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1 INTRODUCTION

1.1 INTRODUCTION

Yakima Air Terminal/McAllister Field (YKM) is a commercial service airport located in the city and county of Yakima, Washington, approximately five miles south of downtown Yakima. The airport service area consists of portions of Yakima, Lewis, King, and Kittitas Counties—a population of approximately 270,700 people according to an air service study conducted for the Airport Board in 2005. The present passenger terminal building was developed in three major projects. The original building was constructed in 1950 at a cost of $200,000. In 1968, the Airport added ground level concourses in a "V" configuration to provide an enclosed circulation space for passengers closer to the aircraft parking positions. The terminal was expanded and renovated further between 1997 and 2000, expanding the airside passenger hold room, adding toilets to the secure area, and installing a canopy over the baggage unloading area. On the landside, the project reconstructed the departures/arrivals curbside canopy and renovated the passenger ticketing and baggage claim lobbies.

Figure 1–1: Airside View

Figure 1–2: Landside View

The terminal currently has approximately 30,838 square feet of space on two levels. All passenger processing occurs on the ground floor. The second floor includes an unoccupied restaurant and bar space that has several different floor elevations, a meeting room, and an unused Airport Traffic Control Tower (ATCT) that offers small office and storage spaces on several levels.

The terminal houses all existing commercial passenger processing functions but, due to configuration inefficiencies, affords a level of service that is characterized in this report as *adequate* to *unacceptable*. Conditions for the terminal tenants, the air

carriers, and the concessionaires are similarly characterized. The functional layout of the ticket lobby does not provide sufficient flexibility to efficiently serve terminal usage patterns by air carriers. The current level of scheduled flights and air charter service can be accommodated, but adding any new air carriers, additional service, or larger aircraft during peak times (i.e., multiple flights within the same hour) would become problematic because of the constraints in space for queuing and processing passengers and bags. The extent of the congestion depends on the specifics of the timing of the flights, the size of the aircraft, and whether a new airline is offering the service, as well as Transportation Security Administration (TSA) staffing levels.

The Airport upgraded existing building systems such as electrical power, heating, and air conditioning during the various terminal improvement projects.

In addition to operational and building systems issues, the terminal building must comply with current building codes when any expansion or major renovation is done. Existing fire-rated construction in portions of the terminal is thought to be in compliance with current codes, but this must be confirmed prior to modification or upgrade. More recent and stringent seismic and energy codes may also mandate upgrade requirements.

With these factors in mind, the Airport Board and its community of stakeholders have a range of issues to consider:

1. What role do the City of Yakima, Yakima County, the City of Union Gap, and the other communities of the Yakima Valley want the terminal facility to create a positive civic gateway for the region?
2. Do the city and county want to commit funding to improve terminal facilities and operations so they provide a level of service comparable to nearby airports in Wenatchee and the Tri-Cities?
3. How does the present terminal factor into the city and county's long-term goals for the airport terminal facilities?
4. What are the priorities for implementing improvements at the terminal?

A URS team conducted the Facility Assessment in June and July of 2011. The team included a terminal planner and architect, an electrical engineer, a mechanical engineer, and a structural engineer. The team evaluated the overall condition of the terminal building and assessed how well the building accommodates air passenger processing. The information included in this report is based on review of documents and information provided by the airport, on-site inspections, and comments and input received from airport personnel.

The physical condition of the terminal facilities is assessed for the following categories:

1. Site, including aircraft apron, terminal drives, public parking, lighting, and landscaping in the immediate terminal area;
2. Structural systems, including the foundations, framing, load bearing capacity, and lateral movement resistance;
3. Building envelope, including the roof, walls, doors, windows, and insulation;
4. Interiors, including furnishings, finishes, and equipment;
5. Building codes, including International Building Code, Washington State Energy, National Fire Protection Association (NFPA) 415, and Americans with Disabilities Act (ADA) Architectural Guidelines;
6. Mechanical systems, including heating, ventilation and air conditioning (HVAC) equipment; distribution system; controls; and plumbing fixtures, fittings, and piping; and
7. Electrical systems, including primary service, distribution, panel boards, emergency power, lighting, communications, and data systems.

The functional or operational performance of the terminal facilities is assessed for the following categories:

1. Departures process, including activities associated with the processing of outbound passengers and their baggage;
2. Arrivals process, including activities associated with the processing of inbound passengers and baggage;
3. Building services, including functions associated with providing and maintaining building services that support terminal activities; and
4. Airport administration, including management and maintenance of overall terminal facilities and operations.

2

2 APPROACH

2.1 METHODOLOGY

The URS team reviewed existing construction documents, inspected and assessed the physical and operational conditions on site at the terminal, and received airport staff and tenant input on terminal conditions.

2.2 ASSESSMENT OF PHYSICAL CONDITIONS

The on-site inspection was conducted in June 2011 by a terminal architect and planner, an electrical engineer, a mechanical engineer, and a structural engineer. Finishes, furnishings, equipment, and the like, were reviewed and assessed. Each consultant made and recorded assessments using the following definitions:

1. **Excellent:** Materials are in "like new" condition (no wear is visible, and no operational problems known) and have up to 100 percent of their anticipated life span remaining.
2. **Good:** Materials exhibit normal wear, primarily cosmetic, but maintain full functioning capability. Minor repairs might remedy evident wear. Materials have up to 75 percent of their life span remaining.
3. **Fair:** Materials exhibit extensive wear, beyond cosmetic, but are still usable and functional. Recommended repairs may be extensive and costly and should be evaluated relative to replacement to determine cost-effectiveness. Materials have up to 50 percent of life span remaining.
4. **Poor:** Materials are deteriorated or dysfunctional beyond repair or have already failed and need immediate replacement. At best, such material may have less than 25 percent of useful life remaining.

Previous repair or replacement dates are included in the assessment, where known, as well as any airport- or tenant-provided information concerning condition. Material assessments are categorized as follows:

- Site civil;
- Structure;
- Exterior envelope;
- Interior development;
- Mechanical systems; and,
- Electrical systems.

2.3 ASSESSMENT OF OPERATIONAL PERFORMANCE

The URS team assessed terminal operations on-site by inspecting passenger processing functions, with consideration for size, capacity, configuration, and location. Each functional area was assessed as follows:

1. **Desirable:** Functions are ideally sized, configured, or located to accommodate current demand.
2. **Adequate:** Functions are less than ideal in terms of size, configuration, or location to accommodate current demand, but performance is not compromised.
3. **Constrained:** Functions are less than ideal in terms of size, configuration, or location for the current demand and performance is frequently compromised during periods of peak activity.
4. **Unacceptable:** Functions fall significantly short of the ideal size, configuration, or location for current demand, and performance is frequently compromised during periods of peak activity.

The assessment includes information noting when the function in question was last modified, as well as any input by airport personnel regarding specific conditions. Assessment categories include:

- Departures process;
- Arrivals process;
- Building services;
- Administrative services; and,
- General issues.

2.4 DOCUMENTS REVIEW

The Airport provided the URS team with as-built drawings of the terminal rehabilitation project, dated July 20, 2000. URS reviewed and incorporated the relevant information from these materials.

2.5 FACILITIES ASSESSMENT REPORT

This report is produced with Microsoft Word. Photos are digital images (.jpg or .pdf format) inserted in the document. Report contents are available to the Airport in .pdf or hardcopy format.

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3 SITE DATA

3.1 PROJECT DATA

- Address — Yakima Air Terminal/McAllister Field
  2400 West Washington Avenue
  Yakima, WA 98903
- Airport Manager — Rob Peterson, ACE
- Terminal Construction History — 1950, Original Terminal Construction
  1968, Terminal Expansion Project
  2000, Rehabilitation Project
- Automobile Parking Capacities

Public	188 spaces (6 handicapped)
Rental Car	36 spaces
Terminal Curb	16 spaces
West Side	9 restricted

3.2 BUILDING CODE DATA

- Building Code (Current Yakima County) — 2006 International Building Code (IBC)
- Occupancy Types — A-3 Assembly
  B Office
  F-1 Industrial
- Occupancy Separations — One hour between A-3 and B or F-1
- Construction Types — Expanded Terminal: Type V-N
  (per codes in effect at time of most recent expansion, 1994 UBC)
- Fire Protection — Building has fire sprinklers
- Building Height — Two story

- Enclosed Area (Gross SF)

First Floor:	22,958	
Second Floor:	7,880	
*Total	30,838	GSF

- Note: Code diagram from the 1997–2000 terminal building rehabilitation project will need to be vetted with the City of Yakima Building Department prior to any future facility expansion. The diagram depicts the two-story portion of the terminal as a B occupancy, but clearly the passenger processing functions on floor one are primarily an A-3 occupancy with B occupancy as a secondary use. This potentially has implications for fire resistive separations between A-3 and B occupancies, but it is also possible, in fact likely, the city and Airport may have agreements from previous building permit reviews accepting this interpretation of occupancy.

4

4 FACILITY ASSESSMENT SITE CIVIL

4.1 ROADWAYS

The airport is accessible from the Interstate 82 interchange and West Valley Mall Boulevard, which connects to West Washington Avenue and the main terminal drive.

The main entry/exit drive is South 24th Avenue, a two-lane, one-way roadway. According to the 1997 airport master plan, this road has a capacity of approximately 700 to 1,000 vehicles per hour in each direction, which is sufficient capacity to handle projected traffic.

South 24th Avenue southbound leads into the Terminal Drive, with two-lane traffic at the immediate entrance that turns into two-lane one-way traffic beyond the parking lot entrance/exit booth. To the right are the Airport Administration Office and a fire station with accompanying employee parking lots. The road in front of the terminal is two lanes, with the curb frontage lane designated for loading and unloading passengers. There is approximately 185 feet of curb directly in front of the terminal. Congestion occurs at the intersection on Terminal Drive Road where vehicles turn left to approach the terminal curbside loading/unloading zone where cars tend to stop at the first opportunity to access the terminal. There is one through lane and a loading/unloading lane in front of the terminal.

Exit from Parking/Toll-Booth Plaza

There is only one exit from the parking lot. The exit from the parking lot is onto South 24th Avenue, which leads directly to West Washington Avenue.

4.2 AUTOMOBILE PARKING

The automobile public parking lot in front of the terminal is a surface lot with existing capacity of 188 spaces, 8 of which are handicapped accessible spaces. To the immediate east of the terminal is a parking lot for rental cars with a capacity of 36 spaces. An additional 8 spaces being used as a cell phone lot are located directly to the west of the terminal building.

4.2.1 Delivery Loading/Unloading

Delivery loading and unloading is currently handled on the landside of the terminal building with trucks temporarily parking on the front drive at the curb or in the rental car parking lot.

4.3 AIRSIDE FACILITIES

4.3.1 Apron

Aircraft maneuver and park on the terminal apron, which is located on the south side of the passenger terminal. The entire aircraft parking apron is Portland Cement Concrete (PCC) pavement. The apron in front of the terminal building was built in 1967 and is in good condition.

4.3.2 Layout

The passenger terminal apron is adjacent to the general aviation aprons to the east and west. Taxiway A, parallel to Runway 09-27, has the most restrictive set back limits that potentially affect the apron use. It is currently an Airplane Design Group (ADG) III taxiway with an object free area (OFA) of 108 feet from the taxiway centerline to the apron. The required OFA for ADG III is 93 feet. The runway Part 77 has a tail height clearance limit of 760 feet from the runway for a B727 aircraft, which is the critical aircraft as defined in the previous airport master plan.

There are five designated departure gates at the terminal. The apron has four aircraft parking positions on the apron that accommodate narrow-body jet aircraft (ADG III). The air carrier regularly uses the remaining apron gate positions as remain-over-night (RON) parking.

Passengers access the parked aircraft by ground level boarding via an open walkway along the airside face of the terminal building walking across the apron to/from the aircraft. This process is described in the “Operations Assessment Summary” for departure and arrivals processes.

Airline equipment staging and ramp functions are supported by a combination of interior and on-apron storage. On the apron these functions are accommodated with a staging area south of the main building, in front of the inbound bag drop-off, and along the head of stand.

McCormick Air Center provides fuel for aircraft using trucks.

