

Modernization Projects – Related Work / Work by Others

Unless noted as included within TK Elevator’s proposal scope of work, the following work **has not** been included in our standard proposal. The standard “related work” also known as “work by others,” is outlined below for your information and in order to provide you with a full understanding of the associated costs involved with the elevator modernization project. The most common items required by various Authorities Having Jurisdiction (AHJ) are:

- Machine room doors must have self-locking, self-closing mechanisms.
- Machine room doors must carry 1 ½ hr. UL B Label rating unless the machine room is remote AND the building is three (3) stories or less per code/IBC.
- Machine rooms must be identified and labeled on the door or entry wall.
- Machine rooms must be separate from all other non-elevator equipment within the building. They must also be finished and carry a fire rating which may require that the existing machine room be walled in at the top of the room.
- Disconnect switches must be lockable, fusible and sized to accept new incoming power requirements from the new equipment. **If the elevator power unit is upgraded, the existing power feeders, disconnects size and electrical conduit sizes may be affected. This cost is not included in our proposal.**



- If emergency battery lowering is being added to each elevator, a separate set of auxiliary contacts will be required for the battery lowering feature per code (installed within a new electrical disconnect).
- Provide a building Earth ground to each elevator disconnect switch in the machine room.
- If emergency power is currently operational at the building, a separate electrical transfer switch and pre-signal connection may be required for the elevator. This may also require additional electrical conduit, wiring and testing of the emergency power.
- Phase I and Phase II fire recall will be required. Specifically, a smoke sensor and/or heat or rise detector as applicable must reside in each machine room, hoistway (if required by the AHJ including sprinklers in the hoistway) and elevator lobby to initiate fire recall sequences spelled out by code. If an existing system is in place within the building, the system will need to be tied into the new elevator controls in the machine room including ‘Fire Hat’ operation per current AHJ/building code requirements. California note only:

sprinklers retained in the overhead of elevators in California must have a smoke detector with outside access and guarding installed per code.



- Dedicated 110V fused cab lighting disconnect located next to existing disconnect.



- Please be advised, the new controllers can be subject to excessive heat loads above 85 - 90 degrees Fahrenheit. Existing conditions should be checked to insure current conditions will not affect the new controllers and all ventilation openings must be screened.



- Air conditioning (AC), mechanical or natural ventilation independently maintained in the elevator machine room is a code requirement. AC is strongly recommended to keep the equipment operating at an optimum temperature per the controller manufacturer recommendations for temperature range.
- The machine room and hoistway needs to maintain a two-hour (2) rating. This may require holes to be patched and covered with fire-resistant drywall and taping to retain the rating. In addition, any ledges beyond 4" (*California note only: 2"*) in length must be covered with bevel cants to prevent anyone from standing in the hoist-way while the car is moving.
- Additional lighting may need to be added inside the pit area and machine room. Ten (10) foot candles are required in each elevator pit and nineteen (19) foot candles are required in each machine room per code. Fluorescent or LED light fixtures are recommended in the machine rooms, overhead and pit areas with an easy-accessible light switch installed in all locations.



- Confirmation that existing outlets in machine room and pit are GFCI outlets or replace with GFCI outlets per code.



- Any exposed pipes or non-elevator related equipment in the machine room will need to be encapsulated/soffited or troughs placed below to prevent liquid exposure to elevator equipment inside the machine room and hoist-way. Existing ceilings may need to be patched contingent upon decision by the local AHJ.
- No foreign equipment may be installed (telephone equipment, sewer/drainage piping) or material stored (i.e. ladders, spare light fixtures, furniture, trash receptacles, etc.) inside the elevator machine room or hoistway.
- A class A-B-C Fire extinguisher is required in each machine room.
- Shunt trip disconnect in the elevator machine room is required per NFPA Code if there are existing sprinklers or new sprinklers are installed. *California note only: Per current code, a shunt trip is only required in California if the existing sprinklers are modified or new sprinklers are installed.*



- Sprinkler fitting(s) with guard(s) in the hoistway, pit and machine room per AHJ/code/fire marshal – possible addition of heat detector or flow switch.
- A dedicated phone line *per elevator* as required by code.



- A sump pump in the elevator pit may be required by the local AHJ. *California note only: No sump pump is required for elevator modernization projects.*
- Hoistway ventilation for elevators with three (3) or more landings as required by the AHJ/code.
- All ventilation openings must be screened (i.e. machine room, hoistway, etc.).



