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BER

Building Engineering Report

New Haven, Indiana

Defense National Stockpile Depot

GS05P90GBD0028RIN91011, Work Order No. 10

Part Two of Eight Parts

Climate Controlled Occupied Buildings

PIC Job # 90490-10100

BUILDING DESCRIPTION:

(Post Engineer Warehouse/Office)

Building #

T141(IN0643NH)

Section A:

Storage

This building has rotted siding and should be scraped, painted and caulked. The roof should be replaced as well as the gutters and downspouts. Splashblocks should be added to divert the water away from the building. In the second and third sections of the building there is evidence of water entering the building. This damage should be repaired and replaced. The exposed rafters in the section are also water-marked. The floor is concrete and has a major crack running down the center of the building in an east to west direction. This crack should be repaired.

Section B:

Storage

This is a wood framed building with a wood structural system and rolled roofing. There are some siding that has rotted as well as the window sills and the doors. The doors and windows should be replaced. The entire building should be scraped, painted and caulked. The roof needs to be replaced as well as the downspouts and gutters. Splashblocks should be added to divert the water away from the building.

Section C:

Storage

This portion of the building is used for equipment storage by on-site maintenance staff. The outside of the building is in bad need of paint and should also be caulked. The roof should be replaced. The sliding doors and jambs have rotted areas. Part of the siding and sill at the south elevation also is rotted. Gutters and downspouts should be replaced and splashblocks added to divert the water away from the building. The interior slab is badly cracked and settled. It should be replaced. There is as much as 3" of differential settlement and some of these cracks are 1 1/2" - 2" wide. There is a heating pipe that is insulated and wrapped running the length of the building. The insulation and pipe wrap should be checked for asbestos. Towards the west end of the building there are some water damage and rotted roof joists that should be replaced. Also, there is split corner bracing and diagonal column braces that should be replaced.

Section D:

Unoccupied

See Part 5 for discussion of this section.

BUILDING DESCRIPTION:

(Post Engineer Warehouse/Shop)

Building #

T141D(IN0643NH)

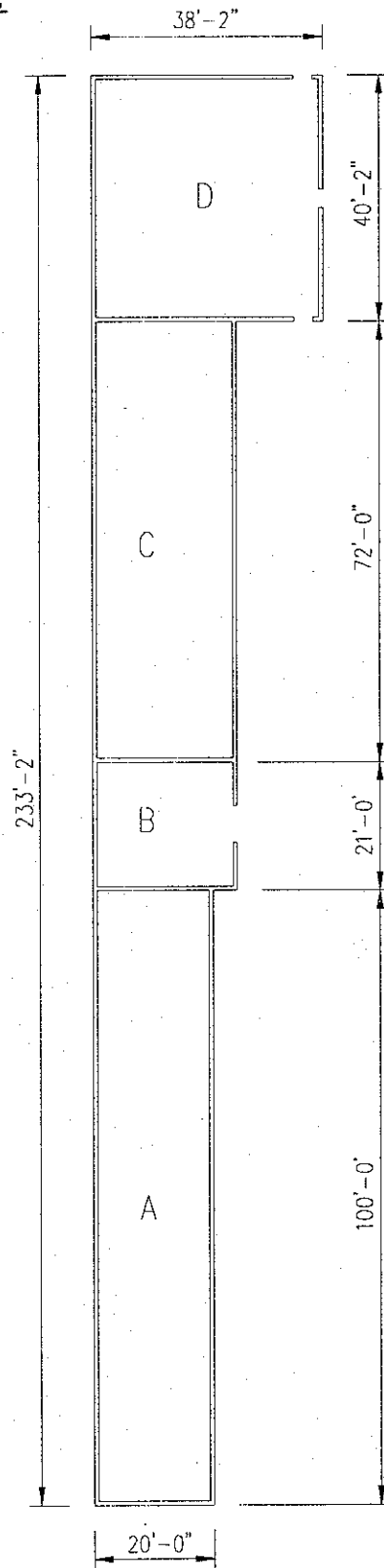
This is a wood framed building with a wood floor structural system. The outside of the building is in need of paint and caulking. The perimeter skirting should be replaced. The roof has a large hole that allows rain and snow to enter the building. The interior of the building has moss and mold and so much water damage that the floor system has rotted. Overall conditions would dictate that this building be demolished.

T146 (IN0619NH)

BUILDING PLAN:

Building #

T141 (IN0643NH)







BUILDING DESCRIPTION:**Platform Warehouse**

Building #

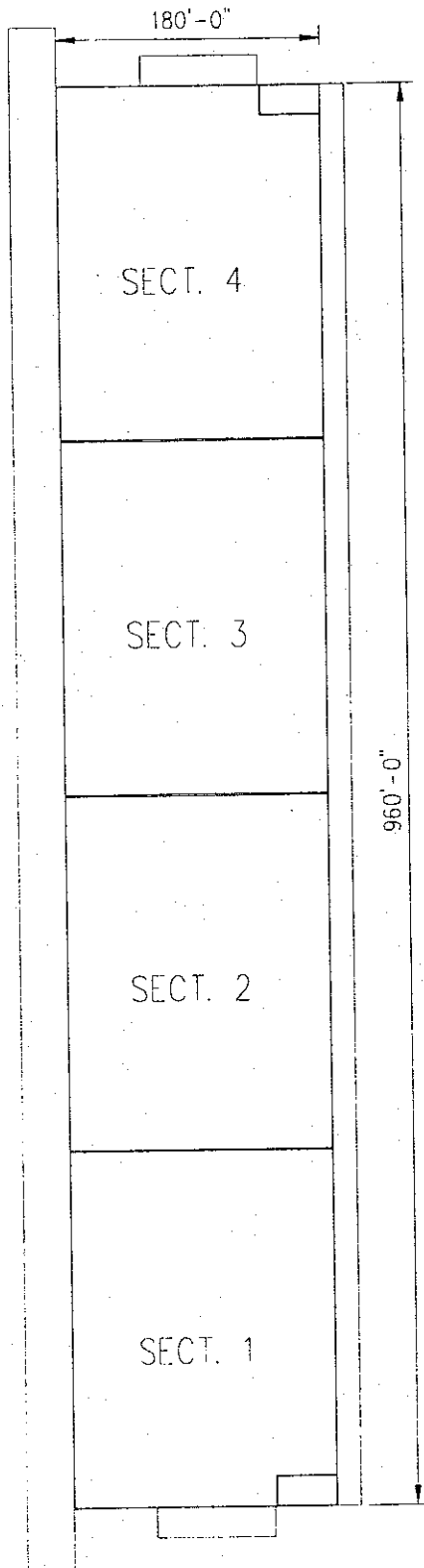
T210 (IN0612NH)

