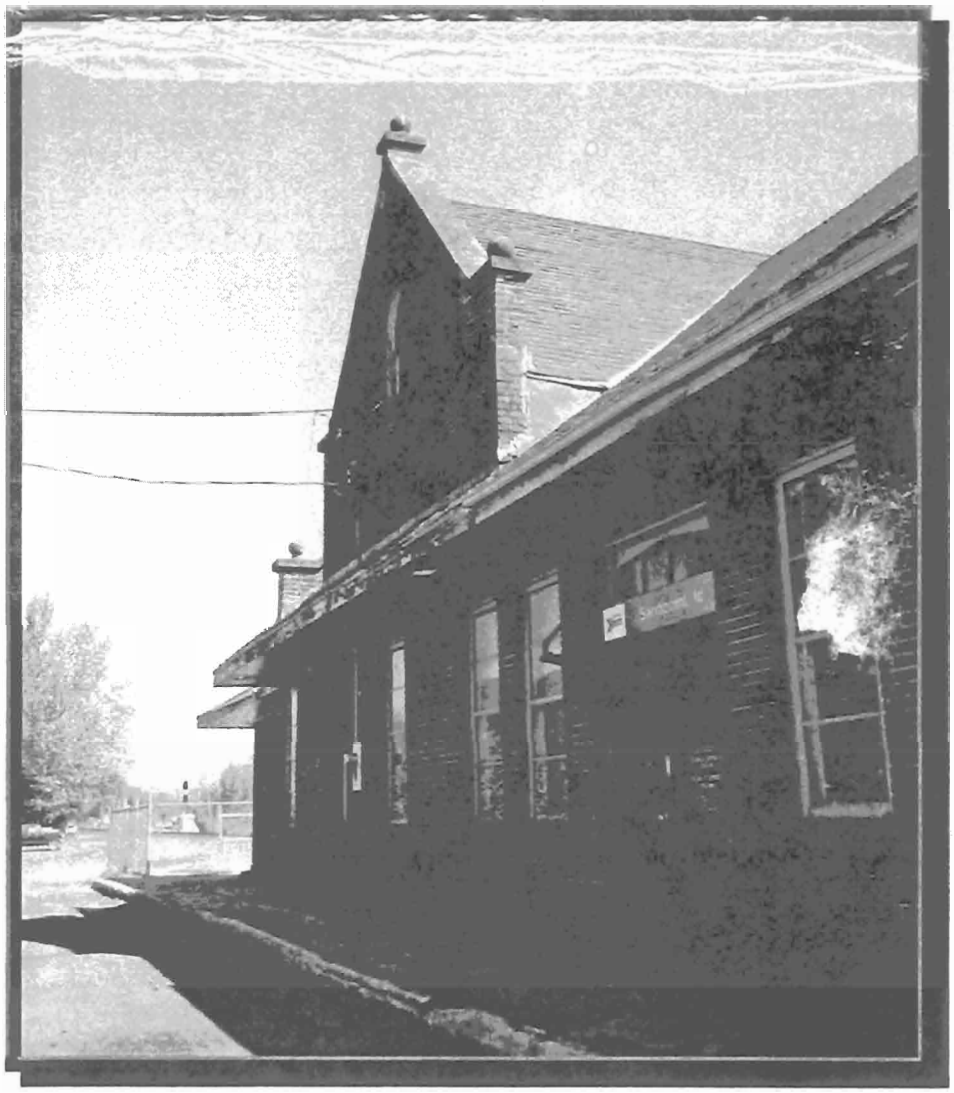
SANDPOINT RAILROAD DEPOT

SANDPOINT, IDAHO



HISTORIC STRUCTURES REPORT AND MONITORING PLAN

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Final
June 21, 2006

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SANDPOINT DEPOT

INTRODUCTION

Objectives

The plans for the US 95 Sandpoint, North & South – Highway Realignment project provide a new alignment for US 95. The new roadway will be about 2 meters (6.5ft) lower than the existing ground as it passes between the Cedar Street Bridge walkway and the Sandpoint Depot. Additionally, the Cedar Street Bridge walkway will be altered and a pedestrian ramp way installed from the east end of the bridge to the new bike path below. These two construction activities will include pile driving and earthwork at the west side of the Depot that will occur within 150 meters of the building.

The Memorandum of Agreement dated April 14, 2005 provides stipulations about the Burlington Northern Santa Fe Railroad Depot. The preparation of this report is one of the stipulations. This report will document the building's condition prior to construction, provide a monitoring plan to be used during construction, and outline future work to evaluate and report on the building's condition after construction. Any project related damage will be repaired by the Idaho Transportation Department (IT) and the Federal Highway Administration (FHWA) to a conditional equal to that of the existing condition before the damage occurred.

This report will document the existing condition and also discuss improvements to the depot that may improve its longevity. Not all improvements, however, will be required of ITD, only those recommendations listed in the section titled "Architectural and Structural Recommendations" will be required for ITD to complete.

Methodology

Investigations of the building and site occurred on May 9-11, 2005 and on July 20-22, 2005. Original drawings from 1916 were used as base drawings for observation of the structure and materials. Black and white 35 mm photographs and digital photos were taken to document the existing conditions. Large format black and white photos were taken of the exterior and larger interior spaces. Additionally, color videos were utilized to capture a "walk-through" documentation in areas where black and white photos would not truly relate the story of the depot.

The Depot is occupied by two entities, the Burlington Northern - Santa Fe Railroad and Amtrak. These two users are currently occupying the Depot, and consequently there is equipment and furnishings throughout the building. Observations and investigations were made based upon the existing occupancy. When large objects or furnishings were in the way, some assumptions were made.

HISTORY OF THE SITE

The town of Sandpoint was named for the "point of sand" along Lake Pend Oreille as mentioned by explorer David Thompson in 1809. Later in the century, during the surveying for the Northern Pacific Railroad, this sandy area was recognized as a useful building material for the construction of the rail line. With the route of the Northern Pacific plotted through Sandpoint, settlement was eminent. In 1880 the first general store was established and the town prospered.[1]

Construction of the rail line progressed from both the east and west. By September of 1881, the western tracks had been extended eastward across the state of Washington past Spokane and 60 miles east into the Idaho panhandle. Next was the arduous route through the mountainous terrain of northern Idaho and northwest Montana where the union with the eastern tracks would culminate in 1883.

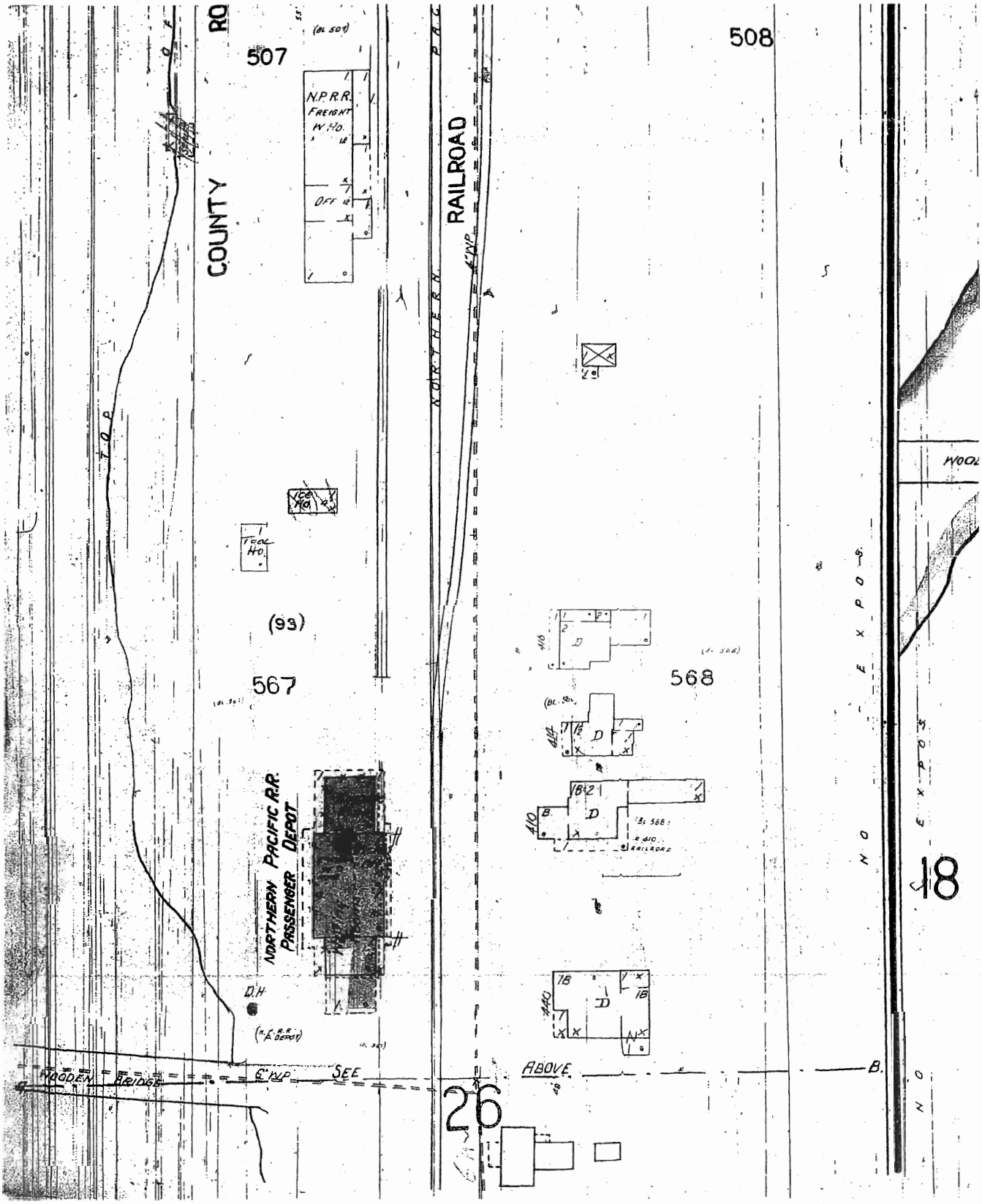
By June of 1882 tracks through the small lakeside town allowed the flow of materials to the construction effort at the eastern end of the line. Sandpoint blossomed to become the Pend d'Oreille Division point of the Northern Pacific. In 1903 a new 46-pier steel bridge over the arm of lake Pend d'Oreille was completed. The timber industry burgeoned and the NP increased in trackage in 1914; 100 miles of tracks were added between Sandpoint and Paradise, Montana.[2]

CONSTRUCTION HISTORY OF TRAIN DEPOT

Architectural drawings of the Sandpoint Depot are dated March 1, 1916.[3] Construction progressed quickly in spring and summer. The Northern Idaho News reported in mid-September "work has commenced on the tiling of the roof of the new Northern Pacific depot, and it is expected that the building will be ready for occupancy by the middle of next month".[4] Indeed by the end of October 1916 the Depot was ready for occupancy, except for the furnishings, which were expected to arrive on every train.

The current Depot is the second building to serve the Northern Pacific Railroad on its course through this Idaho Panhandle town. The new $25,000 brick structure replaced the older depot that was torn down and replaced by lawn.[5] It is not exactly known where the former depot was located.

The 1921 Sanborn Map indicates that the Northern Pacific Railroad Passenger Depot was accompanied by other structures to the north. A tool house, an ice house and a freight warehouse were located along a siding directly north of the Depot. They appear to have been wood frame structures and are no longer extant.[6]



1921 Sanborn Map. Sandpoint, Bonner County, Idaho

ARCHITECTURAL EVALUATION

Construction

Foundation/Basement

The Depot is constructed of an unreinforced concrete foundation supporting unreinforced brick walls. The concrete foundation is 18" thick. A basement is present beneath the north half of the central section. The southern part of the Depot has perimeter duct tunnels beneath a concrete slab floor. The baggage room at the north has a floor of brick pavers, presumably on a concrete slab.

Walls

The brick walls are three wythes thick totaling 13". The inner two wythes are supported by the concrete stem wall; the outer wythe is supported by a sandstone water table course. An intermediate stone sill course wraps the building. The brick is laid in a running bond with 5/8" mortar joints.

Floors

The floors are constructed of a concrete pan system with the slabs being 4 ½" thick. The interior partitions are composed of a 6" concrete curb with hollow clay tile at the lower walls and 2x6 stud walls above. The hollow clay tile is finished with an enameled brick wainscot to a height of 4' – 2". The upper walls are finished in a textured plaster, as are the ceilings.

Roof

The center section of the depot features an unfinished attic, accessed via the baggage room. The roof is wood frame construction.

See the structural section of the report for more about the Depot's construction.

Exterior

The Depot is a compact, linear building, oriented north-south, paralleling the railroad tracks. Its principal mass is a two-story volume at the center with one-story support spaces to each end. The Depot is a juxtaposition of the Gothic style in its asymmetrical massing, steep roofline, materials, and second story features, while embracing the Tudor style at the first floor level. The second story displays gabled parapets at the north and south with gabled wall dormers at the east and west. Each gable features a pointed, arched window typical of the Gothic style. Crenellations at the window bay facing the tracks further express the Gothic manner.

Meanwhile, at the first floor level, the deep, continuous eave line of the lower hip roofs unify the Depot lending a streamlined horizontality to the entire building. The arched windows flatten in the Tudor fashion, along with the long, low flat arch at the three sides of the covered platform at the south.

The deep, red brick walls are accented with sandstone detailing at the base course, sill course, and as parapet coping. Stone orbs finish each of the gable parapets creating a delightful roofline. The chimney and crenellations also feature stone caps.

The covered platform at the south end of the building originally provided shelter for passengers, it now serves, unfortunately, as an area for two cars to park.

Existing Conditions

On the exterior, the sandstone base course has suffered from weathering, possibly de-icing of the adjacent pavement during winter, and abrasion of the surface from equipment and or vehicles over the past ninety years. The sill course also has similar problems, though of a lesser degree, as it's height served to prevent its deterioration (the height of the window sills). At the roof, the sandstone coping at the parapets has also suffered from weathering, plus mechanical attachment problems. It is assumed that dowels attach the sandstone pieces to the brick wall, but mortar joints have deteriorated or are completely missing.

The parapets have suffered from the failure of the flashing and deterioration or loss of mortar. Excessive moisture has produced a build-up of lichen on all of the sandstone surfaces. Efflorescence is evident at the brick. A heavy build-up of moss has occurred on the roof at the north side of the south parapet. Moss is evident at the north side of the bay window. A sandstone orb at the north parapet is missing.

The interior windows have been protected with storm windows. A few cracks are evident, but for the most part, the original single pane, wavy glass remains. At the Baggage Room, the windows have been protected from the exterior with vertical bars. All the windows have cast iron spiked "bird guards" at the sills. At the southwest corner, two windows have been covered with a wire mesh.

Signage is provided at the north and south ends of the building. Mounted on the fascia is a sign reading "SANDPOINT". Above these at each end are large billboard style signs mounted on the roof.

Exterior Alterations

Alterations of the exterior of the Depot are minimal. The original tile roofing has been replaced with asphalt shingles. These shingles are in fair to poor condition. The original built-in gutter at the cornice around the entire building has been removed, probably due to the snow build up that, over time, compromised the functionality of the system. It is unknown when this was altered. Approximately one foot of the original eave depth – including the cornice molding and gutter - was removed and a fascia board was added as the finish. Unfortunately, no drip edge was added at the fascia and gutters are only present over doorways. The result is a greatly deteriorated fascia where the wood has rotted due to moisture and the paint is in bad condition. At the soffit the original tongue and groove wood finish was removed and plywood installed. This renovation has left the roof edge and soffit blunt and diminished in detail.

Stepped flashing at the parapet walls is evident in some areas, where this flashing detail has failed, a long strip of sheet flashing was installed, not always adequately. Snow build-up on the north sides of the parapets has produced excessive moisture damage.

The large door at the baggage room – track side – has been replaced. The opening has been infilled with wood framing and a flush metal door and frame has been installed. The northeast window at the bay window has been infilled and a small window air conditioner unit installed. Two windows at the southeast corner have been covered with a metal grating, though the original sash is still in situ.

Exterior elevations depict the condition of the exterior surfaces.

Interior Alterations

The interior of the Depot has been remodeled. The Baggage and Express Office at the north end has been subdivided to create a narrow storage room at the north end. Burlington Northern now uses the subdivided space for secure storage.

A smaller inner office was created at the north end of the Ticket Office that compromised the east wall of the Passage. The circulation pattern – that of ticketed passengers delivering their baggage to the Baggage Window - was eliminated with the expansion of the Ticket Office into the Waiting Room.

At the southeast corner of the Depot, the original Women's Retiring Room has been subdivided to create the Signal Room, which is accessed only from the exterior. A hallway from the waiting room now accesses the women's restroom.

The ceilings in the Passage, Office, Ticket Office, and Waiting Room have been lowered to the level of the original picture rail at approximately 11 feet in height. Acoustic tile has been applied to the ceiling surface. The floor at the Office and original Ticket office was wood; it has been covered with vinyl tile. The remainder of the floors in the other rooms, except the Baggage and Storage Rooms, is terrazzo on a concrete slab. The terrazzo is carried up the coved base, meeting the enameled brick wainscot. The upper walls are plaster as are the ceilings.

Damage

Floors:

The terrazzo flooring and coved base has suffered cracking due to the cracking of the concrete substraight beneath.

Cracks have occurred at the brick pavers in baggage room. Again, this is due to the cracking of the concrete slab below.

Walls & Ceilings:

The enameled brick wainscot is, for the most part, intact. Some cracking has occurred at joints, with a few loose bricks in evidence. The plaster walls and ceiling exhibit numerous cracks throughout the Depot, some mere hairline cracks, others being much larger.

The original woodwork is intact and minimally compromised. Its deep olive green-brown stain has not been painted over. Daylight appears to have faded the woodwork in some areas.

Room Finishes

The following is a description of the existing finishes on all the surfaces of each room as per the site investigation. The rooms were numbered north to south beginning at the north end of the depot. Interior elevations depict the condition of the surfaces.

<u>Storage Room 1</u> – altered condition; this is a newer room that was created with an east - west partition in the baggage room.

Brick flooring, brick walls at east, west, and north. New wood frame partition at south, original T &G wood ceiling (14'height).

Baggage Room 2 – altered condition; now 2/3 the original size due to the partition at the north end. The sliding door at the east has been removed. The opening has been infilled and a single passage door added. The exterior door openings have cast iron jamb guards. A fuel oil tank for heat was installed at the north end. A trench was created through the floor pavers (north to south) to accommodate the fuel pipe to the basement furnace.
Brick flooring, brick walls at east and west, horizontal T&G wood at south wall, new wood frame partition at north, T&G wood ceiling (14'height). An original "Fairbanks" floor scale is located at the center of the room. The "Baggage" window and counter are still extant at the south wall.

Passage 3 – altered condition; originally a hallway from the baggage room to the ticket office, remodeled – east wall partially removed.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") and plaster upper walls at west and north, new wood frame partition at east, dropped ceiling with 1'x1' acoustic tile (11'height).

Office 4 – altered condition; this space was formerly part of the larger ticket office. It was partitioned at the south to create a private office.
1' x 1' vinyl tile floor and wood base, plaster walls at north, east and part of west, new wood frame partition with wire mesh at upper south wall, dropped ceiling with 1'x1' acoustic tile (11'height).

Ticket Office 5 – altered condition; this space was expanded into the waiting room.
1' x 1' vinyl tile floor (over original wood flooring) and wood base, enameled brick wainscot (1'x4") with plaster upper walls at the west and east, plywood walls at new partitions, dropped ceiling with 1'x1' acoustic tile (11'height).

Men's Restroom 6 – Minimally altered, fair condition. Originally three toilet stalls, two urinals, two sinks, plus a utility sink. The west-most toilet and stall was removed, as was the west sink. The two stalls have marble partitions with four-panel doors. The east-most stall was updated with Fiber reinforced panels. The enameled brick ledge above the west urinal is broken with bricks missing.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and ceiling (14'height). A relight window at the upper east wall is extant.

Smoking Room 7 – unaltered, good condition.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and ceiling (14'height). The door to the waiting room has been removed. A relight window at the upper east wall is extant.
The original plan shows bench seating at this room, which has since been removed.

Waiting Room 8 – altered condition; the ticket office was extended into this space and the ceiling was lowered. Perhaps the plaster ceiling beams and cornice are extant behind the dropped ceiling?
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls, dropped ceiling with 1'x1' acoustic tile (11'height). The double entry doors have granite thresholds; the entry door side being very worn. New hardware has been installed: knobs, closers, and locks. The main door at the west is missing the brass kickplate. The original benches, exhibiting the same deep olive green-brown stain, are extant.

Hall 9 – altered condition; originally the women's waiting room. This space was divided to create the signal room at the eastern side of the room.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and plaster cove cornice and ceiling (14'height).
The original plan shows bench seating at this room, which has since been removed.

Vestibule 10 – unaltered, good condition.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and plaster cove cornice and ceiling (14'height). The south wall exhibits a beveled mirror with enameled brick surround that is in mint condition.

Women's Restroom 11 – unaltered, good condition. The two stalls have marble partitions with four-panel doors.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and ceiling (14'height). Some of the hardware at the door is missing – knob, closer, kickplate.

Signal Room 12 – altered condition; created from part of the women's waiting room with entrance from the exterior at the east.
Terrazzo floor and base (cracks have been patched), enameled brick wainscot (1'x4") with plaster upper walls and dropped ceiling (11'height).
An employee of the railroad stated that this room was altered pre 1965, as he has been with the railroad for forty years.
Basement - altered condition; the window wells have been infilled so there is no natural light. The coal-fired boiler was removed. The coal chute and ash shaft have also been infilled. A new oil-fired furnace has been installed. A small room at the northeast corner was partitioned to create a locker room for employees, but has since been abandoned, as well as the shower stall located in the middle of the basement. The pipe tunnels under the south end of the building were not investigated.

Building Systems

Mechanical System

The original coal-fired boiler has been removed. A furnace, fueled with oil has been installed. A fuel oil tank has been installed at the north end of the Depot. The radiators are extant. A small hall-hung unit heater heats the north storage room. Air

conditioning units have been added; one at the bay window, one at the door of Office 4 and one above the Signal Room door at the southeast.

Plumbing System

The plumbing system consists of two toilets, two urinals, and two sinks in the Men's Restroom; and two toilets and one sink in the Women's Restroom. The drinking fountains outside each restroom have been removed. A fire hose stand is located near the basement door and the east waiting room doors.

The integral gutter system around the entire hipped room has been removed. Gutters occur at the door openings only. Four downspouts empty into a subsurface drainage system. The northwest downspout is missing and literally washes down the brick wall.

Electrical System

The electric system has been changed over the years. Surface mounted conduit is virtually everywhere. Few original outlets remain. The power meter is located at the west wall outside the window to the smoking Room. Electric panels are located at the west wall of the Smoking Room, the partition wall at the Ticket Office (north facing), the north wall of Office 4, the partition wall of the Signal Room (north facing), and the exterior wall of the Baggage Room (northwest corner).

Lighting System

Few of the original light fixtures remain. The Baggage Room, the Smoking Room, and restrooms display original ceiling mounted fixtures, but even these have been compromised as the globes are missing. For the most part, ceiling or pendant mounted fluorescent lights prevail. Individual rooms do not have switches, all appear to be switched at a main point, location unknown, perhaps in an electric box.

The exterior has flush mounted modern fixtures along the soffits. They are minimal and do not provide much illumination.

Communications

A communications tower has been installed near the bay window on the track side of the Depot. The building has been wired for telephone and computer connections. A public telephone has been installed at the south wall beneath the canopy.

Site

A paved platform surrounds the Depot at all sides. At the north, west and south (beneath the covered platform) the original brick pavers remain. These pavers are standard bricks laid in a herringbone pattern south to north. The bricks vary in size from pale red to dark red. The underside of the pavers is embossed with an insignia yielding the brickyard source of the pavers:

A. F. B. Co.
Spokane
W.

According to the International Brick Collectors Association, the American Fire Brick Company (A.F.B. Co.) was in existence from 1902 – 1929.[7]

Throughout the length and width of the platform, the surface is not level, the subsurface material has settled and shifted. Plus some pavers have suffered the wear and tear of use and abuse, as some are missing; broken, chipped or cracked.

At the east side of the Depot, along the tracks, asphalt paving has been installed, probably over the original brick pavers, as the asphalt laps the pavers at the north and south in an uneven edge. The asphalt paving extends from the building edge to within 2 ½ feet of the tracks. It extends approximately 100 feet to the north of the Depot and 300 feet to the south of the Depot for a total length of approximately 500' and at a width of 12'.

A 6" concrete curb edges the asphalt paving and the brick pavers. It is flush with the surface and separates the pavement from the grassy area at the south side of the Depot. At the southwest corner of the platform a short staircase of three risers connects the access road/parking area to the platform. At this corner the concrete curb becomes a deeper retaining wall exposed at a height of 18". The curb/retaining wall diminishes in height as the grade increases from south to north. The stairs and the curb/retaining wall at the entire west side of the platform are in poor condition. The concrete is weathered, the aggregate is exposed, and the rebar is exposed along the edge. It has been patched with concrete and asphalt in some areas. Additionally, the platform is not handicap accessible from the road/parking area, nor do the stairs meet the current building code.

The landscaped area to the south of the Depot gently slopes from the platform to the edge of the access road. This area is mowed grass with three large trees – a fir, a chestnut, and a third tree of undetermined species, which is surrounded by a lilac bush - all hugging the edge of the road/parking area. A small amount of concrete curbing is located beneath the second tree. Railroad signage, parking signage, a utility pole, and a fire hydrant are located at the edge of the grassy area near the stairs.

The gravel access road extends along the west side of the Depot. This road will be removed during the highway construction and replaced with a similar road and parking area. It is paramount to avoid and retain this landscaped area. These elements are important contextual aspects of the historic Depot setting.

Summary of Condition

The Depot has suffered the ravages of time, weathering, and lack of maintenance. Concerning the exterior envelope, the roof, and parapets need a lot of attention. The shingles are in poor condition and need to be replaced. The fascia and soffit have suffered from lack of drip edge and subsequent water damage. Flashing at the parapets is poor and failing. The mortar at the parapets – brick and sandstone - is in poor condition and needs repointing. The wicking of moisture into the brick at the parapets has caused organic growth – moss and lichen – to occur.

The brick walls at the ground level are in great shape. The brick, being of good quality, has withstood the weather of North Idaho for ninety years. Cracks have occurred where expected – at openings. Where the sandstone water table has deteriorated, some bricks are missing and need to be replaced. Ultimately, all the

masonry should be repointed and cleaned. The sandstone water table has suffered the most deterioration. De-icing efforts, water, and physical abuse have caused irreparable damage to the water table around ¾ of the Depot. The north and northeast areas have been protected by a concrete "bumper" and have less damage.

At the interior, the concrete slabs have cracked and caused the terrazzo floor finish to crack also. Some of these cracks have been repaired, but continuous movement has caused recracking. The enameled brick wainscot is in decent shape throughout, needing minimal joint repairs. The plaster walls have suffered serious cracking, as have the remaining original plaster ceilings.

STRUCTURAL REPORT

General Observations:

The depot building sits on a mile-long peninsula that separates Lake Pend Oreille from Sand Creek. Downtown Sandpoint is just across Sand Creek from the depot. From the lake side the building has no protection from the westerly, southwesterly winds that blow across the lake. The creek side is lined with trees and vegetation and appears to provide more protection and the trees will be removed as part of the project. A single set of railroad tracks run north-south on the east side of the depot. The depot structure has un-reinforced brick walls with a wood-framed pitch roof and Gothic style gable ends. These gable ends are also constructed of brick. During our visit, tourists and passersby took pictures of the building and would ask questions about the building, indicating its architectural and historic interest. Also during our visit, a condominium complex was being constructed between the railroad and the lakeshore just east of the depot.

Based on a review of the cone penetrometer test provided by CH2M Hill, Boise, Idaho, it appears that the upper 3 or 4 meters of the site was built up with sandy soils creating the base for the railroad tracks and the building foundation. During our visit, trains passed by the depot approximately every half hour. We were told that about 50-80 trains per day passed by the depot, which seemed about right. Other than two late-night Amtrak trains, there were no set schedules. It was anticipated that significant vibrations would occur as trains passed by the depot. However, it was surprisingly difficult to feel any vibrations in the floor as trains passed. We could feel the windows vibrate slightly from the sound of the engines passing by, but not much in the floor. We did not have vibration detecting devises, so no vibration measurements were taken.

Building Interior:

The interior of the building has several rooms labeled on the floor plan as: 1, Storage; 2, Baggage; 3, Passage; 4, Office; 5, Ticket Office; 6, Men's Room; 7, Smoking Room; 8, Waiting Room; 9, Hall; 10, Vestibule; 11, Women's Restroom and; 12, Signal Room. Individual room observations, including cracks and miscellaneous damage, are mapped on the floor plans, ceiling plans, and wall elevations provided in this report. General observations are as follows:

1. Storage: This room appears to have been part of the original baggage area that has later been partitioned off. The majority of the floor area is constructed of brick pavers. A small portion of the floor is concrete where a drain is centered in an area referred to as a "fish rack" in the original drawings. The north wall is brick masonry as part of the north end of the building exterior. Cracking exists around the western most window. The south, east and west walls are constructed of painted plywood, and show no signs of distress. Pocket space, for the sliding baggage area doors, is created

between the masonry exterior and the storage room interior walls on both the east and west walls. The ceiling is constructed of painted wood slats. Other than the cracks in the exposed exterior masonry, there were no other cracks observed in the floor, walls or ceilings.

2. Baggage: In the center of the room is a floor scale apparently used for weighing baggage or other cargo. The floor in this room is constructed of brick pavers, which for the most part are in fairly good condition. There are some cracks in the floor, which have been mapped on the floor plan. In both the storage area and the baggage area, there is evidence that a row of pavers were removed and concrete replaced to install a pair of fuel lines that extend from the exterior north end of the building to the inner office (Room 4) and then down into the basement to the heating unit. The east and west side walls of this room are exposed brick masonry as part of the building exterior. Both the east and the west walls have cracks in the masonry over the windows near the southern wall of the room. On the east wall there are cracks on both sides of the southern most window. The crack on the south side of the window is much larger being approximately ¾" wide from the top of the window to the top of the wall. On the north side of the window the crack is about 1/16" to 1/8" up the wall. On the west wall, the cracks are larger at the top of the wall, approximately ¾" wide and then reduce to 0" down the wall. Shelving and cabinets were in the way on a portion of the west wall so no cracking was observed on the wall in this area. The north wall is constructed of painted plywood, and the south wall is constructed of wood lap siding. Both the north and south walls appear to be in good condition. The ceiling is constructed of painted wood slats and is also in good condition. Access to the attic is available via a wooden ladder attached to the south wall.

3. Passage: The wall, floor and ceiling materials in this room are the same as the ticket office area and are described in that section. There are a few small cracks on the floor and west wall, which are mapped on the drawings. Access to the baggage room and the basement are through this passage area.

4. Office: This space appears to have been separated from the ticket area, where wood partitions were added along the west and south sides of the room. The partitions appear to be in good condition. The north wall is the original wood wall, which separates the room from the baggage room. No cracks were observed in walls or ceiling of the room. The floor is covered with linoleum tile and therefore, no cracking was observed on the floor.

5. Ticket Office: The majority of the floor of this area is constructed of concrete over the basement, supported by steel beams and steel columns. A portion of the concrete floor is covered by linoleum tile and not visible. However, the concrete floor observed from the basement area does not reveal any stress cracking. The majority of the ticket office floor, as well as the passage area floor is surfaced with terrazzo. Some cracking occurs in the floor, which is mapped on the floor plan. Some of the

floor cracks near ½" in width and have been filled with a caulking material. There is a slight raise between crack edges as the ticket office approaches the passage way. The raise is only slightly noticeable when sliding a foot across the crack, and does not appear to be a tripping hazard. The entire ceiling system appears to have been dropped and is currently 12" square ceiling tile. There is evidence of water damage along the east wall. Some of the tile has been replaced with small sheets of plywood. It is apparent that the ticket office area was originally smaller and the waiting area was originally larger, and that the ticket office has since been expanded into the waiting area. The partition between the waiting area and the ticket office is wood paneling on both sides of the wall and extends to the dropped tiled ceiling. This partition appears to be in good condition.

6. Men's Room: The men's room has three stalls, two urinals, a hand wash basin, and a wash tub. It appears that the toilet has been removed from the westernmost stall, adjacent to the exterior wall. Some of the plumbing is exposed, apparently by design. The ceiling in this area is plaster and is directly attached to the roof system. It appears that a significant amount of water damage has occurred in the ceiling especially adjacent to the masonry parapets, which it appears that the metal flashing has failed to stop moisture from entering the building. There is cracking in the ceiling, which is mapped on the ceiling plan. The floor is surfaced with terrazzo and has some small width cracks, which are mapped on the floor plan. From the base of the terrazzo floor to approximately 4'-8" above the floor, the walls on all sides are tiled with white enameled brick. Generally, this tile appears to be in good condition. Some tiling is missing over the eastern most urinal. Above the tiling, the walls are plaster to the ceiling. Cracking in the walls also exists, which is mapped on the wall elevations.

7. Smoking Room: Similar to the men's room, the floor is concrete finished with terrazzo, the walls are tiled with white enameled brick on all four sides to approximately 4'-8" above the floor and then plaster to the ceiling. The ceiling is also plaster. Four metal lockers have been placed along the western wall, which cover a portion of the wall and the floor. Other than a few small cracks in the floor, ceiling, and walls, the room appears in good condition. Crack locations have been mapped on their respective plans.

8. Waiting Room: This area has the main entrances into the depot from the east and west sides. Double door entrances with large windows exist on both sides. The concrete floor is surfaced with terrazzo, the exterior walls and the south walls are tiled

with white enameled brick to approximately 4'-8" above the floor. Above the tiling is plaster wall to the ceiling. The walls that separate the waiting area from the office area appear to have been added. These walls are wood construction finished with two types of wood paneling. These wood walls appear to be in good condition, in which no signs of distress were observed. The ceiling in the waiting area appears to have been dropped two feet and finished with 12" square ceiling tile. We did not open this area to see the original ceiling. Moisture stains were evident on this tile along the

exterior walls, indicating that rainwater had entered the structure, and again, adjacent to the walls where parapet flashing appeared to be ineffective.

Probably the largest floor cracks exist in this area. The crack sizes range from hairline to about 3/8 inch wide. One crack runs the full width of the waiting room from one entrance to the other. It appears that the larger of these cracks have been filled with a caulking material. The plaster walls also have cracks. These cracks range in size from hairline to about 3/16 inch wide. It appears that filling and painting over some of these cracks has been attempted, but many of these cracks have reopened.

9. Hall: The hallway is part of what was originally the women's retiring room. A wood partition wall was constructed to create the signal room, discussed later. This partition wall is the east side of the hall. The remaining walls in this area are also finished with enameled brick and plaster to the ceiling. Again, the floor is a terrazzo surface. Cracks also range from hairline to approximately ¼ inch. The largest crack extends the full length of the hall and continues well into the waiting room. The exterior wall at the south end of the building has a fairly significant crack above the window to the ceiling. This crack is roughly ¼ inch wide.

10. Vestibule: The vestibule is a small area separating the hall and the ladies restroom, having the same floor, wall, and ceiling finishes. Cracks also exist in the floor, walls and ceiling, which are shown on the mapping.

11. Women's Restroom: The women's restroom is much smaller than the men's consisting of two stalls and a wash basin. Again, the floor is terrazzo, the walls are tiled with white enameled brick and the upper wall and ceilings are plaster. Small cracks exist on the floor, walls, and ceiling, as shown on the mapping.

12. Signal Room: The entire room has been remodeled. It was originally a part of the women's waiting area but has been partitioned off to create a separate room for Burlington Northern Railroad. The floor is covered by 12" linoleum tile, so the concrete below is not visible. Some cracking along the exterior edge of the linoleum exists but it is not clear if these cracks continue into the concrete below. The west wall is part of a painted plywood partition wall, which separates the signal room from the hallway. The remaining three walls are finished in the same manner of the other rooms with the tiling and plaster. The ceiling has been dropped in this room and the room is heated with electrical base-board heaters. No cracking or distress was observed in the walls or ceiling in this room.

Roof System (Attic):

The roof system is composed of 2x wood rafters, collar ties, and ceiling joists supported by both interior stud walls and exterior masonry walls. 1x6 wood slats support the asphalt shingles. The attic space is accessible through the baggage room, and is large enough to stand and walk around comfortably, and is lighted with windows in the four gables. This area is not used as occupied space, nor are any items stored. The roof system appeared to be in good condition and no apparent distress was observed.

The masonry gable end walls are exposed in the attic and also appear to be in good condition. Some efflorescence was observed on the interior face of the masonry. A ¼" steel cable exists which is anchored into the masonry gable ends above the windows, extending from the west end gable to the east end gable. It is not known if the cable was left in place during construction or if was added later. The bolts attaching the ledger to the gable ends are rusting from exposure to moisture. The masonry chimney, which extends from the basement through the attic, appears to be in good condition, no cracks were observed.

Roof Exterior:

The entire roof exterior appears to have been neglected and in need of maintenance. The asphalt shingles throughout the roof are weathered, covered with moss, curled, or missing. The roof plenum does not appear to be vented which may explain why the majority of the shingles are curled at the edges. Rain gutters, which are shown on the original drawings for the building, appear to have been removed and replaced with a fascia board. The fascia board is severely weathered, cracked, and in need of painting or replacing. It also appears that no metal drip edge exists above the fascia. This allows rain water to leach back into the fascia and soffit and damage the framing. The metal flashing adjacent to the masonry gable end/parapets is either missing or failing, allowing moisture to work its way into the structure and dampen interior ceiling and wall surfaces. Moisture damage is evident on the interior of the building in several locations. The stone coping on the end gables are in remarkably good condition. However, the mortar joints between the stones and the bricks within the parapets and chimney are badly weathered and need re-pointing. The parapets are stained in several locations as a result of the mortar leaching from between the bricks and stone and on to the face of the gable ends.

Basement:

Access to the basement is just off the baggage area down a concrete stairway. Other than a few chipped areas from normal wear, and some efflorescent staining on the walls, the stairway appears to be in good condition. There are cracks in the plaster walls and ceiling and evidence of moisture staining especially exterior corners. The basement floor is concrete and appears worn and slightly uneven. Hairline cracks exist throughout the slab - too numerous to map. A few larger cracks in the 1/16 to ¼ inch range are mapped on the basement floor plan. Remnants of an old, circular based boiler for the radiant heating system is imprinted on the floor. The ceiling is a

combination of suspended concrete in composite with steel beams. These steel beams are seated on cast-iron pipe columns and support the main floor above. The structural components of the basement appeared to be performing very well. No cracking or signs of distress was observed in the ceiling area, therefore no cracks were mapped. Numerous plumbing fixtures exist which hang from the ceiling. The walls of the basement are cast-in-place concrete. No cracking in the walls was observed. There is also a concrete ducting system that extends from the basement to south end

of the building under the floor, which is utilized for miscellaneous plumbing, electrical, and mechanical. These ducts were not entered or observed.

Exterior - General:

In general, the multi-wythe unreinforced masonry walls appear to be in good condition. The sandstone base around the entire exterior of the building and canopy appears to be weathered and eroded. It appears that the majority of the erosion of the sandstone is a result of the de-icing practice around the perimeter of the building. The erosion is most prevalent adjacent to the doorways, which would be expected as the de-icing chemicals are most likely used around walkway areas. The erosion near the doorways has caused the loss of the sandstone support of some of the outer wythes of brick and has began the erosion of the inner wythe as well.

Exterior – West Side:

There are several locations along the wall where mortar joints and cracks completely penetrate the masonry. The most severe location exists in the baggage area at the window near the southern end of the baggage room. The crack starts at the base of the wall, about the center of the window and then propagates upward and northward to the north side of the window, and the other over the south end of the baggage room door. These cracks appear larger as they progress to the top of the wall. Other smaller cracks also exist around the same window. These cracks are adjacent to the security bars that are embedded in the masonry. A rain gutter downspout is missing on the wall next to the baggage room door, which has allowed rainwater to splash against the side of the wall and stain the brick.

Exterior – East Side:

The east side of the structure faces the railroad tracks. In general, the bricks appear to be in good condition. Similar to the west side, the most severe location exists in the baggage area at the top of the wall, over the window near the southern end of the baggage room. This crack appears larger as it progresses to the top of the wall. There appears to be some separation between the brick and the north end of the window casing. Other smaller cracks also exist around the same window. These cracks are adjacent to the security bars that are embedded in the masonry.

Another crack on this wall exists between the two office area windows which starts at 0" at about 16" below the top of the windows to about 3/8" to the top of the wall.

Exterior – North Side:

Similar to the south side, the cracking appears to be concentrated around the west side window. One crack exists in the vicinity of the security bars embedded in the window about mid-height of the window. The other crack also appears to penetrate the wall, by evidence of similar sized cracks on the building interior at this same

location. This crack appears to propagate from the bottom of the wall below the west window and then up to the west side of the window to the bottom of the window. This crack stays to the west side of the window but generally does not exceed 3/16" wide. Eventually this crack finds its way to the top of the wall. Except around this window, there does not appear to be any other cracks on this wall.

Exterior – South/Canopy Side:

One significant crack, approximately ¼" to 3/8" wide, exists in this wall. This crack appears to penetrate the wall, by evidence of similar sized cracks on the building interior at this same location. This crack appears to propagate from the bottom of the wall centered below the west window and then up to the east side of the window to the bottom of the window. There is separation between the brick and the window casing on the west side of this same window. Then the crack continues from the top of the window to the top of the wall above the center of the window. There does not appear to be any other cracks on this wall.

Canopy:

On the south end of the structure is a directly attached canopy that is supported by the main structure on the north end, and by two masonry columns on the south end. The canopy can cover two passenger vehicles. The asphalt shingles are showing signs of weathering and the fascia boards are weathered as well and need painting. The masonry columns appear to be in good condition however, the sandstone around the base of the columns has eroded severely, leaving many of the bricks at the base unsupported.

Observations on Cracking within the Structure

Cracks within Interior Walls and Floors

Cracks within the terrazzo flooring, plaster ceilings, and plaster wall exist throughout the building. Generally, these cracks occur as a result of the expansion and contraction of the building. Because concrete and plaster are not very forgiving during the contraction process, they crack. The larger floor cracks in the hall and waiting areas appear to be a result of shrinkage. It appears that these larger floor cracks have been filled with caulking material. It also appears that attempts have been made to patch the larger plaster cracks in which some of these cracks have reopened.

Cracks within the Exterior Walls

Cracking of the masonry exists on all sides of the structure. The majority of these cracks have occurred as a result of expansion and contraction. It is common to find cracks in the center of the lengths of masonry walls that have not been reinforced or expansion/contraction joints have not been constructed to accommodate the

appropriate temperature differentials. In addition, some cracks have occurred as a result of settlement of the structure.

In the area of the baggage room, a hand held optical level was used to estimate the difference in elevation between the north end of the building and the south wall of the baggage room. It was estimated that the north end of the baggage room is approximately 5 inches lower relative to the south wall of the room. The south wall is adjacent to the basement walls where the foundation is constructed at a lower depth, therefore it is assumed that the south wall area of the baggage room is a much stiffer element structurally than the north wall, which sits on a more shallow foundation. It is assumed that the north wall of the baggage room has settled causing rotation of the east and west walls toward the north wall. This would explain the width of the cracks of the east and west walls being larger near the top of the wall and decreasing to zero near the base of the wall. The severity of cracks appears to be worse on the west wall than the east. Although a thorough elevation evaluation of the building throughout would be useful, it is speculated that the baggage room settlement is largest on the northwest corner of the building causing some rotation of the north wall from the east toward the west.

The cracks around the baggage room windows appeared to have occurred partially by the expansion/contraction of the steel security bars embedded into the masonry, and partially as a result of settlement of the structure.

Structural Conclusions

Although the Depot appears to suffer from weathering and general lack of maintenance, the building appears to be relatively sound. However, if continued lack of maintenance persists structural repair costs will continue to increase.

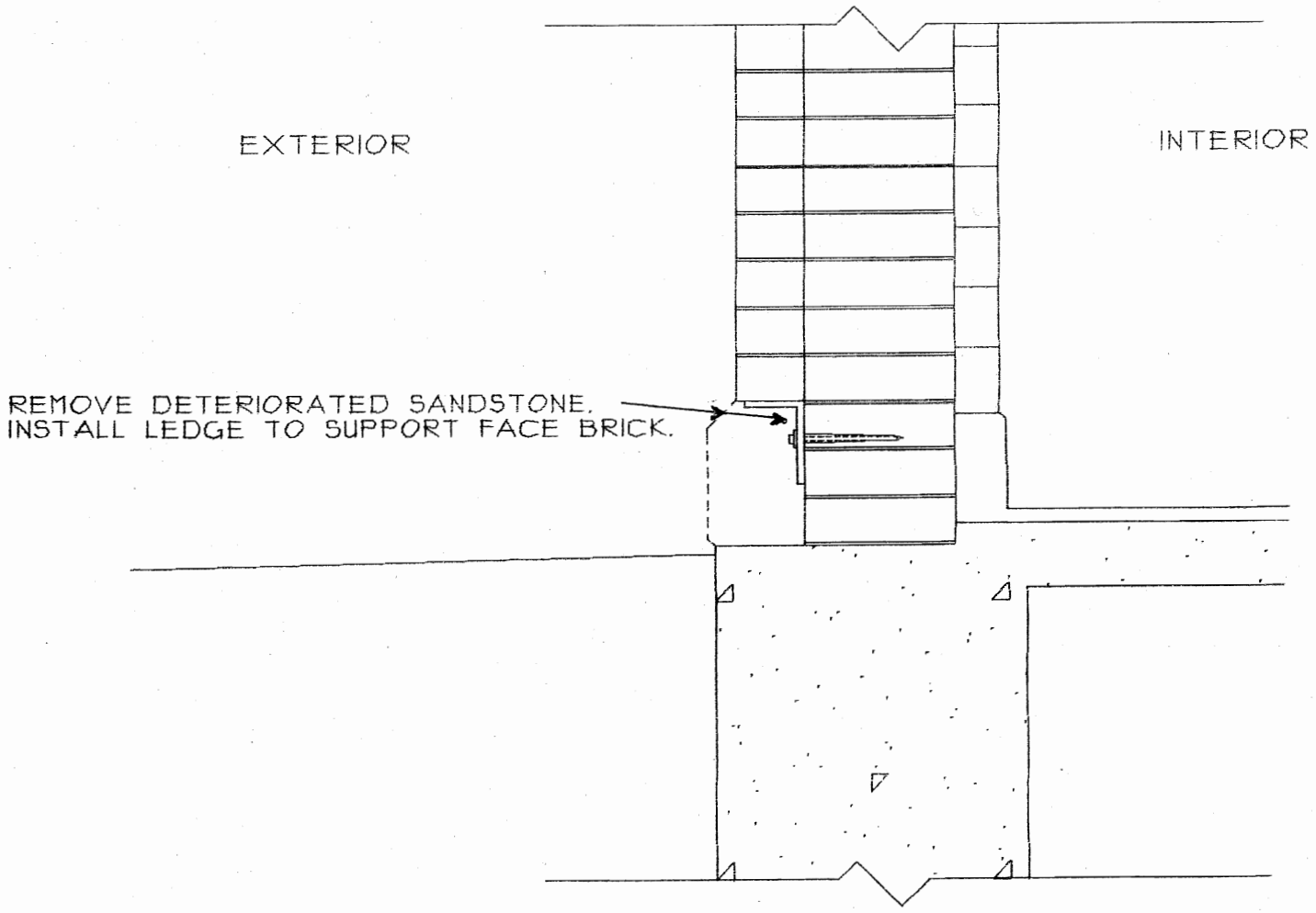
ARCHITECTURAL, STRUCTURAL, AND SITE RECOMMENDATIONS

Preconstruction Building Stabilization/Repairs

1. Remove sandstone water table course at the west side of the building and the column bases at the south only. Install steel angle (ledge) to support the face brick. Install new sandstone water table and repoint the four courses of face brick immediately above. Replace missing inner wythe bricks as required.

