03 BUILDING AUDIT
BUILDING AUDIT
CITY OF GOLDEN VALLEY, MN

December 21, 2020

I. Executive Summary .................................. 2
II. Facility Audits
   Overview ............................................. 4
   City Hall .............................................. 5
   Public Safety ....................................... 12
   Public Works
      Park & Street Maintenance ................. 21
      Utility Maintenance .......................... 27
      Vehicle Maintenance ....................... 31
      10th Ave Cold Storage ..................... 35
   Fire Station #2 ................................... 39
   Fire Station #3 ................................... 44
I. Executive Summary

A. INTRODUCTION

The intent of this study was to review the existing City Hall, Public Safety (Police and Fire Station #1), Public Works, and Fire Stations #2 and #3 facilities in order to document existing physical conditions and space uses, and to identify operational space deficiencies to be further understood through the project’s programming phase. Critical deficiencies, systems at end-of-life, and compliance issues will be included as project scope within cost estimates and project phasing created later in this project.

B. FACILITY ASSESSMENTS

As part of this study, facility assessments were completed. The facility assessments included on-site analysis of the City’s existing facilities. The assessments are intended to provide an indication of the existing conditions, recommended capital improvements, code and life-safety issues, and other maintenance items that should be considered as part of a planned capital improvement project. The facility assessment is not intended to be an exhaustive review, but rather to assess and highlight the major building deficiencies observed during the tours.

Facilities included in this study, and reviewed in person by the project’s architects, interior designer, engineers, construction manager, and facility specialists are:

**City Hall**
7800 Golden Valley Rd, Golden Valley, MN 55427

**Public Safety - Police Department and Fire Station No. 1**
7700 Golden Valley Rd, Golden Valley, MN 55427

**Fire Station No. 2**
400 Turners Crossroad S, Golden Valley, MN 55427
• Original construction 1979, remodeled in 1999.

**Fire Station No. 3**
3700 Golden Valley Rd, Golden Valley, MN 55427
• Original construction 1979, remodeled in 2005.

**Park and Street Maintenance - Public Works**
7708 Golden Valley Rd, Golden Valley, MN 55427 (Parks)
7710 Golden Valley Rd, Golden Valley, MN 55427 (Streets)
• Original construction 1989 (Park Maintenance), 1975 (Street Maintenance), renovated in 2011.

**Utility Maintenance - Public Works**
7720 Golden Valley Rd, Golden Valley, MN 55427
• Original construction 1970.

**Vehicle Maintenance - Public Works**
7730 Golden Valley Rd, Golden Valley, MN 55427

**10th Ave Cold Storage - Public Works**
9400 10th Ave N, Golden Valley, MN 55427
• Site contains (2) primary structures: wood-framed warehouse and open salt shed, and smaller structures and trailers. Dates of construction unknown.

C. SUMMARY

In general, Golden Valley facilities are in very good condition, even with an average age of 35 years. This indicates a high level of regular maintenance and care, both outside and inside. Throughout facilities, the elements most requiring attention and investment are mechanical and electrical systems which, in general across the facilities, are either original to each building’s construction, or are old enough to be at end-of-life and providing a significantly lower level of comfort, indoor air quality, and efficiency than can be found in contemporary systems. Also common across facilities, though distinct to each department’s operations, were space constraints and limitations imposed by the existing buildings and their layouts, on service, workflow, operations, and management of public access and wayfinding. The construction methods of some structures, concrete primary structure for example, mean that the ability to adapt these structure through interior reconfiguration only is limited, hampering an ability for the facilities to fully support today’s service needs and operational requirements.
I. Executive Summary

FIGURE A: Map of Golden Valley municipal facility sites included in this project

FIGURE B: Map of Downtown Golden Valley including current civic campus and adjacent properties on the NE quadrant block
II. Facility Audits - OVERVIEW

A. OVERVIEW

The facility assessments intend to provide an indication of capital maintenance requirements, potential code and regulatory required upgrades, and other building conditions which should be considered as part of the facility’s general upkeep and/or included as part of any future building project, both of which will be itemized within the overall Facilities Study projected budget.

The facility assessment process starts with BKV Group’s team reviewing all available previous studies and surveys, historical documents and drawings for the buildings being reviewed. The next step is an on-site tour of each facility with BKV Group’s team of architects and engineers and Golden Valley department heads. Following the on-site assessment, the team then documents all found conditions within this report and summarizes each facility’s existing conditions.

This building audit process did not review potential environmental issues through testing such as the presence or nature of any soil contamination, asbestos or destructive testing for concealed conditions. The project’s budget, established later, will include any recommendations for future testing.

The Facility Assessment was conducted on November 5 & 6, 2020. The project team followed all coronavirus protocols required by the City of Golden Valley to protect the health and safety of all individuals.

The following individuals were present for the assessments:

- Marc Nevinski, Physical Development Director
- John Crelly, Fire Chief
- Jason Sturgis, Police Chief
- Tim Kieffer, Public Works Director
- Bruce Schwartzman, AIA, Partner with BKV Group
- Susan Morgan, AIA, Project Manager with BKV Group
- Kelly Naylor, City Hall Planner with BKV Group
- Michael Healy, AIA, Associate Project Architect with BKV Group
- Benjamin Janes, Architectural Designer with BKV Group
- Jason Krogseng, Mechanical Engineer with BKV Group
- James Puls, Electrical Designer with BKV Group
- Mohammed Ambo, EIT Electrical Designer with BKV Group
- Dustin Phillips, Pre-Construction + Estimation with Kraus-Anderson
- Andrew Cooper, AIA, Public Works Architect with Oertel Architects

These building audits are seen as supplements to the Comprehensive Facility Assessments prepared by Wold Architects in 2007; this process revisits major issues identified at that time, with a focus on the following:

1. Functional/Operational Accommodations
2. Safety / Security of staff and visitors
3. Accessibility
4. Building Code Related Deficiencies
5. Capital Maintenance / Building Envelope
II. Facility Audits - City Hall

CITY HALL
Address: 7800 Golden Valley Road,
Golden Valley, MN 55427
Year Built: 1957
Gross Area: Approximate 13,400 GSF at Level 1,
13,500 GSF at Lower Level
II. Facility Audits - City Hall

Building Overview

City Hall’s physical structure is in good condition for its age, but primary systems are largely original and at end-of-life, and the interior layout is not conducive to ease of public use, or to adaptation to future evolutions in service.

Summary of Findings

Operational Issues:

01. The entry and arrival is undersized for a facility of this use and scale. The exterior entry vestibule opens to a modest lobby for both the elevator and stairs to the second floor, and immediately abuts the DMV queuing area, which is also an open hallway to the rest of the floor. There is no area of welcome, information, or security desk for City Hall overall.

02. The high volume DMV is poorly placed, impacting access to the rest of the building as there is no separation between service counter queuing space and corridor access to the public restrooms and Inspectional Services counter at the other end of the floor.

03. The City Council area lacks appropriate queuing and pre-function gathering spaces, and can only be reached down a series of blind hallways, with no line of sight to the council chambers. There are no seats or benches adjacent to the council chamber. There are noise transmission issues between the council chamber and adjacent corridor, connected by single-glazed windows and doors. The adjacent meeting room has similar glazing, and while it can be configured in different ways, lacks a furniture storage room, so the space is often full of stacked chairs and tables.

04. There are limited spaces for meetings: either for staff, or for staff to connect with the public. Those that exist require the public to move behind service counters and through staff spaces.

05. Storage space is limited throughout for both departmental and public use, with some departments using available storage within the office suites of other departments, because that is all that is available.

Accessibility + Code Compliance Issues:

01. Building is fully sprinklered.

02. Service counters do not include portions that comply with ADA requirements for height and access.

03. Since the time of the 2007 assessment, there have been some updates to facility restrooms to address non-compliant door clearances; additional work is recommended for interior maneuverability at fixtures and counters.