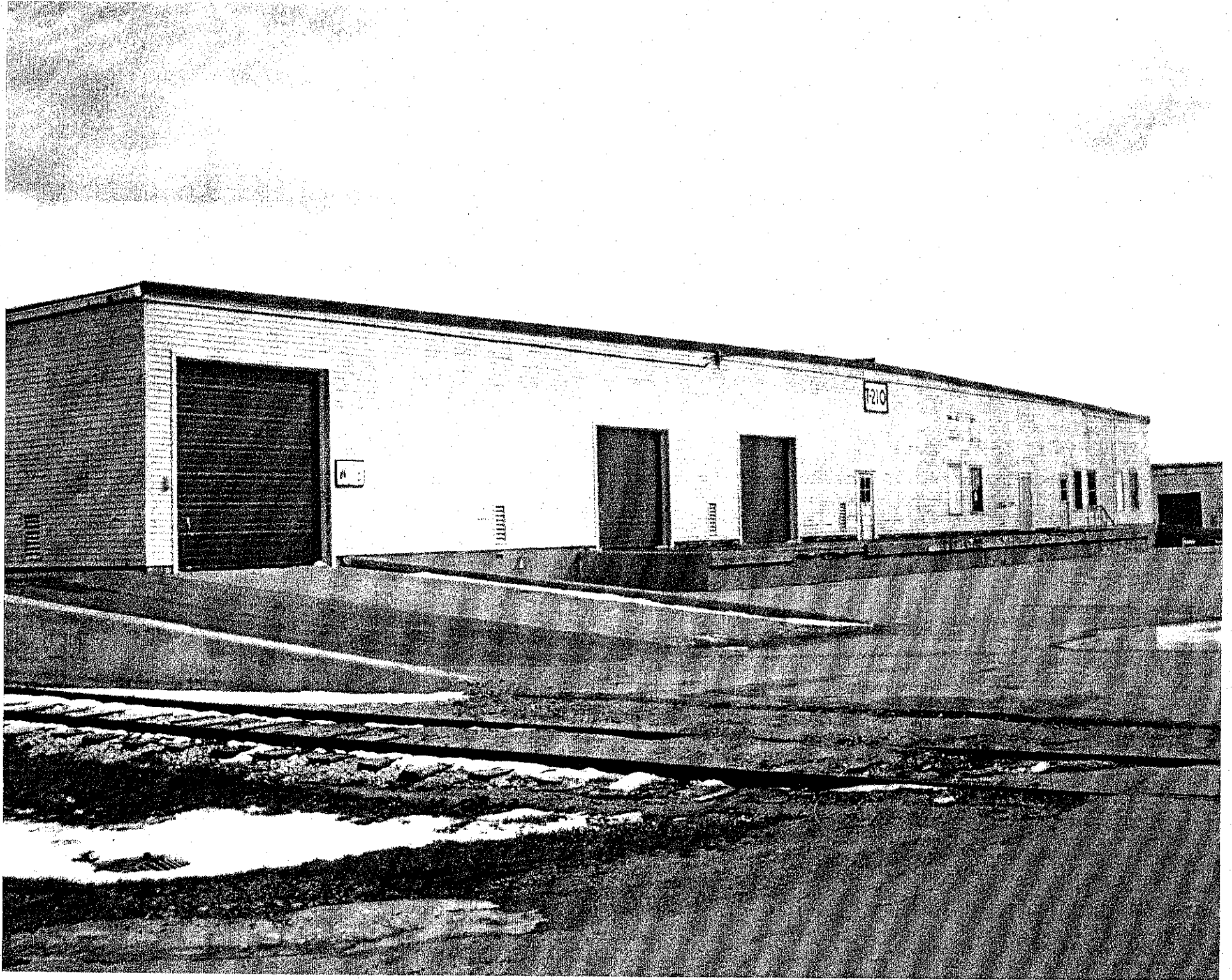
This warehouse building is 960' long by 180' wide. It is a wood construction, wood structural system, wood deck and a modified bitumen roof. The docks at either end of the building as well as the ramps are concrete and filled with asphalt. The wood bumpers for the dock should be replaced. The concrete steps at either end of the building are spalling and should be replaced. The wood rail is rotted and deteriorated. It also should be replaced. The platform at the south elevation of the building has several areas where the asphalt has been patched. These are at the downspout leaders. The patching was done incorrectly and has heaved. This should be corrected. The wood windows and wood personnel doors are deteriorated and should be replaced. The entire building is in bad need of paint and should be scraped and caulked also. Any trim that has deteriorated as well as siding should be repaired and replaced. The building has a relatively new modified bitumen roof, however, the gutters and downspouts were not replaced at that time. These need to be replaced. The building is divided into four sections by brick fire walls. The ends of the firewalls should be sealed at the exterior walls. Above the roof the parging on the firewalls is pulling the brickface off. This should be corrected. There are interior offices and restrooms located at the west end of the building as well as the east. Some of the drywall for these offices and restrooms should be replaced because they are water damaged. All areas if used should be repainted. A small basement exists at the southwest corner of the building. At one time it housed the boiler and coal bins. It extends under the south dock. There is a small amount of water standing on the floor. The reinforcing in the ceiling is exposed. The side walls are leaking. The basement is not used at this time and the boiler does not exist. The sprinkler system also should be upgraded to function properly.