4.3.3 Pavement

The apron is 10-inch-thick Portland Cement Concrete (PCC) constructed in 1967. The PCC is typically laid out in 16-foot by 10-foot plain, doweled panels. However, there are many irregular

shaped panels because of the apron's shape. Overall the apron is in good condition with a few cracked panels and minor edge and corner spalling.

4.3.4 Aircraft Services

Aircraft potable water, aircraft sanitary waste, 400 Hz, and pre-conditioned air are supplied using stand-alone carts.

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5 FACILITY ASSESSMENT STRUCTURE

5.1 STRUCTURE

The existing airport terminal was originally constructed in 1949 including the attached FAA control tower. Construction is wood-framed floors with steel beam girders and pipe columns. In 1968 an airport expansion added two boarding concourses (building wings). The terminal was further expanded during the building rehabilitation project occurring between 1997 and 2000. The phases included a mechanical systems upgrade, roof canopy additions, and a passenger concourse area between the old concourse wings. The structural systems for the various building components are summarized below.

Foundation

The foundation plans for the existing structure built in 1949 show shallow foundations. There are continuous wall footings around the perimeter of the building and below interior bearing walls. At interior columns there are spread footings. Similarly at the rehabilitation/additions, foundations are continuous wall footings at bearing walls and spread footings at interior columns.

Gravity Framing

The gravity framing system consists of solid, sawn-wood joists supported on structural steel beam girders supported on steel columns. Floor joists are supported at the building perimeter on bearing walls. The additions have similar construction.

The roof and floor sheathing is plywood sheathing over the roof and floor joists. The additions have similar construction.

Lateral Force-Resisting Systems

The lateral system in the 1949 structure uses conventional wood-framed shear walls with plywood sheathing. The additions have similar construction with the exception of the 1999 passenger concourse, which uses special steel moment frames for the lateral force-resisting system. Wood diaphragms (nailed plywood sheathing) provide the roof and floor diaphragms, for all structures.

The lateral system for the control tower is masonry shear walls.

Expansion Joints

There is a seismic/expansion joint between the 1968 and the 1980 structures. From visual observation, it could not be determined if joint material is deteriorated enough to cause leaking. Airfield maintenance personnel have not noticed leaks at this location. No other physical seismic joints were identified. Seismic joints were not visible between the old control tower and renovation additions.

5.2 BUILDING CODES

The original terminal building dates from 1949 with an upper and lower level. A three-story control tower with masonry wall construction was also built at that time. In 1968 a concourse addition expanded the structure to the south, adding two boarding concourses totaling 6,100 square feet. The 1997 rehabilitation construction design is in accordance with the 1994 Uniform Building Code. The 2000 rehabilitation construction design is in accordance with the 1997 Uniform Building Code.

5.3 STRUCTURAL ASSESSMENT

Concrete flatwork generally appears to be in good condition. Some cracks appear in aged concrete. There are no indications of excessive concrete slab settlement. Slabs generally slope away from structure.

Exterior skin is brick veneer over wood-framed shear wall. Some exterior walls have cement stucco panels with brick veneer on the lower portion of the wall. Generally the brick veneer attachment to wood-framed wall appears to be in good condition, as determined by a visual assessment of the condition of the brick system. Actual visual observation of attachments could not be made. There are locations where the brick veneer is cracked through the thickness and the grout appears to be deteriorating (picture S-1**)**. Waterproofing caulking is also deteriorated around the brick veneer (picture S-2). These locations should be repaired to minimize the intrusion of water behind the veneer. Cement stucco panels generally appear to be in good condition. The rehabilitation additions use similar exterior siding consisting of cement stucco panels and brick veneer. Sidings at rehabilitation additions are in good condition.

The roofing system is a built-up granulated cap sheet that appears to have been installed on all of the buildings and canopies as part of the 1997–2000 rehabilitation projects, with the exception of the roof at the old control tower. Roofing appears to be in good condition with only one indication of standing water. Some standing water appears to occur to the southeast of the restaurant roof deck as indicated by staining (picture S-3). Maintenance personnel indicated there had been some water

intrusion in this area. Roofing under the roof deck could not be inspected. It appears the roof deck framing was laid directly on roofing. The condition of this roofing should be inspected further.

The roof system at the control tower does not appear to have been replaced during the rehabilitation and is deteriorated and in need of maintenance (picture S-4).

Exposed fascia board, soffits, and exposed roof beams at overhangs show minor water damage (pictures S-5 and S-6).

Rooftop mechanical systems appear to be properly seismically anchored. There are many rooftop mechanical units, ducting, piping, and roof screens with roof penetrations. The roofing at the penetrations should be inspected regularly for deterioration (pictures S-7and S-8).

At the northwest canopy it appears that proper seismic separation was not provided between the canopy and the top of the building wall. The stucco should be repaired to prevent water intrusion (picture S-9).

URS could not directly visually observe the gravity and lateral resisting systems because of building coverings. Visual observation of non-structural elements indicates there is no visible sagging or settling of roof or floor framing. Floors are generally level with no indication of settlement at grade or at the second floor. Maintenance staff report only minimal roof leakage as noted above. Roof leakage is likely due to poor slope to drainage.

6

6 FACILITY ASSESSMENT EXTERIOR ENVELOPE

6.1 ROOF

The overall condition of the roof appears to be good, largely due to a building rehabilitation project occurring in phases between 1997 and 2000. As part of this work, the airport expanded and renovated the terminal, with airside additions to expand the passenger gate lobby and add toilets; a new baggage unloading area canopy; reconstruction of the landside departures/arrivals curbside canopy; and renovation of the passenger ticketing lobby and baggage claim lobby. The airport appears to have installed a new built-up roofing system with granulated cap sheet, as part of this effort.

The roof system seems to be in good condition and presumably is well-drained, although our site visit could not confirm the existence of ponding or leaks. Parapets and flashing look to have been refurbished and appear to be in good condition; however, there are several locations where fascia boards at roof eaves show peeling paint in need of touch-up.

While the present roof condition is good, future risks for leaks abound because of the multiple roof levels, the exterior deck framing sitting directly on the built-up roof near the restaurant lounge (picture A-17), and the many roof penetrations by mechanical equipment, ductwork, power/communications conduits, and roof top equipment visual screens and bracing (picture A-20). Each of these, and there are many, represent a potential source of failure at a future date, and will be difficult to track down.

6.2 WINDOWS

All windows have anodized aluminum frames. The glazing is all insulated double pane. The window frames are a mix of existing and new, with many new windows installed as part of the 1997–2000 rehabilitation projects (pictures A-1, -3, -6, -10, -12, and -15).

6.3 WALLS

Exterior wall finishes are a mixture of brick (pictures A-5 and A-6) and cement stucco (pictures A-11, -12, and -13). The brick finish is primarily in the portions of the building exterior built in 1950

and the stucco is primarily in areas built in 1968 and 2000. Both finishes are painted and in good condition.

6.4 CURBSIDE CANOPIES

Exterior curbside canopies were reconstructed in the 1997–2000 rehabilitation project and appear to be in good condition (pictures A-2 and A-4). The soffits of the canopies are an Exterior Insulation and Finishing System (EIFS) version of stucco rather than the cement stucco used for the exterior walls that are exposed to more contact at grade. This choice is likely to have been economically driven in that the EIFS stucco is a lighter weight product and not exposed to the same level of contact as a wall exposure, so its use allows lighter building assembly weight and lighter steel structural framing members.

6.5 FRONT ENTRY VESTIBULE

The entrance vestibule is in good condition (picture A-21). The 1997–2000 building rehabilitation provided new anodized aluminum storefront with insulated glazing, new doors, and new flooring.

6.6 OTHER EXTERIOR DOORS

The other terminal exterior doors appear to be in good condition, again, many being part of the work in the 1997–2000 building rehabilitation project. Door types include: hollow metal, anodized aluminum with glazing, and overhead coiling doors (pictures A-5, -6, -7, -8, and -10). Weather stripping appears to be intact.

7

7 FACILITY ASSESSMENT INTERIOR DEVELOPMENT

7.1 BUILDING INTERIOR

Interior finishes and their condition vary widely on the different levels of the building—floor, walls, and ceiling. The following is a description of the finish conditions by building floor level.

7.1.1 Terminal Level One

As mentioned in earlier sections, the terminal building has a history dating from its 1950 original construction. Some spaces have had minimal changes or upgrades (such as back-of-the-house spaces) and others have had periodic upgrades because of normal wear or changes in use. The condition of finishes in public spaces on level one was uniformly good, owing to the 1997–2000 rehabilitation projects.

Floors

Floor materials/condition include: carpet (ticket lobby, gate lobby, and offices), vinyl tile (baggage claim and some airline office work areas), ceramic tile (toilets and part of entry vestibule), and concrete (utility rooms and outbound baggage makeup rooms). Floors are in good condition (pictures A-21, -22, -23, -24, -27, -28, -34, -35, -37, and -43).

Walls

Wall materials/condition include: painted brick (entry vestibule), painted drywall or plaster (most wall surfaces), and ceramic tile (toilets). Walls are in good condition (pictures A-30, -31, -34, and -43).

Ceilings

Ceiling materials/conditions include: 2’ x 4’ suspended lay-in acoustic tile (most public spaces and offices), 1’ x 1’ tongue-and-groove acoustic tile, and painted drywall or plaster (soffits at changes in ceiling plane, toilets, and outbound baggage makeup rooms). Most ceilings in the public and back-of-house areas are in good shape, with an exception in the rental car counter area. The 1’ x 1’ acoustic tiles in this area are aging, with replacement tiles noticeably different in color.

One aesthetic shortcoming for existing ceilings is the exposed ductwork in the public seating and circulation spaces connecting the ticket lobby and bag claim lobbies. While the ducts are neatly painted, they break up the plane of the ceiling and make it a series of ceiling sections appearing disjointed rather than as one ceiling element connecting multiple terminal functions (pictures A-22, -23, -24, -28, and -29).

The new light fixtures installed in the 1997–2000 rehabilitation projects appear to be in good condition.

Other Components

Public seating in ticket lobby, baggage claim, and airside gate lobby is a high-quality tandem style seating system used frequently in public transit settings. It appears nearly new and is in good condition (pictures A-28, -34, and -43).

Public transaction counters at ticketing, rental cars, and a now-vacated travel agency are plywood cases with plastic laminate finishes and stainless steel trim at exposed edges (pictures A-25, -26, -27, and -32). These materials are durable, appropriate for their use, and are in good shape. In the future, using a single, unifying counter design would help create a continuity of visual appearance rather than having a different style and color for each tenant.

Toilet rooms serving landside and airside public lobbies are in good condition, having been refurbished in the 1997–2000 rehabilitation projects.

Outbound baggage makeup area finishes are appropriately utilitarian in nature consisting of concrete or resilient vinyl flooring, plaster or 1’ x 1’ tongue-and-groove acoustic tile ceilings, and painted plaster or drywall wall finishes. The air cargo counter is a plastic laminate finish, and is in fair, but serviceable shape (picture A-41). Lighting is surface-mounted fluorescent fixtures and appears adequate for the baggage makeup activities.

7.1.2 Terminal Level Two

Level two of the terminal supports three major uses: Banquet/Board Room, Restaurant, and Lounge (pictures A-44, -45, and -47). There is no tenant occupying the spaces, but the Banquet/Board Room does host periodic meetings. The lack of a tenant and the partial dismantling of the kitchen create a sense of benign neglect in this space. Two additional factors diminish the future potential for redevelopment of these spaces:

1. Eight different floor levels within the level two footprint reduce flexibility of tenant use.
2. An elevated roof above the new airside gate lobby largely eliminates the visual connection between the restaurant and lounge areas and the airfield movement areas.

Given the lack of the airside view amenity, the airport should seek a future tenant who desires an airport presence, but does not need the airside view for business success. Office space, perhaps for airport administration or the Transportation Security Administration (TSA), could be the type of tenant that would desire the location.

Floors

Floor materials/condition include: carpet (banquet room, hall, restaurant, and lounge), epoxy (kitchen), and sheet vinyl (toilets). Floors are in generally good condition, but the kitchen was only in fair condition (pictures A-44, -45, -47, and -48).

