

“In everyday life and language, it seems, that experience of spatial formation is an intrinsic, if unconscious dimension of the way in which we experience society itself. We read space, and anticipate a lifestyle.”

[HILLIER_1984:26]

design development

5.1.1 WINDOW IN THE WALL: UP's impermeable relationship with the city is perforated; rendering the campus accessible to the public sphere and dispersing knowledge into the city. This permeability is significant in integrating the **campus as part of the city fabric** rather than a remote academic preserve. Currently it also generates a flow of traffic, both bicycle and pedestrian, which increases the congestion of movement through campus.

The choice of site for this dissertation has been argued in Chapter 3. The design objective is **reactivating a derelict space** that envelops the retaining wall, along the edge of the Loftus Versveld platform, which currently sits as an obtrusive **urban boundary** on University Road. Preserving the initial ideals of UP; to expand the campus towards the south, the dissertation aims to perforate the boundary on the western side of University Road and establish a thriving pedestrian link between UP campus and both the Loftus Versveld platform and its sports grounds. Furthermore, it is concerned with an **exploration of the boundaries of interior spaces that lie hidden in the urban setting**.

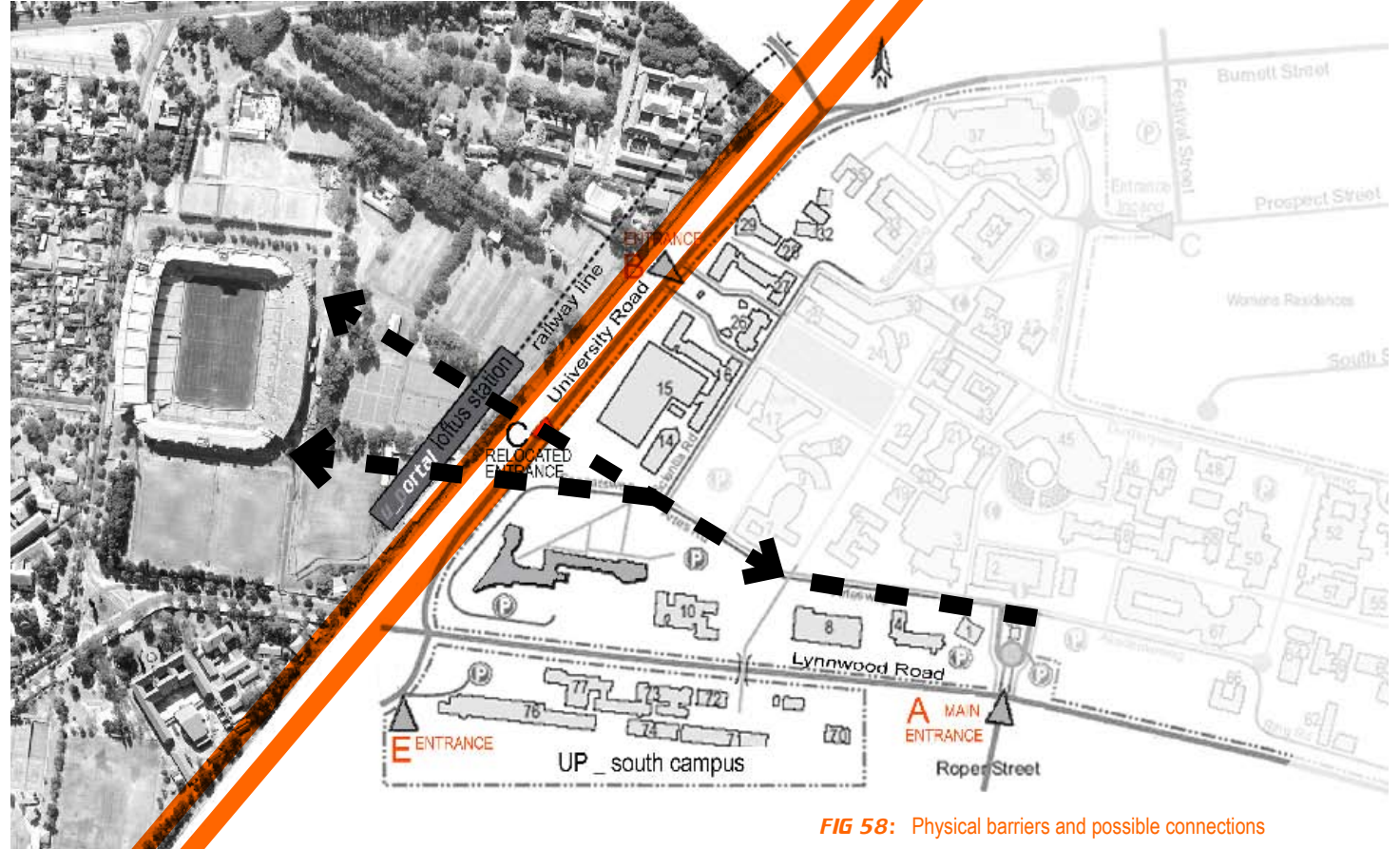


FIG 58: Physical barriers and possible connections

u_portal is designed as a **linear space** which exists in the boundary along the edge that separates the sidewalk from the platform, interior from exterior; and UP from permeable penetration. ***u_portal*** is an urban tool that **unlocks the sidewalk as a vibrant public space**, equipped with **intelligent resources** which facilitate the merge of social patterns and a formal urban fabric.

“In the city, public life orders itself around exchanges of all kinds: material and non-material, objects and words, signs and products. Spatial pattern can, and does, in itself carry social information and content. The formation of non hierarchical, abstract notions of spatial relations which in our view were essential to giving a proper account of spatial organization.”

[HILLIER_1984:91]

