

RATIO



CITY OF DURHAM + DURHAM OUTDOOR AQUATICS STUDY

WHEELS FUN PARK RINK - CODE ANALYSIS

AUGUST 19, 2022

Wheels Recreation Center

715 Hoover Road, Durham, NC

Existing Code Summary Based On 1991 NCBC

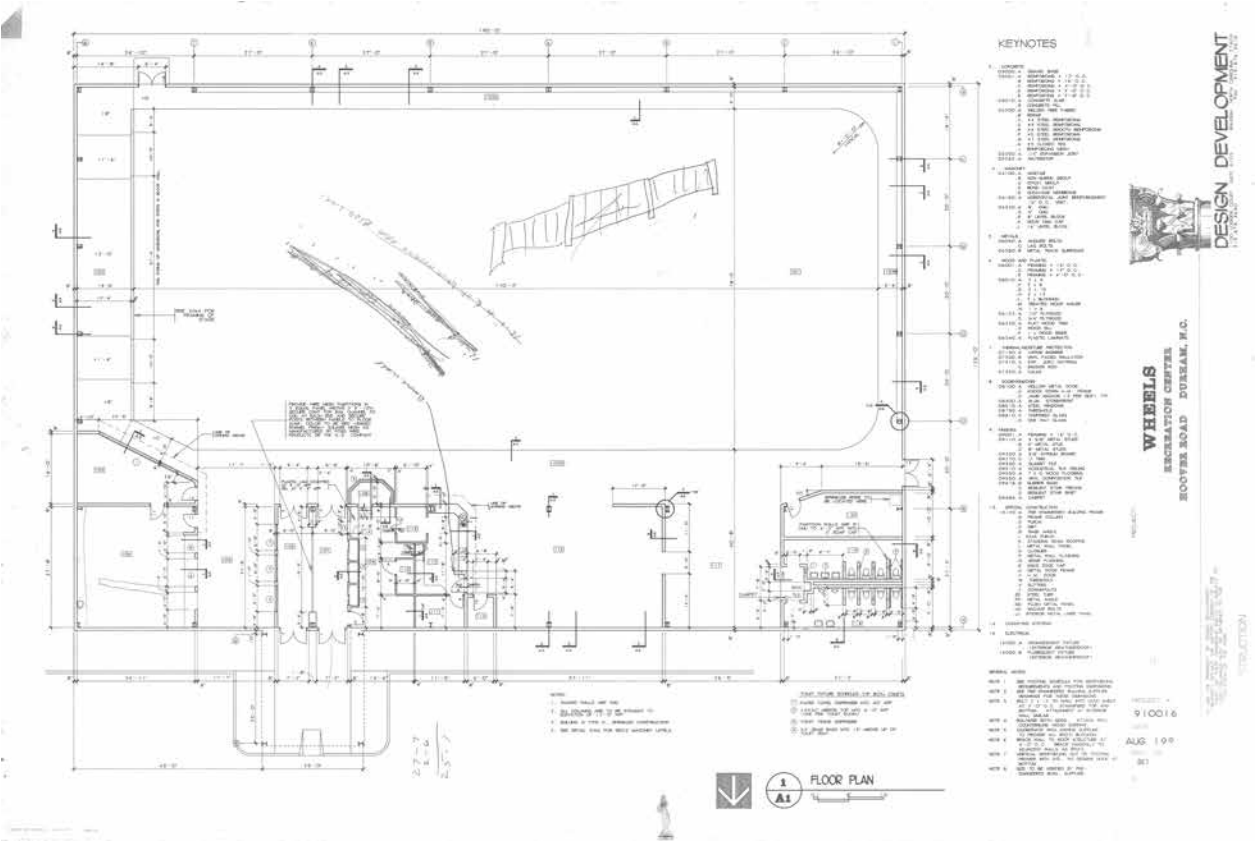
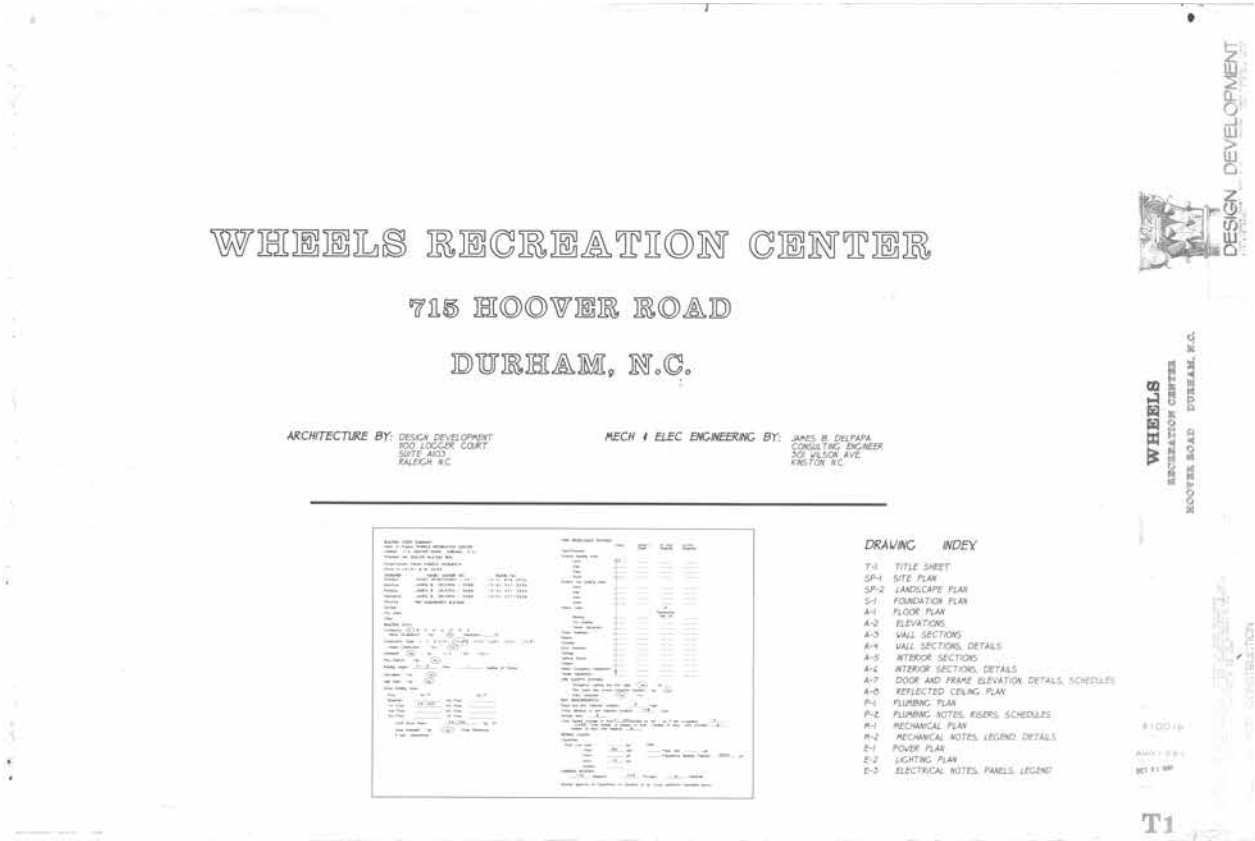
Occupancy: Assembly (A-4)

Construction Type: IV (Unprotected)