One other floor surface (so to speak) was the exterior deck (picture A-46), which has an exterior carpet finish over a plywood substrate. The exterior carpet was partially removed at the time of our assessment site visit because of recent exploration under the deck for roof leaks, so its state of condition, other than in a state of disrepair, was hard to determine.

Walls

Wall materials/condition include: painted wood paneling (banquet room and restaurant), painted drywall or plaster (most other wall surfaces), and vinyl wall covering (toilets). Walls are in good condition, but the colors are dated and dark (pictures A-44, -45, and -47).

Ceilings

Ceiling materials/condition include: 2’ x 4’ suspended lay-in acoustic tile (most spaces), 1’ x 1’ tongue-and-groove acoustic tile (in corridors, above stairs, and at upper lounge seating), and painted drywall or plaster (soffits at changes in ceiling plane, and in kitchen and toilets). Most ceilings in the public and back-of-house areas are in good shape (pictures A-44, -45, and -47).

The new light fixtures installed in the 1997–2000 rehabilitation projects appear to be in good condition.

Other Components

Seating in the banquet room is a mix of types and condition. The tables in the banquet room are on the small side, but this appears to offer flexibility in configuring the room for different events. The furnishing colors are dated (picture A-44).

There are few furnishings in the restaurant seating area. The kitchen is a jumbled arrangement of kitchen equipment, with some equipment obviously removed, and other pieces lying on top of counters and stoves, awaiting an uncertain future (picture A-48).

Likewise, the lounge is in a state of transition, largely, but not completely, empty of furnishings. The bar casework is in good shape, but the color scheme for the space is dated (picture A-45). A future tenant would likely want to gut the space and start over.

7.1.3 Tower

The tower portion of the existing terminal was originally built as an ATCT during the 1950 terminal building project. It has three floor levels below the ATCT cab. The tower has not been used for air traffic control since presumably 1968, as photos of the 1968 expansion show the existing, taller, ATCT already built east of the landside public parking lot along West Washington Avenue.

Terminal tenants currently use the tower as office or storage space. The tower cab is not currently used for any specified function.

Floors

Floor materials/condition includes carpet at offices, resilient vinyl tile at storage, and sheet vinyl at the toilet. Floors are in good condition.

Walls

Wall materials/condition include painted drywall throughout, except for the tower cab, which has a painted plywood wainscot below the window sills of the cab. Walls are in fair to good condition.

Ceilings

Ceiling materials/condition include suspended 2’ x 4’ acoustic lay-in tiles at offices and painted drywall at toilet and storage rooms.

7.1.4 Accessibility

With a couple of exceptions, level one appears to comply with ADA accessibility guidelines throughout. The exceptions are transaction counter heights and signage at ticket counters and rental car counters. Level two spaces have partial, but not total, accessibility because of the large number of different floor levels within the level two footprint.

Outside the building, along the terminal loading/unloading curbside sidewalk, there are curb ramps for access at crosswalks.

8

8 FACILITY ASSESSMENT MECHANICAL SYSTEMS

8.1 SITE UTILITIES

Domestic Water

A 3-inch domestic water service line provides service to the terminal. It enters the building in the basement northeast mechanical room. The service is in good condition and the section from the existing underground water meter in the parking lot to the building appears to have been installed in approximately 2001. The water meter appears to be in poor condition (picture M-8) and is due for replacement by the water purveyor.

Fire Protection Water

The 2000 terminal renovation drawings site plan shows a 6-inch fire service that connects to the city branch main upstream of the domestic service and enters the building in the basement northeast mechanical room. The fire service to the terminal also feeds fire hydrants in the terminal area and is arranged in a loop around the entry drive. Two fire hydrants (picture M-9) are fed from the loop with underground isolation valves and are located at the east and west ends of the entry drive. Fire hydrants were not observed on the secure airside of the site.

The building fire service has an integral pumper fire department connection on the building's north face and is in good condition. It appears to transition to a 2½-inch backflow, 3-inch main just after it enters the building. The 6-inch fire service should be adequate to fire sprinkle the building given the 105-pound-per-square-inch (psi) pressure indicated at the incoming service. However, the present 3-inch branch appears undersized for present coverage and future growth.

Natural Gas

The building is served by Cascade Natural Gas with the gas meter located on the exterior of the building. The meter appears to be a 2.0 to 5.0 psi pressure output given the small size of the piping. The main service does not have a seismic shut off valve. The service appears to be wrapped steel below grade and is maintained by Cascade Gas upstream of the meter. The service size appears adequate and presently provides the required energy to heat the building and most of the domestic water.

Sanitary Sewer

The building is served by 6-inch sewers on the west (installed in 2001) and east (installed in 1950) sides of the building. The east side of the building has an underground grease vault of unknown size that connects to the eastern sewer discharge main. The grease vault is presently inactive but reportedly caused clogging and vented noxious fumes too close to the building air intakes when it was active. The sewer cleanout provisions appear to be lacking access but no significant blockages have been reported. Some of the underground pipe is listed as transite on the existing drawings and may be in poor condition.

Site/Building Storm Sewer

The building is served by a single 10-inch storm sewer on the east (original) side of the building that serves the building and parking lot and reportedly drains under the airfield into Spring Creek on the far south side of the airfield. The 10-inch storm sewer has an 8-inch branch that extends under the center of the building to pick up the building drains and catch basins on the west side of the site. The storm sewer cleanout provisions use 42-inch manhole accesses on each side of the building and no significant blockages have been reported. The deicing system reportedly discharges to the storm sewer with no recycle system.

Area and Parking Drainage

The drainage is connected to the single 10-inch storm sewer on the east (original) side of the building that serves the building and parking lot. Various catch basins and area drains are connected to the system (picture M-1). The system appears to provide adequate drainage except where pavement cracks or settling has occurred. The system reportedly has occasional clogs and better cleanout provisions are desired (picture M-6).

8.2 HEATING VENTILATING AND AIR CONDITIONING (HVAC)

HVAC Renovations

The building's original mechanical design included a steam boiler with cast iron radiators providing heat and various ventilation and air handling systems. Nearly all of the original mechanical systems have been removed or were abandoned during renovations over the years. The Traho Architecture as-built drawings that are dated 2000 show that nearly all of the HVAC systems were replaced with new as part of the Phase 1-2-3 Terminal Rehabilitation Project.

Rooftop HVAC

In 2000 the Airport installed new rooftop gas and electric HVAC units on all of the roof areas of the building that serve the first and second floors. The units were low cost tubular aluminized steel heat exchangers with integral direct expansion refrigerant cooling coils/compressors and condensers. The rooftop unit compressors/fans are energized by rooftop conduits via integral disconnect. Heating energy is provided via roof-mounted, steel, medium-pressure gas piping with pressure regulators for each unit. The rooftop units have integral supply fans, 30% filters, air economizer dampers, and gravity relief hoods (picture M-12) that allow the units to use outside air as the first stage of cooling when it is below 55°F outside and thermostats are calling for cooling inside. The rooftop units distribute conditioned supply air to double-walled insulated ductwork mounted on the roof with roof penetrations to diffusers below (picture M-13).

- Heating: The rooftop units use aluminized steel heat exchangers as part of their heating system. These typically last 15 to 18 years before requiring replacement. Assuming the units were installed around 1998–2000 they likely have 4 to 8 more years before requiring replacement.
- Cooling: The rooftop units use R-22 cooling compressors with brass/copper components with a typical life of 12 to 15 years with electronics problems typically after year 10. Assuming the units were installed around 1998–2000 they likely will start requiring significant maintenance within the next few years and experience compressor failures within the next 4 to 8 years. The R-22 refrigerant used by the cooling system is scheduled for phase-out between 2010 and 2020 and will become significantly more expensive to recharge in the last few years of the rooftop units' useful life.
- Steel Casings/Dampers: The steel casing and accessories of the rooftop units appear to be in good condition, showing little rust. However, since their estimated life is about 15 years, significant repainting, damper seizure, and rust failures will likely occur in the next 5 years.
- Controls: Electronic circuit boards within the rooftop units typically start to fail within 10 to 12 years and are likely not available after 20 years. Significant controls problems and failures will likely occur in the next 5 years requiring increased parts costs and proprietary maintenance service calls.
- Rooftop Ductwork: The rooftop ductwork is a mix of aluminum, galvanized steel, and stainless steel and is in fair condition (picture M-18, -19, and -20). It appears many of the joints have cracked sealant, so moisture/mold may be growing in the insulation layer and rusting the inner duct. The roof blocks and fasteners and supports for the ductwork are in poor condition and generally will need replacement in the next 5 years. Rooftop ductwork

also increases heat loss and reduces heating efficiency and should be eliminated if possible. Rooftop ductwork also makes it very difficult to access roof leaks and reroof the building.

- Rooftop Gas Piping: The existing gas piping is all milled steel with steel or cast iron fittings. The pipe is very rusty (pictures M-14 and M-17). Although the pipe will likely last another 20 years, it will be very difficult to re-roof under the failing support blocks (picture M-24). The piping should ultimately be reinstalled in the ceiling cavity (inside) or galvanized/coated steel replacement pipe should be used.

Miscellaneous Split DX Gas Electric HVAC Units

The HVAC renovations completed by tenants in the year 2000 also installed a few indoor residential gas furnaces with rooftop compressor condenser units. The units installed were low cost 80% to 90% efficient gas furnaces with tubular aluminized steel heat exchangers with integral direct expansion refrigerant cooling evaporator sections. Similar cooling only units are provided for spot cooling of high heat output areas (pictures M-7, -11, and -31). The rooftop unit compressors/fans are connected to the indoor evaporator sections with armaflex foam insulated copper CCR refrigerant piping. Various unitary through-the-wall "window shakers" that are in very poor (likely inoperable) condition (picture M-25) are also evident for spot cooling

- Condition: The existing split DX gas electric units are in fair condition. They typically have a 15-year life and appear to be in their last 5 years of life. Their refrigerant likely will need recharge and controls upgraded before they are replaced. Gas flues also appear to have issues with a few remaining years of life.

Miscellaneous Exhaust Fans and Heaters

The exhaust fans appear to be mostly new as of the 2000 renovation. The fans are generally rooftop mushroom exhaust fans of aluminum construction (picture M-15). These types of mushroom fans typically can have a 20- to 30-year life and, therefore, should have another 10 to 15 years of life with proper maintenance. Some of the original swamp cooler and grease exhaust fans (pictures M-21 and M-22) for the kitchen appear to be operational still (inactive during survey) but are in very poor rusty condition and should be replaced if still needed. Various electric heaters in fair condition are provided for freeze protection and spot heating (pictures M-5 and M-26).

HVAC Controls

The existing controls are generally stand-alone programmable type thermostats (picture M-47) and appear to have been mostly new as of the 2000 renovation drawings. The programmable thermostats appear to have 7-day-per-week time schedules and night setback capabilities and should remain fairly trouble free for another 10 to 15 years. A few older mechanical nonprogrammable (mercury

bulb) thermostats exist (picture M-35) to serve the smaller units. Although these thermostats are 15 to 20 years old they likely will function for many more years.

Interior Ductwork

Interior supply and return ductwork appears to be mostly new as of the 2000 renovation and is in good condition (picture M-33). The older ductwork installed in earlier renovations and for the restaurant is in poor condition and should be replaced. The older ductwork appears to be full of dust and some of the sound lining was observed to be deteriorating. Some of the ductwork in the first floor lobby installed below the ceiling is damaged and unattractive because of the limited depth of ceiling cavity available (picture M-32).

8.3 PLUMBING

Plumbing Fixtures and Fittings

In public toilet rooms, fixtures are generally vitreous china that is in fair to good condition, having been upgraded over the years. Public toilet rooms appear to be ADA compliant. Urinals have battery-powered, infrared flush valves (picture M-28). Water closets have manual flush valves (picture M-29). Lavatories are self-rimming with mixing valve faucets (picture M-27).

The restaurant, airline, and miscellaneous toilet rooms are a mixture of old and new fixtures and are generally in poor condition (pictures M-46 and M-48) and not ADA compliant.