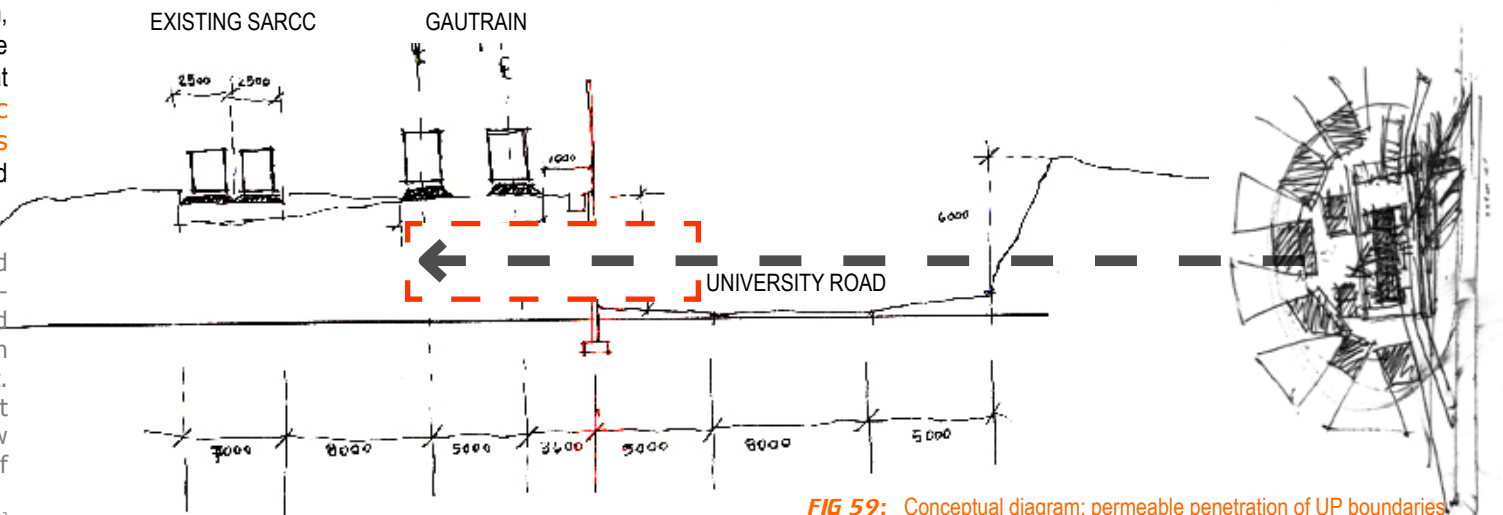


FIG 59: Conceptual diagram: permeable penetration of UP boundaries

5.1.2 RE-DEFINE A BOUNDARY: A concrete skin defines the perimeter of the space revealed underneath the two Gautrain rails. Using surfaces that morph from the ground (platform) expands the elongated space as an extension of the sidewalk. Acknowledging the linearity of the sidewalk, the space is fragmented into smaller more accessible spaces. What is important about these compacted spaces is the communicative relationship between the spaces and a dynamic transition from one space to the next as a singular entity. Through surfaces that resonate from the ground, it preserves continuity and succeeds in creating a seamless space: an essential quality for mobile migration. Each compact space; a fragment from entire linear space, is dismantled and analysed through the nature of its boundaries. Intelligent manipulating of each horizontal and vertical surface by virtue of its height, depth, inclination and material, caused the desired seamless spatiality to evolve from the ground.



FIG 60: Conceptual diagram: fragmentation of linear space.

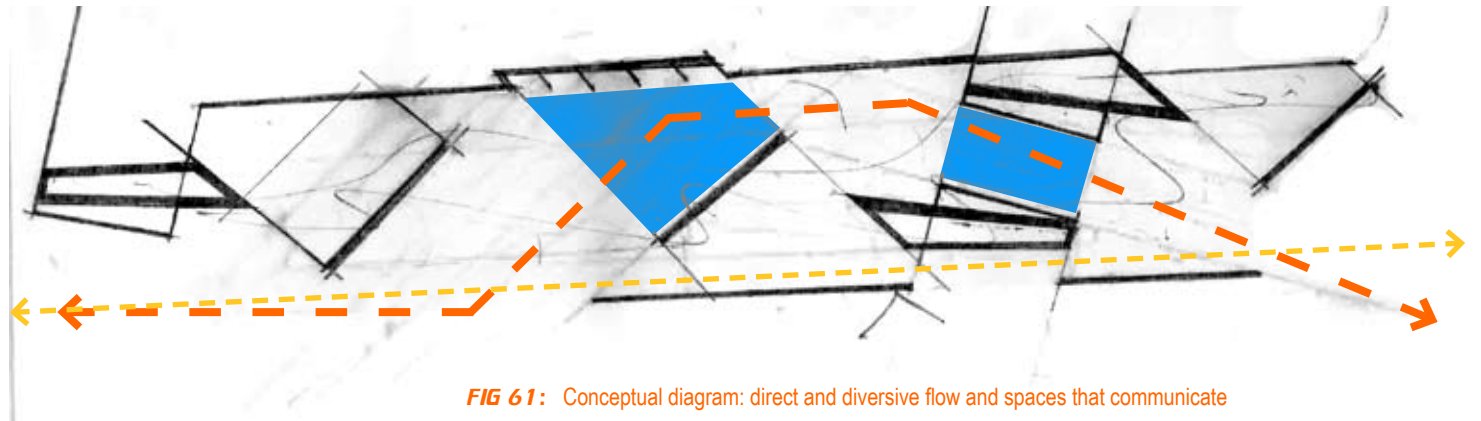


FIG 61: Conceptual diagram: direct and diversive flow and spaces that communicate

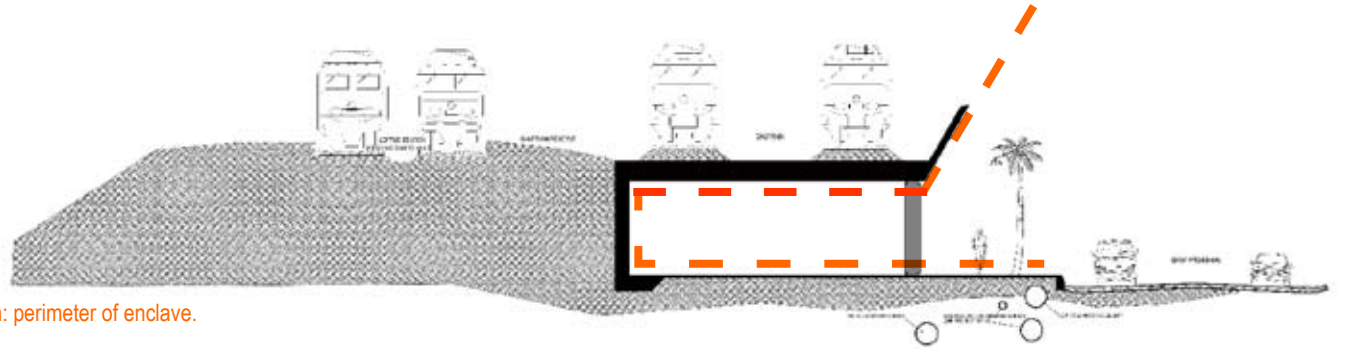


FIG 62: Site section: perimeter of enclave.

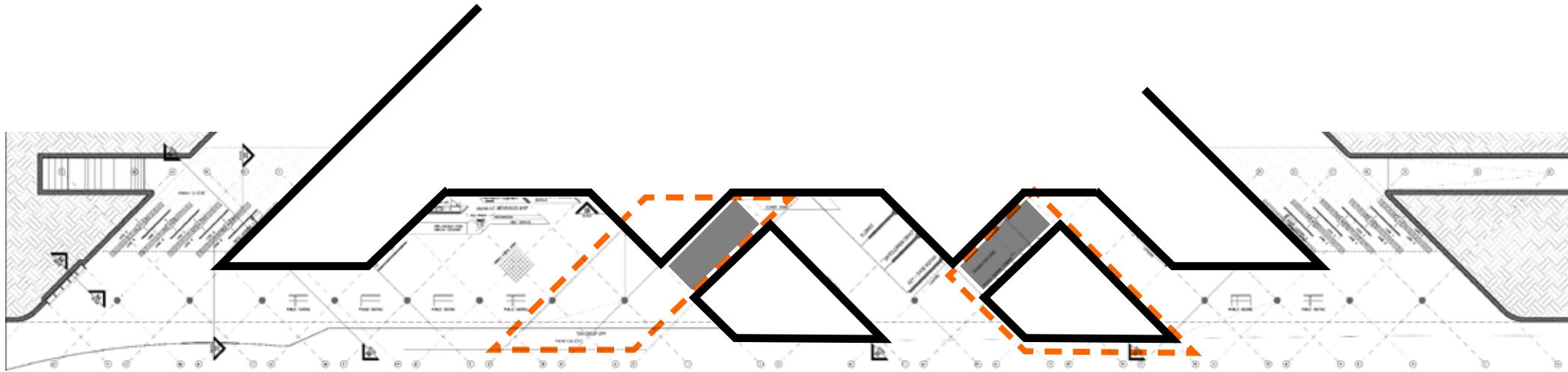


FIG 63: Conceptual diagram: surfaces that morph from the ground,

FIG 64: Conceptual model: surfaces that morph from the ground.