04. Open stair guardrails and handrails are non-compliant for extensions and detailing.

Site:

01. Refer to 2007 report for detailed estimates of work. This audit did not identify additional areas of concern.

Exterior Building Envelope:

01. Refer to the 2007 report for detailed estimates of work. This audit did not identify expanded or additional areas of concern.

02. Exterior glazing is original to the building’s construction, with some fogging at the insulated glazing units (IGUs), which is typical for assemblies of this age, as sealants tend to fail beyond 20 years. This does not affect the assemblies weather barrier performance, but represents a loss of interior seal, which decreases overall thermal performance.

Interior:

01. Lower level office area includes clerestory windows throughout. Current workplace standards recommend all regularly-occupied workspaces have direct line-of-sight outdoors for daylighting and views.
II. Facility Audits - City Hall

02. Ceilings in the lower level are low and many columns disrupt the open office area. This also impacts flexibility for future reconfiguration and new space uses.

03. Workstations appear to be ample in size, often exceeding the industry standard.

04. Service counters at the license center are dated and finished in laminate. New materials such as solid surface or quartz could provide greater durability.

05. Countertop at Council Chamber Dais is dated and finished in laminate. Typically this is stone or solid surface.

06. Restrooms are dated but functional.

07. Upper level corridor contains extensive display cases, which are underutilized and difficult for the city to maintain.

08. General Services office area contains a Kardex Lektriever system. It's unclear how much longer this system will be in use before the city moves to electronic filing.

Plumbing:

01. Plumbing fixtures in the building have manual (non-sensor) flush valves and faucets.

HVAC Systems:

01. A steam boiler is located in the lower level mechanical room and appears to be original to the building.

02. The AHU serving the lower level is a dual-deck, multi-zone unit that appears to be original to the building.

03. Existing building controls are pneumatic.

04. The building includes hydronic perimeter radiant heat. A shell-in-tube steam to hot water heat exchanger and pumps are located in the mechanical room.

05. Perimeter heat is provided through hot water baseboard with mechanical type control valves. These are not controlled by thermostats.

06. A document storage system on the lower level does not appear to be conditioned. A louver is provided between this room and the adjacent corridor. It appears piping above the ceiling of this room is provided with electrical heat trace.

07. The upper level is served by five packaged rooftop units. Systems serving office areas include VAV boxes.

08. Existing rooftop equipment appears to be 20+ years old. RTU equipment labels are not legible due to weathering.

09. A newer roof mounted condensing unit serves the lower level AHU. Refrigerant piping to the unit is insulated.

10. Some rust observed on roof mounted ductwork.

11. A mini-split AC unit serves an upper level server room.

12. Based on conversation with a member of the maintenance staff, the city hall equipment has not required recent significant maintenance/repair. Temperature control/comfort issues are common in the building, especially during colder seasons.

13. The city currently has a service contract with Uhl companies for the campus.

Electrical Systems:

Emergency / Stand-by Power Distribution

01. Life safety loads need to be separated to comply with current codes. If additional life safety loads are identified, a larger diesel generator may be required.

Lighting:

01. Lighting is largely LED throughout. Occupancy and
daylight sensors building-wide would increase energy efficiency.

**Safety and Security Systems:**

01. Not reviewed in detail.

**Audio-Visual Equipment:**

01. Specifically within the City Council chamber, equipment is original to the building, of an age where replacement parts are no longer available. The city had a planned replacement of the system for 2020, deferred by the start of this project.

**Fire Alarm System:**

01. Per 2007 report, fire alarm system to be upgrade to a fully addressable system, including head-end panel and devices throughout.
II. Facility Audits - City Hall

FIGURE 1: Entering directly into the DMV area is congested with wayfinding issues. NOTE: Conditions shown include COVID protocols.

FIGURE 2: Service counters are hidden and feature dated, less durable finishes. Counter heights do not have portions that comply with accessibility requirements for lower service areas.

FIGURE 3: Restrooms feature dated finishes but are functional. ADA clearances to be reviewed as part of an overall building renovation.

FIGURE 4: Low ceilings and columns in the lower level office disrupt the open office area. Frequency and configuration limit spatial flexibility.

FIGURE 5: Office spaces lack dedicated storage areas. File storage is located wherever possible throughout, with a small number of small-footprint storage closets for other supplies and materials.

FIGURE 6: Extensive display cases are underutilized and difficult to maintain. The row here is at the current side of the council chamber, and could otherwise provide line-of-sight into this public space.
II. Facility Audits - City Hall

**FIGURE 7:** Some signs of water damage are apparent in the ceiling systems. This indicates minor issues with HVAC piping above.

**FIGURE 8:** Interior doors are clear-finished wood, which stains when carpets are steam-treated.

**FIGURE 9:** Exterior stucco and metal coping shows some signs of wear, but represent cosmetic issues rather than water-infiltration related.

**FIGURE 10:** Inconsistency of paint finishes and touch-ups in some places from installation of new exterior window.

**FIGURE 11:** Some signs of metal oxidation and staining on the exterior.

**FIGURE 12:** Exterior windows frames show some wear, though this is age-related and aesthetic, and does not affect unit performance.
II. Facility Audits - City Hall

FIGURE 13: Landscaping and building orientation help to hide the building from the public way.

FIGURE 14: Landscaping also blocks visual and physical access from the primary corner of Winnetka and Golden Valley Road.

FIGURE 15: The rear facade of the building facing Winnetka Ave does not present a strong public facade or sense of civic identity.
II. Facility Audits - Public Safety

PUBLIC SAFETY BUILDING
POLICE DEPARTMENT
FIRE STATION #1

Address: 7700 Golden Valley Road,
Golden Valley, MN 55427

Year Built: 1966 (Police)
1995 (Fire Station #1 Addition)

Gross Area: Approximate 18,300 GSF at Level 1,
9,000 GSF at Lower Level
II. Facility Audits - Public Safety

Building Overview

The physical structure of the Public Safety building is in reasonable condition for its age, though the primary MEP systems impact operations and comfort. Operational workflows and capacities for police and fire are defined by the building rather than by best practice and safety.

Summary of Findings

Operational Issues: Fire Department

01. **Fire** - There are no provisions for 24/7 staffing at any of the existing fire stations. It is essential that the City switch to an on-duty staffing model to keep a cost effective fire department, and the physical configuration of the existing facilities limits the implementation of this transition.

02. **Fire** - The stations are not designed to build camaraderie and support department recruitment efforts.

03. **Fire** - The apparatus doors are not sized for modern fire apparatus. This limits the vehicles that the department can purchase and operate.

04. **Fire** - The apparatus doors are not equipped with high-cycle springs and tracks, which leads to more frequent failures and delayed response.

05. **Fire** - The apparatus doors do not meet the provisions of UL 325, the modern safety standard for those doors.

06. **Fire** - There is no indicator light that tells the apparatus driver when the overhead door has cleared the light bar, increasing the likelihood that the top of the apparatus will hit the bottom panel of the door.

07. **Fire** - The turnout gear is stored in the apparatus bays and is exposed to diesel exhaust and natural UV light. This is a violation of NFPA standards.

08. **Fire** - Turnout gear is located alongside the apparatus, creating a risky location for firefighters to don or doff PPE with potentially moving apparatus beside them.

09. **Fire** - The decontamination spaces are not equipped to be compliant with NFPA standards.

10. **Fire** - There is insufficient separation between the potentially contaminated areas of the station and equipment/areas that need to remain clean.

11. **Fire** - There is no sink for handwashing before entering clean areas of the station.

12. **Fire** - There is carpet in the fire stations, which can harbor carcinogen or bacteria that is tracked in from the apparatus bay.