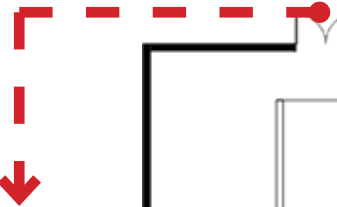
Sprinkled: Yes

Gross Building Area: 23,750

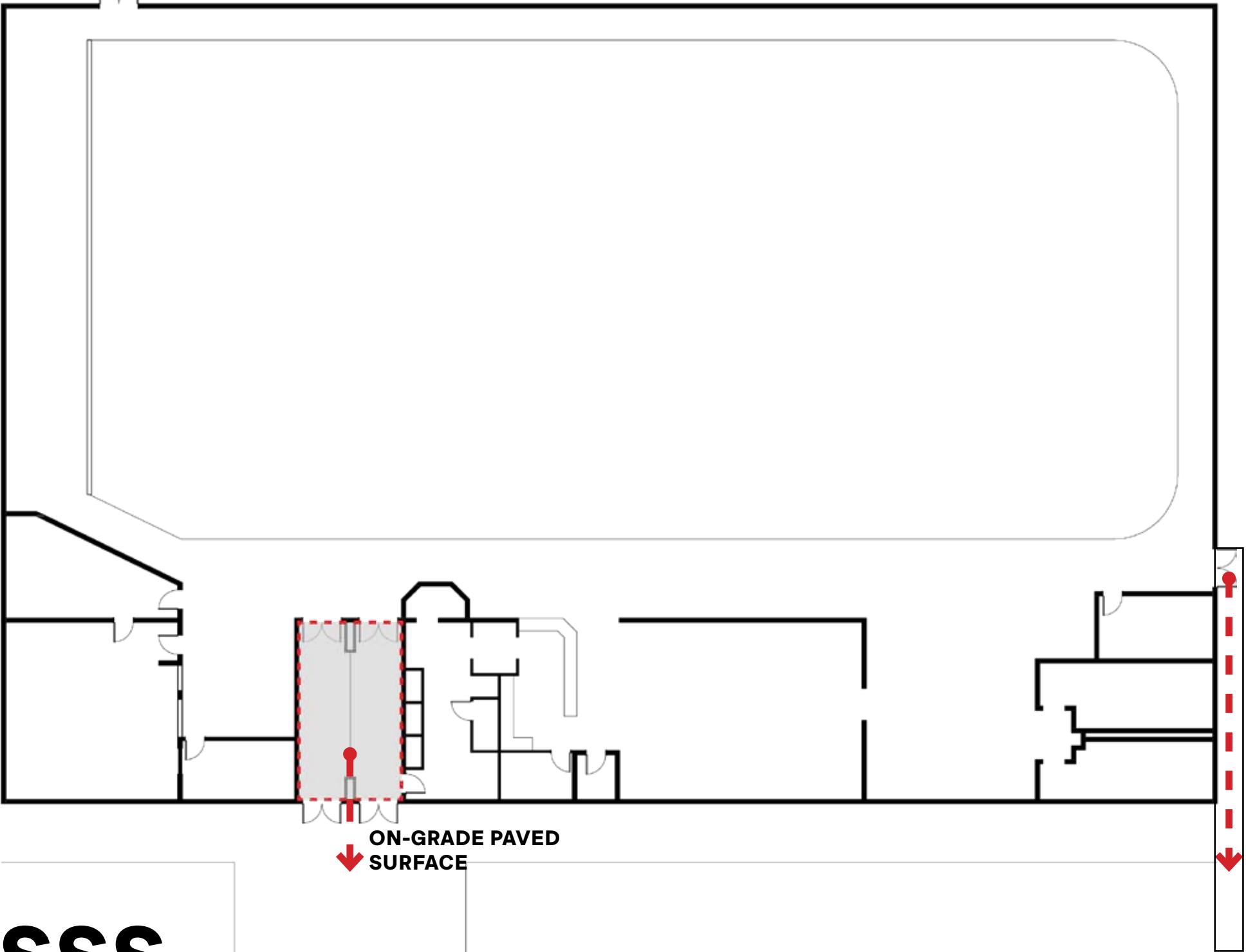
Total Occupancy: 1,440



ON-GRADE, NO
WALK PROVIDED



R
O



EXTERIOR
ADA RAMP

ENTRY/EGRESS

- The parking lot does not have curb ramps for accessibility. Parking area curb ramps will need to be constructed to provide accessible parking. [2017 ICC A117.1 - Section 406]
- Provide access aisle for van parking that can be shared between two accessible parking spaces. [2017 ICC A117.1 - Section 502]
- Optional: affix the entry and exit doors with automatic door opening hardware. [2017 ICC A117.1 - Section 404]



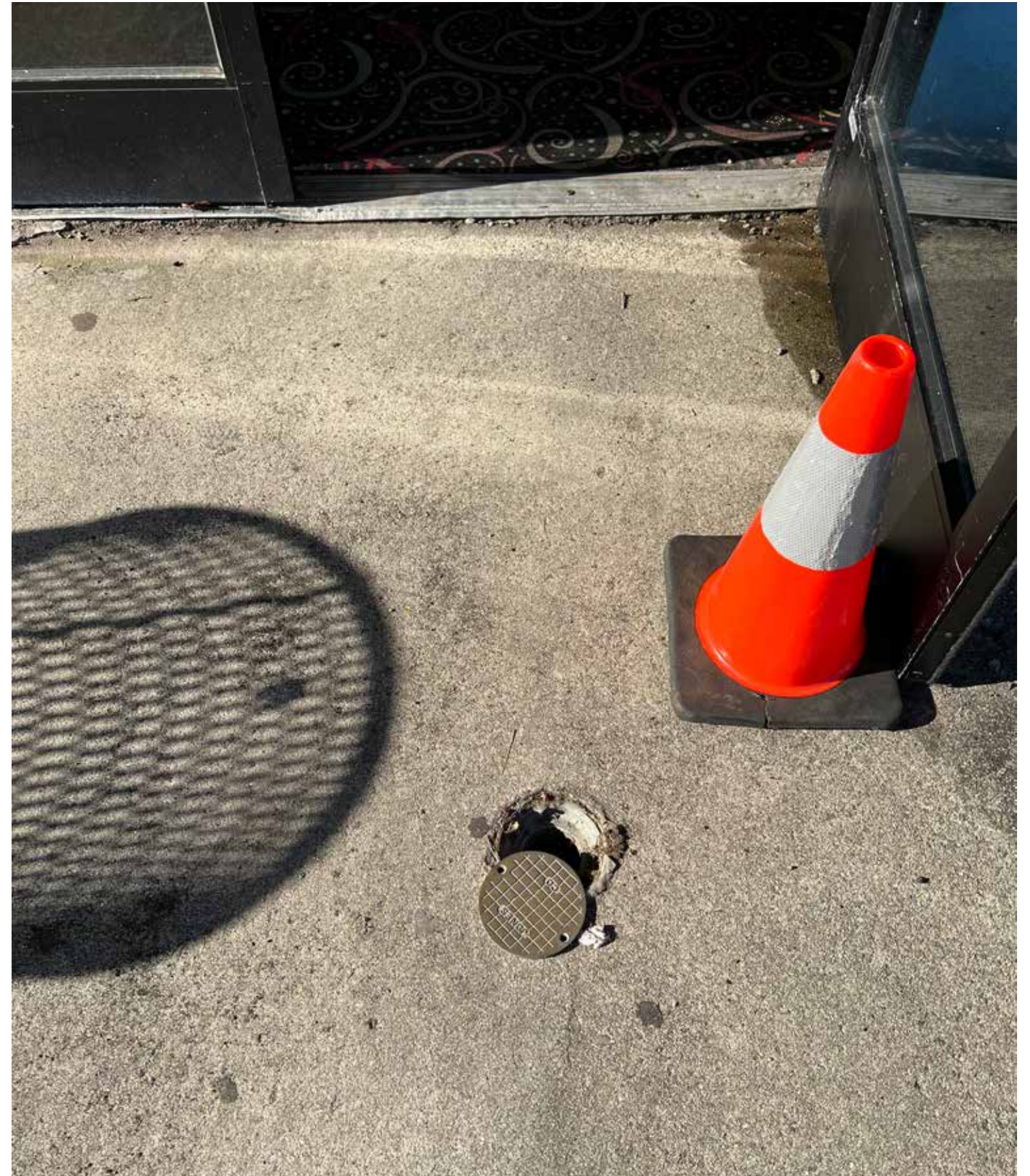
- Door entry + exit transitions exceed the required height of 1/2". Fill will need to be added to raise the transition from sidewalk to door entry. [2017 ICC A117.1 - Section 303]