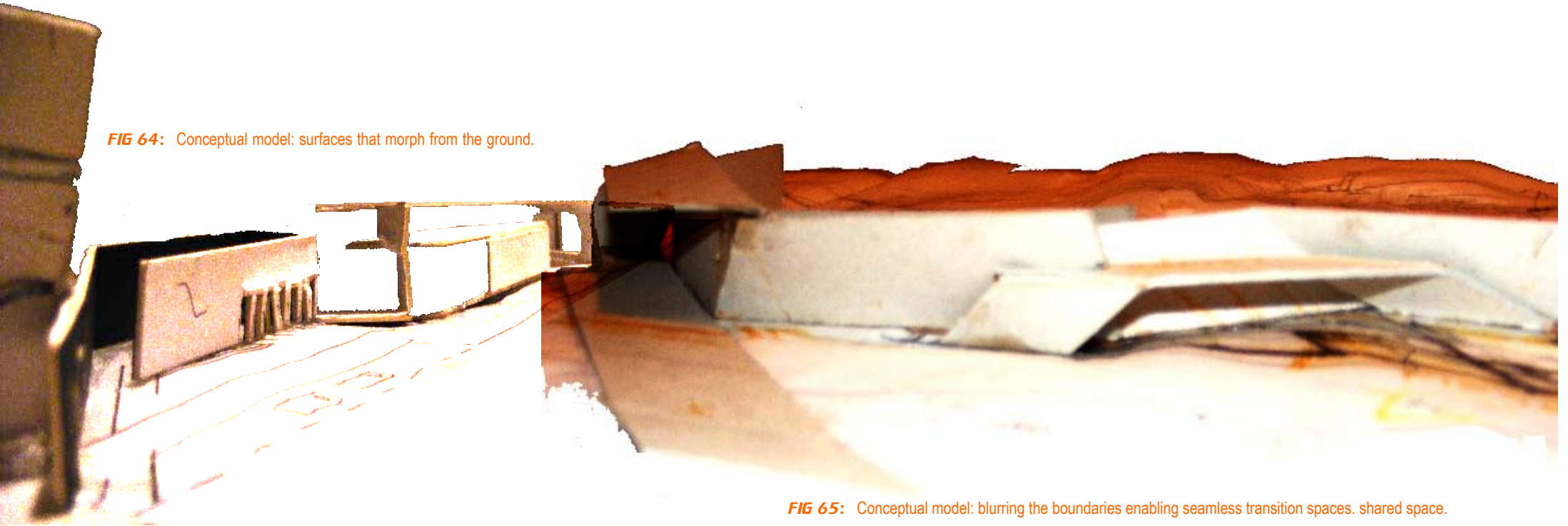


FIG 65: Conceptual model: blurring the boundaries enabling seamless transition spaces. shared space.



5.1.3 OUTLINE OF THE ENCLAVE: The site shares a **subtle formalistic relationship** with the Main Administration Building (“the Ship”) across the street, in respect to the heritage significance “the Ship” is an **axial icon for UP**. Using a series of platforms that gradually incline with University Road, a natural form develops in the wall: a void that outlines contrast in the solidity of the wall. Due to the nature of the site, the enclave is distinguished as an inverse that mirrors the Main Administration building.

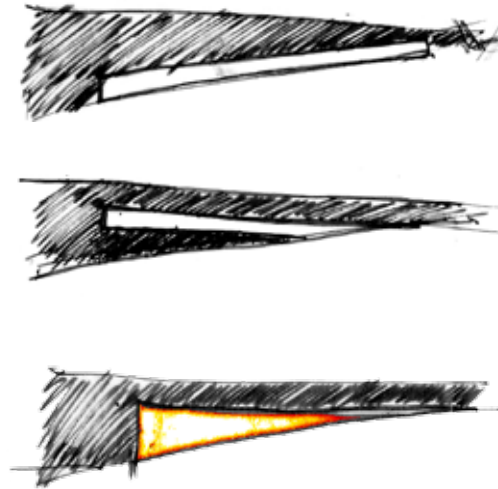


FIG 66: Conceptual sketches: outline of the enclave.



FIG 67: The Main Administration Building.

5.1.4 ENTERING THE ENCLAVE: The entrance closest to the intersection; currently not in use will be restored as a functional entrance. The main entrance that is currently the only functional entrance will be demolished and a new entrance relocated at a more feasible position. Both entrances will be widened and individually aligned with UP. A third throughway positioned across from the relocated UP entrance establishes an accessible bicycle and pedestrian link between Loftus Versveld Sports grounds and UP campus. Entrances to the platform define the end of the enclave, like runways that signify the final transition, using a repetition of LED down lights to stimulate the experience of transition.

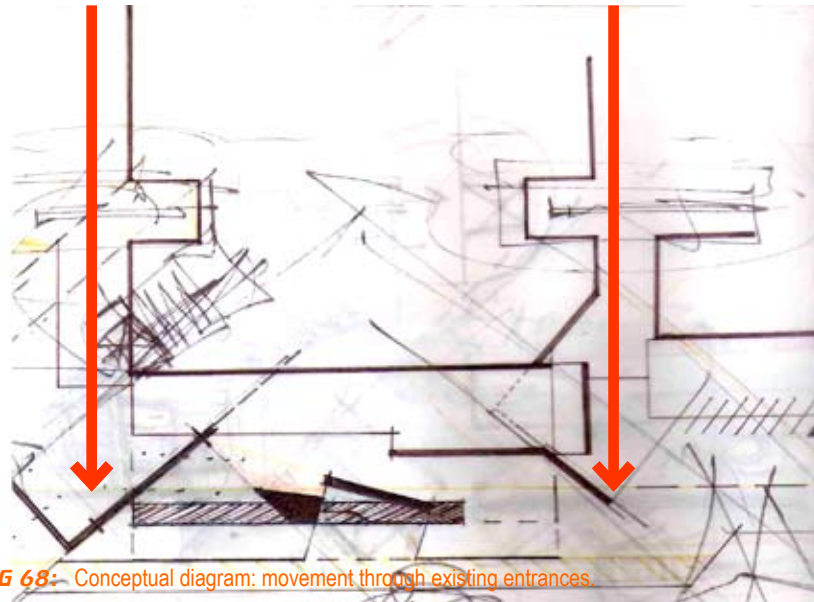


FIG 68: Conceptual diagram: movement through existing entrances.

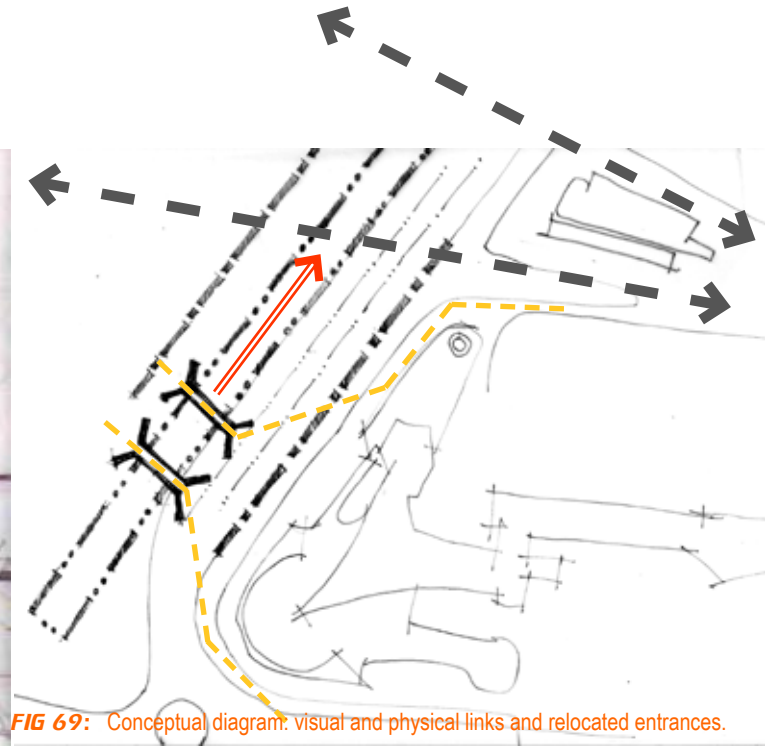


FIG 69: Conceptual diagram: visual and physical links and relocated entrances.

