



Project construction procedure

The jobs that will be carried out in the established work areas are described and conform to the planned calendar. As seen, the activities are not exclusive to one or another phase in particular. Once this is mentioned, the procedures to be attended will be for the construction of the project product of this contract.



To start the work and following the specifications and requirements expressed by the CONTRACTOR, we will start to prepare the area for the proper development of the work to be done.

We will start according to our work program. The project consists of a 3-level structure and basement plus exterior work and landscaping. Considering the particular type of project, the majority of phases are repetitive on different levels, excluding the

basement and foundations. Subsequent levels will have similar processes, so it is sufficient to describe one of those levels. The lower levels will consist of their own activities and are distinguished from the rest of the building by their own nature.

I.0 Terrazas and preliminary work

The first step will be to clean and depallate the land of all the material not suitable for construction. It will be carried out with the right equipment according to our technical proposal. This will consist of depalring the soil of shrubs, grass and eroded soil to a depth of 20 cm from the natural grade to remove the contaminated material. The material resulting from this action will be loaded and transported by mechanical means to a site proposed and approved by the supervision.



With the land prepared, we will begin with the placement of a temporary perimeter wall of plywood and wooden posts, this will serve to protect and delimit the work area and prevent anyone outside the construction from entering its boundaries. Surveyors will place milestones and benchmarks to as fixed and reference points.

After the establishment of a control line, level control stakes are normally placed along the edge of the earthmoving area at a specified spacing according to the work being done. In smaller projects, the two most common methods of controlling the terrace is using these stakes and thread lines (blowout). The use of laser transits or total



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

station are more sophisticated options with GPS control systems and provide a higher level of accuracy, usually used in larger projects to control the operations of heavy machinery and graders.

The site must be compacted according to the standards set for the construction of the embankment to a depth of at least 150-200 mm before the construction of the embankment begins. This is normally carried out by scarifying and then compacting the loosened material. To ensure that the specified compaction is



achieved, the moisture content of the soil must meet ASTM standards, otherwise it will require drying if it is too wet or water being added if it is not optimal. The depth of the "filler" should not be greater than that which can be compacted. The degree of compaction must be consistent with that required by the filling material.

Finally, the surface will be primed with an asphalt-based solution before placing the upper surface, which is the finished area in which to transit.

1.1 Basement and foundations

Using the previously placed markers, surveyors can set the structural grid on the property and mark-out the pier footings, foundation beams, foundation walls and any other related structures that need to be placed on the ground.



Next, we can proceed to carry out the excavation for the foundation footings according to the project. Excavations will be executed by mixed means, starting with a backhoe and then manually refining and profiling. The excavation material will be selected to determine if there is material in conditions of reuse for backfills, the rest will be transported by mechanical means out of the work area.

Once the excavations of footings, foundation beams and foundation slabs are completed, a 5 cm thick poor concrete bed will be placed to provide a level and clean template for the placement of the reinforcing steel. Once the base is placed, the iron workers will proceed to place the reinforcement as indicated in the structural project and complying with the applicable standards and codes.



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6



Completing this task, the infrastructure will be verified, checking dimensions and levels. With the shoring in place and secured, we will notify the supervisor that we are in a position to place concrete and its validation is required. With the inspection of the supervision, the casting of the foundation will be carried out with ready-mix concrete of 250 Kg/cm². Attending to the planned logistics of, it is more advisable that the concrete is premixed and applied with pump.

1.2 Metal structures

The joining element that attaches the foundation to the superstructure are the anchors and the steel base plate. The base plates with their anchors will have been prepared in the workshop. These will be mounted on the foundation die at the time of laying the concrete.



Once the placement of the concrete in the entire substructure is finished, the nuts and base plates will be placed, leveling them so that they are in a position to receive the metal structure. The metal superstructure will have been manufactured in the workshop to exact dimensions according to the project. Once each element has been identified by the axes of the structure, the assembly will begin with the placement of each of the structural steel columns. By means of cranes, the columns will be transported and

mounted in place, monitoring the verticality with surveying equipment so that the alignment is in the correct position. When the columns are aligned, the welder crew will proceed to fix each of the columns by welding them to the base plate with E70XX welding rods, as designated by the structural project. The entire structure will arrive from the workshop primed with anticorrosive paint and once placed, it will be detailed in the parts where the weld has removed the primer. Finally, two layers of fire-resistant paint will be applied.



