Arak High speed Railway Station Transport and Mobility Study

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High Speed Rail Expert

Railway system and provisions

Wide Area Analysis

Iranian Railways

Ridership: 21 millions

System length: 12,998 kilometers

Stations numbers: 360

Freight: 31 million tons

Distance from Arak Station to Tehran: 260 km

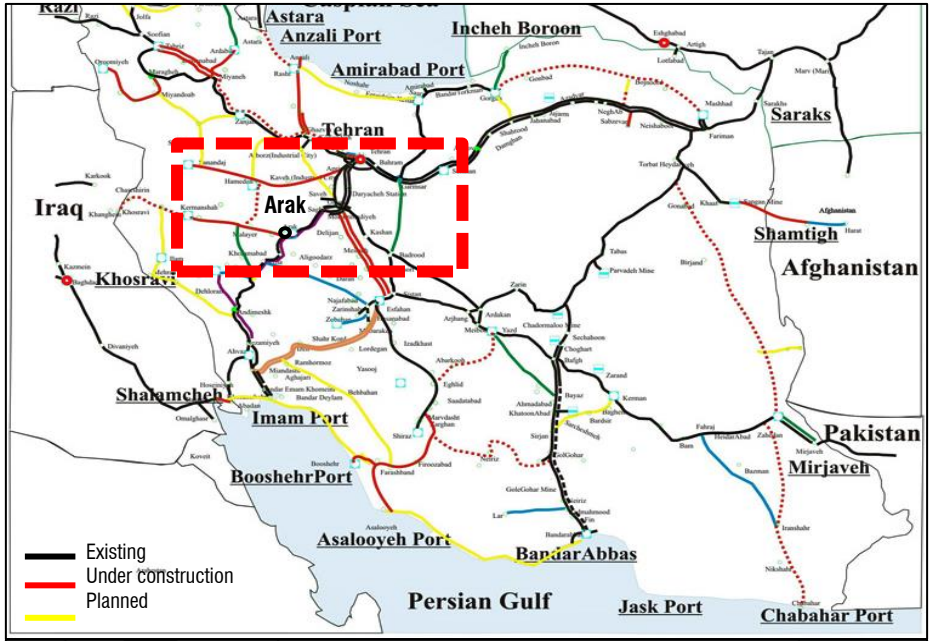
Legend:

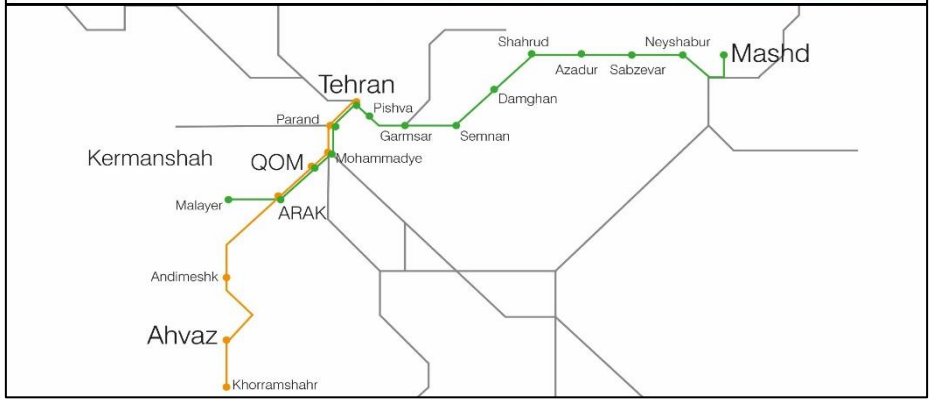
- Route: Malayer – Teharan - Mashad
- Route: Teharan – Ahvaz - Khorramshahr

Arak Station Train Schedule:

- 2 trains a day | train no. 182, 183
- 9 trains a day | train no. 118, 119, 130, 131, 132