BUILDING PLAN:

Building #

T210 (IN0612NH)





BUILDING DESCRIPTION:**Platform Warehouse**

Building #

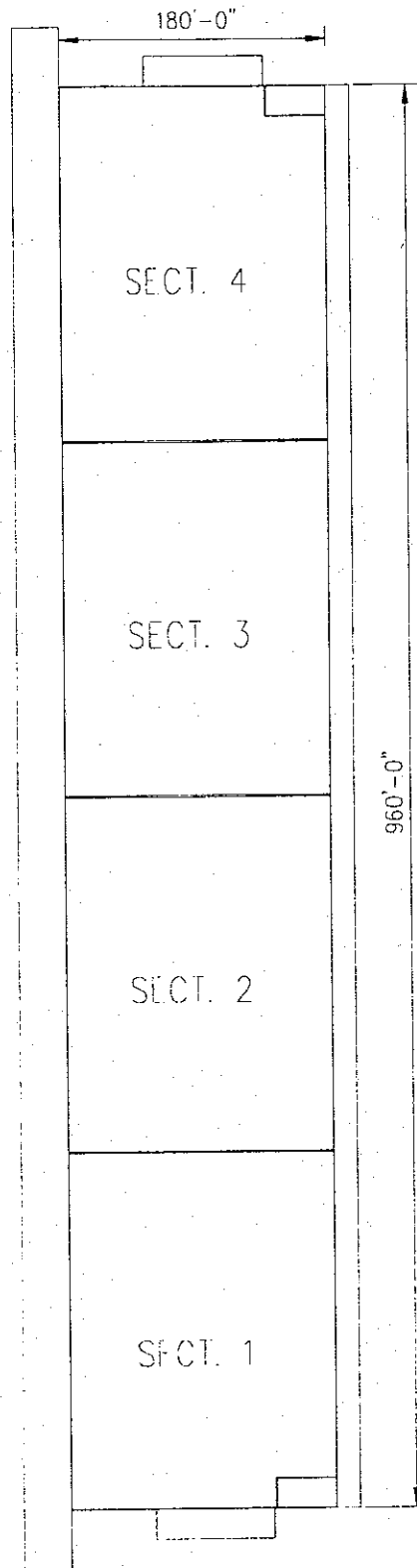
T211 (IN0613NH)

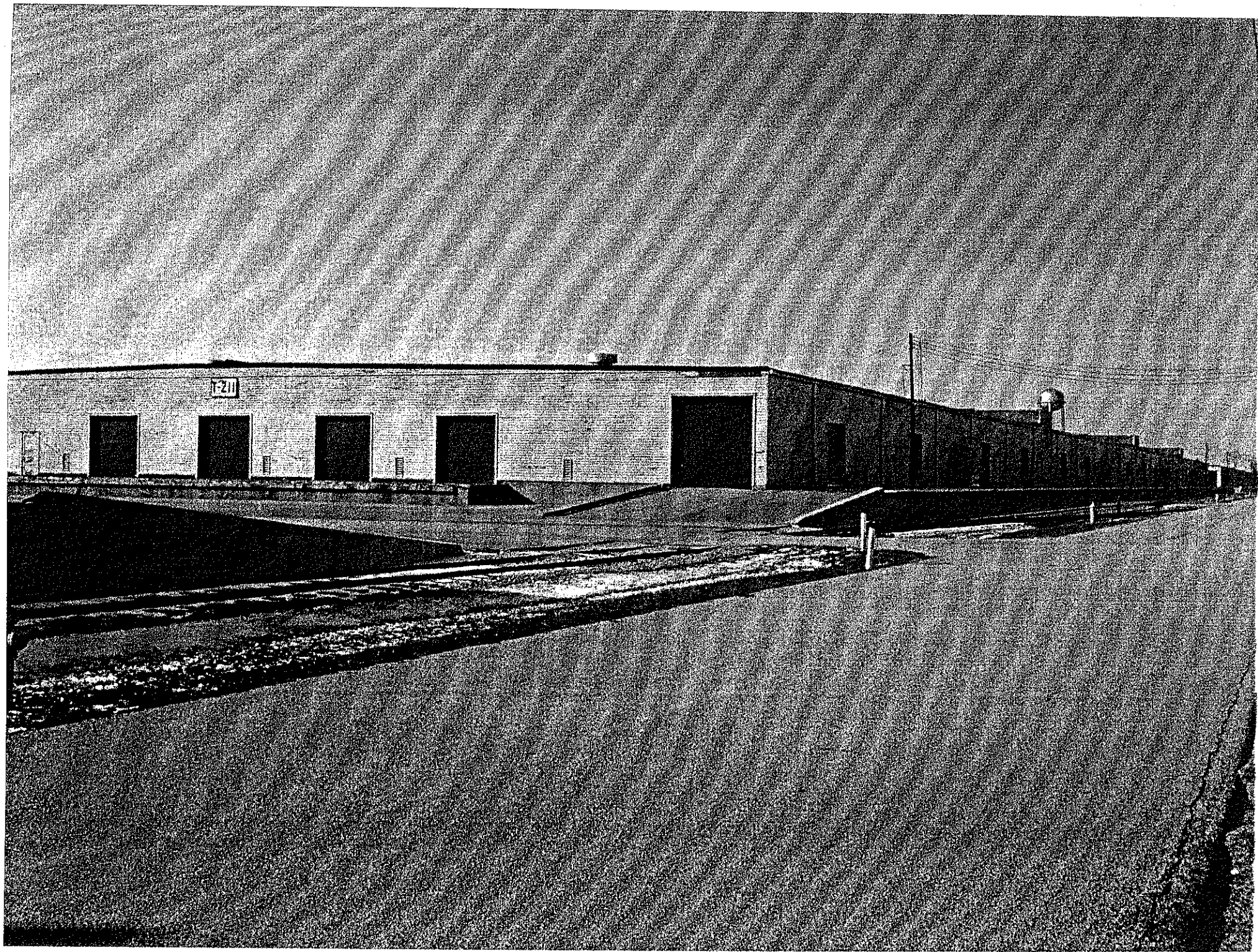
This is a 960' by 180' warehouse building with a slab-on grade, wood exterior walls with a wood structural frame system, wood roof deck and a modified bitumen roof. The east and west docks are concrete with asphalt fill. The wood dock bumpers are rotted and deteriorated and should be replaced. The concrete steps are spalling and should be replaced. The wood rails are deteriorated and should be replaced. There are scattered areas of spald concrete at the edges that should be repaired. The north and the south retaining walls are out of plumb. The gutters and downspouts drain under the platforms and empty onto the railroad tracks on both the north and the south elevation. There is no swale evident to carry the water away. The roof has been replaced recently, however, the gutters and downspouts were not and should be replaced. Also, the cast iron leaders should be checked for blockage. There are indications that they may be stopped up. The windows and personnel doors in the entire building should be replaced. The entire building should be scraped, caulked and painted. All of the trim work should be repaired or replaced as needed. The wood louvers on the exterior walls are in very bad repair and should be replaced. In general, the concrete floor is cracked, however, at the northwest ramp door and around the overhead doors they are especially bad. This building also has a partial basement at the northwest corner. It is standing in one inch of water. The offices and restrooms at the east and west end are of wood partition with drywall construction and show some signs of water stain and damage. It was suggested that these rooms be demolished and the space used for additional storage. The floors at the fire doors as reported on the previous report have not been corrected. The corrections per the fire sprinkler survey have not been made.