After this, the stabilized mortar (grout) will be placed on the base plate as designated by the project. In each of the columns, inspections of penetrating liquids and magnetic particles will be carried out by an external laboratory to ensure the quality of the work. In the upper nodes of the columns or where the levels indicate it, connection plates will be placed for the assembly of the structural steel beams. As with the procedure for the columns, the beams will be welded to the columns on the nodes that the project indicates.



1.3 Masonry

Once the metal structure is assembled, masonry work can begin. It is important to note at this time that, simultaneously with the laying of the foundation, there will be parts of the work that overlap with other disciplines such as hydraulic and sanitary installations. This is mentioned since, during the foundation process, it will have been planned to leave pipe passages in those parts where it requires it.

Following in order of procedures and depending on the requirements of each area of the project, the subsequent filling of trenches should be carried out or to make the soil surface ready to receive concrete slabs directly in the basement area or to cover open trenches. In the case of the basement, ready-mix concrete type 250 Kg/cm² will be poured over the areas indicated by the structural project and in the required thickness until reaching the level of the finished ground of 3,489 mm. This particular case consists of approximately 1400 m² of basement, prior to the placement of concrete, the steel reinforcement will be placed with steel rods as shown by the structure. Once the floor is made, the structure of the mezzanine and also the subsequent levels will be carried out.

The construction system for the upper levels is with steel-deck and concrete. To do this, the crew of steelworkers will place the steel-deck sheet on the metal beams following the guidelines set by the AISC,



the current building regulations and the specifications established by the approved structural project. Nelson shear bolts will be placed and a layer of electrowelded mesh of high-strength steel will be attached. With this completed we will proceed to place the concrete of each level that is already verified by the supervision. The slab will have a thickness of 15 cm with ready-mix concrete type 250 Kg/cm². Once the concrete is placed, level and with the desired finish, it will be cured with curing

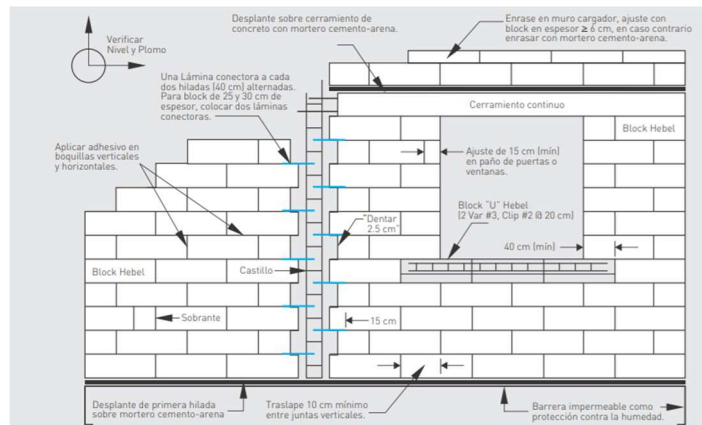
membrane to protect it and favor a proper setting.

During this process, the overlaps of disciplines will also be observed to leave the pass-throughs for installations between floors.

Once the entire structure is finished, we can proceed to work on walls and partitions. This work will be carried out by special masonry crews. The project establishes that the exterior walls are with the Hebel system, here it should be noted that in the clarification meeting it was specified that they are not included in the offer, however, your option consists of the following. The outer perimeter walls will be based on the standard Hebel block that will be joined with the special mortar for this block.