Domestic Cold Water

The 3-inch (105 psi) domestic water service originating in the old boiler room is copper with brass valves (picture M-38) and is in good condition with a few reported leaks mostly caused by freezing. The domestic water service appears to be missing a backflow preventer (cross connect violation) and has a single pressure regulating valve (picture M-43) that lacks the code-required relief downstream. Some existing galvanized steel piping in poor condition is evident in the older parts of the building but it is not clear if it is still active. Piping insulation is torn and missing in many locations and is in need of repair (picture M-34). Hose bibs serving the building exterior and other locations appear to be in poor condition and need replacement. A sub meter is installed on the service to the restaurant tenant water systems. Shock arrestors appear to be missing on most of the fixtures, causing water hammer.

Domestic Water Heating

The gas and electric water heaters appear to be mostly new as of the 2000 renovation drawings and are in fair to good condition. The gas heaters are generally 90% efficient condensing type (picture

M-44) with a few 80% efficient, gas instantaneous (picture M-50 and M-16) and electric heaters serving outlying fixtures. Domestic water heaters of this type typically have a 10- to 18-year life and thus likely have 5 to 8 years of remaining life. Domestic water expansion tanks were provided per code for tanks in the 2000 renovation drawings. These tanks are steel with bladders and likely near the end of their estimated life of 8 to 12 years.

Domestic hot water systems are mostly copper with brass valves in fair condition with a few reported leaks. Thermostatic mixing valves (picture M-45) appear to provide lower temperature water for public lavatories per code requirements. Hot water circulation pumps appear to be 2000 renovation vintage in fair condition. Since these small pumps typically have an 8- to 12-year life they will likely need replacement soon. Piping insulation is torn and missing in many locations and is in need of repair.

Sanitary Waste and Vent Piping

Most of the main waste piping is cast iron (picture M-36) in good condition with a mixture of hub and spigot and no hub joints. Branch piping and vent piping is a mixture of galvanized in poor condition and copper in fair condition. Some plastic waste and vent piping is present where repairs and renovations have taken place (picture M-37). Drains appear to be missing trap primers at many locations and that may be the source of sewer fumes.

Roof Drainage System

Flat roofs drain via cast iron roof drains with cast iron grates (picture M-10). All roofs appear to overflow to lower roofs or over the lip of the roof such that most roofs do not require overflow drains. Roof drain piping is mostly cast iron in fair to good condition with some galvanized noted on smaller roofs in poor condition.

Interior Gas Piping System

Gas piping (estimated 2.0 to 5 psi) is typically black steel with screwed joints inside the building. Pressure regulators with black steel vent piping are provided for indoor furnaces and water heaters. All indoor gas piping appears to be in good condition with no reported leaks. Indoor medium-pressure gas piping is normally routed in welded piping for public facilities. However, the existing airport piping is screwed steel that can leak eventually from thermal expansion/contraction at the screwed joints.

8.4 FIRE SPRINKLER SYSTEM

Main Service

The fire protection service entrance includes a 6-inch main (picture M-41) (105 psi) (picture M-42) in fair condition with a newer approximately 3-inch backflow preventer assembly that connects to the building distribution system (picture M-39). A 4-inch Siamese pumper connection (FDC) (picture M-2) is located on the face of the building about 75 feet from the nearest fire hydrant. An alarm gong (picture M-3) is located above the FDC.

Distribution Piping/Valves

The distribution piping appears too small for the available pressure and length of piping to the most remote zone. The larger piping is generally painted steel with mechanical joint couplings (picture M-40) that shows evidence of leaking at the joints. The smaller piping is screwed black or galvanized steel (picture M-4) that also shows evidence of leaking at joints. Branch and main valves appear to have tamper switches as required by NFPA.

Fire Sprinkler Heads

Heads within the terminal are a mixture of semi-recessed and exposed of varying vintages (picture M-30 and M-49). Heads generally are in good condition but appear to have lower hazard spacing than required by NFPA in the wood-framed building areas. External canopies and overhangs are generally served by dry sidewall heads from the wet fire sprinkler system.

9

9 FACILITY ASSESSMENT ELECTRICAL SYSTEMS

9.1 POWER DISTRIBUTION SYSTEM

Electrical power to the terminal building is routed underground from a pole located on the north side of West Washington Avenue to a pad-mounted switch in the north parking lot. From the switch, power is routed underground to transformers at the terminal building and at the control tower. The terminal building is served from a 500kVA pad-mounted utility transformer on the east side of the building. The main electrical switchboard is located outside in National Electrical Manufacturer's Association (NEMA) 3R free-standing enclosures against the east building wall. The main switchboard is rated for 2,500 amps at 208Y/120 Volt, 3-Phase. It has a 2,500-amp main circuit breaker and distribution breakers feeding panelboards throughout the building. The main switchboard was installed in approximately 2000 and is in good condition with some minor rust on the enclosure exterior.

All of the panelboards throughout the building were replaced in 2000. Older panels were abandoned in place most with the interiors removed. Some panels are located in outdoor enclosures on the roof, which is not ideal. The panels appeared to be in good to fair condition. Many of the feeder conduits are routed exposed on the roof supported on wooden blocks.

There are outlets for electric vehicle charging located on wooden posts on the east end of the building (airside).

9.2 EMERGENCY POWER SYSTEM

Battery packs provide emergency lighting for the terminal building. There is no emergency generator.

9.2.1 Lighting

Exterior Lighting

The exterior light fixtures are mostly fixtures with high-pressure sodium lamps and a few fluorescent fixtures. They are controlled by photocell. The apron lighting consists of building-mounted flood

lights and pole-mounted flood lights. Parking lot lighting consists of pole-mounted architectural (round) high-pressure sodium fixtures on concrete poles.

Interior Lighting

The light fixtures in the public spaces are a combination of recessed fluorescent troffers and surface-mounted fluorescent. Other areas have surface-mounted and pendant-mounted fluorescent wraparound and strip lights. The second floor has some recessed can lights and some custom fan/lights in the vacant restaurant. The fixtures are in fair shape. Many of the lenses are discolored from age.

9.2.2 Fire Alarm System

The existing fire alarm system is an addressable Simplex Grinnell 4100 fire alarm system. Pull stations are located at the exits and speaker/strobes are located throughout the building. The fire alarm system appears to be in good condition.

9.2.3 Clock System

There is no central clock system. All clocks are stand-alone battery operated.

9.2.4 Sound/Paging System

There is an old speaker paging system with two amplifiers (one for inside, one for outside) with eight interior zone controls. This is generally acceptable.

9.2.5 Telephone/Data System

The telephone service to the building is all copper telephone wiring. Fiber optic cable service was installed from the terminal to the airport offices to provide wifi services to passengers. The phone system consists of 66-type wiring blocks and patch panels. There is a digital Inter-Tel phone system with digital handsets in some areas. Several telephone closets are located throughout the building. Some of the old rotary analog handsets have been abandoned in place in the departure lobby.

There are many television satellite discs located on the roof (Dish Network, Direct TV and others). Most appear abandoned.

TSA has a Dell server rack located in one closet that was installed in 2009.

10

10 OPERATIONS ASSESSMENT

10.1 SUMMARY

This section examines how the various portions of the terminal building function in terms of providing service to the travelling public. In reviewing specific functions, however, we also have the opportunity to assess more subjective components of the airport user's travel experience relating to the terminal facility. Issues such as architectural character, the presentation of community amenities, a sense of welcome to the community, and a sense of community pride are also important factors to consider when discussing the terminal facility. The current terminal at YKM leaves room for improvement with regard to these attributes as well as more objective customer service issues. During future expansion planning, any design should consider the emotional, as well as functional, passenger experience the Airport Board wishes to provide for travelers using the terminal building.

10.1.1 Departures Process

Curbside

Given current levels of commercial service, there is an ample length of available curbside for passenger loading and unloading. The drive in front of the terminal offers frontage for easy loading and unloading from private vehicles, taxis, and buses and extends eastward beyond the terminal should terminal user demand exceed the covered frontage available. The curbside immediately in front of the terminal is covered providing passengers with shelter from inclement weather. However, the curbside width is somewhat narrow, and the north-of-building location tends to make the loading area a bit dark. The location of the concrete-clad steel columns that support the roof canopy overhead can interfere with the opening of passenger-side car doors along the curb. The vestibule at the main terminal entrance is the only terminal entry on the curbside and serves both departing and arriving passengers, which can lead to congestion if departure and arrival traffic occur simultaneously.

Ticket Lobby

The ticket lobby is immediately inside the main terminal entrance. Given current levels of commercial service, the number of ticket counter positions is adequate to handle passenger volumes, although this area could become overcrowded during peak periods of operation when service improves. The orientation of the ticket counters (perpendicular to the curbside); the separated

physical locations of airline ticket counters; as well as the inadequate size of the passenger queuing areas pose significant challenges to efficient passenger processing and circulation, but the current low level of passenger volumes has kept these shortcomings from being major problems.

The former travel agency customer service counter in the ticket lobby could contribute to circulation congestion if passenger volumes were higher. The amenity of a travel-related tenant is a positive feature should it return, but the location should be reconsidered during future terminal planning efforts.

The overall passenger processing flow diagram for the terminal is a product of the original small scale 1950 passenger terminal. Given the passenger demands in that era, the layout was efficient and properly scaled. Today's air passenger facility demands are far different. Significant increases in passenger volumes would bring this terminal to gridlock in a number of areas, such as the building entry, the ticketing queues, the ticket counters, and the circulation space connecting these functions.

Airline Ticket Office (ATO) and Baggage Operations

ATO space for Horizon Airlines and a future air carrier appear to be adequate for the immediate future. However, the physical separation of the ATO and baggage areas (as well as the ticket counters) is an inefficient configuration brought about by earlier decisions to expand the building in a cost efficient rather than functional manner.

The Horizon Airlines outbound baggage handling area is currently undersized because of the addition of Transportation Security Administration (TSA) baggage screening operations in the makeup area. Baggage cart circulation is highly constrained, and the airline employee lockers and break area have no enclosed space. An air cargo operation coexists in the makeup room with a public entry and transaction counter opening off a small parking area west of the terminal building. Additional storage area for equipment would be useful.

Concessions

Currently, there is no food and beverage concession in the terminal building. There is a small, vacant space on the ground floor for a coffee/snack-type concession, and there is a vacant restaurant/lounge on the second floor. These concessions are both on the landside (non-secure) of the terminal, and there are no provisions for airside (secure) concessions. Passengers would benefit from concessions, but the small volume of passenger traffic makes it difficult to support the expense of providing the service. An airside food and beverage concession, preferably with a view to airside, would be a big improvement to customer service if passenger volumes supported the investment.

Public Services

Public services include items such as restrooms, telephones, vending machines, automated teller machines (ATM's), and other conveniences provided for the passengers. The primary public restrooms in the main terminal are adequately sized, and have been renovated in recent years. Newer terminal buildings typically include a small "family restroom" wherever men's and women's rooms are located. A family restroom is generally handicap-accessible and includes a baby-changing table. While this type of service may not be possible at the existing restroom location, it is an idea worth exploring should new restrooms be considered as part of future terminal improvements.

A freestanding ATM machine is adjacent to the main entrance in the Ticket Lobby. However, there is no business center or location to send a fax or plug in a computer in the terminal. A small area with these provisions would provide an added level of service to the business traveler.

Security Screening

The passenger security screening checkpoint is immediately adjacent to a ticket counter area. This results in a potential and unfortunate conflict between ticketing and checkpoint queuing lines. These lines, when concurrent, contribute to overall congestion in the ticket lobby and the main circulation areas in the non-secure portion of the terminal building. If future passenger levels or TSA screening requirements dictated a larger footprint for screening, the terminal would have to give up gate lobby space to accommodate the increase.

Passenger Gate Lobby and Boarding Area

The passenger gate lobby and boarding area is south of the ticket lobby and adjacent to the aircraft apron at ground level. It was expanded during the 1997–2000 terminal rehabilitation project, filling in the space between the two diagonal passenger circulation concourses that were added during the 1968 expansion project. Unfortunately this infill diminished the airside views from the restaurant/lounge operation, one of the primary assets of the second-floor concession.

The Airport could improve airside passenger service by providing family restrooms; food and beverage service; sit-down counters for working on laptop computers; or café-type tables and chairs in addition to the traditional gate lobby seating.