11 TRAINS A DAY | 7 TRAINS LINES





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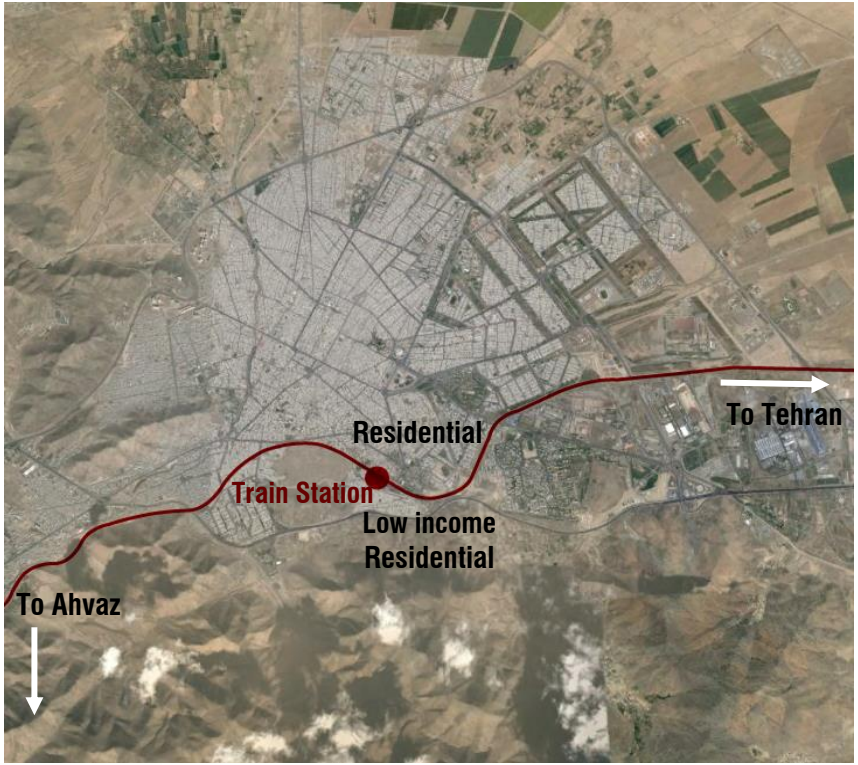
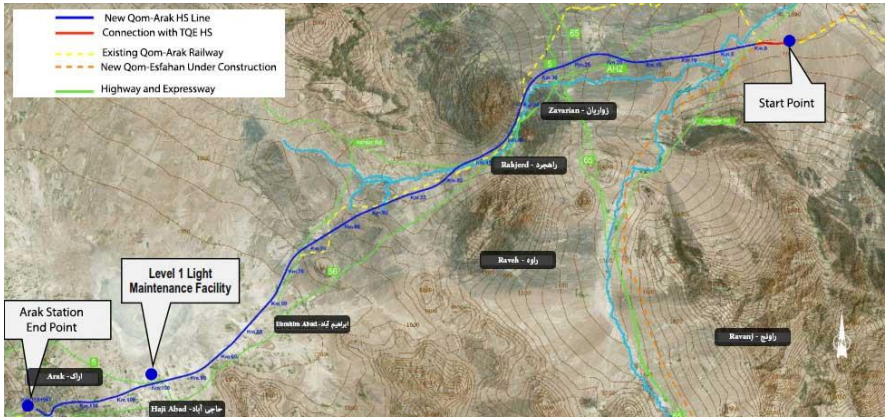
Project location (Tehran-Qom-Arak High Speed Rail)





Wide Area Analysis

Arak
Province: Markazi Province
Population: 526,182
Area: 55,750 sqm
Length of new line: 117 km