   NOTE: After sandstone replacement, discontinue the use of the de-icing agent adjacent to the sandstone water table.

2. Repoint all masonry joints at all faces of the four parapets to ensure solid connections between masonry units, including brick and sandstone coping.



Exterior Wall Section at Sandstone Water Table

Building Protection During Highway Construction

1. Cover doors and windows at south, west and north sides with steel mesh grating. This will allow light while protecting openings. Entry shall be at the east doors only during construction.

Site Stabilization/Repairs

1. The concrete curbing along the platform is in poor condition. Any earthwork nearby will collapse the crumbling curb. Remove the concrete curb and pavers at west side of the Depot. The bricks at the platform shall be salvaged and stored for reuse. At the completion of the road construction a concrete curb will be installed to match the existing profile and the pavers reinstalled in the herringbone pattern. Consider incorporating handicap accessibility to this platform during reconstruction.
2. Install a construction fence along the west side of depot and landscaped area.

Post Construction Repairs

1. Reconstruct concrete curb and brick platform/walkway at west side.

Future Repairs for Consideration by Others

1. Repoint all masonry and clean masonry to eliminate organic growth using the gentlest means possible. No sand blasting or abrasive cleaning methods shall be allowed.
2. Reroof entire building: replace step flashing at parapets, install drip edge, install ridge vents, and replace sheathing as necessary.
3. Replace fascia, soffit, gutter/downspouts, add soffit vents.

Site Evaluation

Trees at center to be protected and preserved.

Tree Protection Standards

Tree root loss during construction is one of the largest reasons for tree decline and death during and after work has been completed. An effect of tree root loss is many times not noticed for up to 10 years after the work is completed. This damage can be minimized by a few simple practices prior to the start of any construction activities. While it is no guarantee of survivability it will ensure that all precautions were taken to preserve the trees.

Most tree roots are within the top 12 to 18 inches of the soil. Any activity above or below ground in this area will affect the trees. These activities include excavation of soil, grade changes, root cutting, irrigation, compaction of soil, trunk and branch damage and dumping of any chemicals within the tree drip line.

In this area near the Depot there are three trees, Boxelder, Fir, and Chestnut. The Boxelder will sustain the biggest root loss of about 20%. The Fir tree will sustain a root loss of about 15% and the Chestnut will sustain a root loss of about 5%. To increase the chance of survival during construction, proper tree protection should be done. Even with the proper protection the Boxelder has only a probability of survival of about 85%, the Fir has a probability of survival of about 90%, and the Chestnut a survival probability of about 100%.

The following guidelines should be followed to ensure proper protection during the construction period.

Tree Pruning

Remove any dead or broken branches prior to the start of any work. Clearance pruning may also be necessary for equipment. Pruning should be done by a Certified Arborist. The Arborist should also be asked to inspect the trees for any defects or major problems.

Root Pruning

A trench 24 to 30 inches deep should be dug by hand a point 12 inches behind the area of excavation for the curb. A trench 6 inches deep should be dug behind the edge of the sidewalk excavation. Roots that are encountered should be cut with a saw or pruners. The trench should be backfilled immediately after roots have been cut. The area should then be thoroughly watered. This work should be completed by a Certified Arborist.

Mulching

A layer of mulch should be applied within the protection area. Mulch should be 2 to 3 inches deep. This will assist with retaining moisture during the project.

Tree Protection Fencing

Tree protection fencing should be designated on the site plan and location marked by the Arborist. The location should follow the root-trenching path adjacent to any excavation area. The protection fencing should extend in the area 10 feet outside the drip line of the trees. Chain link fencing is recommended for the protection fencing. Orange construction fencing is not adequate because it is too easily moved or pushed over during construction. Fencing should be a minimum of 5 feet in height and wired to steel posts at 10-foot intervals. Fencing should be checked a couple of times a week to ensure that no damage or repair is needed. Fencing should be removed only after construction is completed. No vehicle access within the fenced area should be permitted. Access for tree maintenance will need prior approval by the Engineer.

Irrigation

The trees should be irrigated during the construction period. Soil moisture should be tested by the Arborist weekly and adjusted according to their findings.

Grade Changes

No grade changes should be done within the protection area. Any soil work should be completed by hand to minimize compaction. No additional soils should be applied within the protection area.

Chemicals, Debris and Vehicles

Chemicals (paint, solvent, etc.) and concrete (including cleaning) should not be permitted within 20 feet of the protection area. Debris disposal or material storage should not be permitted within the protection area. No vehicles should be allowed to park within the protection area. Vehicles should not be allowed to sit and idle beneath the tree branches outside the protection area except for construction activities.

Utilities

No underground utilities should be placed within the protection area unless they are installed by boring. Installation of irrigation shall be limited to the perimeter of the protection area.

Inspection

The trees should be inspected weekly for any broken branches or damages to the trunk and invasion into the protection area. Any broken branches should be removed. After completion of construction the trees should be inspected and signed off by the Arborist.

MONITORING PLAN

General

This section describes the general aspects of the potential impacts of the highway construction on the Sandpoint Depot. For reference, the Depot is located between US95 Stations 101+61 and 102+03 (metric) and approximate Depot Road Stations 7+60 and 8+00. Two types of construction activity are expected to impact the existing depot structure: pile driving and earthwork.

Pile driving for the construction of the pedestrian bridge across Sand Creek. This construction will consist of driving nominal 12-inch diameter shell piles (shown on the Drawings variously as 305 and 324 mm diameter), with one exception. The exception is a single nominal 24-inch (610 mm) diameter steel shell pile to be driven at Bent R8. The primary concern with the effect of pile driving is vibration caused by the pile driving. Once the piles are installed, the Depot building should sense no additional impact. Two test piles are indicated on the drawings, which would provide an opportunity to measure vibration caused by pile driving. However, the larger diameter pile would likely result in greater vibration effects, and is closer to the Depot building than the two test piles shown on the drawings.

Earthwork and pavement construction includes a cellular concrete embankment approximately 74.8 meters long, from US95 Station 101+07 to Station 101+81.8. In other words, this lightweight concrete embankment extends in front of about 21 meters of the 40-meter long Depot building. In this case, there are two causes of concern: vibration caused by earthmoving and compaction equipment, and settlement caused by the weight of embankment constructed near the Depot building and any attendant changes in water table elevation resulting from site grading, if any. The vibration effects should be felt only during the actual construction period, whereas settlement effects could last for a significantly longer period.

Among the documents provided for our review was a technical memorandum prepared by Dean Harris of CH2M Hill/Boise, dated April 4, 2005, and entitled "Estimates of Settlement for BNSF, U.S.95, Sandpoint North and South, Key 1729". In this document are presented estimates of settlement caused by primary consolidation and secondary compression at 100-meter intervals along the railroad track. It is postulated in this memorandum that, with respect to primary consolidation, "Most of this settlement is anticipated to occur during the period of construction." Secondary compression is "anticipated to occur over a very long period of time (20 years)." A review of the boring and cone penetration logs suggests that the primary consolidation period may last long past the construction period. However, one of the attached computation sheets "depotsettlement.xls" indicates a depth of wick drains of 25 meters, which may suggest that the consolidation period will be shortened with wick drains, though there is no mention of such on the Drawings provided for review. In any event, wick drains could not be installed beneath the depot building itself, so the settlement period may be significantly longer than anticipated.

In the attachments to the memorandum is a table presenting "Estimated Settlement of Existing BNSF Railroad", wherein "Estimated Consolidation Settlement" for U.S.95 Station 101+00 is 20 to 30 mm and Station 102+00 through 106+00 it is 10 to 20

mm. A footnote states: "Additional settlement of 15 to 25 mm may occur as a result of secondary compression." However, toward the end of the attachments is a sheet entitled "Depot Settlement", which states "Current Design + Embankment + Retaining Wall", then lists 10 mm of "primary settlement" and 15 mm of "secondary settlement". The point on the Depot analyzed is not indicated. However, we believe it would be appropriate for the designers to estimate the settlement at all four corners of the Depot building and, perhaps, several more points around the perimeter of the building. The building inspection by the structural engineering member of our team revealed several inches of differential settlement across the building as it sits in its present condition. If an inch (20 to 30 mm) of settlement is anticipated for the centerline of the BNSF railroad tracks, considerably more settlement may be experienced by the structure, which is much closer to the proposed earthwork than the railroad tracks.

VIBRATION MONITORING

Allowable vibrations in the vicinity of an aged building that already exhibits distress from weathering and differential settlement is difficult to establish. However, based on research conducted primarily by the US Department of Interior Bureau of Mines, an upper limit of 2 inches per second (approximately 50 mm/sec) peak particle velocity appears to be a safe limit for sound structures. Though this work was conducted primarily to evaluate the effects of quarry blasting, this criterion has been applied to pile driving, explosive demolition of bridges and buildings, marine rock dredging and other activities with some success. The difficult task is to tailor this criterion for buildings that have sustained prior damage, such as the Sandpoint Depot. More robust structures than the structures used by the Bureau of Mines in their studies (residential structures awaiting demolition) can withstand higher velocities, perhaps even when some structural deterioration has occurred. Therefore, a 50 mm/sec limit is not likely to be suitable for the Sandpoint Depot. A recommended approach to establishing vibration limits for the Sandpoint Depot is presented below.

In this case, the depot has sustained the vibration effects of heavily loaded trains passing on its east side for many years. Therefore, it is important to determine the vibration levels caused by heavily loaded trains, and determine allowable peak particle velocities during construction based on the results of monitoring such train traffic.

Therefore, we recommend that an engineering seismograph be installed adjacent to the Sandpoint Depot and that three to five stations be established at about fifty foot intervals (to be adjusted as appropriate in the field). Vibration measurements should then be made as a heavily loaded train reaches each of those stations (or record vibration continuously, noting when the train reaches the locations of interest). From these data, a relationship for the site between vibration level and distance can be approximated, and an allowable peak velocity can be established.

When test pile driving is performed, the seismograph crew should again be mobilized to the field, and vibration measurements made for three to five piles driven at different distances from the seismograph's geophone to determine whether all production piles can be installed using the Contractor's planned methods or whether mitigation measures are required. Test pile driving should commence with the test pile

furthest from the Depot building, noting the energy required to drive the piles, i.e., the driving resistance encountered as the pile is driven through the varying foundation soil strata. If the vibration experienced at the Depot building approaches the allowable established previously, pile driving should be suspended and mitigation measures should be implemented in concert with the design engineers. Of particular concern is the single, larger diameter (24-inch diameter) pile, which may have a much greater effect on the Depot building than the remaining (12-inch diameter) piles. Consideration should be given to replacing it with multiple, smaller piles of the same size and capacity as the remaining 12-inch piles.

When embankment construction is initiated, a test fill program should be performed to develop a similar relationship between vibration level and distance for the largest vibratory compactor that the Contractor intends to use for embankment construction. If field tests indicate that such equipment cannot be safely used within the planned distances of the Depot building, smaller, lighter equipment should be mobilized and tested in a similar fashion, establishing thereby distances from the Depot building to which each type of equipment may be used.

Depending on the consistency or variability in the data obtained during the test pile driving and embankment construction, it may be advisable to make periodic confirming observations during production pile driving and embankment construction.

It is recommended that an isolation trench be constructed on the west side of the Depot at a minimum of 6 inches in width by 6 feet in depth. This will be located at the low end of the cut line and be backfilled with loose material to function as a "vibration trench".

SETTLEMENT MONITORING

We anticipate that settlement induced in the Depot building by construction activities will express itself in various ways, including subsidence of the building frame and cracking or opening of existing cracks in walls and floors and at their interfaces, and around penetrations in the structure, such as doors and windows. Therefore, it will be appropriate to utilize several methods to monitor the total and differential movement of and within the building structure. The preliminarily recommended methods are described further below. However, since the total and differential settlements anticipated for the Depot building are unknown at this time, it is difficult to recommend monitoring devices and methods at this time, and revision may be appropriate at a later date. As mentioned in Section I, GENERAL, above, a settlement estimate has only been made for a single, unknown point in the Depot building. These recommendations should be revisited when more detailed settlement estimates at various locations are available. Recommended monitoring locations are provided on the drawings

The frequency of settlement observation should be determined and reevaluated continually during the monitoring period. Initially, weekly measurements are recommended for the first month, to be adjusted as appropriate considering the rate of movement observed. Primary consolidation settlement generally observes a log-time relationship, so the frequency of observations can usually be reduced significantly within a short period of time.

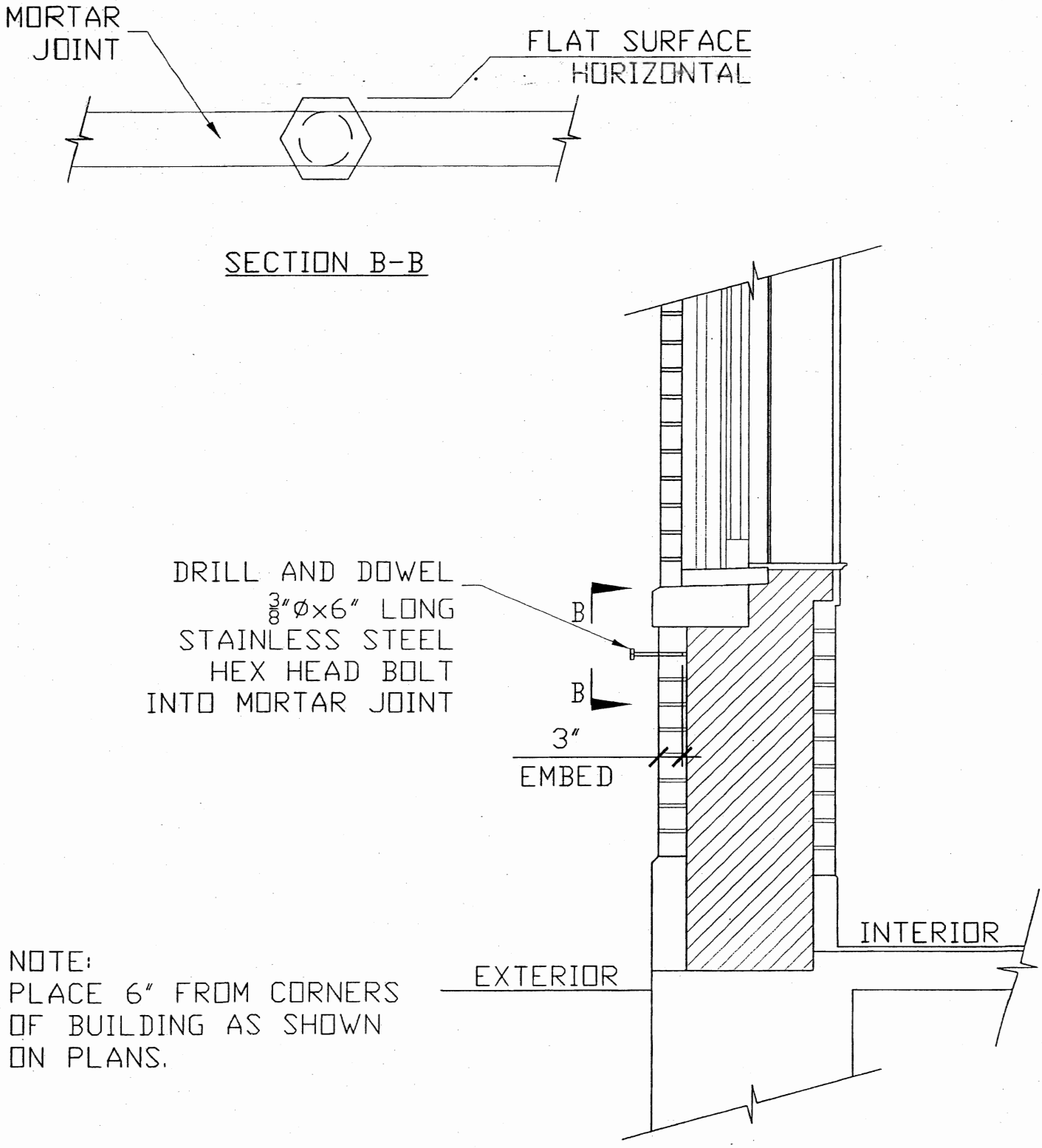
Building Settlement

The building settlement observation points should be stainless steel, hex-head bolts drilled and grouted into the mortar between courses of brick in accessible locations, with a flat edge of the bolt head pointing upward. The bolts should be mortared into the walls to be monitored.

Drill and dowel 3/8" diameter stainless steel bolts 3" into the mortar joints. One bolt shall be placed at each corner of the building approximately 6 inches from the corner, as shown on the depot site plan. The bolt heads shall be placed such that a side of the bolt head shall be horizontal. The length shall project from the brick sufficiently to allow the placement of a surveyor's rod without the interference of the roof eave or sill course. The bolts should not protrude so far as to be disturbed or to be an impediment or hazard of any sort. (See locations at site plan Appendix II).

A professional land surveyor should be retained to install two elevation benchmarks at locations that will not be influenced by project construction of other activities. These benchmarks should be referenced to a known USGS datum with Second Order accuracy. Their locations should be selected so that they are readily visible from the Depot location utilizing an automatic level. The benchmarks shall be of sturdy construction, resistant to disturbance or degradation, and their elevations should be checked against the original datum on a regular basis or when settlement readings appear anomalous.

During the excavation and embank period of construction, the surveyor shall take readings of each bolt documenting the time, date, location of the bolts, and the elevation of the bolt relative to the benchmark.



Bolt placement Detail

WALL CRACKING, WALL/CEILING CRACKING

Wall cracks should be monitored by installing Whittemore-type gage points on either side of the crack to be monitored. Whittemore-type gages are available from geotechnical equipment manufacturers. The manufacturers and their model numbers are: Hogentogler C6981, Humboldt H-3230, and ELE International (Soiltest Division) CT-171. Typically, two insert points are set on one side of the crack and one on the other side, in a triangular arrangement. By measuring the distance between the points, movement in the horizontal and vertical directions can be determined quickly and economically. Gage accuracy is on the order of 0.0001 inch and readings are linear over a range of 0.200 inch.

Where movement between two intersecting walls or a wall and a ceiling are to be measured, one brass conical insert used typically with Whittemore-type gages should be installed in one of the walls, with a small, flat metal plate glued to the intersecting wall or ceiling. The distance between the conical insert and the adjacent plate(s) can be measured with a set of drafting dividers and a machinist's scale. If a lengthy crack is to be monitored, multiple gages shall be placed at intervals of every 2'-0".

Where more significant movement is anticipated, L-shaped gages should be used. These are two L-shaped pieces of metal on opposite sides of the crack and the distances between them can be measured with calipers or an inside micrometer.

This type of monitoring devise can be attached with glue or screws to the surface. Some cracks occur in the enameled brick wainscot where monitoring is recommended. In this instance the gage will be glued to the historic fabric so that it will not be damaged.

Monitoring the wall cracks at the exterior is not recommended as the gage devise would be accessible to the public and could be vandalized over a lengthy monitoring time period. The large cracks evident at the exterior, particularly at the baggage room, penetrate the thickness of the wall. Therefore monitoring them at the interior is equivalent to an exterior location.

Floor Cracking

Floor cracking presents a more difficult problem because the Depot building is still in use, and it is important not to create a trip hazard or to install anything that may be damaged by pedestrians. Therefore, we recommend that locations to be monitored be well measured and documented so that they can be re-established accurately. Though the locations can be marked by scratching the surface of the terrazzo or concrete floor, these marks are often worn off with time, so a permanent marking pen and good documentation, such as photography are important so the monitoring point can be accurately re-established.

To measure horizontal movement of a crack, the Whittemore-type conical points can be installed below floor level so that they are not disturbed. This, however, is only if the crack penetrates the thickness of the floor. If the crack is superficial, small holes can be drilled – 1/16" diameter – at each side of the crack as reference points.

To measure vertical movement, placing a rigid straight edge over the crack and measuring vertical offset with a feeler gage is recommended. The important factor in vertical measurement is to initially establish reference points for repeated monitoring. Again, small holes can be drilled – 1/16" diameter – at each side of the crack as reference points. If a lengthy crack is to be monitored, multiple gages shall be placed at intervals of every 2'-0".

Crack Monitoring

Ideally, all existing cracks within the structure would be repaired, filled, patched, or caulked before construction, so that all new cracks would be evident. However, to monitor existing cracks for movement, the following recommendations are offered.

All existing cracks in the plaster walls and ceilings over 1/8" width shall be clearly located on a drawing and measured. It is recommended that the measurement techniques suggested in this report be followed.

All existing exterior wall cracks over 3/8" width shall be clearly located on a drawing and measured. It is recommended that the locations of exterior cracks be clearly documented and measured with calipers. Where these cracks penetrate through the wall and are visible on the interior, it is recommended that these cracks be monitored using the measurement techniques suggested in this report.

All existing floor cracks over ¼" wide shall be monitored using the measurement techniques suggested in this report.

Visual observations shall be made of all existing cracks, regardless of those monitored from the start, for noticeable changes. Similarly, if new cracks appear, observations shall be documented. Further monitoring may be required for these cracks as determined by the monitoring manager.

****

See 11" x 17" drawings at Appendix II. Selected monitoring locations are keyed on the floor plan, reflected ceiling plan, interior elevations, and site plan.

****

Monitoring Timeframe

The various aspects of monitoring the Depot need to coalesce with the schedule of the road construction. This team now has a vast understanding of the building and the monitoring devices need be installed in the locations selected on the drawings. This shall occur after the Depot stabilization measures have been completed. Initial settlement readings should be taken before any highway construction occurs. Weekly monitoring shall happen after highway construction begins within 100 meters of the Depot. After a few weeks of activity and this initial data are reviewed, a re-evaluation of the monitoring frequency and timing needs to occur.

This team needs to know the sequence of operations and their durations, as it is very difficult to set monitoring times and frequencies. In any event, the data will need

to be reviewed immediately after taking the readings for the first few months. Once patterns start to reveal themselves, it becomes less urgent. During pile driving and earthwork right in front of the Depot, it is paramount for a monitor manager to be present during these activities. As construction diminishes, monitoring how things settle under the weight of new construction will occur on a less frequent basis.

A post construction monitoring time frame of a couple of years will initially include monthly observations, collection of data from gauges, and completion of a brief summary report at each interval. After three to six months, based on the actual results, the monitoring should transition to quarterly.

---

[1] Lalia Boone. Idaho Place Names, A Geographical Dictionary. (Moscow, Idaho: The University of Idaho Press. 1988), 330.

[2] Renz, Louis Tuck. The History of the Northern Pacific Railroad. (Fairfield, WA: Ye Galleon Press, 1980). 79-95, 227, 245.

[3] Plan of Passenger Station for Sandpoint, Idaho. Northern Pacific Railway, Office of Chief Engineer, St. Paul, Minn, March 1, 1916.

[4] Northern Idaho News. (19 September 1916, p.1, c. 4.)

[5] Northern Idaho News. "Depot Practically Finished." (Tuesday, 24 October 1916, p. 8, c. 2.)

[6] Sandpoint, Bonner County, Idaho. Sandborn Map Co., (11 Broadway, New York. August 1921), revised July 1948, 1951.

[7] Jim Graves. International Brick Collectors Association (ICBA). www.msinter.net/tweety/

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Consultants

Donovan & Associates, Hood River, OR. Large Format Photography

GeoEngineers, Inc., Boise, ID. Geotechnical Engineer

Treasure Valley Engineers, Inc., Boise, ID. Structural Engineer

Arborist Consulting, 5131 Camas Lane, Boise, ID, Certified Arborist

APPENDIX I

A. Secretary of Interior's Standard's for Rehabilitation
B. Monitoring Devices
C. Photos: 35 mm Black & White

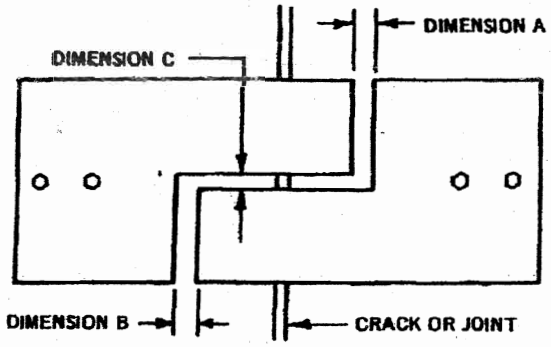
A. SECRETARY OF INTERIOR'S STANDARDS FOR REHABILITATION

Rehabilitating the historic Sandpoint Depot will encompass the principles of the Secretary of Interior's Standard's for Rehabilitation as paraphrased below.

1. The property shall be used for its historic purpose or placed in a new use where minimal changes to its character defining elements will occur.
2. The historic character of the property shall be retained and preserved.
3. The property shall be recognized as a physical record of its time.
4. Properties change over time, acquiring historic significance; those changes shall be retained and preserved.
5. Distinctive features, finishes, construction techniques, and craftsmanship shall be preserved.
6. Historic features shall be repaired rather than replaced. If replaced, features shall be documented.
7. Cleaning shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by the project shall be protected and preserved.
9. New additions, exterior alterations or related new construction shall not destroy historic materials that characterize the property. New work shall be differentiated from the original, yet compatible in size, scale, and features.
10. New additions or adjacent new construction shall, if removed in the future, not impair the integrity of the historic property.

B. Monitoring Devices

RELATIVE MOVEMENT INDICATOR FIELD DATA SHEET



PROJECT: _____

DATE: _____ TIME: _____

TEMPERATURE: _____

PERTINENT POOL ELEVATIONS:

UPSTREAM: _____ DOWNSTREAM: _____

LOCK FULL: ☐ LOCK EMPTY: ☐

FOR INITIAL READING SEE SHEET DATED: _____

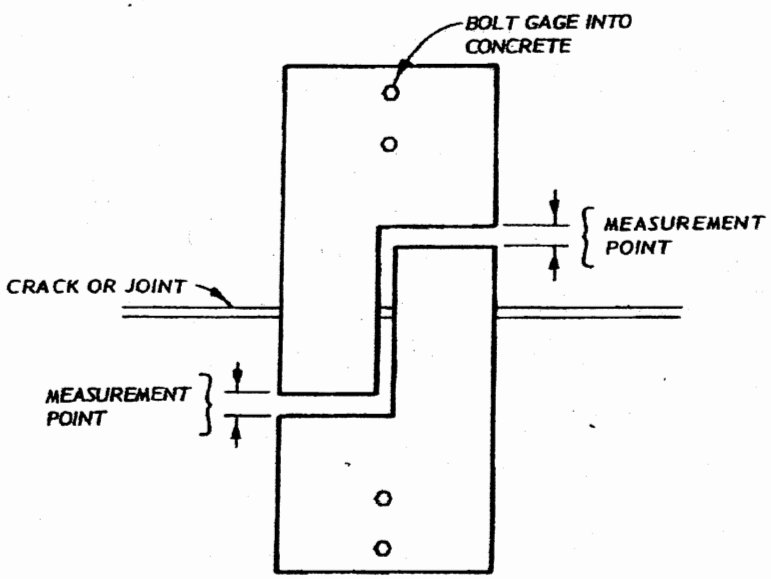
GAGE LOCATION	DIMENSION A			DIMENSION B			DIMENSION C		
	READING		DIFF.	READING		DIFF.	READING		DIFF.
	INITIAL	PRESENT		INITIAL	PRESENT		INITIAL	PRESENT	

COMMENTS:

SHEET OF

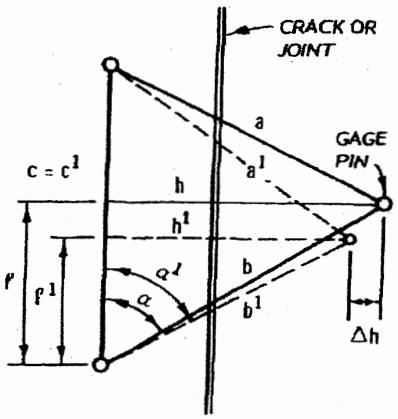
"L" Shaped Gage. The gage is another variation of the two dimension measurement gages. It consists of two "L" shaped plates fastened to the concrete on opposite sides of the crack, as shown in the figure. Measurement is made with calipers at the openings between the two gages. This gage will measure movement in the two component directions in the plane of the crack. In addition to translation, this gage will also measure rotation of one side of the crack with respect to the other side. By measuring the gage openings on both sides of the gage, the angle of rotation since the last measurement had been made can be calculated.

Dial Gage. The dial gage, is intended to measure only expansion and contraction of the crack or joint. The instrument consists of two bars attached to the concrete on opposite sides of the joint with one bar having a mount to accept a dial gage and the other a foot on which the plunger of the dial gage rests. The whole instrument is housed in a metal box with a plexiglass viewing cover, and is attached to the face of the monolith to one side of the crack. Its accuracy is dependent upon the accuracy of the dial gage used.



"L" Shaped Gage. (Prepared by WES)

Multiposition Strain Gage. This measurement technique utilizes the Whittemore strain gage described in paragraph 2-28b, and three brass inserts that are placed in the concrete on either side of the crack or joint to be measured. It measures movement in two dimension in the plane of the surface on which the crack appears by measuring the distance between the three inserts and by using triangulation principles to determine the horizontal and vertical components of the movement. Figure 5-3 shows the gage setup and gives the equations necessary for calculation. Two insert pins, one placed on each side of the crack or joint, can also be used; however, this setup will only measure the component of crack movement parallel to the line of the gage points.



$$\cos\alpha = \frac{b^2 + c^2 - a^2}{2bc}$$

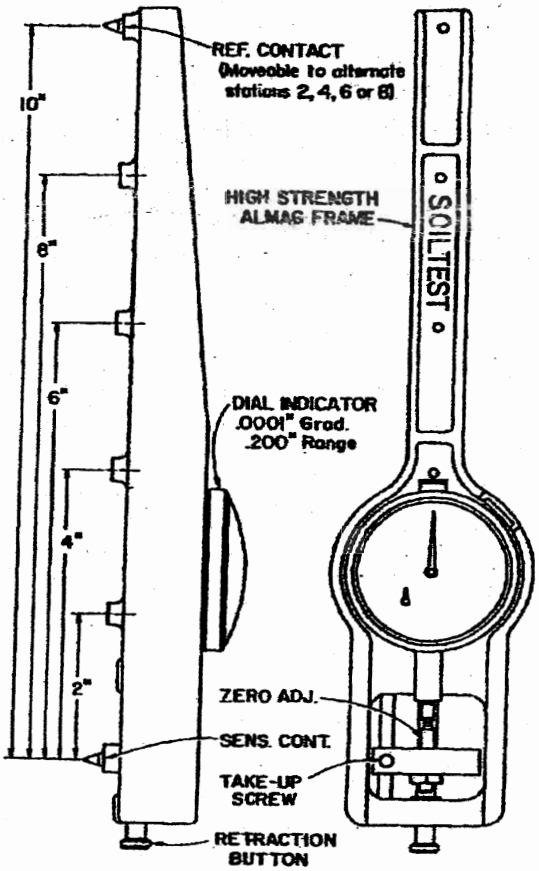
$$f = b\cos\alpha = \frac{b^2 + c^2 - a^2}{2c}$$

$$h = \sqrt{b^2 - f^2}$$

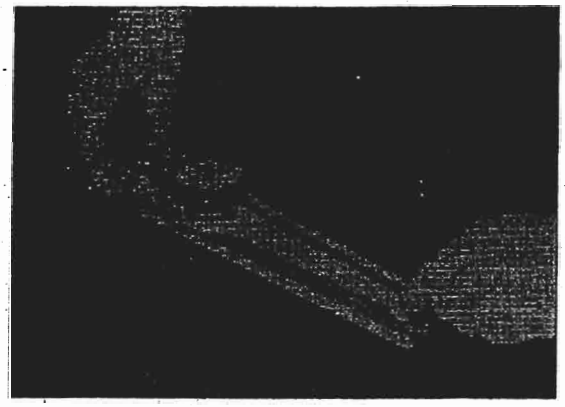
$$\Delta f = f - f^1 \qquad \Delta h = h - h^1$$

TO OBTAIN $\cos\alpha^1$, h^1 AND f^1 SUBSTITUTE PRIMED VALUES OF a, b, AND c ABOVE.

Multiposition Strain Gage. (Prepared by WES)



Whittemore Type Mechanical Strain Gage (Courtesy of Soiltest, Inc.).



Whittemore Type Strain Gage in Position on Invar Master Bar (Courtesy of Soiltest, Inc.).

C. Photos: 35 mm Black & White

Photography Identification Log

Arrow Rock Architects, PLLC

Photographer: Donna Hartmans

Subject Title: Sandpoint Depot

Roll # 1

Frame #	Date	Site	Subject	Direction of View	Remarks
3	7/21/2005	Depot	Signal Room	South	
4	"	"	"	north	
5	"	"	south & east elev.	nw	
6	"	"	east & north elev.	sw	
7	"	"	east elev.	west	n. end -baggage rm. Door
8	"	"	"	"	central section - north
9	"	"	"	"	central section
10	"	"	"	"	central section - south
11			DELETED		
12	"	"	east elev.	west	south end - canopy
13	"	"	s. elev.	north	
14	"	"	"	"	beneath canopy
15	"	"	n. elev.	south	
16	"	"	roof/north parapet	"	moss on roof
17	"	"	e. parpet	"	
18	"	"	bay window	"	moss/efflouresence
19	"	"	e. parapet	west	missing mortar
20	"	"	e. wall	west	eroded sandstone
21	"	"	s. parapet	up	moss/lichen
22	"	"	se corner	nw	eroded stone
23	"	"	s. parapet	up	new brick
24	"	"	se column	down	eroded base
25	"	"	baggage rm	south	scale
26	"	"	"	west	
27			DELETED		
28	"	"	ticket/office	ne	
29	"	"	"	sw	
30			DELETED		
31	"	"	ticket office	nw	
32	"	"	waiting room	sw	floor
33	"	"	"	south	south wall - west side
34	"	"	"	"	south wall - east side
35	"	"	"	"	plaster spall
36			DELETED		
37	"	"	waiting room	north	smoking room doorway

Photography Identification Log

Arrow Rock Architects, PLLC

Photographer: Donna Hartmans

Subject Title: Sandpoint Depot

Roll # 2

Frame #	Date	Site	Subject	Direction of View	Remarks
1	7/21/2005	Depot	Smoking Rm	down	floor @ doorway
2	"	"	"	"	"
3	"	"	Men's RR	north	door
4	"	"	"	up	water damage @ ceiling
5	"	"	"	north	stall
6	"	"	"	east	sinks
7	"	"	Hall	south	
8	"	"	"	up	
9	"	"	"	down/north	floor crack-patched
10	"	"	vestibule	north	crack @wall
11	"	"	"	down	patched crack @ floor
12	"	"	Women's RR	"	"
13	"	"	"	north	stalls
14	"	"	"	up	Water damage @ clg
15	"	"	s. & w. elev.	ne	
16	"	"	West elev.	"	canopy
17	"	"	"	"	central section - south
18	"	"	"	"	central section
19	"	"	"	"	west parapet
20	"	"	"	"	central section - north
21	"	"	N. & W. elev.	"	north end
22	"	"	ne corner	se	
23	"	"	facia/soffit	up	west side
24	"	"	acia & s. parape	up	
25	"	"	w. parapet	"	
26	"	"	w. elev.	east	cracks @ windows
27	"	"		"	missing brick
28	"	"	"	"	no downspout
29	"	"	n. elev.	South	crack @ window grate
30	"	"	w. elev.	east	window infill/curb
31	"	"	s. elev.	north	crack @ window - canopy
32	NOT USED				
33	NOT USED				
34	NOT USED				
35	NOT USED				
36	NOT USED				

Photography Identification Log

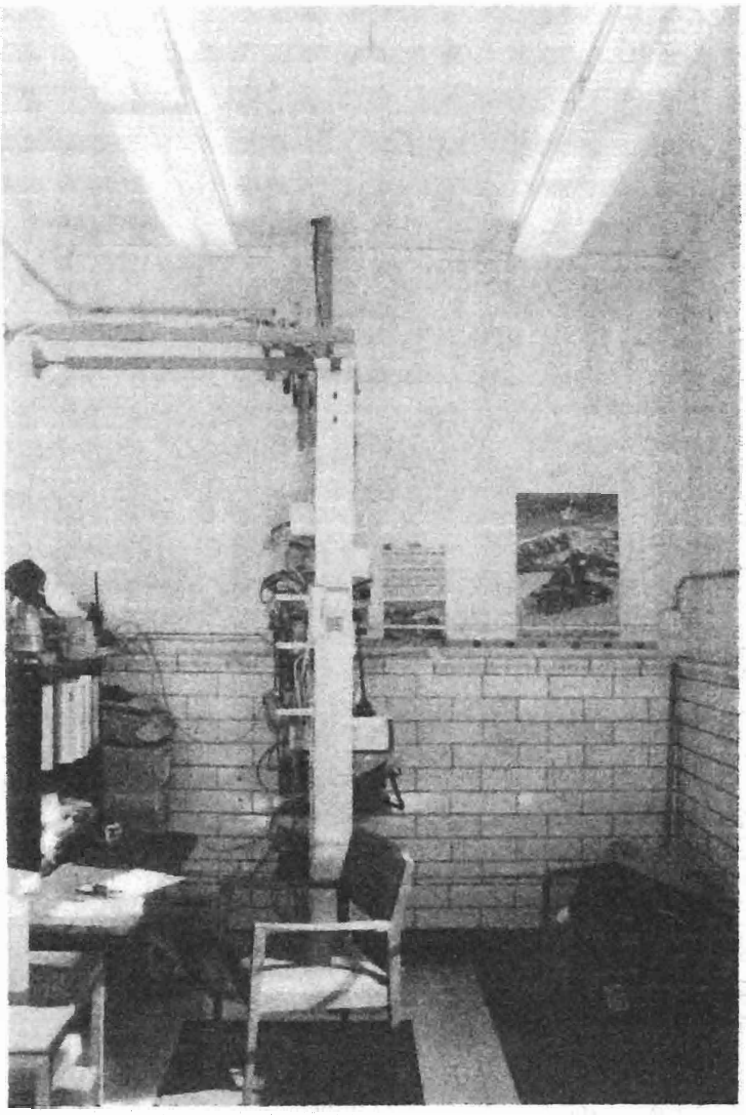
Arrow Rock Architects, PLLC

Photographer: Donna Hartmans

Subject Title: Sandpoint Depot

Roll # 3

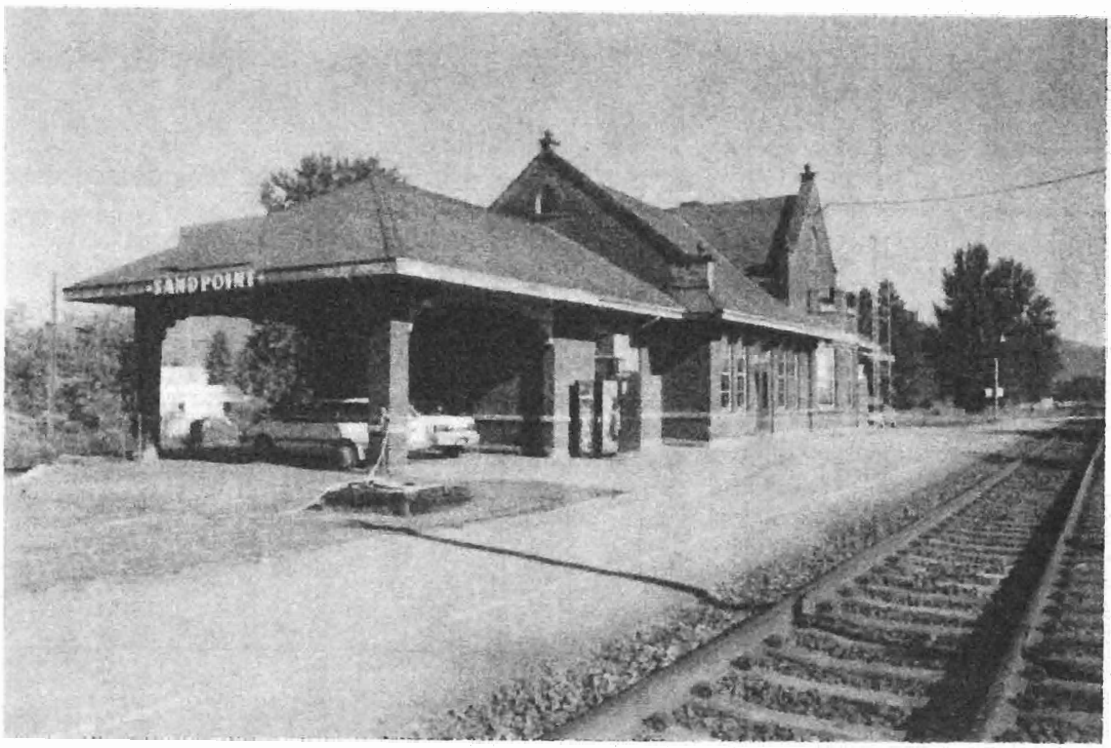
Frame #	Date	Site	Subject	Direction of View	Remarks
1	7/21/2005	Depot			
2	DELETED				
3	DELETED				
4	DELETED				
5	"	"	Site	north	trees & cars
6	DELETED				
7	DELETED				
8	DELETED				
9	"	"	Site	north	trees & access road w cars
10	"	"	Site	north	tracks & walkway
11	DELETED				
12	DELETED				
13	"	"	Site	North	stairs @ sw corner
14	DELETED				
15	DELETED				
16	DELETED				
17	DELETED				
18	DELETED				
19	"	"	Site	east	curb & pavers
20	DELETED				
21	DELETED				
22	DELETED				
23	"	"	Site	south	nw corner of curb/pavers
24	NOT USED				
25	NOT USED				
26	NOT USED				
27	NOT USED				
28	NOT USED				
29	NOT USED				
30	NOT USED				
31	NOT USED				
32	NOT USED				
33	NOT USED				
34	NOT USED				
35	NOT USED				
36	NOT USED				