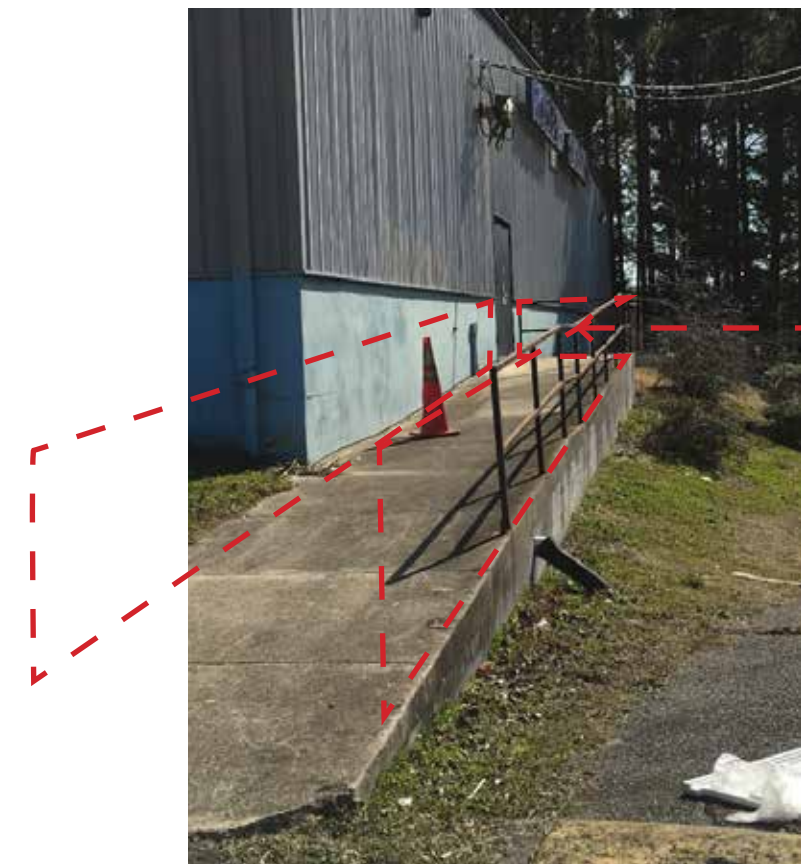
- Ticket counter height is at 37" in height. The accessible requirement is at 36". This counter will need to be lowered. [2017 ICC A117.1 - Section 904]



- Drain trip hazard located in front of the entry door. Secure the drain cover.
- The rear egress door does not have an accessible route to an area of refuge. Clear path to provide accessibility. [2017 ICC A117.1 - Section 402]

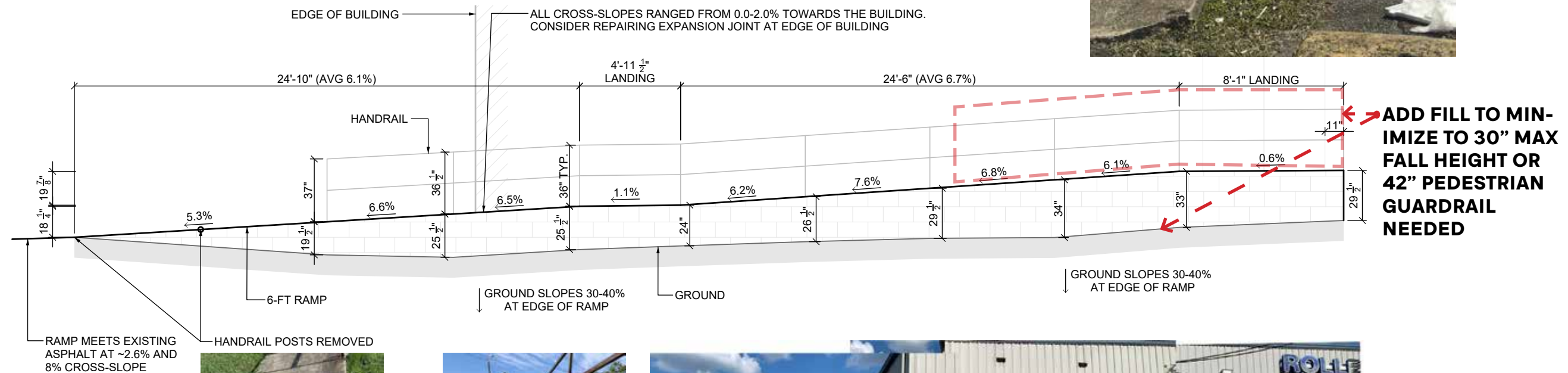


- Surface slopes along existing ramp are acceptable but bottom of ramp does not meet an ADA compliant route. Ramp would need to be reconfigured to turn around northwest corner of building to meet an accessible grade.
- Existing single handrail does not meet current ADA requirements. Handrail to be removed & replaced with ADA compliant handrails on both sides of ramp.
- One area along the ramp has >30" fall height. Fill would need to be added to decrease fall height or new pedestrian guardrail would need to be added for the top landing



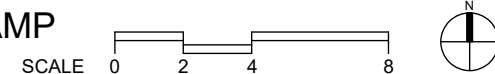
NEW COMPLIANT
HANDRAIL NEEDED ON
BOTH SIDES OF RUNS
>5% SLOPE

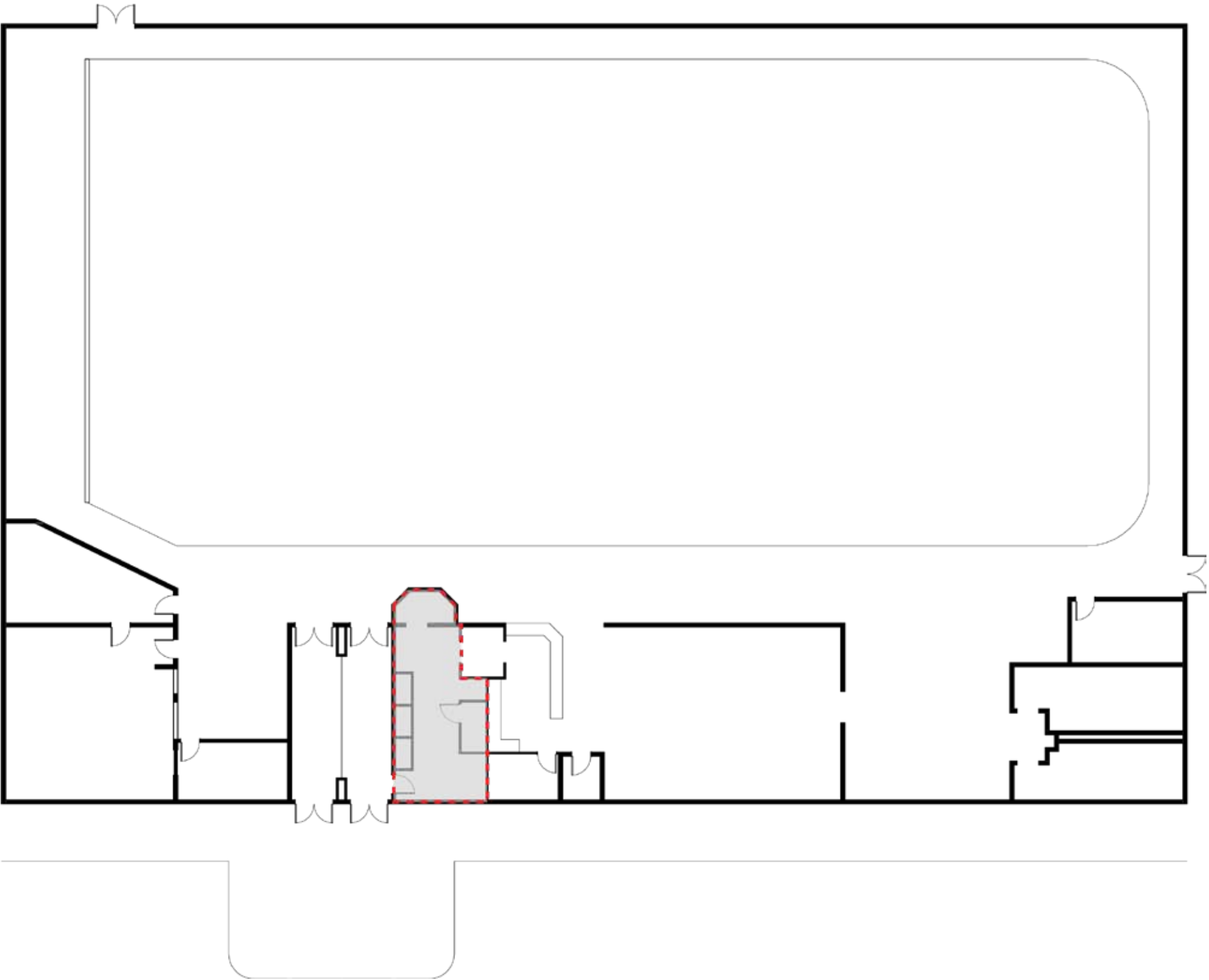
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01
X-000