10.1.2 Arrivals Process

Arrivals Entrance/Greeters' Area

Upon exiting their aircraft, passengers enter the terminal by way of one of five arrival/departure gates. Once inside the gate lobby, they can proceed to the airside exit doors adjacent to the passenger

security checkpoint. These doors allow passage into the Ticket Lobby space, which connects to the rental car counters and the baggage claim lobby beyond. The limited size of the Ticket Lobby space and the arrangement of functions requiring queuing in a main circulation area causes this space to become quite crowded when there are many passengers and meeter/greeters.

Baggage Claim/Rental Cars

The Baggage Claim and Rental Car area functions adequately today because of the small volume of users it serves. Should, as in times past, two or three air carriers serve the terminal, this area would be too small for the number of arriving passengers during peak periods. In addition, the single bag slide would be unable to handle more than one arriving flight at a time.

The rental car counters would also be congested, because the queuing area would become congested during peak periods with passengers circulating through to bag claim for their baggage.

Public Services

Currently, there are small restrooms near the baggage claim area; however, these restrooms are not along the path of travel for arriving passengers and are difficult to locate. Larger restrooms visible from the bag claim area would be preferable.

A number of other items in and around the baggage claim area that would improve passenger service include baggage trolleys, seating, and a visitor's welcome/information desk.

Arrivals Curb

See earlier discussion on departures process. The curbside has adequate length for the passenger volumes encountered and is largely covered to keep passengers protected from the weather. As was noted with the departures curb, the columns supporting the roof canopy are positioned very close to the drive, and pose a hazard to passenger-side car doors.

10.1.3 Building Services

The terminal building operates for the most part as a stand-alone facility without dependence on centralized City or County services for daily operations. Relative to services that the building requires on-site for daily operations (mechanical, electrical, communication, elevator rooms, etc.), the terminal has all the functions that it presently requires.

However, any future expansions must revisit the issue of fire protection with an eye to present code requirements for fire sprinklers and anticipated facility size. While observing that the terminal has existing support spaces for utilities and services, these spaces are in some cases undersized because

of incremental growth of demand or addition of new equipment over time. Relocation and/or resizing of spaces are deemed prudent if and when conceptual design for a facility expansion begins.

TSA-required facility security systems include an Access Control and Monitoring System that monitors doors and fences along the Airport Operations Perimeter. The operating system and software for these functions are housed in the Airport Administration Offices. Approved airport personnel are issued badges that allow access via card readers at each door or gate.

10.1.4 Administrative Services

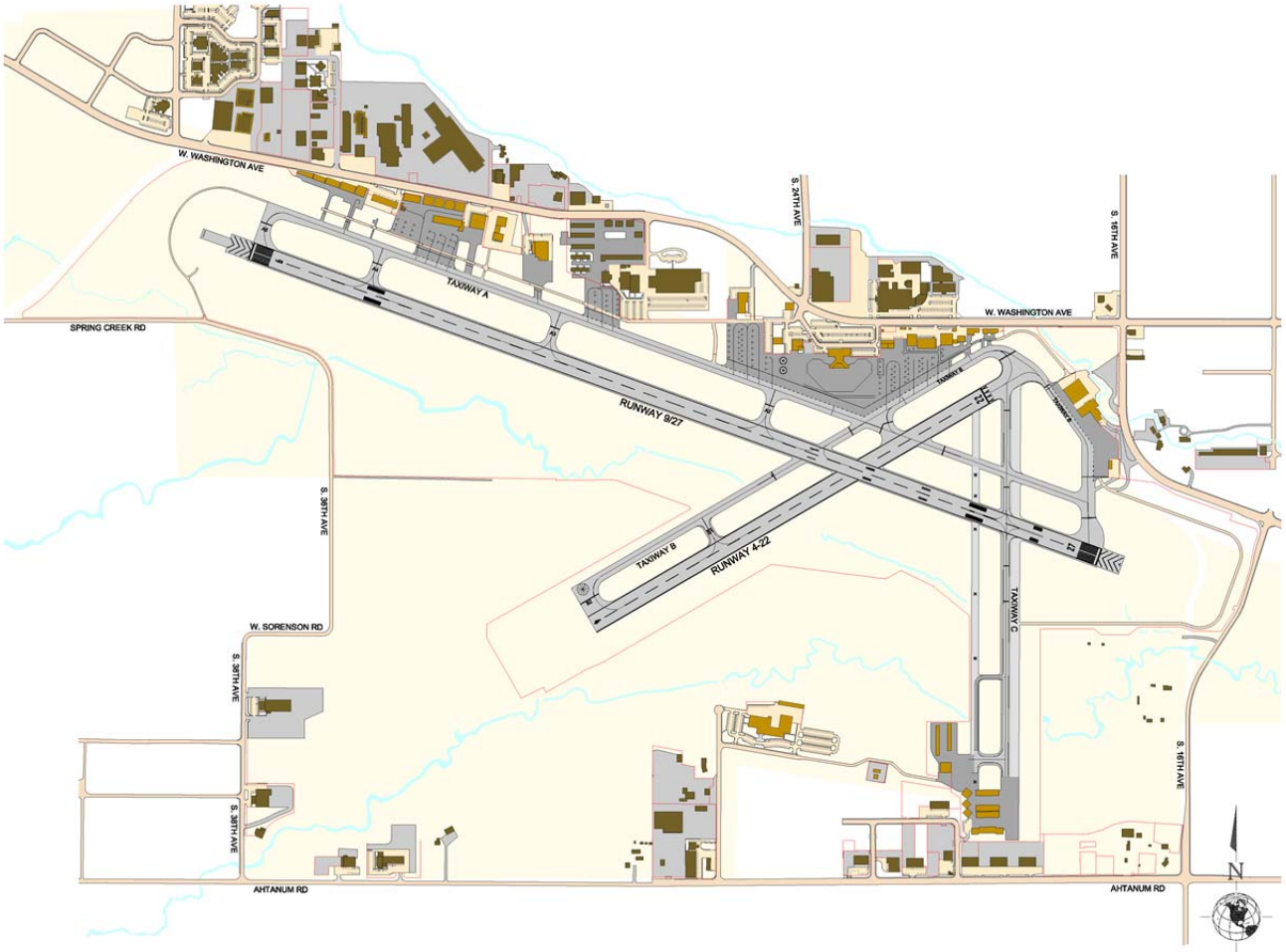
The Airport Administrative Offices are adjacent to the airfield. The space contains a reception area, small conference room, and offices for airport management. Generally, the office space appears to be adequate for its current use.

There is no Emergency Communications Command Center at the airport. Emergency events are managed from County offices downtown. There is no Airport Police Office at the airport. Police services are assigned from Police Department Offices downtown. Neither of these services was mentioned by staff as being deficient.