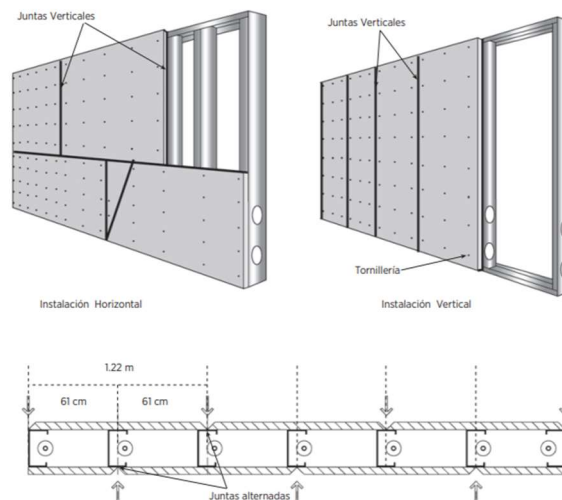


Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6



Before the work of the interior walls began, a crew of plumbers and electricians will carry out all the installations according to the project. Having prepared the passes for these installations, the following construction processes will go in direct coordination of masonry with all the facilities that intervene.

The interior walls shall be made of a galvanized sheet studs and plates, covered with drywall and joined with tape and ready-mixed compound or a layer of cementbond (basecoat), when designated by the project.



Having the walls framed, the suspended ceiling will begin with its preparations. As the project points out, the ceilings can be of different types, to mention some that will be installed in the project are the following.

- Techo desmontable ceiling manufactured by King.
- 24"x24" renewable ceiling plates manufactured by King.
- Solid 1/2" USG drywall ceiling.
- Solid 1/2" USG drywall and fiberglass ceiling.
- 1/2" USG Type X fire resistant solid drywall ceiling.



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

After the wall and ceilings are completed, we can immediately start with finishes and stucco on all exterior walls and paint on all surfaces. Both the interior and exterior walls will be primed with acrylic sealant before the application of the paint.



With the walls and ceilings finished, work can begin on floors with any finish that is required, ceramic, conductive tile, wood or carpets.

To complete the work, both on the basement level and on all other levels, the windows, handrails and furniture according to the project will be placed.

Taking into account that the building consists of several floors with identical characteristics, these procedures will be repeated as requested by the project.

In specially designated areas it is necessary to install conductive tile, manufactured in p.v.c. of 2 mm thickness of a single layer, conductivity between 25,000 and 1,000,000 ohms, influence of water after immersion of 14 days at 20 degrees c. or 0.25 % maximum, abrasion resistance of at least 75.00 cycles according to astm e162-h-18 and astm-d-1242-92 and copper lamella of 0.001" of minimum thickness and 0.500" of minimum width and a minimum of 18" in length. This lamella will be welded at one end to a 10-gauge cable that will go to the earth system.





1.4 Recreation level

At the same time as the construction of the main building, another team will be in charge of building the recreation area that consists of the construction of a swimming pool that will have an approximate area of 70 m2, in addition to having a whirlpool tub.



For the pool, the process will consist, first of all, in drawing out the pool outline and excavating them by mechanical means, it will be finished manually to give the established and desired shape and depth. At this time, we proceed to place the pipes for suction and recirculation of water and the air or water inlet under pressure for the hydromassage. Skimmers and outlets for nozzles, and vacuum cleaner connection will be placed. In the same way the floor drains will be placed at the bottom. All these pipes will be tested for as per

ASTM standards before proceeding with the following work.

With the preparations finished, the corrugated steel grill will be placed with the assembly established by the project. Finally, the concrete will be placed by pressure (Gunnite) and will form a monolithic shell. With the pool shell finished in its basic form, we will finally proceed to the application of the desired finishes inside the pool. Depending on the final design, we will place the edge (copping) on the perimeter of the pool. This will be at the level of the outside floor. Finally, the connections for supply, return and lighting pipe will be made from the pool to the machine room where the filtering, recirculation, heating and electrical control panels will be located.



With the pool finished in its basic form, we will finally proceed to the application of the desired finishes inside the pool. As a complement and depending on the final design, it will be placed at the edge (couping) around the perimeter of the pool. This will bring the level of the exterior floor.

Finally, the connections of the feeding, return and lighting pipe will be made from the pool to the machine room where the filtering, recirculation, heating and electrical control panels will be located.

