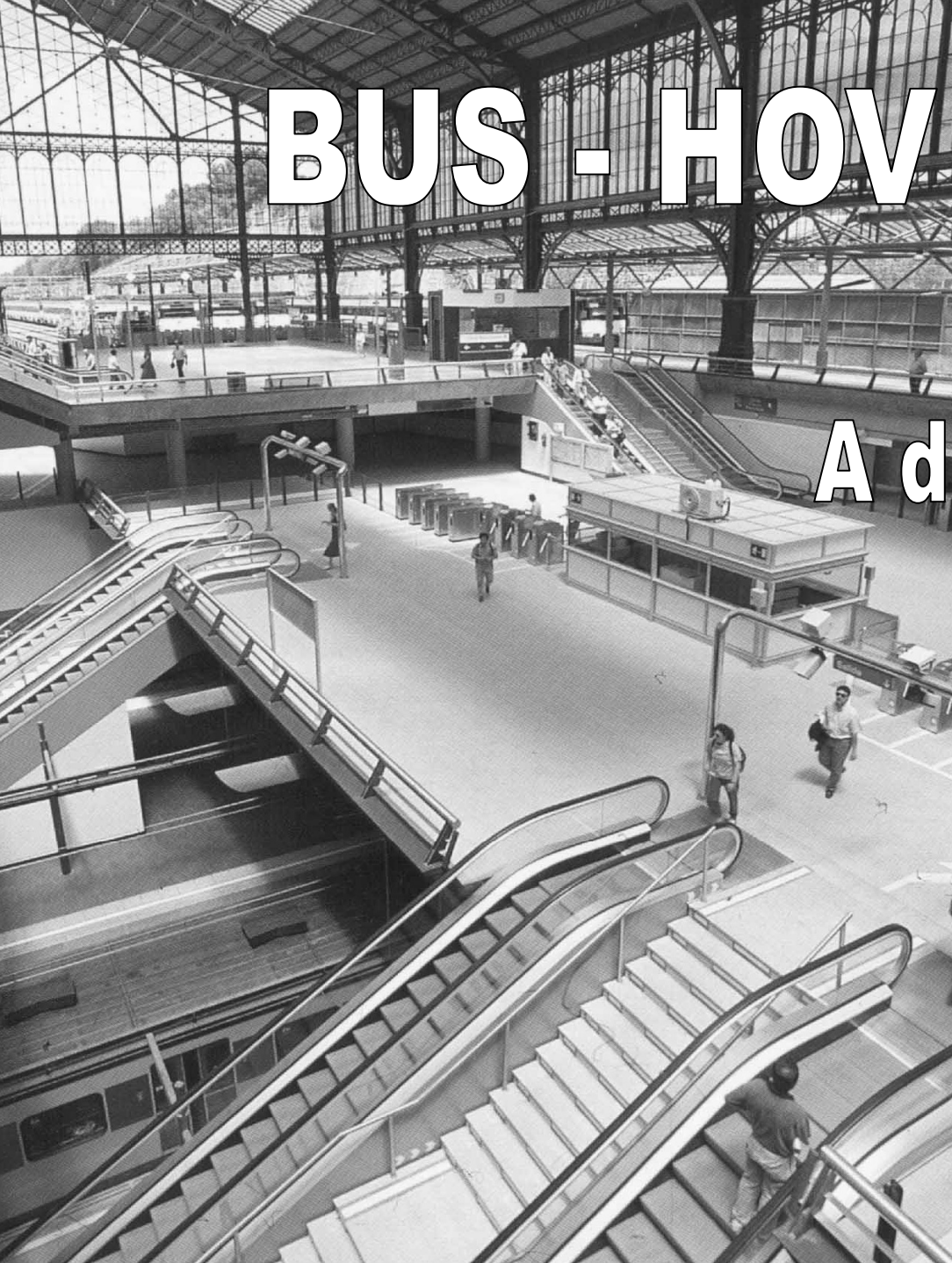
Sección tipo de autopista/autovía con calzada central para BUS



What is demanded to a bus reserved platform?

- **Itinerary continuity:**
 - Road traffic segregation
 - Direct connection with public transport network (transport interchanges)
 - Connection with urban network of bus lanes (BRT systems)
- **Level of service:**
 - Journey speed
 - Regularity
- **Road safety**
- **Pedestrian accesibility**
 - Correct location of bus stops
 - Adequate accesibility to bus stops

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A different approach