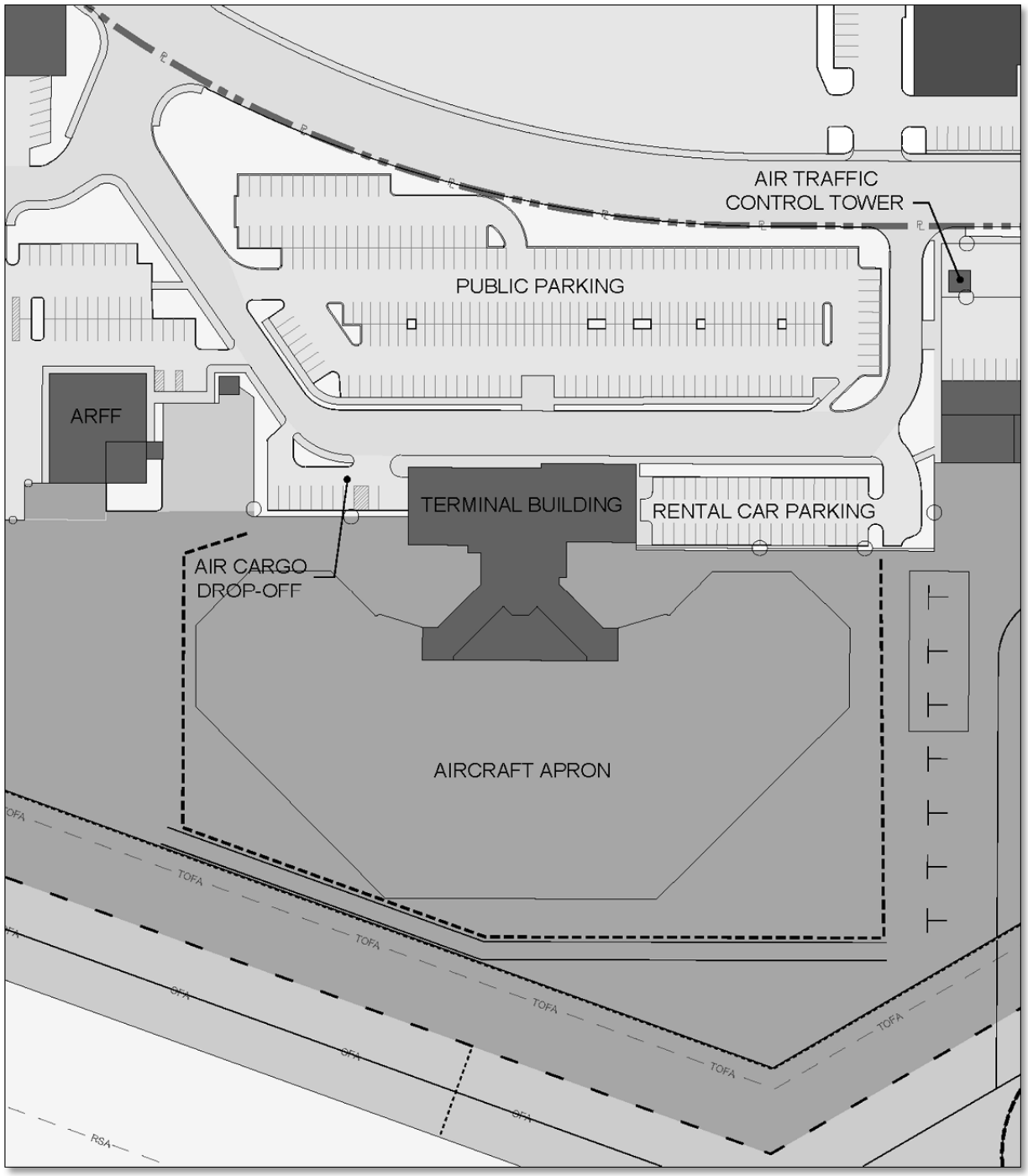
A

A. BUILDING ASSESSMENT FLOOR PLANS

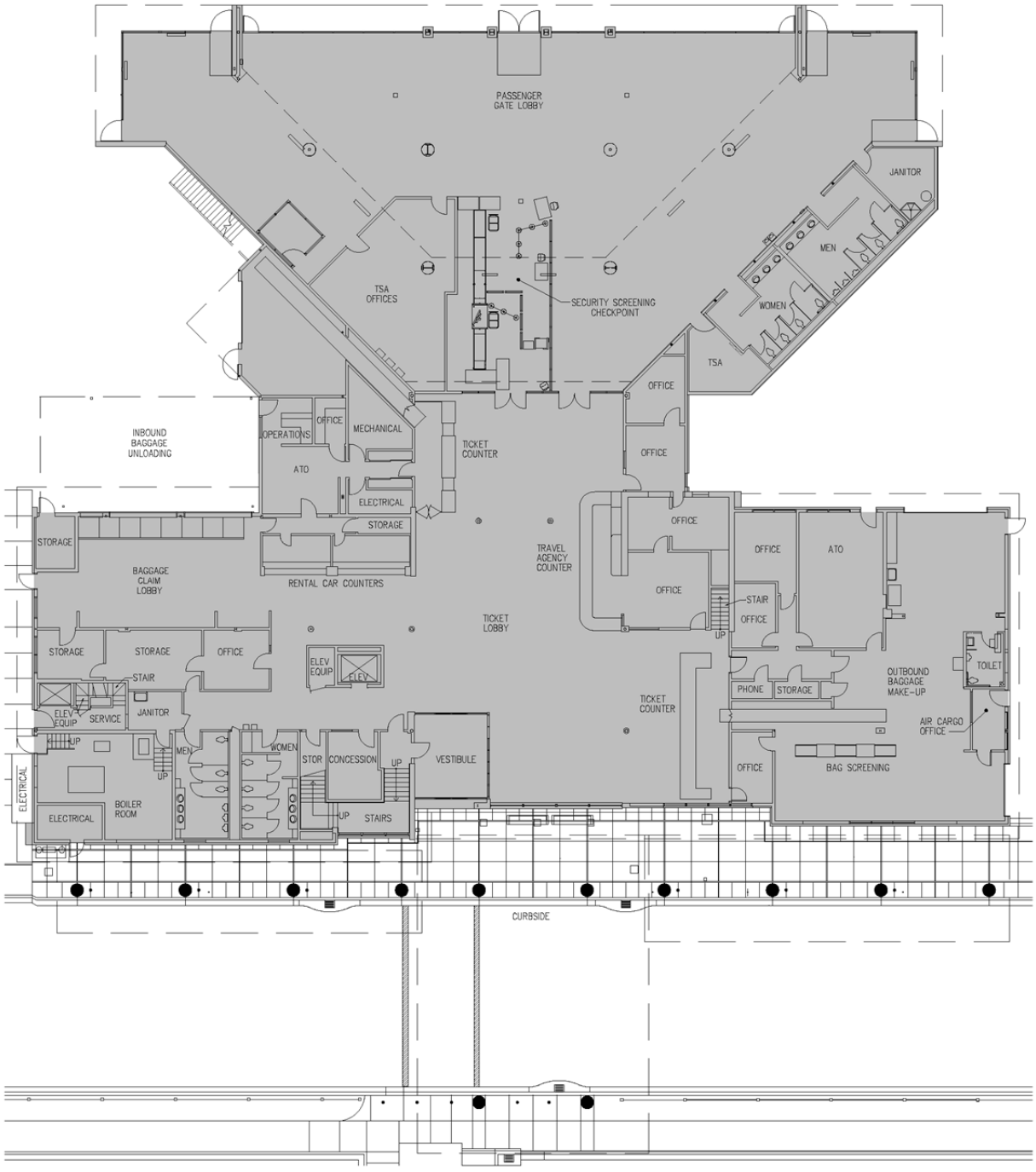
A.1 AIRPORT PLAN



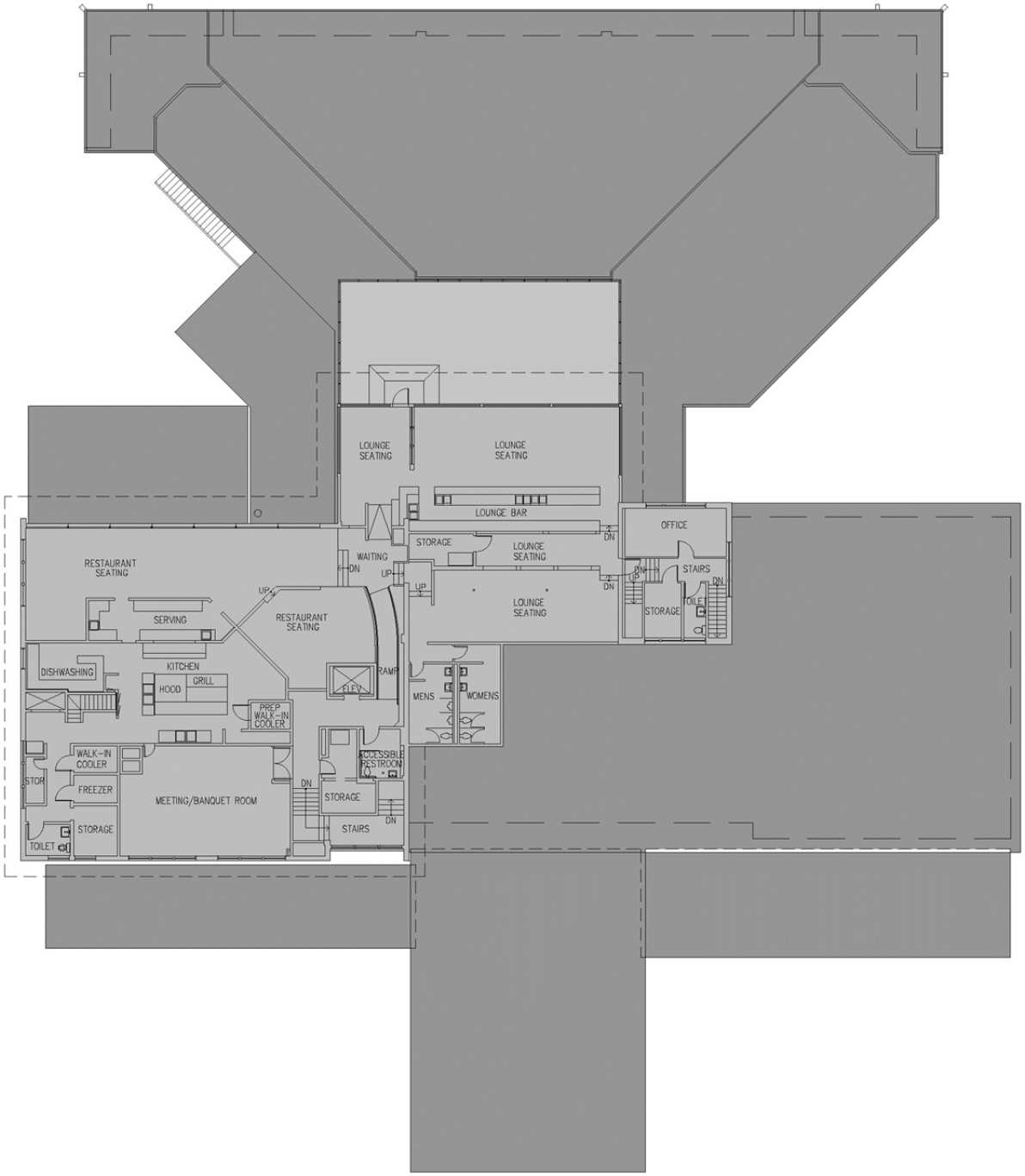
A.2 TERMINAL AREA PLAN



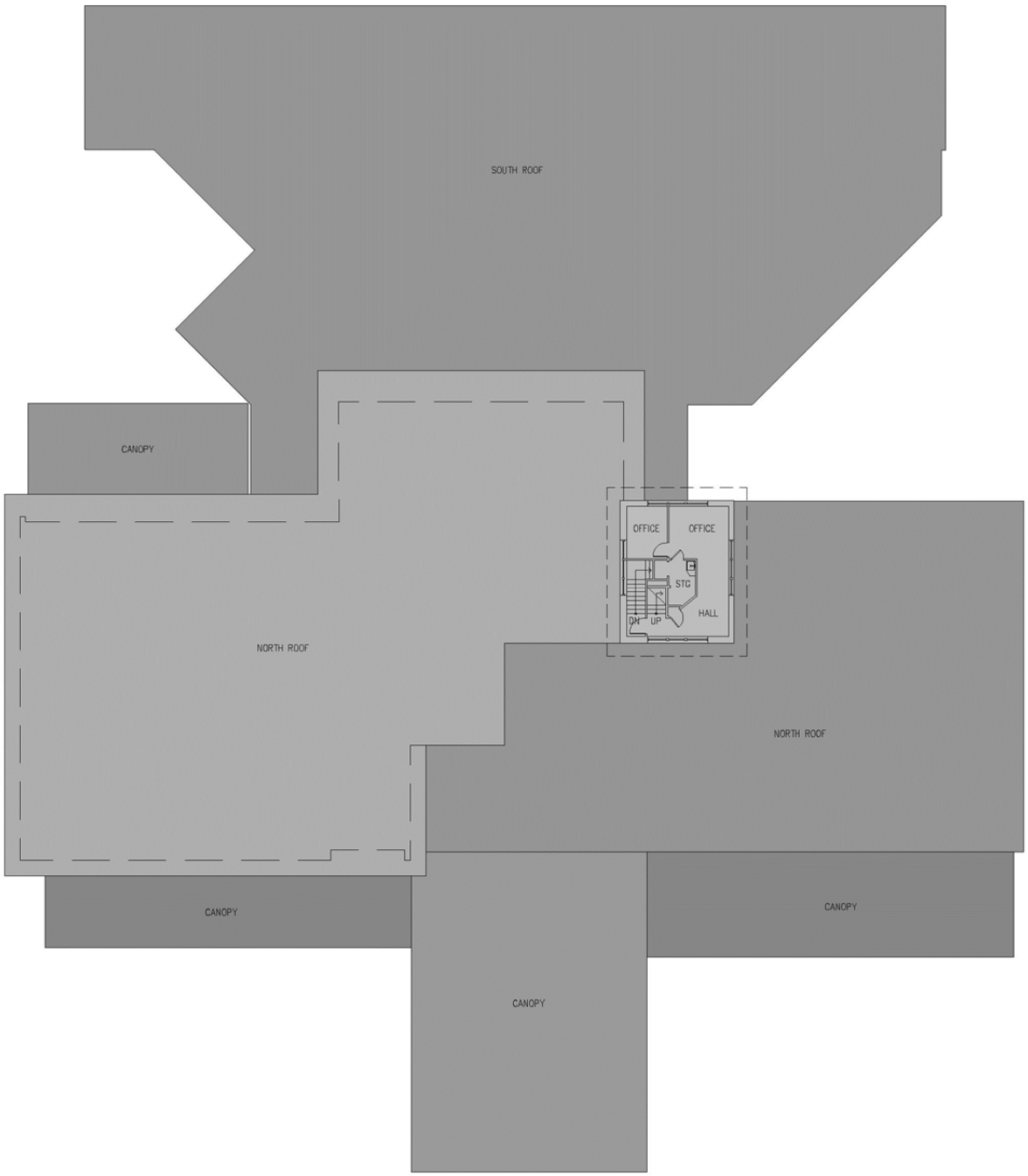
A.3 TERMINAL PLAN FLOOR 1



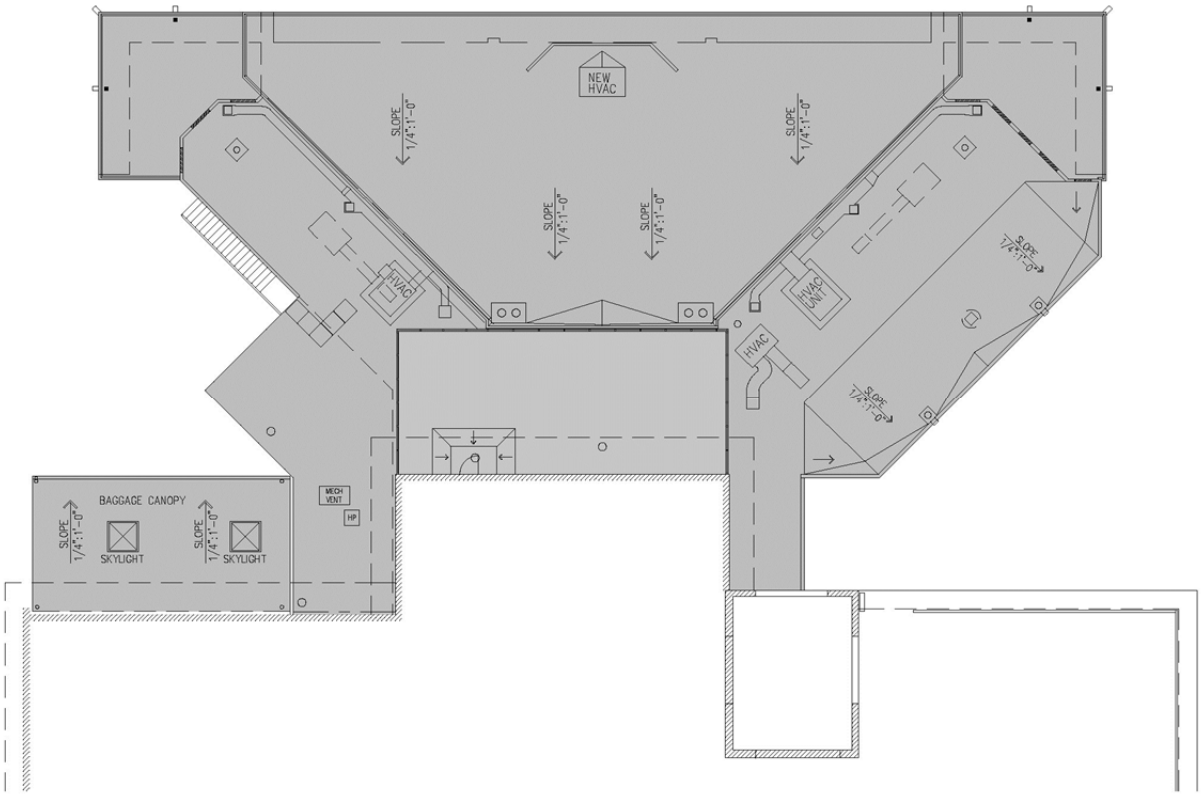
A.4 TERMINAL PLAN FLOOR 2



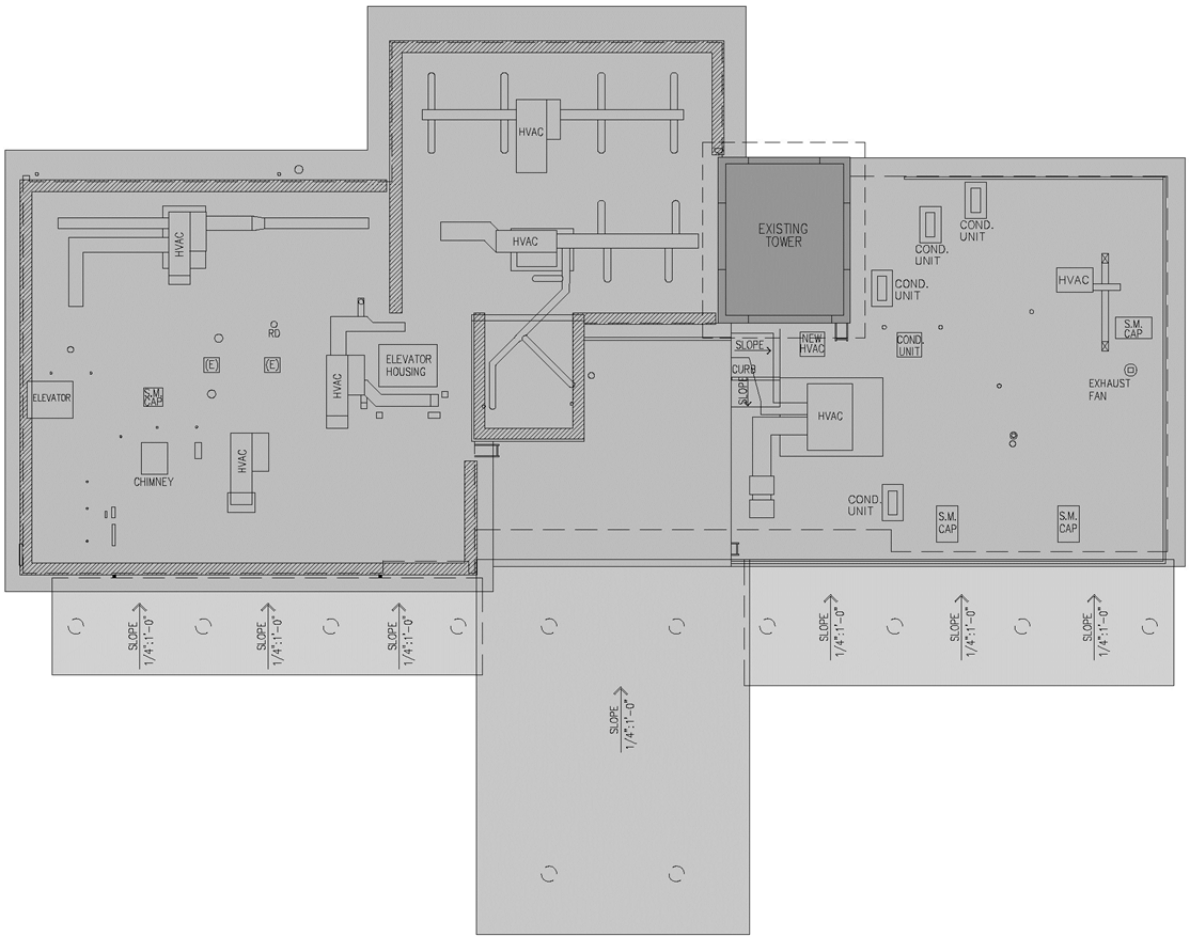
A.5 TERMINAL PLAN FLOOR 3



A.6 TERMINAL PLAN SOUTH ROOF



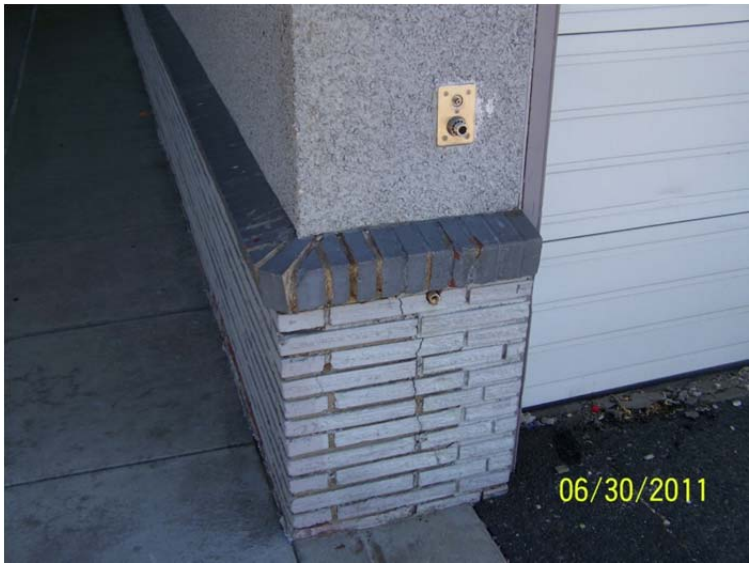
A.7 TERMINAL PLAN NORTH ROOF



B

B. BUILDING ASSESSMENT DATA INVENTORY PHOTOS

B.1 STRUCTURAL SYSTEMS



S-1: Cracked and deteriorated mortar joints in exterior brick veneer

S-2: Deteriorated caulking at exterior face brick veneer

S-3: Evidence of ponding at roof

S-4: Roofing system and flashing in need of repair at low roof at former airport traffic control tower

S-5: Water damage in fascia and overhanging soffit

S-6: Water damage at end of exposed roof beam

S-7: Roof top mechanical equipment

S-8: Roof top mechanical equipment

S-9: Separation in overhang roof at building parapet

B.2 ARCHITECTURAL SYSTEMS

A-1: Air cargo office

A-2: Departures curb

A-3: Covered curbside

A-4: Arrivals curb