WHEELS FUN EXISTING ACCESS RAMP





OFFICE

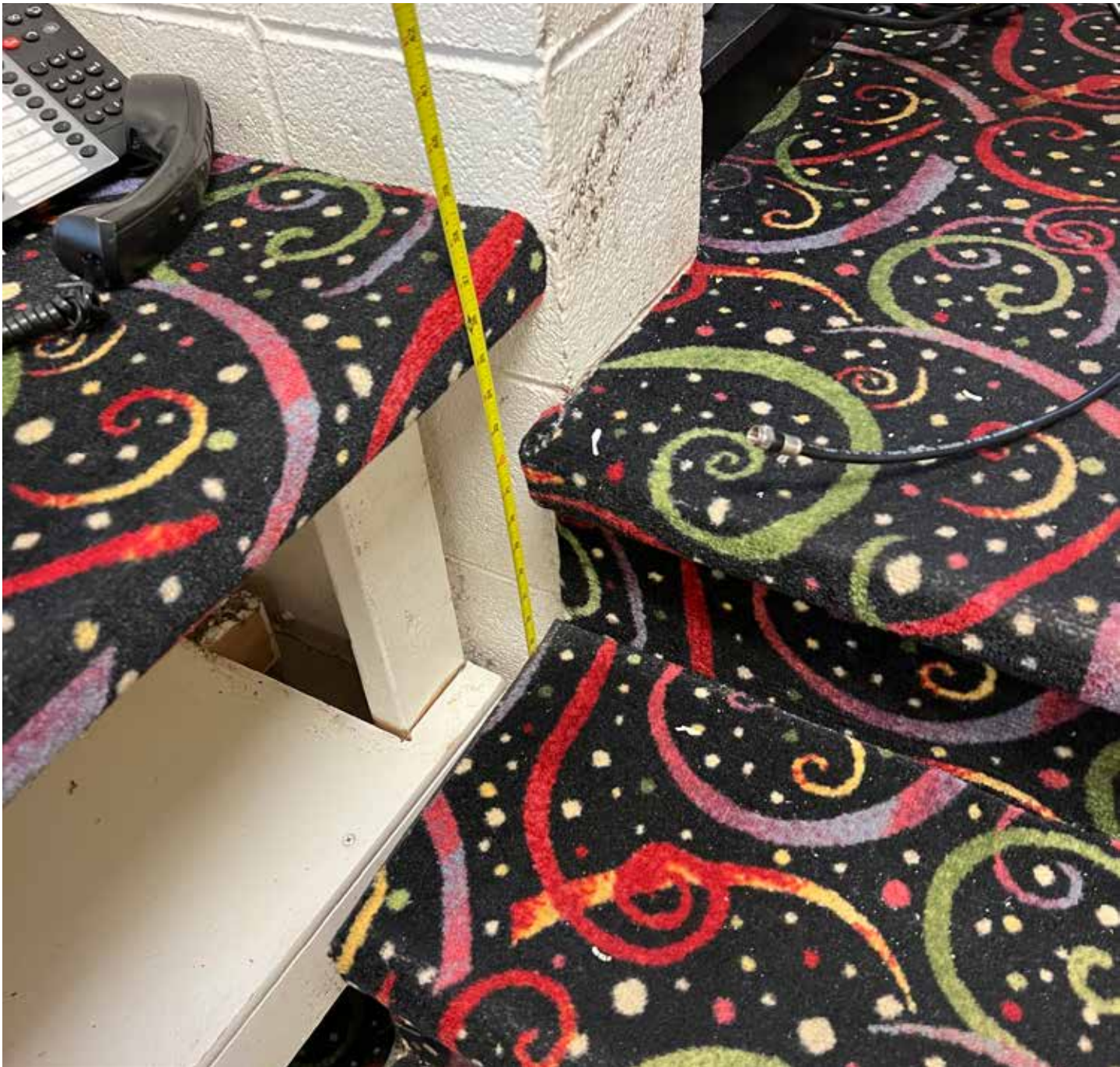
- The “pull” clearance on the office door does not meet the 18” clear dimension. The adjacent trophy display wall will need to be shifted by 10”. [2017 ICC A117.1 - Section 404]
- Door hardware on each of the three office doors will need to be replaced from knobs to levers. [2017 ICC A117.1 - Section 309]



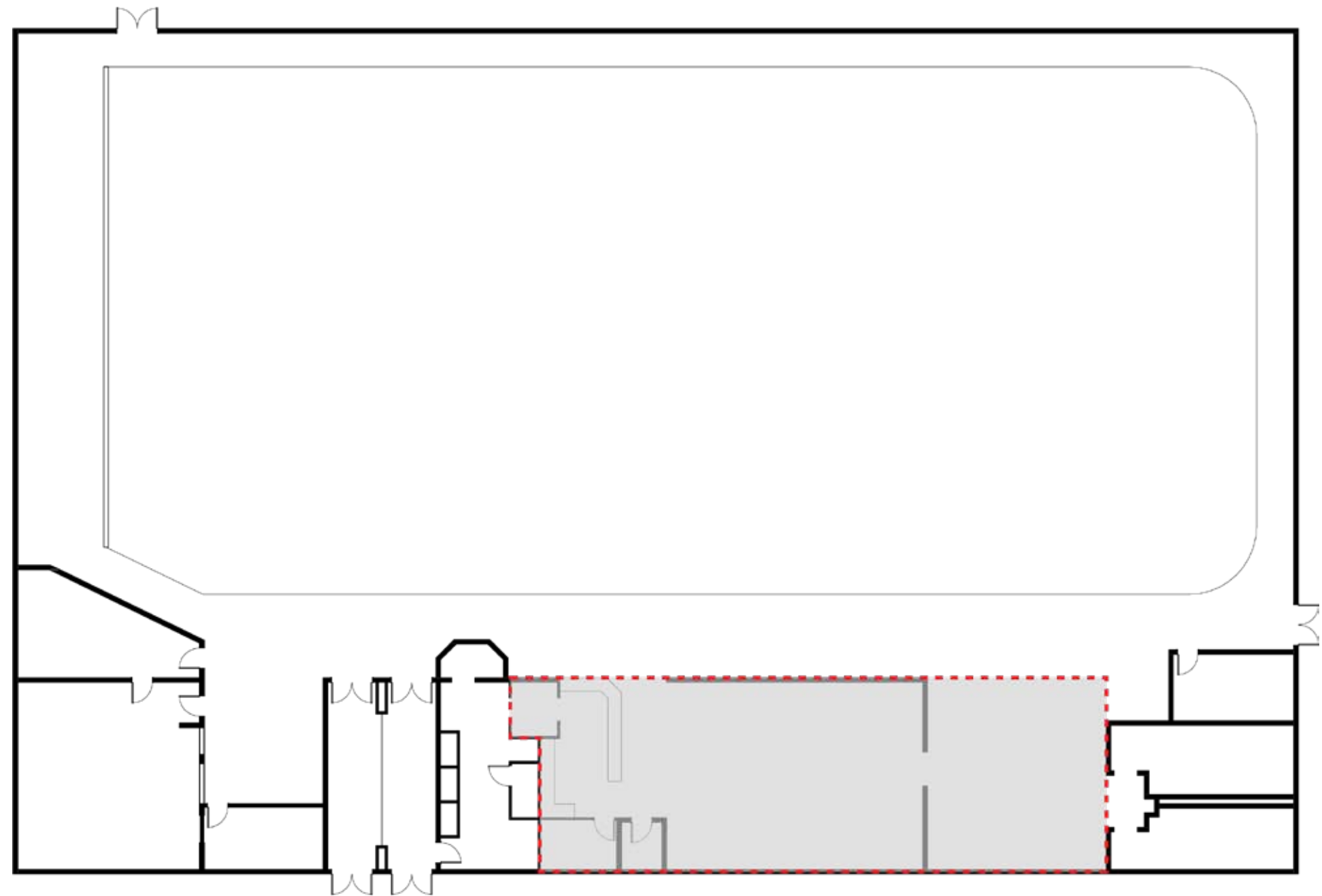
- Investigate when the most recent fire inspection was completed and if the building has met those requirements.