13. **Fire** - There is very little opportunity for hands-on training for the firefighters (re: scenario training or fire tower).

14. **Fire** - There is no public lobby for the fire station. Visitors have to be escorted through secure police areas to reach the fire station.

15. **Fire** - There is insufficient space in the apparatus bays to park all the required vehicles, leading some vehicles to share a single door.

16. **Fire** - The showers and lockers for staff are located on the other side of the clean areas of the station, forcing contaminated firefighters to traverse the clean spaces to get to a shower facility.

17. **Fire** - There are insufficient showers to allow all staff to “shower within an hour” as recommended for decontamination after a call.

18. **Fire** - Storage for the fire department is distributed through several small rooms throughout the building.

19. **Fire** - The workflow for decontamination of equipment is divided into several small rooms.

20. **Fire** - Many of the offices do not have access to natural light.

21. **Fire** - There is no dedicated training room for firefighters.

22. **Fire** - Office spaces are overcrowded - 3 Fire Inspectors share one office, while 1 FT Admin and 2 On-Call Battalion Chiefs share another office.
II. Facility Audits - Public Safety

23. **Fire** - Due to lack of adequate parking, Police park their large utility panel truck in the apparatus bay, leading to operational and parking issues for the Fire Department.

**Operational Issues: Police Department**

01. **Police** - The police department plans to continue to increase on-site training which will require additional training space beyond what is currently provided. Space such as a dedicated use-of-force space with mats, classroom space, simulation training, and 5-lane firing range will be vital to support this goal.

02. **Police** - Circulation space in the squad garage is constrained. Parking stalls are narrow and not very deep, so items stored along the wall can not be accessed when a vehicle is parked in the garage. The garage design with multiple overhead sectional doors is not ideal for parking and multiple doors increases maintenance and energy costs.

03. **Police** - The squad garage does not provide space for all department vehicles. The garage space is divided into two areas, one attached 3-stall garage and a detached 12-stall garage. Several department vehicles are stored outside in unsecured locations or at other city facilities.

04. **Police** - the weapon cleaning space is located along a back wall in the garage, which requires moving vehicles to gain access to the counter and equipment. Additionally, the ventilation provided in the space is not localized or adequate to remove the fumes from cleaning solvents used during the process.

05. **Police** - The locker room space is not adequately sized for volume and diversity of staff. There are also ongoing humidity/ventilation issues. The men’s locker room currently has 40 lockers total (32 single tier, 24” wide), and the women’s locker room has 16 lockers total (8 single tier, 24” wide).

06. **Police** - The fitness space is used frequently by staff; however, the room is undersized to appropriately place the equipment currently located in the space. The ventilation in the room is also poor.

07. **Police** - The building’s layout unintentionally has created spaces that are either not ideally located or sized appropriately for modern day operations, leaving some spaces underutilized.

08. **Police** - Only one soft interview room is provided and can be access from the public lobby. Additional interview and public meeting space is needed located outside the secure staff area.

09. **Police** - Overall, the facility is limited on storage space for equipment and supplies. The department has resorted to using spaces such as stairwells for additional storage.

10. **Police** - The evidence storage and processing space does have adequate ventilation. Additionally, video surveillance in the evidence processing space and around the greater building is limited.

11. **Police** - The facility does not have adequate space to store larger evidence and vehicles held for evidence on-site. Vehicles held for evidence can not be stored securely.

12. **Police** - Several doors throughout the facility do not have electronic access control, which is recommended as modern practice to provide enhanced security and the ability to track access to secure areas.

13. **Police** - The increasing number of staff over the years has overcrowded available workspace in the facility. There is a need for improved workspace for patrol officers, supervisors, and acoustically private office space for social workers and mental health officers. Currently, seargant workspaces are allocated in two rooms, each which is overcrowded with insufficient storage and work space for each staff.

14. **Police** - The configuration of the facility, including the adjacency of the Fire Department and training
II. Facility Audits - Public Safety

Rooms that are often used by the public create issues maintaining the ability to secure private information and data in areas that is not accessible to the public.

Accessibility + Code Compliance Issues:

01. Existing egress stairs are currently used for storage by both departments, which is not recommended.

02. Configuration of handrails and guardrails to be updated for full dimensional compliance.

03. Door operating clearances at restrooms and locker rooms do not fully comply with pull and push side clearances.

Site:

01. Police - The site layout does not provide separate parking for the department’s staff. Contemporary planning favors providing fenced/secured parking space dedicated for law enforcement staff.

02. Police - The Police Department utilizes an adjacent garage for vehicle storage, gun cleaning, and miscellaneous storage

03. Fire - The East parking lot does not accommodate the parking needs of both Fire and Police staff.

Exterior Building Envelope:

01. No major issues identified with water infiltration or thermal assemblies.

02. Existing west-facing EIFS above the entry has a significant amount of staining and mold, which appears to only be superficial.

Interior:

01. Finishes and materials are in good condition, though somewhat dark and dated. Typically would be refreshed as part of any major interior renovation, given their age.

02. Plumbing fixtures in the building have manual (non-sensor) flush valves and faucets.

03. Fire - Apparatus bay includes 6 trench drains.

04. Police - Auxiliary garage includes a gas-fired instantaneous water heater that serves wall faucets, a mop sink, and emergency eye-wash.

05. Police - Auxiliary garage is served by trench drains.

HVAC Systems:

01. Served by VAV system with AHU-1 and roof mounted condensing unit, with the AHU-1 being located on a mezzanine mechanical unit between the Police and Fire Department areas.

02. Perimeter baseboard, unit heaters, and heating coils are served by a boiler system located in the lower level. This serves both the Police and Fire Department areas.

03. Fire - Vehicle apparatus bay is heated by a newer overhead infrared gas-fired tube system.

04. Police - Gun range is served by a VFD controlled exhaust fan and make-up air unit. The make-up air unit and exhaust VFD are located on the upper level mezzanine area.

05. Police - The lower level evidence rooms have ventilation issues per the Police Chief; evidence locker prep area did not appear to include any exhaust. Access to evidence storage area was unavailable.

06. Police - Lower level fitness room may need additional cooling and ventilation/exhaust.

07. Police - Lower level men’s and women’s locker rooms are each served by a VAV box. It was noted that both of these rooms have ventilation and humidity issues.
II. Facility Audits - Public Safety

08. Police - Sally port garage and vehicle garage includes exhaust systems and low intakes and are heated by newer overhead infrared gas-fired tube systems.

09. Police - The vehicle garage includes a gas-fired make-up air unit within the garage.

10. Police - Auxiliary garage is served by a gas fired make-up air unit within the garage at one end and sidewall exhaust fan at the other end. A newer overhead infrared gas-fired tube system is also included.

Electrical Systems:

01. Availability of power within offices is limited, and does not meet contemporary standards. The use of extension cords and power strips was visible in many office and workspaces throughout the building.

02. The roof has an existing solar panel system.

Emergency / Stand-by Power Distribution

01. Emergency Generator is insufficient to provide backup power for all critical functions, between 24/7 Police, Fire, and Emergency Management uses.

Lighting:

01. Incandescent and fluorescent bulbs used throughout. Impacts energy efficiency and operating costs.

02. Rooms do not have occupancy or daylight sensors for efficient management of lighting. Manual toggle switches only.

Safety and Security Systems:

01. Not reviewed in detail.

Audio-Visual Equipment:

01. No specific comments.
II. Facility Audits - Public Safety

FIGURE 1: Training Mats for the Police Department are stored in the egress stairwells due to lack of adequate storage and training space.

FIGURE 2: There is only a single training room for use by Police and Fire for all types of training, and for public use. It cannot easily be reconfigured and is only accessible beyond the line of security.

FIGURE 3: Some signs of water damage are present in limited areas in the lower level ceilings, indicating issues with piping above ceiling.