A-5: Electrical service entry

A-6: Baggage claim entry

A-7: Inbound baggage area

A-8: Outbound baggage makeup access (inactive)

A-9: Portable aircraft loading stair

A-10: Airside gate lobby access to apron

A-11: Airside gate lobby access to apron

A-12: Airside exterior courtyard for staging ground service equipment

A-13: Airside exterior courtyard for staging ground service equipment

A-14: Alaska Airlines outbound make-up access

A-15: Roof adjacent restaurant space

A-16: Roof adjacent restaurant space

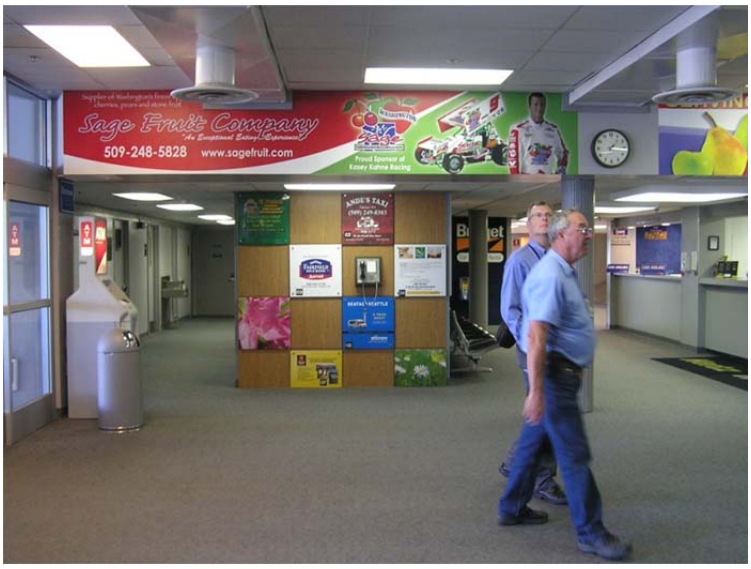
A-17: Exterior deck adjacent lounge

A-18: Former airport traffic control tower (ATCT) adjacent roof level

A-19: Former ATCT cab

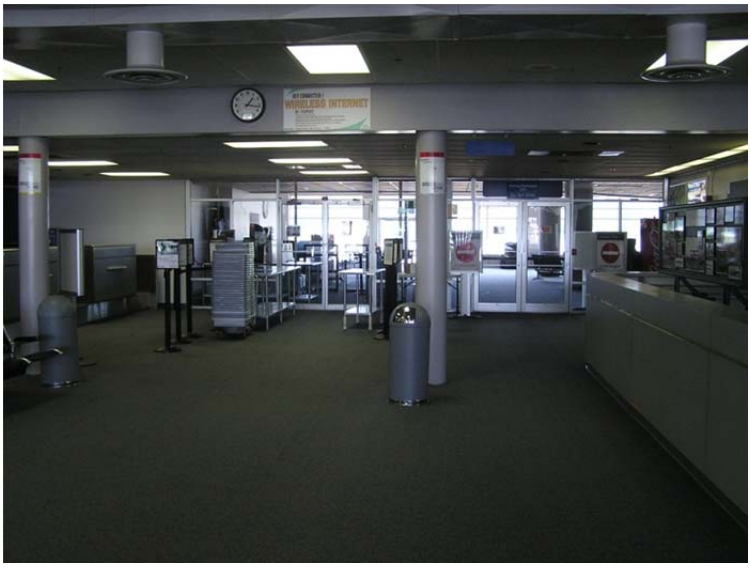
A-20: Roof-mounted mechanical equipment of various vintages

A-21: Terminal building main entry



A-22: Hotel/transportation services phone station

A-23: Rental car and airline ticket counters (airline counter inactive)



A-24: TSA passenger checkpoint and gate lobby landside exit)

A-25: Travel agency counter and offices (inactive)

A-27: Alaska ticket counter

A-28: Ticket lobby seating

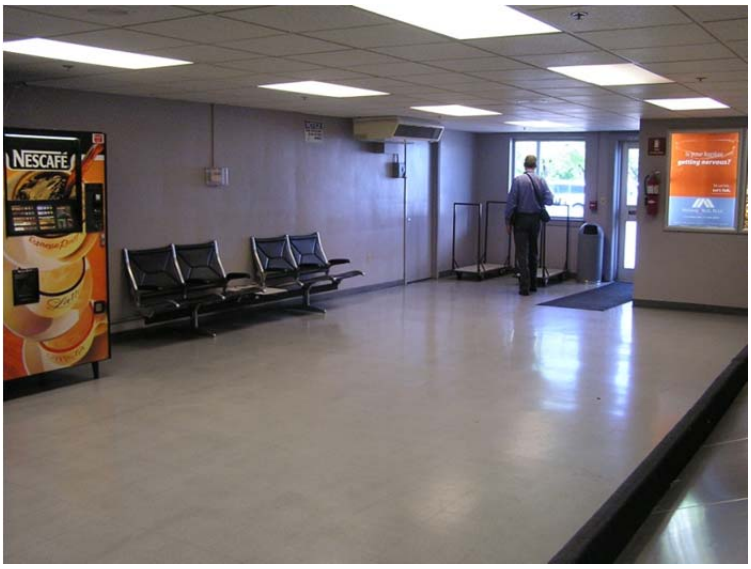
A-29: Exposed ductwork in ticket lobby ceiling