BUILDING PLAN:

Building #

T211 (IN0613NH)





BUILDING DESCRIPTION:**Platform Warehouse**

Building #

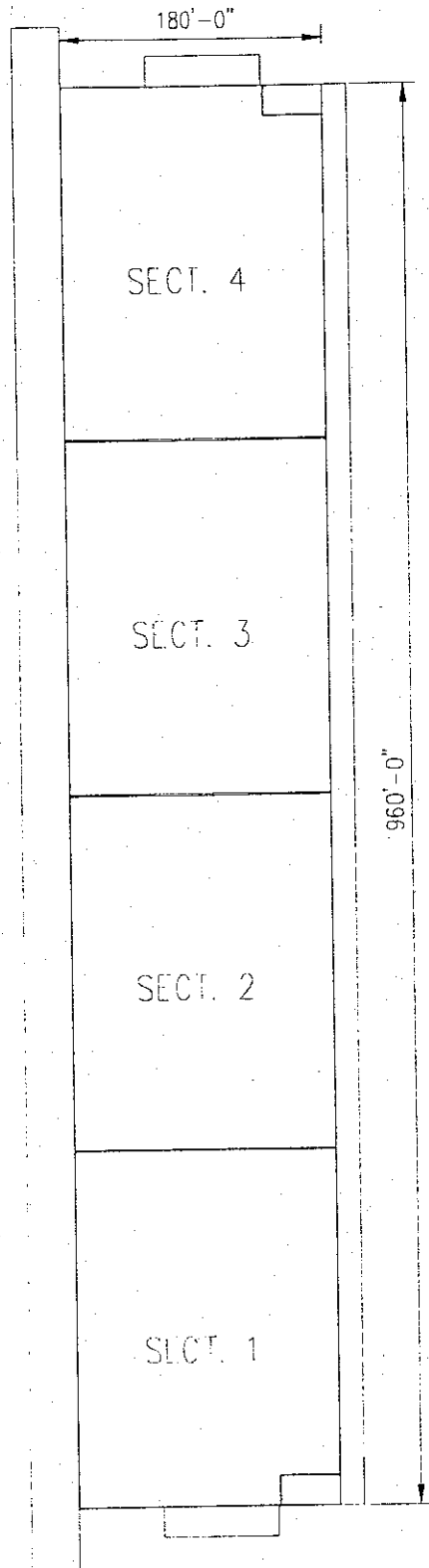
T212 (IN0614NH)