- A code-compliant pit ladder must be installed.
- A finished elevator cab floor must be present and flush with the car sill.
- No tripping hazards in front of each elevator entrance/landing.
- All in-ground hydraulic elevators must have a sealed jack hole (watertight) in the pit.
- Please provide TK Elevator with a copy of any available report regarding the presence of existing asbestos, lead paint or any other known hazard within the project including areas around the machine room, pit, entrances and hoistway equipment.
- If a purchaser chooses to have flush-mount hall stations and/or flush-mount hall/car lanterns, it is possible that there will be cutting, patching, and painting to install these types of fixtures. This cost is not included in our proposal and will likely require a separate contractor/cost.

TK Elevator representatives are readily available to assist in providing an assessment of existing site conditions. Since many of the items noted above are subject to interpretation or variance dependent upon inspection authority and applicable Code(s), having an AHJ inspector review the site conditions if feasible may assist in firming total project costs for modernization project considerations.

Please discuss a site-specific assessment of your building's existing site conditions with your TK Elevator representative. A checklist for the above noted items has been provided to complete such an assessment.

Related Work / Work by Others Checklist



Job Name: _____ Elevator No.(s)_____ TKE Job No._____

Bldg. Contact: _____ Applicable Code(s):_____

The following is a list of work needed to be completed by others prior to TK Elevator’s return to the site to adjust/inspect the job unless alternate arrangements have been made:

- Adequate permanent power to the elevator controller – usually through a lockable, three (3) phase and fused disconnect per AHJ/local codes.
- Auxiliary electrical disconnect contact for battery lowering device.
- Separate electrical transfer switch and pre-signal connection for buildings with emergency power.
- Building Earth ground to each elevator disconnect switch in the machine room(s)
- Self-closing, self-locking machine room door.
- Fire-rated machine room door.
- Identified and labeled machine room door.
- Finished and fire-rated machine room walls (no holes) and separate from all non-elevator related equipment.
- Sealed penetrations in hoistway and machine room (fire-caulking or similar around machine room and hoistway intrusions).
- Class A-B-C fire extinguisher inside the machine room.
- No storage in elevator machine room (other than elevator-related items).
- Complete drywall installation inside hoistway with fire tape (if not concrete or block) with no ledges.
- Mechanical or natural machine room ventilation (recommend mechanical AC).
- Adequate machine room lighting, switches and GFCI receptacles.
- Dedicated circuit, lockable (by padlock) and fused electrical disconnect for 110VAC lighting per code.
- Dedicated and operational (i.e. dial tone) telephone line to *each* elevator.
- Additional items noted on reverse of this form.
- Operational fire-life safety system including smoke sensor wiring to the elevator machine room (into a J-Box) and tied into the elevator controller(s).
- Smoke sensor in the hoistway (*with access door in California only*), machine room and at all floor levels near elevator doors/entrances per AHJ/code.
- Sprinkler fitting with guard in the hoistway, pit and machine room per AHJ/code/fire marshal – possible addition of heat detector.
- Hoistway ventilation (three (3) or more landings) per AHJ/code.
- Shunt trip breaker for buildings with sprinklers including if required heat/flow detectors and control.
- No foreign equipment may be installed inside the elevator machine room or hoistway. (i.e. telephone equipment, sewer/drainage piping, foreign wiring, conduit, etc.).
- Pit ladder installed per AHJ/code.
- Sump pump (where required by AHJ/code).
- Screening of all ventilation openings (i.e. machine room, hoistway, etc.).
- Adequate pit light(s) with guard(s), switches and GFCI receptacle(s).
- Sealed jack hole – watertight (hydraulic elevators only).
- Finished elevator cab floor must be present and flush with the car sill.
- Trip hazards at floor levels.
- Finished front walls for mounting hall signal fixture cover plates.
- Potential asbestos, lead paint or other hazard.

Once the above items have been completed, please contact your local TK Elevator office. A TK Elevator representative will visit the site to confirm the work is completed and then schedule the inspection with the AHJ. Please allow approximately two (2) weeks for scheduling, adjusting and testing. Please note that we are not able to schedule an inspection by the AHJ until all the above items are completed. In addition, please arrange to have all appropriate trades available for final AHJ inspection. If access to the hoistway is required to complete items that should have been done during the installation process, a signed change order for an operator at our standard rates may be required prior to scheduling the work. Additional charges may be billed for remobilization of the modernization installation crew if the above work is not completed and the crew(s) was/were removed from the project jobsite.

Completed by: _____ Date: _____