



**Allana
Buick
Bers**

Kona Community Hospital Building Envelope Assessment

Roof, Exterior Wall, & Window Assessment
Buildings 1, 2, and 3.

PREPARED FOR

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Background

Kona Community Hospital (KCH) is planning capital improvement projects to renovate and repair the existing building envelope at Buildings 1-3 (See Figure 1). To assist in developing the required scope of repair and maintenance work, KCH retained Allana Buick & Bers, Inc. (ABB) to perform a visual assessment of existing roofing, exterior walls, and windows at the Kona Community Hospital located at 79-1019 Haukapila Street, Kealahou, HI.

ABB assessed the following buildings:

- Building 1 - Main Hospital Building, including Behavioral Health Services entrance
- Building 2 - Special Services Building
- Building 3 - Radiation and Oncology Building



Figure 1 - Aerial image of Kona Community Hospital with subject building outlined and labeled

ABB visited the hospital site on March 25, 2025 to visually assess existing conditions at roofs, exterior walls and windows. Observations and findings presented in this report are derived from our visual assessment of existing conditions, interviews with facility personnel, and review of record documents that the hospital provided to us.

According to these documents, Kona Community Hospital was constructed circa 1972 and consisted of the original rectangular shaped 3-story section of the Main Hospital (Building 1) (See Figure 2). Several subsequent renovations and additions have expanded the Main Hospital in 1989 and 1996 (See Photo 1). Building 2 - Special Services Building was added in 1996 and Building 3 - Radiation and Oncology Building was added in 2004.

The following summarizes the building envelope elements ABB assessed:

- Building 1 Roofing - Low slope roofs covered by a thermoplastic single ply roofing membrane which has been coated with a silicone elastomeric roof coating.
- Building 2 & 3 Roofing - Steep slope roofs covered by standing seam metal panels.
- Buildings 1, 2, and 3 Exterior Walls - Concrete, concrete block, and metal framed exterior walls covered with exterior paint and direct applied cement plaster finishes as well as exterior insulation and finish (EIFS) cladding.
- Buildings 1, 2 & 3 Windows - Anodized and painted aluminum block frame windows.

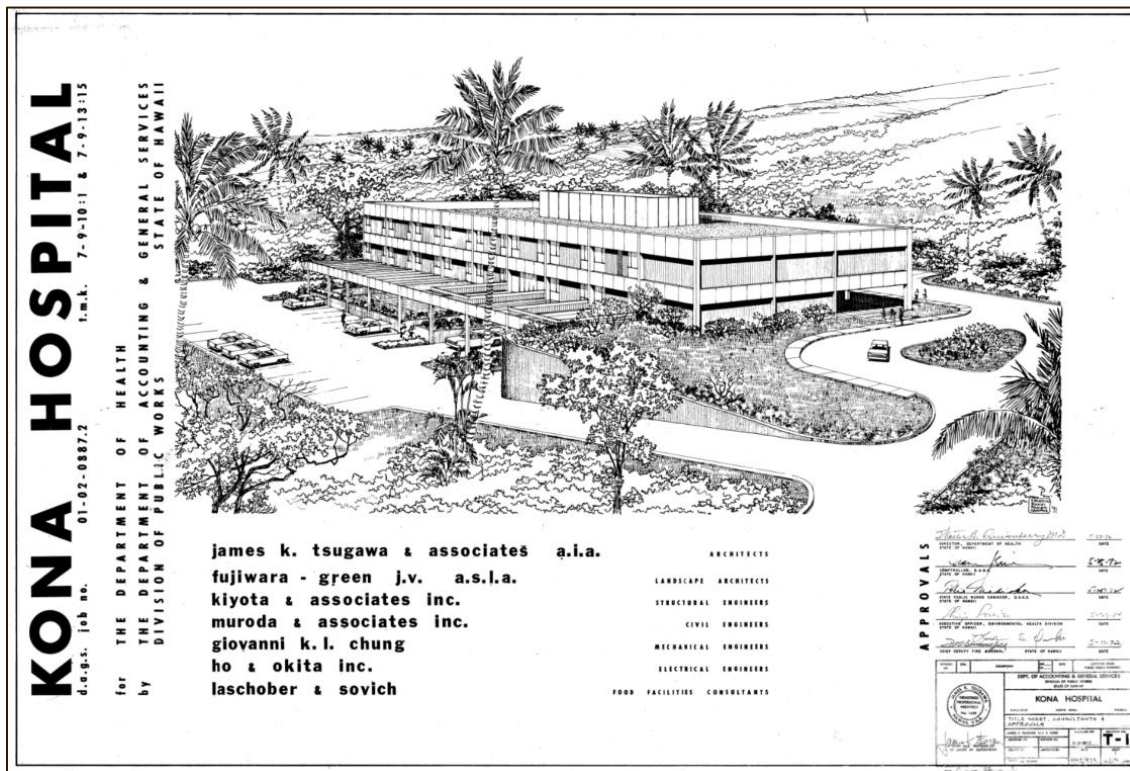


Figure 2 - Kona Hospital original record drawing cover page dated 1972

Observations

Building 1 – Main Hospital

Building 1 has multiple roof areas associated with each of its additions (see Photo 1).

Low Slope Roofing

The low slope roof areas are at varying elevations. Except for the 1989 stair tower roof (see arrow on Photo 1), and the lower roofs of the 1989 and 1996 addition, which require mobile ladder access, all other Building 1 roof areas were accessed via the stair tower or permanent fixed roof access ladders.