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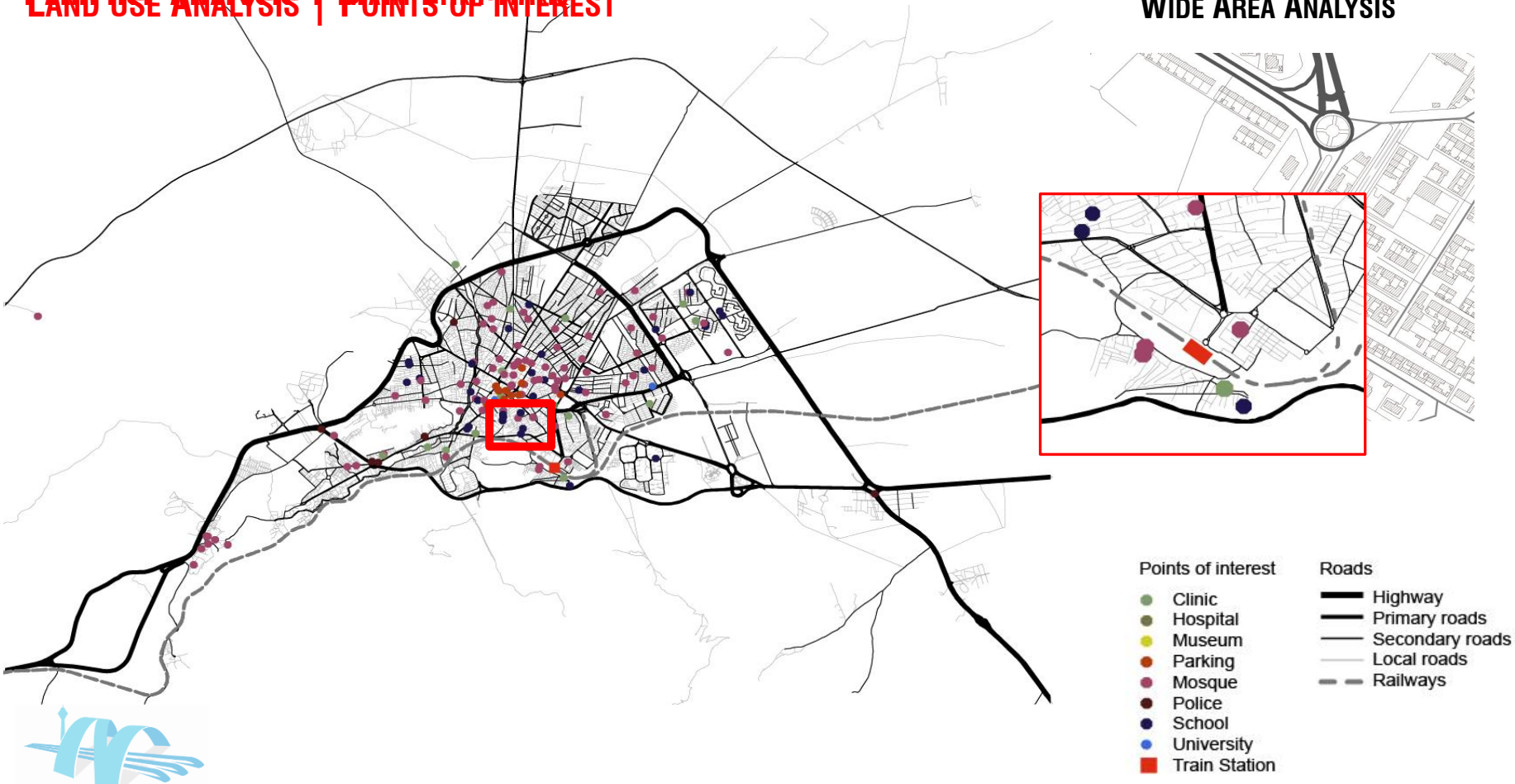
EXISTING STATION AND RAILWAYS

Land use Analysis | Points of interest

Wide Area Analysis



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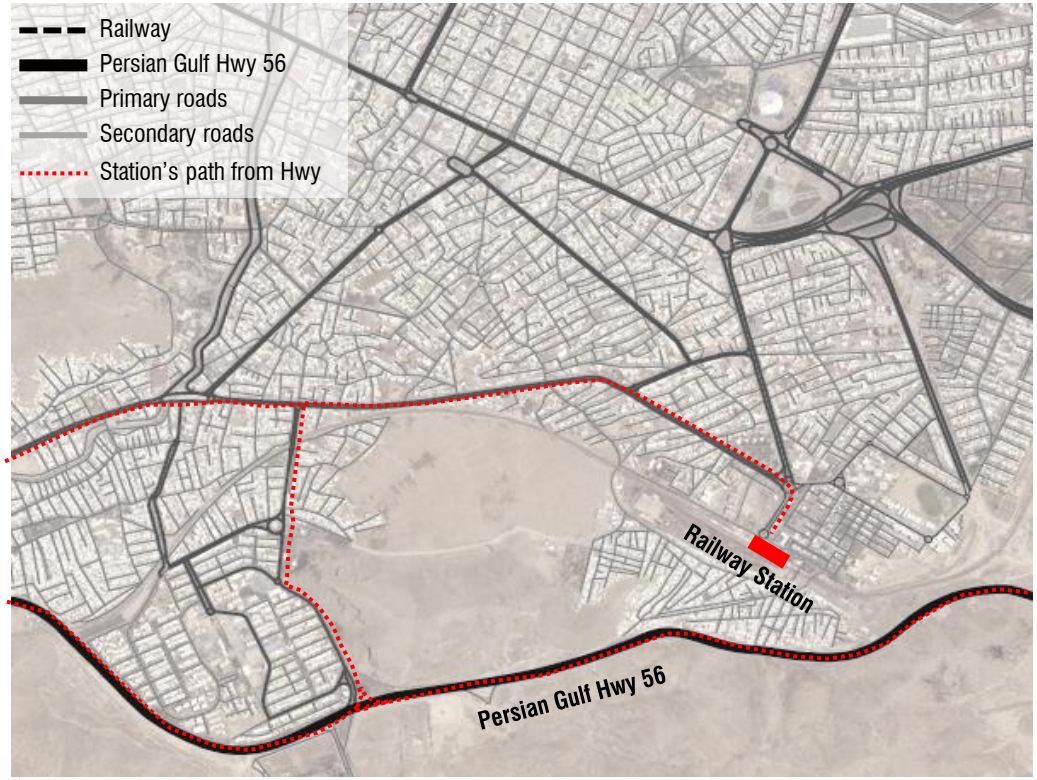
EXISTING ROAD NETWORK