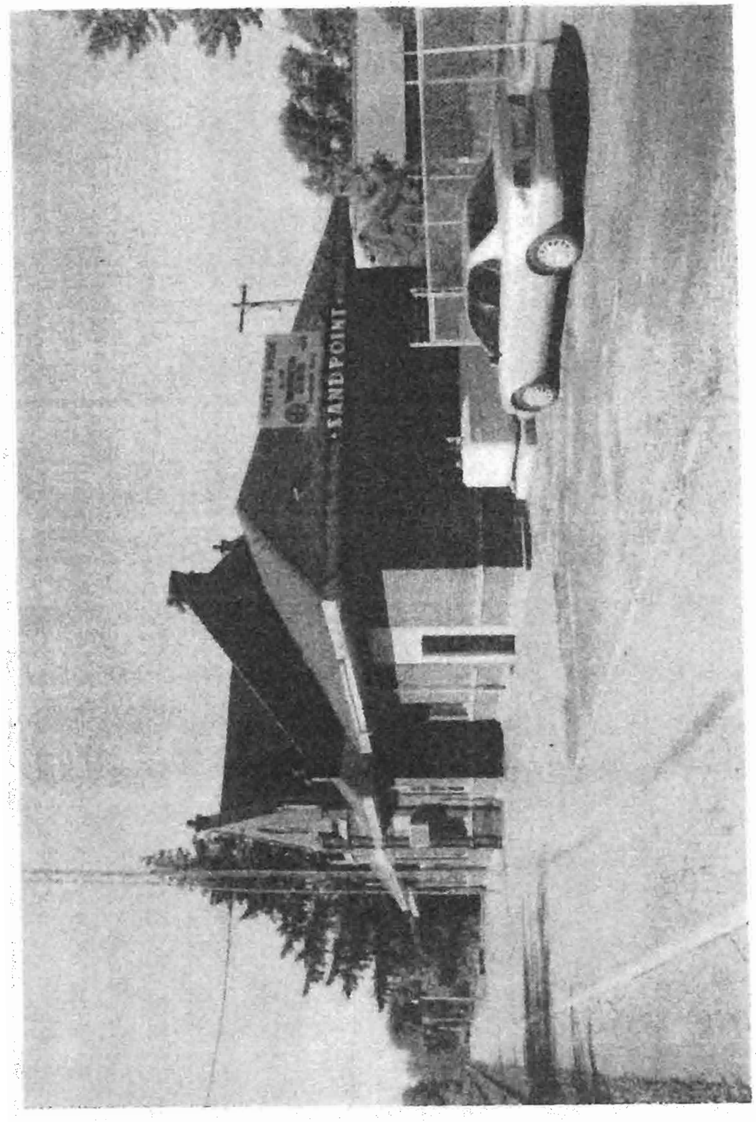


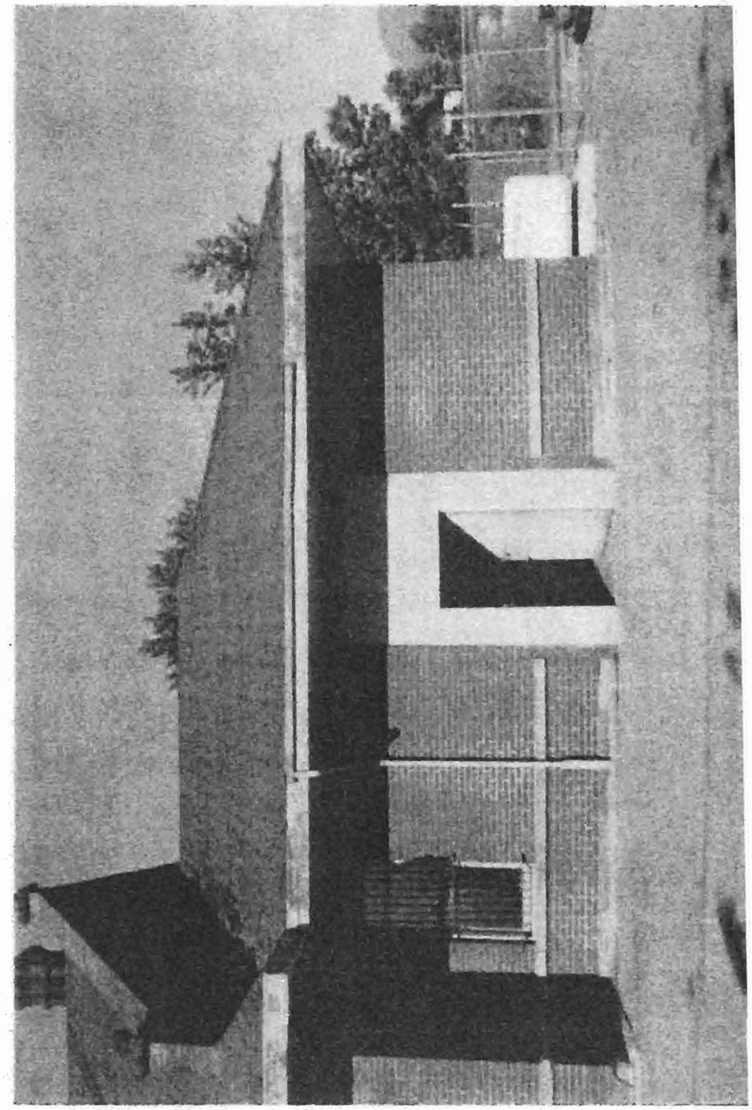
R1/F3
Sandpoint Depot
Signal Room

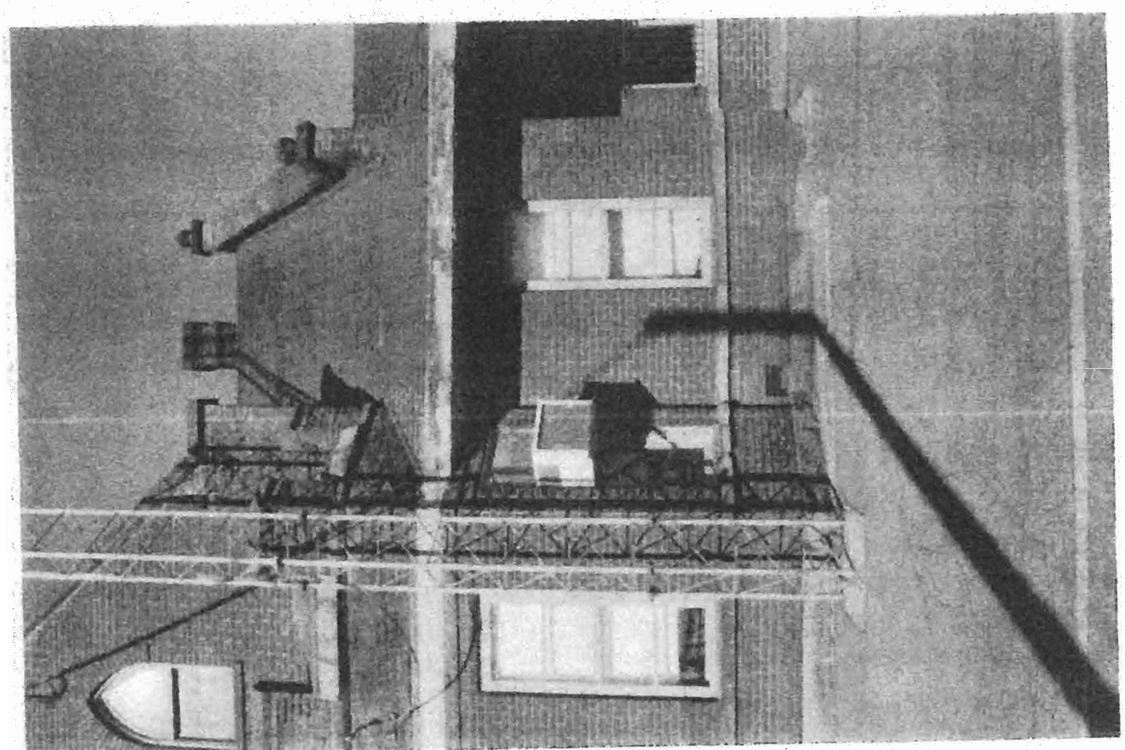
R1/F4
Sandpoint Depot
Signal Room

R1/F5
Sandpoint Depot
S. & E. elevations





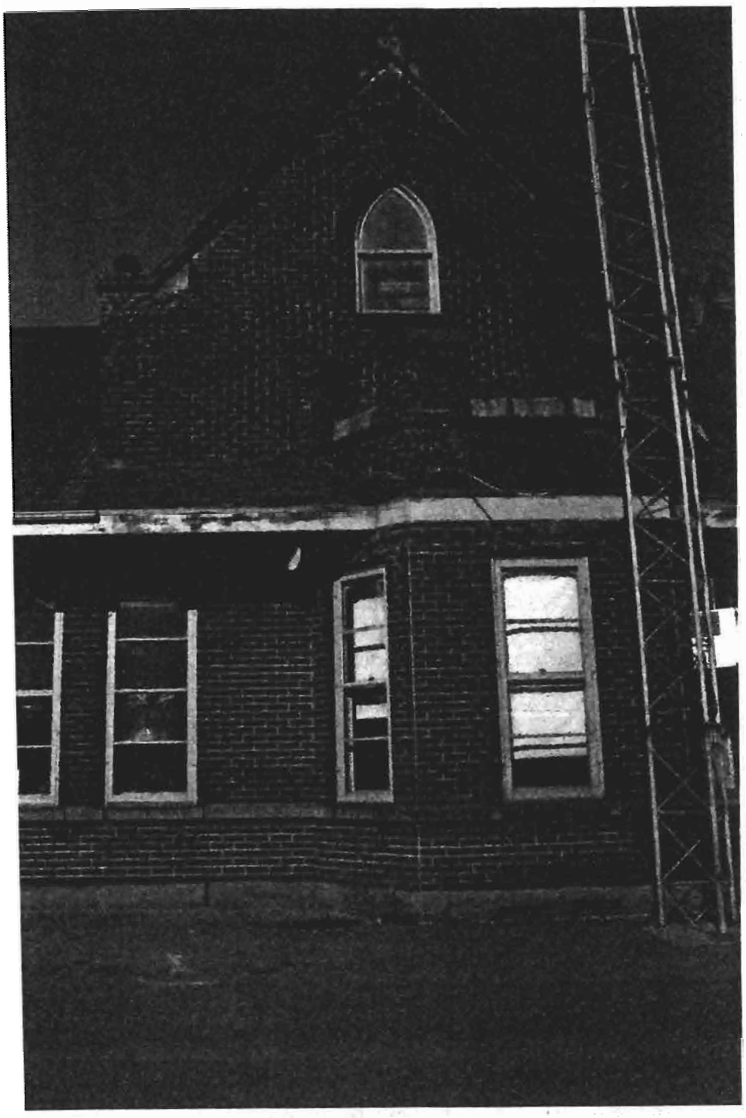


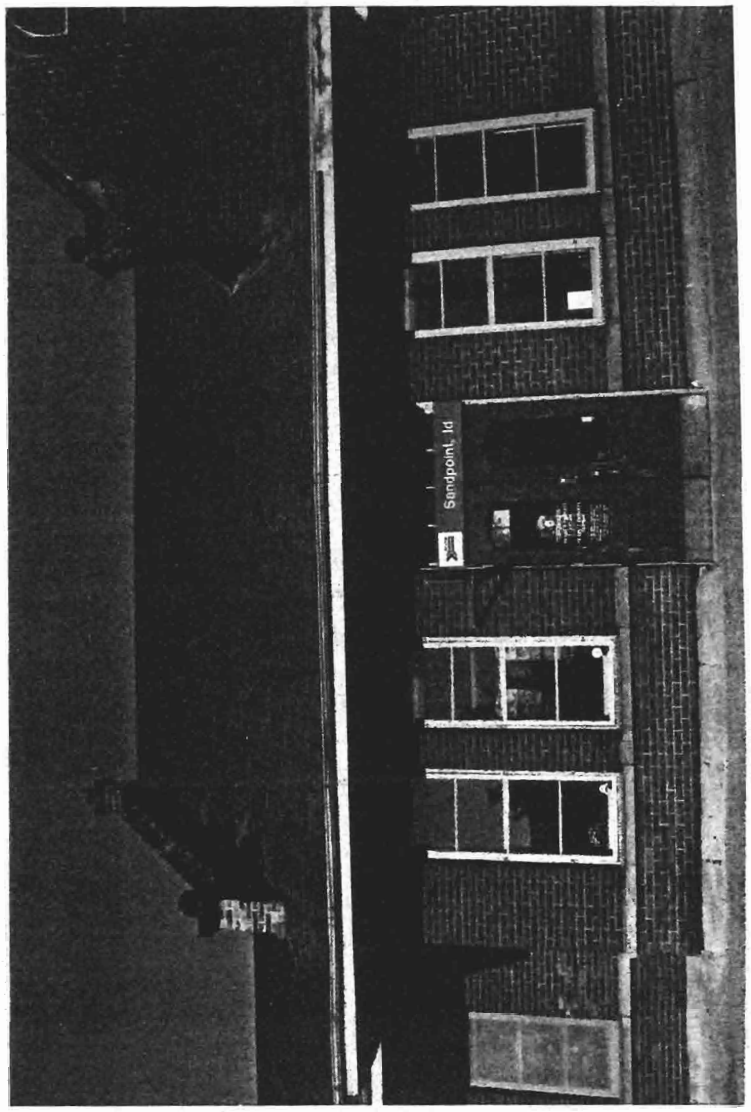


R1/F6
Sandpoint Depot
E. & N. elevations

R1/F7
Sandpoint Depot
E. elev. – north end

R1/F8
Sandpoint Depot
E. elev. – central
section - north

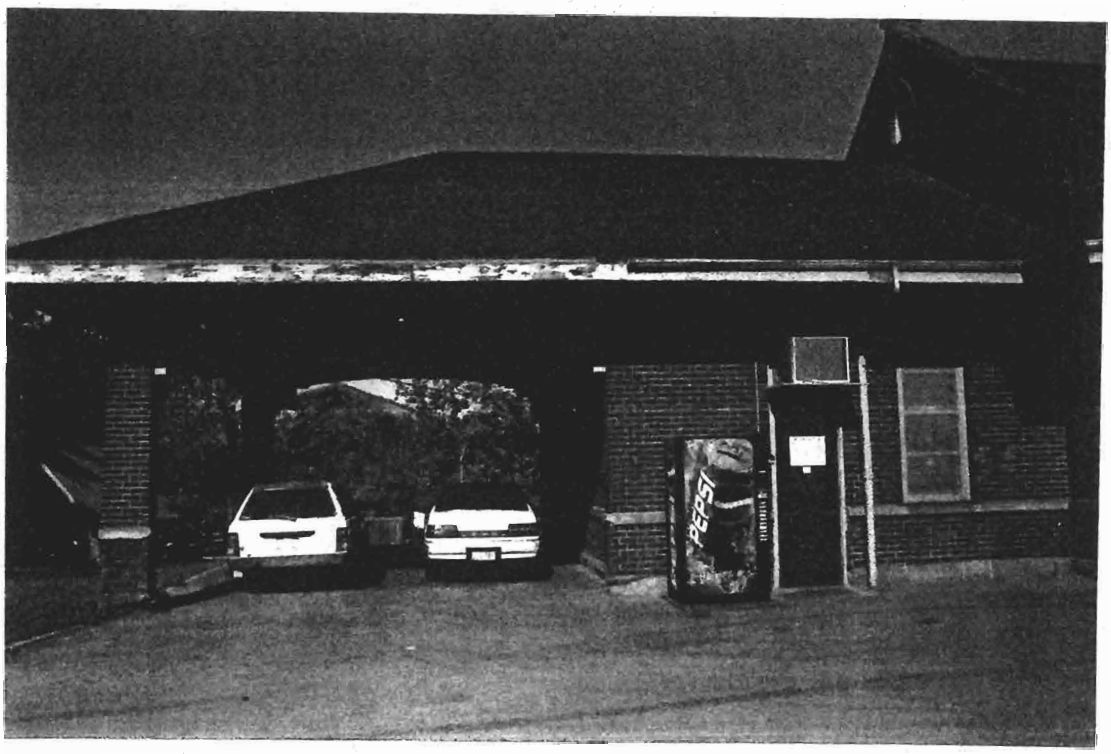


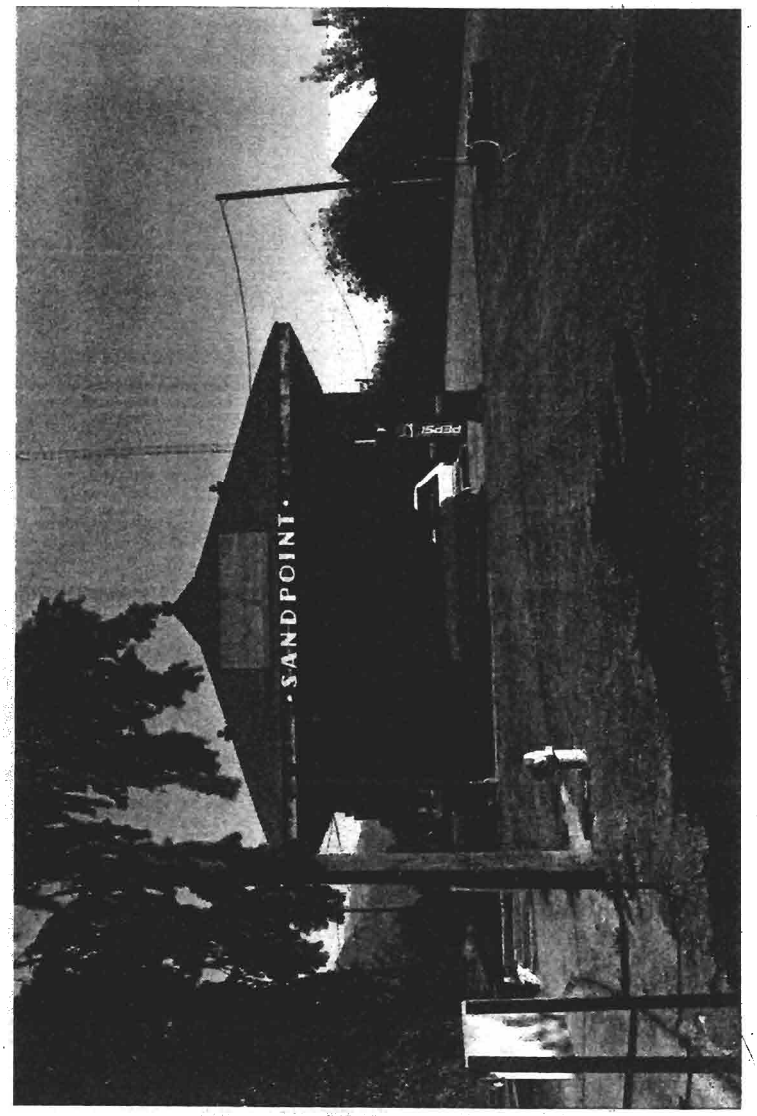


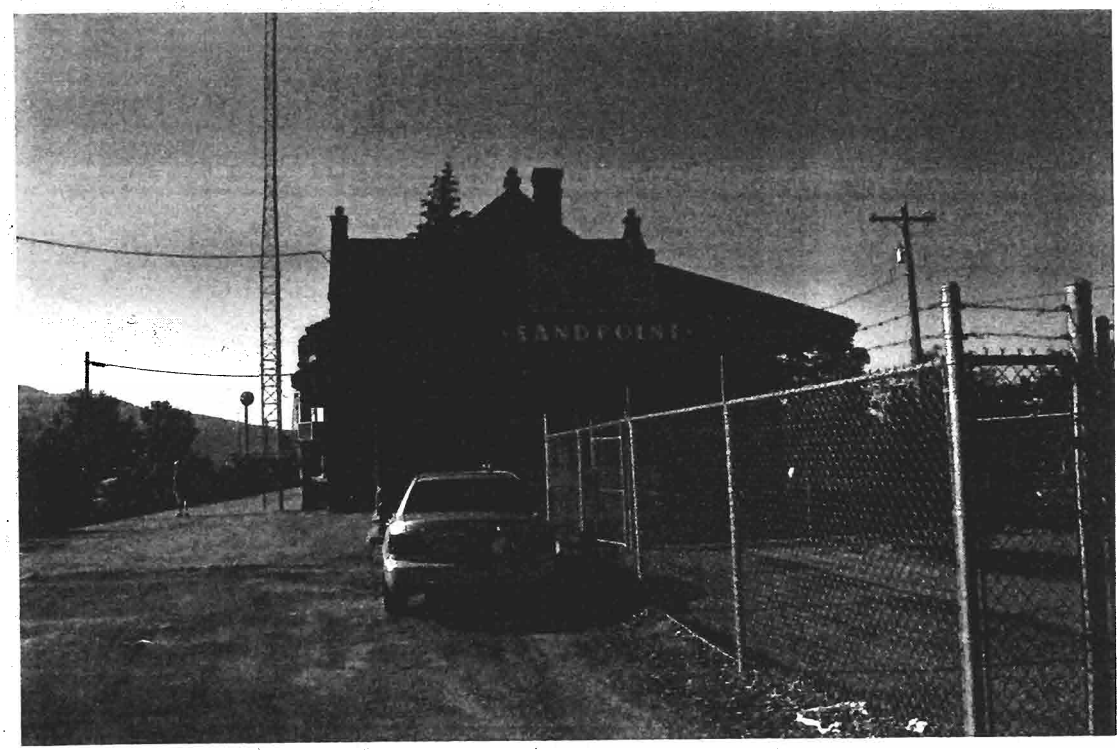
R1/F9
Sandpoint Depot
E. elev. central section

R1/F10
Sandpoint Depot
E. elev. – central section - south

R1/F12
Sandpoint Depot
E. elev. – south end - canopy



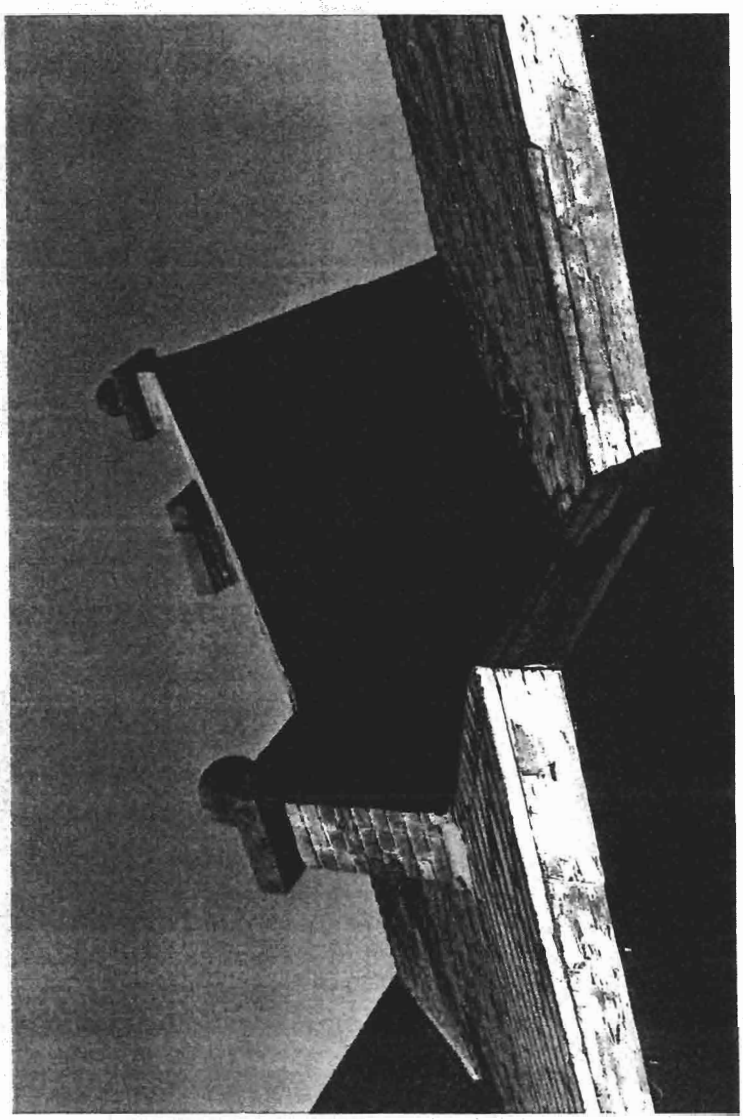


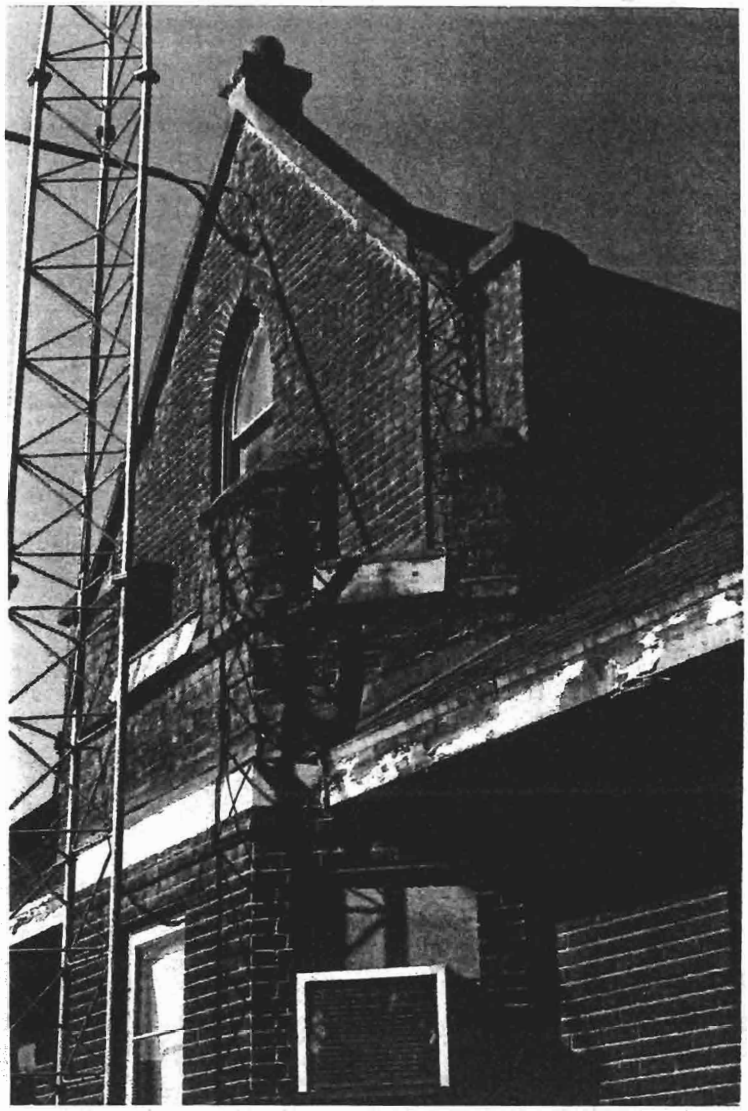


R1/F13
Sandpoint Depot
South elev.

R1/F14
Sandpoint Depot
South elev. Beneath canopy

R1/F15
Sandpoint Depot
North elevation

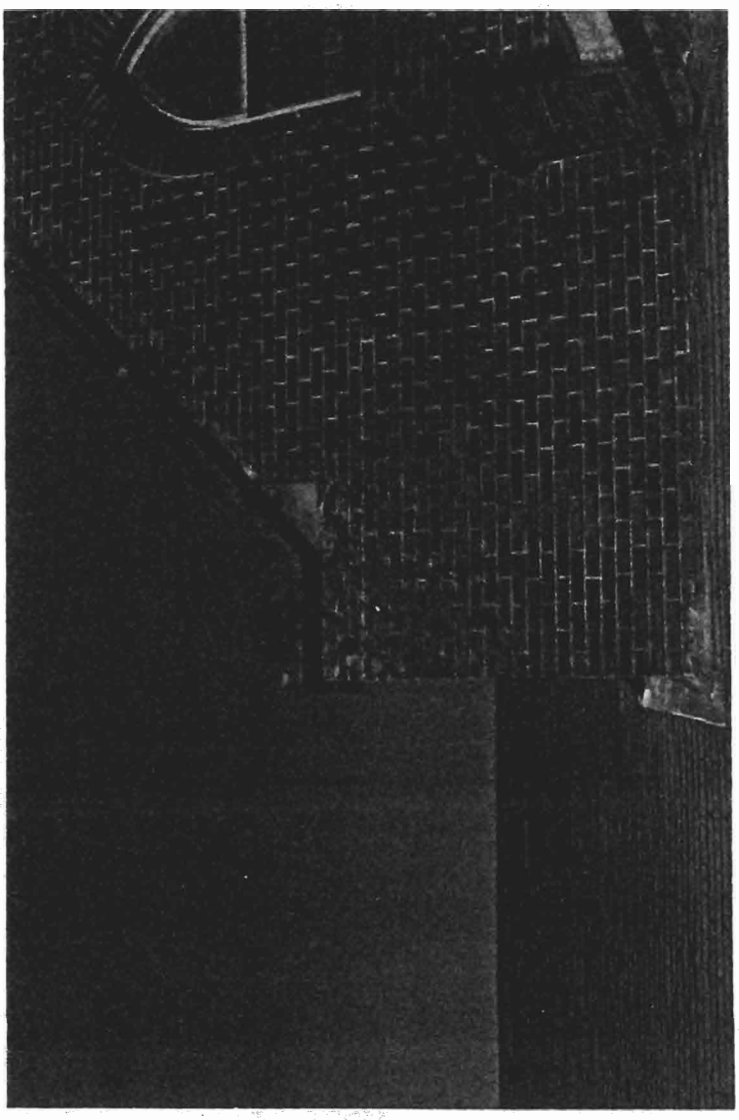


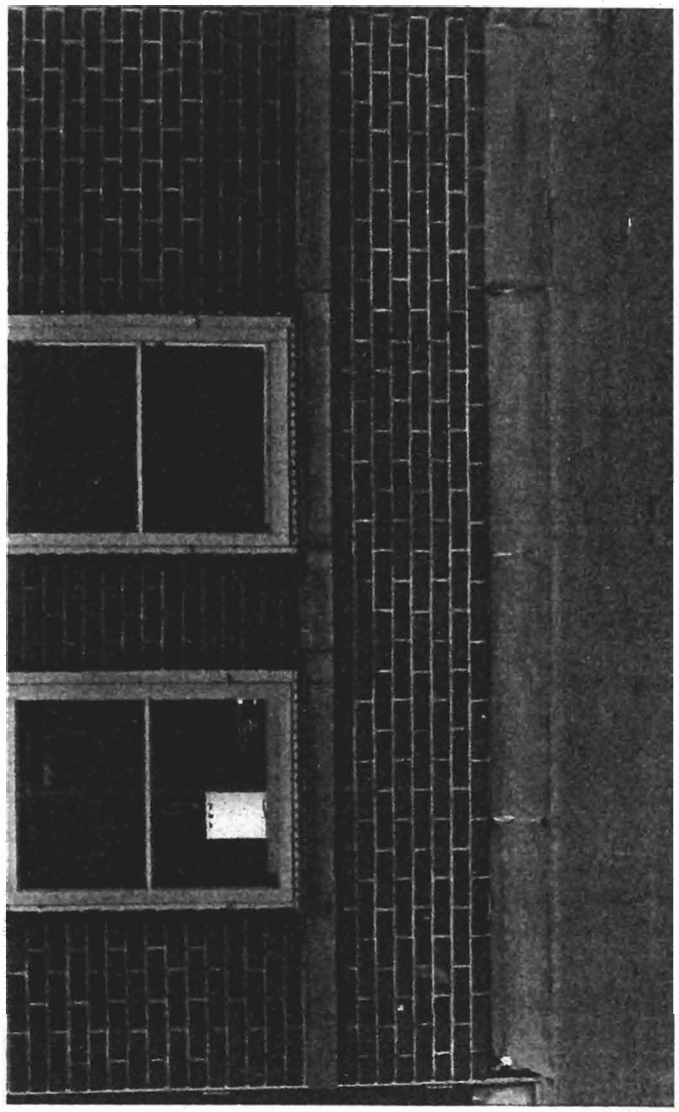


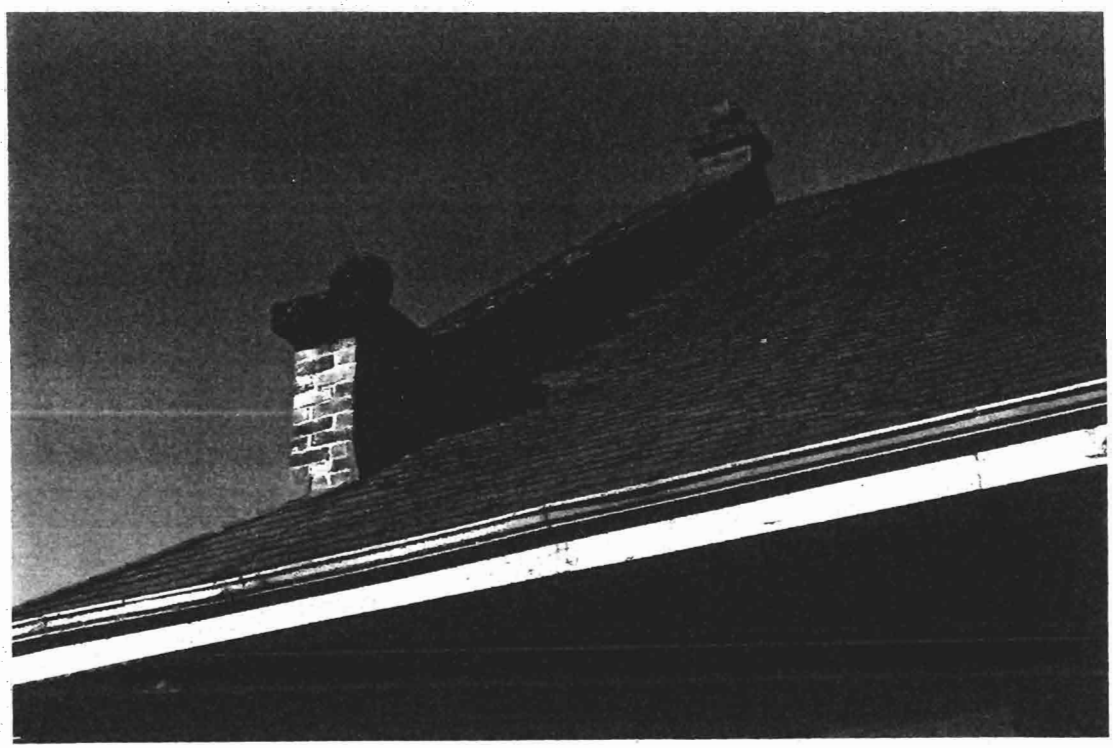
R1/F16
Sandpoint Depot
Roof & North
parapet

R1/F17
Sandpoint Depot
East parapet

R1/F18
Sandpoint Depot
E. elev. – bay
window



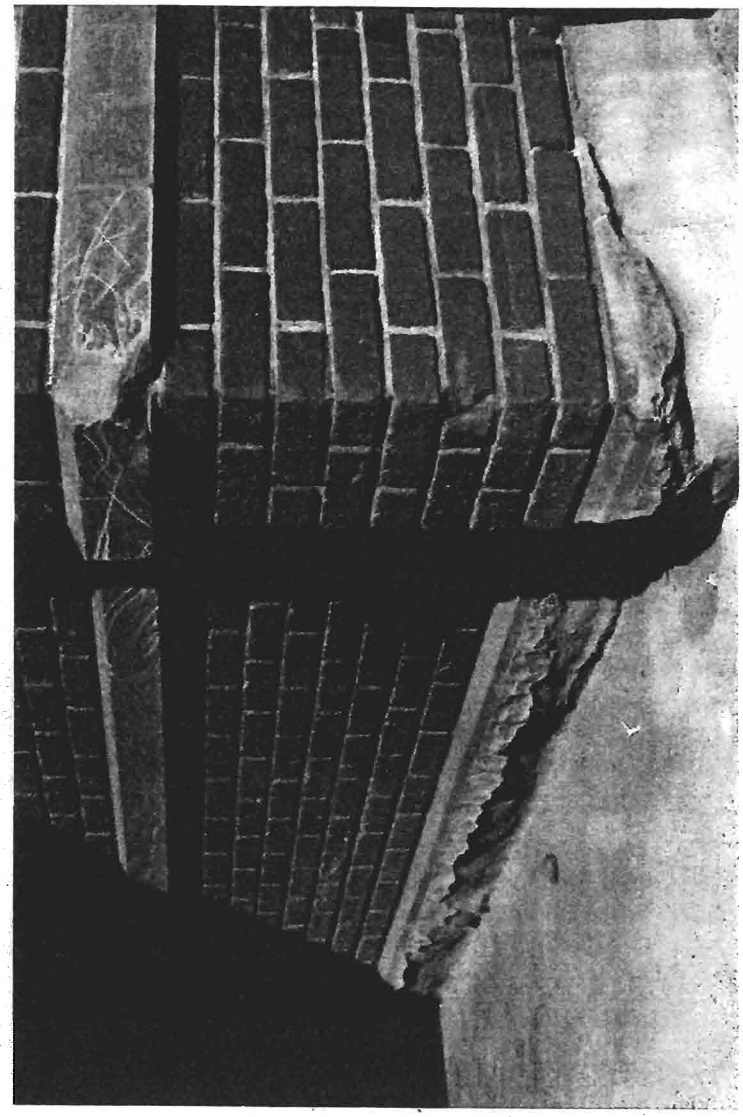


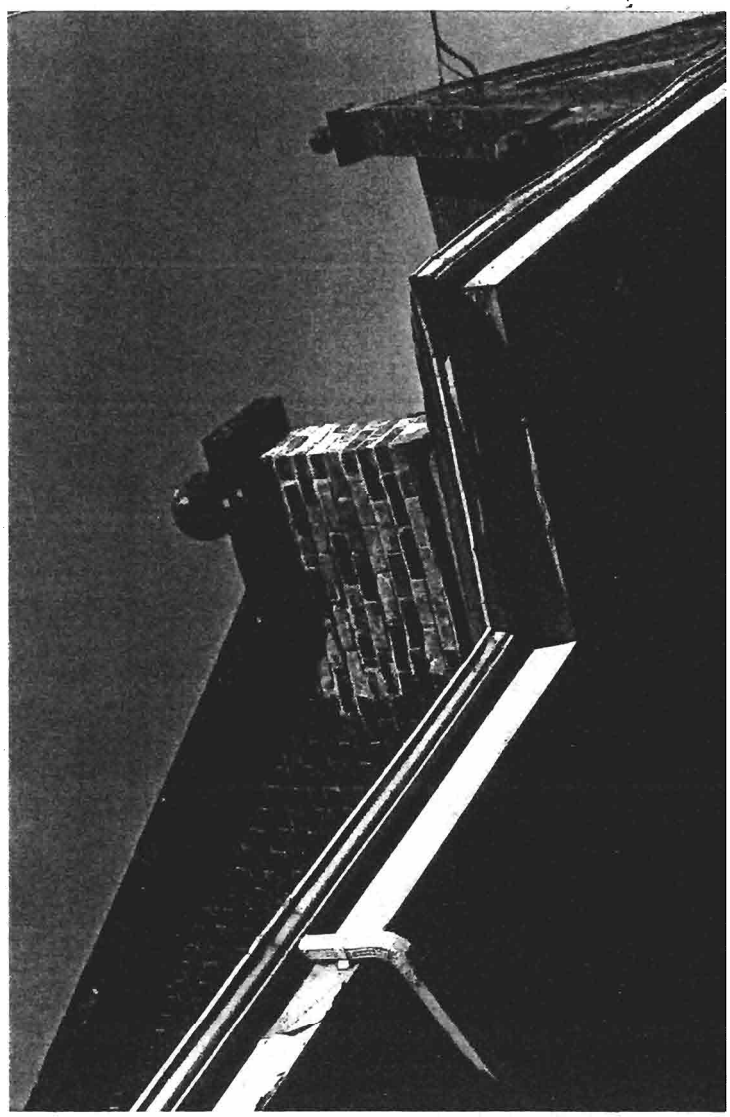


R1/F19
Sandpoint Depot
E. elev. East para

R1/F20
Sandpoint Depot
E. elev.