1.5 Electrical installation

Low voltage

Following the work program and the planned logistics, everything related to the electrical installations will be carried out by specialized labor following the stages in which the building is being built. First and during the early phases of the building, underground pipes and passages will be placed through foundation structures or concrete walls, according to the project. Once the structure and slabs are placed, the electrical



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

teams can prepare and assemble the necessary supports, trays, suspended pipes and vertical passages between levels.

Special care will be taken, as in all the work that we execute, in following the guidelines, regulations and established indications of the project. When inconsistencies are found with the project and work, supervision will be notified so that it can consult with the designer and make appropriate corrections or recommendations.

As the work progresses, it will be possible to continue with the placement of the conductor between the exits and the panels that correspond to them. During this process, the cables must be identified and labeled with the circuits that correspond to them and the boxes where they go. The pipes will be identified with the color codes established by CFE.

All cables and connections shall be tested to ensure that there are no cable crossings or discontinuity in the



lines, as well as that they correctly reach the switches on the electrical panels. Electrical distribution centers can be normal, regulated or isolated. Each one will have a service and installation system for the service they intend to give. In particular, ungrounded insulated boards (IT) are wired with special conductors and will be connected to an isolation transformer. When they are placed and wired, a thorough inspection must be passed to verify their correct functioning (this is vital and cannot be expressed more strongly).

Once the wiring and feeding of the main feeders of the circuits and distribution boards, as well as the wall and ceiling outlets have been completed, it will be possible to follow the placement of accessories and luminaires.

Medium voltage

As medium voltage we will consider the installation and assembly of electrical equipment that provides electrical energy in medium voltages (7200 V) to the building facilities and how it is transformed into usable voltage. This service will come from the main medium voltage lines of CFE and to the interior of the building, transforming it into low voltage for consumption. Here the connection to the city grid, power consumption measurement, transformation, and we can also include the emergency power supply systems through a generating plant.

The medium voltage installation can be applied and installed independently of the rest of the construction. Although they coincide in their interconnection, they are mostly jobs carried out on the outside of the building. To do this, it begins with the approval of the medium voltage project by CFE and obtaining the feasibility of services.

Separating the work into two basic areas, one consists of the connection, transition, measurement and conduction towards the points that the project indicates. The other part consists of the preparation of the



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6



power generation service in cases of emergency. The latter shall be assembled in the engine room where this equipment will be placed.

The first follows similar practices to the rest of the electrical installation with the addition of the construction of underground register according to CFE standards and the placement of the indicated transformer. According to what is in the approved project, connections are made with designated meter cables, ensuring that they are firmly screwed into their connectors, a loose connection can cause heating, failures and short circuits.

The placement of the emergency generator and control panels are installed inside the engine room, which must have proper ventilation, a fuel tank and exhaust control equipment during its operation. This will serve as a backup in case the main supply fails and therefore must be fault-free and always in optimal operating condition.

1.6 Hydro sanitary installation

Under this heading we include everything related to the supply and conduction of potable water in the building, the collection of sewage to be eliminated and the filtration and recirculation services of water for the pool and the hydromassage.

For this, there is a team specialized in this task, which knows the applicable procedures and standards, as well as the peripheral equipment that is part of this discipline. During the execution of these work, the specifications and indications of the approved plans will be faithfully observed. Our purchasing and warehouse team will ensure that the necessary materials are always available at all stages of the work, since the aforementioned facilities are interspersed during several phases of construction.

Observing the work program and the development of how the stages are executed, special care will be taken to leave the preparations, pipe steps, laying of power lines or discharges, at the appropriate construction times. Before lines are covered or buried, hydrostatic tests will be carried out to verify their tightness. Evidence will be documented and copies given to the supervisor for knowledge and approval.



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6



In the drainage lines, the slope of the pipes in their horizontal sections and their correct connection to sanitary cleanouts will be verified. The internal grid that collect the sanitary discharges from the appliances will invariably have a double ventilation system that ensures the proper functioning of the siphon.

The main feeder line and branches of the system will follow the respective quality control procedures and appropriate to the type of pipe and use that must be given. In the case of water lines, the recommendations and specifications of the NOM and ASTM will be followed for acceptable tests, for copper pipes, PVCS, PVCH and ABS.