- The DJ booth area is not accessible. The platform does not have an accessible route and does not have the proper floor clearance for turning space. It would be recommended to enlarge this area, relocate, or alter to provide accessibility. [2017 ICC A117.1 - Section 304, 406]



R
D



KITCHEN + DINING

- Service counter height exceeds the maximum height, will need to be lowered to no higher than 36". [2017 ICC A117.1 - Section 904]
- The kitchen hand wash sink exceeds the required 34" height maximum and does not have the proper insulation to protect against leg contact. [2017 ICC A117.1 - Section 606]
- The kitchen hand wash sink also requires 15" clear from the center of the fixture. The adjacent cabinet will require to be shifted. [2017 ICC A117.1 - Section 306]
- The kitchen hand wash sink requires a faucet fixture with levers rather than turn knobs. [2017 ICC A117.1 - Section 309]

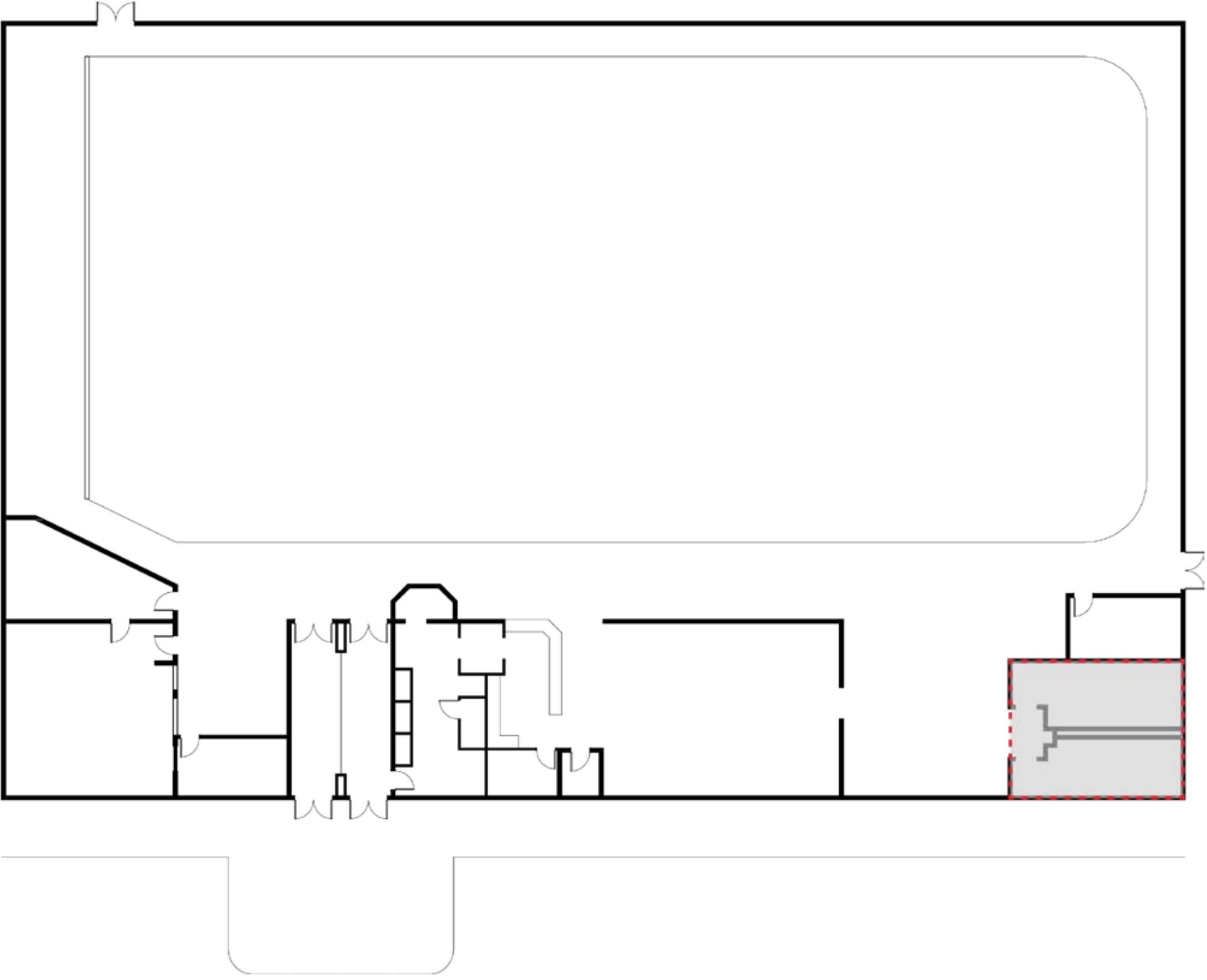


- Prior to opening, the kitchen will need cleaning and renovation preceding approval from the proper Health Department officials.
- Door hardware on each of the two doors in the kitchen area will need to be replaced from knobs to levers. [2017 ICC A117.1 - Section 309]



- Water Cooler does not meet accessibility requirements. The required floor space in the alcove is 36" wide. This will need to be relocated and add another water cooler. [2017 ICC A117.1 - Section 305]