R1/F21
Sandpoint Depot
S. parapet

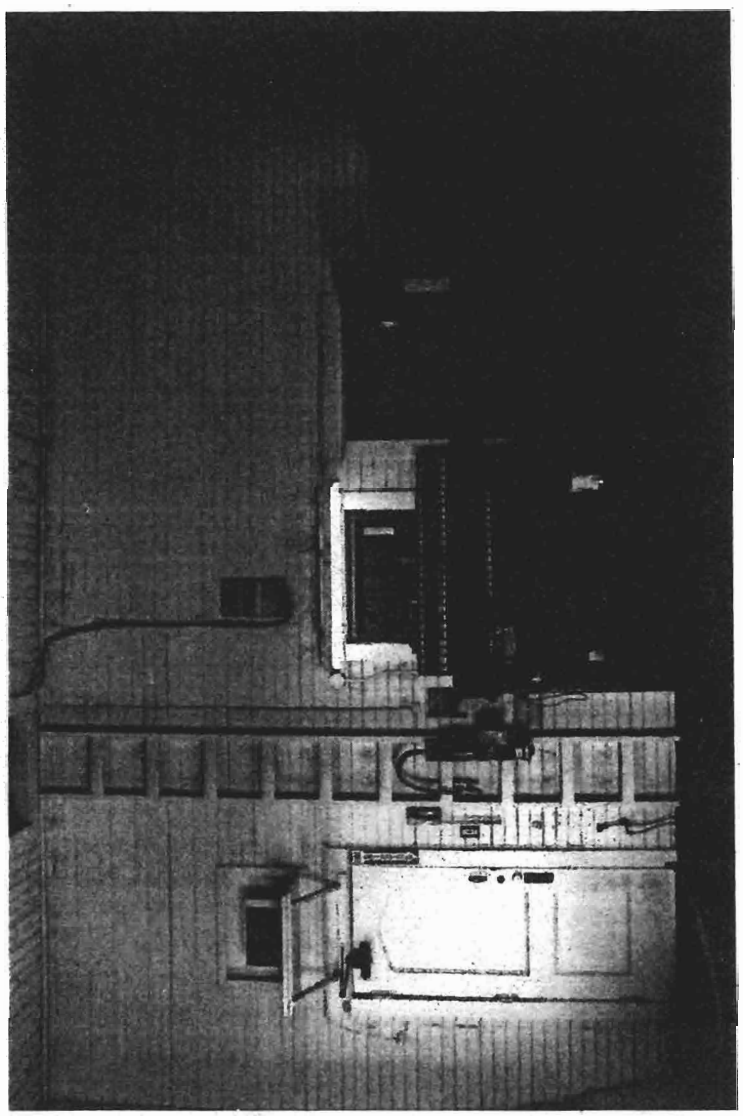


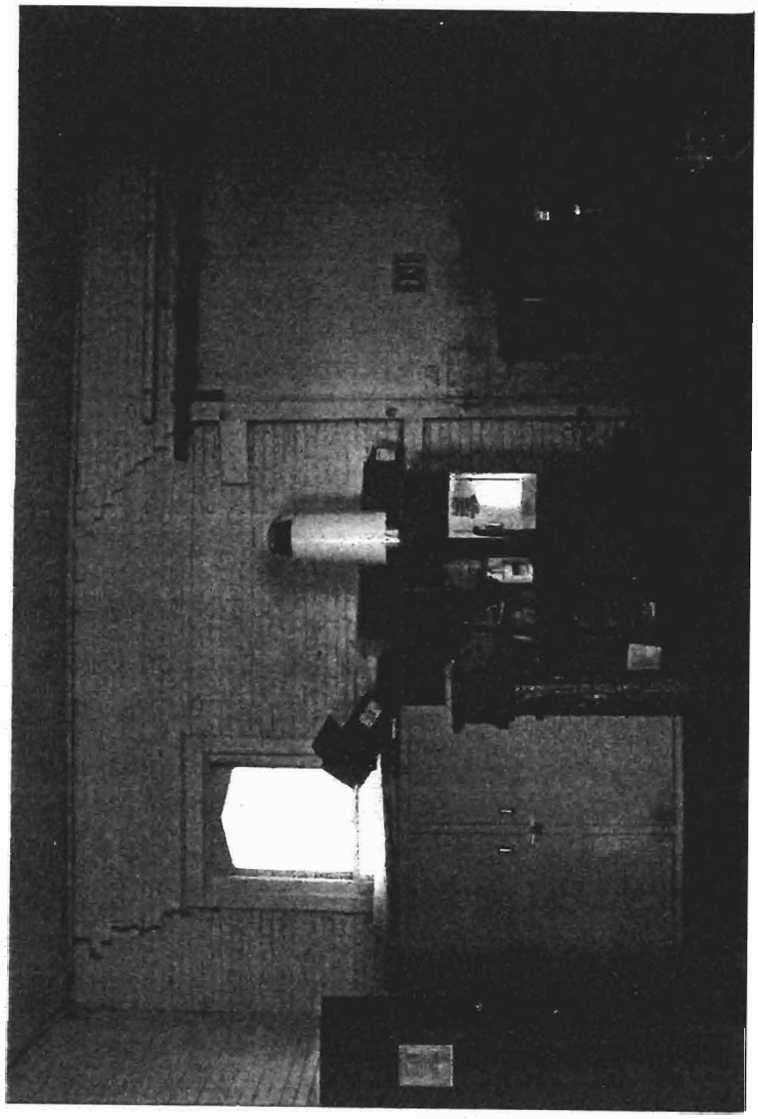


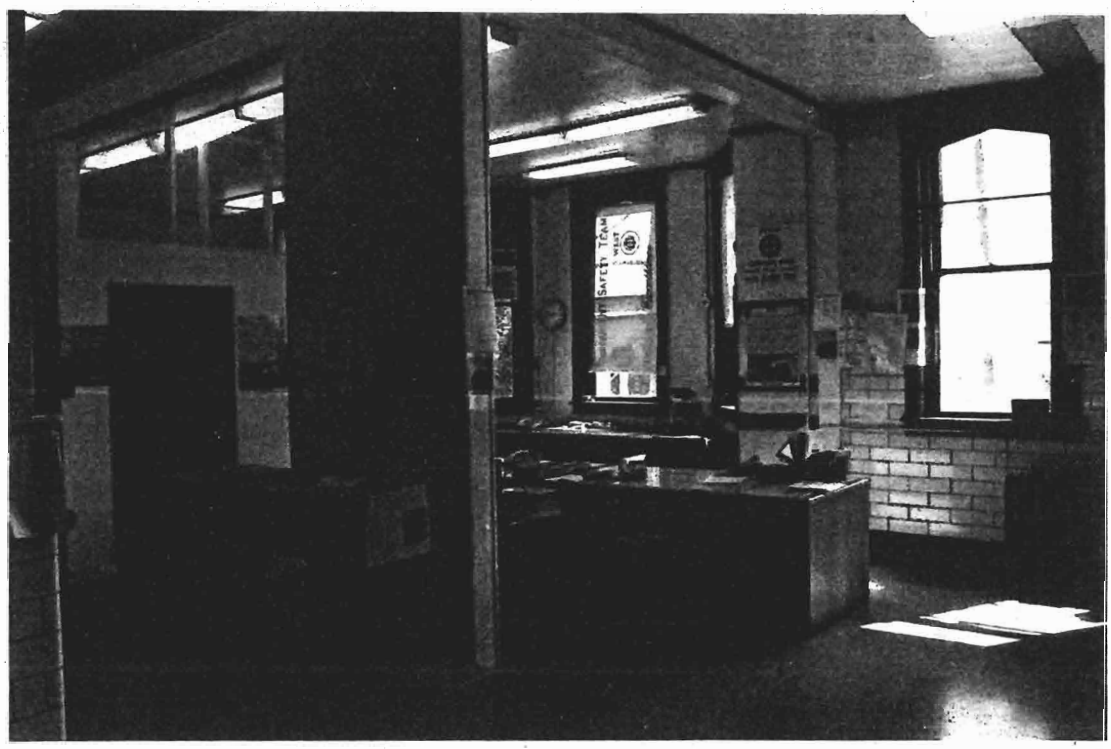
R1/F22
Sandpoint Depot
Southeast corner

R1/F23
Sandpoint Depot
South parapet

R1/F24
Sandpoint Depot
SE column



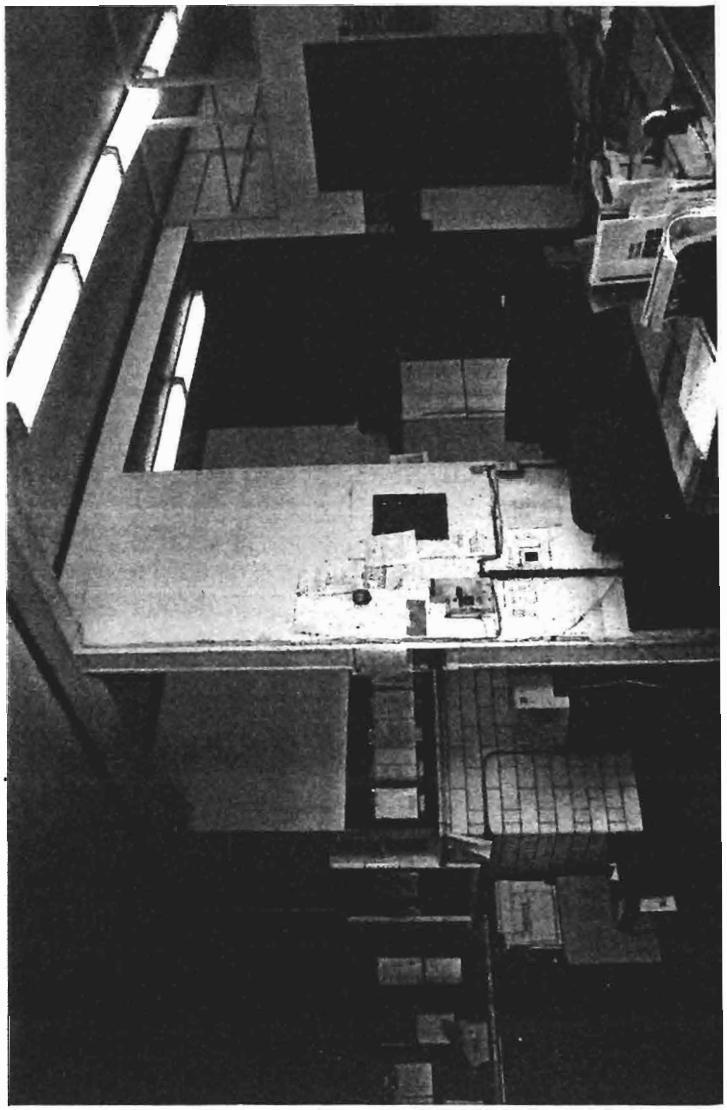




R1/F25
Sandpoint Depot
Baggage room

R1/F26
Sandpoint Depot
Baggage room

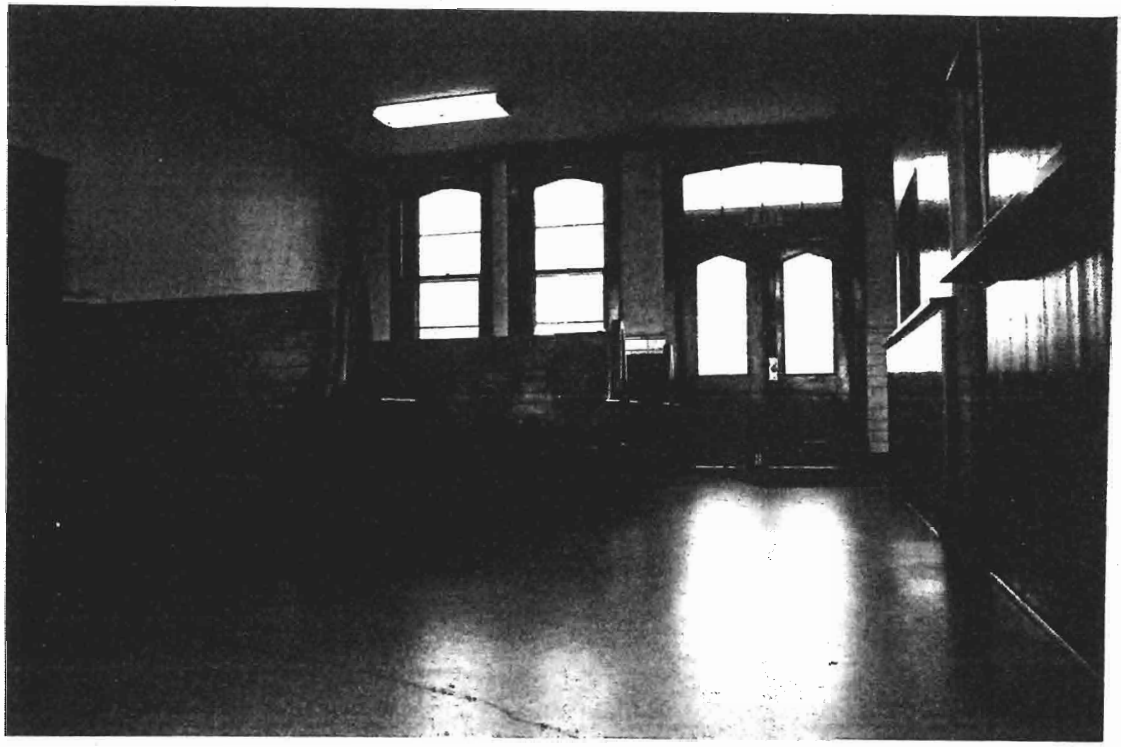
R1/F28
Sandpoint Depot
Ticket Office

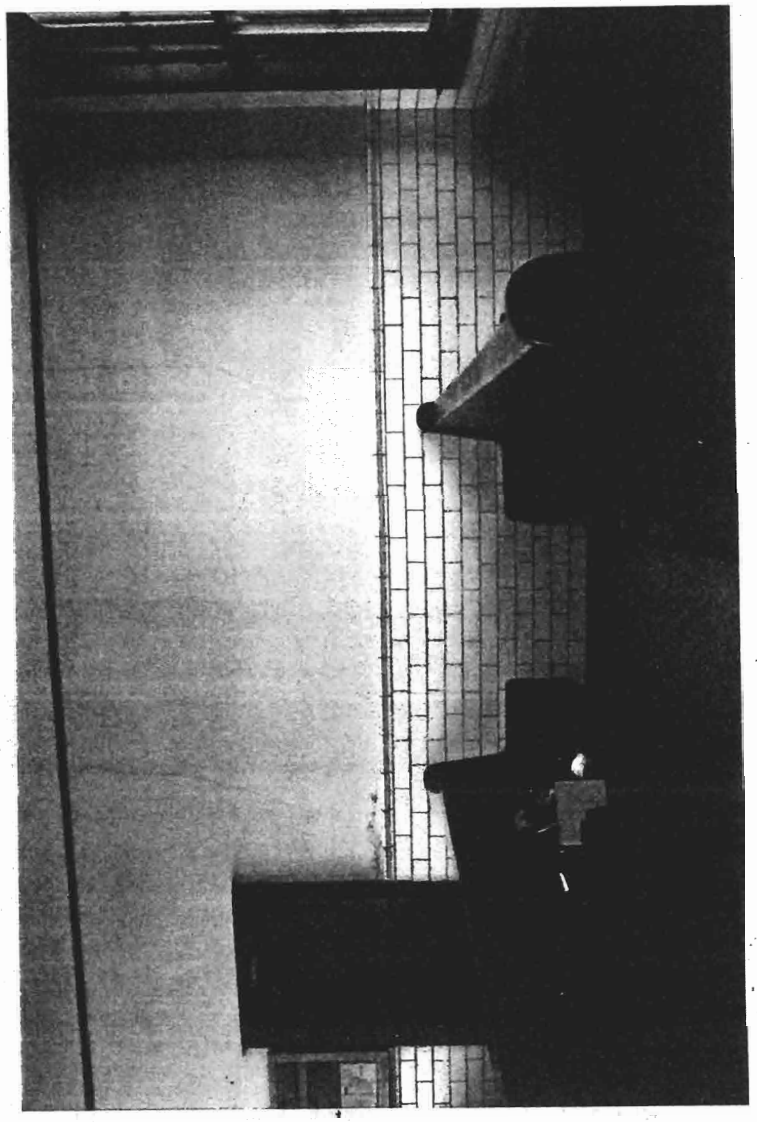


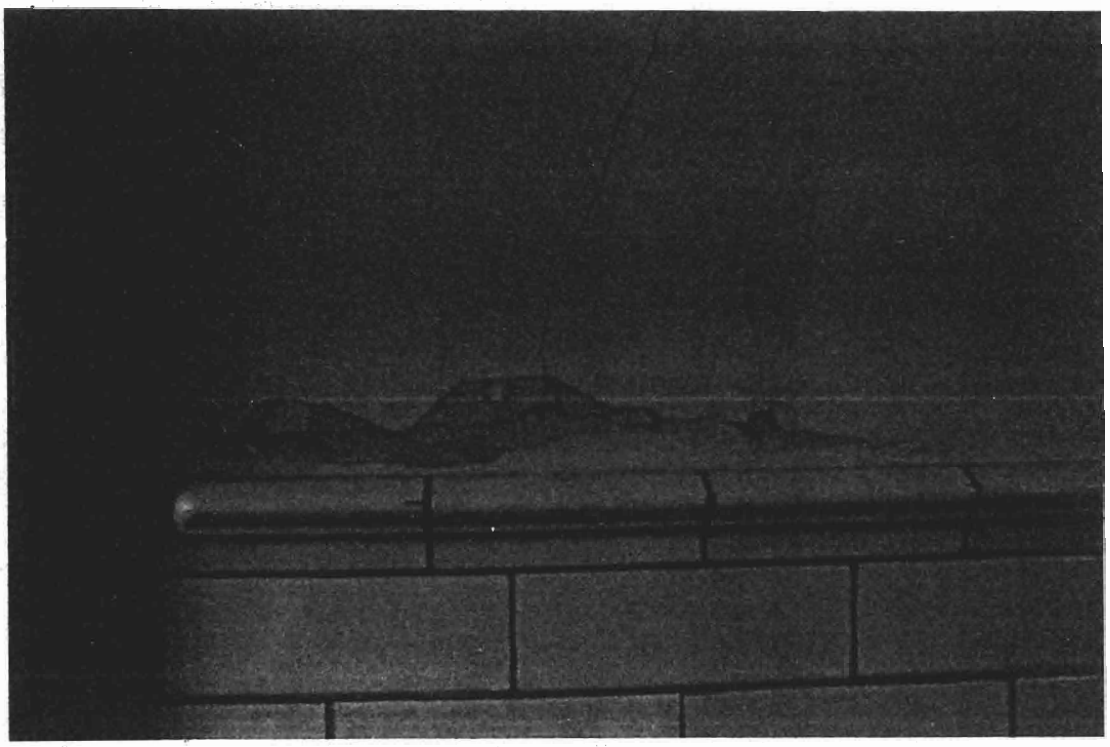
R1/F29
Sandpoint Depot
Ticket Office

R1/F31
Sandpoint Depot
Ticket Office

R1/F32
Sandpoint Depot
Waiting Room



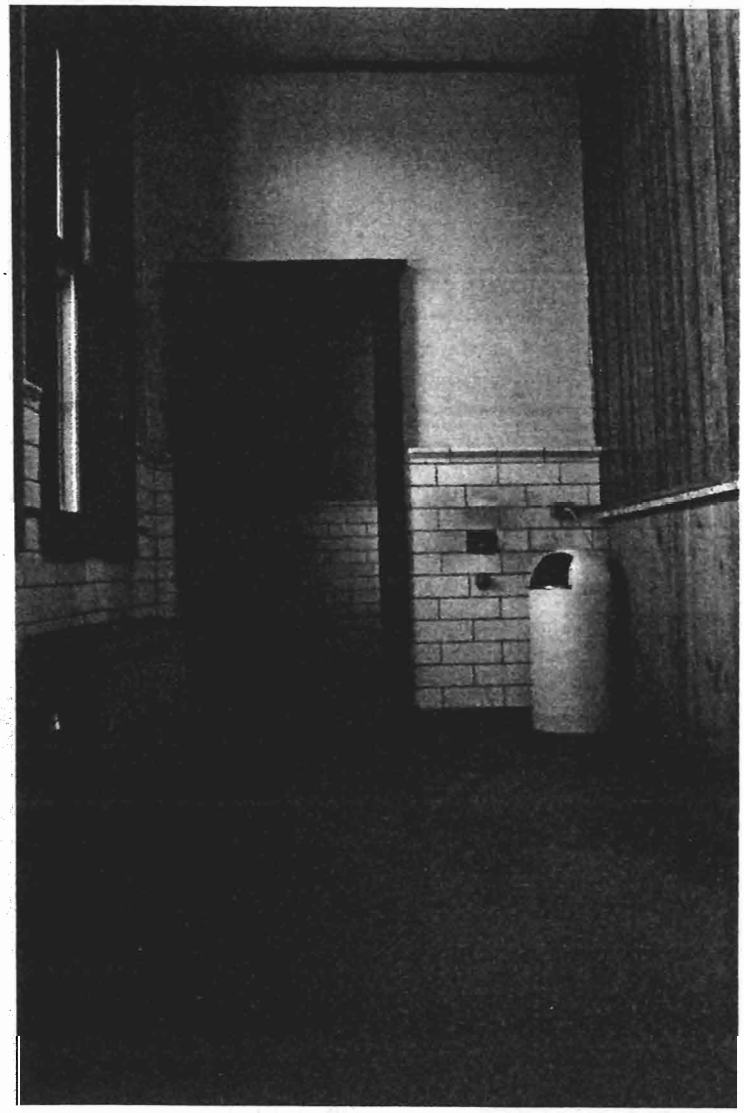


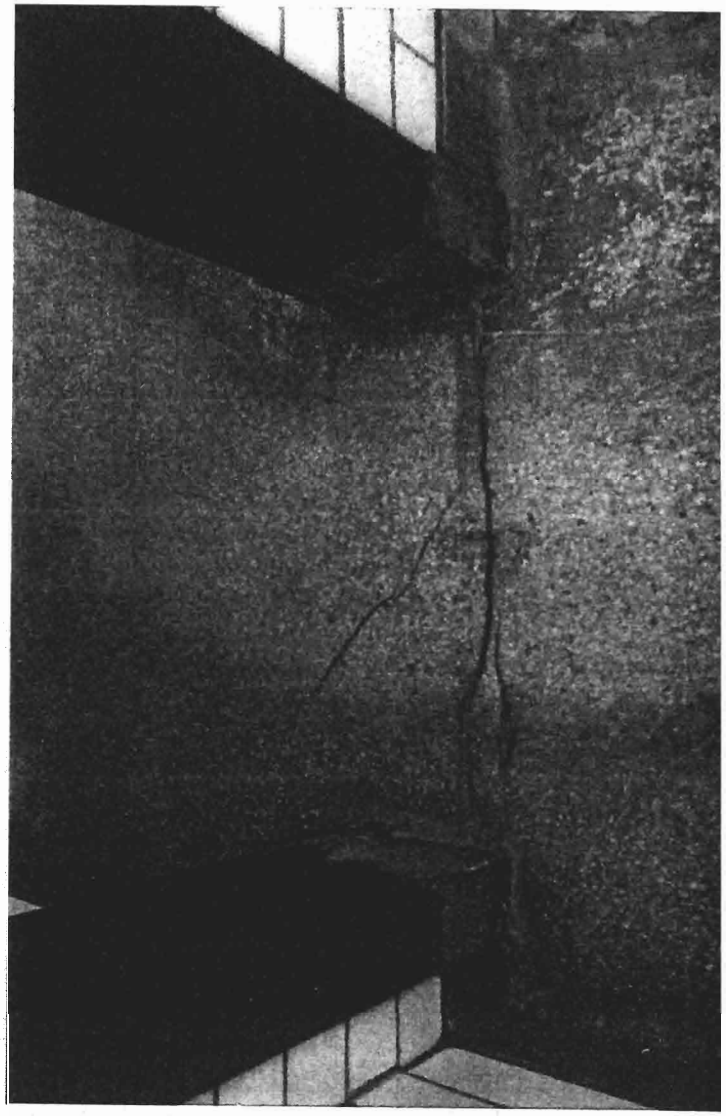


R1/F33
Sandpoint Depot
Waiting Room

R1/F34
Sandpoint Depot
Waiting Room

R1/F35
Sandpoint Depot
Waiting Room

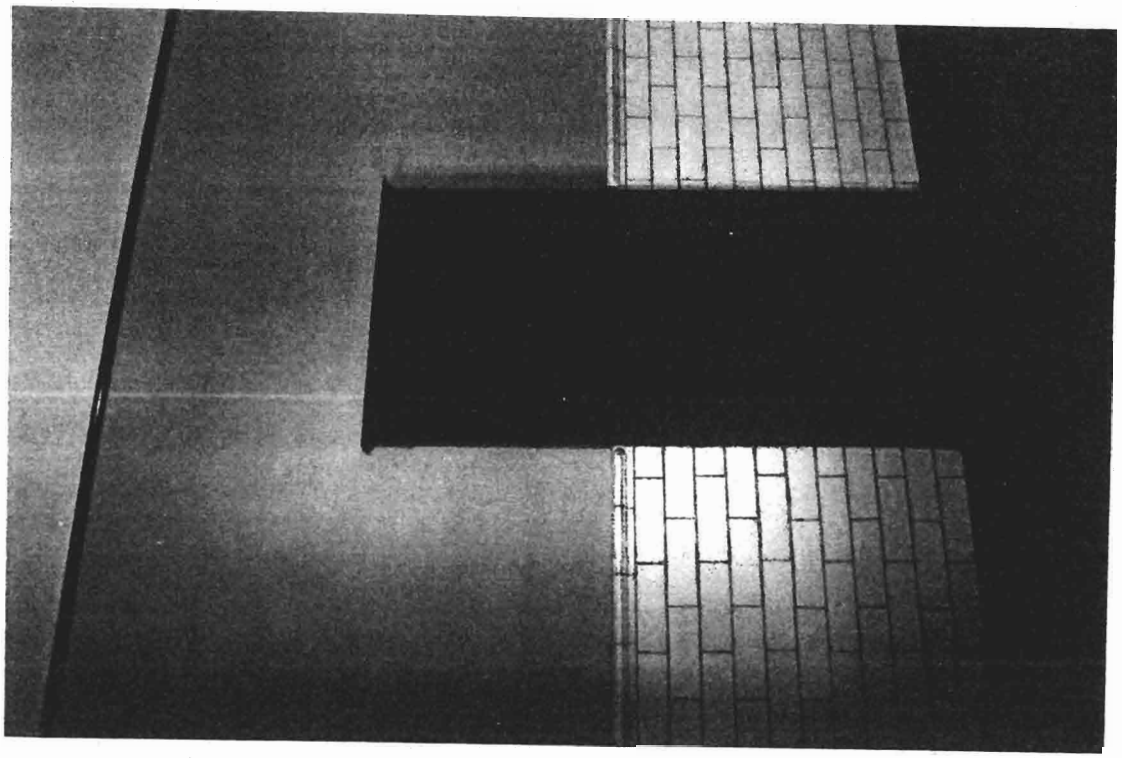


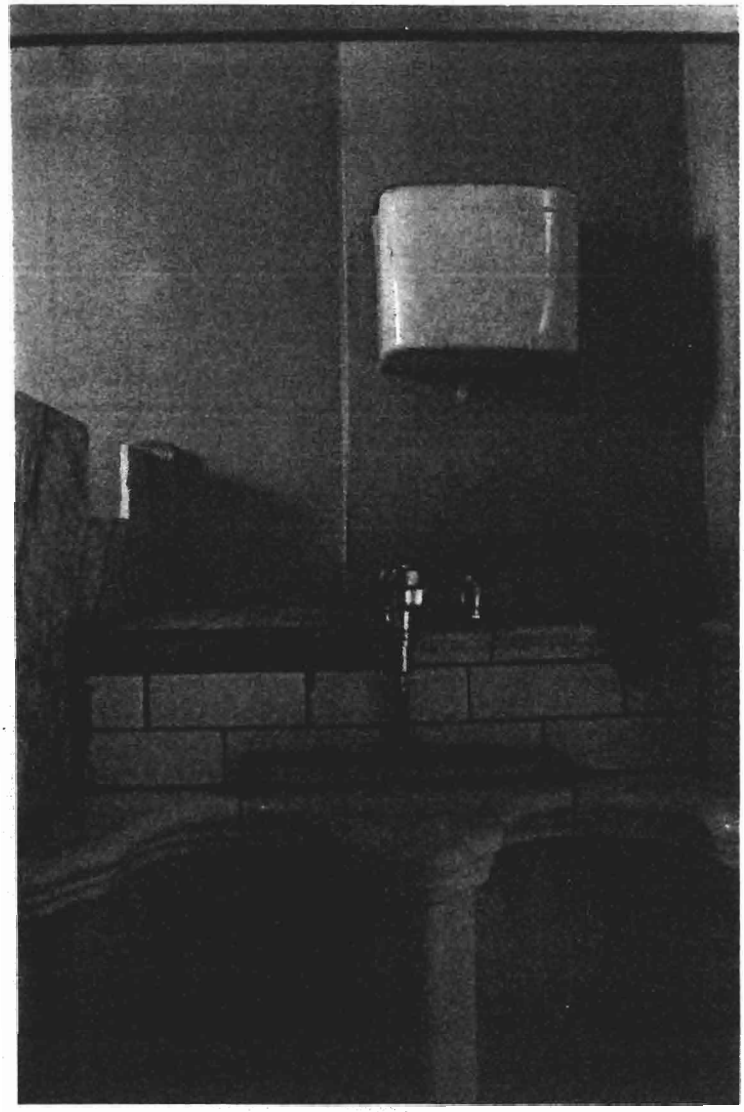


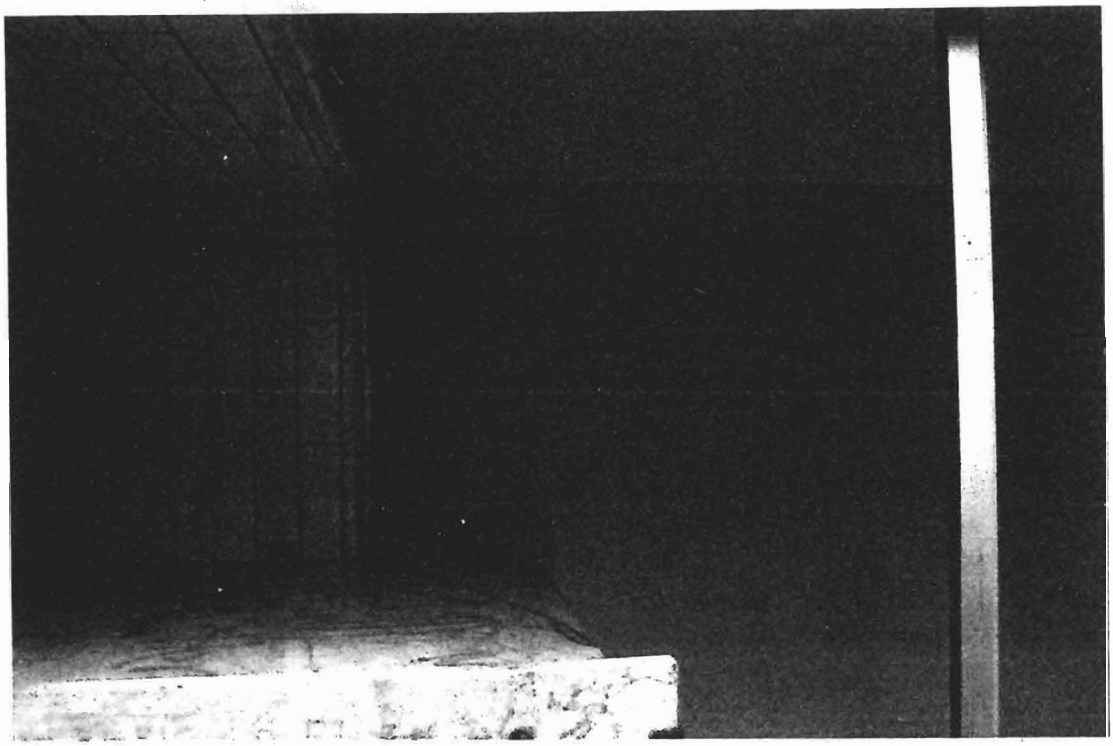
R1/F37
Sandpoint Depot
Waiting Room

R2/F1
Sandpoint Depot
Smoking Room

R2/F2
Sandpoint Depot
Smoking Room



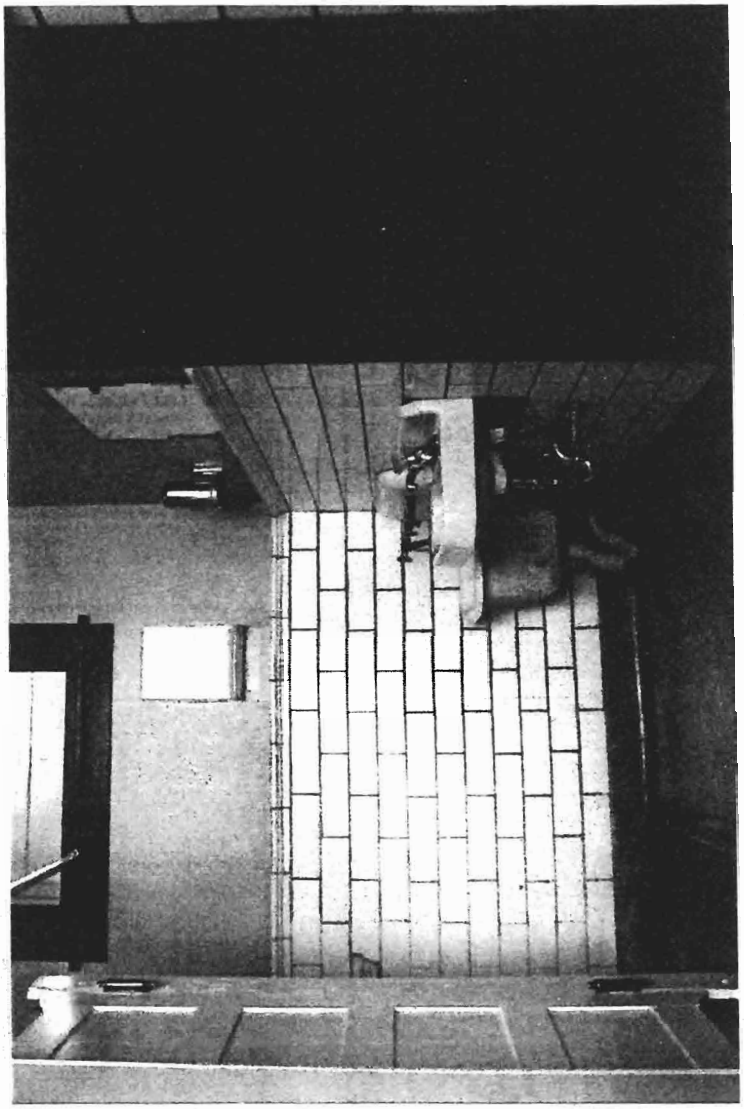


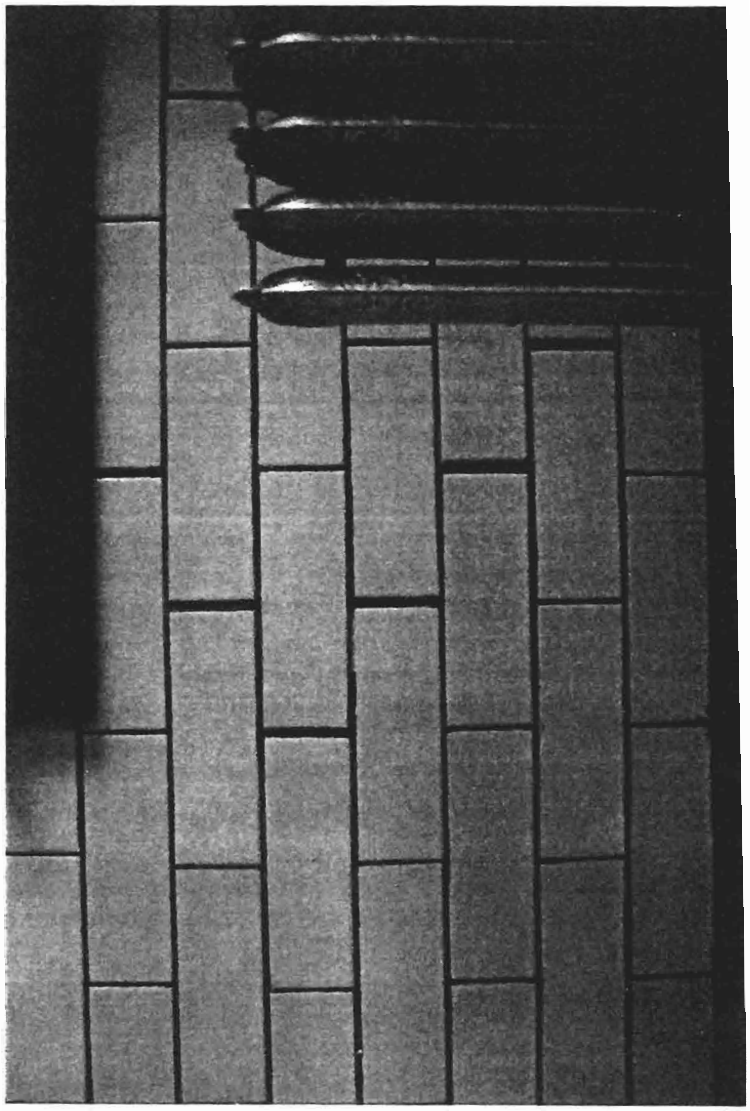


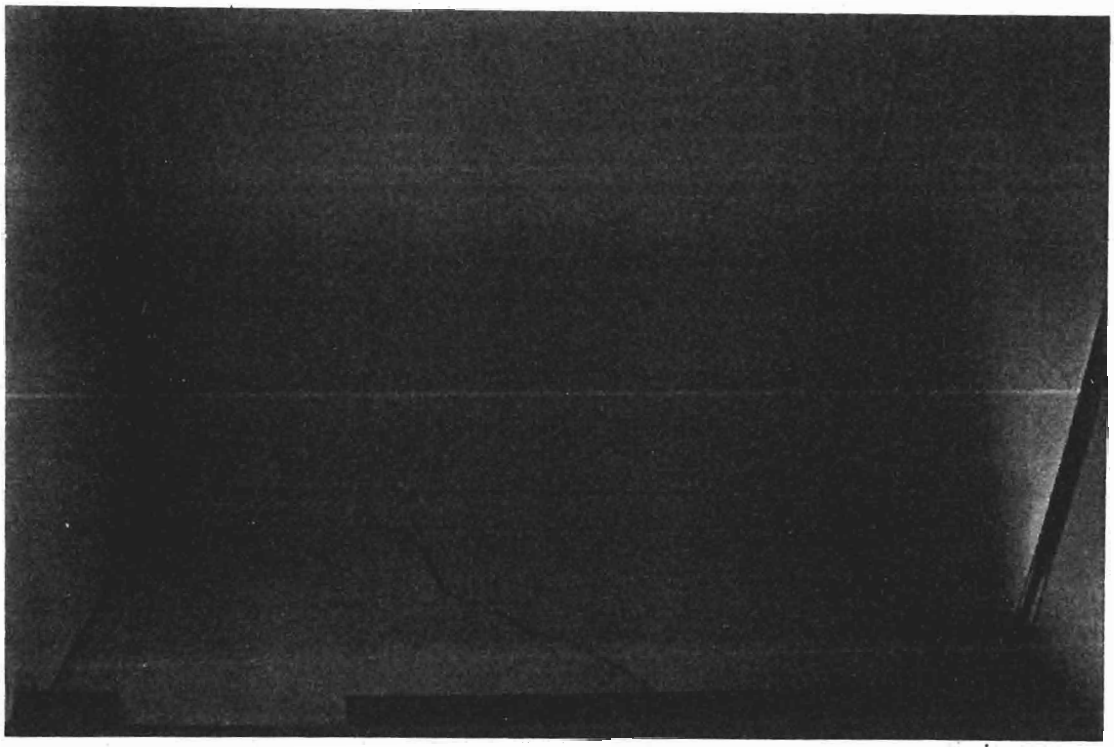
R2/F3
Sandpoint Depot
Men's RR

R2/F4
Sandpoint Depot
Men's RR

R2/F5
Sandpoint Depot
Men's RR



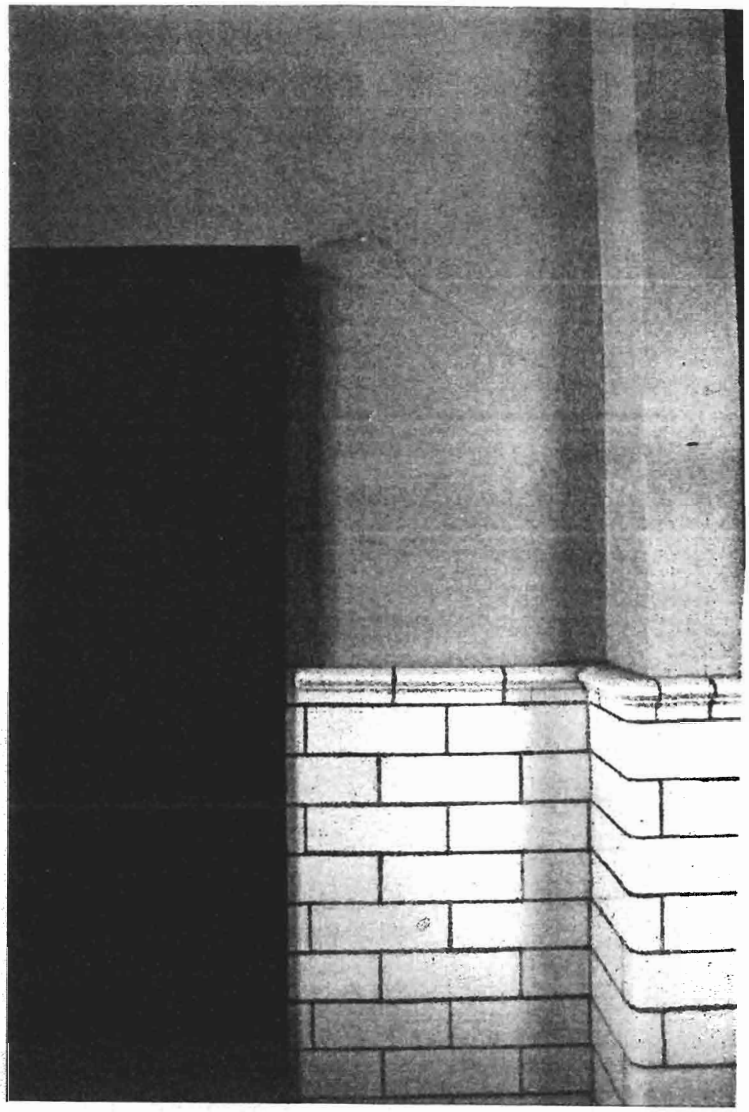


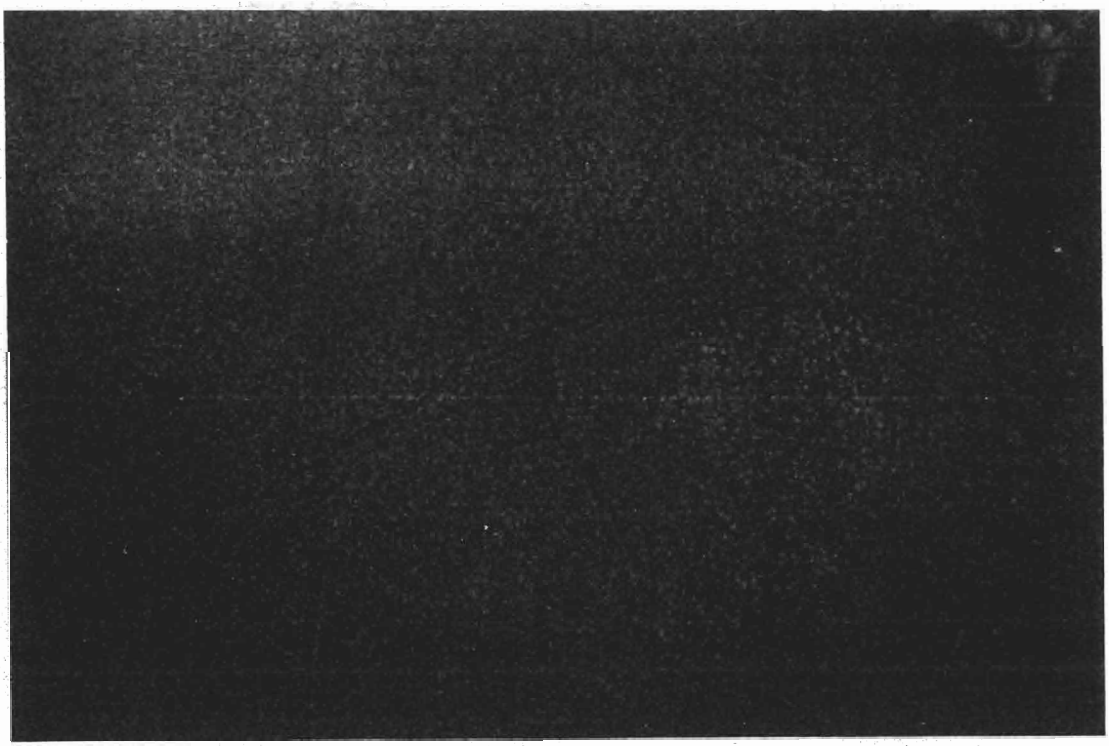


R2/F6
Sandpoint Depot
Men's RR

R2/F7
Sandpoint Depot
Hall

R2/F8
Sandpoint Depot
Hall

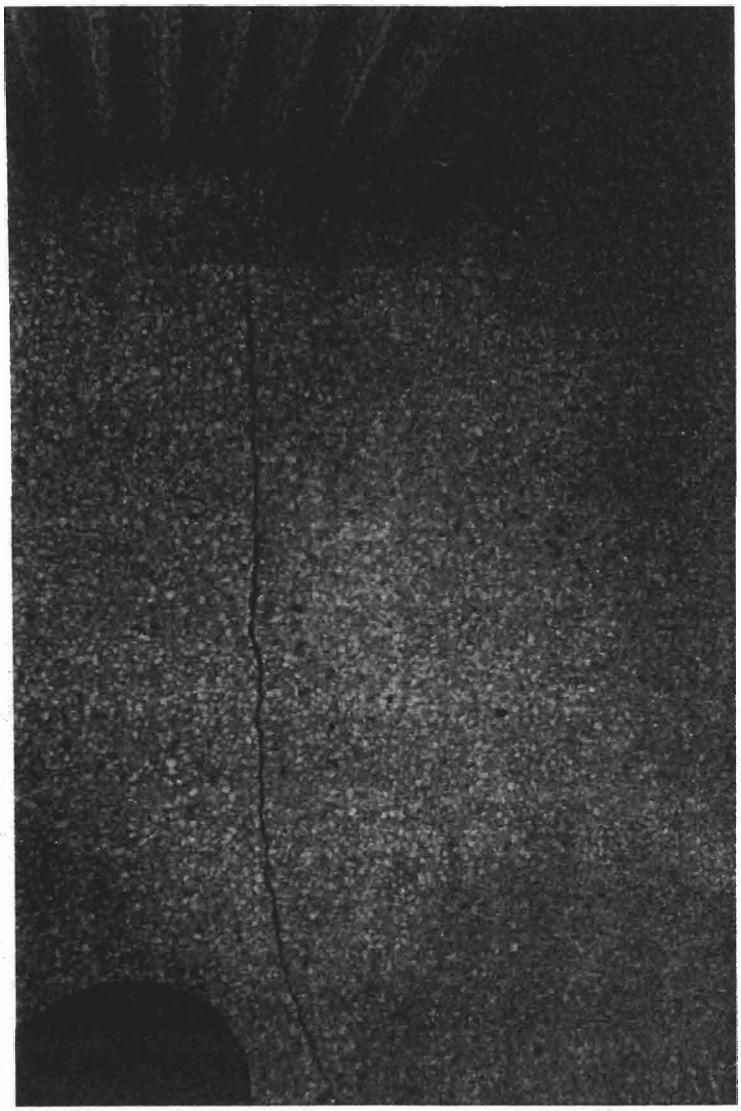


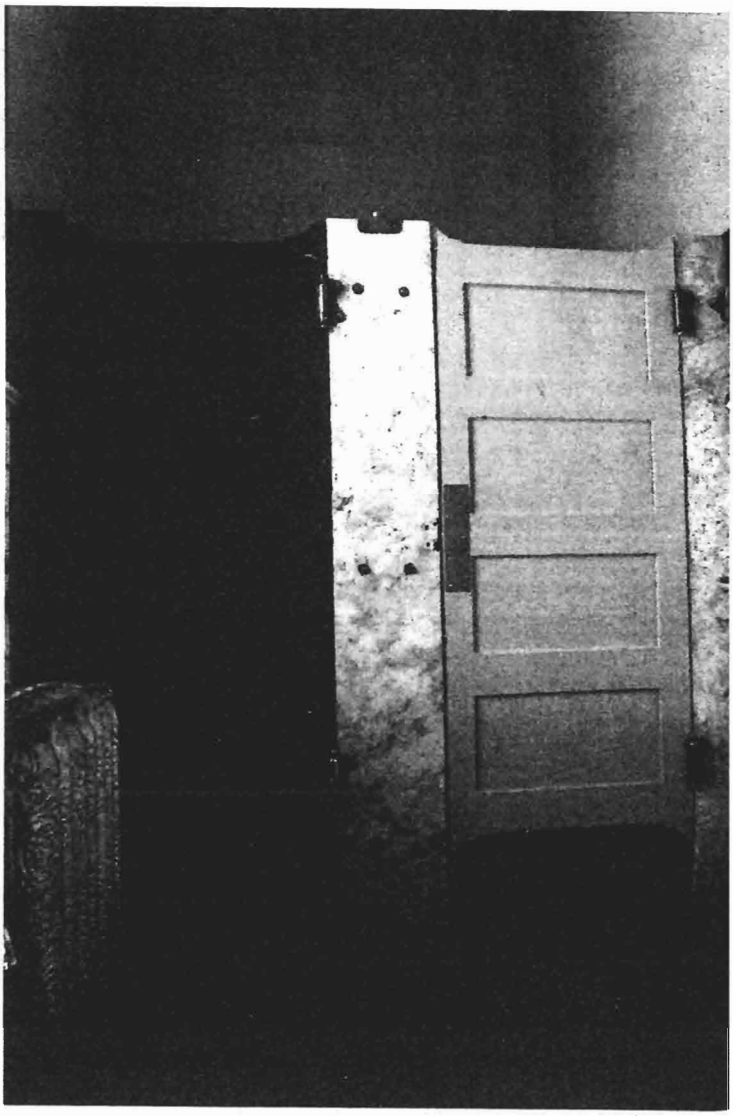


R2/F9
Sandpoint Depot
Hall

R2/F10
Sandpoint Depot
Vestibule

R2/F11
Sandpoint Depot
Vestibule

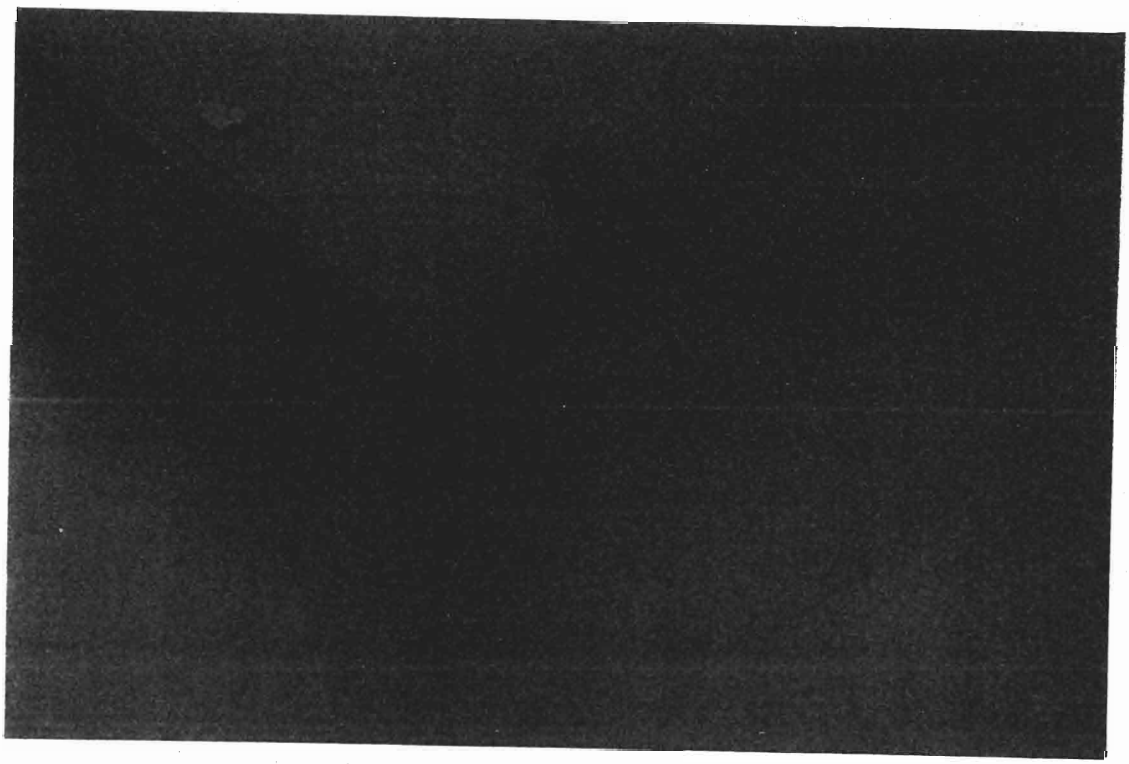


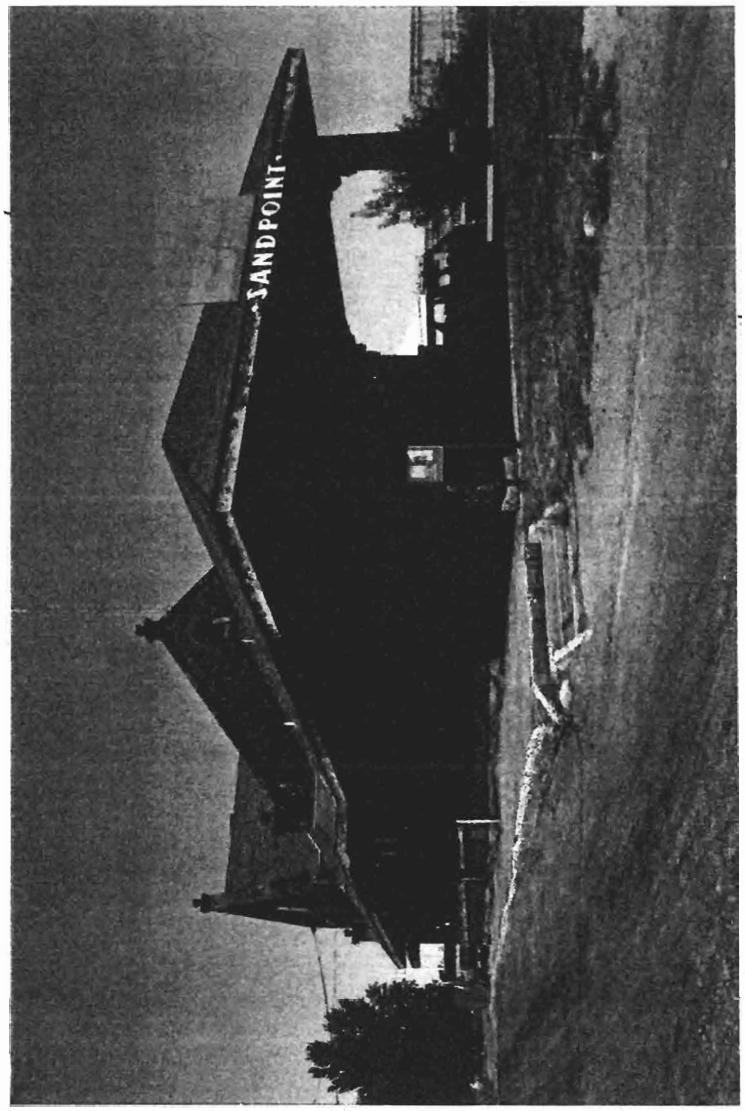


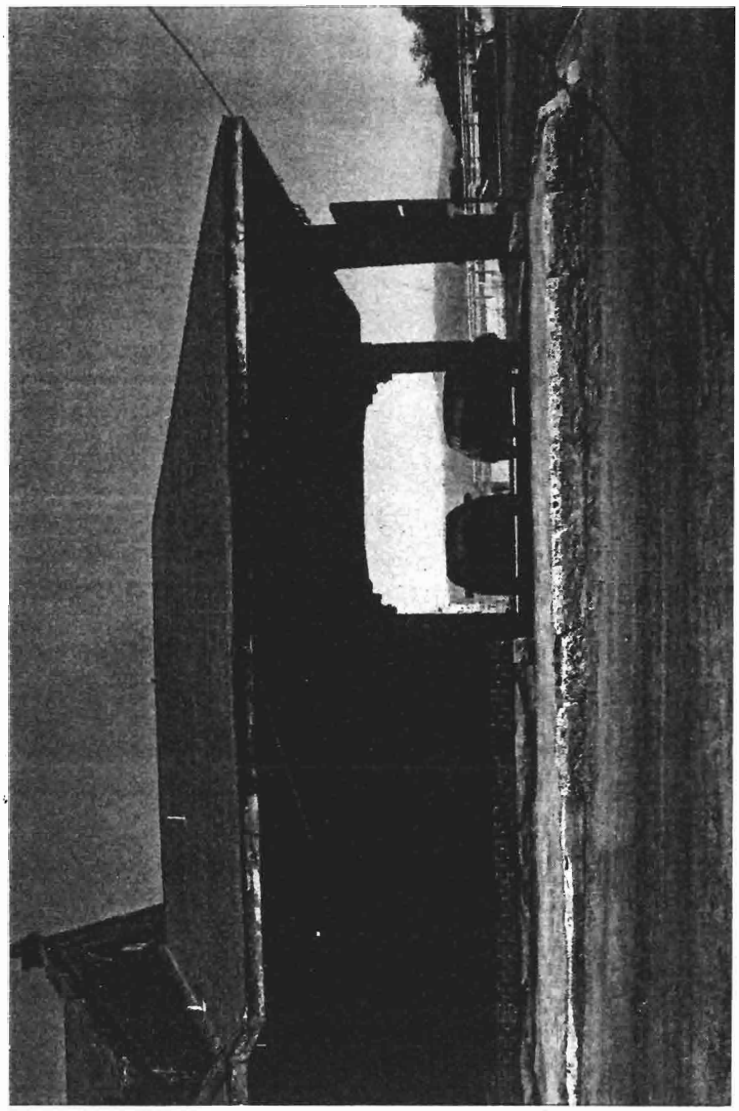
R2/F12
Sandpoint Depot
Women's RR

R2/F13
Sandpoint Depot
Women's RR

R2/F14
Sandpoint Depot
Women's RR



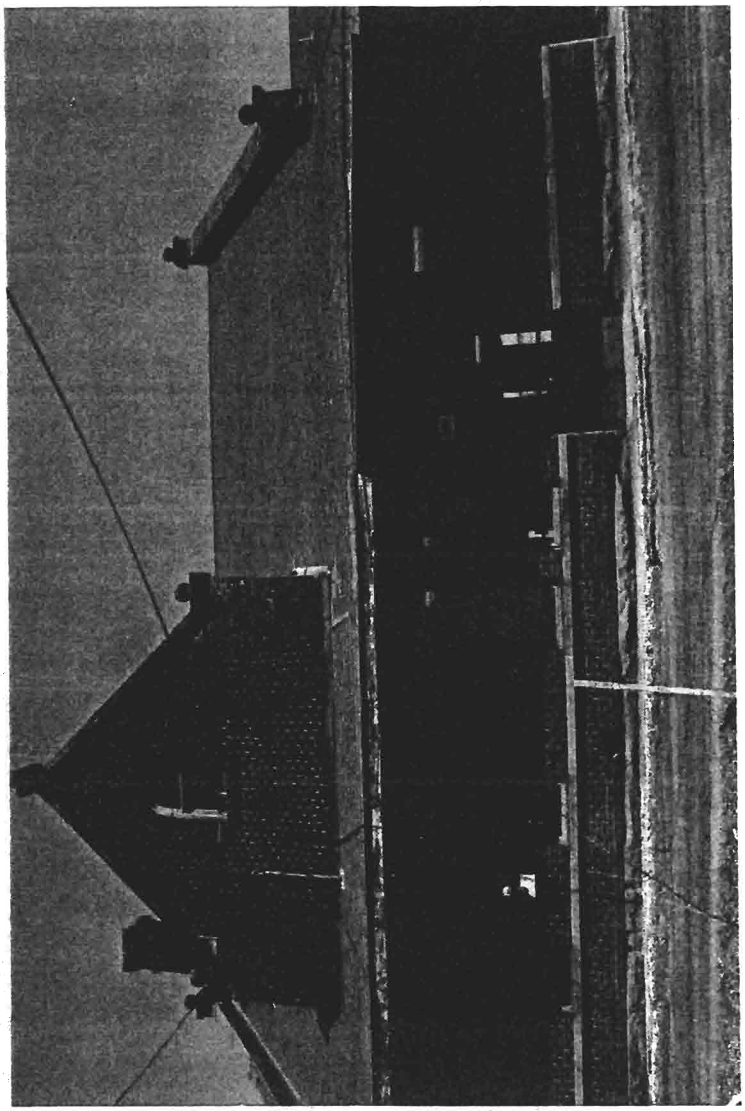


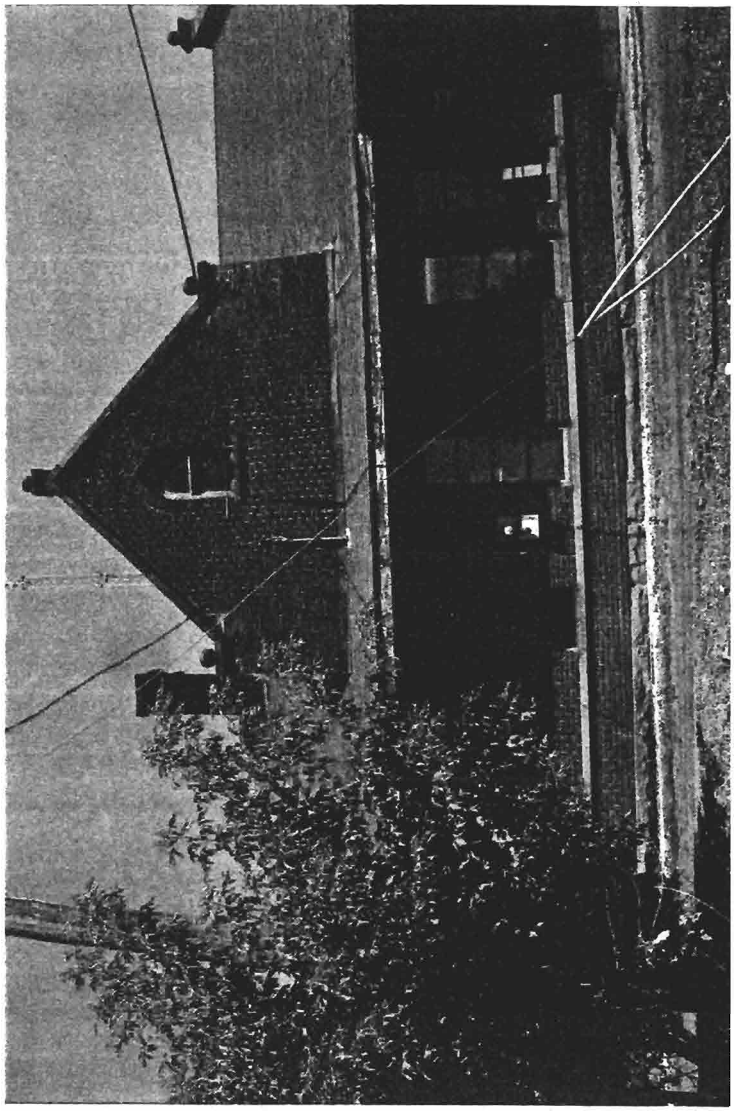


R2/F15
Sandpoint Depot
S & W elev.