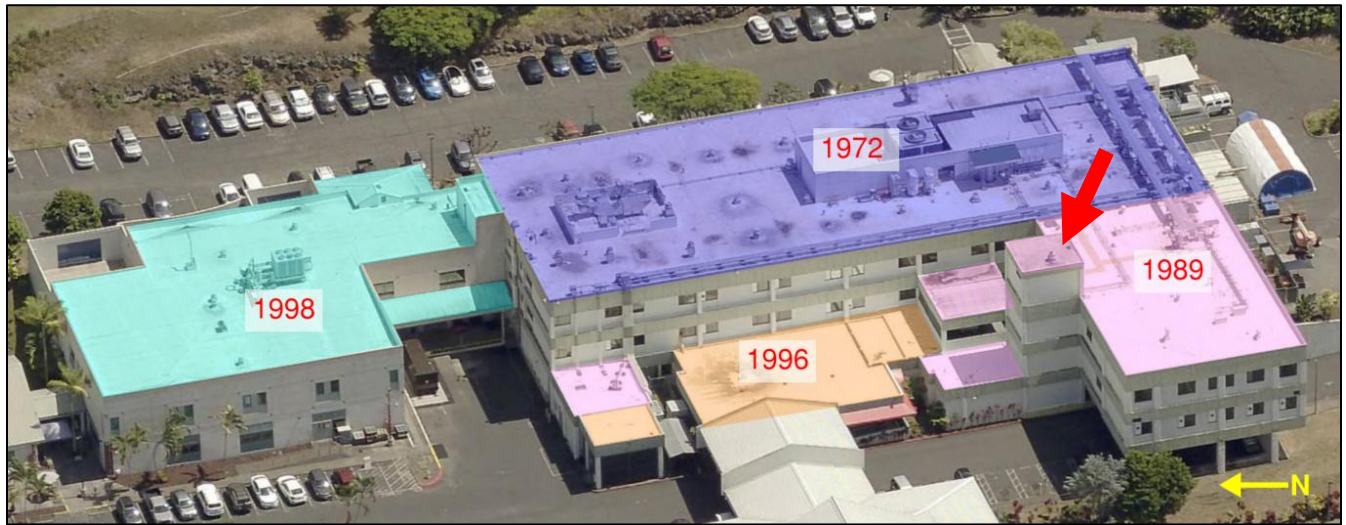


Photo 1 - Aerial photo of Building 1 (Main Hospital) with shading and original construction years

System Summary:

- Primary Roof System: TPO (Thermoplastic Polyolefin) single ply membrane (manufacturer unknown) (date of installation unknown)
- Roof Coating: Elastomeric coating (Gaco Western: Gaco Flex S2000 White Silicone Coating) (date of installation unknown)
- Insulation: Tapered lightweight concrete topping (1972 original building) Tapered rigid insulation (1989, 1996 & 1998 additions)
- Roof Slope: 1/8-1/4 inch per foot depending on location
- Drainage Method: Internal roof drains and overflow scuppers (no overflow drains at 1972 original building).



Photo 2 - Overall view of Building 1 low slope roof area facing southeast

System Assembly: Record drawings indicate that the original Building 1 roof assembly consists of a TPO single ply roofing membrane installed over either cover board and tapered insulation (areas constructed in 1989, 1996, and 1998) or over a sloped lightweight insulating concrete topping.

The manufacturer of the existing roof membrane and date of installation is unknown. The existing TPO single ply membrane was reportedly coated with GacoFlex S2000 white silicone elastomeric coating manufactured by Gaco Western, but there is no record of when the coating was applied.

The condition of the underlying TPO membrane was not visually assessed due to the silicone coating. The coating was reportedly applied to extend the life of the existing roof by repairing issues to the original TPO membrane. The TPO membrane base flashings extended up roof perimeter parapet walls which are covered with a pre-finished sheet metal coping. At the 1989 roof areas, the single ply base flashing membrane was extended over a sheet metal counterflashing left in place from a prior roof assembly (See Photo 4 & Exhibit Observation #1).

At the interior perimeter of the roof's concrete walls, base flashings are mechanically terminated with an aluminum termination bar. Numerous fluid-applied flashing repairs were noted throughout interior perimeter concrete wall base flashings. (See Photo 3 and Exhibit Observation #2). Hospital facilities staff reported the roof and base flashings are not currently leaking.



Photo 3 - Typical TPO membrane roof base flashing termination with fluid applied flashing repairs

Drainage & Slope: Roof drainage for the original building was achieved with sloping light weight insulating concrete installed over a flat structural concrete roof deck. Original construction drawings indicate slopes of between $1/8''$ and $1/4''$ /foot and our field observations verify this.

Roof drainage for areas of Building 1 constructed later is achieved with tapered rigid thermal insulation boards installed over the flat structural deck. These roofs slope at approximately $1/4''$ /foot.

Roof drainage for Building 1 is provided by internal cast iron roof drains. The original main roof area has no overflow drains. Addition roof areas included overflow exterior scupper drains. Evidence of ponding water is present at isolated locations and typically around roof drains (See Exhibit Observation #4).

Sheet Metal Flashing & Trim: Sheet metal flashings primarily consist of prefinished galvanized steel parapet wall copings caps and counterflashings. Building facility personnel informed ABB that parapet wall coping caps were added over the parapet walls of the 1989 Building 1 addition after the original building construction. The parapet walls of the uppermost roof on the 1989 addition building have a sheet metal counterflashing from a previous roof system that was left in place and covered by the existing single ply roofing system and subsequent roof coating (See Photo 4 Exhibit Observation #1).



Photo 4 - Sheet metal coping over parapet wall and TPO membrane base flashing installed over counterflashing

Roof Curbs, Penetrations and Openings: Building 1 roof penetrations include curbed exhaust / intake fans, various curb and stand mounted HVAC units, plumbing vents, structural penetrations, and support stands for duct work and MEP lines (See Photo 2). Many roof penetrations have less than the recommended 8" of vertical height. The tops of membrane pipe flashings were unsealed. (See Exhibit Observation #3).

Steep Slope Roofing

Steep slope roof areas at Building 1 are covered by standing seam metal roof panels constructed during the 1989 addition. These steep slope roof areas are located at the west elevation over the Behavioral Health Services entrance (See Photo 5), and at the building east elevation over a loading dock area (See Photo 7).