WIDE AREA ANALYSIS

CATCHMENT AREA ANALYSIS | BY CAR | MULTIPLE MODES

Legend

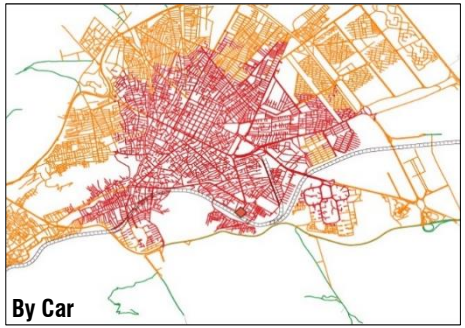
Roads
- Local roads
- Railways

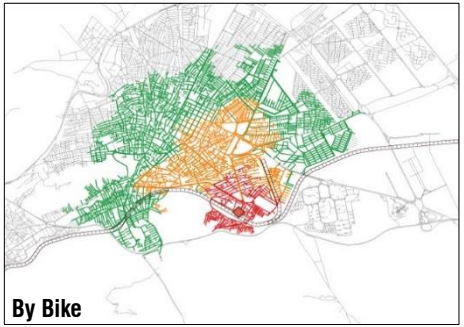
Isochrone | covered area by car
- 0 - 5m
- 5 - 10m
- 10 - 15m
- 15 - 20m
- 20 - 25m
- 25 - 30m
- 30 - 35m
- 35 - 40m
- 40 - 45m

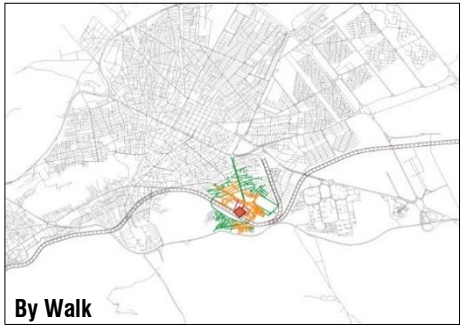
WIDE AREA ANALYSIS

The catchment area (isochronal) analysis maps the streets covered in 45 minutes by car from the train station, taking in consideration the current vehicular traffic within the area.
Most of the city area is covered up to 25 minutes.