The inclination of the individual visual and physical alignments with UP's relocated entrance and its pedestrian path that curves around the Main Administration Building established the 45° grid detrimental to the design. The 45° grid is spaced with the alignment of the palm trees, accentuating the cultural prominence they signify in this educational precinct, and enhancing a rhythmic transition in the linear space.

Planes aligned with the 45° grid indicate surfaces which have morphed from the ground (platform) identified as the urban fabric. Organised around activities and functions that are fundamental to the existence of the *u_portal*; nodes that exist of public infrastructure and information resources.



FIG 70: Rhythmic alignment of Palm Trees on University Road..

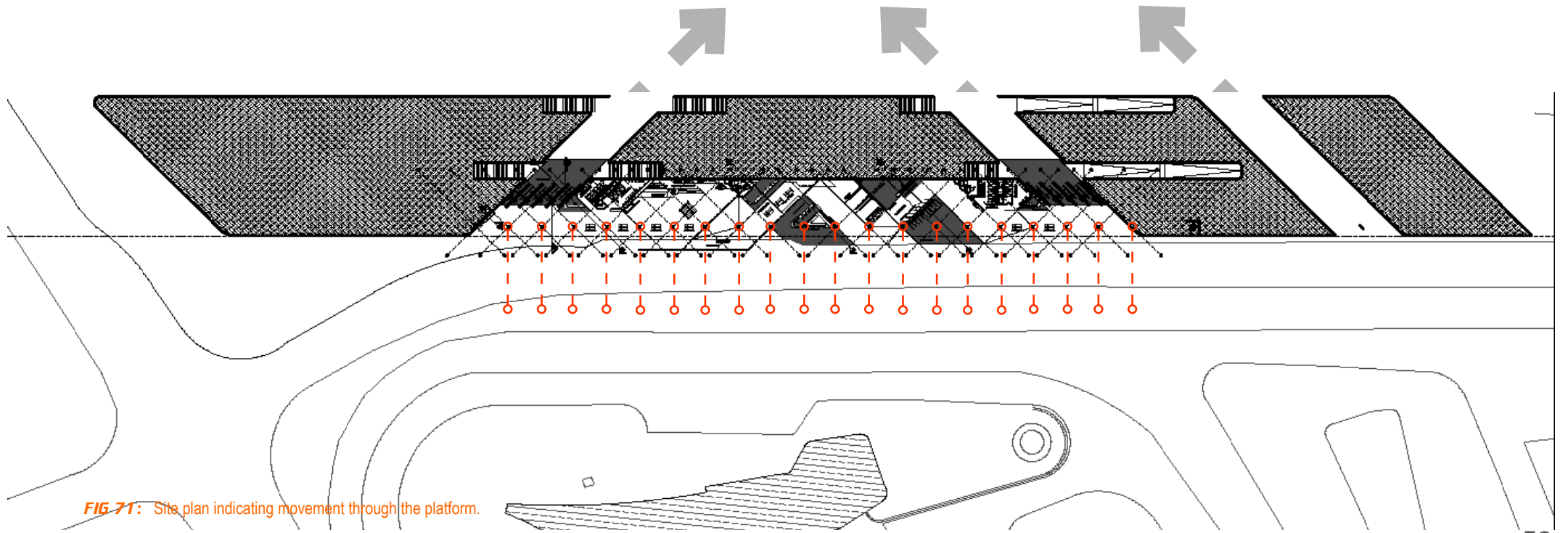


FIG 71: Site plan indicating movement through the platform.

5.2.1 SPATIAL HIERARCHY: A core structure embedded with supportive ground surface infrastructure is rooted in the space as the spine that ties the spatial programming. Juxtaposing movement with infrastructure, it accounts for a dynamic spatial interface. Hierarchy of the spatial organisation is directly related to the duration spent at each compact space, where each spatial program consists of a **transaction pod** as the functional anchor, a **self service** interface and an **activity generator**.

5.2.2 INFRASTRUCTURE GENERATES PU

The main priority of the **u_pod** is to create and sustain a public space that addresses factors of:

- a.) **safety** which includes 24/7 security and sufficient lighting during day and night.
- b.) **access** with a multi modal interchange between trains, busses, taxis and bicycles.
- c.) **public amenities** such as seating, shading, water fountains and ablutions. Establishing a different type of transport interchange at each entrance.

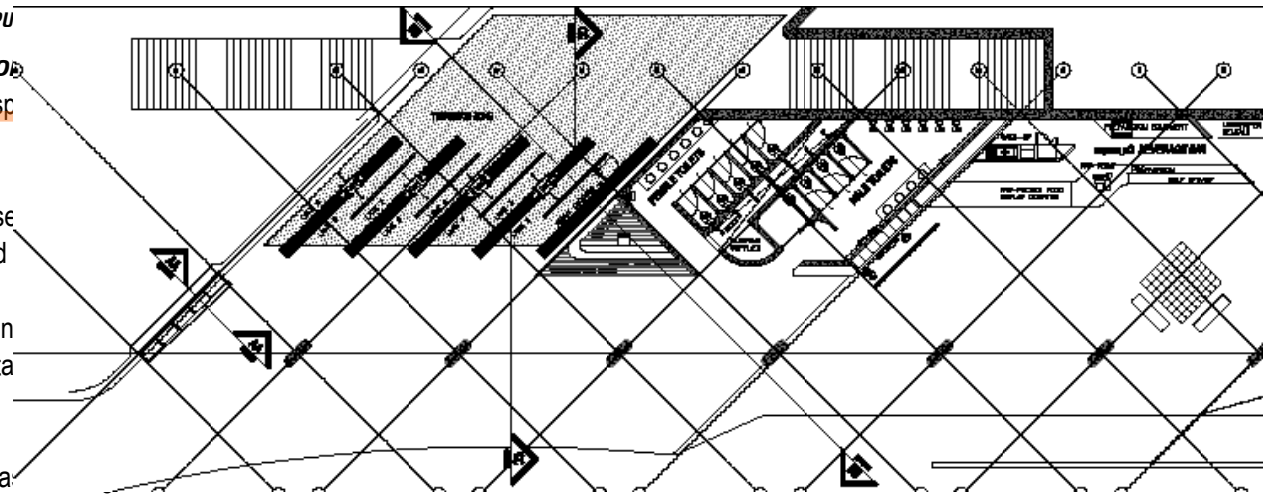
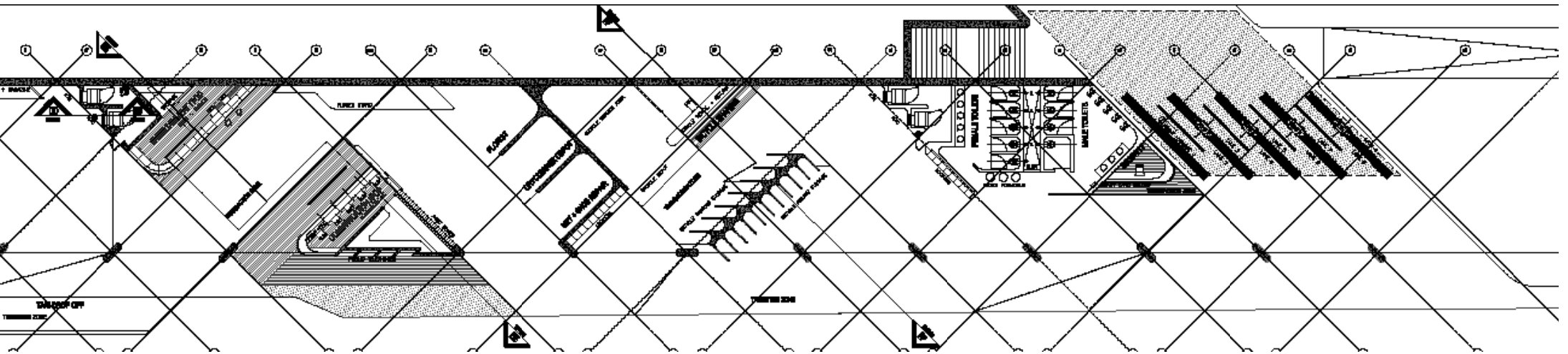