R2/F16
Sandpoint Depot
West elev.

R2/F17
Sandpoint Depot
West elev.

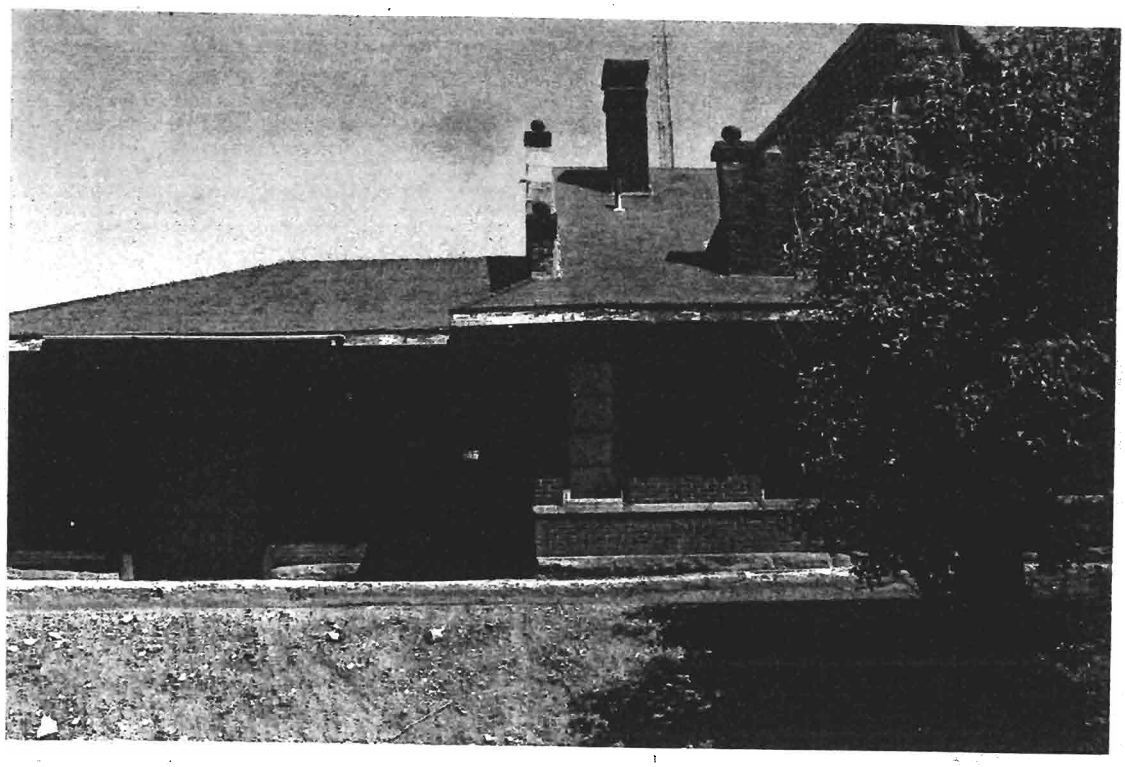


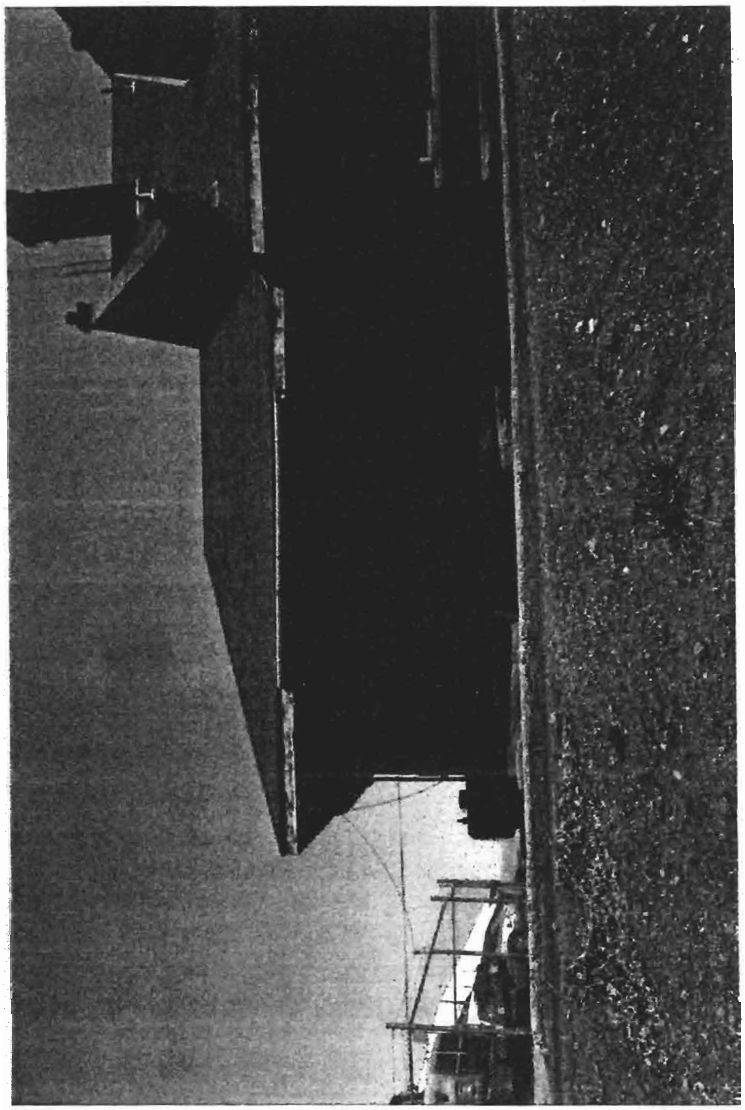


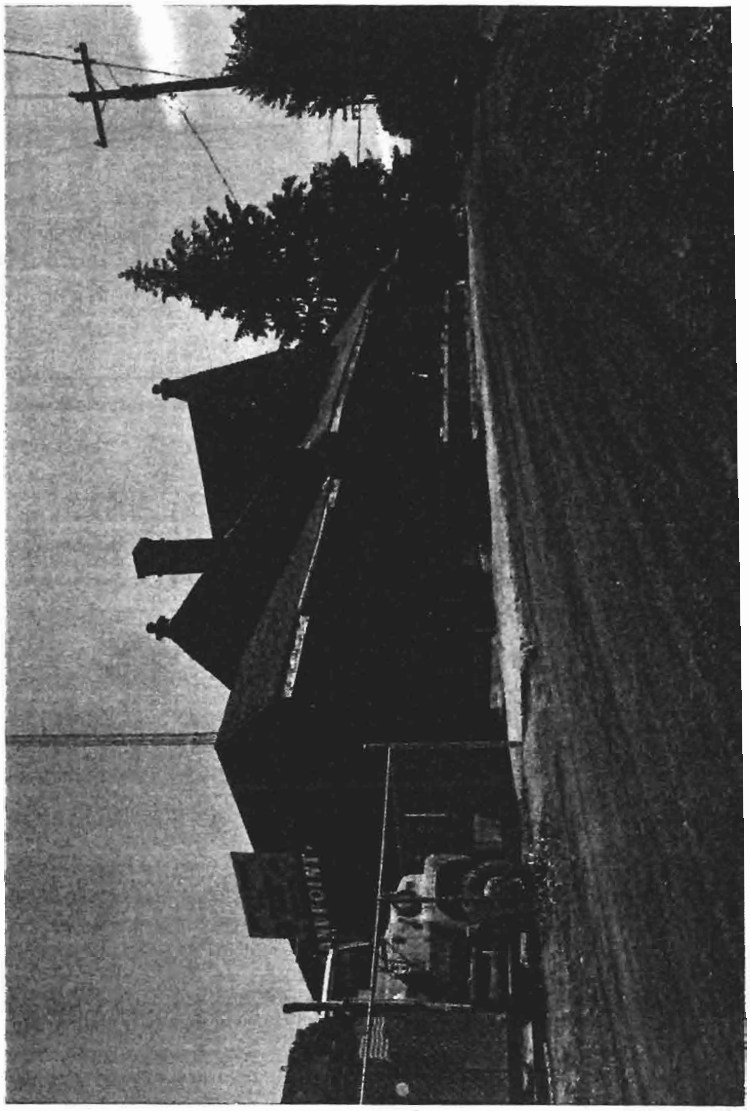
R2/F18
Sandpoint Depot
West elev.

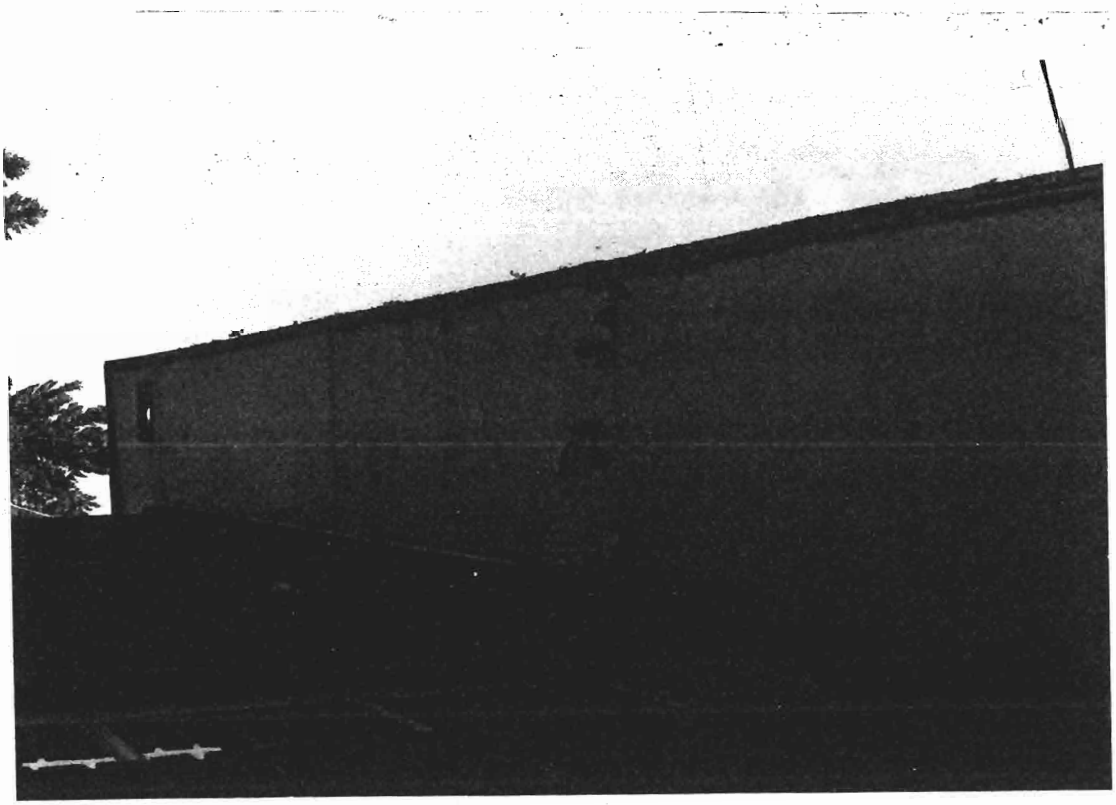
R2/F19
Sandpoint Depot
West elev.

R2/F20
Sandpoint Depot
West elev.





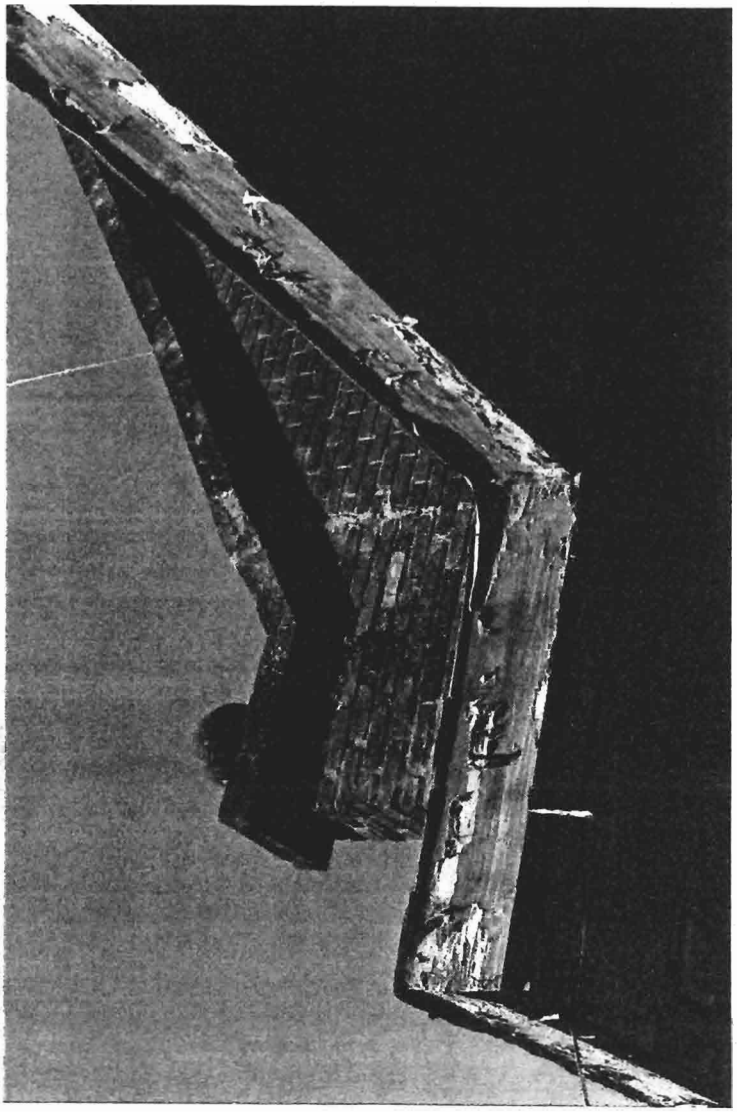


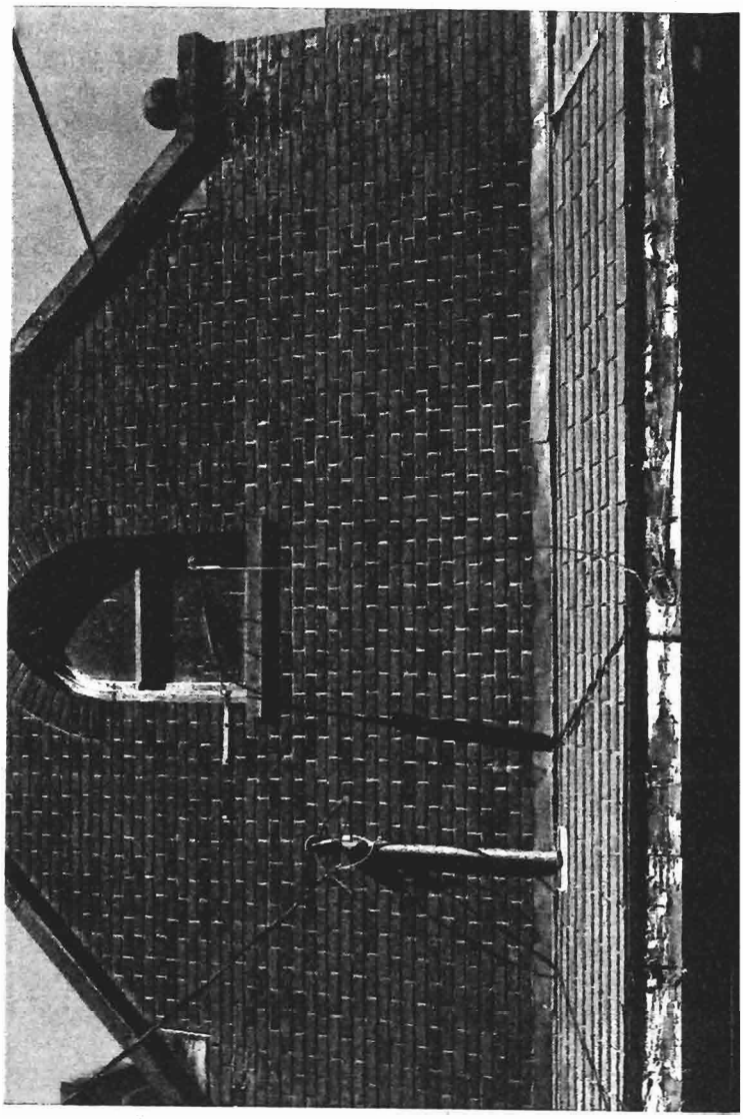


R2/F21
Sandpoint Depot
West elev.

R2/F22
Sandpoint Depot
N & W. elev.

R2/F23
Sandpoint Depot
Facia & soffit

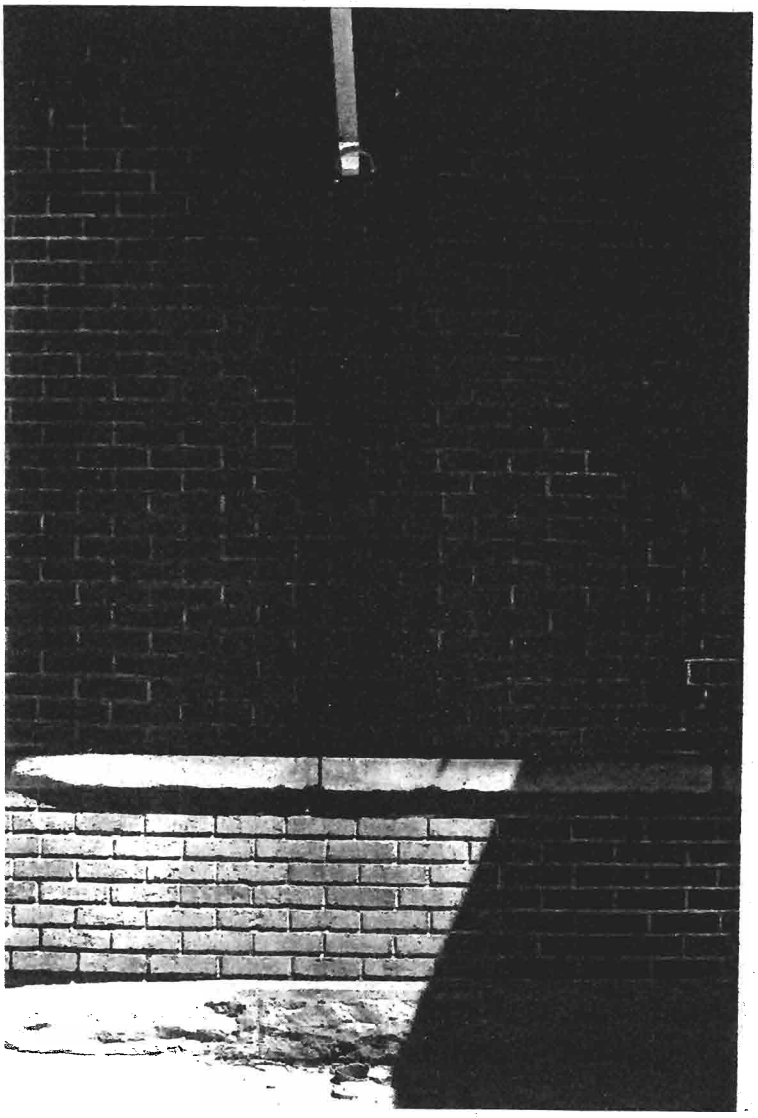


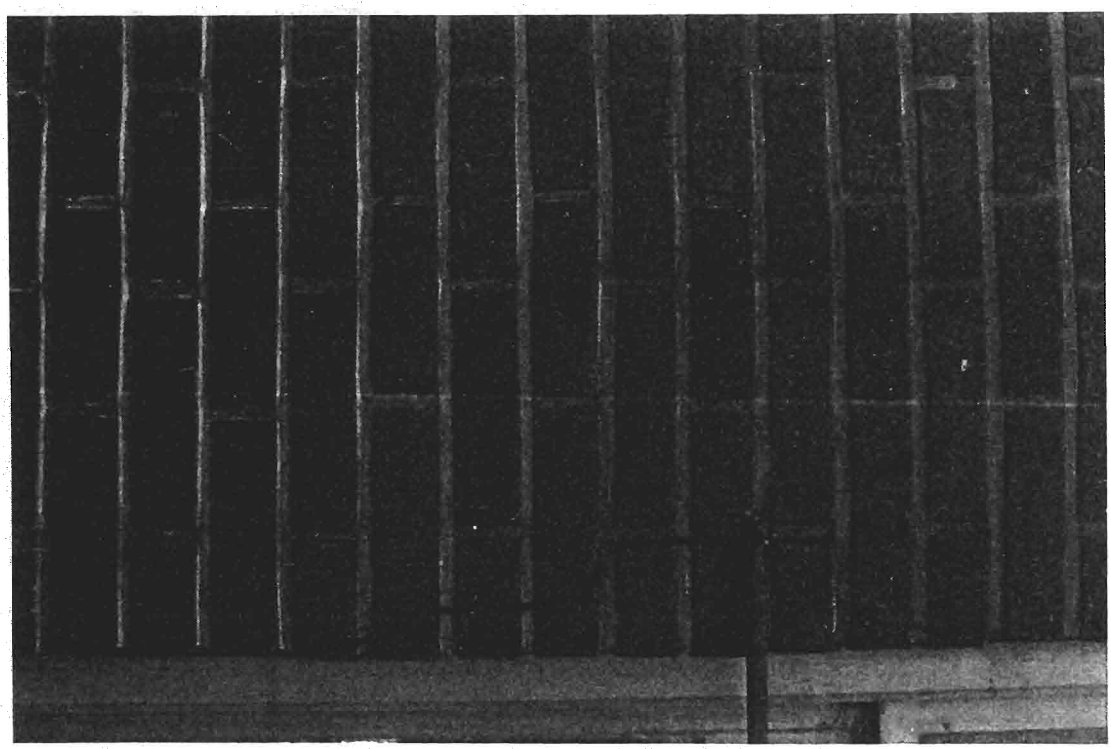


R2/F24
Sandpoint Depot
Facia 7 S. Parapet

R2/F25
Sandpoint Depot
W. Parapet

R2/F26
Sandpoint Depot
West elev.

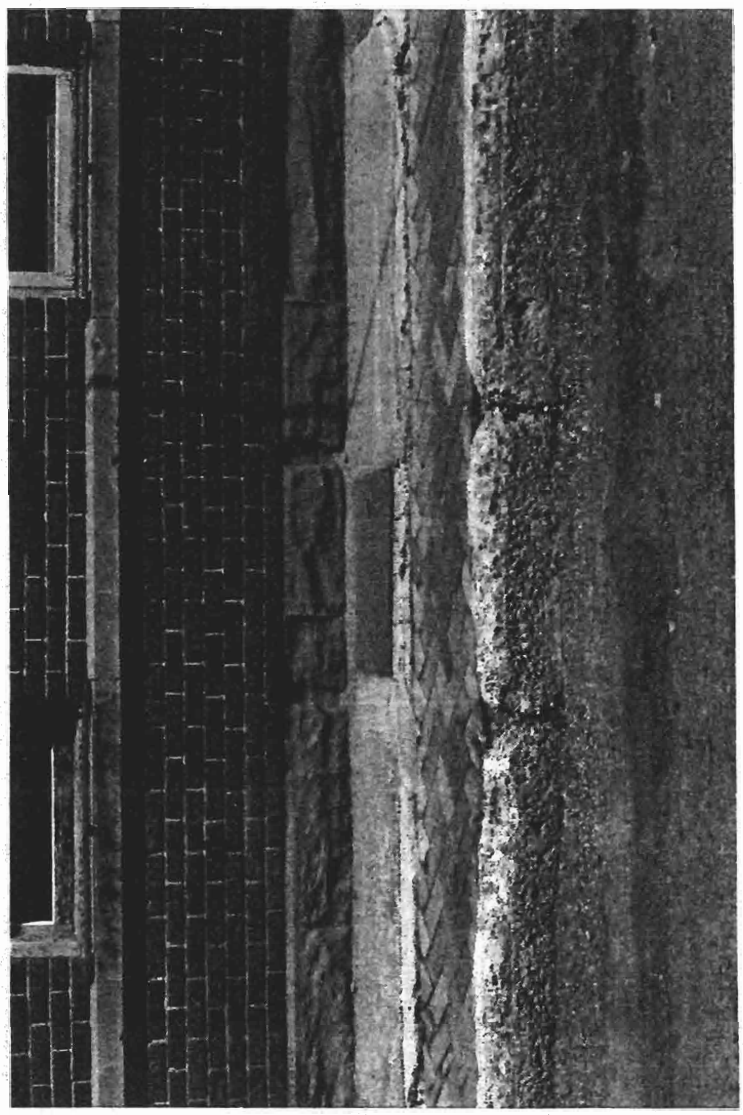


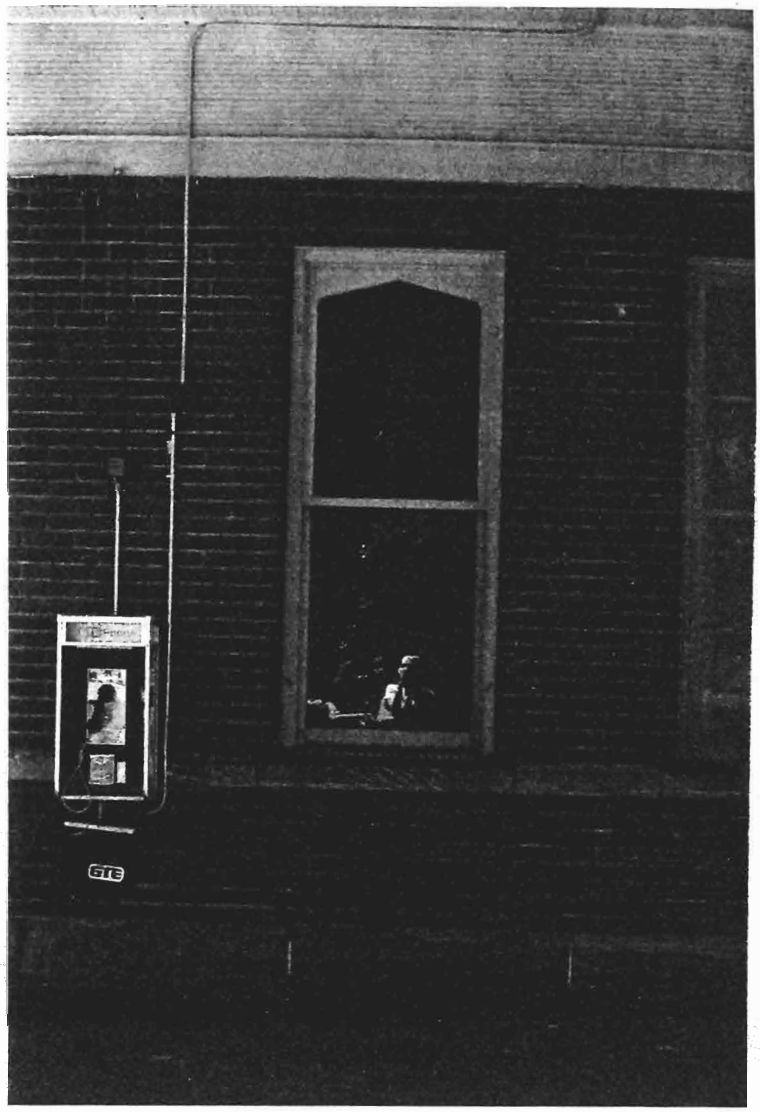


R2/F27
Sandpoint Depot
West elev.

R2/F28
Sandpoint Depot
West elev.

R2/F29
Sandpoint Depot
North elev.

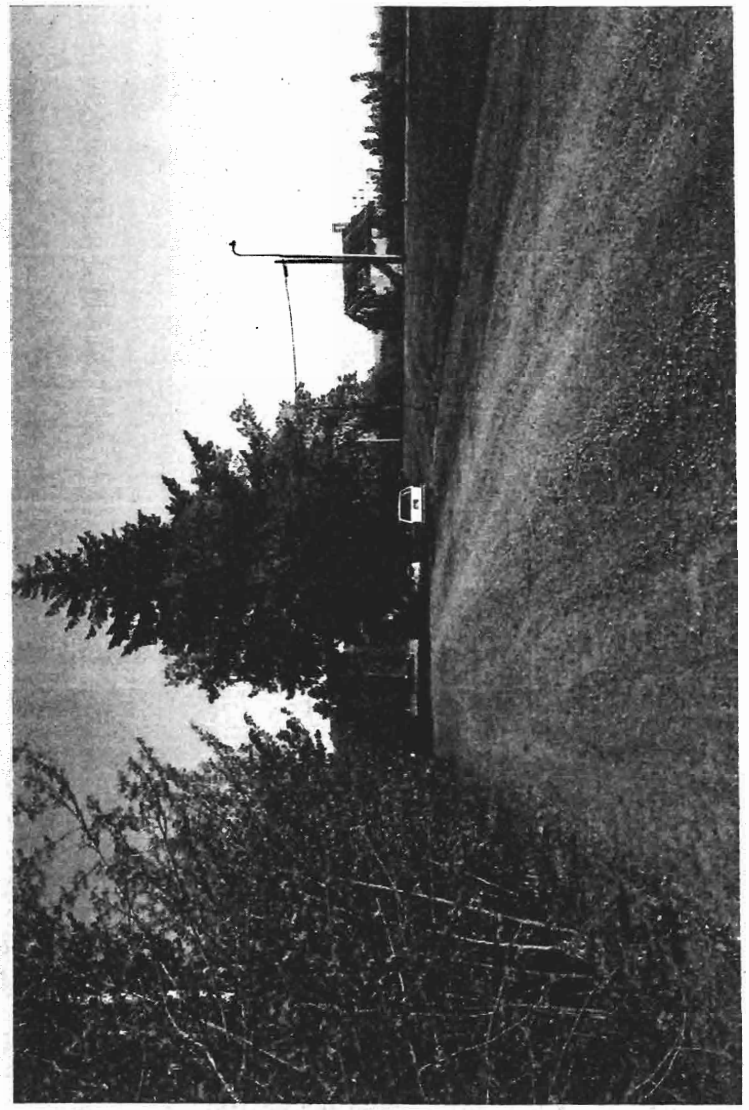


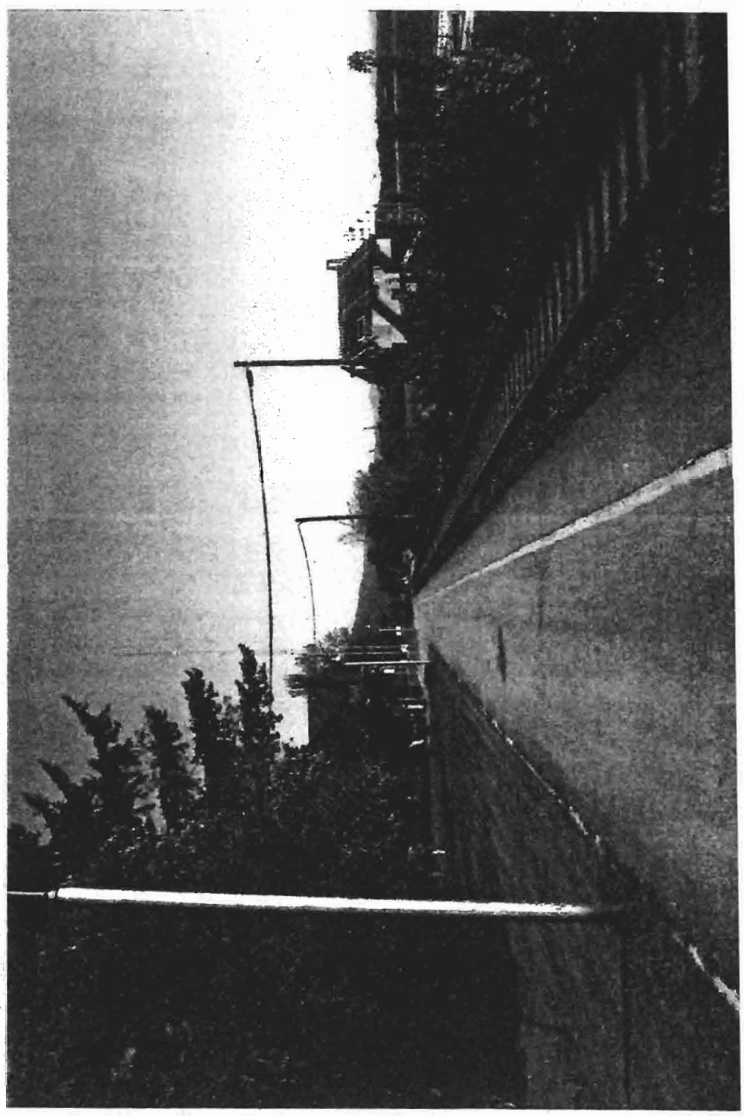


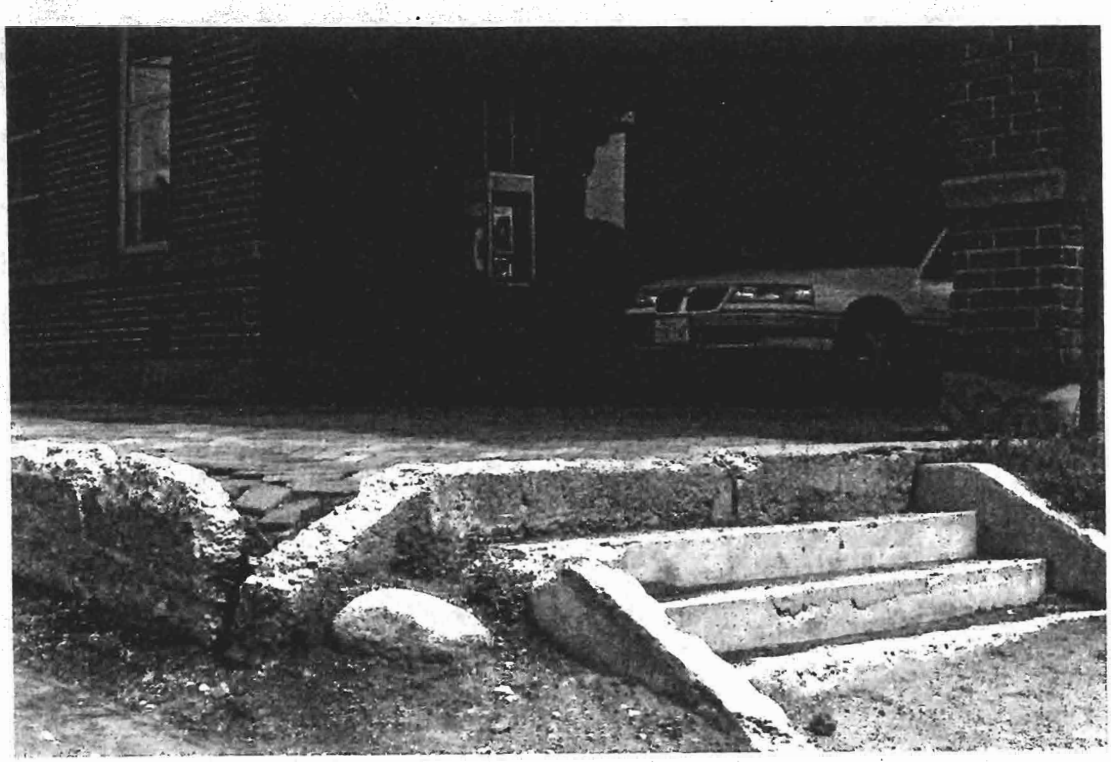
R2/F30
Sandpoint Depot
West elev.

R2/F31
Sandpoint Depot
South elev.

R3/F5
Sandpoint Depot
Site



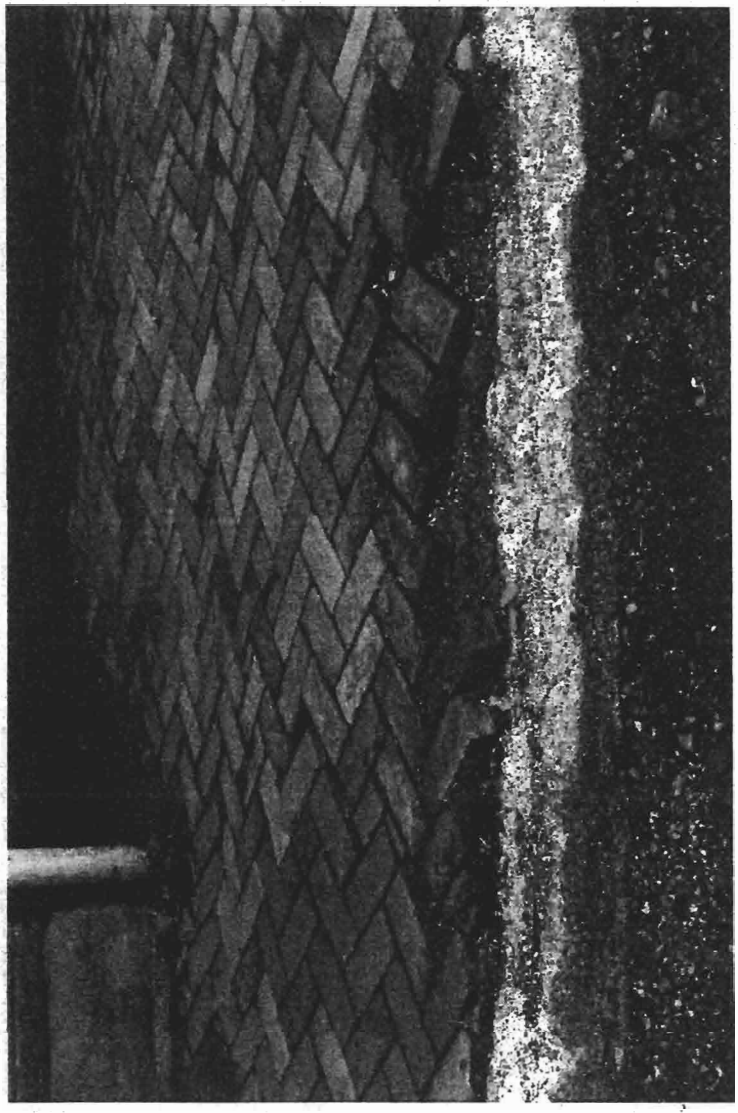


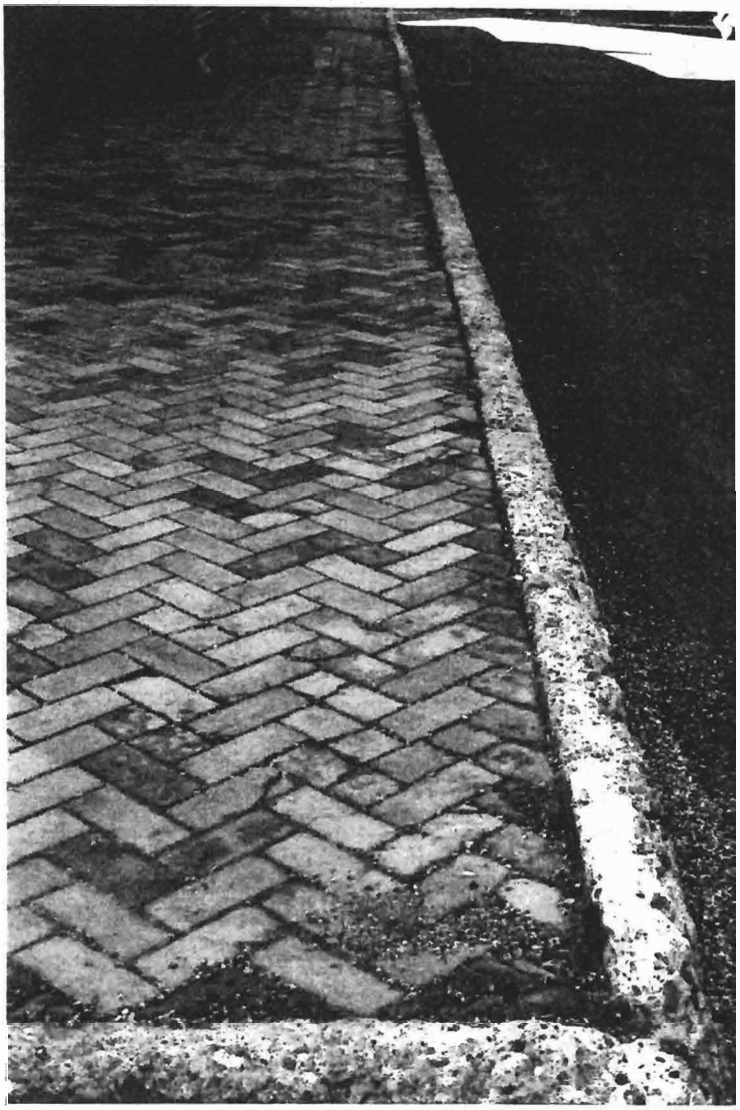


R3/F9
Sandpoint Depot
Site

R3/F10
Sandpoint Depot
Site

R3/F13
Sandpoint Depot
Site





R3/F19
Sandpoint Depot
Site

R3/F23
Sandpoint Depot
Site

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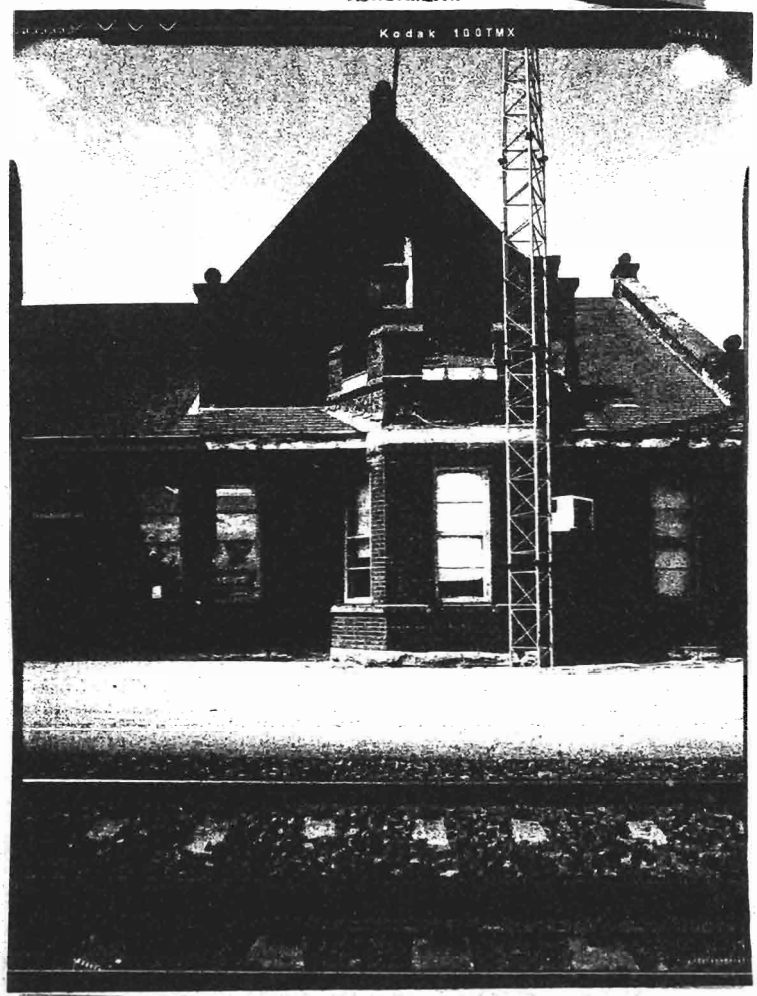
INSERT EMULSION SIDE DOWN