Photo 5 - Behavioral Health Services Building standing seam metal panel roof

Slope Roof System Summary:

- Primary Roof System: Pre-finished galvanized steel standing seam metal roof panels
- Insulation: None observed
- Roof Slope: 3-1/2" to 5-1/2" per foot depending on location
- Drainage Method: Exterior hanging gutters at roof eaves

The standing seam roofs are generally in fair condition, exhibiting some surface staining. The upper portion of the roof is sloped at 5-1/2 inches per foot with a transition to 3-1/2 inches per foot at the lower portion of the roof.

Standing seam roof confined rake edge base flashings have reported leaks. The confined base flashing abuts EIFS clad parapets. The standing seam roofs have been coated to address these leaks, however, leaks in this area are still reported. (See Photo 6 Exhibit Observation #6).



Photo 6 - Coating repairs at south elevation with improper detailing at roof sidewall flashing



Photo 7 - Standing seam roof over loading dock area at west elevation

Exterior Walls



Photo 8 - Overview of Building 1 concrete walls typical condition

System Summary

- 1972 Original Building: Concrete wall with direct applied finish
- 1989 and 1996 Additions: Concrete walls with direct applied finish
- 1998 Addition: Concrete, CMU, and steel framed cavity walls with exterior insulation and finish system (EIFS)

Exterior walls of the original 1972 building, as well as the 1989 and 1996 additions, consist primarily of concrete walls with an unreinforced cementitious parge finish. (See Photo 8 and Exhibit Observation #7). The exterior paint is worn and faded. Delaminating parge finish is present at select areas on the south elevation (See Exhibit Observation #9). Paint blistering was observed at the northernmost elevation of the 1996 addition at a location just below the top of a parapet wall that is not covered by a sheet metal coping (See Exhibit Observation #8).

The 1998 addition walls consist of concrete, concrete masonry unit (CMU) and steel framed walls covered by an exterior insulation finish system (EIFS). The EIFS cladding does not have control joints but does have horizontally and diagonally oriented architectural reveals. Some lateral cracking was noted at the southwest elevation and minor cracks observed throughout (See Exhibit Observation #12). Dark streaks from drip stains and dirt build up were noticeable on the upper portions of the EIFS wall and below window reveals (See Photo 9 and Exhibit Observation #11).



Photo 9 - Overview of Building 1 1998 addition typical exterior wall with EIFS cladding (West Elevation)

Windows

System Summary

- Window Type: Solid aluminum extruded box frames with insulated glazing units (IGU). The windows are either fixed or operable and found in good condition. (See Photos 10 & 13). Anodized aluminum window frames were in good condition (See Photo 11).

Steel frames of doors and louvers at the Building 1 1998 Psychiatric Facility addition had a worn and aged paint finish with some steel corrosion evident (See Photos 13-15 and Exhibit Observation #'s 15-18).

The width of sealant joints between the window frames and concrete rough opening varied between approximately 1/16-inch to 1/2-inch. Window sealant joints were aged and have failed in adhesion and cohesion. (See Photos 14 & 15 Exhibit Observation #18). The majority of the window perimeter sealant joints at the 1972 building, 1989 addition, and 1996 addition have been painted over and have also failed in adhesion and cohesion (See Photo 12 and Exhibit Observation #14).

Glazing gaskets were aged at Building 1 1998 addition, where sealant repairs were noted at glazing gasket corners (See Photo 16 See Exhibit Observation #17). Building personnel reported that there were no known areas of active water intrusion originating from windows.

ABB was not able to access the interior of the building at the operable window locations to determine their operability or the condition of the weather seals.



Photo 10 - Overview of Building 1 exterior walls and windows facing southeast



Photo 11 - Anodized aluminum block frame windows under porte-cochere at main entrance



Photo 12 - Typical cracked paint finish applied over window perimeter joints



Photo 13 - Painted aluminum framed windows and painted steel louvers at Building 1 1989 Addition north elevation adjacent to Building 3.



Photo 14 - Interface of aluminum windows and steel door frame at west elevation of Building 1 1989 Addition.



Photo 15 - Failing sealant joint between steel door frame and EIFS cladding at the West Elevation of Building 1 -1989 Addition



Photo 16 - Sealant repair at window glazing gasket noted at Building 1 1989 Addition West Elevation

Building 2 – Special Services Building

Steep Slope Roofing



Photo 17 - Overview of standing seam metal roof at Building 2 and porte-cochere (view facing west)

System Summary:

- Roof Type: Standing Seam Steep Slope
- Primary Roof System: Pre-finished galvanized steel standing seam metal roof panels
- Roof Insulation: None (All insulation provided internally)
- Roof Slope: 3-1/2-inch to 5-1/2-inch per foot depending on location.
- Drainage Method: Exterior Hanging Gutters & Downspouts

The Special Services Building (Building 2) was constructed in 1996 and has a gable style roof profile. Roofing consists of a 24-gauge pre-finished galvanized steel structural standing seam metal panel roof system. Metal roof panels are secured with concealed clips over steel purlins and trusses. Roof overhangs are approximately 6 feet. Other than a few areas of localized dirt build-up on the panel surfaces, the metal panel roof material appeared to be in good condition (See Exhibit Observation #'s 19-21).

