GRAN VIA STREET

1. Case Study Area and Character Sections

Case Study Area
The case study street is located in Sabadell, a medium-sized city (185270 habitants in 36 km2), about 30 km from Barcelona. Sabadell is the capital of the Valles Occidental County. Historically, Sabadell has been an important industrial nucleus in Catalonia, with a large number of textile companies.

Gran Via street is a 4.6 km long street and runs through different barriers of the city: Torreguitart, Creu Alta, El Tauli Zone. The train runs under the street in one stretch. The Gran Via functions as an inner ring road, and forms a barrier between the city centre and the newer barriers. Congestion is part of daily life on the Gran Via with cues during several periods of the day.

Case Study Area in Gran Via Street is 2065 metres running from Felip Pedrell Street to Illa Street.
Character Sections
Gran Via is divided into four sections as shown below. Section 1 goes from Felip Pedrell Street to Prats de Lluçanes Street (265 m), section 2 from Prats de Lluçanes Street to Agnes Armengol Street (480 m), section 3 from Agnes Armengol Street to Francesc Izard Street (620 m) and finally section 4 from Francesc Izard Street to Illa Street (700 metres).
## 2. Street indicators

**Theme 1.** Built Form

### Theme 1.1 Buildings

<table>
<thead>
<tr>
<th>Primary Description</th>
<th>Measurement and or Comment</th>
<th>Change</th>
</tr>
</thead>
</table>

![Map of street indicators](image)
section 1

section 2

(*)median trip (only in small sections) with a undercarriage way (two-way working)

section 3
### Building Height

Average height of rooftop is 23 m in section 1, 16.5 m in section 2, in section 3 it is 9.5 m and 26 m in section 4. Around 1975 Gran Via Street had a similar building height now; except in section 4, where it was lower. The exact height around 1975 is not known.

### Spacing of Buildings

Ratio of frontage to space between frontages is zero in most character section because space between buildings does not exist. Ratio of frontage to space between frontages on the North side in section 1 is 24 and in section 3 is 0.13. And in section 4, ratio on the South side is 58.

### Inactive Frontages

Ratio of length of inactive frontage to active frontage is 2% in section 1 and 2; 51% in section 3 and 23% in section 4.
1.1.4 Doorways

Number of doorways per 100 m opening onto the public realm is 11 in section 1; in section 2 exist 16 doorways, 6 in section 3 and 5 doorways in section 4.
1.1.5 Historically important buildings or significant structures

Gran Via Street has an important building in section 3: Tauli Corporation Hospital, a county hospital. This building is for emergency services, and it generate an important traffic—both pedestrians (visitors), cars and ambulances.

1.1.6 Quality of Built Fabric

Regarding quality of built fabric, Gran Via street has a reasonable quality and a good state of repair in most sections.

**Theme 1.2 Space Between Buildings**

<table>
<thead>
<tr>
<th>Primary Descriptors</th>
<th>Measurement and or Comment</th>
<th>Trend (Increasing/decreasing etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1 Street Width</td>
<td>Distance between opposing building lines is 48.75 m; 55.50 m; 59.40 m and 39.6 metres in each character sections.</td>
<td>Around 1975 street width in Gran Via Street was the same that existing situation.</td>
</tr>
<tr>
<td>1.2.2 Side Space Width</td>
<td>Width of side space in section 1 is 13.6 m and 3 m. In section 2 2.21 m and 4 m. In section 3 are 7.85 m and 8.4 m and in section 4 9.22 m and 4.65 metres.</td>
<td>Gran Via Street had a similar side space width in 1975. Except in some zone where side space width is widest width now.</td>
</tr>
<tr>
<td>1.2.3 Median Strip</td>
<td>Gran Via Street has a 2.6 m median strip in section 1. In small stretches of section 2 and 3, the central carriageway runs under the street, and the pedestrians can cross above.</td>
<td>Around 1975 median street was the same that exist now.</td>
</tr>
</tbody>
</table>
1.2.4 Width Between Side Space

Width 32.14m; 49.8m; 42.98m; and 28.73m in each character section.

Around 1975 width between street space was the same that exist now.

1.2.5 Trees and Other Greenery

☐ Green shapes the street space and is an important formative element, unmistakable of the street

☐ Green has an influence on the street space / Green outweighs over technical installations.