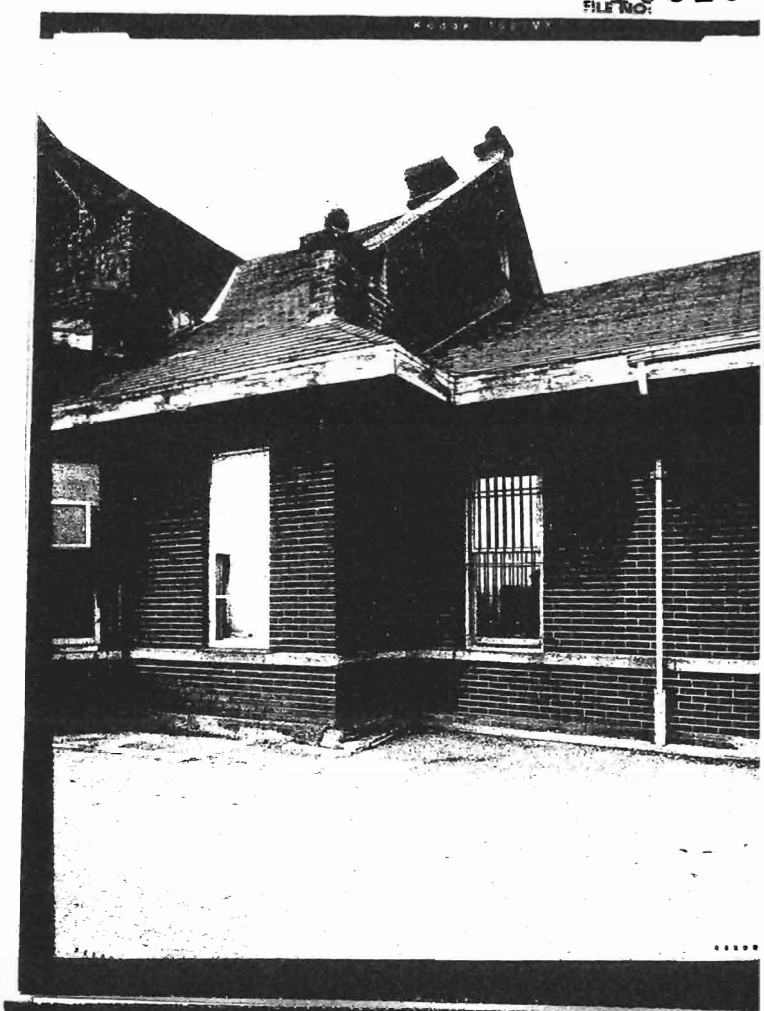
STYLE NO. 45-4B

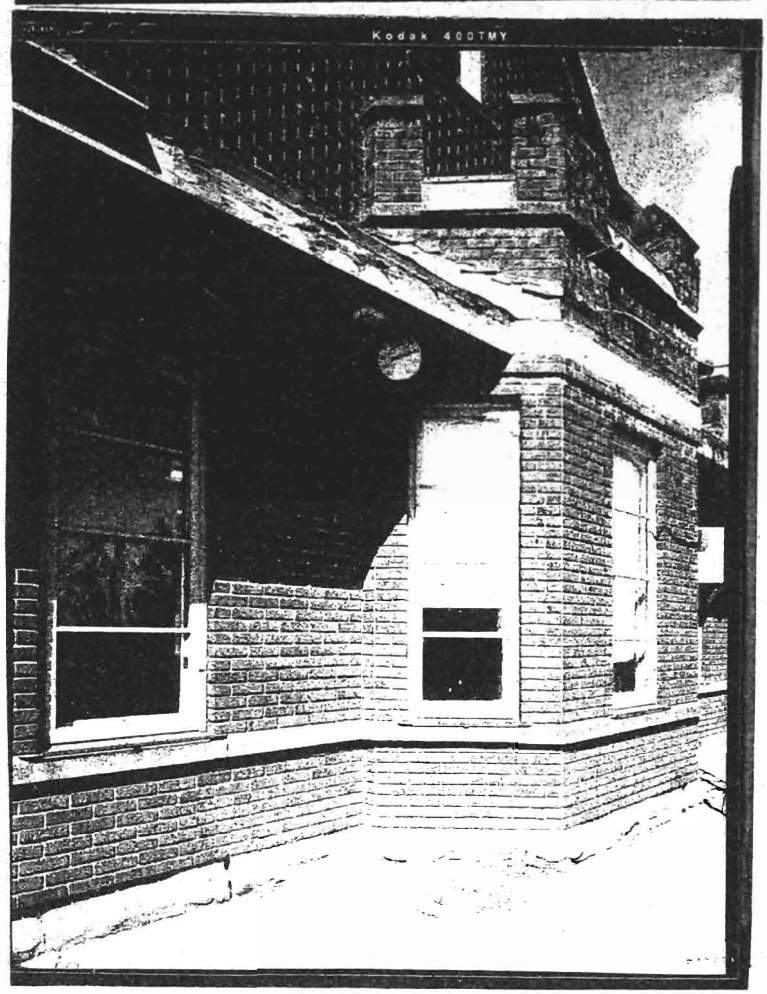
DATE:

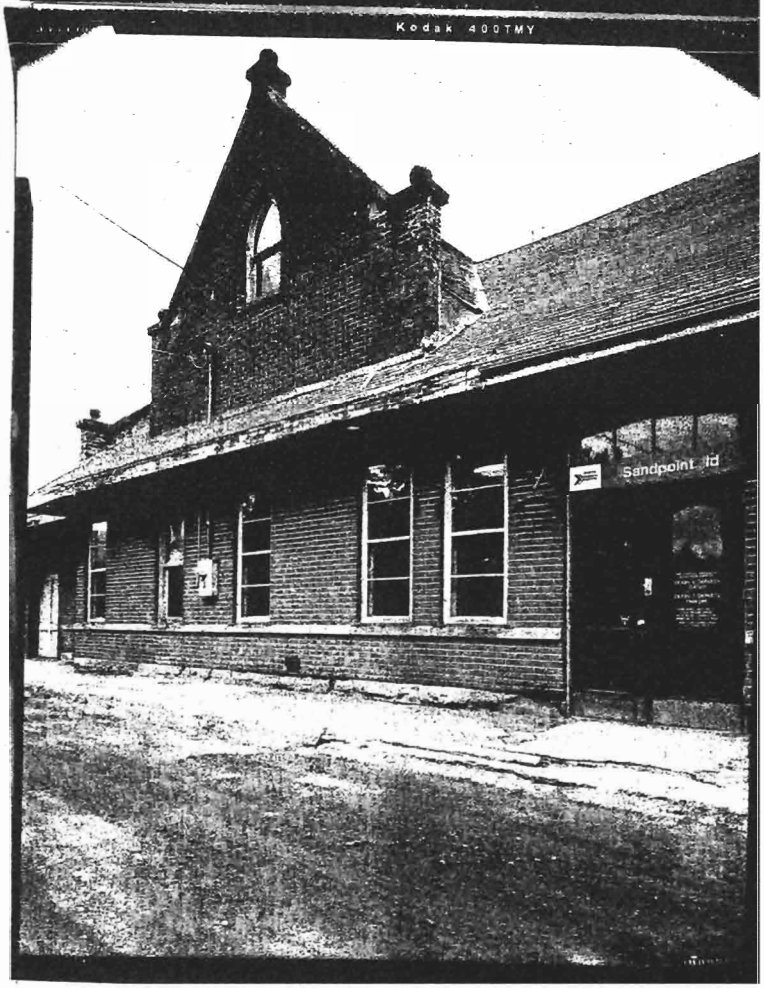
ASSIGNMENT: 2077

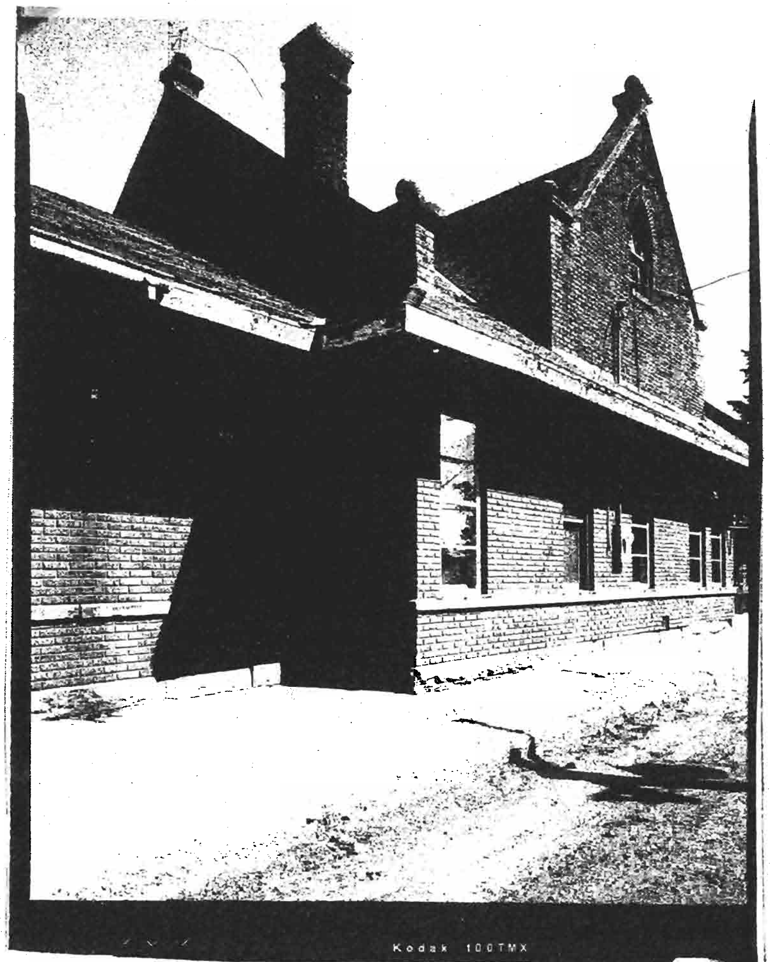
FILE NO: 15028







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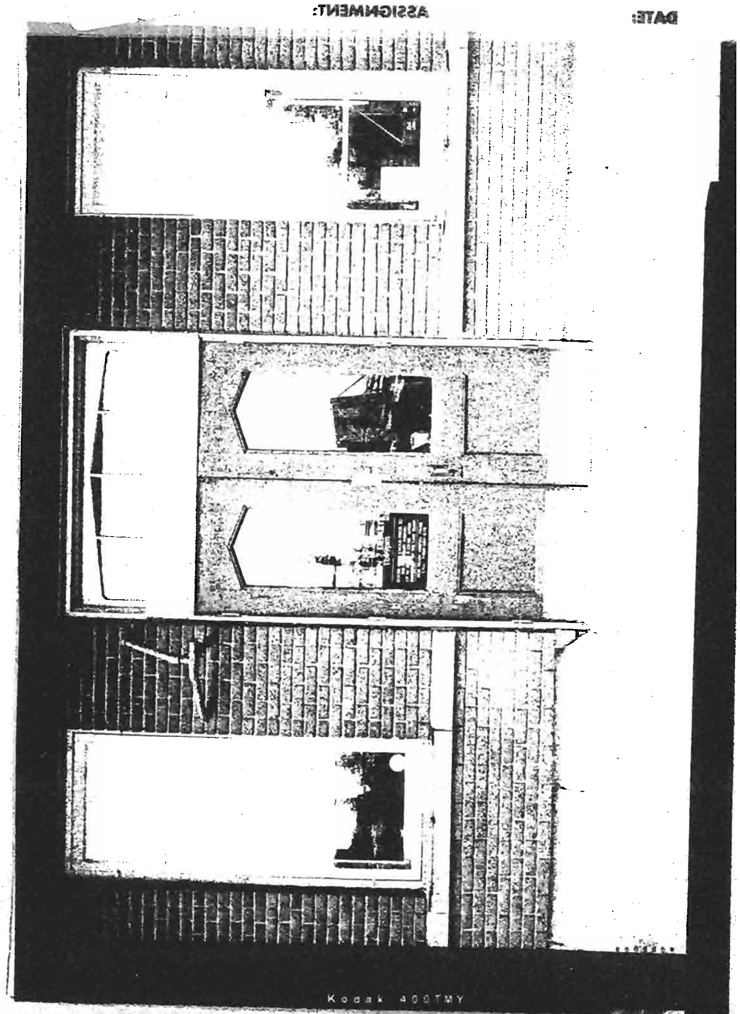
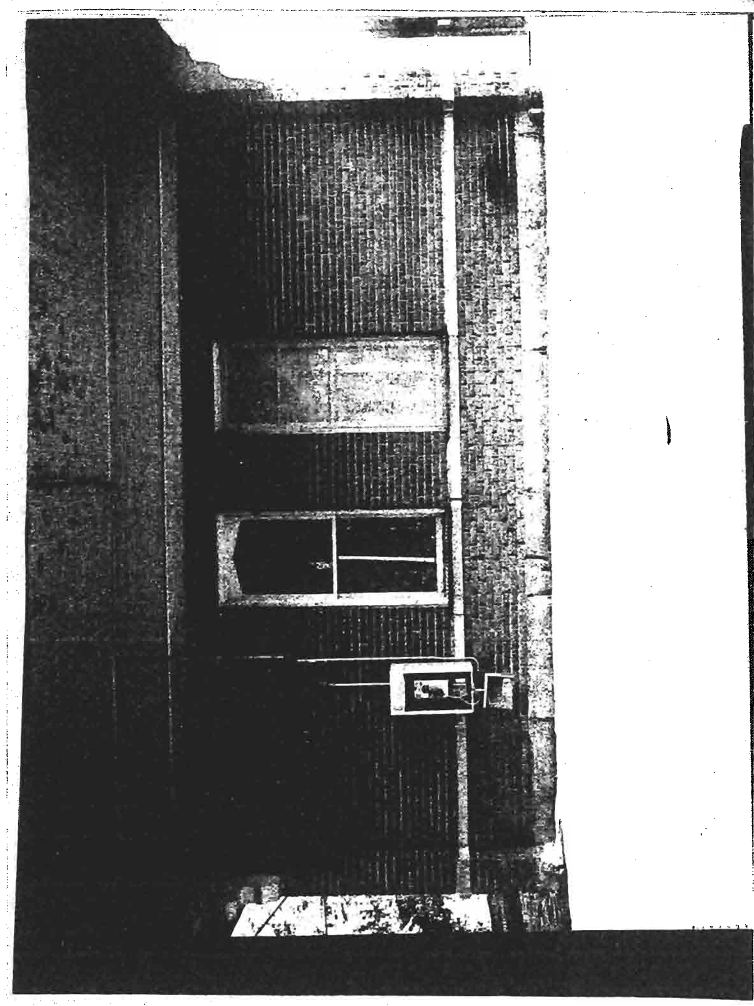
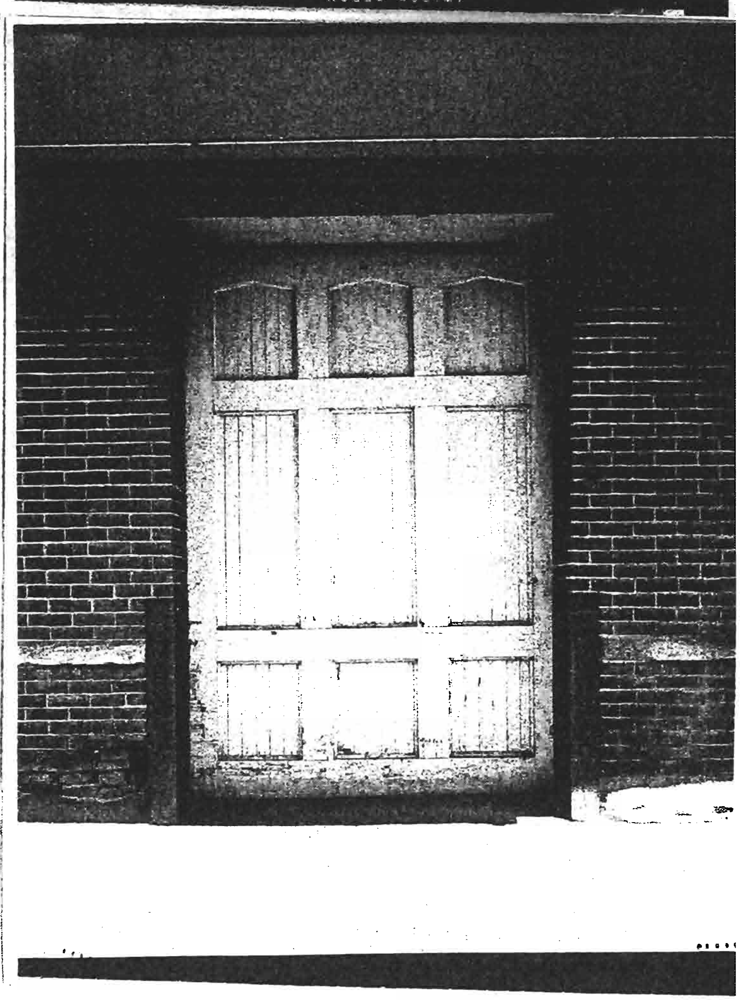

Kodak 400TMY





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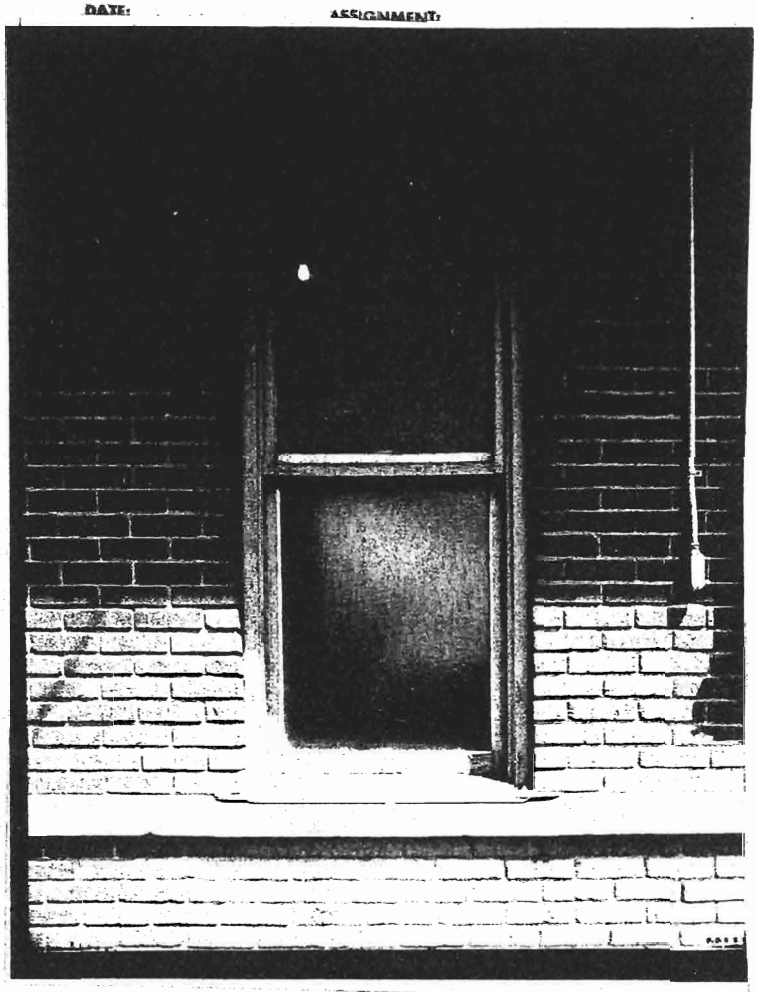
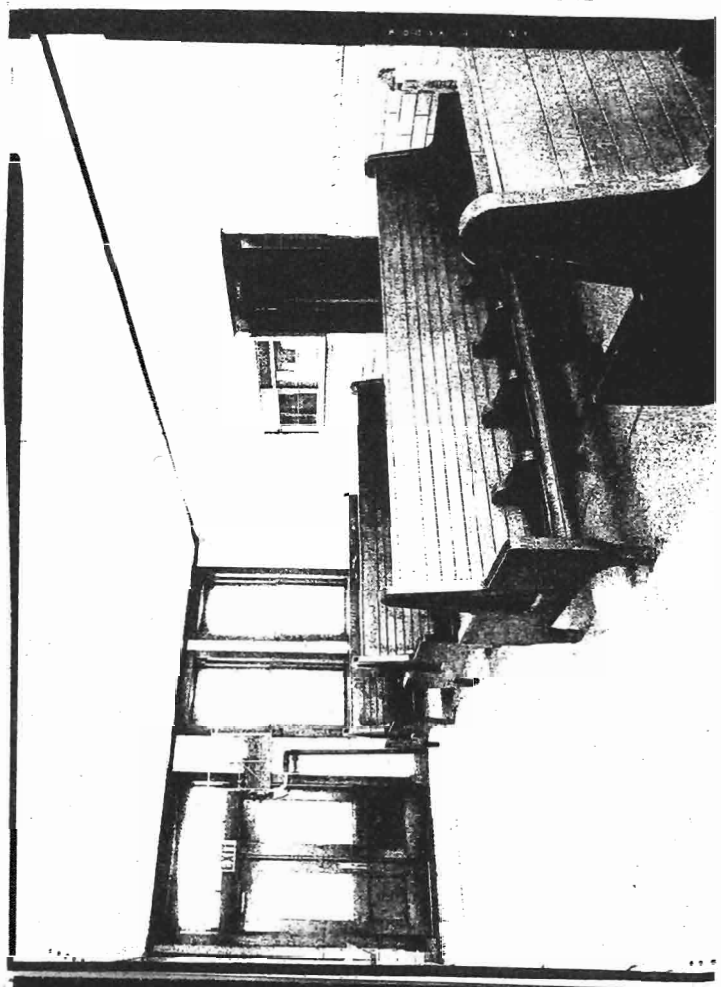
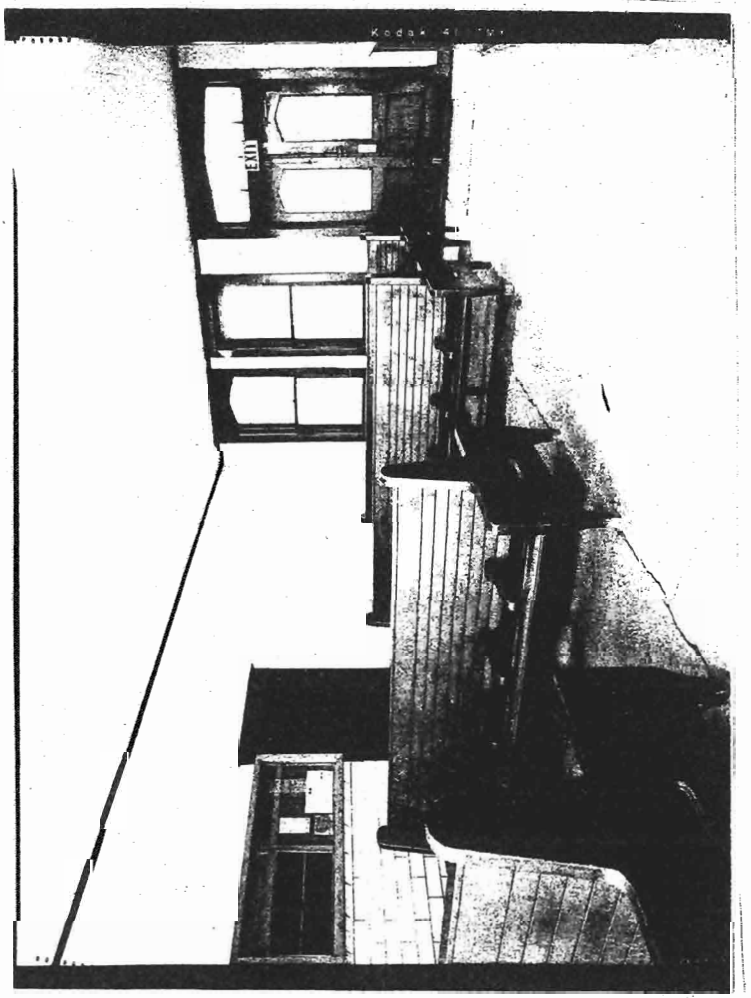
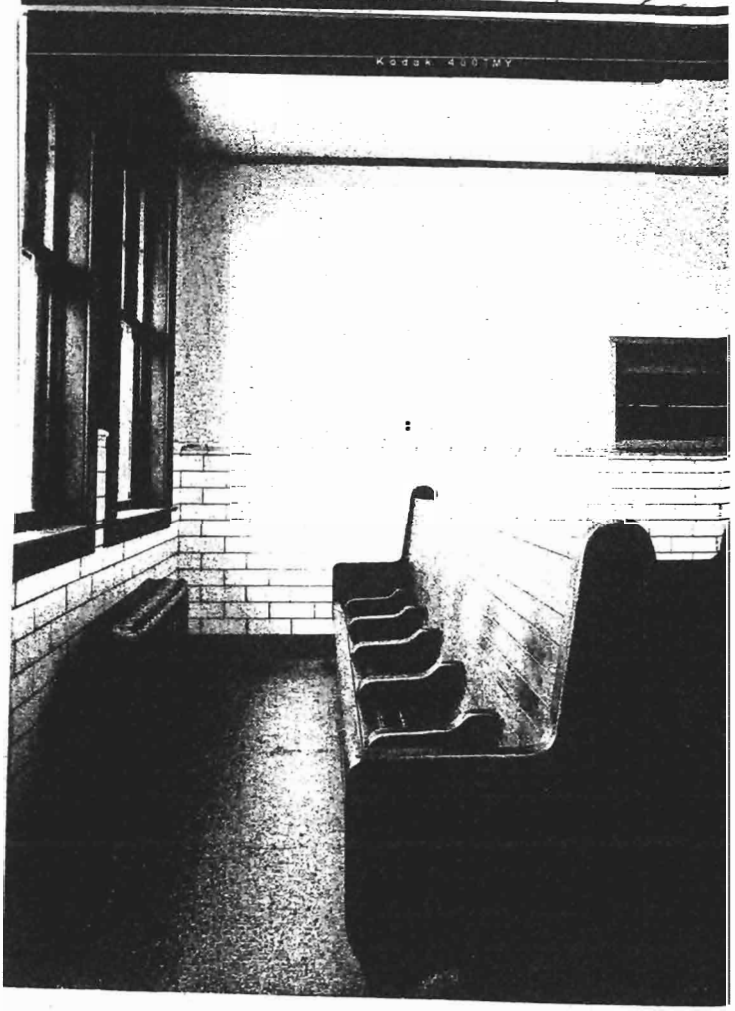
13119

FILE NO:









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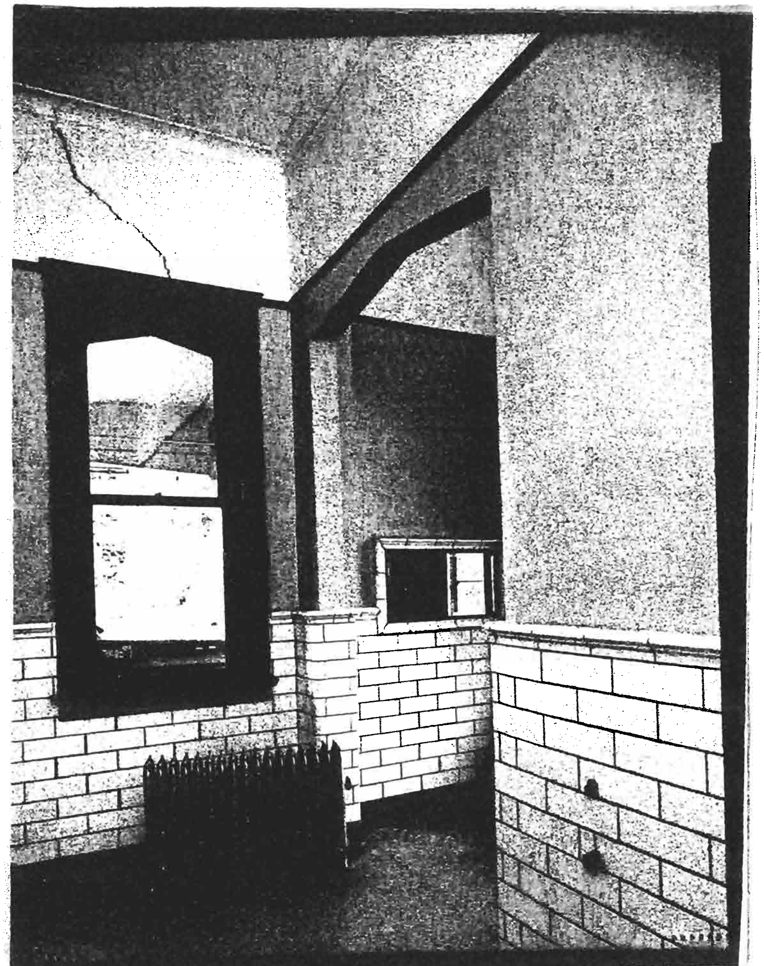

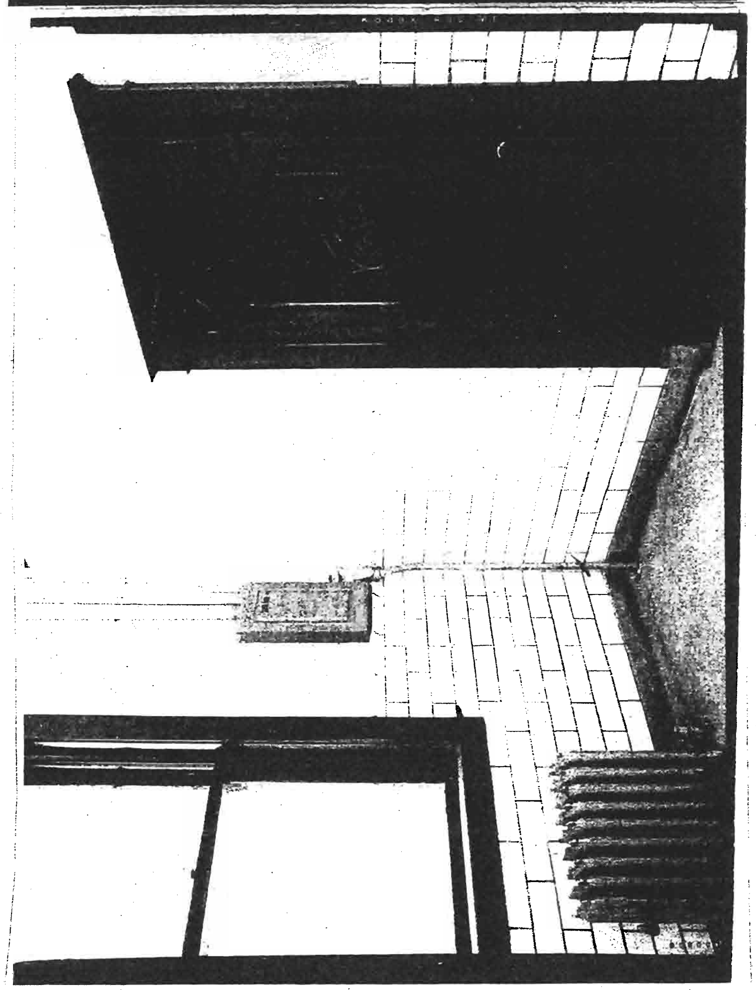

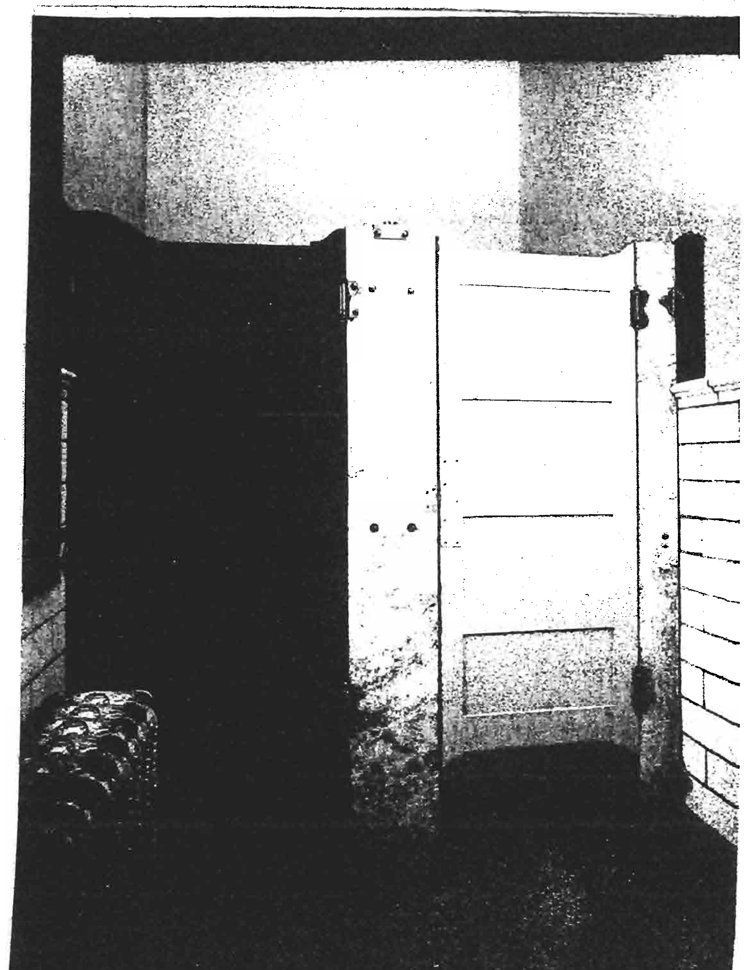


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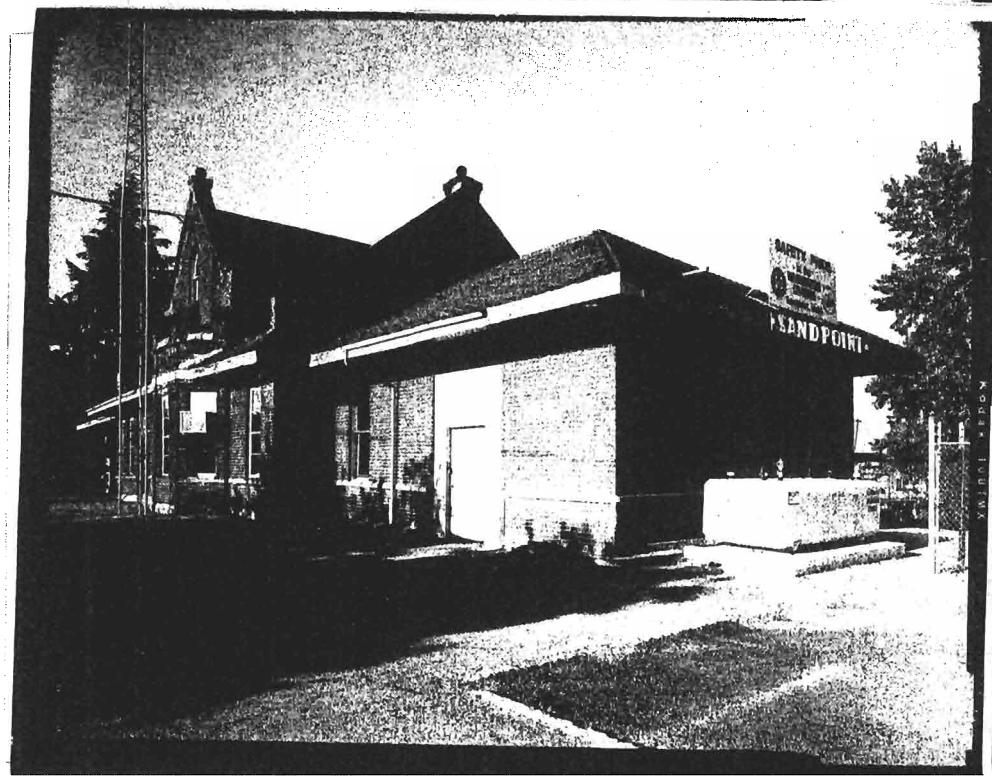
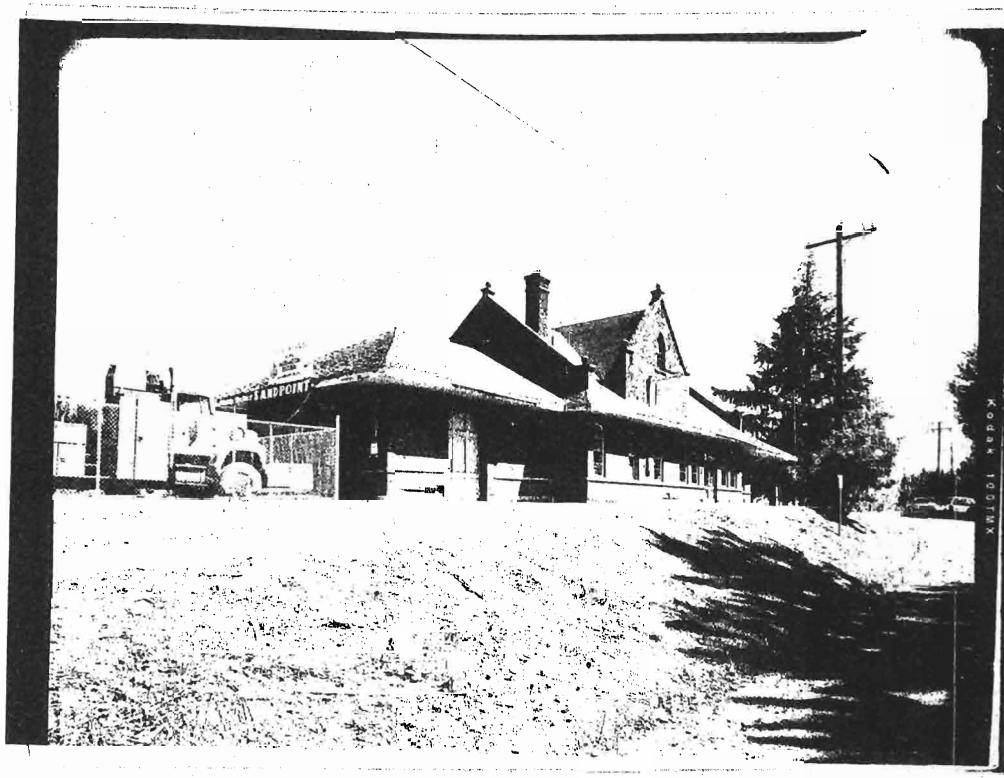
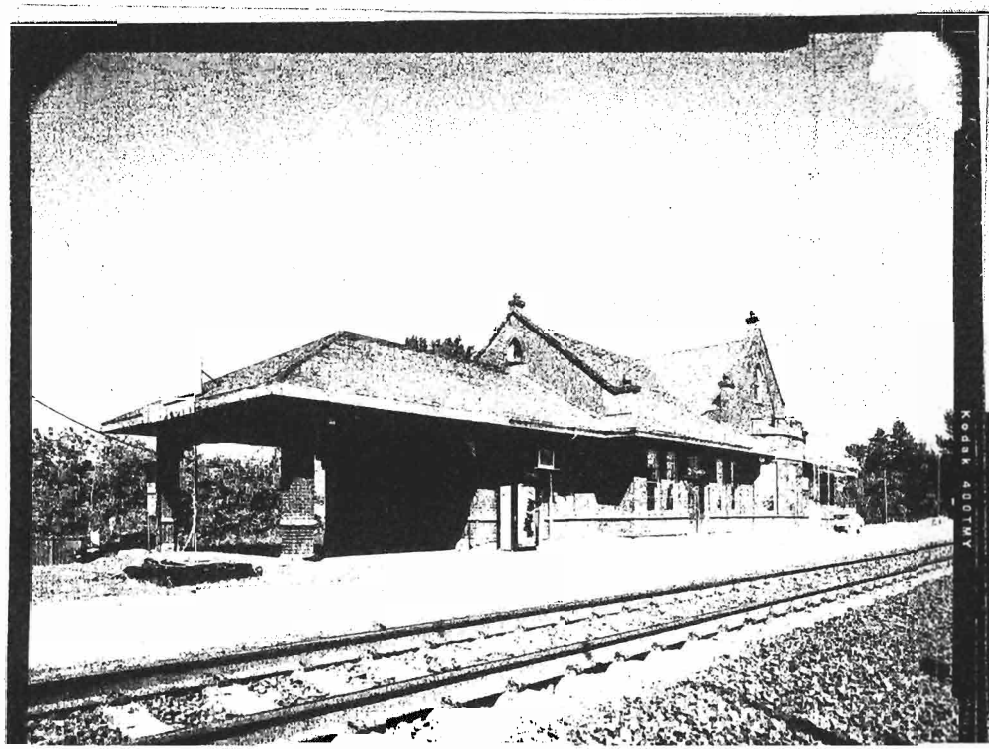

SANDPOINT


SANDPOINT


SANDPOINT
Kodak 100TMX


Kodak 400TMY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Kodak 400TMY

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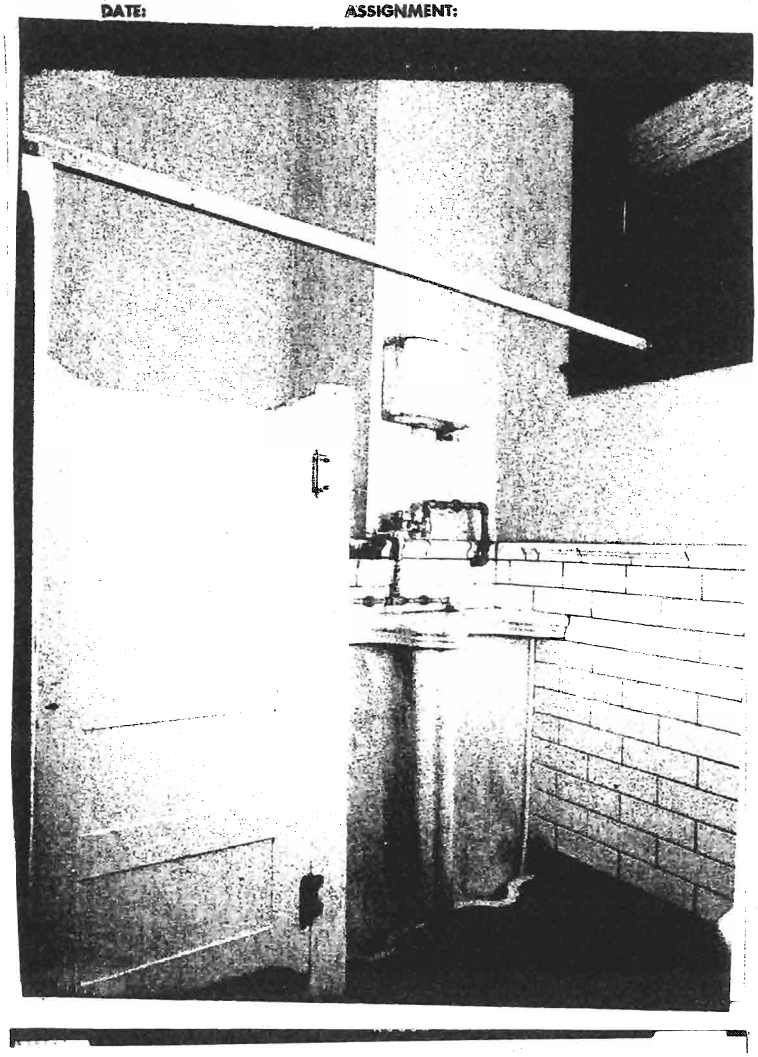
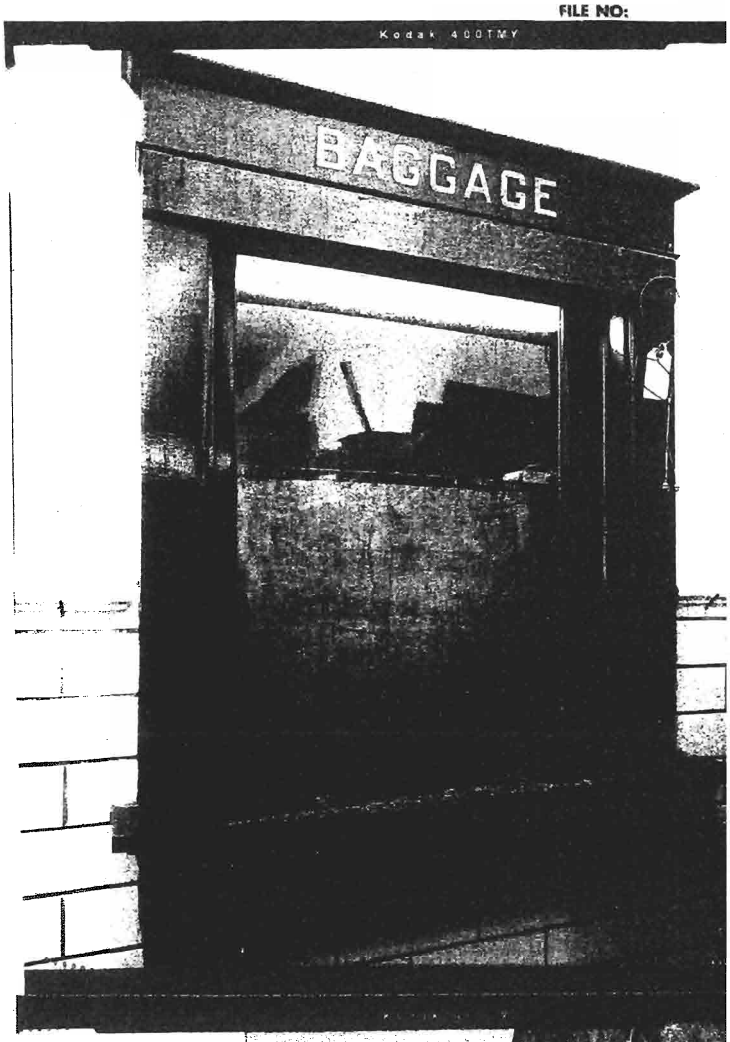
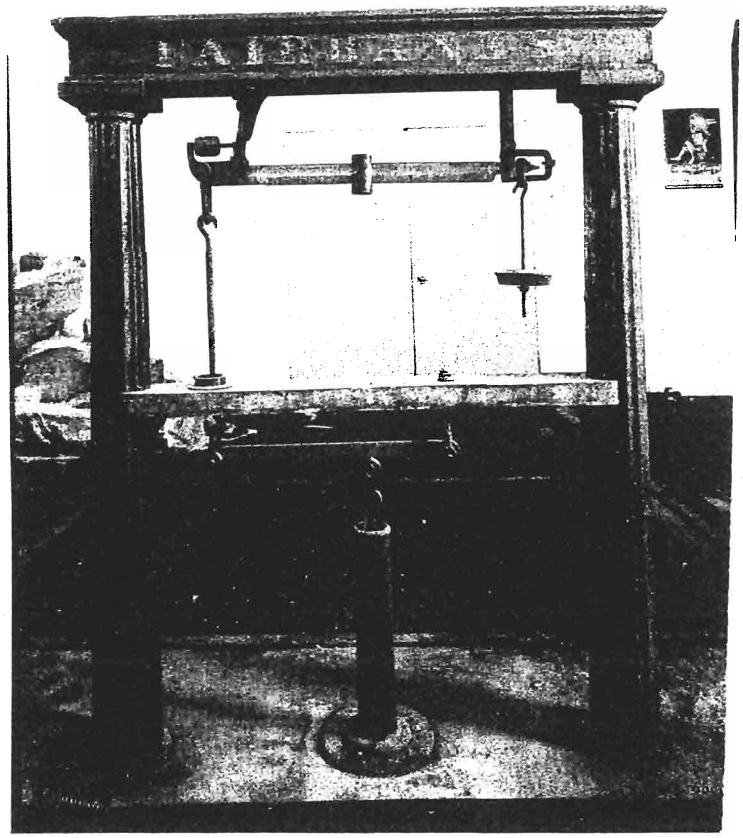
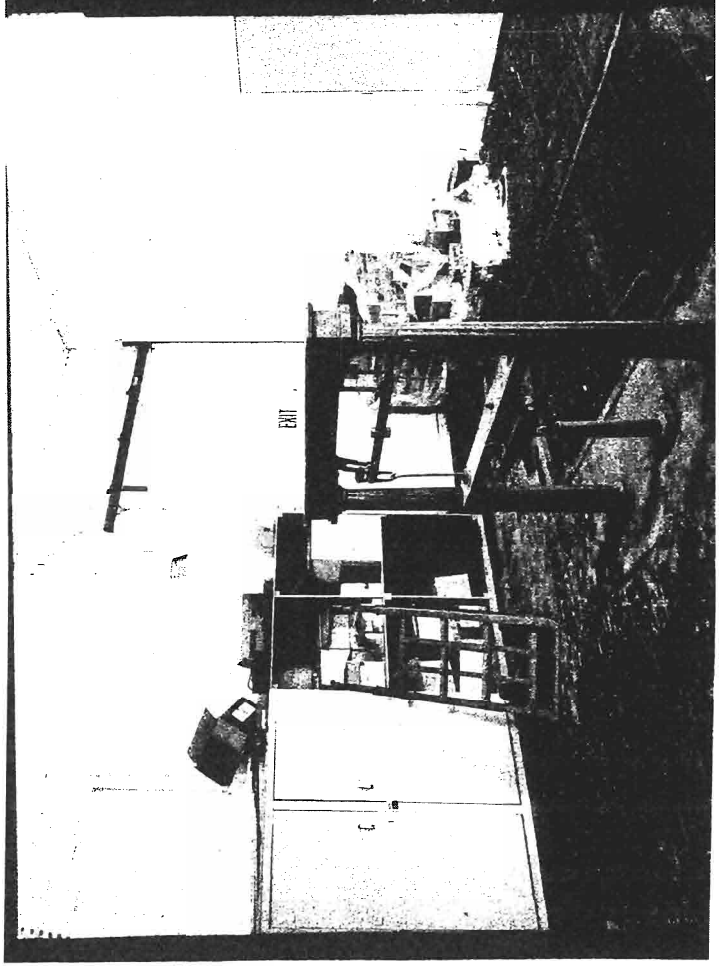