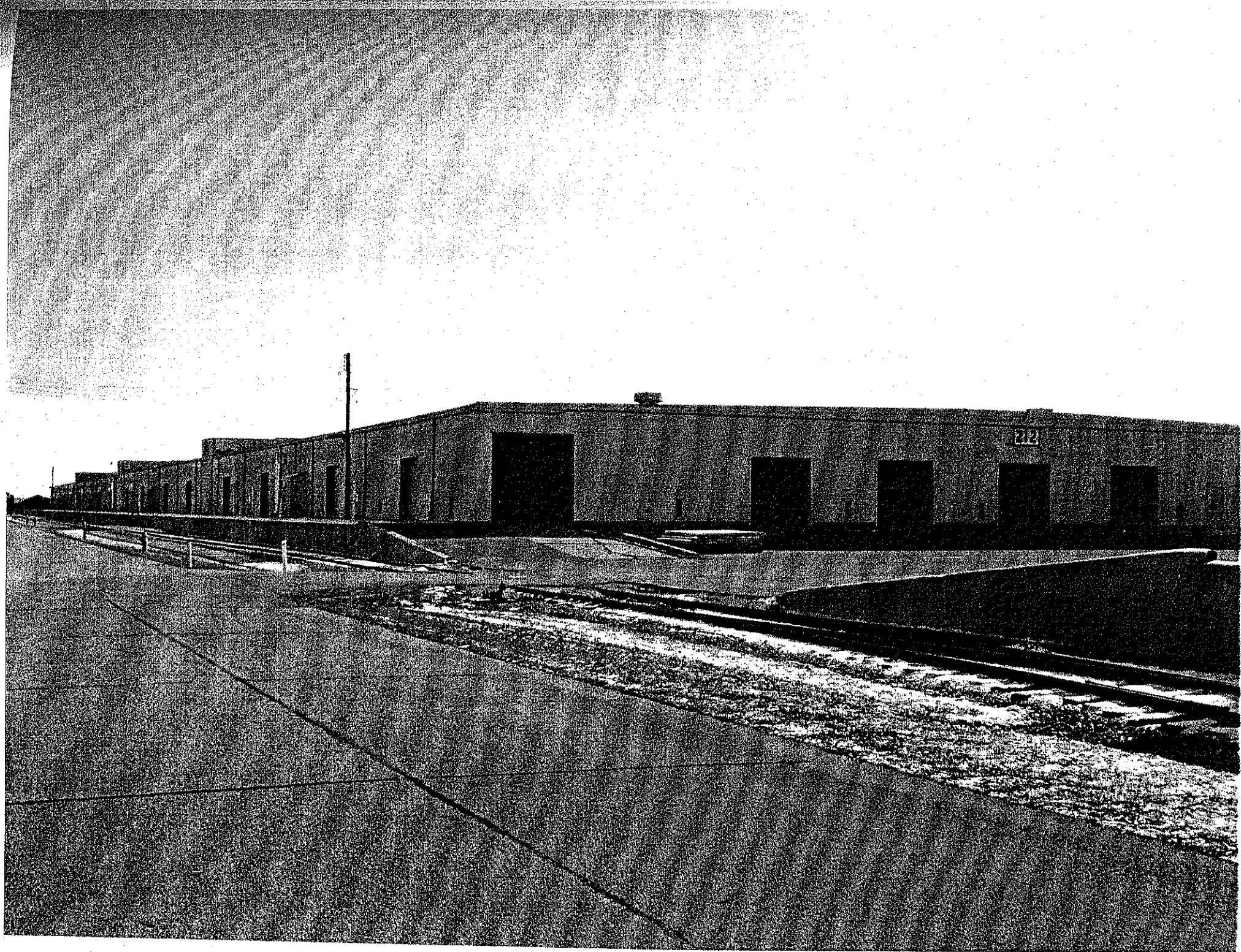
This building is used as a warehouse. It is elevated approximately 3 1/2' and has a dock on all four sides. At the east and west end the docks have concrete ramps for access to the platforms. There are concrete steps in the truck dock area. The concrete for the most part is spald. The asphalt on the east and the west end is breaking up and is cracked. The handrails for the steps are of wood and are rotted. At the north elevation the concrete retaining wall for the elevated dock is out of plumb. The building is of wood frame construction and has wood siding. The roof is a rolled roof and is in bad condition. The entire exterior paint is cracked, chipped and peeled. All of the siding and trim should be replaced as necessary. The entire exterior should be scraped, primed and painted after it has been caulked. Nine person doors at the exterior are in poor condition and are coming apart. The doors, frames and hardware should be replaced. Where the elevated dock joins the building there is a crack. This crack should be filled with sealant. At the outer end where the asphalt meets the concrete retaining wall there also is a joint that is allowing water to penetrate behind the concrete. This joint should be filled with sealant. The gutters and downspouts for this building are corroded. The joints are open and the brackets and nails are loose. All gutters and downspouts should be replaced. The building is divided into four areas by brick firewalls. Above the roof on these firewalls the flashings have failed and should be replaced. In general the floor slab is cracked, especially bad are bays 51, 52, 55 and 56. The slabs at most overhead doors are cracked and fall away towards the doors. At each end of the building there are offices and restrooms that are no longer used. If it is determined that these need to be brought back into operable condition, extensive repairs will be necessary. At the southwest corner of the warehouse a partial basement exists that once housed a boiler. The sidewalls, floors, and ceiling are in need of repair. Water is standing on the floor. In some cases the reinforcing is exposed at the ceiling, however the boiler has been removed. Inspection of the electrical system reveals that the light levels from the incandescent lights is at a very low level. The roof leaks are damaging the electrical system to the point of being very dangerous. This situation should be corrected at once. There are some siding panels at the exterior of the building that appear to be transite. Those panels should be tested for asbestos. The sprinkler risers were renovated approximately three years ago and appear to be in good condition. However, the sprinkler mains and branch lines may not be in such good shape.

BUILDING PLAN:

Building #

T212 (IN0614NH)





BUILDING DESCRIPTION:**Grade Level Warehouse**

Building #

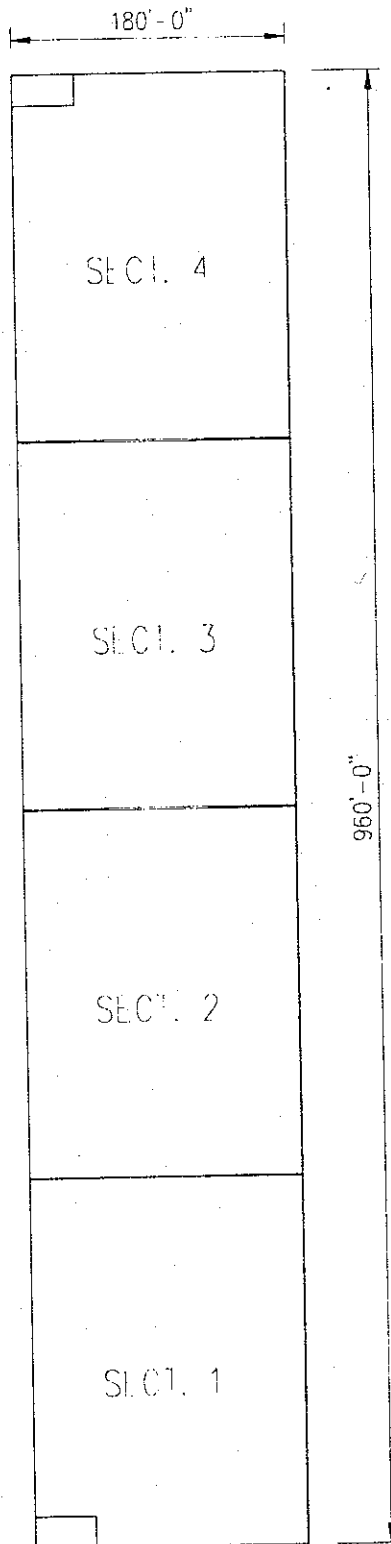
T213 (INO615NH)