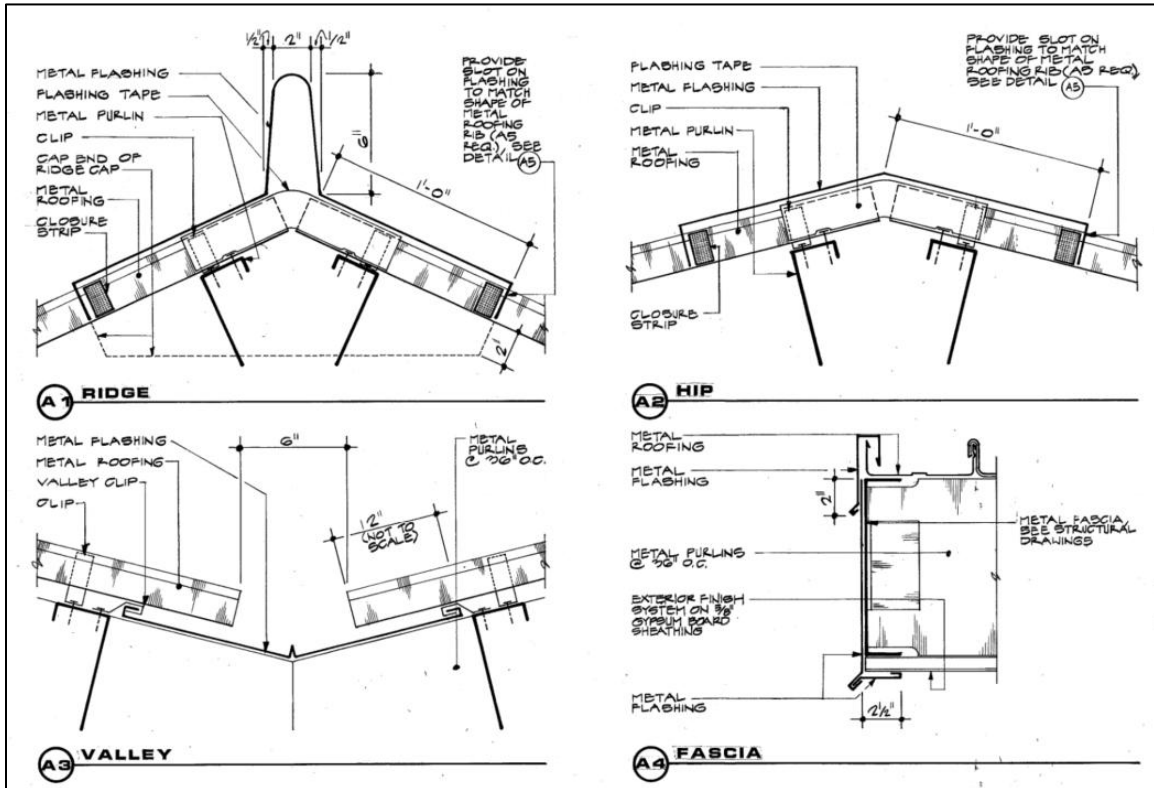


Figure 3 - Roof details from Building 2 1996 record drawings

Roof Drainage & Slope: The standing seam metal roof is sloped 5-1/2 inches per foot at upper areas with a slope transition to 3-1/2 inches per foot at lower areas. Water drains to exterior hanging gutters and downspouts located at roof eaves (See Figure 4).

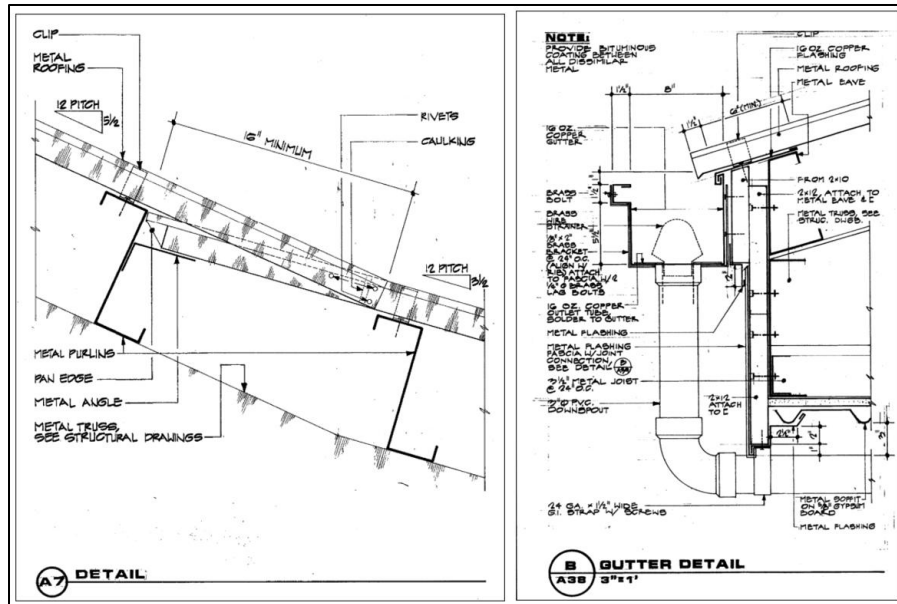


Figure 4 - Roof details from Building 2 1996 record drawings

Roof Metal Flashing & Trim: Metal panel roof flashings consist of hip, ridge, valley, drip edge, rake edge, headwall, and sidewall flashings fabricated of the same material as the metal roof panels (See Photo 18).



Photo 18 - Overview of standing seam metal roof at Building 2 (facing south)

Roof Curbs & Penetrations: Through roof penetrations are minimal and consist of plumbing vent pipe penetrations only. ABB was not able to access the Building 2 roof to determine the condition of the plumbing vents. There are no curbed penetrations. Louver vent openings are located on both gable ends (See Photo 18).

Exterior Walls

System Summary:

- Exterior Wall Assembly: Concrete wall with direct applied cement plaster finish

Exterior walls of the Special Services (Building 2) are exposed concrete covered with a direct applied, unreinforced, parge coat finish (See Photo 19 & 20). The exterior wall paint is in good condition. Some concrete wall cracks, less than 1/8-inch width, were observed adjacent to window openings of the east wall elevation (See Photos 21 & 22 and Exhibit Observation #26). Minor cracks were also observed at the concrete walls at the stairway on the south elevation (See Exhibit Observation #27). Wall openings include windows, doors, and louver vents. Through wall penetrations consists of utility lines, and wall mounted items primarily include electrical conduit, junction boxes, and light fixtures.