- 0 - 5 min
- 6 – 10 min
- 11 – 15 min







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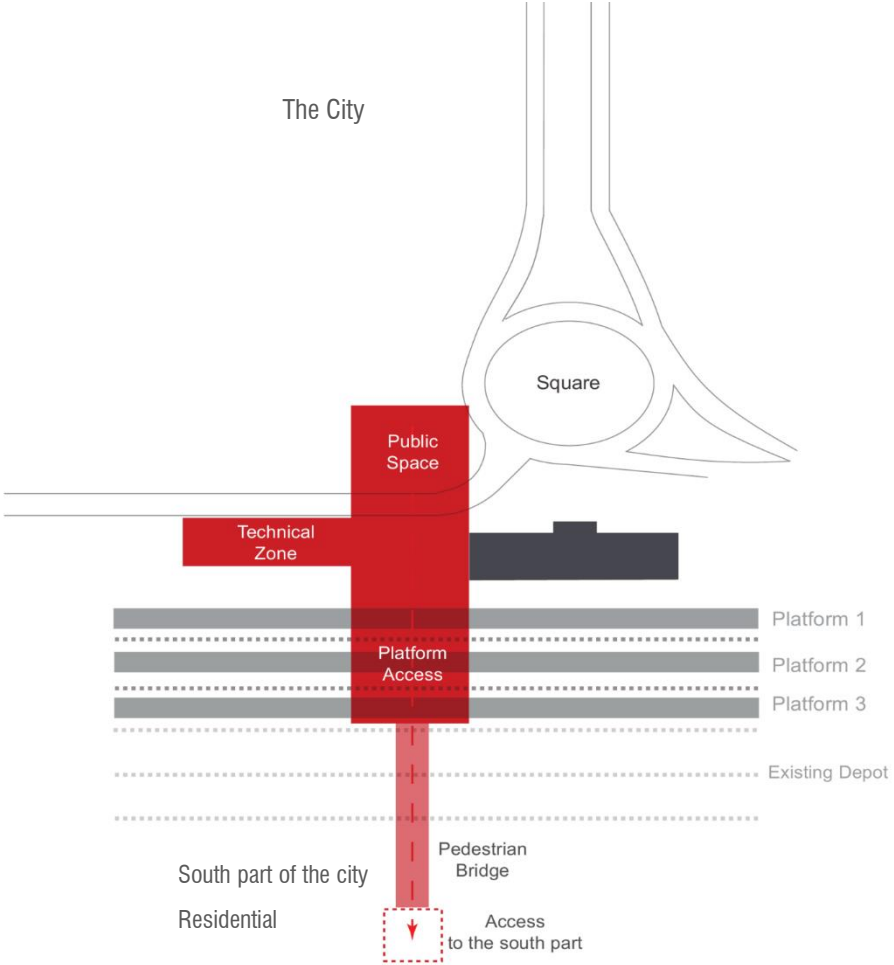
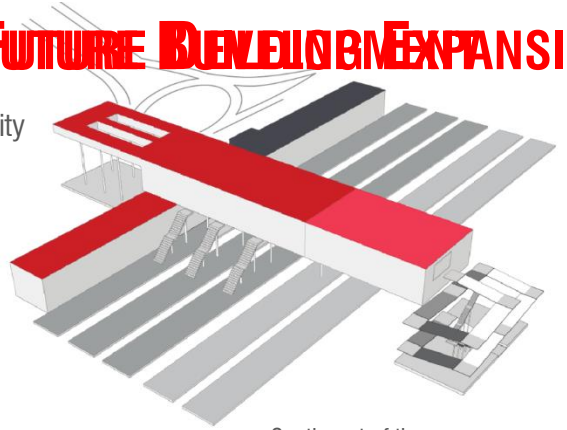
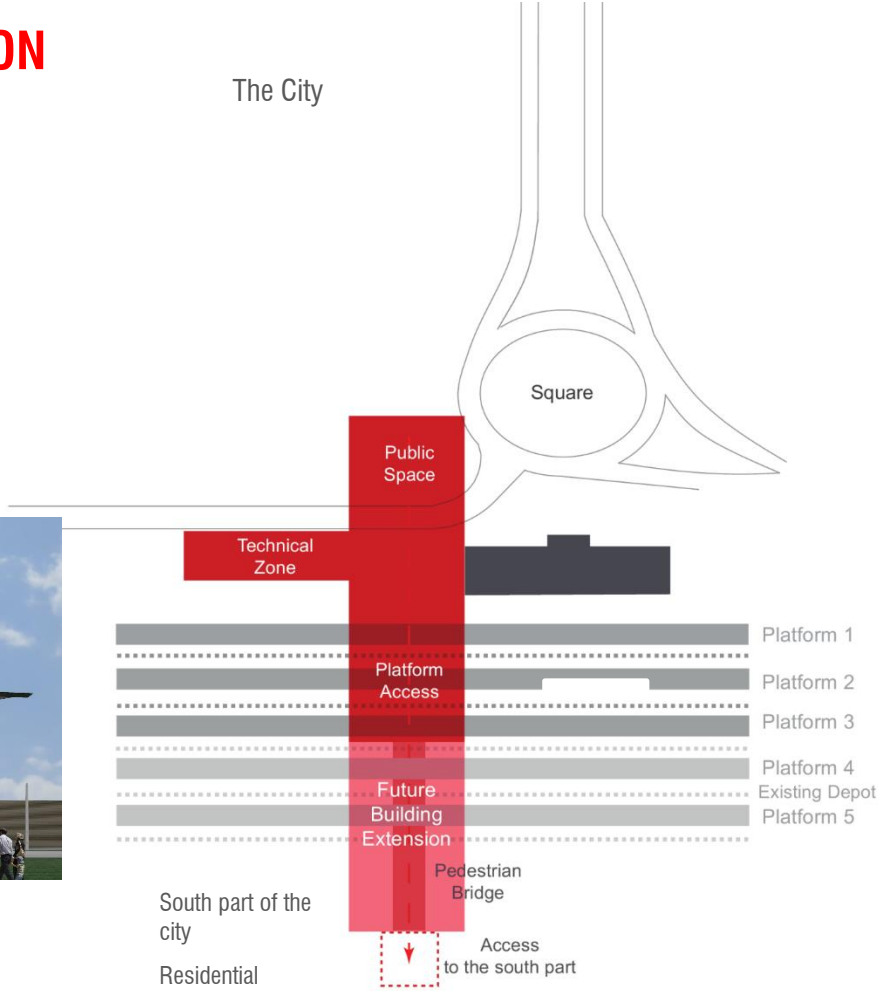
PHASE 1 : SUGGESTED DESIGN FOR STATION

