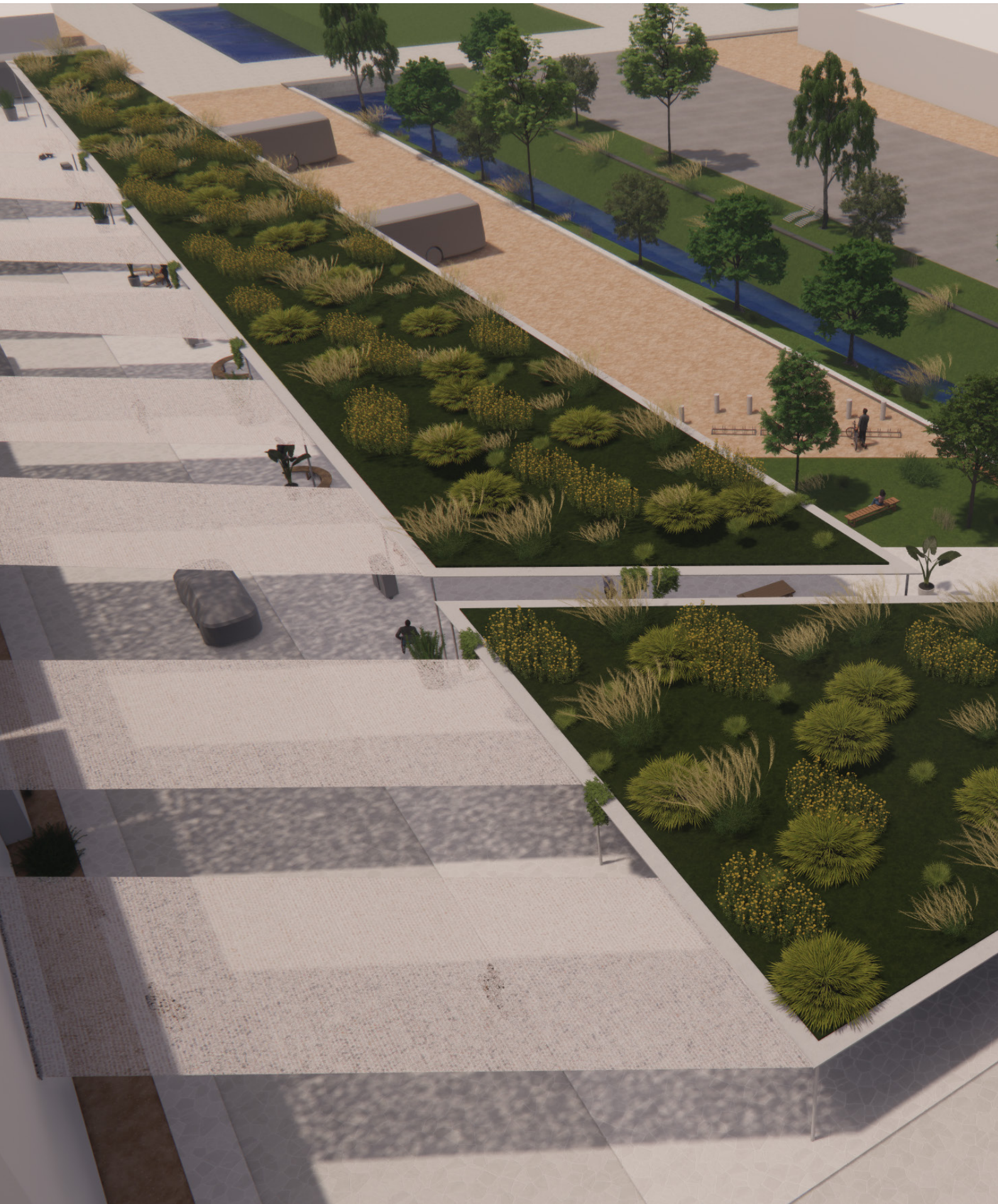
CETRAM : Santa rosa

COLLECTIVE CONNECTIVENESS

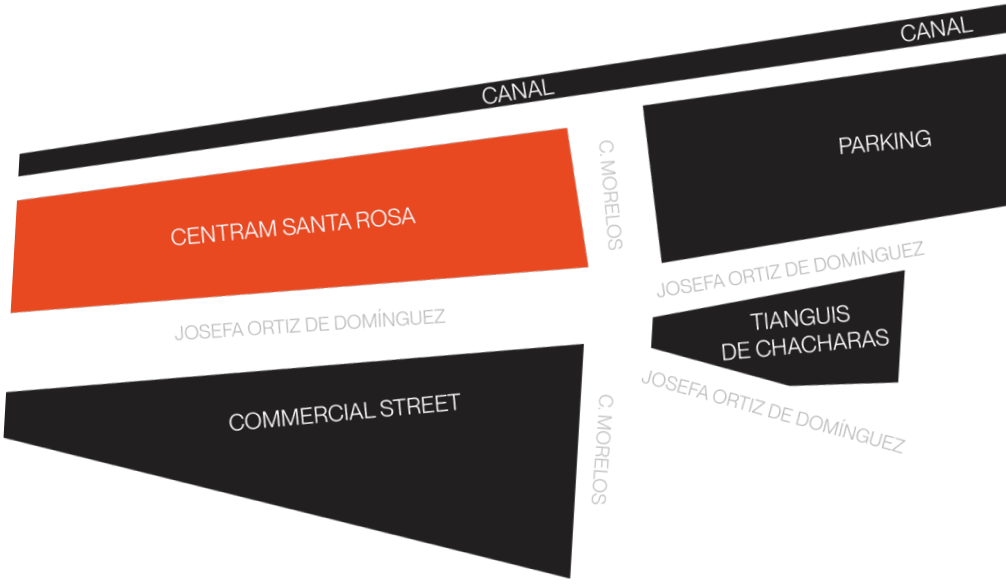
20°44’39.58” N - 100°27’1.07” W

QUERÉTARO , MEXICO



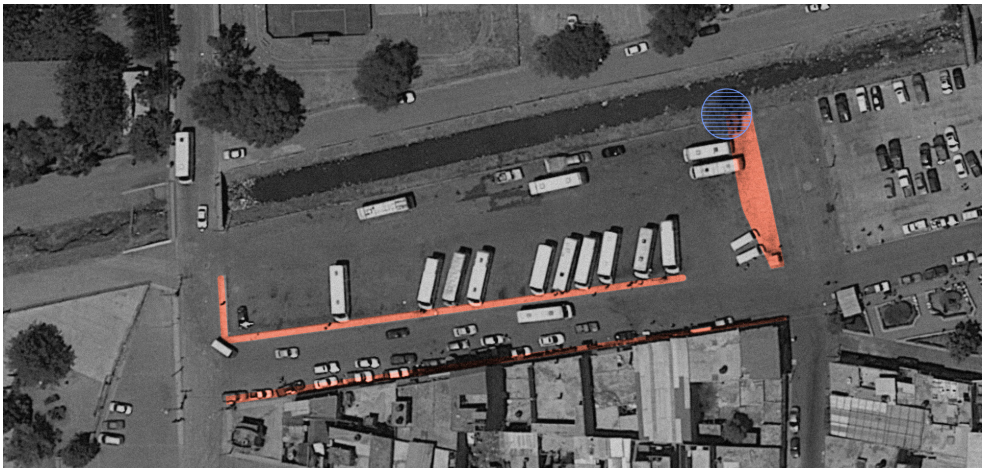
The CETRAM, or modal transfer center, of Santa Rosa Jáuregui has the main purpose of connecting different modes of transportation, notably from an urban point of view to a rural one. (Eugenia Vázquez, 2023)