Photo 19 - Overview of Building 2 west elevation



Photo 20 - Overview of Building 2 southwest elevation

Windows

System Summary

- Window Type: Anodized aluminum block frame windows

The windows and doors at Building 2 consist of double-glazed, anodized aluminum, block framed punched windows and doors with a mix of fixed and operable units (See Photos 19 & 20 Exhibit Observation #'s 26-30). Anodized aluminum window frames were in good condition with no issues identified at the window or door units themselves. Painted hollow steel metal doors were also observed (See Exhibit Observation #31 and 32) A window that fits tightly within the concrete wall rough opening, with inadequately sized perimeter sealant joint, was observed at the east elevation to the left of the main entrance (See Photos 21 & 22 and Exhibit Observation #26).



Photo 21 - Cracked concrete at window at east elevation of Building 2



Photo 22 - Cracked concrete at window at east elevation of Building 2

Building 3 – Radiation and Oncology

Steep Slope Roofing



Photo 23 - Overview of Building 3 standing seam metal panel roof system viewed from east elevation

System Summary:

- Roof Type: Steep Slope
- Primary Roof System: Pre-finished galvanized steel standing seam metal roof panels
- Roof Insulation: None
- Roof Slope: 4-inches per foot
- Drainage Method: Exterior hanging gutters & downspouts

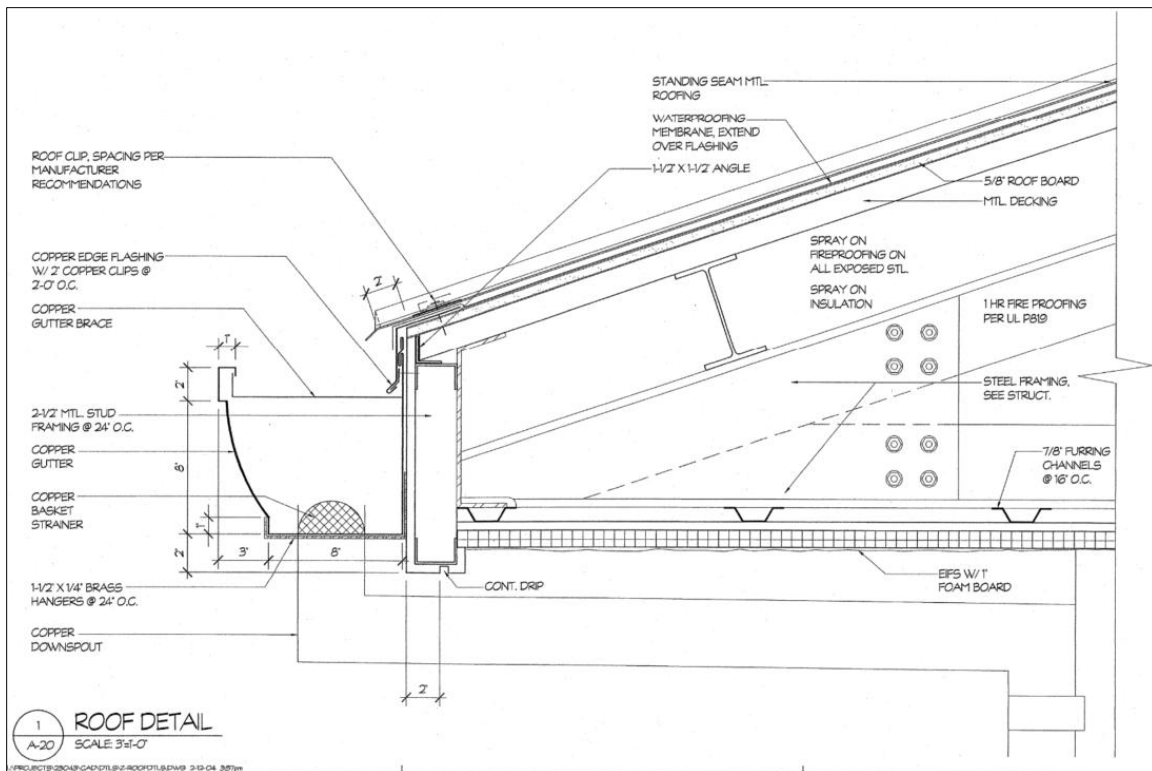


Figure 5 - Roof detail from 1998 Building 3 record drawings

Assembly: The Radiation and Oncology Building (Building 3) was constructed in 1998 and has a shed profile steep slope roof covered by a 24-gauge pre-finished galvanized steel standing seam metal panel roof system (See Photo 23 Exhibit Observation #'s 34 and 35). According to reviewed record drawings, metal roof panels are secured with concealed clips over a waterproofing membrane over 5/8-inch gypsum board sheathing attached to metal decking and steel framing (See Figure 5). No active roof leaks were reported. Other than dirt build-up on the surface of the metal roof panels (See Exhibit Observation #34-35), the metal panel material appeared to be in good condition.

Drainage & Slope: The standing seam metal panel roof is sloped at 4-inches per foot. Water drains to exterior hanging gutters and downspouts located at roof eaves. Organic debris and vegetative growth was observed at the gutters at the east elevation (See Exhibit Observation #'s 37, 38). Gutter to downspout connections were uncoupled and is resulting in some water draining outside the downspout (See Exhibit Observation # 39).

Sheet Metal Flashing & Trim: Metal panel roof flashings consist of drip and rake edges, ridge metal, head wall and sidewall flashings fabricated of the same material as the metal roof panels.

Curbs & Penetrations: Through roof penetrations are minimal and consist of plumbing vent pipe penetrations only. There are no curbed penetrations. Louver vent openings are located at gable ends (See Photo 24).

Exterior Walls



Photo 24 - Building 3 southwest elevation

System Summary:

- Exterior Wall Assembly: Concrete, CMU and metal frame walls covered by EIFS cladding.