FIGURE 4: Existing Gym space is undersized for serving both the Police and Fire Departments.

FIGURE 5: Police Department locker space is fully utilized, without enough space for gear, and underserved by exhaust ventilation, while the Fire Department lacks dedicated locker space.

FIGURE 6: The work spaces in the auxiliary garage are inaccessible when squad cars are parked due to garage depth.
II. Facility Audits - Public Safety

FIGURE 7: Finishes on the floor tile in the stairwell are visibly worn. Guardrails and handrails are non-compliant in detail with ADA.

FIGURE 8: Dedicated Police Dept break room is located in the basement, inefficient for staff on call.

FIGURE 9: Overhead door closer on an exterior door is loose at this heavily-used access point.

FIGURE 10: Heavy carpet wear on one stairwell requires replacement.

FIGURE 11: Carpet tile in the Police Dept record storage/work room is loose, with no permanent adhesion.

FIGURE 12: There is a lack of storage space in the Investigations area of the Police Department. Space used for materials and IT.
II. Facility Audits - Public Safety

FIGURE 13: Insulated panels on the Police Department garage doors are delaminating.

FIGURE 14: The seals on the Police Department garage doors have worn and now allow outside air in.

FIGURE 15: Some visible cracking at the walls of the auxiliary garage, suggesting settlement issues.

FIGURE 16: West-facing EIFS shows some signs of age at a superficial level.

FIGURE 17: Fire Department spaces lack adequate storage space for uniforms and gear.

FIGURE 18: Interior walls at the basement level show some signs of moisture damage and efflorescence.
II. Facility Audits - Public Safety

FIGURE 19: Record storage spaces lack adequate storage.

FIGURE 20: Turnout lockers are located in the apparatus bay, which can be dangerous for firefighters with trucks potentially moving behind them.

FIGURE 21: The Fire Department lacks adequate space for drying gear and equipment after responding to a call.

FIGURE 22: Lack of storage space is also apparent in the Fire Department.

FIGURE 23: Fire Department Dayroom lacks comfortable seating options and provisions for a 24/7 staffing model.

FIGURE 24: Insufficient garage space means multiple vehicles may share one door.
II. Facility Audits - Public Works - Park & Street Maintenance

PUBLIC WORKS: PARKS & STREET MAINTENANCE

Address (Parks): 7708 Golden Valley Road,
Golden Valley, MN 55427

Address (Streets): 7710 Golden Valley Road,
Golden Valley, MN 55427

Year Built: 1975 (Streets); 1989 (Parks)

Gross Area: Approximate 7,000 GSF at Level 1,
27,200 GSF at Lower Level
II. Facility Audits - Public Works - Park & Street Maintenance

Public Works Facilities Overview

The primary deficiency of all the public works buildings is available space. Operations in each department are as efficient as possible given the space constraints and time dedicated to maneuver equipment. Public Works staffs are famous for working with what they have, and Golden Valley is a prime example of that theme. Despite being separated into 3 primary structures, the divisions within Public Works do work cohesively.

The existing facilities are older construction, with a construction type and size that is incapable of handling the larger, more diversified, and specialized equipment that make up modern Public Works fleets, while also lacking the ability to adapt to future equipment developments. Given that Golden Valley is a community that will not increase in land area, growth of the Public Works department will likely be seen in specialized activities, necessitating flexible work areas and storage of specialized equipment.

Summary of Findings

Operational Issues:

01. Total time and planning for seasonal equipment changes takes about 1 month to execute due to the lack of warm storage and the relational distance to the cold storage facility offsite.

02. There is only one way in or out of the Parks garage, which means that anything larger than a large mower needs to back into parking spaces or back out of the building.

03. The mowers are entirely summer use and are not converted over to winter sidewalk or park maintenance. In the winter, they are stored at the 10th Ave Cold Storage facility, which removes them from warm storage and exacts a degradation toll from being stored in a completely cold facility.

04. Interior vehicle traffic in the Street department garage is ‘as required,’ meaning there is no defined traffic flow to accommodate equipment access and egress. Large vehicles may need up to 10 point turns to access parking or egress a parking stall, depending on adjacent equipment. Some vehicles find it easier to back up from the parking stall, directly out through the overhead door opening. Some vehicles will keep trailers connected and park in the drive lane, meaning these vehicles must be the first out or temporarily moved to allow other vehicles out.

05. Commute times for staff range from 10 minutes to an hour, and when overnight events occur that don’t allow for staff to go home in between shifts there are no amenities to support them in the building.

Accessibility + Code Compliance Issues:

01. Facility has a split-level entry: requiring a half a flight of stairs down to the garage level or up to the second floor; there is no elevator.

02. Second floor office functions, including the private offices, breakroom, and restroom are accessible by stairs only in both Parks and Street Department areas.

03. No roof access in building.

Site:

01. The site area for Public Works is currently landlocked in a shared campus with other city functions.

02. Three separate, smaller facilities in a tight area with multiple vehicle circulation paths and mixed exterior parking areas has created an environment for a high potential and frequency of accidents which can and has damaged equipment and structures.

03. The fueling station on site does serve the entire city fleet, storing 10,000 gallons of diesel and 6,000 gallons of unleaded.

04. The fueling system has been recently upgraded, and there are no known environmental concerns or leaks with the existing fueling station. However, there is no canopy or self contained site drainage.
II. Facility Audits - Public Works - Park & Street Maintenance

system that could contain potential spills within a sensitive watershed area around Basset Creek.

05. Mowers, sweepers, and dump trucks are washed outside, where the sediment and clippings are collected through a series of outdoor separators and structures before water is eventually discharged on the north end of the site to Bassett Creek.

06. The Street department’s supplies of sand and salt are located offsite at the 10th Ave Cold Storage facility.

Exterior Building Envelope:

01. Overhead doors are 12’ tall and openings have evidence of damage on the door and building structure. The opening is too narrow for plows and wings to safely traverse, and backing in vehicles often requires spotters.

02. Skylight needs refurbishing / replacement.

Interior:

01. Parks and Street department garages are connected by a large opening, which is not used for vehicle access and not intended for staff traffic.

02. Parks - Main entry is a split entry arrangement, with stairs down to the main storage area and stairs up to the administrative area.

03. Parks - Daily use equipment is all parked on one side of the garage.

04. Parks - There is a wash bay in the building, but it is used for storage when not in use, so when vehicles do need washing anything stored there must be moved.

05. Parks - Workshop area and dedicated parts and small equipment storage is integrated into the perimeter of the warm storage area. The main level parts and work room doubles as a mower/equipment storage area.

06. Parks - Perimeter storage shelves are floor mounted and limited in storage by building/fire code stackable storage height limitations.

07. Parks - Locker areas are provided, but their small size limits staff access. Clothing storage is on the main vehicle storage floor due to available locker room space.

08. Parks - Storage also used for material and supply storage of paper products, attic stock, light bulbs and other fixtures for all city facilities.

09. Parks - Private offices provided for the Supervisor, Crew Lead, and Forester, but only one computer is provided for the rest of the department.

10. Streets - Brine making and storage is indoors.

11. Streets - Vehicle parking is a mix of straight-in and angled parking. This is a function of the overhead door locations, building dimensions, and geometry. Some straight-in parking is also back-in parking to facilitate egress. Parking spaces are labeled for specific equipment.

12. Streets - Front snow plows are dropped in a parking space when not in use, as attachment has become simplified, but plow wings stay attached to their vehicles. However, the narrow space between the wings and the adjacent vehicle’s mirrors makes it difficult to maneuver.

13. Streets - Work areas are scattered around the perimeter of the warm storage area, with storage shelving and work space similar in scope to the work areas in the Parks division.

14. Streets - contains a dedicated laundry room and carpentry shop that are appropriately sized and outfitted, although there is no dedicated sign shop.