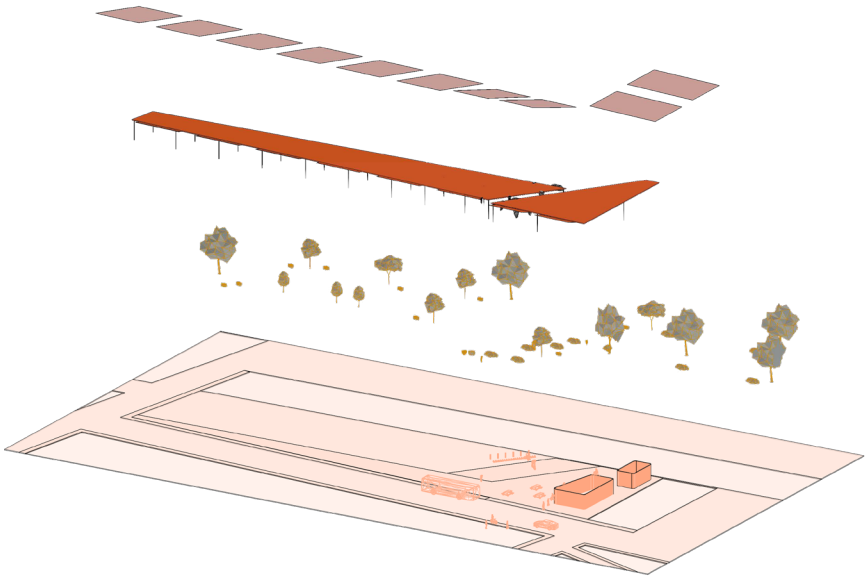
Due to its location, it also acts as a central area for the market area situated across the street and the bazaar hosted in the adjacent parking lot on sundays.



However, the CETRAM currently does **not fulfill these roles optimally,** seeing as, of now, the organizational logic of the parking does not prevent both efficient connection between the modes of transport and adequate pedestrian safety.

The heat island effect, along with the lack of facilities, prevent the CETRAM from being the comfortable social central area it has the potential to be.



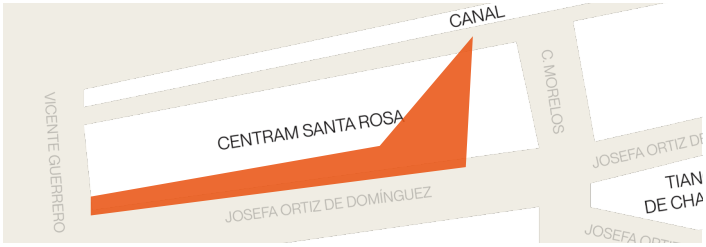


The main issue that needs to be addressed is the heat island effect. Creating areas of shade would exponentially reduce said effect, and what better way to do this than by adding cover in the form of a canopy above waiting and resting areas?

HEAT ISLAND EFFECT REDUCTION SOLUTIONS

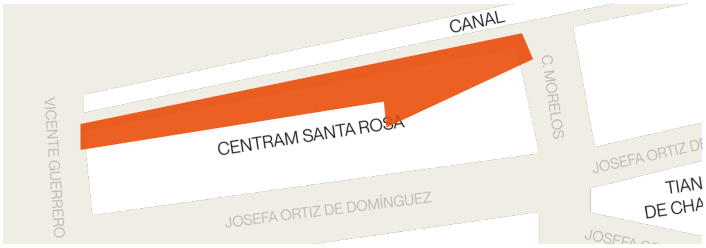
The canopy would be separated in three different types : permanent, vegetal and temporary

Firstly, permanent green-roofing from the location of disembarkation of users to a social area adjacent to facilities such as a booth and washrooms would be added. This would act as a biophilic inorganic canopy.