The exterior walls of the Radiation and Oncology Building (Building 3) consist of metal framed, CMU and concrete walls covered by an exterior insulation and finish (EIFS) cladding system (See Photo 24 and Exhibit Observation #'s 40-44). The EIFS cladding is generally in good condition. The EIFS cladding at Building 3 does not include control joints or reveals. Some minor hairline cracking was noted at windows at the southwest elevation (See Photo 26 and Exhibit Observation #44) but otherwise cracks in the EIFS system were minimal. Through wall penetrations consists of utility lines, and wall mounted items primarily include electrical conduit, junction boxes, and light fixtures (See Exhibit Observation #43).



Photo 25 - Typical painted aluminum block frame window at Building 3

Windows

System Summary

- Window Type: Pre-finished aluminum block framed punched windows
 - Mix of fixed and operable units (See Photo 25)

Aluminum windows and doors were generally in good condition with some locations of minor paint touch up noticeable. (See Photo 26).

No perimeter sealant joints were observed around the window frames as indicated in the architectural details of the reviewed record drawings. The EIFS cladding extends to the frame of the window (See Photo 26 and Exhibit Observation #'s 46-49).



Photo 26 - Typical detailing at window and EIFS cladding. No sealant joint observed at window perimeters. Note touch up paint.

Discussion

Building 1 – Main Hospital

- Low Slope Roofing
 - ABB found the low slope roofing to be in poor/failing condition and believe it should be replaced as soon as possible as it is beyond its service life.
 - Overall Condition: Poor / Failing
 - Remaining Service Life: Expired
- Steep Slope Roofing:
 - The standing seam metal roof is in fair condition, and replacement should be planned for in the next 10-13 years when it reaches the end of its service life.
 - Overall Condition: Fair
 - Remaining Service Life: 10-13
 - The sealant dependent repairs made to address the historical leaks are not considered to be a long-term solution to address the noted detailing issues at the sidewall condition.
 - Permanent repairs require removal of the existing EIFS cladding at the sidewall and the installation of new flashing materials.
 - Leak testing can be performed to attempt to recreate leaks, diagnose cause, and confirm an appropriate repair until such time as the roofing is replaced.
- Exterior Walls
 - With the exception of the 1998 addition, the exterior walls were found to be in poor condition and should be replaced as soon as possible as it is beyond its service life.
 - 1972 Original Building:
 - Overall Condition of Exterior Cladding / Finish: Poor
 - Remaining Service Life of Exterior Cladding / Finish: 0 years
 - 1989 and 1996 Additions:
 - Overall Condition of Exterior Cladding / Finish: Poor
 - Remaining Service Life of Exterior Cladding / Finish: 0 years
 - The exterior walls at the 1998 addition were found to be in fair condition and should be expected to last 7-10 years.
 - 1998 Addition:
 - Overall Condition of Exterior Cladding / Finish: Fair
 - Remaining Service Life of Exterior Cladding / Finish: 7-10 years
- Windows
 - Block frame windows units and doors are generally in good condition and should not need full replacement for 10-15 years.
 - Overall condition: Good (except 1989 addition building) Fair (1989 addition building)
 - Remaining Service Life: 10-15 years
 - Window sealant joints and glazing gaskets were in poor condition and should be

replaced as they are at the end of their useful life.

- Overall condition: Poor
- Remaining Service Life: 0 years

Building 2 – Special Services Building

- Steep Slope Roofing
 - The standing seam roof is in serviceable condition and should only require normal maintenance repairs.
 - Overall Condition: Good
 - Remaining Service Life: 10-15 years
- Exterior Walls
 - The exterior paint finish covering the concrete walls of Building 2 is in good condition can be expected to last another 10 to 13 years.
 - Overall Condition of Exterior Cladding / Finish: Good
 - Remaining Service Life of Exterior Cladding / Finish: 10-13 years
- Windows
 - Building 2 windows are in good condition and can be expected to remain in service with normal maintenance for 10-15 years.
 - Overall condition: Good
 - Remaining Service Life: 10-15 years with maintenance

Building 3 – Radiation / Oncology

- Steep Slope Roofing
 - The standing seam metal roof is currently in good condition. With appropriate maintenance, we anticipate it to remain in service for an additional 10-15 years.
 - Overall Condition: Good
 - Remaining Service Life: 10-15 years
- Exterior Walls
 - The EIFS cladding is a barrier system, meaning it does not include a back-up drainage cavity behind the EIFS cladding assembly.
 - The exterior insulation and finish system (EIFS) covering the walls at Building 3 is in good condition and does not require any immediate action at this time.
 - Overall Condition of Exterior Cladding / Finish: Good
 - Remaining Service Life of Exterior Cladding / Finish: 10-13 years with
- Windows

-
- Building 3 windows are in serviceable condition. did not reveal any notable deficiencies and no immediate need for repairs were identified.
 - Overall condition: Good
 - Remaining Service Life: 10-13 years

Recommendations

Recommended Action Summary

- **Building 1 – Main Hospital**
 - Low Slope Roofing – Replace all low slope roofing as soon as possible. Continue maintenance and reactive approach to roof repairs until replacement.
 - Steep Slope Roofing - Repair & Maintain
 - Clean roofs of all debris and dirt.
 - Clean and remove debris from gutters.
 - Repair roof sidewall flashing at interface with EIFS cladding.
 - Exterior Walls
 - 1972 Original Building - Repair and restore: Refinish with a silicone elastomeric coating system after surface repair and preparation.
 - 1989 and 1996 Additions - Repair and restore: Refinish with elastomeric wall coating system after surface repairs and preparation.
 - 1998 Addition - Repair and maintain: Clean surfaces to remove staining from dirt build-up. Repair cracks and damaged EIFS cladding, finish to match existing.
 - Windows - Repair & Maintain
 - Remove and replace window sealant joints and perform window wet glazing repairs in conjunction with exterior wall restoration work.
- **Building 2 – Special Services Building**
 - Steep Slope Roofing – Maintain, including regular gutter cleaning.
 - Exterior Walls - Maintain
 - Windows – Monitor and Maintain
- **Building 3 – Radiation and Oncology**
 - Steep Slope Roofing – Repair and Maintain
 - Remove debris and vegetative growth from gutters.
 - Repair gutter to downspout connection to establish a sealed connection.
 - Exterior Walls - Maintain
 - Windows - Maintain

Building 1 – Main Hospital

Low Slope Roofing

Remove existing low-slope roofing and replace with a 3-play SBS Modified Bitumen system.