15. Streets - Equipment is stored outdoors when not in use to allow access to the interior parking area and workspace.

16. Streets - Breakroom is a multi-function area, with a
II. Facility Audits - Public Works - Park & Street Maintenance

small work station / computer access for staff, radio charging, and a muster / meeting room.

17. Streets - There is no women's locker room. The upper floor men's locker room utilizes old turnout gear storage lockers.

18. Streets - There is no dedicated wash bay - vehicles are washed in the drive lane, causing staging issues and delays.

Plumbing:

01. Garage areas are served by trench drains.

02. Gas-fired tank water heaters at each office area serve plumbing fixtures, wall faucets, mop sinks, emergency eye-washes, and clothes washer.

03. Plumbing fixtures in the building have manual (non-sensor) flush valves and faucets.

HVAC Systems:

01. Work Area/garage includes an exhaust system with low intakes and additional roof-mounted exhaust fans with inlet at the ceiling.

02. Street Maintenance garage area includes roof mounted exhaust fans with inlet at the ceiling only.

03. Each of the two garage areas include gas-fired make-up air units within the garage.

04. Garage areas included newer overhead infrared gas-fired tube systems.

05. Office areas at both ends of the building are served by constant volume vertical furnaces with gas heat and remote condensing units.

Electrical Systems:

01. The facility has a 400A 120/208V system and a 75 KVA transformer, with a connected solar panel system.

Emergency / Stand-by Power Distribution

01. There is no back-up generator for the building.

Lighting:

01. Fluorescent light fixtures at interior and exterior, LED fixtures in vehicle bay.

02. Occupancy sensors at locker rooms and some offices; remainder of spaces utilize manual toggle switches.

Safety and Security Systems:

01. Buildings have a security system and fire suppressant.

Audio-Visual Equipment:

01. N/A
II. Facility Audits - Public Works - Park & Street Maintenance

FIGURE 1: Some damage from equipment is visible on the curbs throughout vehicle driveways and parking areas shared with City Hall, Police, and Fire.

FIGURE 2: Finishes in the Parks Department break room are dated, albeit sturdy condition.

FIGURE 3: Some visible cracking appears on the interior walls in the Parks department garage.

FIGURE 4: Cracking also appears on the masonry wall separating the Parks garage from the Police auxiliary garage.

FIGURE 5: Some damage from equipment appears above the garage doors in the metal cladding.

FIGURE 6: Acoustic ceiling tiles in the locker rooms and offices show signs of water damage from concealed piping above.
II. Facility Audits - Public Works - Park & Street Maintenance

FIGURE 7: Acoustic ceiling tiles in the locker rooms and offices show signs of water damage from concealed piping above.

FIGURE 8: Storage in the Parks department is partially dedicated to storing paper and material supplies for all the other municipal facilities.

FIGURE 9: Visible damage and wear on the floors is common throughout the Streets department garage.

FIGURE 10: Seals on the garage doors have worn and now allow daylight and air through.
II. Facility Audits - Public Works - Utility Maintenance

PUBLIC WORKS: UTILITY MAINTENANCE
Address: 7720 Golden Valley Road,
Golden Valley, MN 55427
Year Built: 1970
Gross Area: Approximate 2,000 GSF at Level 1,
12,700 GSF at Lower Level
II. Facility Audits - Public Works - Utility Maintenance

Building Overview

Refer to Public Works Facility Overview on page 22.

Summary of Findings

Operational Issues:

01. Vehicle traffic inside the storage area is ‘as required’ meaning there is no defined traffic flow. The largest vehicles need to back in from the exterior to the parking space, and other vehicles may need to be moved to grant access to or from parking spaces. Multiple point turns are often needed to enter and exit the facility.

02. Equipment parking is also carefully orchestrated, with each piece having its own specific location and often requiring a spotter. In one case, the excavator arm needs to be articulated over another vehicle to allow both to park in the facility, a maneuver that is dangerous indoors and has caused structural damage. A mixture of head-in and rear-in 90 degree parking causes access and safety concerns, including blind spots and door dings.

Accessibility + Code Compliance Issues:

01. Facility has a split-level entry: requiring a half a flight of stairs down to the garage level or up to the second floor; there is no elevator.

02. Second floor office functions, including the private offices, breakroom, and restroom are accessible by stairs only.

03. There is no women’s locker room.

04. There is no roof access in the building.

Site:

01. The site area for Public Works is currently landlocked in a shared campus with other city functions.

02. Three separate, smaller facilities in a tight area with multiple vehicle circulation paths and mixed exterior parking areas has created an environment for a high potential and frequency of accidents which can and has damaged equipment and structures.

03. The fueling station on site does serve the entire city fleet, storing 10,000 gallons of diesel and 6,000 gallons of unleaded.

04. The fueling system has been recently upgraded, and there are no known environmental concerns or leaks with the existing fueling station. However, there is no canopy or self contained site drainage system that could contain potential spills within a sensitive watershed area around Basset Creek.

05. Yard storage is accessible directly outside the north overhead door and houses castings, pipes, bulk materials, trailers, etc. This area is secured by fence and gate and is the only secured area on campus for Public Works.

06. Mowers, sweepers, and dump trucks are washed outside, where the sediment and clippings are collected through a series of outdoor separators and structures before water is eventually discharged on the north end of the site to Bassett Creek.

Exterior Building Envelope:

01. No specific comments.

Interior:

01. Main entry is split entry, with stairs up to the administrative spaces and stairs down to the locker room and main storage area.

02. Main storage area houses the largest and most expensive public works equipment.

03. Work areas and miscellaneous storage areas are scattered around the perimeter of the warm storage area.

04. Material storage for water line pieces and sanitary sewer pieces are stored in a dedicated area.
II. Facility Audits - Public Works - Utility Maintenance

05. Breakroom is multi-function, and also houses SCADA equipment.

06. Locker room is recently reconstructed for full time employees; seasonal employees do not have a locker area. The old locker area has been re-appropriated as a dedicated office.

07. An old wash bay, which was not usable, was converted to a new laundry room and mudroom to create parking space and storage. Equipment is washed in the drive lane, similar to before the conversion.

**Plumbing:**

01. Garage areas are served by trench drains.

02. Two gas-fired instantaneous water heaters located in the garage area serve plumbing fixtures, wall faucets, mop sinks, emergency eye-wash, and clothes washer.

03. Office area restrooms and locker room have been recently remodeled and include new water closets/urinals with sensor flush valves and a semi-circular wash basin.

**HVAC Systems:**

01. Garage includes an exhaust system with low intakes.

02. Garage area appears to be served by a roof mounted make-up air unit with supply plenum/grilles at the ceiling.

03. Garage area includes newer overhead infrared gas-fired tube system.

04. Office area is served by a constant volume vertical furnace with gas heat and a remote condensing unit.

05. Office area restrooms and locker room have been recently remodeled but include original supply ductwork and grilles, which were painted rather than replaced.

**Electrical Systems:**

01. 400A 120/208V System with a 75KVA 120/208 Transformer.

02. Switchgear is missing a cover and is in a condition where replacement is recommended.

03. Connected to solar panel system.

**Emergency / Stand-by Power Distribution**

01. There is no back-up generator for the building.

**Lighting:**

01. Fluorescent exterior lights, with LED fixtures in the vehicle bay.

02. No occupancy or daylight sensors; manual toggle switches only.

**Safety and Security Systems:**

01. Has security system and fire suppressant.

**Audio-Visual Equipment:**

01. N/A
II. Facility Audits - Public Works - Utility Maintenance

FIGURE 1: There is a step down into the garage within the footprint of the door swing, which would not be allowed in today’s code standards.

FIGURE 2: Previous roof penetration remains without concrete patching.