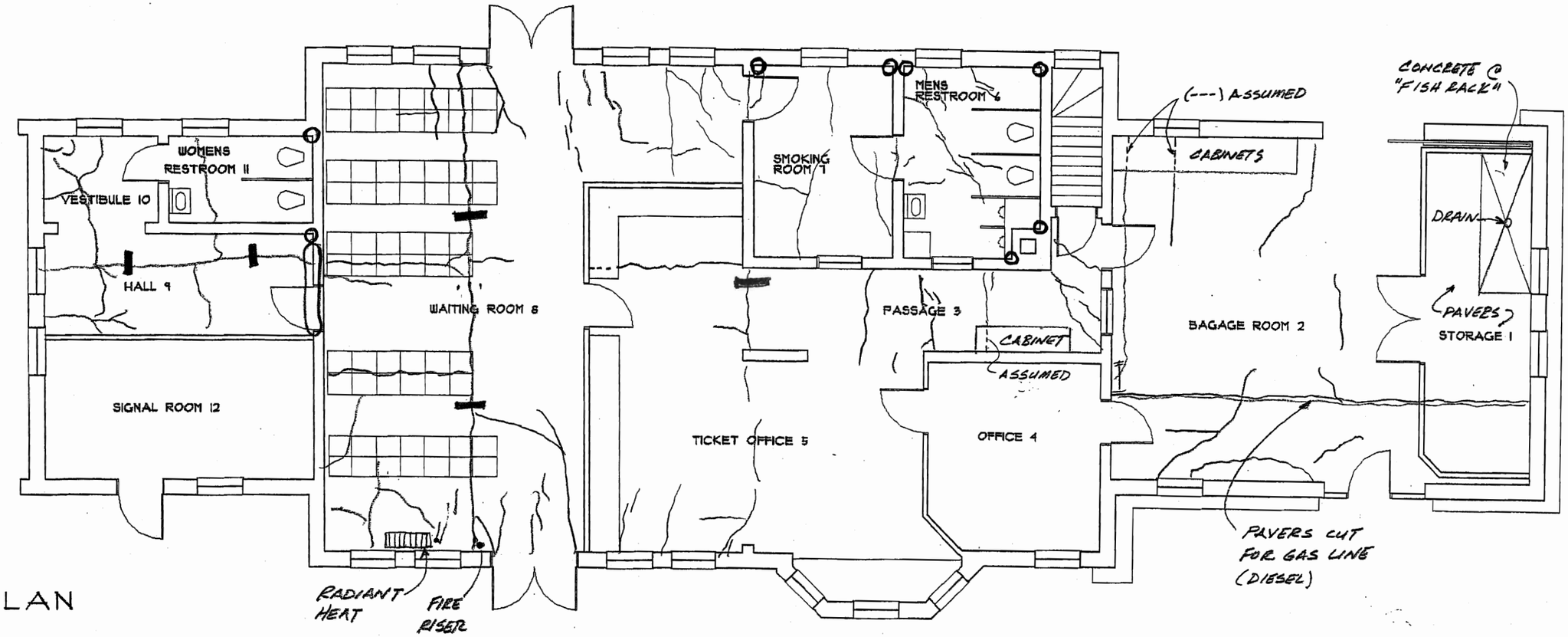




Appendix II

Drawings: showing existing conditions and Monitoring Locations

SANDPOINT
DEPOT



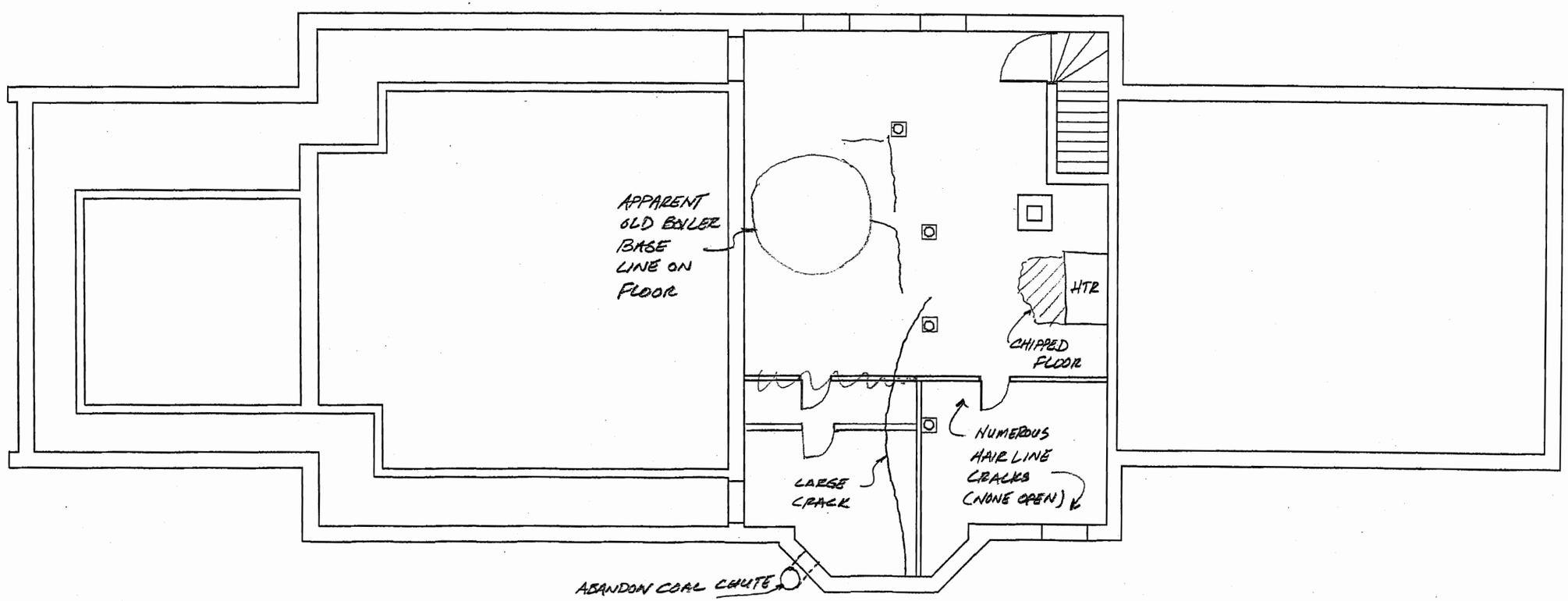
01 FLOOR PLAN

FLOOR CRACK PLAN

MONITORING LOCATIONS

▬ = FLOOR

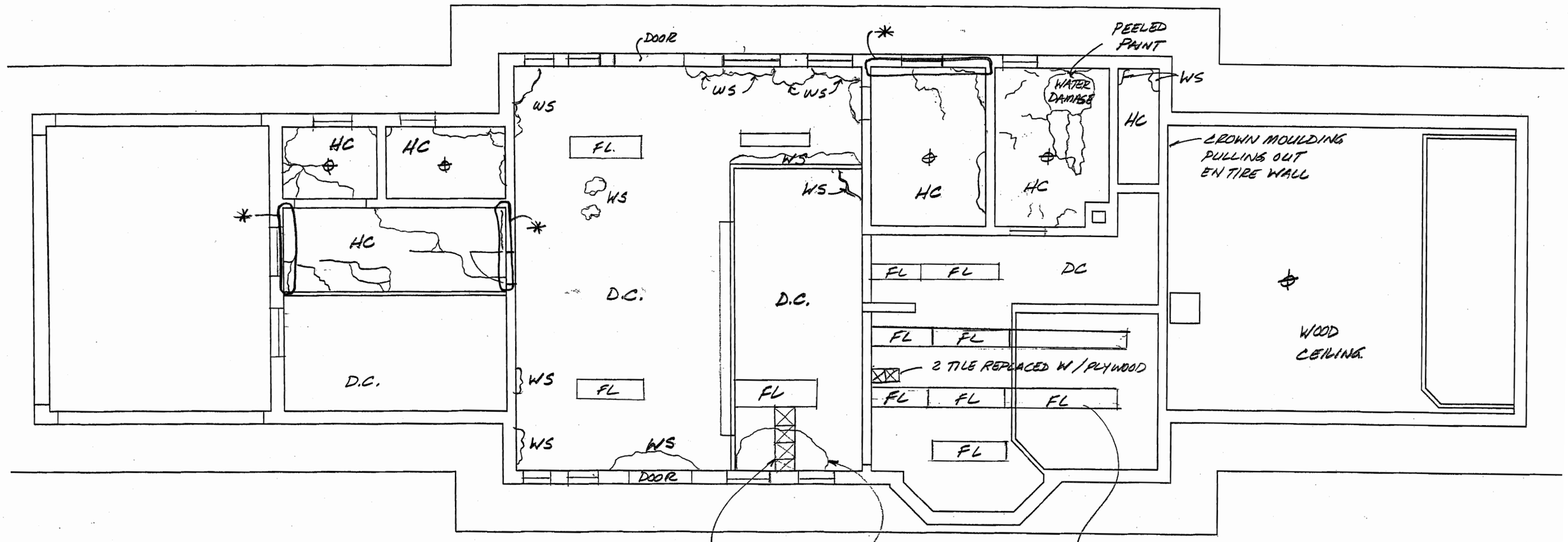
○ = CORNERS: WALL/WALL INTERSECTION



01 BASEMENT PLAN

1/4" = 1'-0"

FLOOR CRACK PLAN

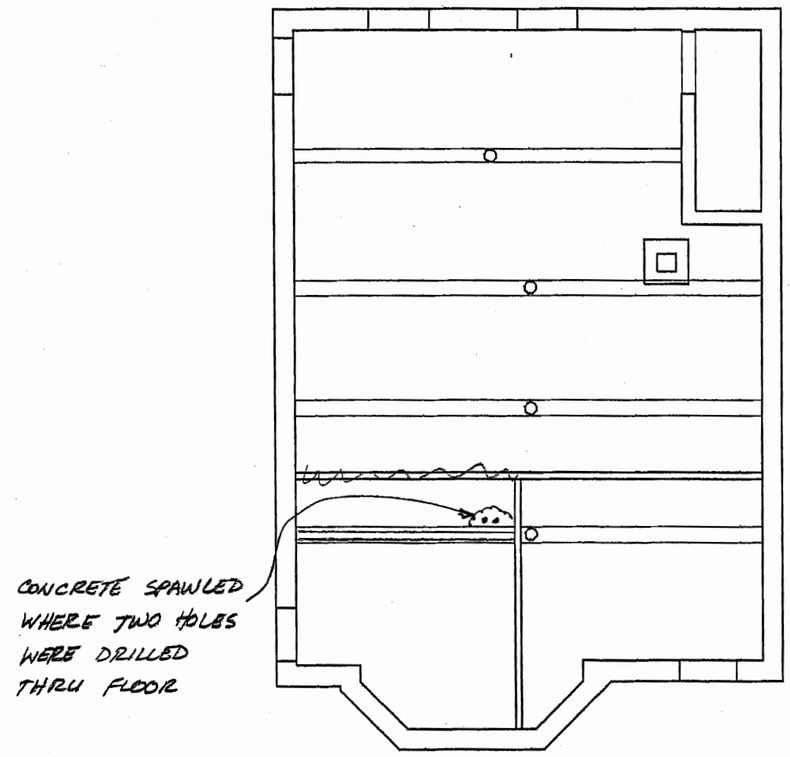


02 REFLECTED CEILING PLAN

CEILING CRACK PLAN

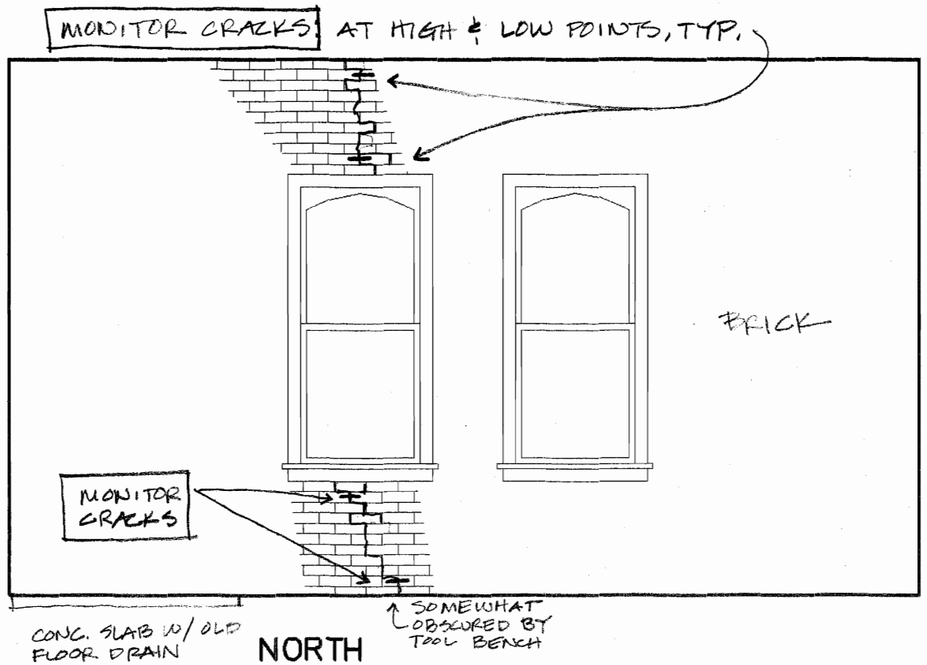
MONITORING LOCATIONS

* — ▭ = CEILING/WALL INTERSECTION

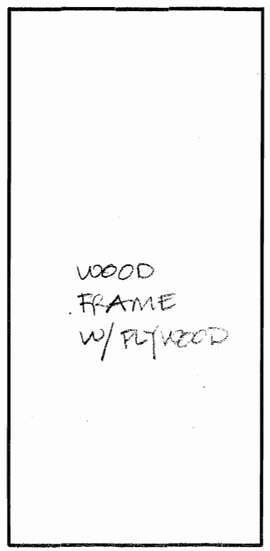


02 BASEMENT REFLECTED CEILING PLAN

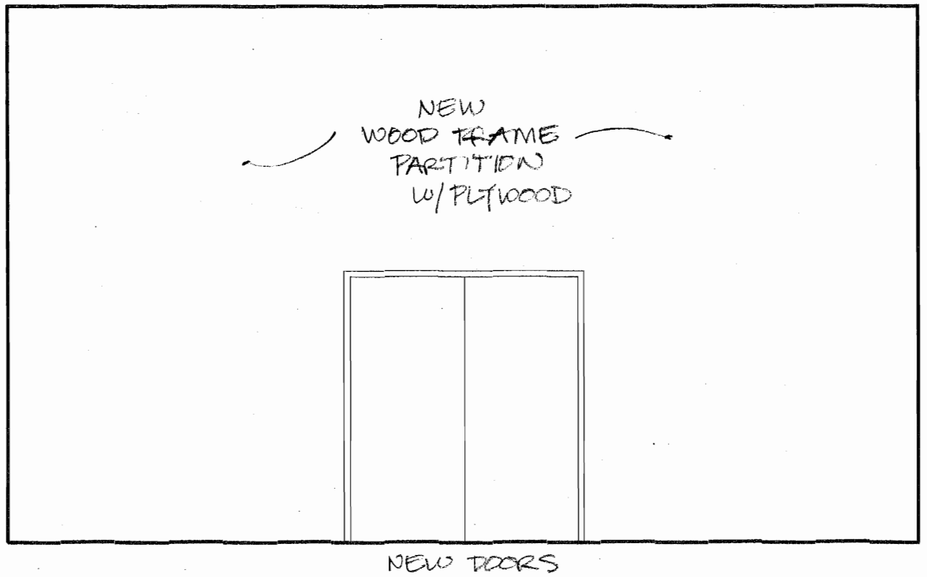
1/4" = 1'-0"



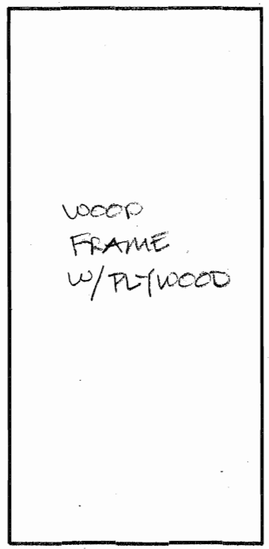
NORTH



EAST



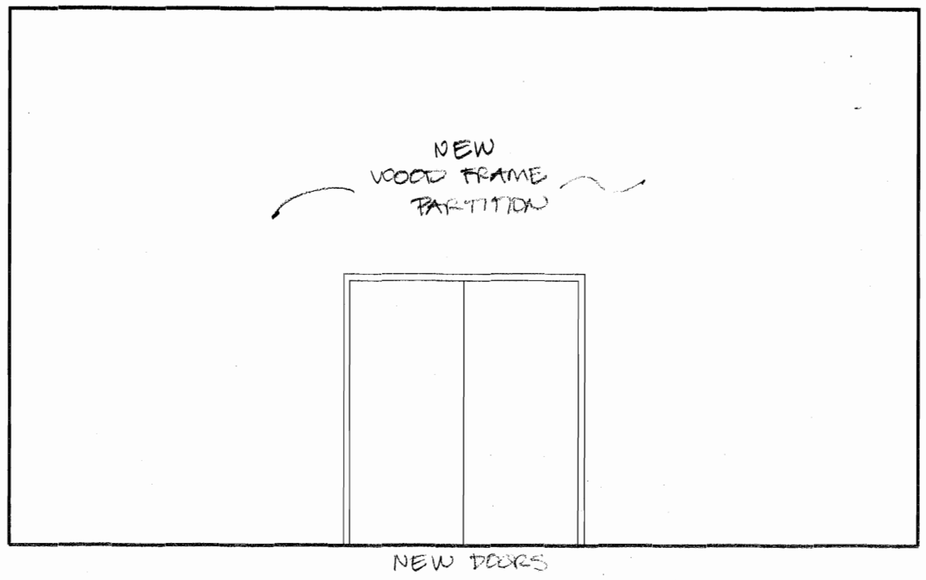
SOUTH



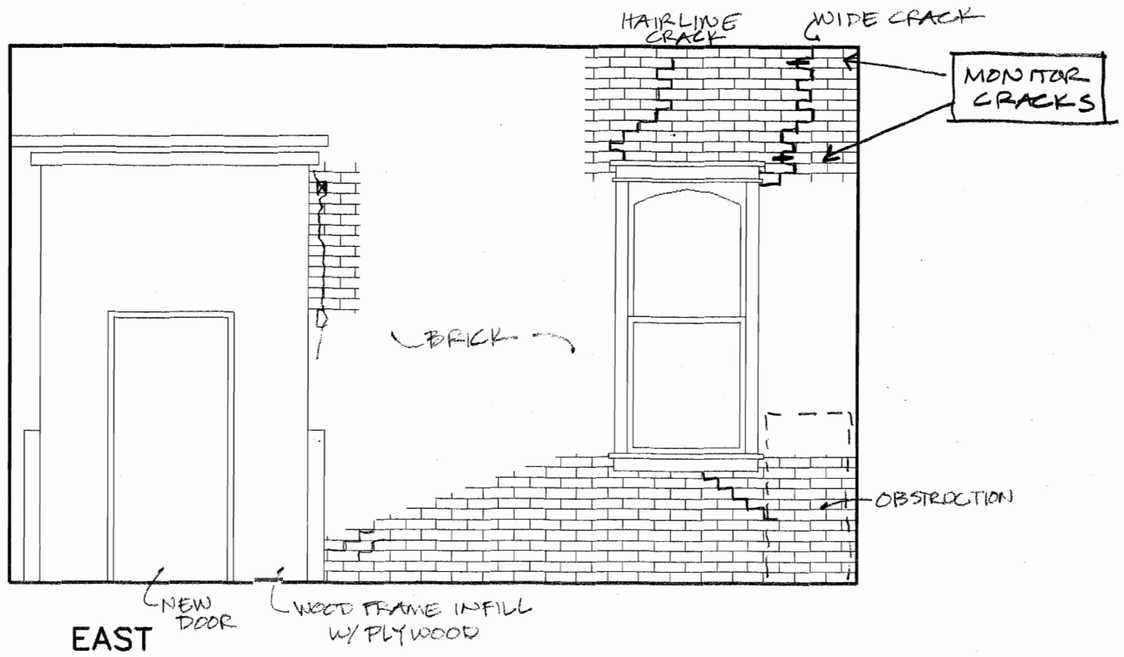
WEST

STORAGE ROOM 1

1/4" = 1'-0"



NORTH



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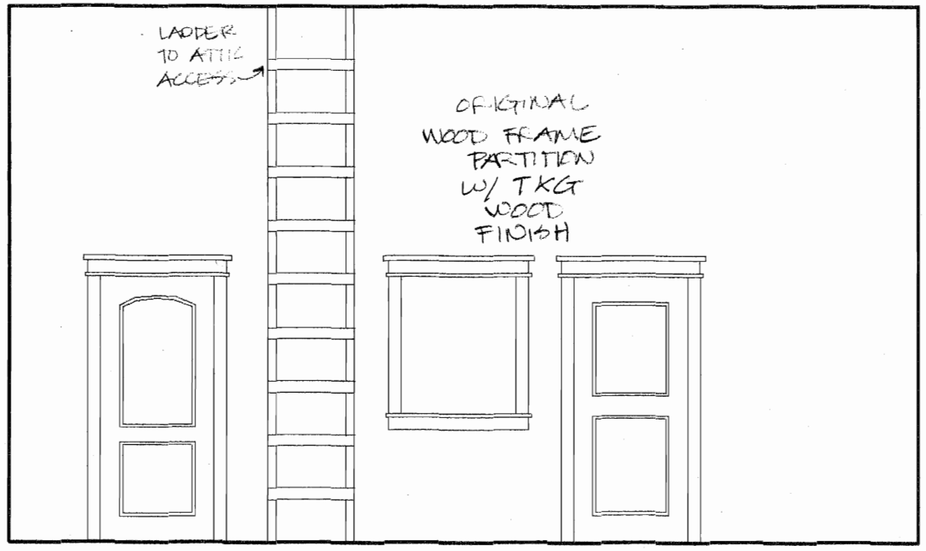
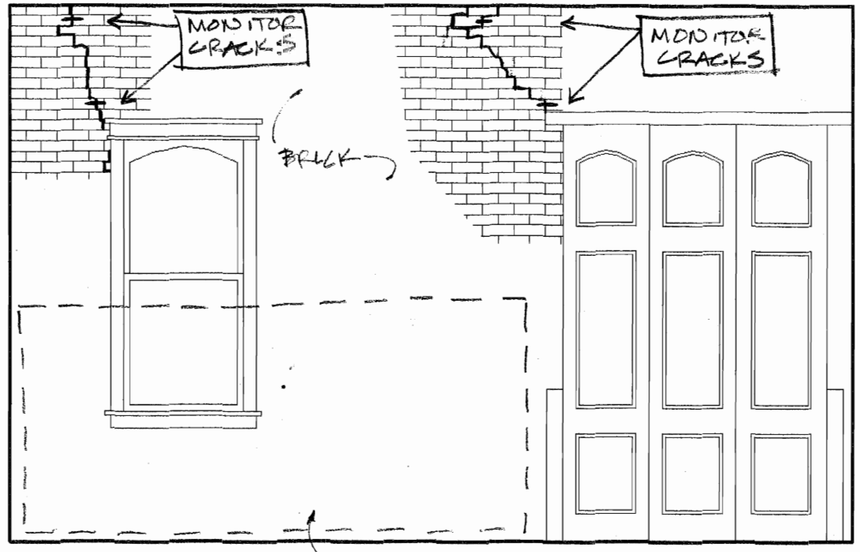


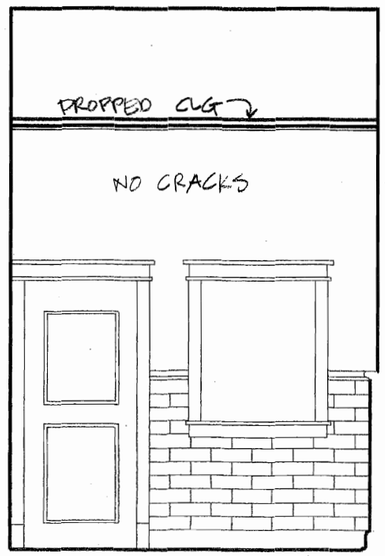
SOUTH



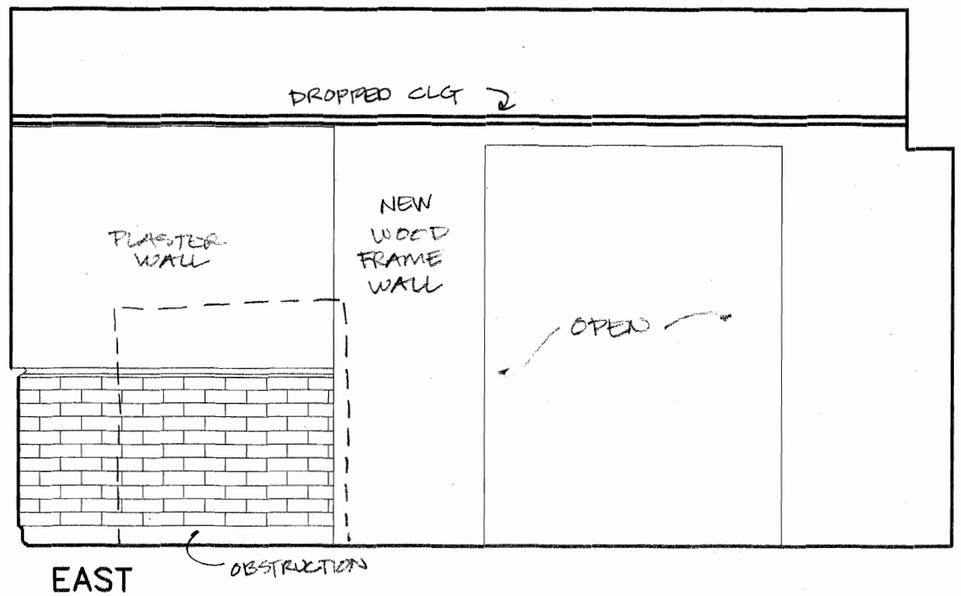
WEST

BAGGAGE ROOM 2

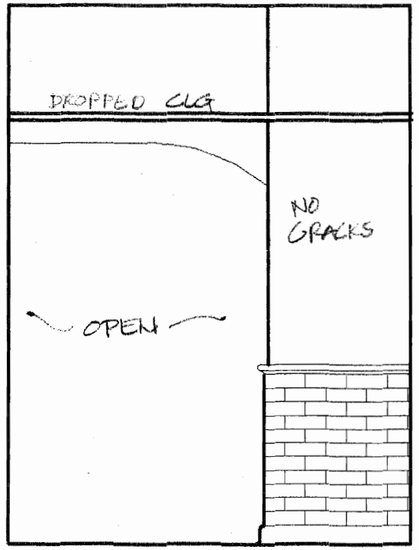
1/4" = 1'-0"



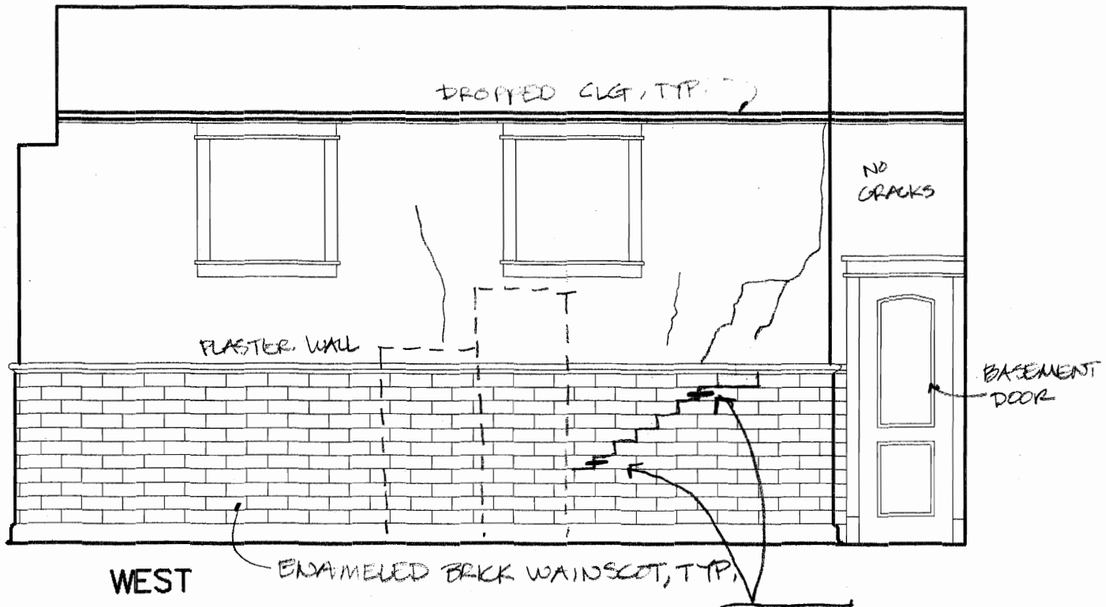
NORTH



EAST



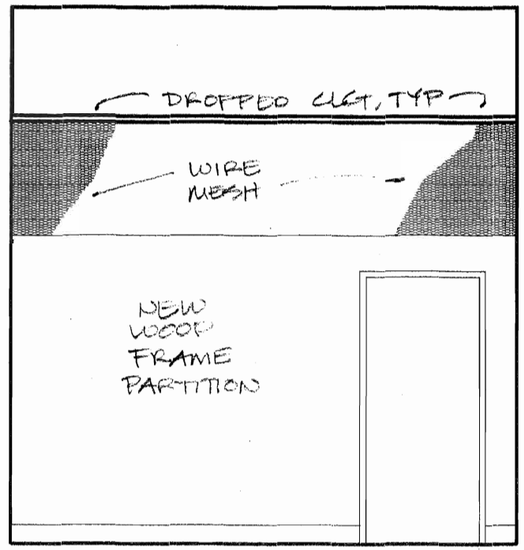
SOUTH



WEST

PASSAGE 3

1/4" = 1'-0"



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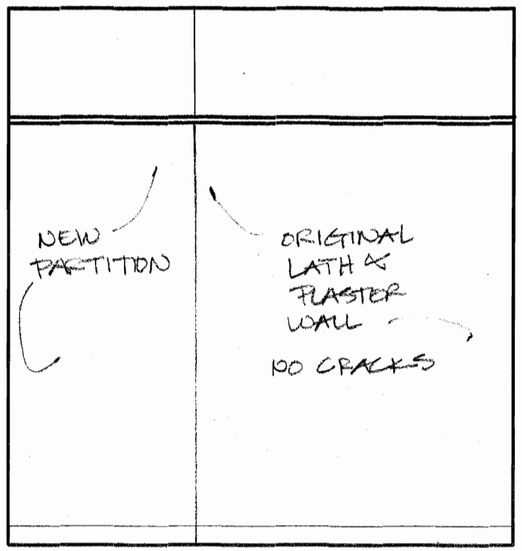
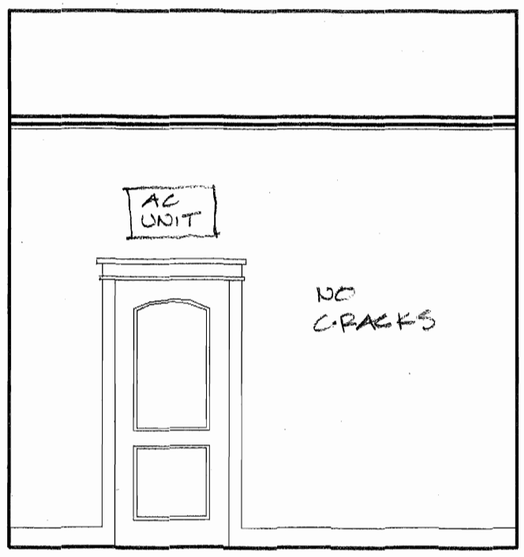
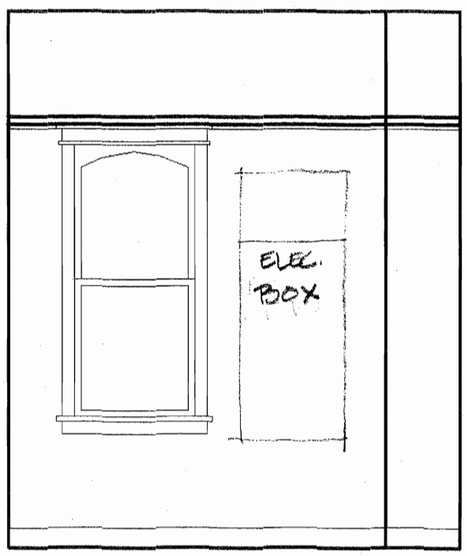


WEST



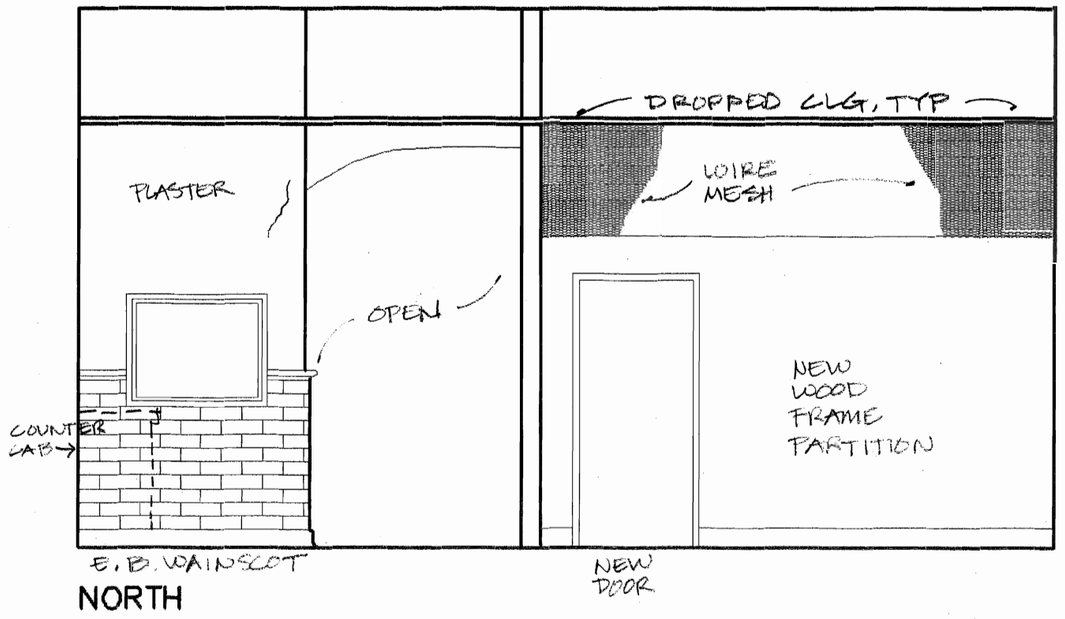
NORTH



EAST

OFFICE 4

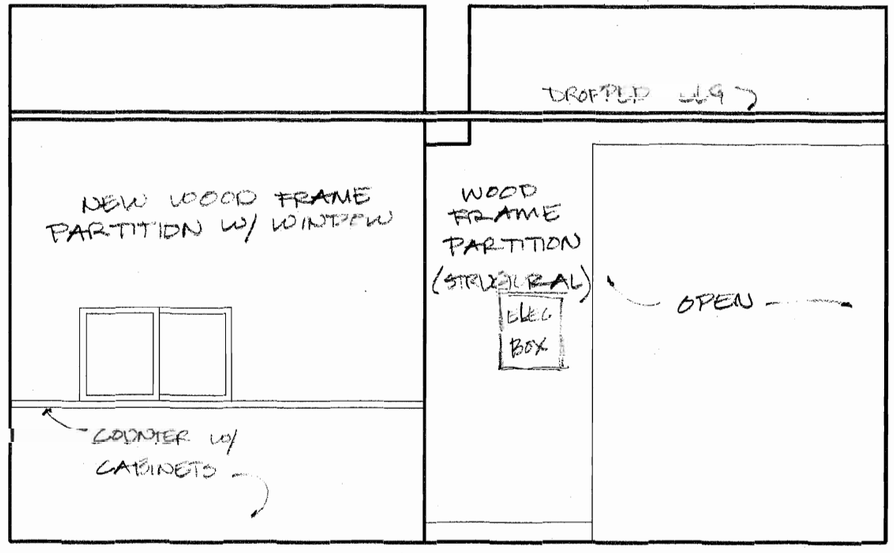
1/4" = 1'-0"



NORTH

EAST

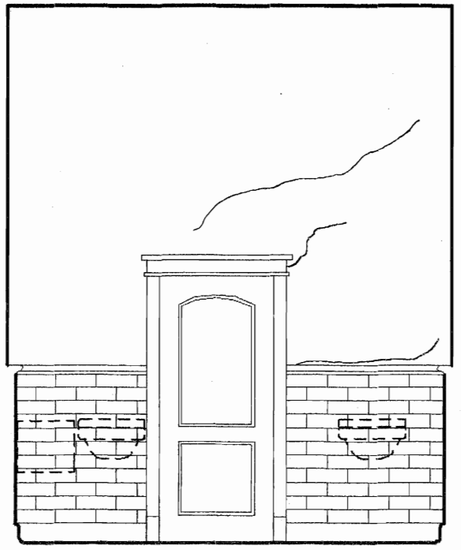
SOUTH



WEST

TICKET OFFICE 5

1/4" = 1'-0"



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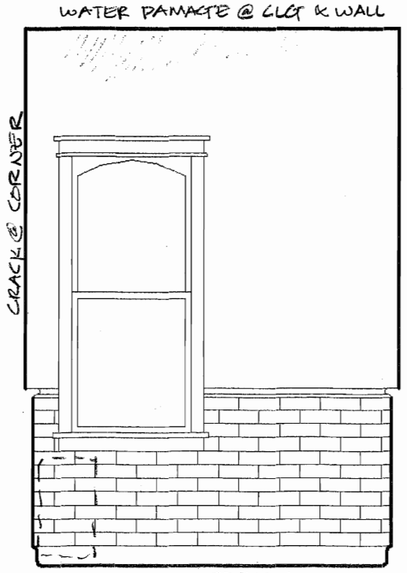

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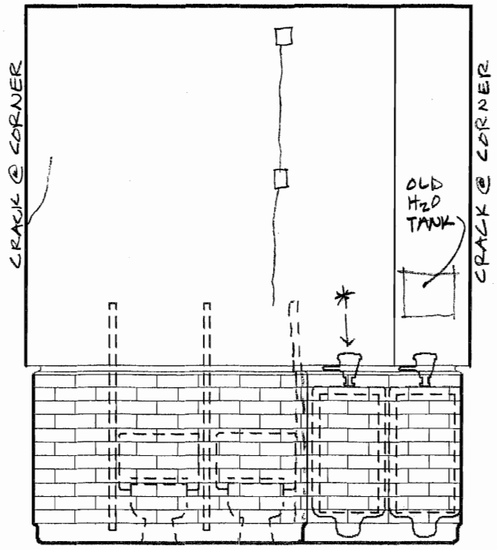
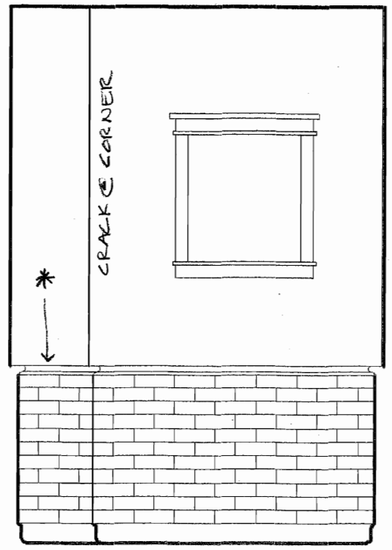


NORTH

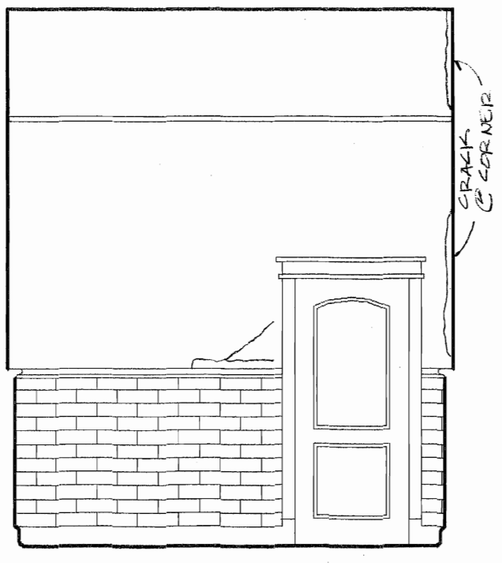
ENAMELED BRICK GREATLY DETERIORATED AT LEDGE ABOVE URINAL



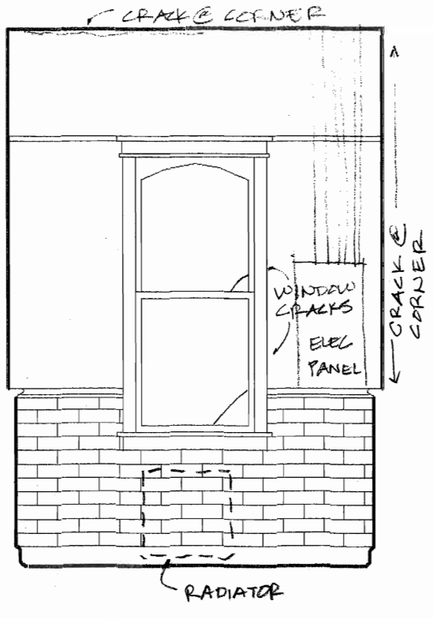
EAST

MENS RR 6

1/4" = 1'-0"



SOUTH



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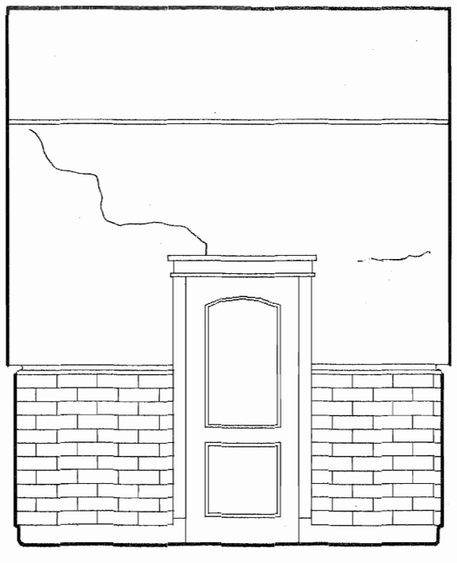

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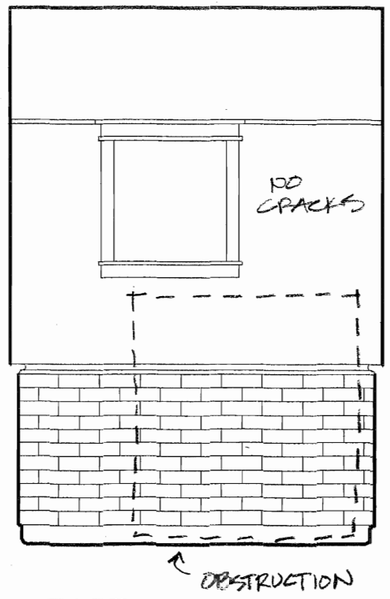
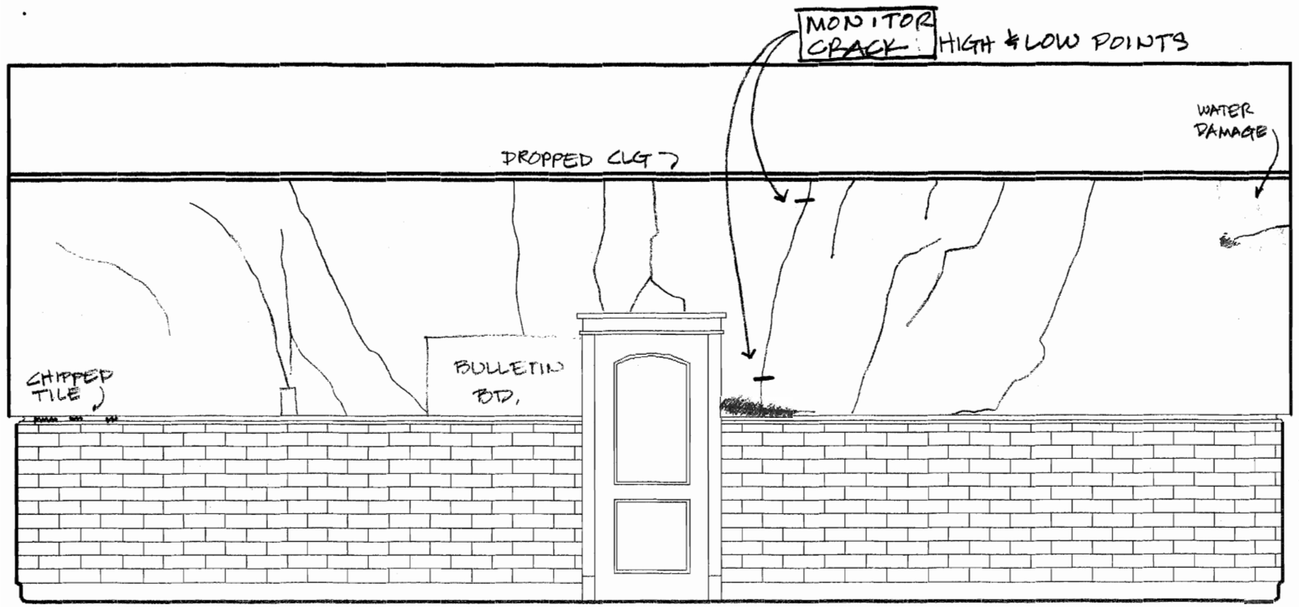