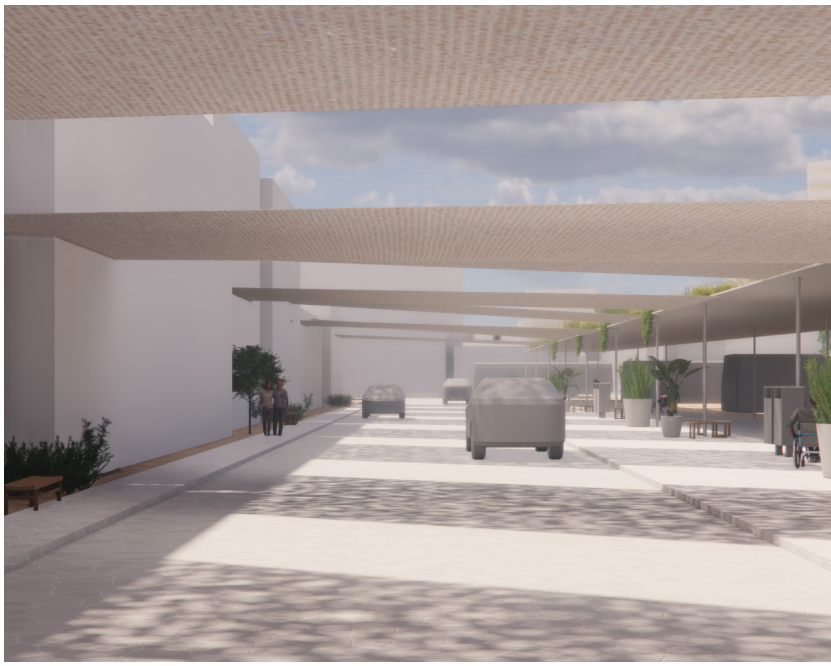
ISecondly, on the northern side of the CETRAM lies a storm drain which is currently being neglected.

This drain could however be used in a more efficient way by planting local vegetation and, most importantly, trees which would not only create shade in the long run, but also allow for a better management of rainwater since the plants could absorb a certain quantity of that water which will then evaporate and consequently reduce the surrounding heat. (Rhéaume, 2022)



Finally, the natural canopy being a long-term solution and the roofing above the CETRAM being a mid-term solution, a need for a short-term solution presents itself.This could be remediated with the installation of temporary textile roofing above the market to not only create shade in the high traffic area but also promote the local culture by encouraging visits to the market.

This textile roofing would also create a sense of continuity and unity between the CETRAM and the surrounding covered areas. In summary, to reduce the heat island effect, the concept of canopy in both its natural form and its biophilic man-made form should be integrated into this project.



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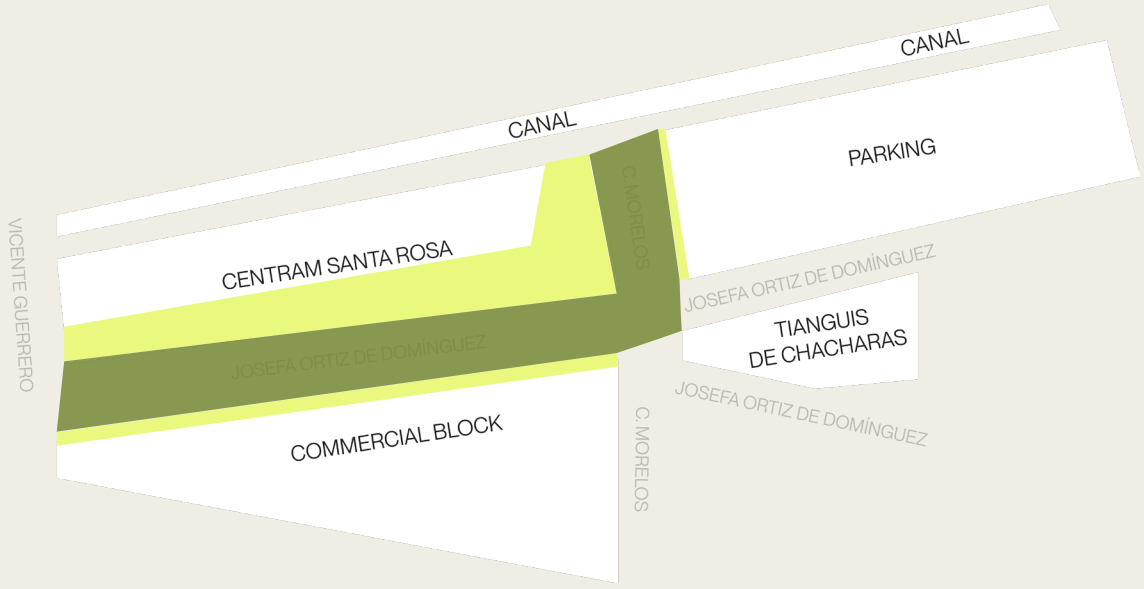
REPURPOSING AREAS

However, due to the current logic of the bus traffic, the implementation of social areas and facilities is nearly impossible, hence the idea of condemning the southern entryway of the bus parking to create space.