A-30: Food/drink concession (inactive)

A-31: Access to public restrooms and drinking fountain

A-32: Rental car counters

A-33: Inbound baggage claim slide



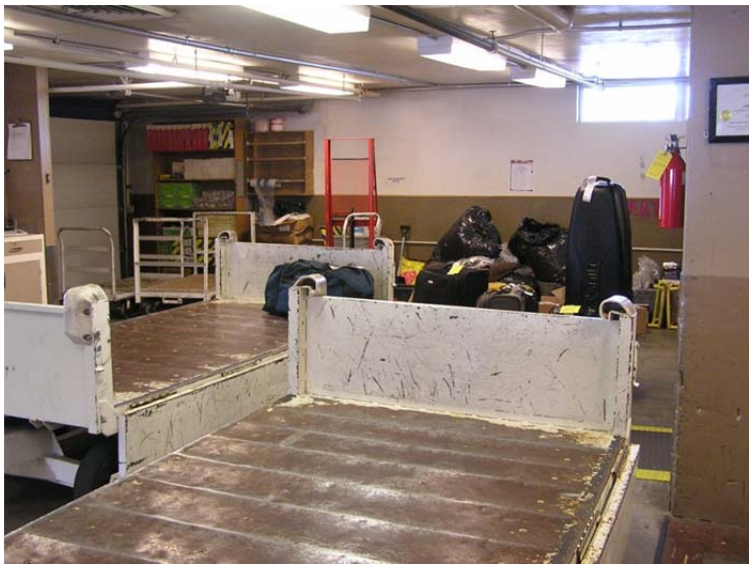
A-34: Baggage claim lobby

A-35: Horizon ATO access to ticket counters

A-36: Horizon ticket counter baggage belt entering the makeup area

A-37: TSA outbound baggage screening operation

A-38: Horizon staff lockers and break area

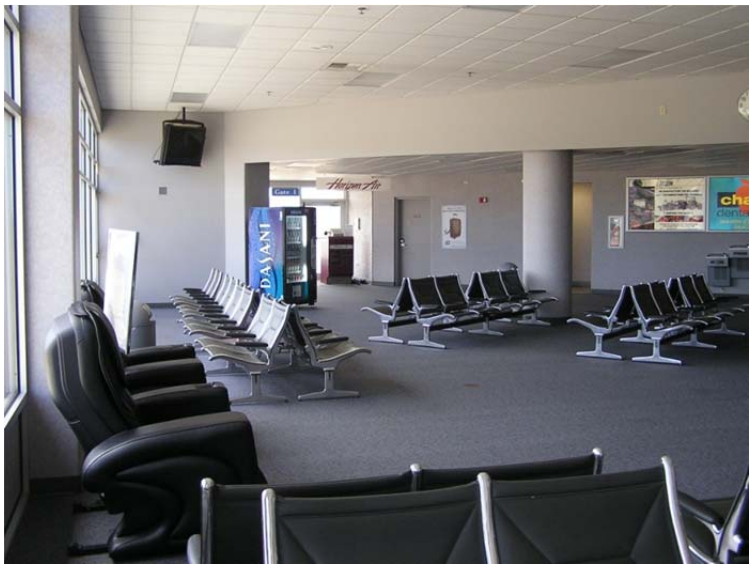


A-39: Horizon air cargo staging area

A-40: Horizon outbound baggage makeup area

A-41: Alaska air cargo transaction counter

A-42: Alaska refrigerator and ice machine in makeup area



A-43: Airside gate lobby

A-44: Level 2 banquet/board room

A-45: Lounge space (inactive)

A-46: Lounge deck (inactive)

A-47: Restaurant space (inactive)

A-48: Restaurant commercial kitchen (inactive)

A-49: Office space in former ATCT

A-50: Former ATCT cab (inactive)

B.3 MECHANICAL SYSTEMS

M-1: Storm drain catch basin at entry drive

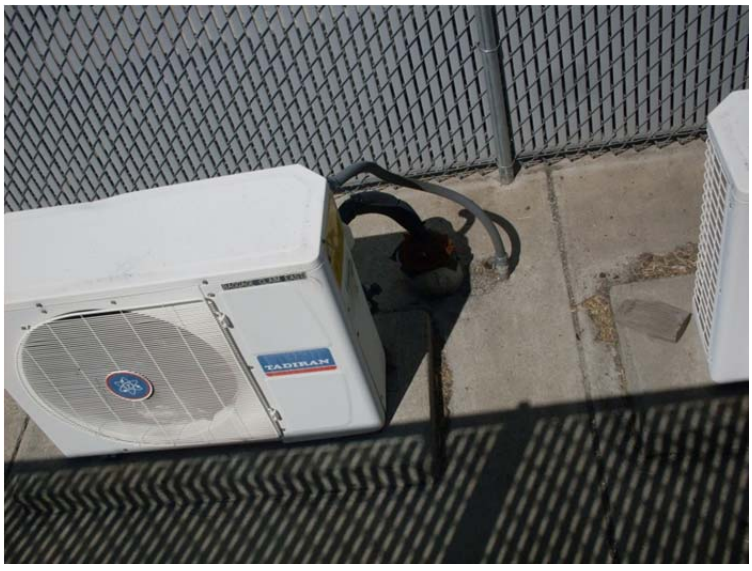
M-2: Fire Department siamese pumper hose connection

M-3: Electric fire alarm gong at front drive

M-4: Typical fire sprinkler head

M-5: Typical electric heater

M-6: Parking drainage cleanout



M-7: Typical tenant split AC condensing unit

M-8: Building water meter

M-9: Fire hydrant at entry drive

M-10: Typical roof drain

M-11: Split cooling unit condenser

M-12: Gravity relief integral to rooftop unit

M-13: Typical rooftop ductwork

M-14: Rusty milled steel rooftop gas piping

M-15: Aluminum mushroom roof exhaust fan

M-16: 80% efficient instantaneous gas water heater

M-17: Rusty mild steel rooftop gas piping

M-18: Typical galvanized steel rooftop ductwork

M-19: Galvanized steel rooftop ductwork

M-20: Double wall galvanized rooftop ductwork

M-21: Abandoned swamp cooler fan

M-22: Kitchen grease hood exhaust fan

*M-24: Failing support blocks –crushed vent flashing

M-25: Through-wall AC unit

*M-23 intentionally skipped.

M-26: Typical wall heater

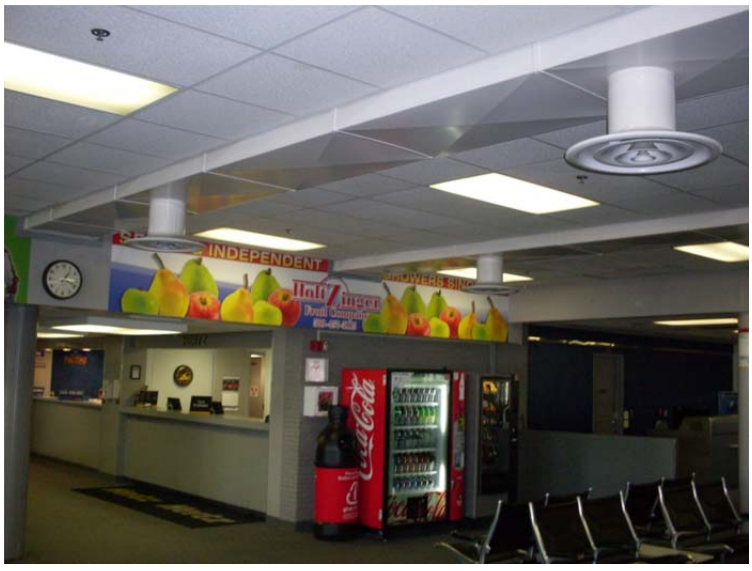
M-27: Renovated self-rimming lavatories/mixing faucet

M-28: Flush valve urinals – one at ADA height

M-29: Manual flush valves on water closets

M-30: Exposed fire sprinkler head

M-31: Semi-recessed fire sprinkler head



M-32: Ductwork below ceiling

M-33: Year 2000 renovation diffusers

M-34: Missing domestic water pipe insulation

M-35: Typical wall mounted thermostat

M-36: Cast iron hub and spigot waste piping

M-37: Plastic waste and vent piping repairs

M-38: Copper domestic water with brass valves

M-39: Fire service main building backflow preventer

M-40: Fire sprinkler pipe with mechanical joints

M-41: Fire sprinkler service entrance transition

M-42: Fire water service pressure = 105 psi static

M-43: Main domestic water regulator without relief

M-44: Newer 90% efficient condensing water heater

M-45: Domestic water thermostatic mixing valve

M-46: Kitchen plumbing fixture in poor condition

M-47: Typical newer electronic thermostat

M-48: Plumbing fixtures in fair condition

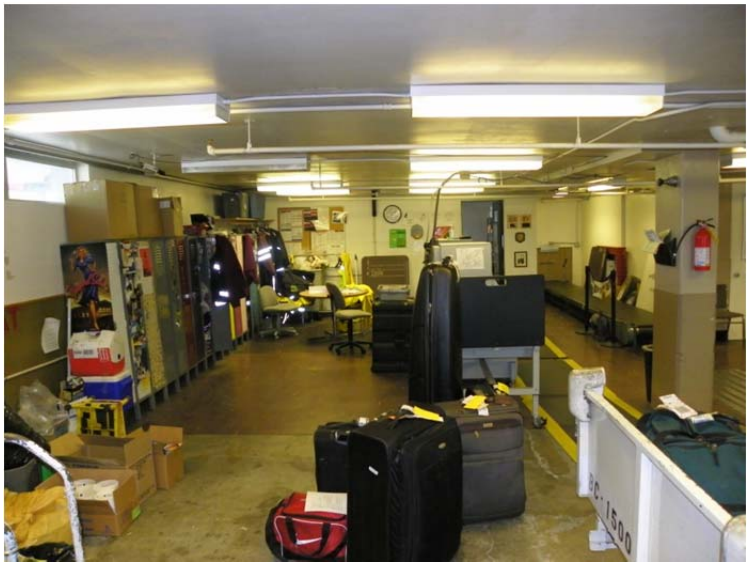
M-49: Exposed fire sprinklers below ceiling

M-50: Gas instantaneous domestic water heater.

B.4 ELECTRICAL SYSTEMS

E-1: Apron lighting

E-2: Apron lighting



E-3: Baggage area lighting

E-4: Electrical telephone closet

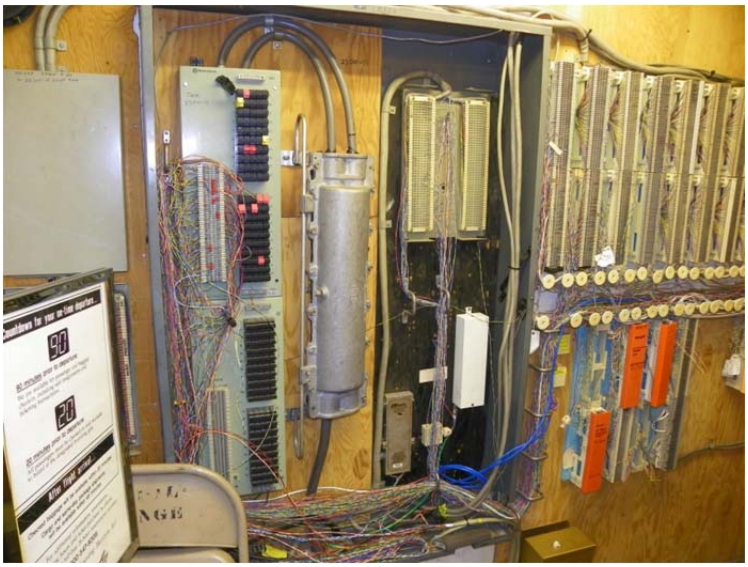
E-5: Fire alarm panel

E-6: Interior lighting

E-7: New and abandoned panels

E-8: Roof panels and conduit routing

E-9: Sound system



E-10: Telephone closet

E-11: Telephone handset

E-12: Transformer and main switchboard

E-13: Under canopy lighting

E-14: Utility primary switch and telephone pedestal