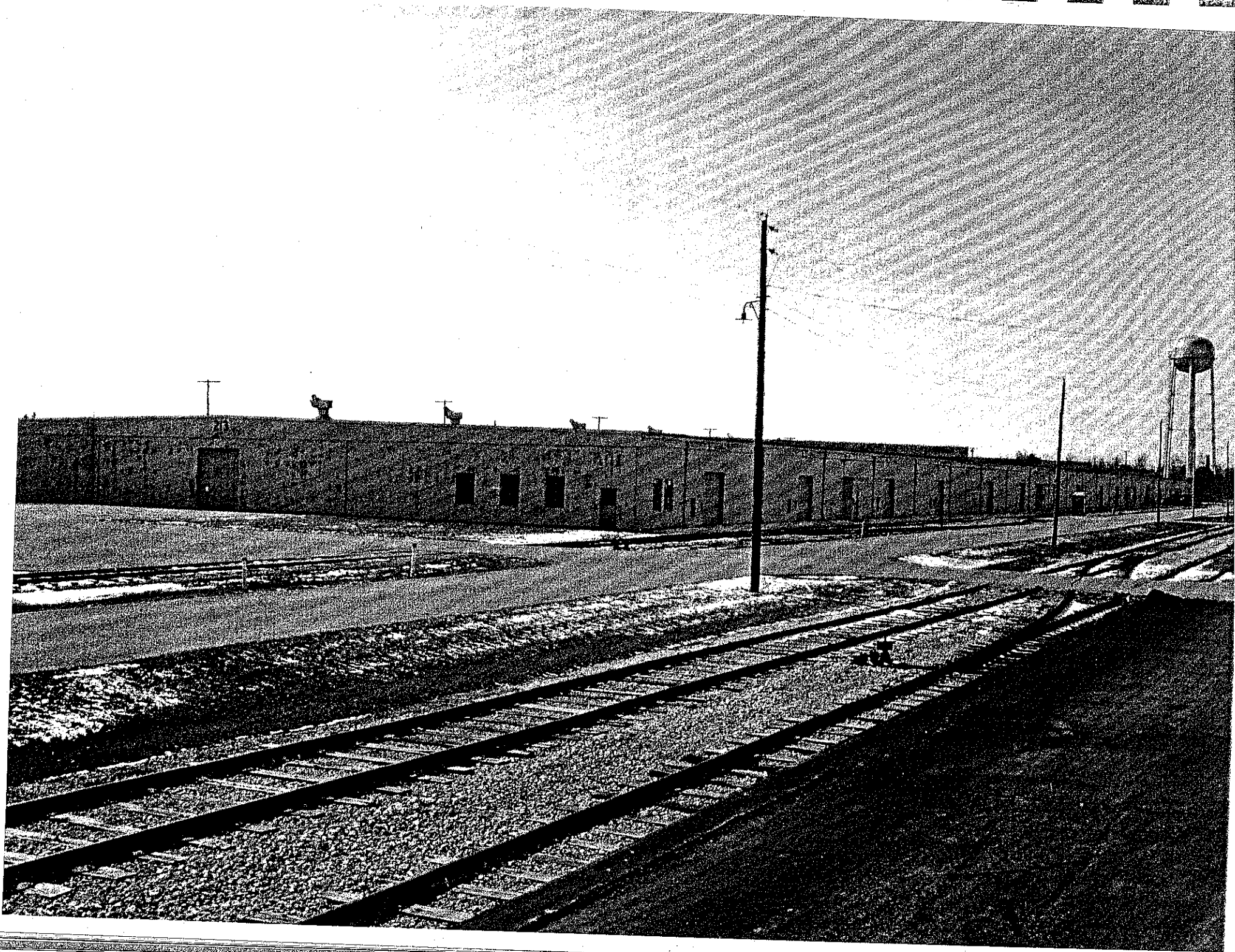
This building is used as a warehouse and has poured concrete exterior walls, has a wood frame, wood roof deck and rolled roofing. There are asphalt drives at the east and west end and concrete walks on three sides of the building with a railroad track on the fourth side. All overhead doors are new steel insulated sectional overhead doors. The person doors are for the most part in bad shape and disrepair, as are the windows. The building is divided into four sections separated by brick firewalls. The floors are concrete. The walks along the south elevation are in bad repair and should be patched and/or replaced. At several locations around the building there are cracks in the concrete wall that should be repaired. The building is painted, however, the paint is cracked, chipped and peeled. All exterior surfaces should be caulked scraped, primed and painted. The joint between the sidewalk and the building should be filled with sealant. The lawn at the west end of the building during periods of rain stands in water as does the drive at the east end of the building. The roofing is old and deteriorated and should be replaced. At the time the roof is replaced the roof deck should be inspected and rotted decking replaced. The gutters and downspouts for this building are in bad repair and should be replaced. The flashing on the firewalls above the roof have pulled loose and are in bad repair. These flashings should be replaced. There are offices and restrooms located at the west and the east end of the building that are no longer used. It was suggested that these offices and restrooms be removed to allow additional storage space. The sprinkler risers were updated approximately three years ago and are in good condition. The sprinkler system, mains and branch lines may be in need of repair.