FIGURE 3: Precast concrete has the most integrity in protected areas; within open areas of the garage there is visible damage from equipment hitting the bottoms of the beams.

FIGURE 4: Damage to the bottom of a structural beam within the open garage area from the equipment adjustments necessary to nestle and park vehicles and equipment.

FIGURE 5: The size of the garage is inadequate for the size of modern equipment, creating circulation and parking challenges for vehicles, requiring more than 3-point turns for all movement.
II. Facility Audits - Public Works - Vehicle Maintenance

PUBLIC WORKS: VEHICLE MAINTENANCE

Address: 7730 Golden Valley Road,
Golden Valley, MN 55427

Year Built: 1989

Gross Area: Approximate 1,700 GSF at Level 2,
10,500 GSF at Level 1

OVERALL SITE CONTEXT
II. Facility Audits - Public Works - Vehicle Maintenance

Building Overview

Refer to Public Works Facility Overview on page 22.

Summary of Findings

Operational Issues:

01. Space challenges exist at the site, building, and use level. The facility’s structural bays are occasionally in conflict with maneuvering room for vehicles.

02. See additional notes below.

Accessibility + Code Compliance Issues:

01. Second floor office functions, including the private offices, breakroom, and storage are accessible by stairs only - there is no elevator.

Site:

01. The site area for Public Works is currently landlocked in a shared campus with other city functions.

02. Three separate, smaller facilities in a tight area with multiple vehicle circulation paths and mixed exterior parking areas has created an environment for a high potential and frequency of accidents which can and has damaged equipment and structures.

03. The fueling station on site does serve the entire city fleet, storing 10,000 gallons of diesel and 6,000 gallons of unleaded.

04. The fueling system has been recently upgraded, and there are no known environmental concerns or leaks with the existing fueling station. However, there is no canopy or self contained site drainage system that could contain potential spills within a sensitive watershed area around Basset Creek.

Exterior Building Envelope:

01. Skylight needs to be refurbished/replaced.

02. See Note 4 under Interior.

Interior:

01. A retrofitted large vehicle bay includes a Rotary Vrex platform lift with an 80,000 pound capacity.

02. Maintenance bays have diagonal access from the center drive lane.

03. A column line runs down the middle of the building.

04. Barrel vault skylight is very dirty, indicating vehicle exhaust extraction issues, as well as the age of the structure.

05. Main service floor is served by a 7.5 ton overhead crane, large capacity platform lift, in-ground high capacity lift, and three small capacity in-ground lifts.

06. Vehicle and equipment service is performed in the drive lane when necessary.

07. Maintenance area has work stations and tool storage around the perimeter of the service area, as well as decent access to daylight.

08. Parts and material storage is scattered in several locations, including a room also appropriated for a break area.

09. A dedicated welding and fabrication bay is separated by bi-folding doors and served by a 2-ton overhead crane. A small dedicated fabrication area at the north end is served by a smaller capacity monorail crane. The upper level storage mezzanine also has a small capacity monorail crane.

10. Restrooms are located on the main level.

11. The public works director and support staff have offices on the upper level, with good size and functionality. The adjacency to the work area without adequate soundproofing is problematic for
II. Facility Audits - Public Works - Vehicle Maintenance

meetings and phone calls.

12. Facility is served by two piston-type air compressors, and has a bulk fluid delivery system and gravity fed waste-oil system.

**Plumbing:**

01. Garage areas are served by trench drains.

02. A gas fired tank water heater in the office area mechanical room serves plumbing fixtures, wall faucets, mop sinks, and emergency eye-washes.

**HVAC Systems:**

01. Garage area includes tail-pipe exhaust systems and additional sidewall exhaust fans.

02. Garage area is served by a gas-fired make-up air unit within the garage.

03. Garage area includes a newer overhead infrared gas-fired tube system.

04. Mechanic shop and welding areas include dedicated exhaust hoods.

05. Bulk fluid (oil) storage area includes vented tanks but does not include general exhaust.

06. Office area is served by a constant volume vertical furnace with gas heat and a remote condensing unit.

**Electrical Systems:**

01. 600A 120/208V System.

02. Transformer is unlabeled.

**Emergency / Stand-by Power Distribution**

01. Building has an back-up generator.

**Lighting:**

01. Fluorescent light fixtures on exterior, with LED fixtures in vehicle bay.

02. Building has both occupancy sensors and manual toggle switches.

**Safety and Security Systems:**

01. Has security system and fire suppressant.

**Audio-Visual Equipment:**

01. N/A
II. Facility Audits - Public Works - Vehicle Maintenance

**FIGURE 1:** Some cracking is apparent at the trench drains.

**FIGURE 2:** Cracking and other wear is visible throughout the garage floor.

**FIGURE 3:** Acoustic ceilings show some signs of water damage from concealed piping. Dust marks adjacent to diffuser suggest duct cleaning is required.

**FIGURE 4:** Staff restrooms and shower facilities are dated and show signs of wear.

**FIGURE 5:** Some cracking also appears in the second floor slab.

**FIGURE 6:** Soundproofing was needed to limit noise from servicing equipment.
II. Facility Audits - Public Works - 10th Ave Cold Storage

PUBLIC WORKS: 10TH AVE COLD STORAGE

Address: 9400 10th Ave N,
Golden Valley, MN 55427

Includes open yard across 10th Ave N

Year Built: 1991

Gross Area: Approximate 11,200 GSF

GOLDEN VALLEY COLD STORAGE FACILITY

OVERALL SITE CONTEXT
II. Facility Audits - Public Works - 10th Ave Cold Storage

Building Overview

Refer to Public Works Facility Overview on page 22. Property includes two portions bisected by 10th Ave N, with structures and open storage to the north, and a yard with open bulk storage to the south.

The site has two permanent structures: the wood-trussed warehouse and the open precast concrete salt/sand shed. The site also houses miscellaneous storage for the Police Department in an enclosed container, and training supplies for the Fire Department in a premanufactured 10x16 shed.

The wood-trussed warehouse also houses animal control kennels.

Summary of Findings

Operational Issues:

01. The greatest challenge is the separation of these resources from the bulk of Public Works operations, requiring two staff to journey from the Downtown campus to this location to pick up and drop off any equipment or vehicles.

02. Both sides of the site only have a single access point - this increases the time it takes to load trucks with salt before a storm.

Accessibility + Code Compliance Issues:

01. No specific comments.

Site:

01. Site is bordered by US 169 to the west and industrial neighbors (Lubetech) to the east, and is surrounded by wetlands.

02. North side of the site contains a precast salt and sand storage structure and a wood framed pole barn for cold storage, while the south side of the site serves as bulk pile storage.

03. South side of the site is a collection point for brush before it gets chipped by an outside vendor.

04. Bulk dirt piles are temporary and meant for use, rather than permanent storage and/or screening.

05. Site is not specifically screened from adjacent roadways, and is secured by fence and gate.

06. North side of the site also houses the remainder of the bulk material storage bins not located at the main campus; 8 storage bins in total.

07. Area near the north side of the cold storage facility is used as a miscellaneous storage area for bulk materials.

08. Space is limited by the wetlands, which causes snow storage and stockpiling issues.

Exterior Building Envelope:

01. Salt and Sand building is open to the air, and is constructed of precast wall panels with a separation panel in the middle and a steel joist / decking roof.

02. The building opening faces west, exposing bulk material to the weather and rain.

02. Loading limit of salt and sand compartments is approximately 6’ on the exterior walls.

03. Cold Storage building is a metal-panel clad pole barn.

Interior:

01. Main storage area is open storage accessible by one overhead door, with shelving and racking for various storage needs.