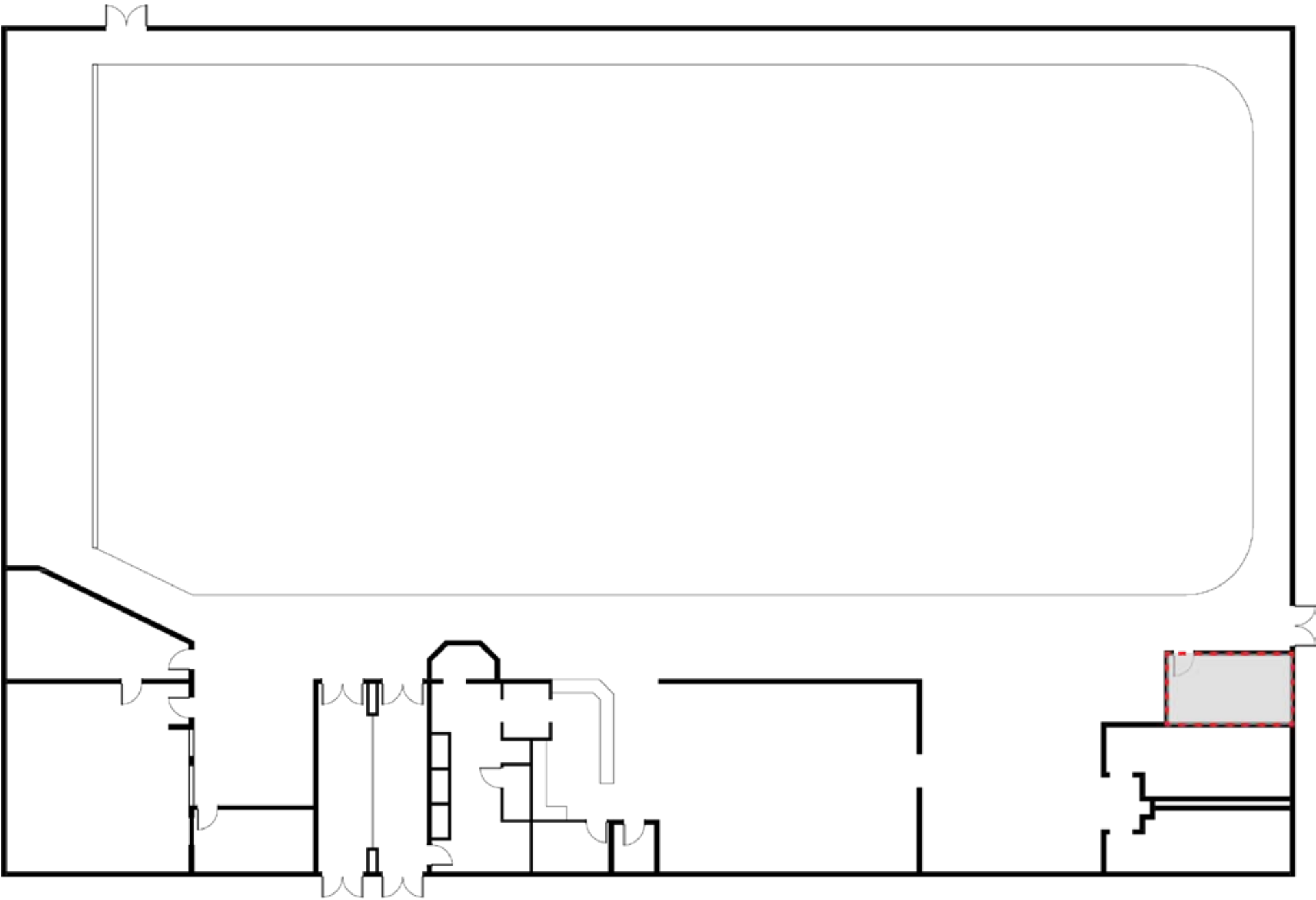




RESTROOMS

- Lavatory height in both mens and womens restrooms exceed the accessible height. Will need to be lowered at or below 34".
[2017 ICC A117.1 - Section 606]
- There is no way-finding signage for those with sight-limiting disabilities. [2017 ICC A117.1 - Section 703]

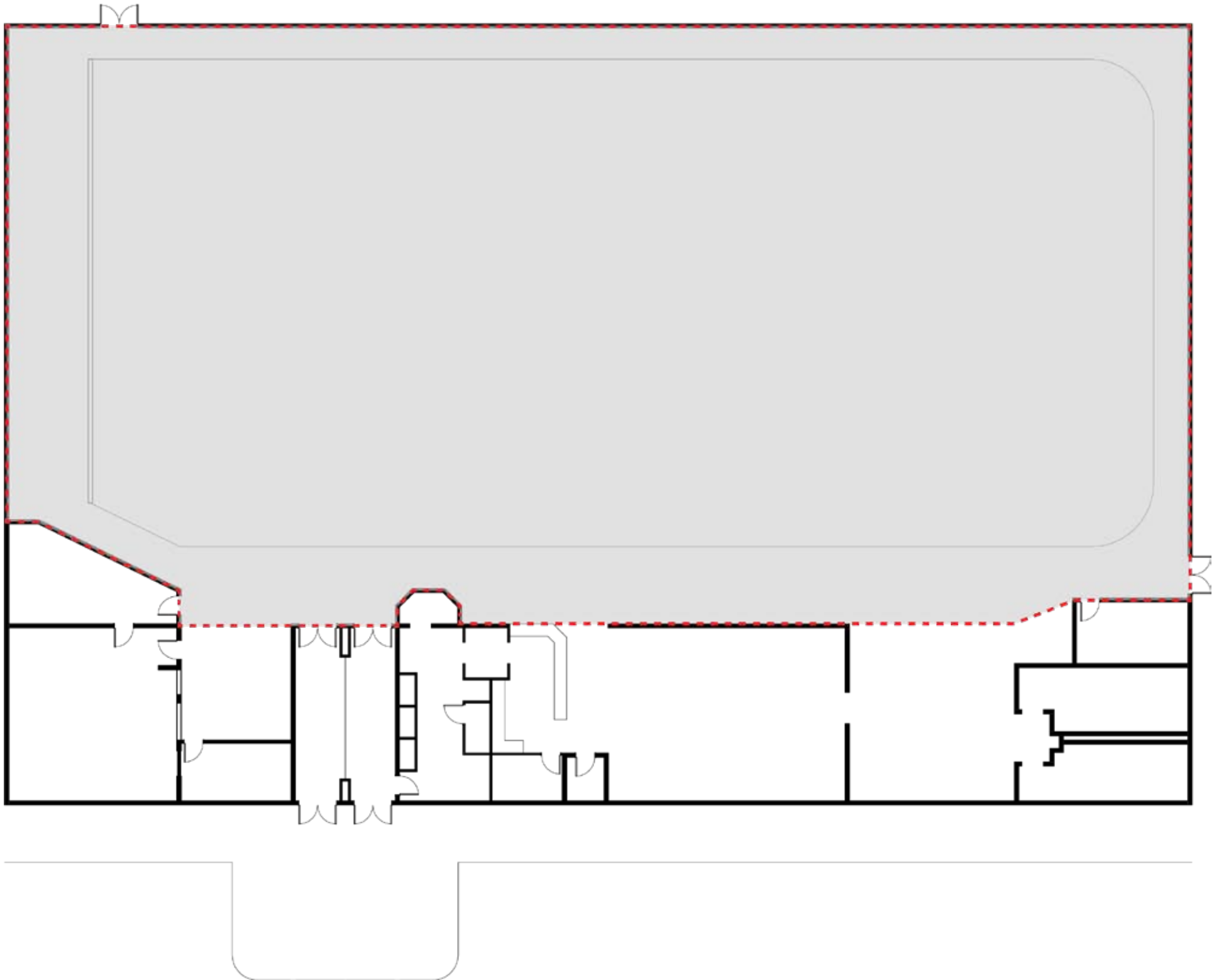




ELECTRICAL ROOM

- While there are no accessibility issues regarding the electrical room, there is a concern with the building seal at the electrical conduit.