FIG 72: Plan showing core structure that ties the ground surface infrastructure.

DURATION: SHORT



DURATION: INCREASE



DURATION: INCREASE



DURATION: SHORT

Near the traffic circle provision is made via a taxi curb, for fluid integration of the train, taxis, and busses where the noise levels on the site are higher. A prominent horizontal surface grows from the platform ceiling and disappears into the ground and visually connects pedestrian and vehicular interchange. At the same time it blurs the boundaries between ceiling, wall and floor; also between the street and sidewalk.

Infrastructure which supports the public transport interchange are located closest to the entrances that feed the railway, these include a Security Transaction Pod, automated ticket vending machines, ablutions and turnstiles.

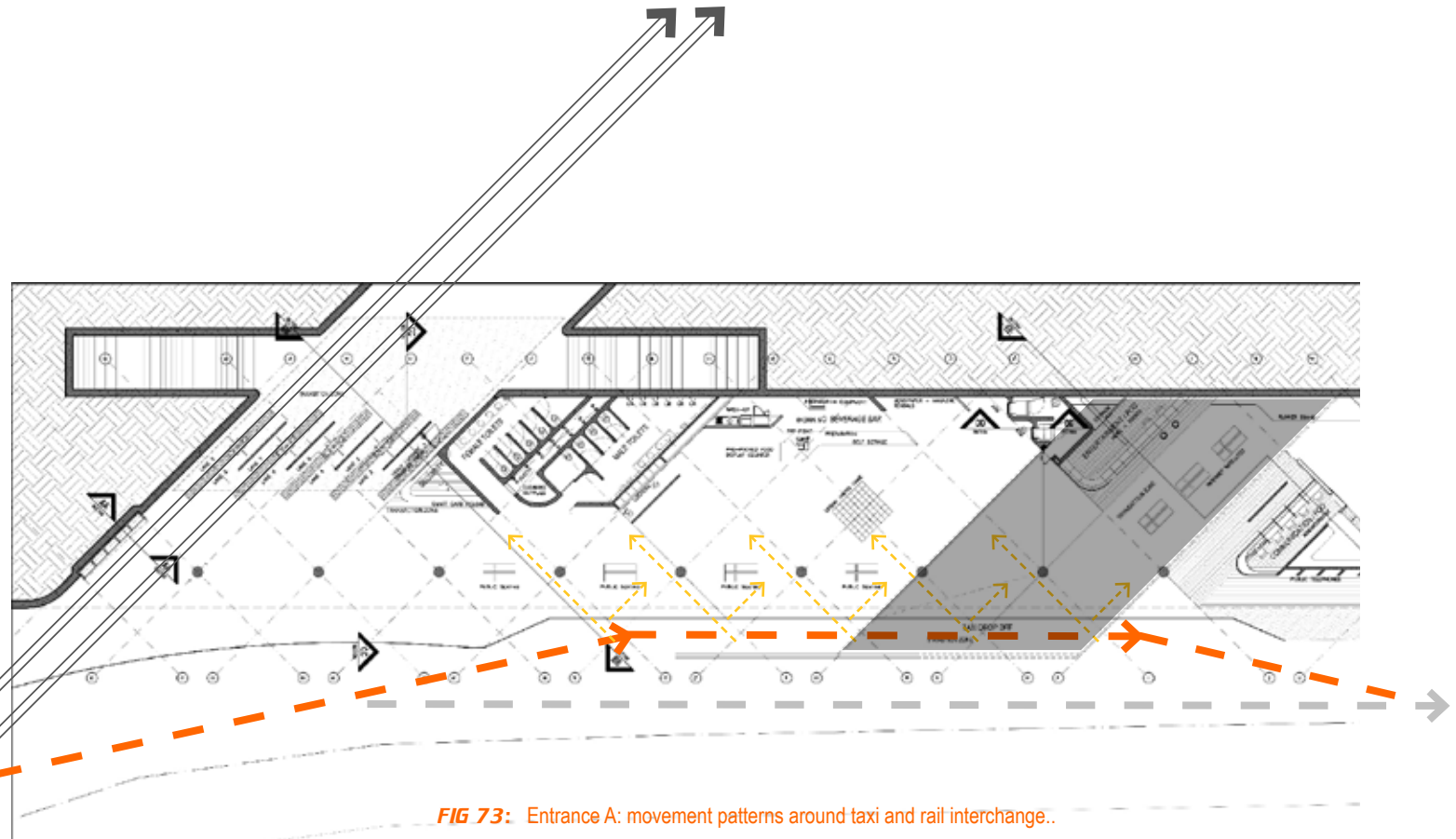


FIG 73: Entrance A: movement patterns around taxi and rail interchange..

FIG 74: SECTION CC: INTERACTIVE AND TRANSITION SPACES.