02. Loader storage, for use at the salt building, is partially heated and houses a medium sized wheeled loader.

03. Animal control storage is heated and housed inside the main storage area.

04. A mezzanine space is used as storage for barricades and barrels.
II. Facility Audits - Public Works - 10th Ave Cold Storage

Plumbing:

01. Kennel area has water service, but no water heater or floor drains.

HVAC Systems:

01. Storage building is unheated.

02. Equipment bay in storage building includes a newer overhead gas-fired tube system.

03. Kennel area is served by a constant volume vertical furnace with gas heat and a remote condensing unit.

Electrical Systems:

01. Pole-mounted single pole transformer.

Emergency / Stand-by Power Distribution

01. There is no back-up generator in the building.

Lighting:

01. LED light fixtures.

Safety and Security Systems:

01. There is no security system, but the building does have dry fire suppressant.

Audio-Visual Equipment:

01. N/A
II. Facility Audits - Public Works - 10th Ave Cold Storage

**FIGURE 1:** A small portion of the cold storage facility is heated, to store a front loader used to move salt and sand on site.

**FIGURE 2:** The interior of the building features a dirt drive aisle with paved storage areas to the side. Single in-out access.

**FIGURE 3:** Wear is apparent in the dirt drive aisle where it meets the concrete slabs.

**FIGURE 4:** The salt and sand storage structure shows some wear on the metal decking at the roof.

**FIGURE 5:** Most of the space on site outside of the wood-truss warehouse is used for bulk material storage.
II. Facility Audits - Fire Station #2

FIRE STATION #2
Address: 400 Turners Crossroad South, Golden Valley, MN 55427
Year Built: 1979
Gross Area: Approximate 5,400 GSF at Level 1
II. Facility Audits - Fire Station #2

Building Overview

This facility was constructed when the density of development in Golden Valley was very different, allowing the Fire Department more direct access to major roads and highways in all directions. Development over time as cut off these access points, increasing the time it takes for firefighters to come to the station for a call, and to get from the station to a call. The facility is built into the earth on two sides, and had substantial mold issues in prior decades, requiring a full interior gut for remediation. Since that time, no new issues of that type or scale have been identified. Additionally, Fire Station No. 2 also serves as a polling location during elections.

Summary of Findings

Operational Issues:

01. There are no provisions for 24/7 staffing at any of the existing fire stations. It is essential that the City switch to an on-duty staffing model to keep a cost effective fire department, and the existing stations prohibit this transition.

02. The stations are not designed to build camaraderie and support department recruitment efforts.

03. The apparatus doors are not sized for modern fire apparatus. This limits the vehicles that the department can purchase and operate.

04. The apparatus doors are not equipped with high-cycle springs and tracks, which leads to more frequent failures and delayed response.

05. The apparatus doors do not meet the provisions of UL 325, the modern safety standard for those doors.

06. There is no indicator light that tells the apparatus driver when the overhead door has cleared the light bar, increasing the likelihood that the top of the apparatus will hit the bottom panel of the door.

07. The turnout gear is stored in the apparatus bays and is exposed to diesel exhaust and natural UV light. This is a violation of NFPA standards.

II. Facility Assessment

08. Turnout gear is located behind the apparatus, creating a risky location for firefighters to don or doff PPE with potentially moving apparatus behind them.

09. The decontamination spaces are not equipped to be compliant with NFPA standards.

10. There is insufficient separation between the potentially contaminated areas of the station and equipment/areas that need to remain clean.

11. There is no sink for handwashing before entering clean areas of the station.

12. There is carpet in the fire stations, which can harbor carcinogen or bacteria that is tracked in from the apparatus bay.

13. There is very little opportunity for hands-on training for the firefighters.

14. The angle of the bay doors relative to the interior of the station forces responding firefighters to make repeated left and right turns.

15. The angle of the bay relative to the street makes responding towards the north awkward and returning from the south impossible.

16. There is insufficient walking space between the apparatus and the walls of the bay.

17. The station requires backing-in. This puts the firefighters who stand outside the vehicle and act as spotters at risk, and increases the risk that apparatus will be damaged by contact with the building.

18. There is no storage area in the building other than along the walls of the apparatus bay.

19. There is a step between the apparatus bay floor and the remainder of the fire station. This is a tripping hazard during response.
II. Facility Audits - Fire Station #2

20. A chest freezer is stored in the apparatus bay where the contents can easily become contaminated.

21. There is not a separate janitor area for the contaminated portions of the facility to avoid transfer of contaminants on mops and brooms.

22. There is no secure vestibule that would allow a firefighter to interact with a member of the public without giving them access to the entire facility.

23. There are no windows in the facility except into the watch room and apparatus bay.

24. There is insufficient exhaust in the apparatus bays.

Accessibility + Code Compliance Issues:

01. Specifically at restrooms but also at the main corridor connecting the office space to the garage, maneuvering clearances and door push/pull clearances are tighter than currently allowed.

Site:

01. Refer to general building summary re: access to the station from greater Golden Valley.

02. The configuration of the single-access, angled bays requires multi-point turns when returning to the station in order to park engines backing in, which creates a fair amount of noise for the immediately adjacent single-family residences.

03. There is only a single driveway and parking lot for staff and visitors, which becomes an operational issue while the station serves as a polling location during elections.

Exterior Building Envelope:

01. No specific issues identified during the walkthrough.

Interior:

01. There is not enough space when entering the building for firefighters to clock in when responding to a call, as there is only a small corridor adjacent to the main office.

02. Restrooms do not provide adequate locker space.

Plumbing:

01. Vehicle apparatus bay and work area are served by trench drains.

02. A gas-fired tank water heater at the back of the apparatus bay serves plumbing fixtures, wall faucets, mop sinks, emergency eye-wash, and clothes washer.

03. Plumbing fixtures in the building have manual (non-sensor) flush valves and faucets.

HVAC Systems:

01. Fire station offices, dayroom, and restrooms are served by a constant volume packaged rooftop unit.

02. Front dispatch office includes heating/cooling PTAC unit.

03. Vestibule includes electric cabinet unit heaters.

04. Vehicle apparatus bay and work area are heated by gas-fired unit heaters at the ceiling.

Electrical Systems:

01. 200A 120/208 power system

02. Transformer is unlabeled.

03. There are exposed wires at various locations throughout the station.
Emergency / Stand-by Power Distribution

01. No specific notes.

Lighting:

01. Fluorescent lighting fixtures at interior and at exterior pole-mounted fixtures.

02. No occupancy sensors at most of the building, only manual toggle switches.

03. There are some missing light fixtures.

Safety and Security Systems:

01. No specific comments

Audio-Visual Equipment: N/A
II. Facility Audits - Fire Station #2

**FIGURE 1:** Exterior brick finish shows some signs of accidental damage from vehicles leaving and entering the apparatus bay.

**FIGURE 2:** The open garage houses vehicles, lockers, laundry, storage, and an early historic fire engine.

**FIGURE 3:** Wooden frames at the apparatus bay doors are weathered.

**FIGURE 4:** Staggered layout of the apparatus bay, along with narrow bay doors, leaves little room for vehicle doors to open, or for adequate turnout space.

**FIGURE 5:** Entrances to and from the apparatus bay are cramped and have an immediate step that is a potential tripping hazard.

**FIGURE 6:** Some staining is present on the interior walls.
II. Facility Audits - Fire Station #2

**FIGURE 7:** Apparatus bay floors show some signs of wear.

**FIGURE 8:** Signs of moisture and mold problems are present in the ceiling tiles.

**FIGURE 9:** Turnout lockers are located in the apparatus bay, which can be dangerous for firefighters with trucks potentially moving behind them.

**FIGURE 10:** Furniture and finishes in the dayroom are dated.

**FIGURE 11:** Apparatus bay doors are undersized for modern equipment, leading to difficult entry and exits during a call.