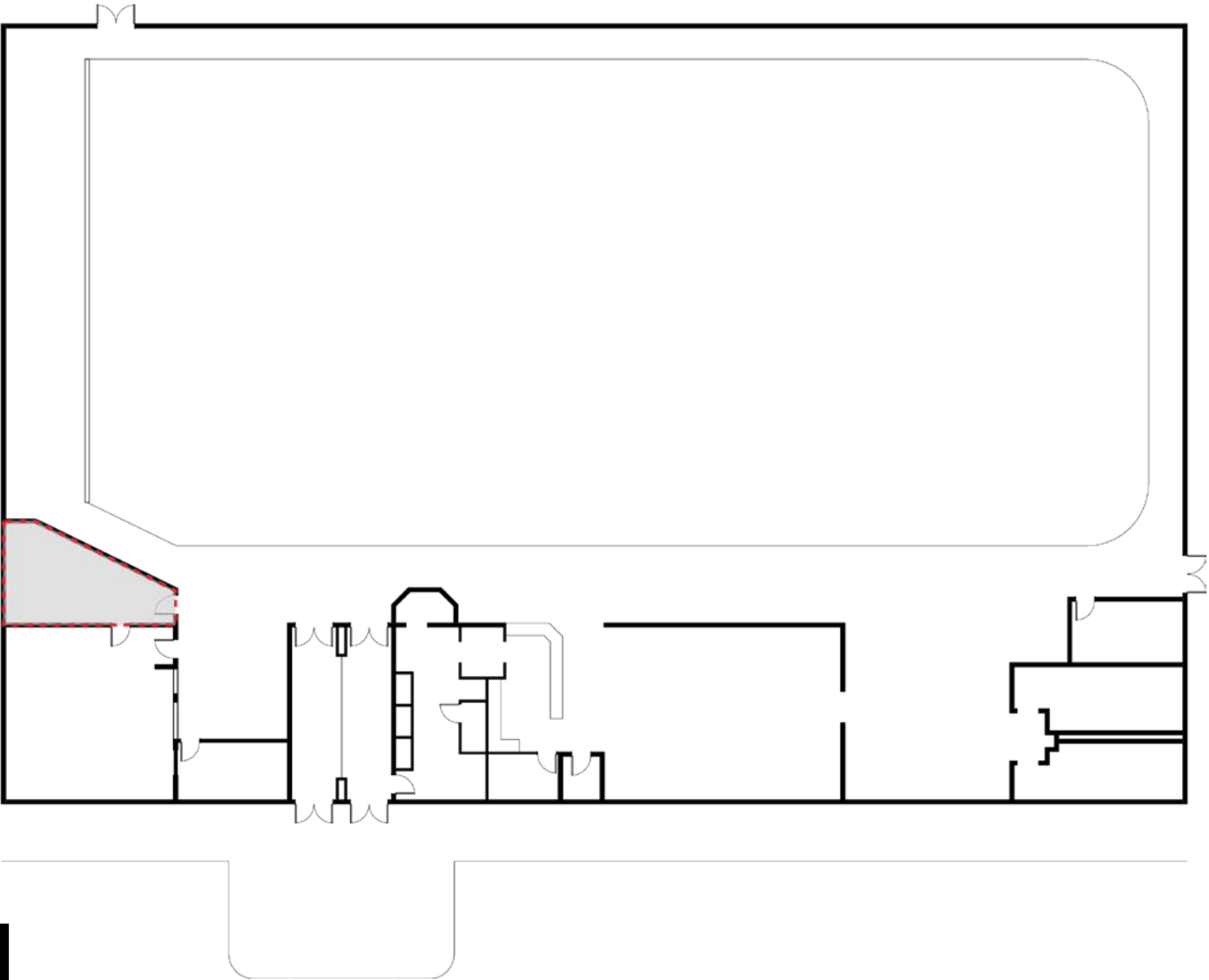
RINK

- Stage obstructs accessible route of egress to the north door.
[2017 ICC A117.1 - Section 402]
- There is no accessible route from the walkway to the rink floor. Solution to add proper accessibility could be to add a ramp or remove a portion of the raised floor. [2017 ICC A117.1 - Section 402]
- While not an accessibility issue, there is a 1"-2" gap between the rink floor and the edge of the walkway. This could potentially become a hazard. Add trim to prevent this issue.



- The security bar used to keep the egress doors shut will need to be removed prior to opening.

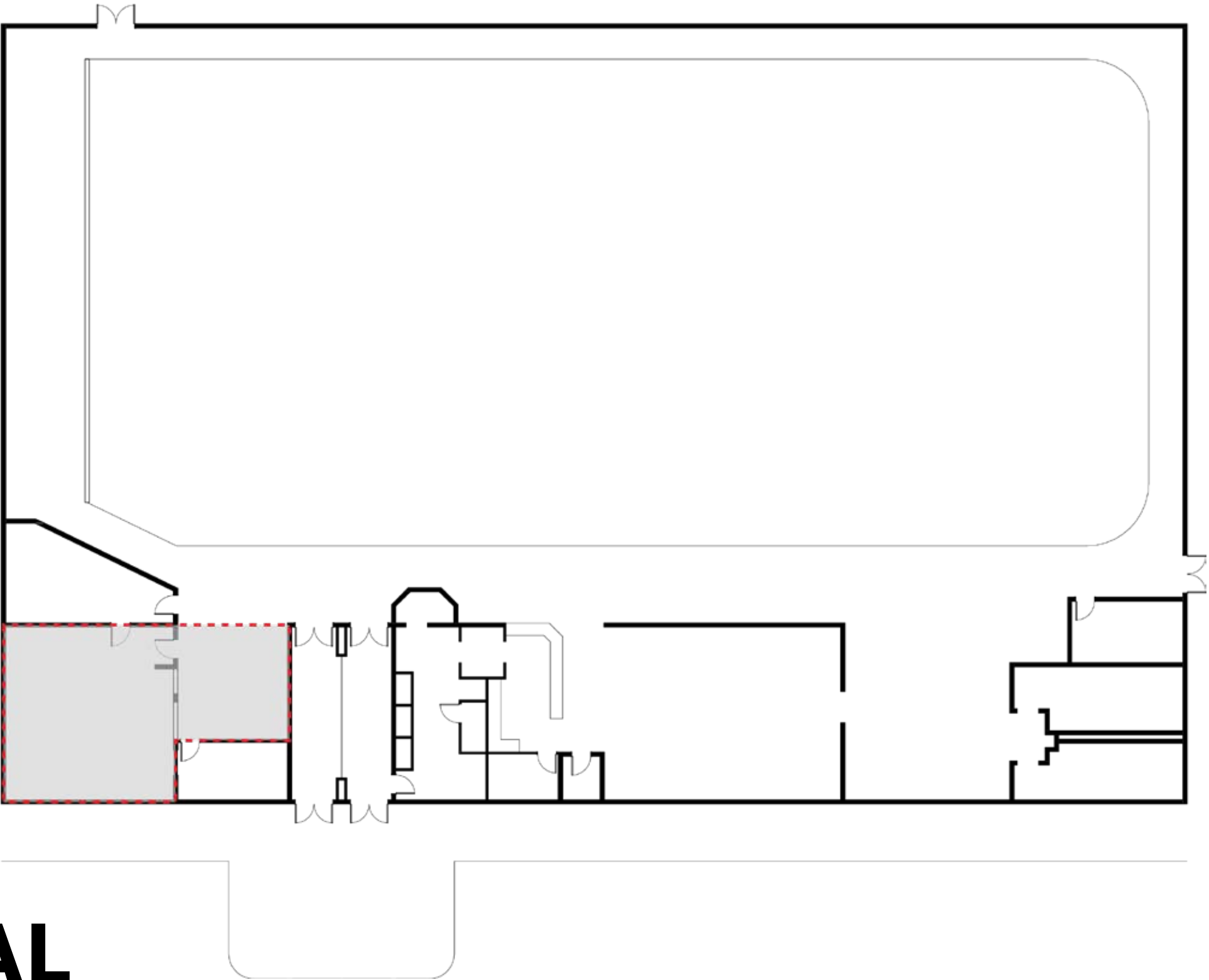




PARTY ROOM

- Accessible pull clearance on the entry door to the party room does not have the proper clearance. [2017 ICC A117.1 - Section 404]
- While not an accessibility issue, loose wire on the wall could be a problem.
- Door hardware on each of the two doors in the party room area will need to be replaced from knobs to levers. [2017 ICC A117.1 - Section 309]