EAST

SMOKING ROOM 7

1/4" = 1'-0"



SOUTH

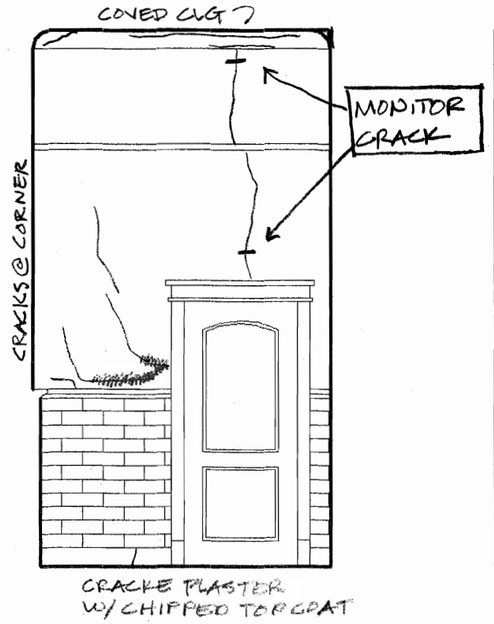
WEST

NORTH

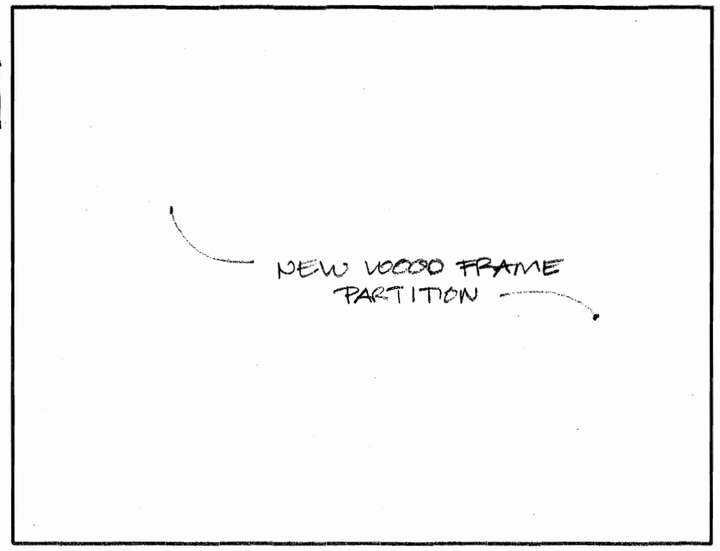
EAST

WAITING ROOM 8

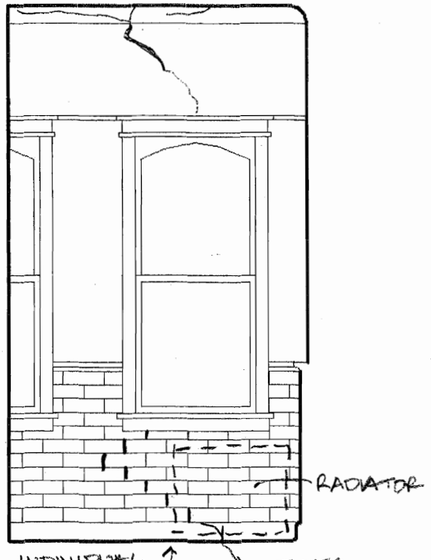
1/4" = 1'-0"



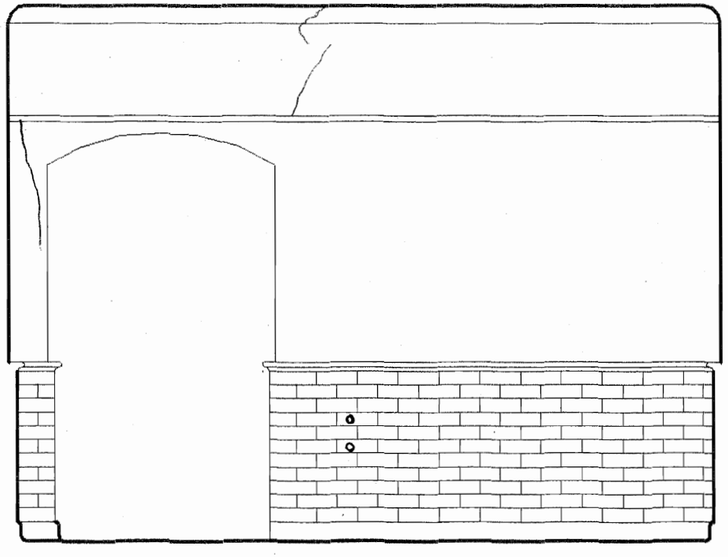
NORTH



EAST



SOUTH

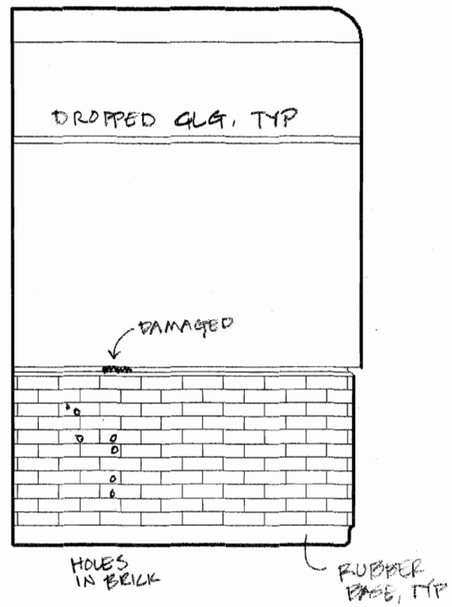


WEST

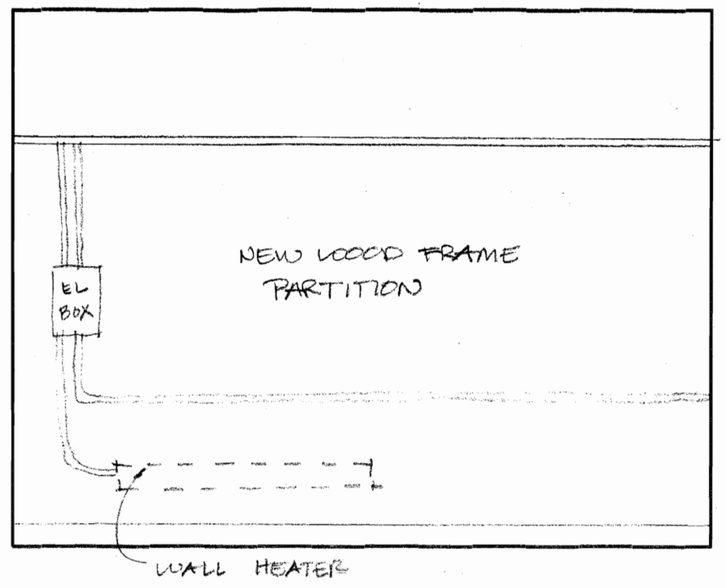
D.P. REMOVED PIPES CAPPED

HALL 9

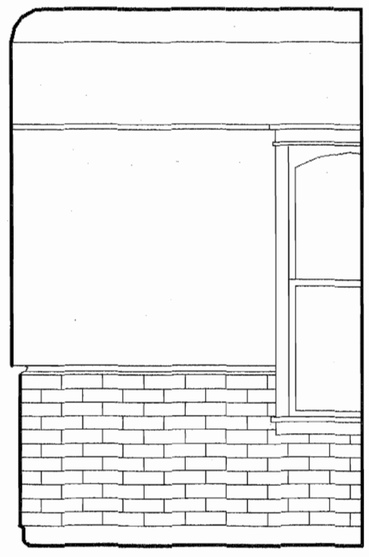
1/4" = 1'-0"



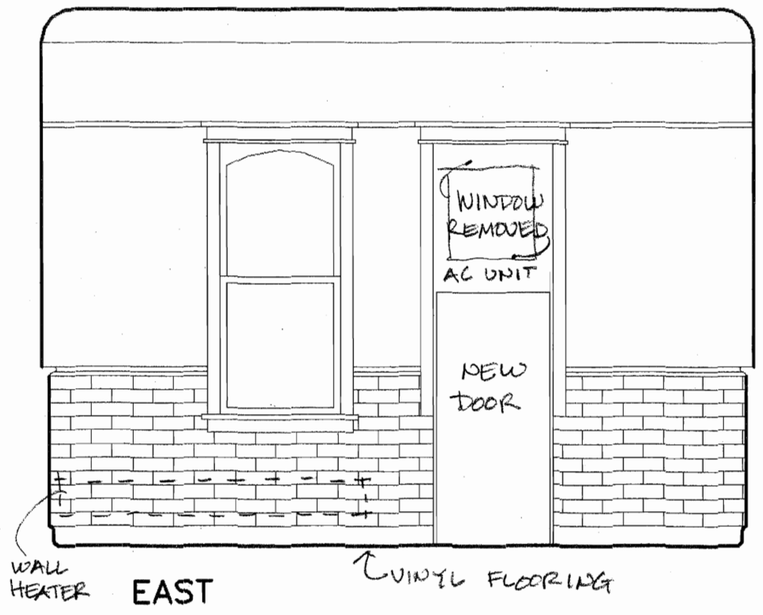
NORTH



WEST



SOUTH

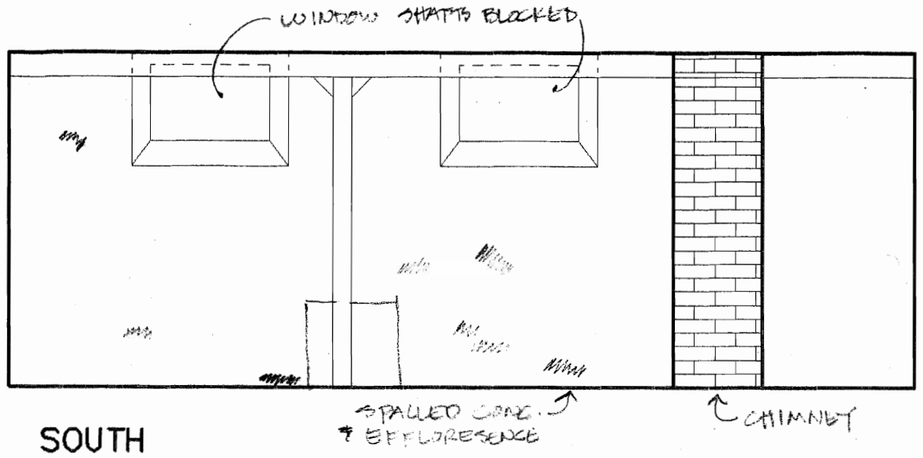


EAST

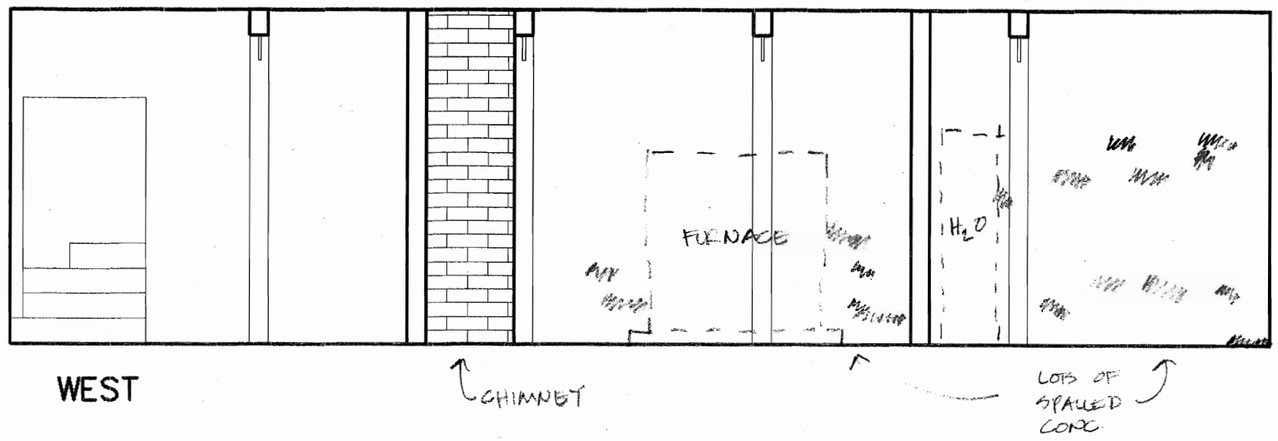
SIGNAL ROOM 12

PARTITIONED PRE - 1965

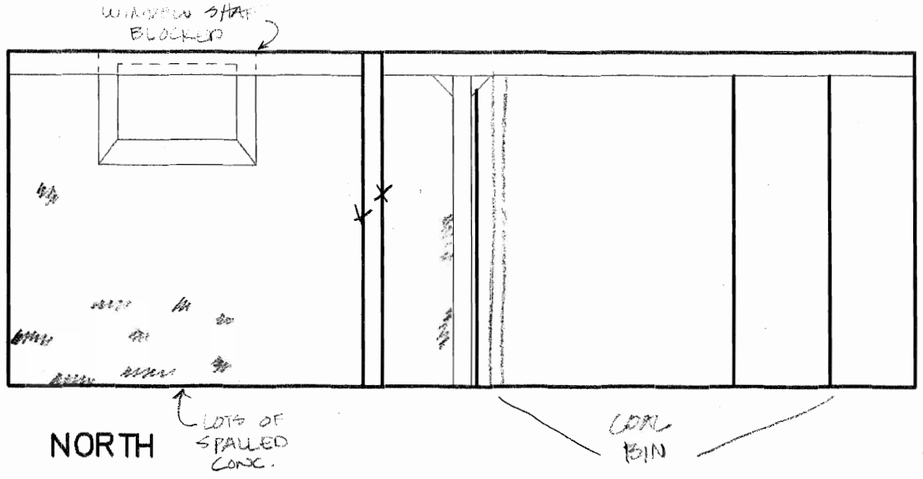
1/4" = 1'-0"



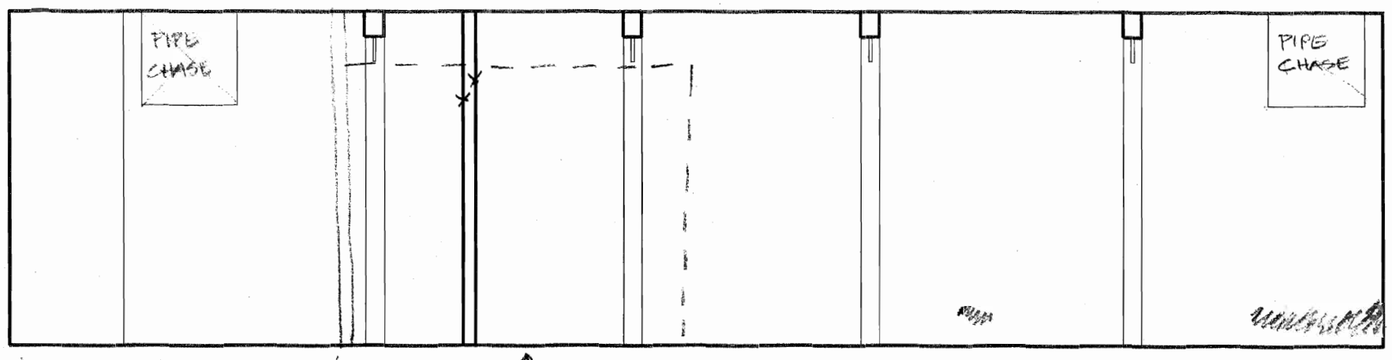
SOUTH



WEST



NORTH

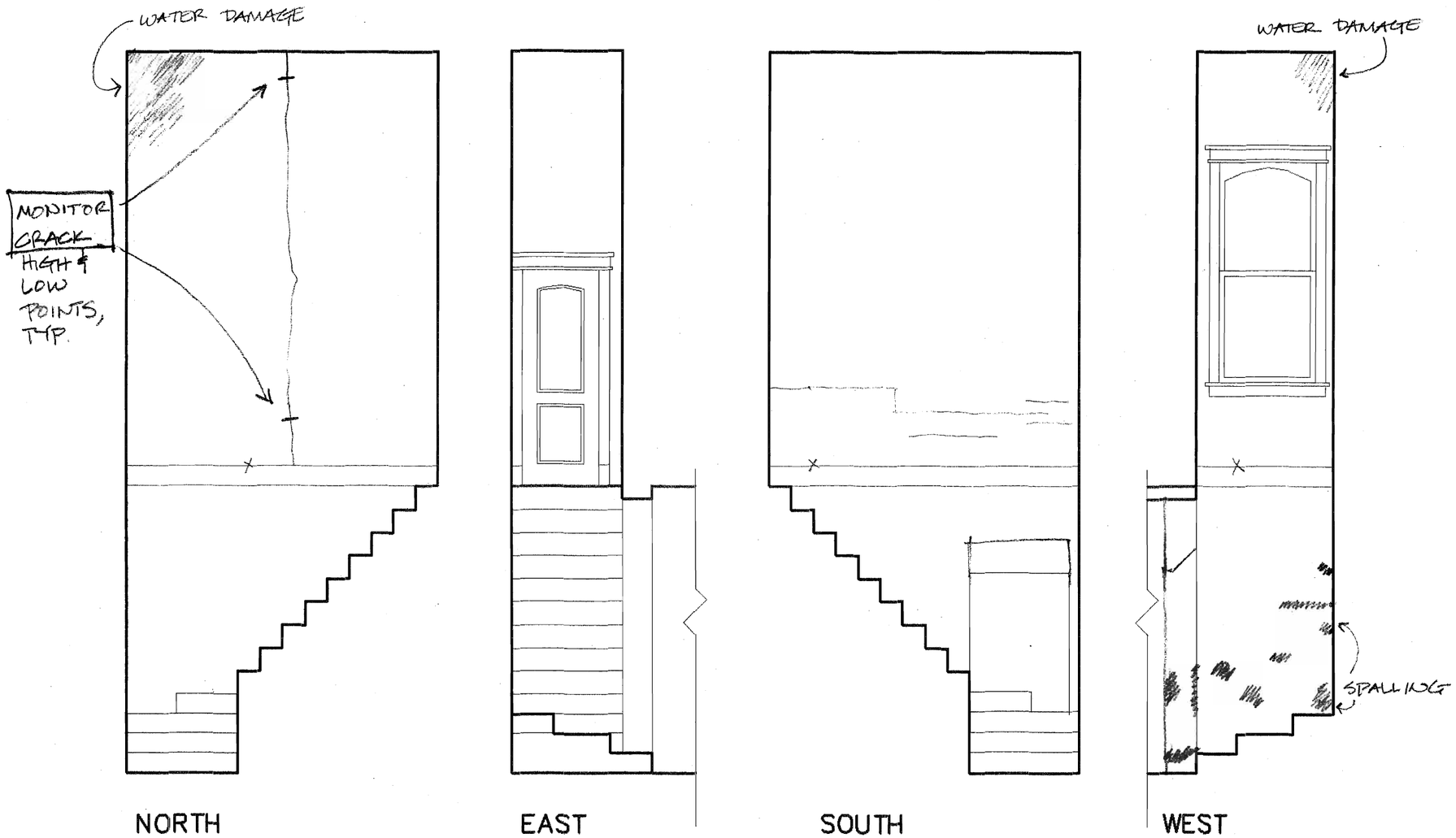


EAST

FORMER COAL STORAGE ROOM

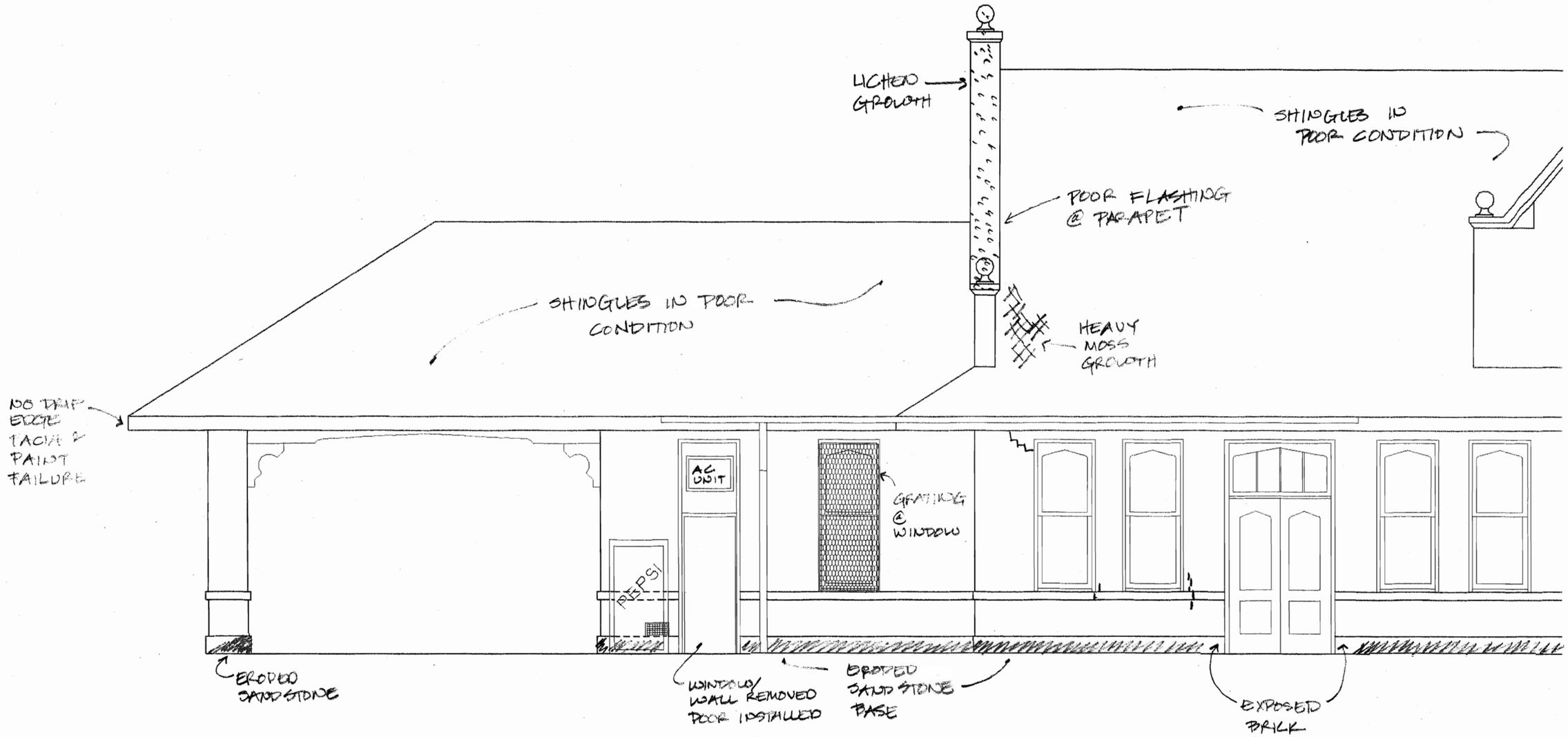
BASEMENT

1/4" = 1'-0"



STAIRWAY TO BASEMENT

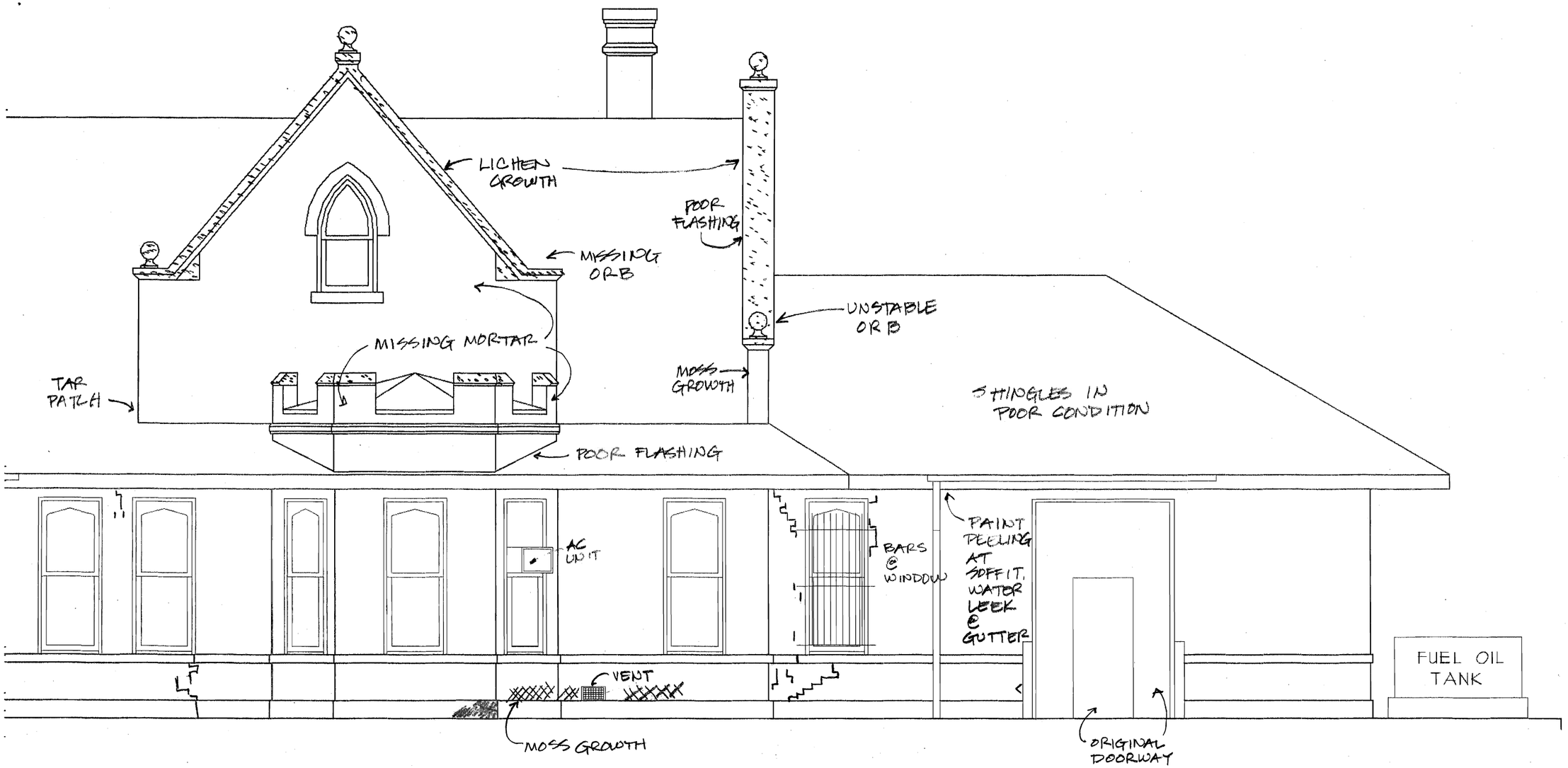
1/4" = 1'-0"



EAST ELEVATION (TRACK SIDE)

(SOUTH END)

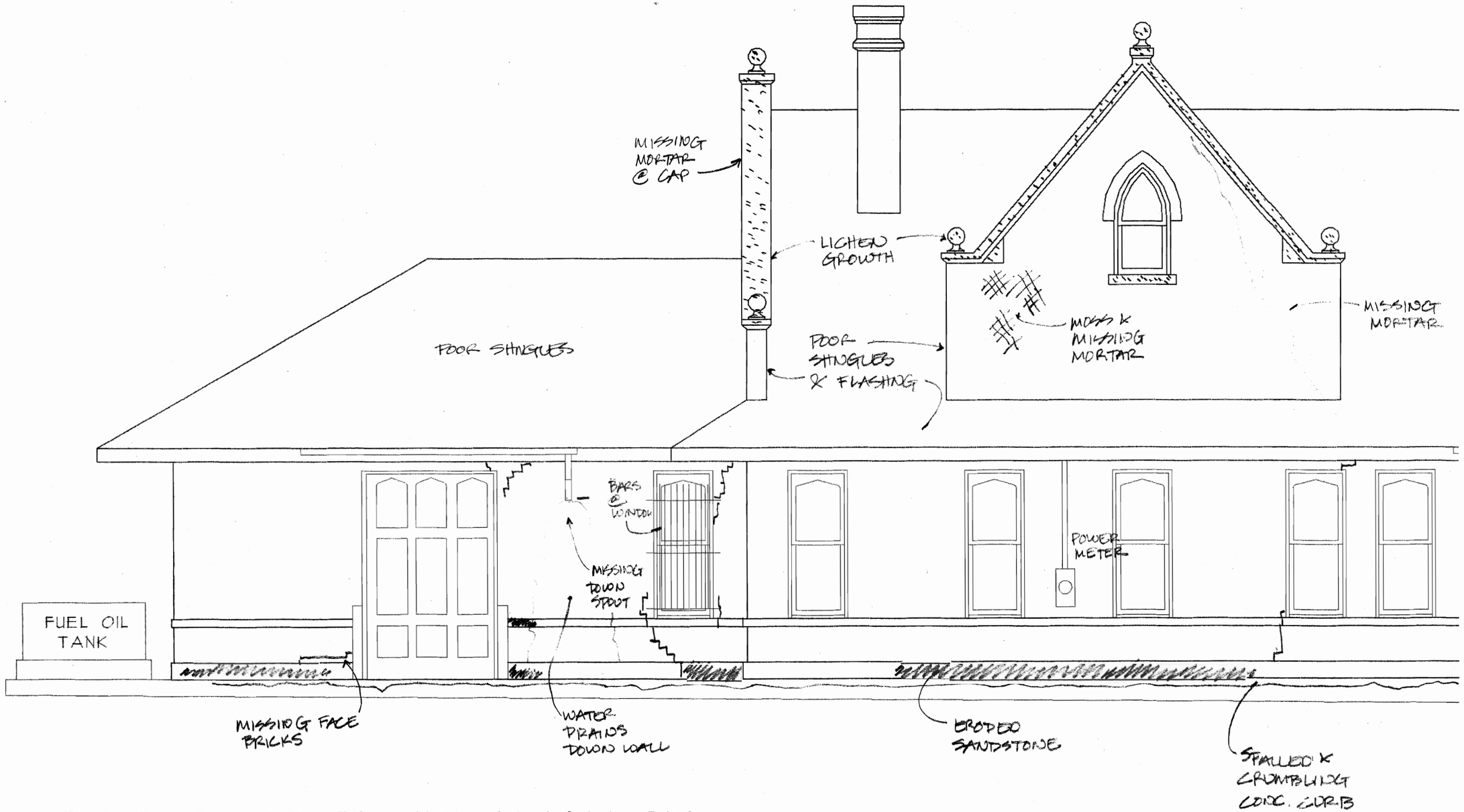
3/16" = 1'-0"



EAST ELEVATION (TRACK SIDE)

(NORTH END)

3/16" = 1'-0"



WEST ELEVATION (HIGHWAY 95)

(SOUTH END)

3/16" = 1'-0"

LICHEN GROWTH

SHINGLES & FLASHING IN POOR CONDITION

PEELING PAINT @ FACIA

ROTTING FACIA

VENT

VENT

ERODED SANDSTONE

SPALLED & CRUMBLING CONC. CURB

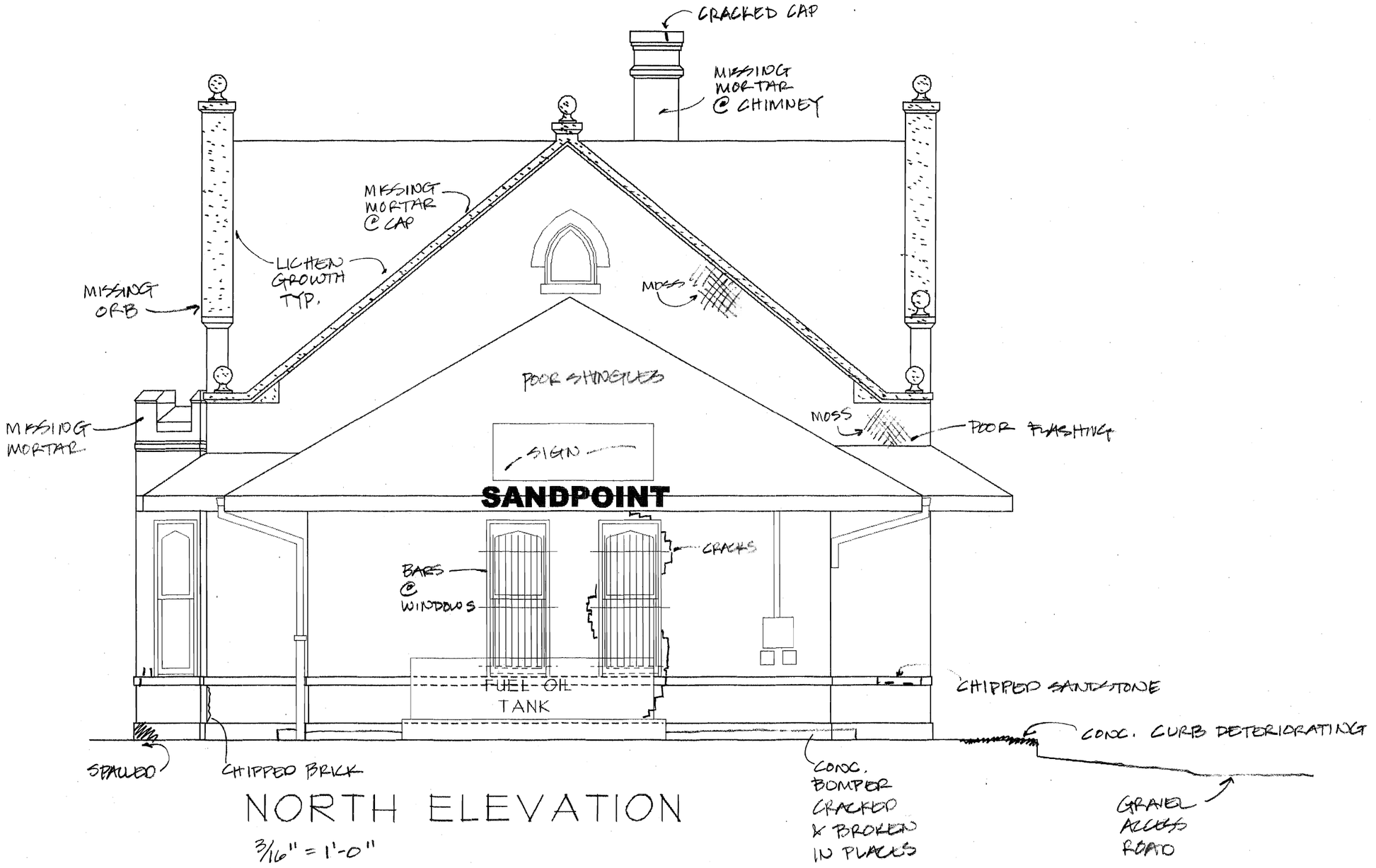
EXPOSED BRICK @ DOORWAY

ERODED SANDSTONE BASE

WEST ELEVATION (HIGHWAY 95)

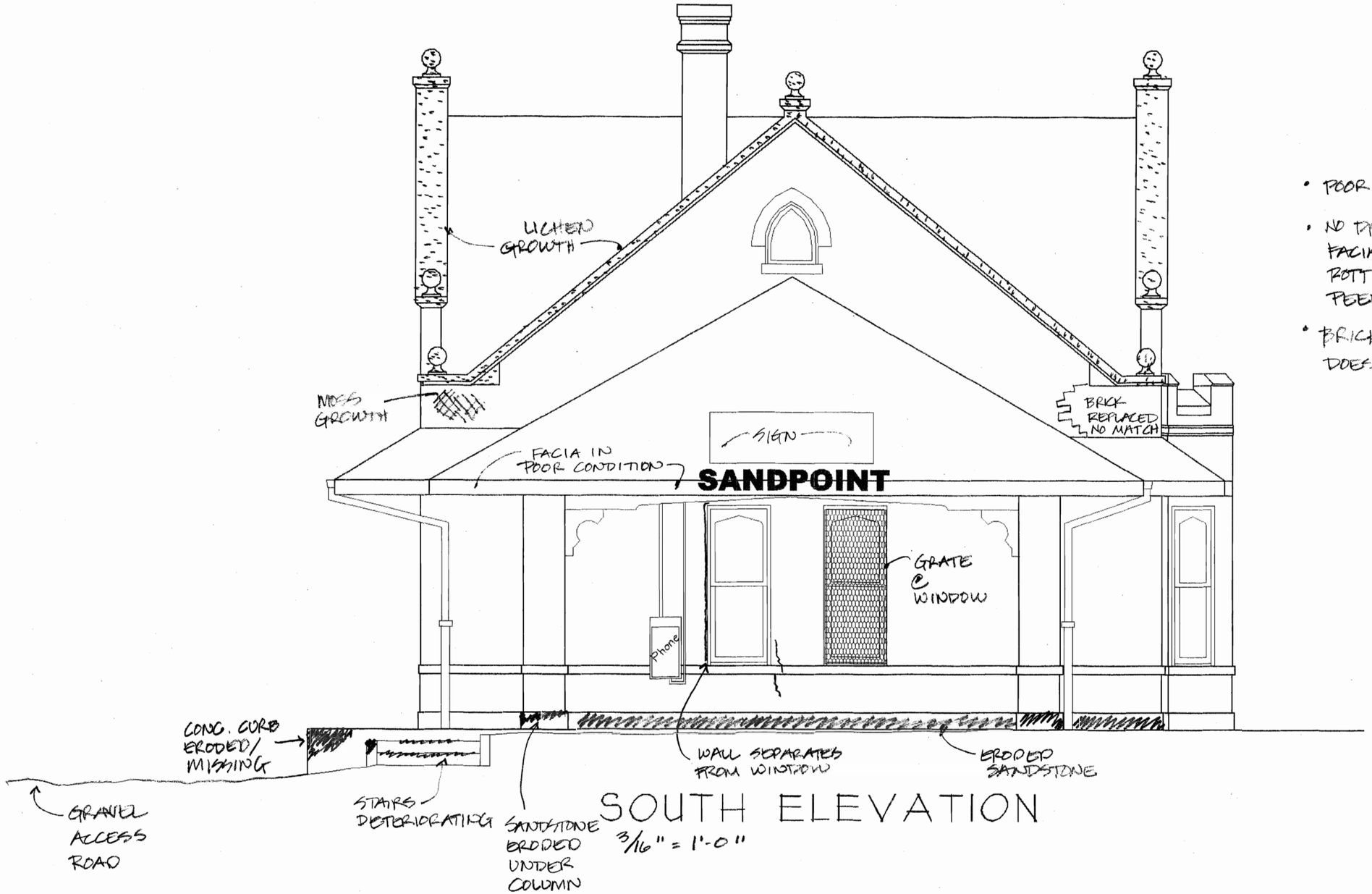
(NORTH END)

3/16" = 1'-0"



NORTH ELEVATION

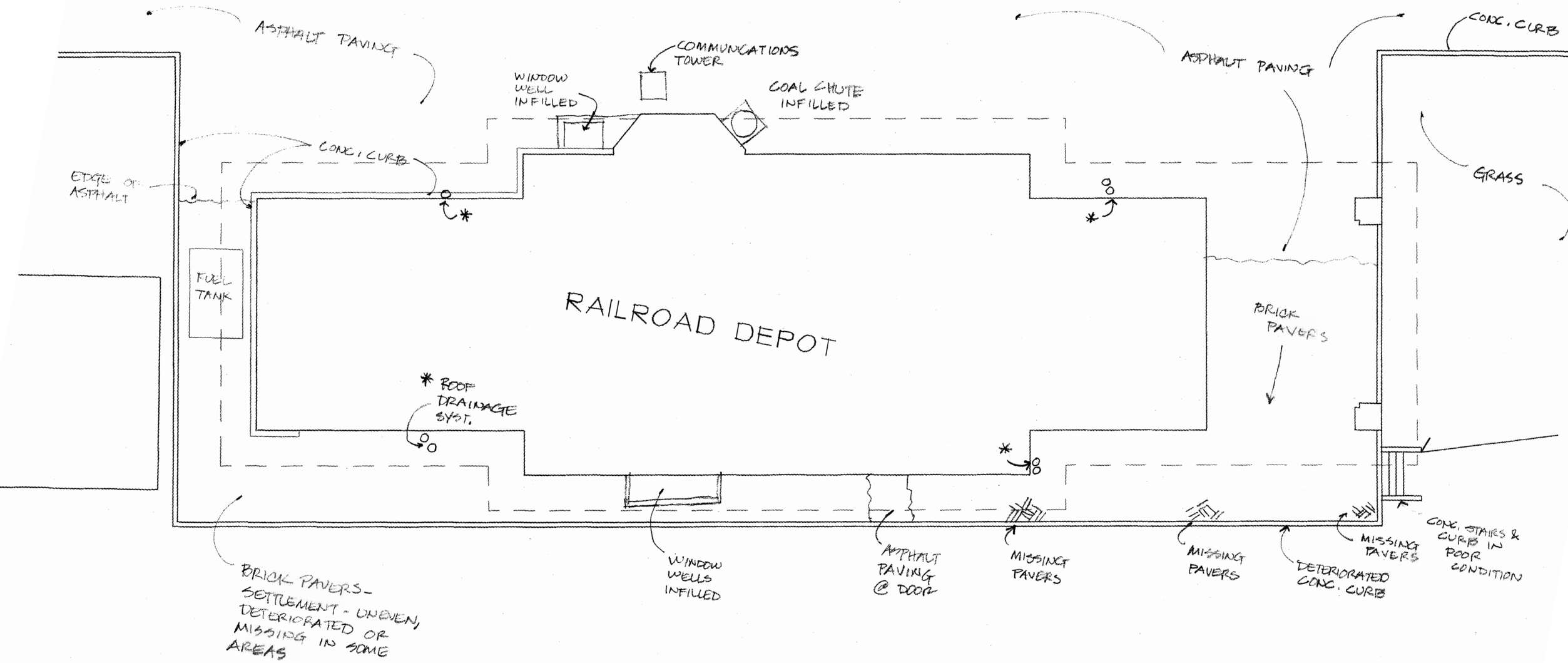
3/16" = 1'-0"



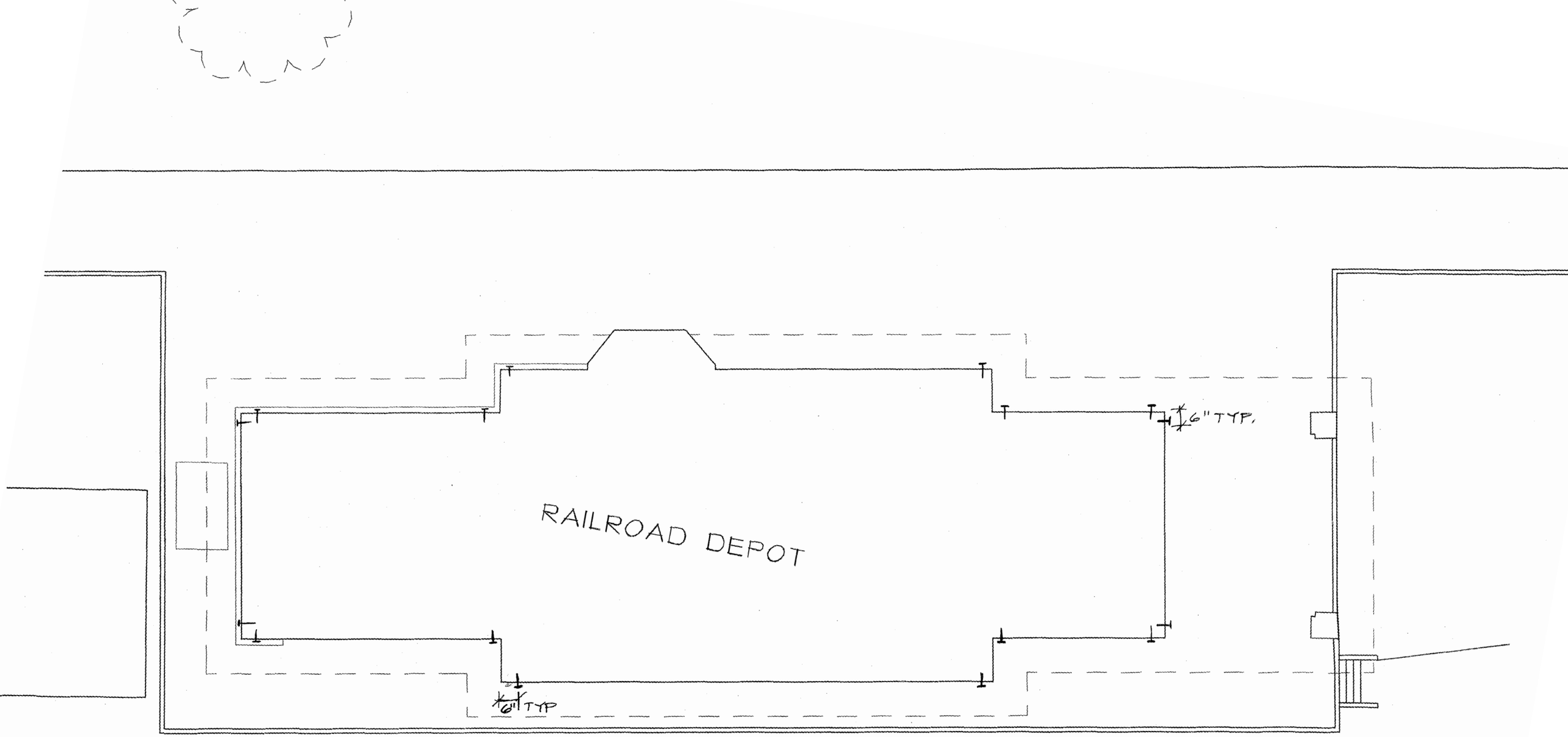
SOUTH ELEVATION

3/16" = 1'-0"

- POOR CONDITION OF ~~SHINGLES~~
- NO DRIP EDGE @ ROOF
  FACIA IN POOR CONDITION
  ROTTING & PAINT PEELING
- ~~BRICK~~ REPLACEMENT DOES NOT MATCH



SITE PLAN
EXISTING CONDITIONS



SETTLEMENT MONITORING
INSTALL 3/8" ϕ STAINLESS STEEL BOLTS 3" INTO MORTAR JOINTS APPROXIMATELY 6" FROM THE CORNERS OF THE DEPOT.
INSTALL JUST BELOW SILL COURSE, SO THAT HEAD PROJECTS BEYOND SILL COURSE. 16 LOCATIONS

SITE PLAN

MONITORING LOCATIONS