We aim to clarify the logic of the parking lot. Indeed, by only allowing one entrance and exit through the Vicente Guerrero Avenue on the western side of the parking lot and extending this entryway, buses would have a clear trajectory inside the parking lot and jamming would be avoided.

This clearer trajectory would also get rid of the need for passengers to unsafely cross the parking lot in order to reach the oher modes of transportation.

Furthermore, considering the fact that the southern entryway faces the Emiliano Zapata street, which is the street where the market area is situated, the removal of it would lessen the traffic of buses on said street and allow pedestrians to cross it in a safer way, once again promoting visits to the market.



PROVIDED SHARED AREA
PROVIDED SOCIAL AREA
PROVIDED NATURAL AREA
ZONE

GROUND-LEVEL INTERVENTIONS

Now that the removal of an entryway and the implementation of canopies have been established, what can we do with the newly freed and shaded space?

Firstly, adding necessary facilities such as washrooms, sitting areas, bicycle racks, a proper waste management system to avoid the pollution of the storm drain, tables and a front booth for both the recharge of transportation cards and a retail dynamic to the discretion of the city.

Secondly, designing the shapes of the platform in a way that clarifies the waiting areas for the different bus companies with the most efficient path to follow in order to reach the other modes of transportation. The shape of the green area which overtakes a section of the parking lot is also designed at an angle in order to take into account the axis of rotation necessary for a bus to back out.

The idea of solidifying the CETRAM as a central social area for the urban modes of transport, rural modes of transport, market area and bazaar has already been established as being a main focus to this project. To delve into this idea further, paving the section of the Emiliano Zapata street in front of the market and the small section where the taxis wait with the same pavement would help unite the spaces . This paving would suggest pedestrian priority crossing around the CETRAM and help reduce speeding problems.

MATERIALITY

During the elaboration of this project, priorities were taken into account when contemplating options for the materiality such as the usage of light-colored materials which provide a decent cooling potential, (Columbia University, 2006) consideration for the sustainability of materials, materials which can be locally sourced and taking inspiration from the materials already used in Querétaro.

Taking in consideration these priorities, we suggest these two materials: sandstone and adobe.

Firstly, sandstone could be used as a natural alternative to asphalt. It is an exceptional candidate for the following reasons put forward by the company Yanko Design: it « can increase the pavement reflectance [...] by up to 20% », « can slow the rate of ground-level ozone formation » and « enhances visibility at night, reducing lighting requirements, saving energy and increasing safety » (Tran, 2011). These potential properties of sandstone roads are directly linked to the reduction of the heat island effect and would make a great addition to the project. Furthermore, sandstone can be locally sourced since it can be found in the Balumtun Sandstone geologic formation in Chiapas. (Carbot-Chanona, 2020)

Secondly, adobe, according to a publication by Dr. Jackie Craven on ThoughtCo., is « an ancient building material usually made with tightly compacted sand, clay, and straw or grass mixed with moisture, formed into bricks, and naturally dried or baked in the sun without an oven or kiln. » (Craven, 2019) While there is no specific suggested usage for adobe in this project, it would be a welcome choice of material for the furniture such as tables and benches and would be a way to include the expertise of local designers in this project. It is also important to mention that there are currently older buildings in Querétaro that are made of adobe, which means that having adobe for furniture would be an architectural nod to the historical centers of the city.

GREENERY

The following chosen plants can be found in Querétaro and its close surroundings and, during the choice, a palette of color representative of the vibrance of the city was taken into account:

Tropical Milkweed, Laelia Orchid, Mexican Honeysuckle and Narrow-Leaved Ragwort. It is important to take note of the fact that laelia orchid is a species of plant which can grow in rocks (iNaturalist, 2023), therefore, next to the storm drain. As for the trees, there is no specific suggestion of species in this project, but the surrounding trees seem like excellent candidates considering that they would blend into the area and create a lot of shade.

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