☐ Green does not shape the street space / Green and other installations cancel each other

☒ Green has no influence on the street space / Green sporadically exist

☐ There is no Green

In section 1 and section 3 green has a reasonable influence: there are a lot of trees on the side space. In sections 2 and 4 green has no influence.
1.2.6 Street surfaces, furniture and other design elements

What materials are used –

- [x] asphalt
- [x] paving stone
- [ ] concrete
- [ ] cobblestone pavement

Gran Via Street has paving stone on side spaces and asphalt on the carriageway. There are a reasonable maintainance in all 3 sections.

Around 1975 street surfaces was asphalt for carriage space and paving stone for side spaces.

1.2.7 Guard Railing

Gran Via Street has no guard railing.

This street had no guard railing 25 years ago.

1.2.8 “People Spaces”

Gran Via Street has 4 people spaces: 2 in section 1; 1 in section 3 and 1 in section 4. Are they green?

- [ ] yes
- [x] no
1.2.9 Lighting

Describe the lighting e.g.

- the places are very well light, illumination is part of design of the place
- places are light
- no light (the places are places of fear)
- the footpaths are well lit
- the footpaths are poorly lit
- only one side lit
- the lighting is at the median
- no lighting of the footpaths
- colour of light
- ... aesthetically pleasing?
  - yes
  - no

Gran Via Street don’t have a homogeneous street line. The longitudinal lines of street lighting is variable: next to the kerb, on median strip. etc Also, the footpaths are medium lit.

Secondary Descriptors

1A Definition (Two Dimensional Scale)
Ratio street width to building height is 2.12; 3.33; 6.3 and 1.5 for each character section.

1B Definition (Enclosure)
Average width between side spaces is 32.15, 49.79; 42.98 and 28.73 for each character section.

Around 1975 ratio street was the same that now.

Gran Via Street had a similar effect 25 years ago.
in Gran Via Street.

Section with a greater enclosure effect is section 4, and to a less degree in section 2 and section 3 the degree of enclosure is smaller.

1C Transparency

Regarding level of transparency between public and private realm at the meeting of the vertical and horizontal planes; section 3 has a larger percentage of inactive frontage with 51% and section 2 has more doorways per 100 metre building line (16 doorways). But section 1 has a larger percentage of illuminated building line with 33%.

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**Theme 2. Function, Management and Regulation**

<table>
<thead>
<tr>
<th>Primary Descriptors</th>
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<th>Change</th>
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</thead>
<tbody>
<tr>
<td>2.3.1 One-Way or Two-Way Working</td>
<td>All the street works two way.</td>
<td>The street always worked two way.</td>
</tr>
<tr>
<td>2.3.2 Speed limit</td>
<td>Speed limit is 50 km/h along Gran Via Street</td>
<td>Around 1975 speed limit was 60 km/h.</td>
</tr>
<tr>
<td>2.3.3 Traffic Calming Measures</td>
<td>Is traffic “calmed”?</td>
<td>Gran Via Street had no traffic calming measures 25 years ago.</td>
</tr>
</tbody>
</table>

☑️ yes
☒ no

**Section 3**
| 2.3.4 Number of Marked Traffic Lanes | In section 1 the number of lanes per carriageway is 4 in Northern direction and 2 in Southern direction. In section 2 there are 5 and 3. In section 3 4 + 3. Finally, in section 4 the number of traffic lanes are 3 + 3. 
As mentioned before the sections 2 and 3 have stretches with underpasses for throughgoing traffic. The section in these tunnels is 1+1 and 1 emergency lane in the middle. | Around 1975, Gran Via Street was same number of marked traffic lanes for each direction. |
| 2.3.5 Lane Width | Width of lanes is 3.5 m for sections 1, 2 and 3; and in section 4 the lanes are reduced to 3.25 metres. | 
| 2.3.6 Visual Width | No visual reduction of carriageway is found. | Around 1975, Gran Via Street had not visual reduction of carriage width. |
| 2.3.7 Division/Allocation of Carriageway Space | **Describe segregation of carriageway** | Around 1975 division of carriage space was same that now. |
| **bus / tram** | □ separate
☑ in mix
width:______________ | 
| **bicycles** | □ separate
☑ in mix
width:______________ | 
| **pedestrians** | □ separate
□ in mix
width:______________ | 
| **HOV / taxis etc** | □ separate
☑ in mix
width:______________ |
2.3.8 Division/Allocation of Side Space

Describe division of side space-
- pedestrians: 11.60 m and 2 m in section 1; 2.21 m and 3 m in section 2; 6.85 m and 7.40 m in section 3; finally, 5.22 m and 3.65 m in section 4.
- bicycles: _______m
- green: ___1__m
- parking: ______m
- bus/tram: _____m
- waiting places: _______m

In 1975 division of side space was same that now.