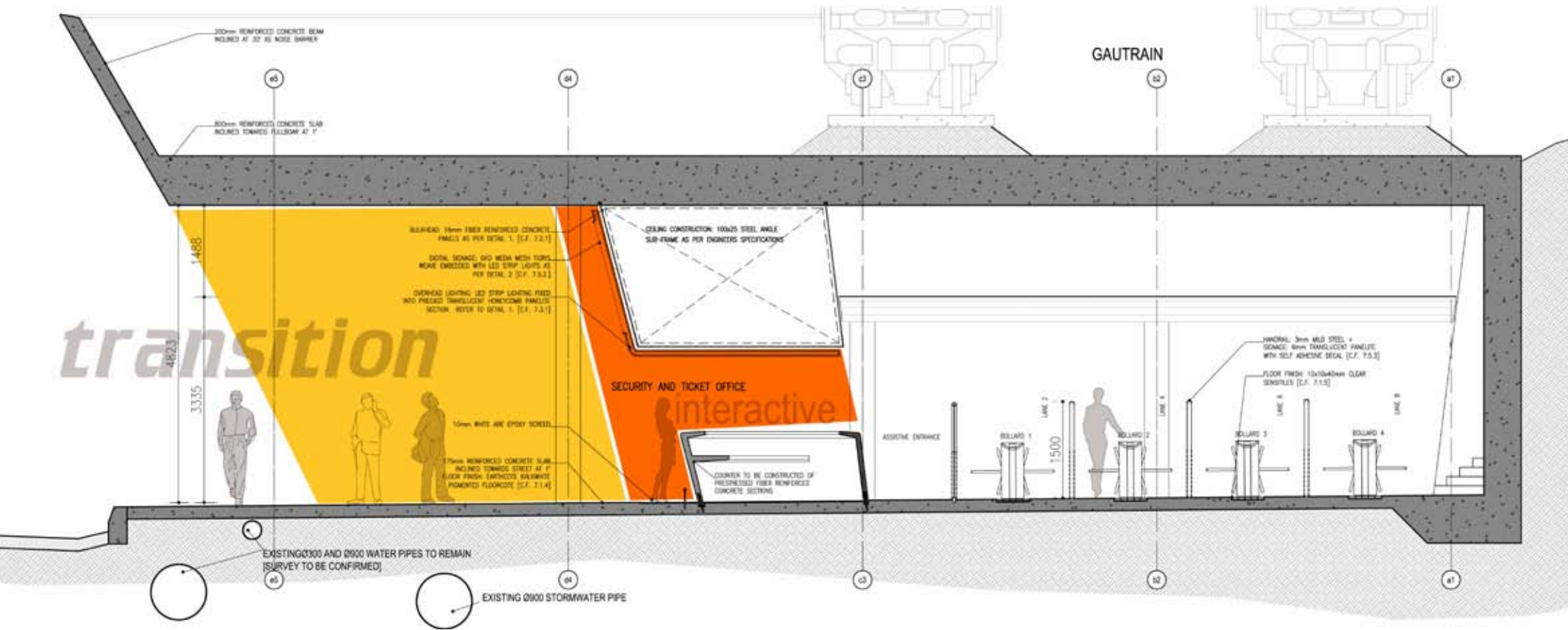




FIG 75: Rendered perspective of entrance A



FIG 76: Rendered perspective of security ipod

At the entrance aligned with the relocated UP entrance a bicycle and train interchange is introduced. This location for the bicycles is due to the lower ceiling height and slightly slower moving traffic. Here a Bicycle Rental Pod communicates directly with the bicycle sharing and private storage 'display' unit. The ground surface again acknowledges the transition between the sidewalk and interior space, and is subjected into the space protruding the infrastructure as a surface that grows from the ground.

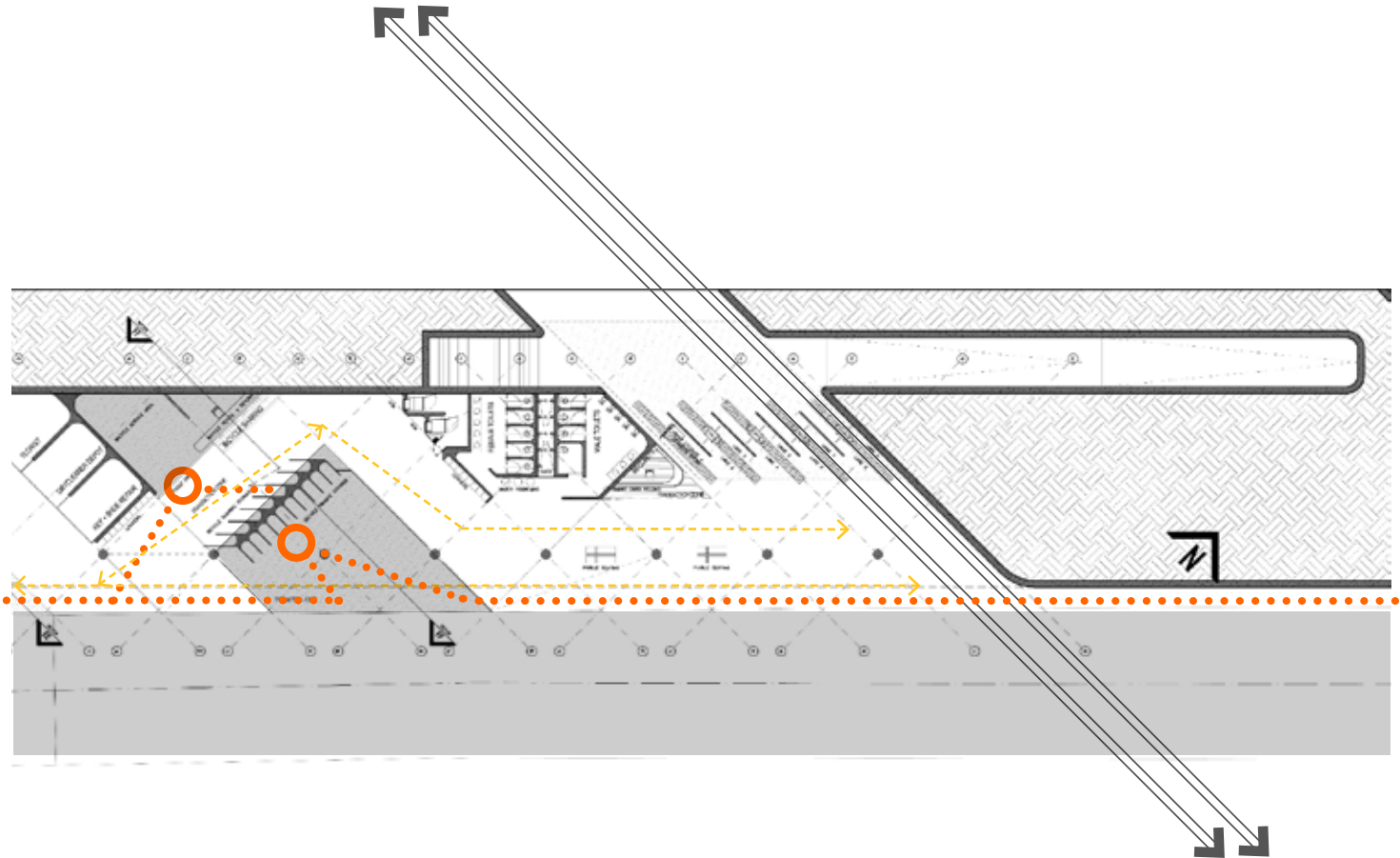


FIG 77: Entrance B: movement patterns around bicycle and rail interchange.