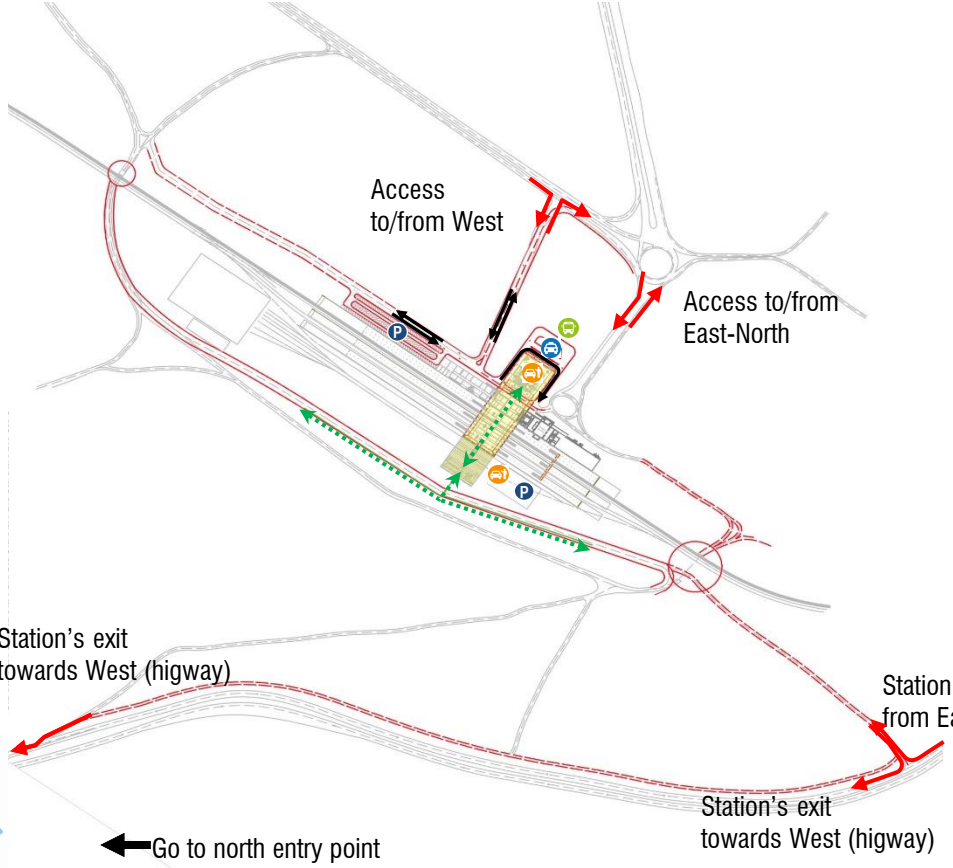


Phase 3 : Future Building Expansion





WIDE AREA ACCESSIBILITY



ACCESS AND CIRCULATION SYSTEM

PHASE 1 DEVELOPMENT

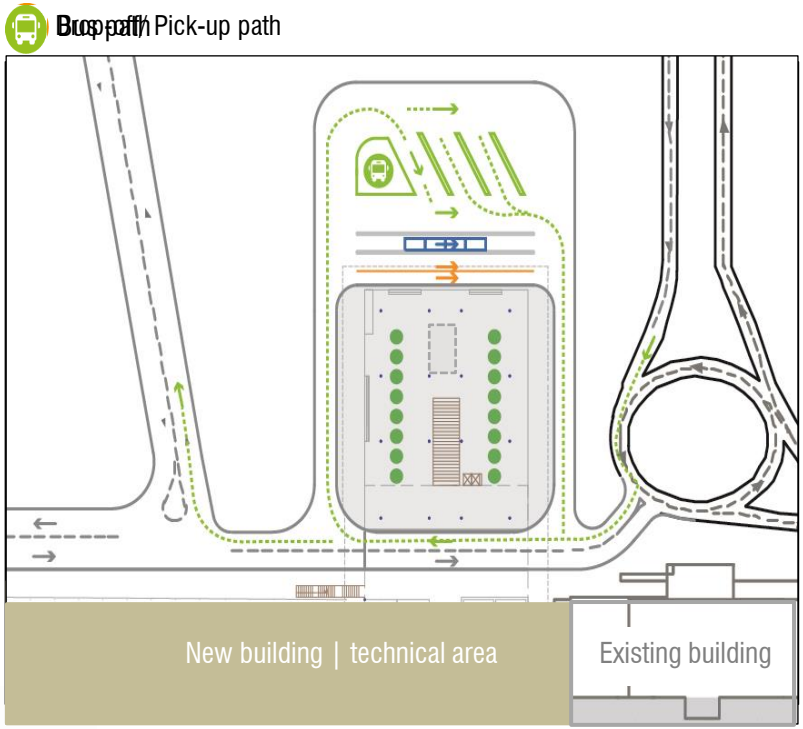
- ✓ Improving both private and public (buses) transport
- ✓ Reconfiguration of the railway station
- ✓ The proposed new road parallel to Shahr Sabz
- ✓ The parking between the highway and the station
- ✓ Additional parking and drop-off/pick-up area