Option 1 - 3-ply SBS Modified Bitumen		
System Description	Relative Cost	Estimated Life
Fully adhered 3-ply SBS modified bitumen roof system with granular surfaced top ply sheet over cover board and rigid polyisocyanurate insulation.	High	30-35 years
Pros	Cons	
Redundant multi-ply SBS membranes provides a tough, durable and resilient roof system which is less susceptible to damage from roof top operations, foot traffic, projectiles and debris compared to single ply options.	Higher cost.	
Most durable roof system option with longest life expectancy.	Longer installation times due to multi-ply construction.	

Figure 6 - Building 1 Low Slope Roof Replacement Recommendation

Steep Slope Roofing

Continued annual inspections and routine maintenance in accordance with metal panel roofing manufacturer's requirements are recommended to preserve the roof's integrity and ensure its long-term durability.

Gutters and downspouts should be regularly cleaned to ensure proper drainage.

If roof leaks are suspected, perform forensic water testing to diagnose cause of leaks and determine appropriate repair scope of work.

Exterior Walls

Restore & re-finish the exterior concrete walls of Building 1 (all locations) with a silicone elastomeric wall coating system such as the Dowsil Allguard system. Elastomeric coating comes in various colors and can be installed to match the existing building color scheme.

- Wall restoration work will need to include preparation of wall substrates and preliminary repairs such as removal of any areas with disbonded direct applied finish, disbonded paint finishes, crack and spall repairs where applicable.
- Work will require the use of mobile lifts and / or scaffolding for access to upper wall areas.

Windows

Remove and replace window sealant joints and perform window wet glazing repairs as part of the exterior wall restoration project for Building 1.

- Replace window sealant joints with a high-quality silicone sealant such as Dowsil 795.
- Perform ASTM E 1105 window water testing to confirm watertight integrity of repaired windows.

Building 2 – Special Services Building

Steep Slope Roofing

Continued annual inspections and routine maintenance are recommended to preserve the roof's integrity and ensure its long-term durability.

Gutters and downspouts should be regularly cleaned to ensure proper drainage.

If roof leaks are suspected perform forensic water testing to diagnose cause of leaks and determine appropriate repair scope of work.

Exterior Walls

Refinish with the same elastomeric coating system that is recommended for Building 1 exterior walls.

- Including all exterior walls at the facility under one project has the benefit of establishing a uniform exterior wall aesthetic across all buildings and would ultimately lower the overall capital improvement costs of multiple renovation projects.

If not proceeding with an elastomeric coating in the near future, then minor cracks in the concrete wall, such as those noted at corners of window locations (See Photos 21 & 22), should be sealed to establish a watertight seal.

Windows

Inspection and any repair of exterior sealant joints and glazing gaskets at each window unit should take place during any future wall restoration work that requires scaffolding and / or mobile lifts for access to wall surfaces.

If window leaks are suspected, perform forensic water testing to diagnose cause of leaks and determine appropriate repair scope of work.

Building 3 – Radiation and Oncology

Steep Slope Roofing

Continued annual inspections and routine maintenance are recommended to preserve the roof's integrity and ensure its long-term durability.

Gutters and downspouts should be regularly cleaned to ensure proper drainage.

Repair gutter / downspout connections that are improperly joined and allow water to leak from gutter.

Exterior Walls

Refinish with the same elastomeric coating system that is recommended for the Building 1 walls.

- Installing a coating system will address the handful of hairline cracks at the window perimeters.
- Including all exterior walls at the facility under one project has the benefit of establishing a uniform exterior wall aesthetic across all buildings and would ultimately lower the overall capital improvement costs of multiple renovation projects.

Windows

Inspection and any repair of exterior sealant joints and glazing gaskets at each window unit should take place during any future wall restoration work that requires scaffolding and / or mobile lifts for access to wall surfaces.

If window leaks are suspected, perform forensic water testing to diagnose cause of leaks and determine appropriate repair scope of work.

Limitations

This visual assessment is limited in scope and does not constitute a comprehensive evaluation of all components or concealed conditions of the building envelope. The assessment is based solely on review of record drawings made available to ABB, discussion with facility personnel, and on visual observations made from accessible areas without the use of destructive testing or intrusive investigations. Observations were limited to areas safely accessible at the time of inspection. High elevations or restricted spaces have not been fully examined. Conditions hidden behind walls, ceilings, cladding, or roofing membranes cannot be assessed without destructive testing and may conceal deficiencies or damage. The findings represent the condition of the building envelope at the time of inspection only and may not reflect changes due to wear, weather, or building use over time. This assessment does not include a full code compliance review.

Exhibits

- B1-1 Building One Roofing Assessment
- B1-2 Building One Façade Assessment
- B1-3 Building One Window Assessment
- B2-1 Building Two Roofing Assessment
- B2-2 Building Two Façade Assessment
- B2-3 Building Two Window Assessment
- B3-1 Building Three Roofing Assessment
- B3-2 Building Three Façade Assessment
- B3-3 Building Three Window Assessment

Please do not hesitate to contact us with any questions.