BUILDING PLAN:

Building #

T213 (IN0615NH)





BUILDING DESCRIPTION:**Grade Level Warehouse**

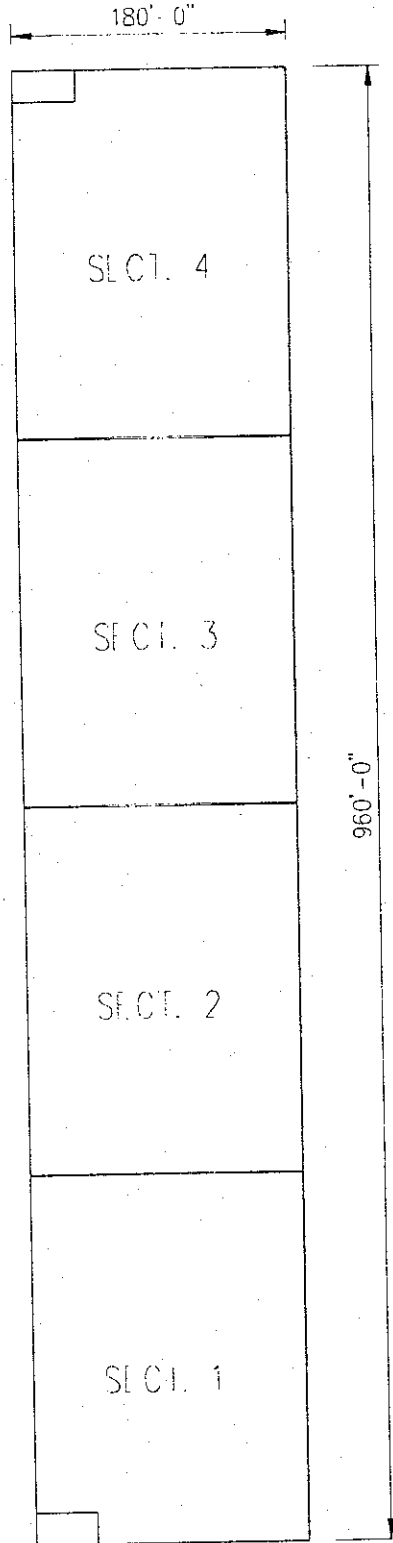
Building #

T214 (IN0616NH)

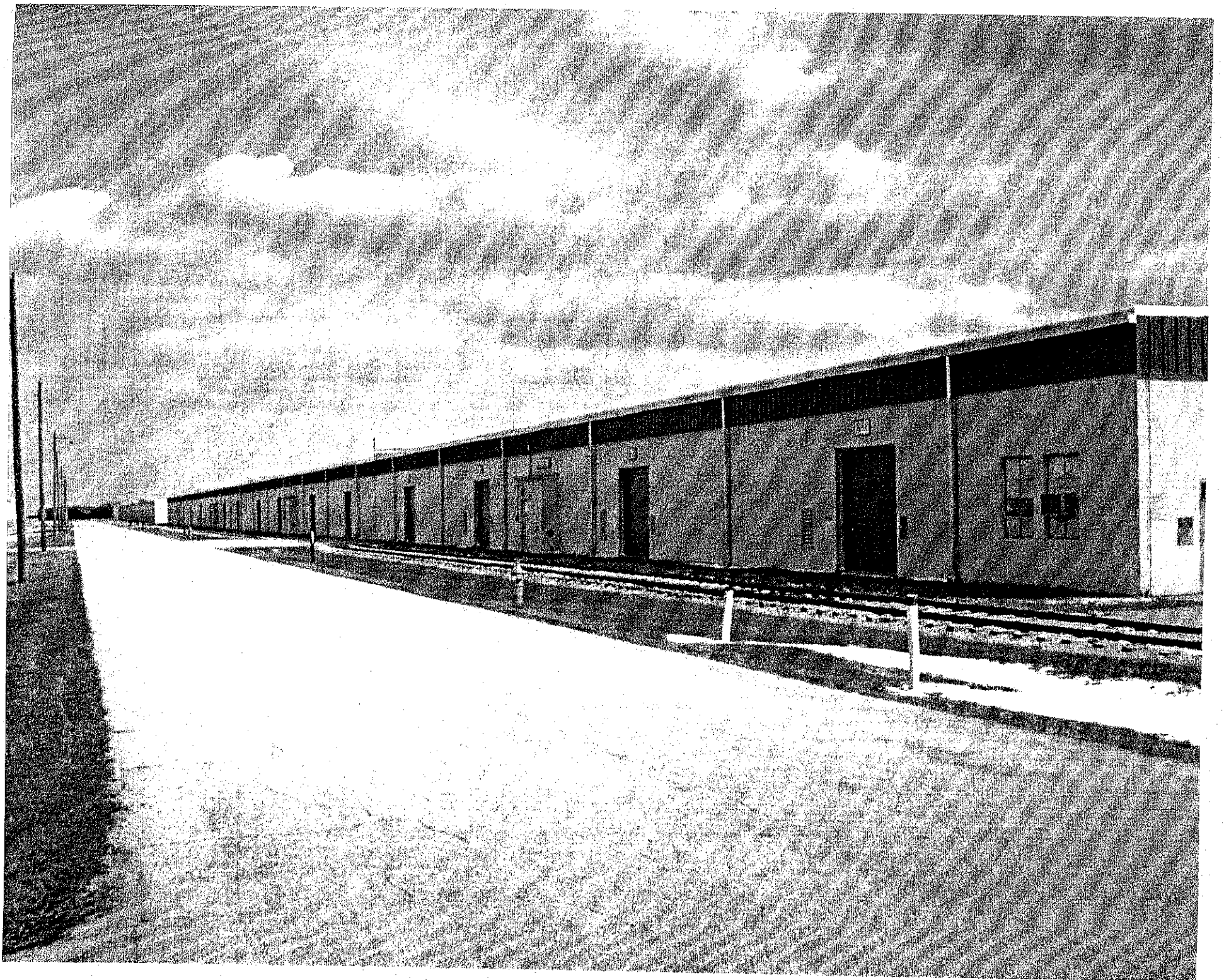
This warehouse is 960' long by 180' wide, has poured concrete perimeter walls, a wood frame structural system, a wood roof deck, and a new modified bitumen roof. All of the flashings, gutters and downspouts have been replaced recently. There is a concrete walk on three sides of the building that is in bad repair. Inside of the building at the northwest corner is a de-contamination room for the employees. At the opposite end of the building there are offices and restrooms that are no longer in use. The partition walls are wood and drywall. The asbestos panels at the east and west ends of the building have been removed and a new metal panel has been installed around the perimeter at the roof. The entire building should be scraped, caulked and painted. All of the control and expansion joints should be filled and caulked. The overhead doors have been recently replaced. The drives at either end of the building should be seal-coated. The personnel doors and the windows in the office areas should be replaced. This building is sprinklered and the sprinkler riser housings appear to be in good shape. Modifications to the floor slab at the fire doors have not been made.