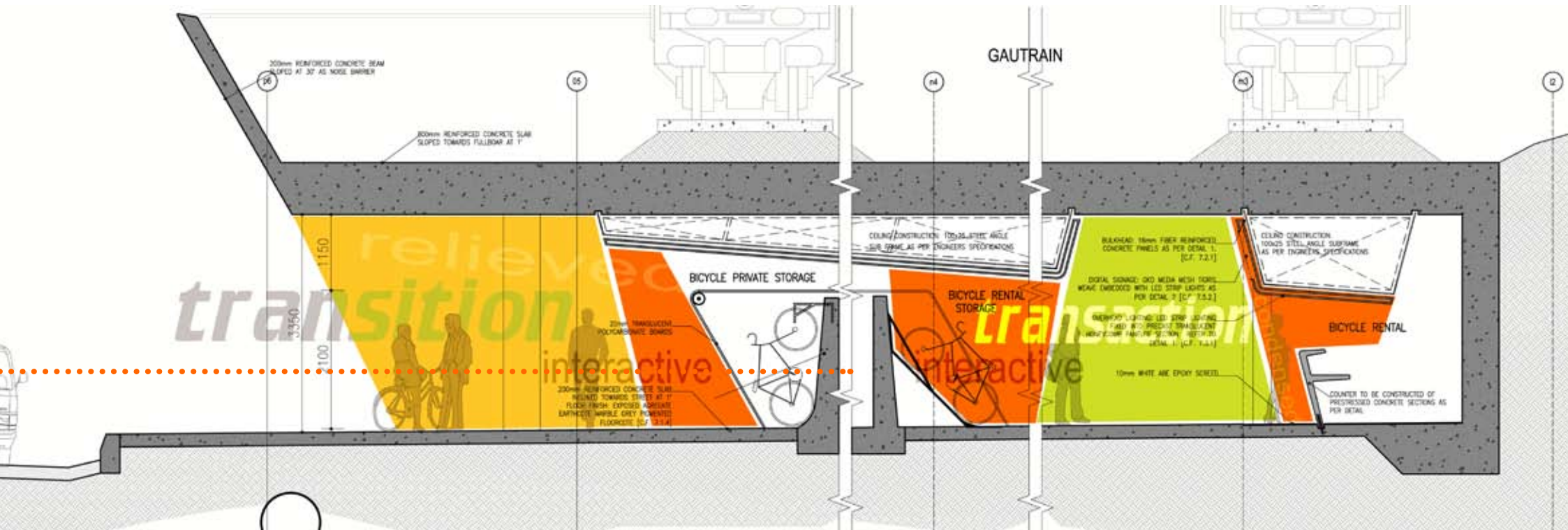


FIG 78: Section FF communicative spaces that informs the Bicycle Pod.



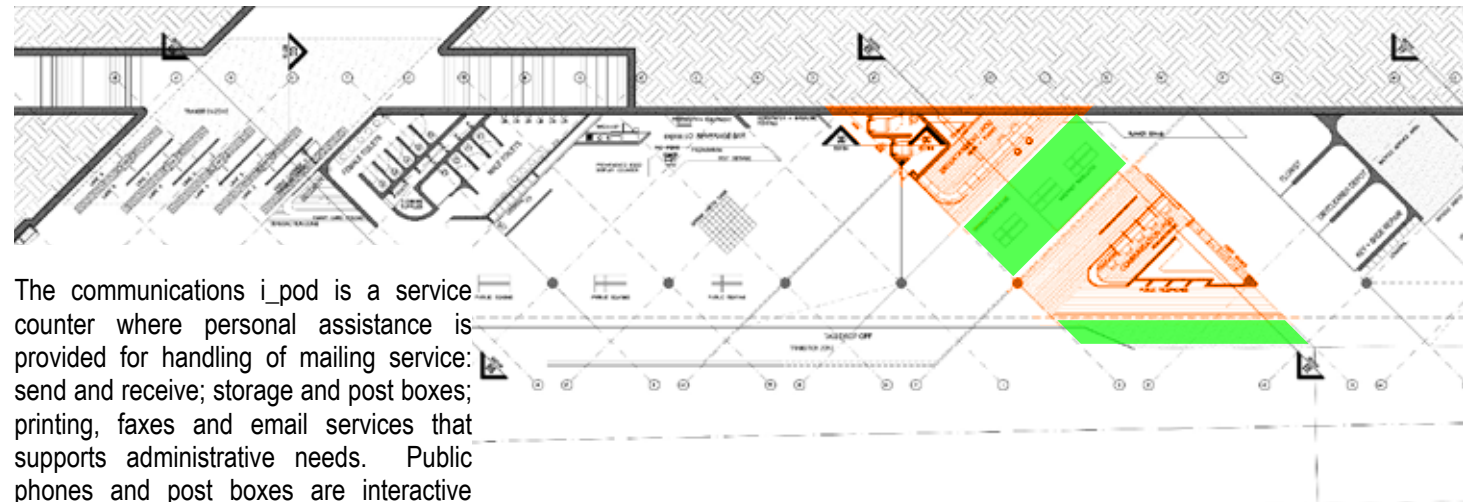
FIG 79: Rendered perspectives of Bicycle ipod: communicative spaces

FIG 80: Rendered perspectives of Bicycle ipod: communicatve spaces

5.2.3 INFORMATION ACCOMMODATES MOBILITY:

The entertainment i_pod and communication i_pod are both informative transaction zones. They are positioned at the heart of the *u_portal*, in a linger zone, which is further removed from the entrances because the duration of time interacting with the space, transactions and infrastructure is longer. These pods are introduced to the programme of the *u_portal* functioning as supportive information resources that maintains mobile migration in the urban field. Way finding information systems and digital information technologies facilitate a fluid transition between multi-modal systems.

At the entertainment i_pod commuters have access to information relevant to events of the academic precinct, such as sport events at Loftus Versveld, concerts from UP aula, Masker theatre and shows or movies in Brooklyn and Hatfield centres. Interactive music and photo downloading booths are the entertainment activity generators where commuters can listen to premiers of the shows and events.



The communications i_pod is a service counter where personal assistance is provided for handling of mailing service: send and receive; storage and post boxes; printing, faxes and email services that supports administrative needs. Public phones and post boxes are interactive supportive ground surface infrastructure classified as the communication activity generators.

FIG 81: Entertainment and Communications iPod sharing a transaction space.

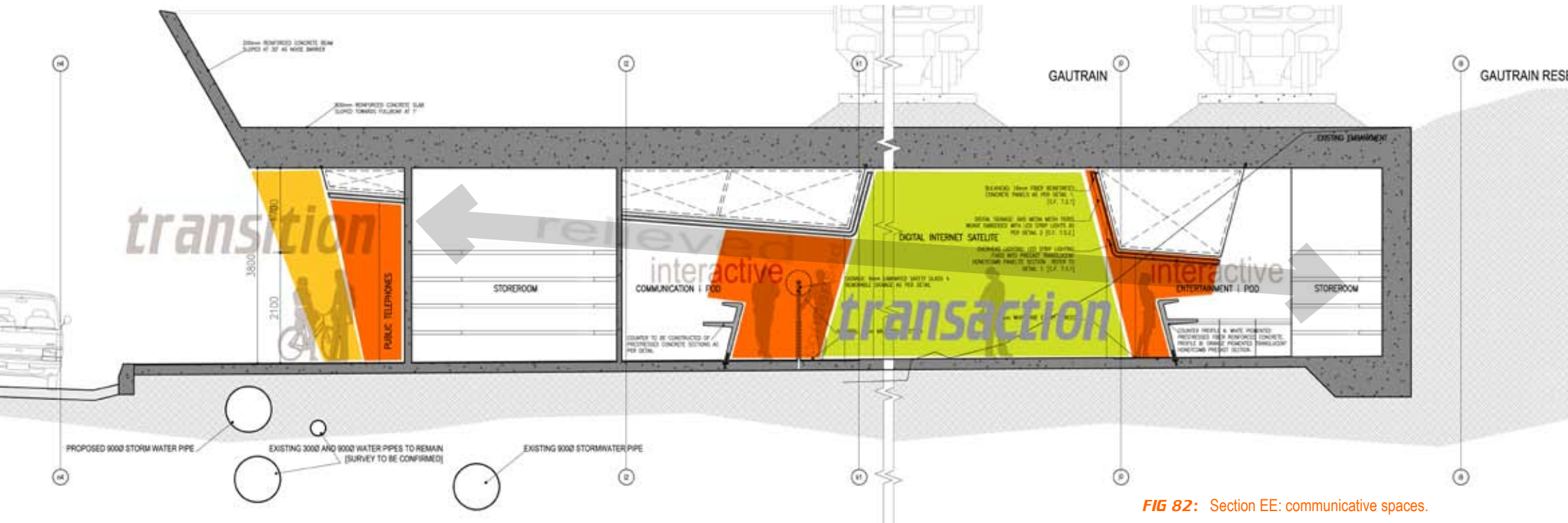


FIG 82: Section EE: communicative spaces.