Side space is divided in green space (1 metre for trees) and the rest for pedestrians.

2.3.9 Pedestrian Crossings

Describe pedestrian crossing points -
- everywhere possible to cross
- to cross the street only at some points possible

number of crossings per 500m: 3
- no possibility to cross

Number/location of signal lights at pedestrian crossings:

Number of marked pedestrian crossings (e.g. zebra crossing)
Number of built pedestrian crossings: 0
Number of over-/underpasses: 6
“Staggered” or straight across crossing

In 1975, Street had same number of underpasses (6), same number of crossings per 500 m: only 3.

Section 2

Section 3

Underpasses in Gran Via Street. Section 3
Gran Via Street has 6 underpasses; 1 in section 1; 1 in section 2; 2 in section 3 and 2 in section 4.

2.3.10 Signal Junctions

<table>
<thead>
<tr>
<th>Pedestrian phase provided?</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
</table>

“all green” pedestrian phase provided?

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
</tr>
</thead>
</table>

diagonal crossing provided?

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
</tr>
</thead>
</table>

cyclists catered for?

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
</tr>
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</table>

Gran Via Street had same signal junctions 25 years ago.

There are 12 signal junctions, 3 in section 2, 6 in section 3 and 3 in section 4.

Pedestrians has no priority relative to vehicles along the whole street.

2.3.11 Roundabout Junctions

Gran Via Street has one roundabout junction in section 2. Pedestrians are not catered for in the roundabout.

In 1975, Gran Via Street had not some roundabout; so cars had limited movements in this section where now there is a roundabout.
2.3.12 Other Junctions

Section 1 has 3; 9 in section 2; 1 in section 3 and 4 in section 4. Street had same name of junctions 25 years ago.

2.3.13 On-Street Parking

Gran Via Street has 268 possible legal parking places. In section 1 there are 39 on-street parking places, partly for delivery vans and partly without restrictions.

In section 2 there are 92 on-street legal parking distributed in 3 types: no restrictions, time restrictions and for delivery vans.

In section 3 there are 60 on-street parking places. There are no free places.

Finally, section 4 has 77 on-street no restrictions parking places.

2.3.14 Cycle “Lanes”

For each side of street describe the type of cycle provision e.g. –

- [ ] none
- [ ] path/lane for both directions
- [ ] on road bicycle lane
- [ ] bicycle path on the sidewalk
- [ ] bicycle path in the side space
- [ ] with support at crossings

Around 1975 there was cycle “lanes” provision in this street.

2.3.15 Cycle Parking

What is the number of formal cycle parking places? zero

Around 1975, in Gran Via Street there was no cycle parking places neither
2.3.16 Bus Stops and Stands

In Gran Via Street there are 10 bus stops: 1 in section 1, 5 in section 2; 2 in section 3 and 2 in section 4.

Marked spaces?
☒ yes
☐ no

Parking prohibited?
☒ yes
☐ no

Shelter provided?
☒ yes
☐ no

See bus stops in next page
Theme 3  Patterns of Use

Theme 3.1  Traffic

Primary Descriptors  Measurement and or Change
3.1.1 Average Vehicle Flow Annual  ADT: 19605 vehicles.
3.1.2 Peak Vehicle Flow

In general, peak vehicle flow in Gran Via street is 1140 vehicles/hour.

3.1.5 Bus/Tram Reliability

Average delay in minutes of bus is 6 minutes.
Gran Via Street has no tram.

Theme 3.2 Activities

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<tbody>
<tr>
<td>3.2.2 Pedestrians Along the Street</td>
<td>See next page</td>
<td></td>
</tr>
</tbody>
</table>
3.2.6 Off-Street Parking

Number of spaces is 297 distributed as follows: In section 1 36 off-street parking, 96 in section 2; 50 in section 3 and finally, 115 in section 4. Regarding type of off-street parking, in all sections most of these are for residents.
Recent statements

The Gran Via was constructed about 30 years ago taking into account the necessities for the car drivers and without looking at the other street users needs. No recent statements have been found. The Municipality probably won’t start a discussion about the future of Gran Via until another road is being constructed that can take over the traffic function of the Gran Via street.

Case Summary

The Gran Via is the inner ring road in Sabadell. Its function as a traffic distributor is very important with about 20,000 vehicles/day. The street forms a barrier between the city centre and the newer quarters outside the city centre. Traffic congestion is normal, as the capacity of the street (through traffic) is no more than one lane per direction.

Although the traffic situation is very bad, new apartment buildings have been constructed during the last 5 years next to the street.

Performance indicators are not being elaborated.