Proposing a new connection from the south junction of the railway station to the eastward and west ward of road

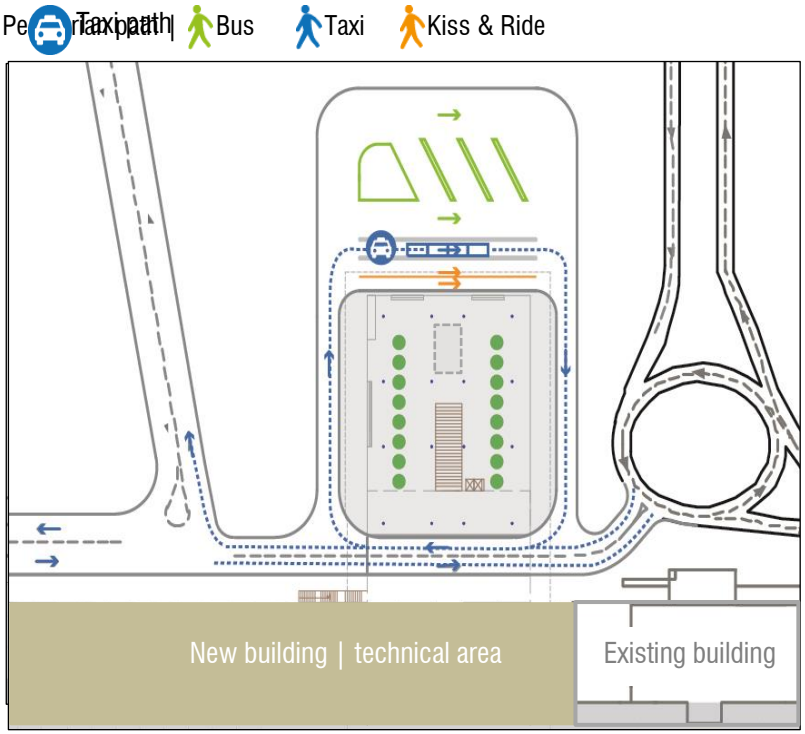
Linking between the highway and railway with the urban surroundings

Additional parking and drop-off area are proposed in the station forecourt to enhance intermodal connectivity between rail and other transport modes