FIG 83: Rendered perspective of communication and entertainment pods

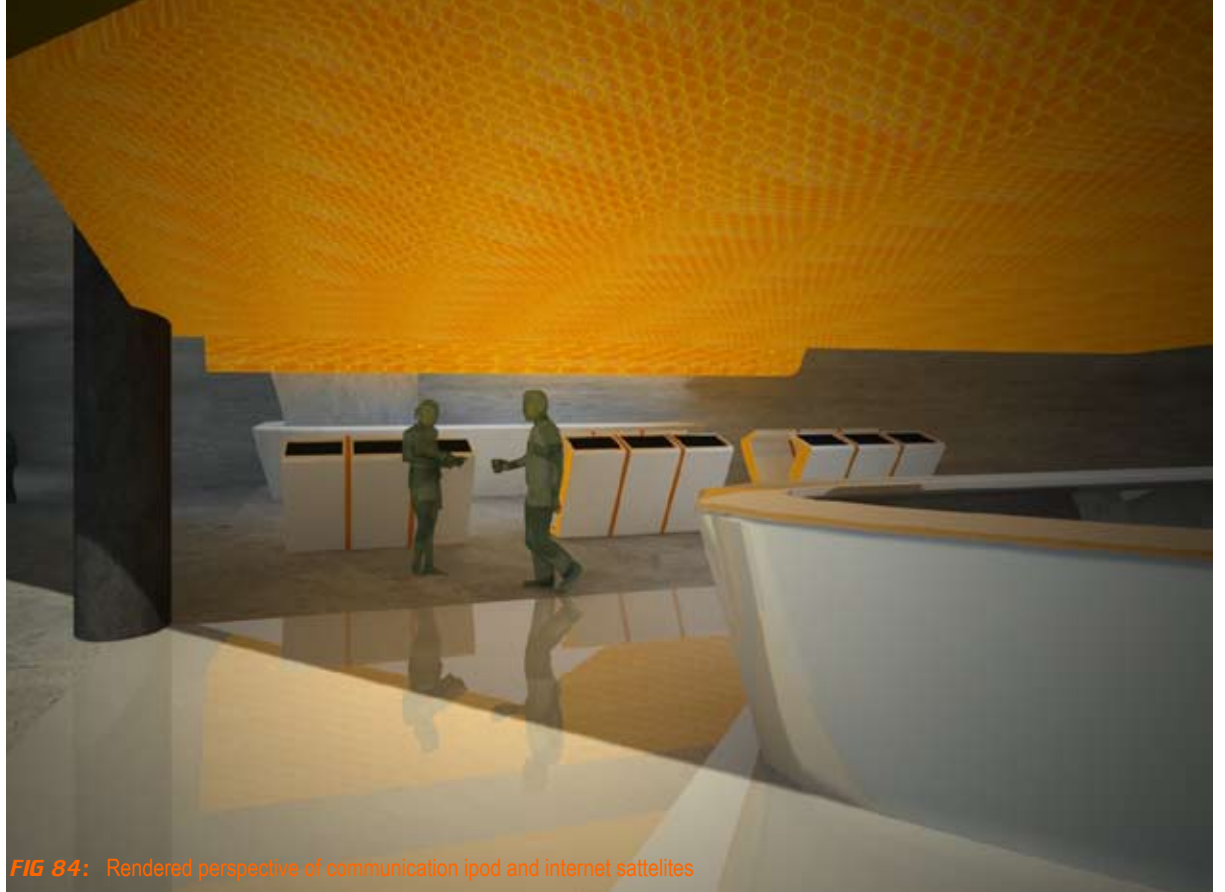


FIG 84: Rendered perspective of communication pod and internet satellites

A digital network of **internet satellites** is shared by the entertainment and communications i_pods as their self-service infrastructure. These satellites evolve from public seating into internet access units. The objects are designed as elements that morph from the ground, because they are part of the fundamental functions of a **u_portal**. A secondary digital spine intertwined in the physical infrastructures spine located in particular transaction spaces.

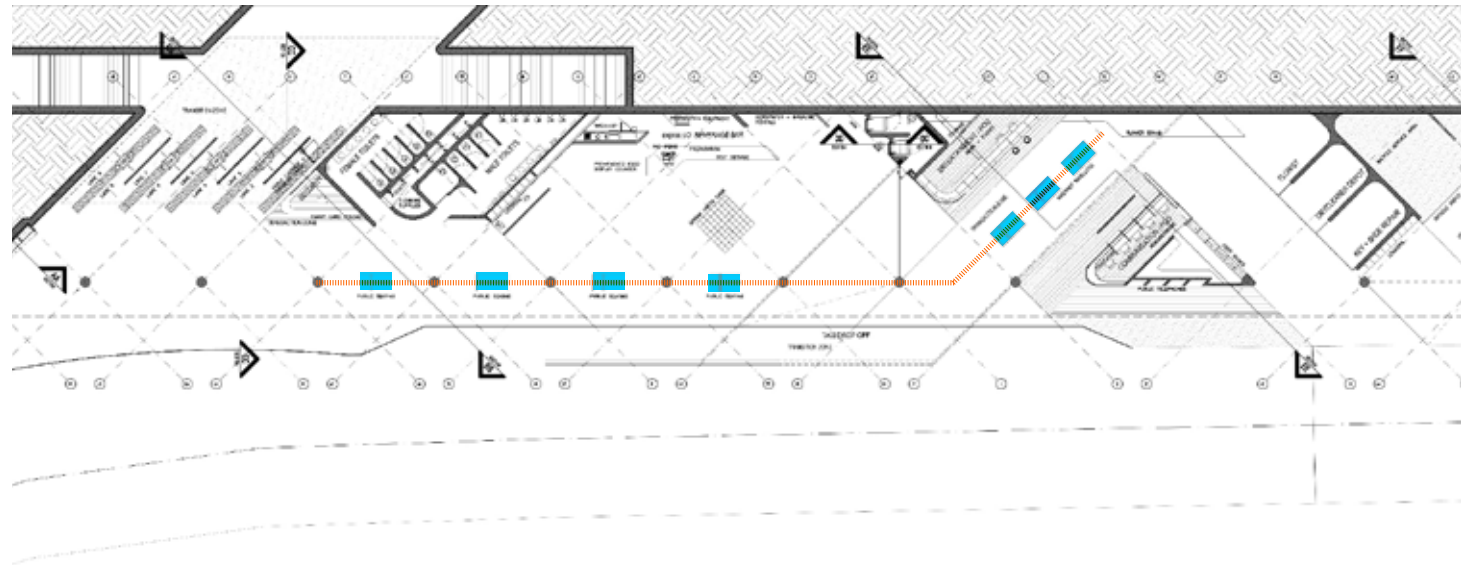


FIG 85: Plan allocating the internet satellites and public seating network.



FIG 86: Rendered perspective of objects in space: public seating and internet satellites