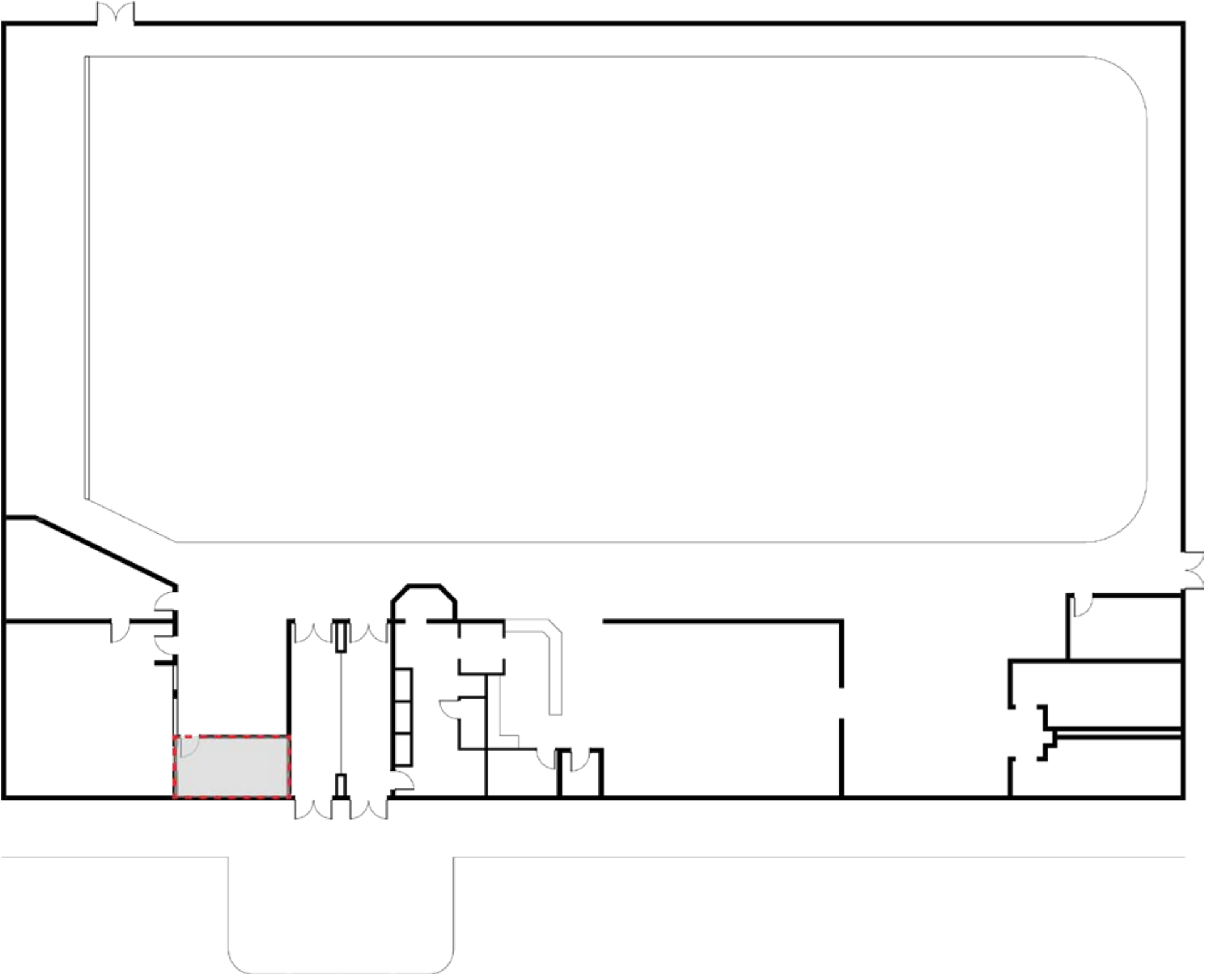




SKATE RENTAL

- The pull clearance inside the skate rental door does not meet accessibility standards. Wall will need to be shifted by at least 4". [2017 ICC A117.1 - Section 404]
- Door hardware on the door in the skate rental area will need to be replaced from knobs to levers. [2017 ICC A117.1 - Section 309]





STORE

- The lights in the store area do not work.
- The wood siding base at the exterior wall should be investigated for possible mold and water intrusion.
- Door hardware on the door in the store area will need to be replaced from knobs to levers. [2017 ICC A117.1 - Section 309]



WHEELS FUN PARK SKATING CENTER

Mechanical, Electrical, Plumbing & Fire Protection
Needed/Recommended Actions to Keep Skating Rink Open
June 16, 2022 – updated Aug. 23, 2022

The Wheels Fun Park Skating Center was acquired by the City of Durham in 2020 and has since been used for miscellaneous purposes, such as a COVID vaccination center. At the time of our site visit, the building was occupied and being used. The MEP&FP systems were operating and functional. In our opinion, the MEP&FP systems do not require any major upgrade to keep the building open.

HVAC

Skating Center

Existing Conditions

General: The Skate Center houses the roller-skating rink, snack bar, eating area, restrooms, office, skate storage and party room. Five (5) packaged rooftop units provide HVAC. Four of the RTUs are located above and serve the skating rink. One RTU serves the other areas including the snack bar, eating area, restrooms, office, and entrance.

HVAC: Access to the roof was gained on August 11, 2022. The RTU units were observed.

Unit	Make	Model #	Serial #	Nominal Capacity / Tons	Age / Date
RTU 1	Trane	N/A	N/A	N/A	N/A
RTU 2	Trane	TCD150D400BB	90210030	12.5	1 / 2009
RTU 3	Daikin	DCC150XXX4BXXXAB	14062455	12.5	6 / 2014
RTU 4	Daikin	DCC150XXX4BXXXAB	14070649	12.5	7 / 2014
RTU 5	Trane	TCD181B411HB	40710031	15	6 / 2004

Notes:

1. RTU#1 was iced up at the time of the site visit.
2. RTU#2 does not have heating capability.

The HVAC Technician reported the following:

When the City of Durham put the building into service as a Covid-19 vaccination center, the units were checked, and the following maintenance items were address:

System	Finding / Action
RTU#1	1. Charged refrigerant system. Unit was low on refrigerant (coil was frosting up).
	2. Cleaned coil.
	3. Changed filters.
	4. Replaced bad heater contacts.
RTU#2	1. Cleaned coil.

	2. Changed filters.
RTU#3	1. Changed limit switches (found filters to be clogged)
	2. Cleaned coil.
	3. Changed filters.
	4. Checked heat.
RTU#4	1. Cleaned coil.
	2. Changed filters.
	3. Checked heat.
RTU#5	1. Charged refrigerant system. Unit was low on refrigerant.
	2. Changed thermostat.
	3. Cleaned coil.
	4. Changed filters.
	5. Checked heat.



Skate Center RTUs (Photo taken from roof of Play Structure)

Controls: The RTUs are controlled by individual thermostats.

Exhaust: The Men's and Women's restroom had exhaust fans located above the ceiling. The fans were inaccessible and could not be observed. The fans were operational.

Future Considerations

- The Trane units (RTU#1 and RTU#5) are in poor condition and have reached their expected useful life.
- Trane unit RTU#2 is 13 years old and nearing the end of its expected useful life.
- The Daikin units (RTU#3 and RTU#4) are 8 years old, in fair condition, and expected to have a remaining useful life of 5 to 10 years with normal maintenance performed on a regular basis.

ELECTRICAL

There are no readily observable significant electrical deficiencies that will prevent keeping the building operational.

- If the facility has not been recently re-lamped, we suggest that all bulbs and/or tubes be replaced (preferably with LED's) and the light switches operation be verified, and all receptacles be tested and repaired or replaced as needed.
- The fire alarm system should be tested and serviced by a licensed firm or individual.
- It is recommended that all panelboards and transformers be opened and all feeder conductor terminations be checked and retorqued to factory recommended values.

Fire Protection

- The system should be inspected, tested, and maintained in accordance with NFPA 25 by a licensed sprinkler contractor.
- Concealed sprinkler heads which have missing or loose cover plates should be replaced.

Plumbing

- Identify which meter serves this building and install a backflow preventer in the line.
- Install handicap accessible drinking fountain.
- Verify if water heaters work and use them if they do.
- If the water heaters do not work, they should be replaced, and expansion tanks, thermostatic mixing valves, and temperature gages should be added.
- If the handwashing sink in the kitchen serving area is required to be ADA compliant, it should be replaced with a compliant model.
- Repair or replace mop basin faucet.
- Add or replace pipe insulation if the existing insulation or lack of insulation is allowing condensation to drip onto ceiling tiles.