BUILDING PLAN:

Building #



T214 (IN0616NH)



BUILDING DESCRIPTION:

Grade Level Warehouse

Building #

T215 (IN0617NH)

This building is a 960' by 180' warehouse having concrete block exterior walls with a wood frame structure, a wood roof deck and rolled roofing. The concrete block throughout this building is very badly cracked and deteriorated. Also, the paint is chipped and flaking throughout the building. Part of the reason for this is that water is cascading down the building from the roof due to the poor condition of the gutters and downspouts. It is causing water to enter the building. Adding to the problem is the very poor condition of the roof itself. It is very badly blistered, even in cold weather, and shows evidence of the decking being rotted below. Around the perimeter of the building at the top there are panels which appear to be transite. These panels should be tested for asbestos content. The interior of this building is one big room and does not have the firewalls the other buildings have. At the east elevation of this building the block has two expansion joints. However, the building is making its own expansion joints between the existing joints. The concrete foundation extends approximately 16 inches above grade. At the east elevation the top of the concrete foundation is spalling almost the entire length. The interior slabs are broken and heaved in several areas. In general, the areas around the overhead doors are broken and sloped towards the doors. Along the north and south exterior walls there is evidence that the roof is leaking and that water is entering the building. Midway of the south wall, a pilaster has been damaged and the rebar is exposed. There is no sprinkler system in the building, however, there are pull stations located around the building on the exterior. There are offices and restrooms located on either end of the building. These offices and restrooms have wood partition walls with drywall. Neither are in use. To bring this building to a reasonable condition we would suggest that the roof be removed, the decking that has deteriorated be replaced and a new roof applied over. All of the flashings, gutters, and downspouts should be replaced. The asbestos or transite siding should be removed and replaced with a metal panel similar to what was done on building 214. The entire building should be tuckpointed and caulked and then painted. Although the sidewalks on this building are not nearly as bad as other buildings, we would suggest that the joint between the concrete sidewalk and the building be filled and sealed. The personnel doors and windows should be replaced at this time also. It was suggested that the offices and restrooms at either end of the building be demolished since they are no longer used and the space be used for additional storage. Since this building is being used as high pile storage we would suggest that the floor slabs be repaired

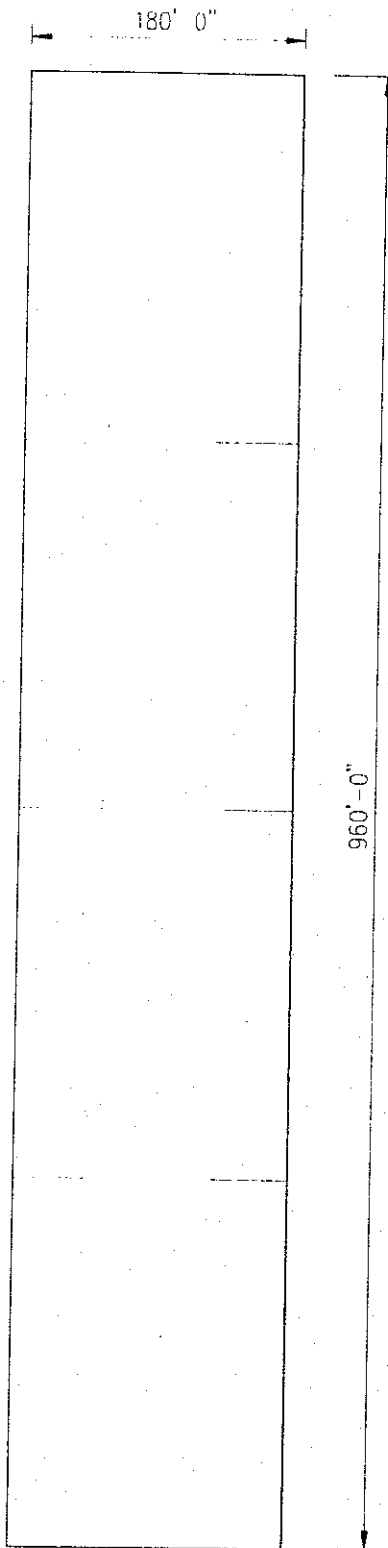
Defense National Stockpile Depot

New Haven, Indiana

and in some cases replaced to facilitate the high pile storage.

BUILDING PLAN:

Building #



T215 (IN0617NH)