CIRCULATION SYSTEM



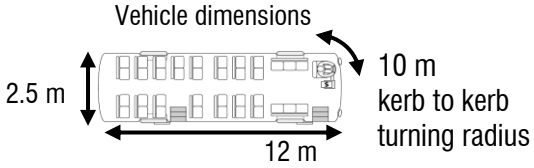
ACCESS AND CIRCULATION SYSTEM

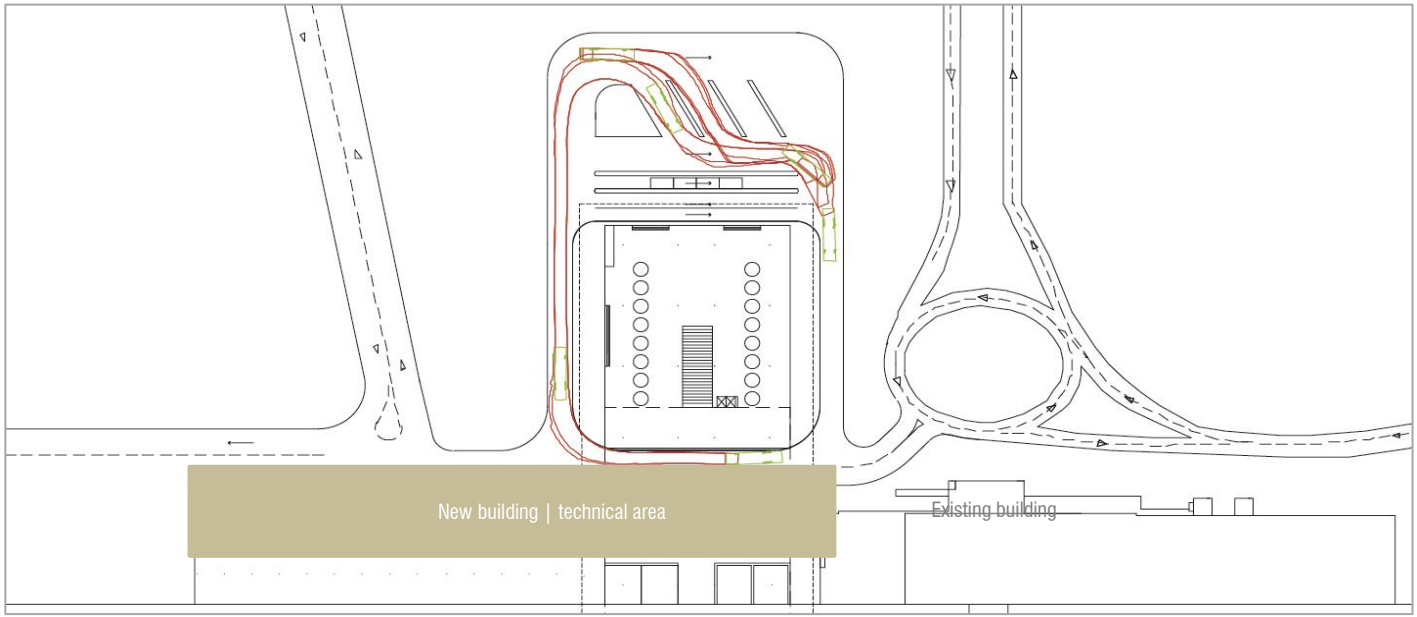


GEOMETRICAL VERIFICATION

The suggested access system proposal is geometrically verified against potential critical maneuver to ensure a sufficient space for car and bus circulation. The analysis is carried out considering a travel speed between 10 km/h and 15 km/h, for private car 10km/h for buses, turning radius stands at 10m.

ACCESS AND CIRCULATION SYSTEM



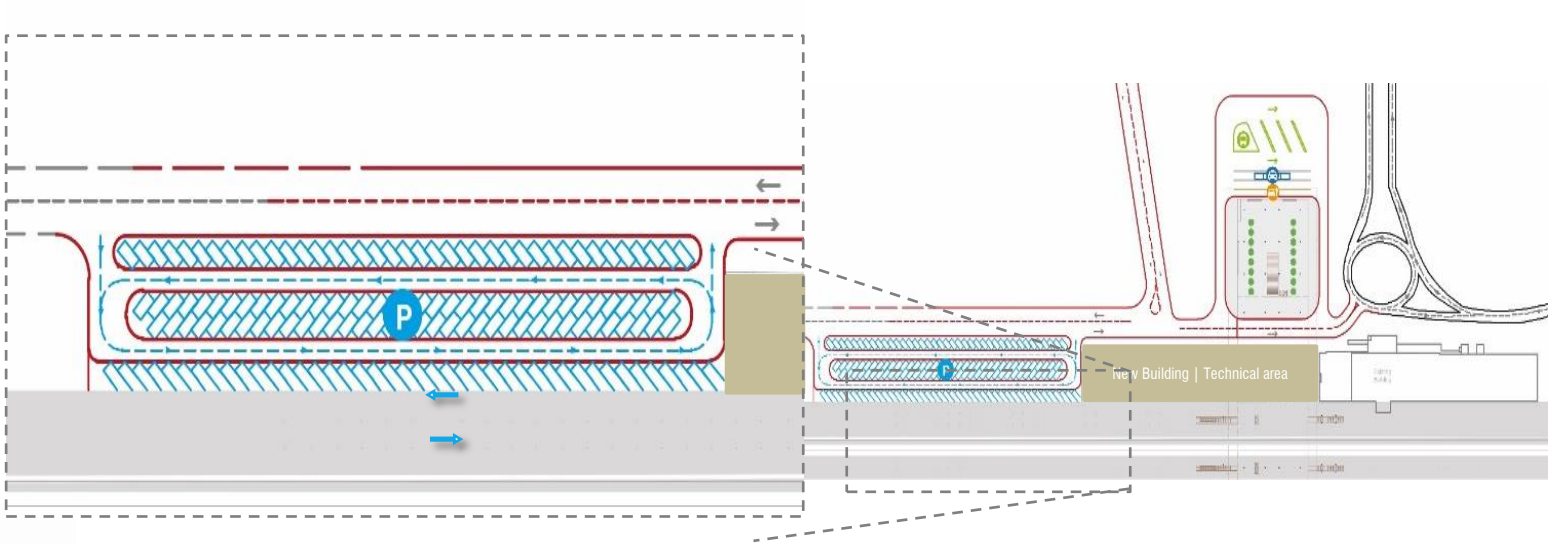


Bus verification

PARKING LAYOUT

ACCESS AND CIRCULATION SYSTEM

The parking area counts 154 angled parking places, served through a counterclockwise loop.



Thank you

for your kind attention

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