**FIGURE 12:** Apparatus bay threshold shows some signs of wear.
II. Facility Audits - Fire Station #3

FIRE STATION #3
Address: 3700 Golden Valley Road,
Golden Valley, MN 55427
Year Built: 1979
Gross Area: Approximate 5,600 GSF at Level 1
II. Facility Audits - Fire Station #3

Building Overview

In addition to serving as a Fire Station, this location is also used as a polling place, which causes issues with an overlap of public and emergency service vehicles, and public use of operational spaces for the fire department.

Summary of Findings

Operational Issues:

01. There are no provisions for 24/7 staffing at any of the existing fire stations. It is essential that the City switch to an on-duty staffing model to keep a cost effective fire department, and the existing stations prohibit this transition.

02. The stations are not designed to build camaraderie and support department recruitment efforts.

03. The apparatus doors are not sized for modern fire apparatus. This limits the vehicles that the department can purchase and operate.

04. The apparatus doors are not equipped with high-cycle springs and tracks, which leads to more frequent failures and delayed response.

05. The apparatus doors do not meet the provisions of UL 325, the modern safety standard for those doors.

06. There is no indicator light that tells the apparatus driver when the overhead door has cleared the light bar, increasing the likelihood that the top of the apparatus will hit the bottom panel of the door.

07. The turnout gear is stored in the apparatus bays and is exposed to diesel exhaust and natural UV light. This is a violation of NFPA standards.

08. Turnout gear is located alongside the apparatus, creating a risky location for firefighters to don or doff PPE with potentially moving apparatus beside them.

09. The decontamination spaces are not equipped to be compliant with NFPA standards.

10. There is insufficient separation between the potentially contaminated areas of the station and equipment/areas that need to remain clean.

11. There is no sink for handwashing before entering clean areas of the station.

12. There is carpet in the fire stations, which can harbor carcinogen or bacteria that is tracked in from the apparatus bay.

13. There is very little opportunity for hands-on training for the firefighters.

14. The location of the responder parking with regards to the apparatus response path creates conflicts.

15. The station requires backing-in. This puts the firefighters who stand outside the vehicle and act as spotters at risk, and increases the risk that apparatus will be damaged by contact with the building.

16. There is no storage area in the building other than along the walls of the apparatus bay.

17. There is a step between the apparatus bay floor and the remainder of the fire station. This is a tripping hazard during response.

18. The corridor is too narrow to allow two people to pass each other.

19. There is not a separate janitor area for the contaminated portions of the facility to avoid transfer of contaminants on mops and brooms.

20. There is no secure vestibule that would allow a firefighter to interact with a member of the public without giving them access to the entire facility.

21. The gang shower does not meet modern standards of privacy.

Accessibility + Code Compliance Issues:

01. Maneuvering clearances at restrooms and between garage and office area.
II. Facility Audits - Fire Station #3

**Site:**

01. Site only has a single driveway for use by staff vehicles, emergency vehicles, and public vehicles when in use as a polling place.

02. Site is steeply sloping at the edges, and there is some indication of initial settlement issues towards the NW corner of the interior garage slab.

**Exterior Building Envelope:**

01. This building has wood fascia and soffits, with a combination of general wear, damage from (birds or animals), and moisture issues on horizontal soffit issues. This type of material is not recommended as a primary exterior finish due to issues with longevity and durability without frequent maintenance.

**Interior:**

01. Interior spaces and finishes are dated.

02. Configuration of dayroom does not separate out kitchen and seating area from meeting space.

**Plumbing:**

01. Apparatus Bay is served by trench drains.

02. A gas-fired tank water heater at the back of the apparatus bay serves plumbing fixtures, wall faucets, mop sinks, emergency eye wash, and clothes washer.

03. Plumbing fixtures in the building have manual (non-sensor) flush valves and faucets.

**HVAC Systems:**

01. Fire station offices, dayroom, and restrooms are served by a constant volume horizontal gas-fired AHU located in the vehicle apparatus bay.

02. Front dispatch office includes a heating/cooling PTAC unit.

03. Dayroom includes electric baseboard at windows.

04. Vestibule includes electric cabinet heaters.

05. Vehicle apparatus bay includes exhaust through low intakes and in-line exhaust fans that discharge to exterior wall louvers.

06. Apparatus bay includes a gas fired make-up air unit mounted in the ceiling of the bay.

07. Ductwork and dampers in the apparatus bay are configured such that the return/relief air from the office area can be discharged into the apparatus bay or to the inlet of the make-up air unit.

08. Apparatus bay includes a newer overhead infrared gas-fired tube system.

**Electrical Systems:**

01. 120/208V power system.

02. Transformer is unlabeled.

**Emergency / Stand-by Power Distribution**

01. No specific comments.

**Lighting:**

01. Fluorescent light fixtures at interior and exterior of building.

02. No occupancy or daylight sensors; manual toggle switches throughout.

03. Some missing light fixtures.

**Safety and Security Systems:**

01. No specific issues.

**Audio-Visual Equipment:**

01. N/A
II. Facility Audits - Fire Station #3

FIGURE 1: Curbs in the parking lot show signs of damage.

FIGURE 2: Signs of wear and moisture are visible at exterior wood soffits and fascia.

FIGURE 3: There is some damage in the sidewalks around the building.

FIGURE 4: Furniture and finishes in the dayroom are dated.

FIGURE 5: Wear and damage from birds is common in the exterior fascia.

FIGURE 6: Some visible cracking appears in the apparatus bay floors.
II. Facility Audits - Fire Station #3

FIGURE 7: Some wear and damage appears on the step into the apparatus bay.

FIGURE 9: The apparatus bay doors are undersized for modern equipment, making for difficult entry and exit while responding to a call.

FIGURE 11: Visible wear and damage is present in the office countertop.

FIGURE 8: Turnout lockers are located in the apparatus bay, which can be dangerous for firefighters with trucks potentially moving behind them.

FIGURE 10: Bathroom fixtures appear dated and lack privacy.

FIGURE 12: Some visible cracking appears in the dayroom walls.
II. Facility Audits - Fire Station #3

Figure 13: The apparatus bay is used for open storage.

Figure 15: Some signs of separation and settling appear along the exterior walls of the apparatus bay. Dimension of settlement is not concerning at this time.

Figure 14: Accessory vehicles stored in the apparatus bay do not have clear exits without shuffling around the equipment. Note: these are adjacent to laundry and drying equipment.

Figure 16: CMU walls in the dayroom show signs of efflorescence.
II. Facility Audits - Fire Stations

A NOTE ON FACILITY ASSESSMENTS FOR FIRE STATIONS:

Firefighters are at significantly higher risk than the general population to develop cancer (21% higher colon cancer risk, 32% higher brain cancer risk, 39% higher skin cancer risk, 102% higher testicular cancer risk, etc.). This risk is a direct result of their firefighting activities – they are frequently exposed to highly toxic and carcinogenic compounds at the fireground (arsenic, benzene, acrylonitrile, polycyclic aromatic hydrocarbons, etc.), and they bring those compounds back to the fire station on every hose, ladder, fire truck, and piece of personal protective equipment that was anywhere near the fire. In addition, operating diesel fire trucks inside the fire station every day for years has resulted in massive amounts of diesel particulates permeating the apparatus bay (one large study showed a typical apparatus bay has concentrations 16 times above EPA Standards). Both the fireground toxins and the diesel particulates are so small that they hang suspended in the air for long periods of time, so the risk does not go away between calls but rather is consistent every time the apparatus bay is entered. Apparatus Bays are not a safe place to work, not a safe place to store equipment and supplies (especially absorptive materials like paper products), and not a safe place to walk through to gain access to adjoining spaces. Any adjoining space that is not properly protected through air pressure differentials and air locks also becomes contaminated. The increased risk of cancer becomes a major factor in evaluating the functionality of a fire station, and it will be covered in detail.