Once the placement of lines has been completed, the different devices and equipment in the engine room will be connected.

1.7 Installation of medical grade gas

Being aware that all installations must be carried out with care, one cannot fail to emphasize the additional importance for this service. The supply of medical grade gases involves a different procedure and additional care. This is due to the nature of the use it will have and the consequences of poorly executed work.



In particular, it refers to the fact that these pipes must be disinfected and loaded with nitrogen until the moment of their commissioning. The copper pipe used must be type "L" and can only be welded with silver welding. These activities will be carried out according to the program and the appropriate state of progress. Previo at the beginning of the activities of facilities, will have the trained personnel, materials and equipment approved. As in other pipes, airtightness tests will be carried out before trying to connect to the appliances for use. Finally, bacteriological tests of the entire network will be carried out. This must be approved or the works will not be received. The complete medical gas system will consist of pipe networks, sectioning valves, wall sockets and consoles if indicated.



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

1.8 Air conditioning (HVAC)

These activities will be carried out as the construction of the building progresses, in accordance with the work program. Prior to the start of the activities, our trained staff will approve sufficient materials and equipment, we will verify that there are pipeline steps by slabs where necessary, preparations, pipes, anchors, etc. that are required by the project. The ducts will be either prefabricated or custom-made, as required by the HVAC project. When the final connections of the equipment are made, the corresponding tests will be carried out to verify its correct operation. The permanently installed equipment must meet the specifications and requirements of the customer and will be installed according to the project, tested and delivered in perfect operation.



One aspect that cannot be overlooked is air filtration, in general and specifically in areas where it is vital such as operating rooms and the like.

The material and equipment stored in our warehouse will be verified to be in good condition before delivery on site. Following the work program and its logistics, the area ready to receive the necessary materials, ducts or equipment will be determined.



Once the areas are ready, crews of duct installers, plumbers, and electricians will proceed to assemble the material in the assigned area. The support will be installed with a separation that varies according to the diameter of the ducts, once the connection of accessories and equipment with the ducts and pipes is finished, the partial or total hermeticity tests of the system are carried out.

1.9 Special installations, voice and data

These activities will be carried out in stages and at the same time as the electrical installations by floors and areas. This will mainly consist of the placement of pipes or trays as indicated by the project. It will be until the moments prior to the conclusion of work that the equipment and accessories will be assembled and the corresponding tests will be carried out to verify their correct operation.



Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

After the quantification of plans, the material for conduction, support and trays will be supplied. The fastening of the cable to the tray will be fixed with plastic ties and this will be executed by the personnel responsible for these facilities. The upper space of the tray should not be invaded with any type of support since it interferes with the wiring. the derived pipes that reach the tray must be fixed, in it with a galvanized clamp.



Once the connection of accessories is finished, and



equipment, the corresponding tests will be carried out to verify their correct operation. finally all the automation and control equipment is placed.

1.10 Landscaping and exterior work

In the final stages of the job, we will proceed with the installation of landscaping and completion of the exterior elements. This includes the laying of sidewalks, decorative garden accessories, plants, etc. For the gardens, the area will be cleaned by removing debris and material not suitable for plants. The topsoil will be placed, sown with grass, the planters will be built and placed according to the project, the corresponding plants will be placed, the required maintenance and irrigation will be given.





Av. Paseo de la Reforma No 42, Piso 1 Oficina "A" col
JuarezAlo Cuauhtémoc, Mexico City
CP 06600, tel. 55-36-87-4064
RFC: IMA2101148B6

1.11 General and fine cleaning

Throughout the construction process, a clean and orderly work will be maintained. It will be a common and standardized practice that work areas are kept clean at the end of each working day.

During the construction process and as sections of the project are completed, a general cleaning of that area will also be performed and cordoned off to avoid unnecessary passage.

Finally, a thorough cleaning will be carried out to prepare the delivery of the entire area and proceed to administrative closures.

Sincerely

IMA-NIP, S.A. de C.V.

Mata Hernandez Ingenieria y Supervision SA de CV

Abel Mata Hernandez

Engineer

Legal Representative.