Sincerely,

ABB



Malea Buhlman, AIA, CDT, CSI
Senior Consultant



OBSERVATION - 1



OBSERVATION - 2

BUILDING 1 - LOW SLOPE ROOF OBSERVATIONS

PRIMARY ROOF: SYSTEM: TPO (THERMOPLASTIC POLYOLEFIN) SINGLE PLY MEMBRANE
ROOF COATING: ELASTOMERIC COATING (GACO WESTERN: GACO FLEX S2000 WHITE SILICONE COATING)

OBSERVATION NUMBERS:

- 1 - PARAPET WALL WITH COUNTERFLASHING COVERED BY ROOFING MEMBRANE EXTENDED UP WALL (TYP.).
- 2 - FLUID APPLIED FLASHING REPAIR OVER LEADING EDGE OF ROOF BASE FLASHING (TYP.).
- 3 - UNSEALED ROOF BASE FLASHING LEADING EDGE AT PLUMBING PENETRATION (TYP.).
- 4 - PONDING WATER AT ROOF DRAIN LOCATION (TYP.).
- 5 - LOOSE FASTENERS THROUGH HORIZONTAL PLANE OF PARAPET WALL COPING CAP (TYP.).

BUILDING 1 - EXISTING STEEP SLOPE ROOF SYSTEM:

PRIMARY ROOF SYSTEM: PRE-FINISHED GALVANIZED STEEL STANDING SEAM METAL ROOF PANELS

OBSERVATION NUMBERS:

- 6 - IMPROPER DETAILING AT STEEP SLOPE ROOF SIDE WALL FLASHING AT EIFS CLAD EXTERIOR WALL.



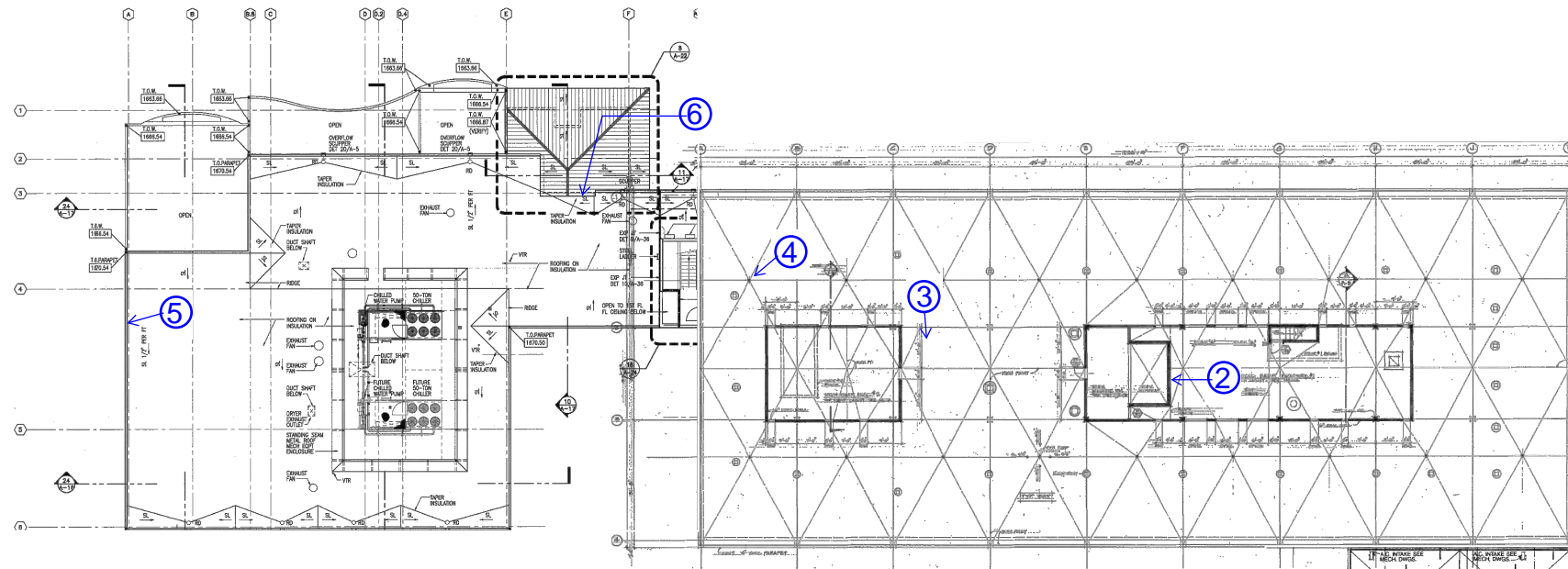
OBSERVATION - 3



OBSERVATION - 4



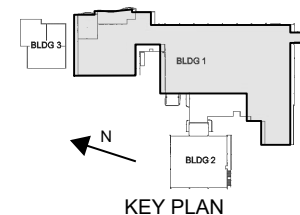
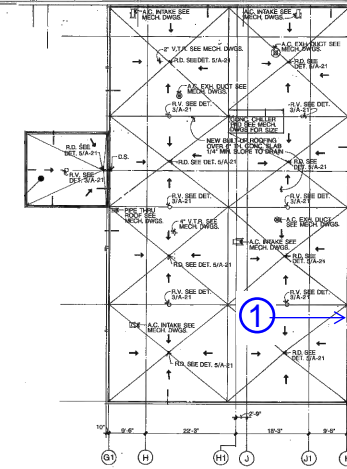
OBSERVATION - 5



BUILDING ONE - ROOF PLAN



OBSERVATION - 6



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BUILDING ONE ROOFING ASSESSMENT

BUILDING ENVELOPE ASSESSMENT
KONA COMMUNITY HOSPITAL

KONA COMMUNITY HOSPITAL

PROJECT NO.:
25-9177.01

DRAWN:
LDB

CHECKED:
GSB

SCALE:
NTS

REF.:
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DRAWING NO.:
B1-1

DATE: 07/1/2025

ISSUE: 001



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OBSERVATION - 7



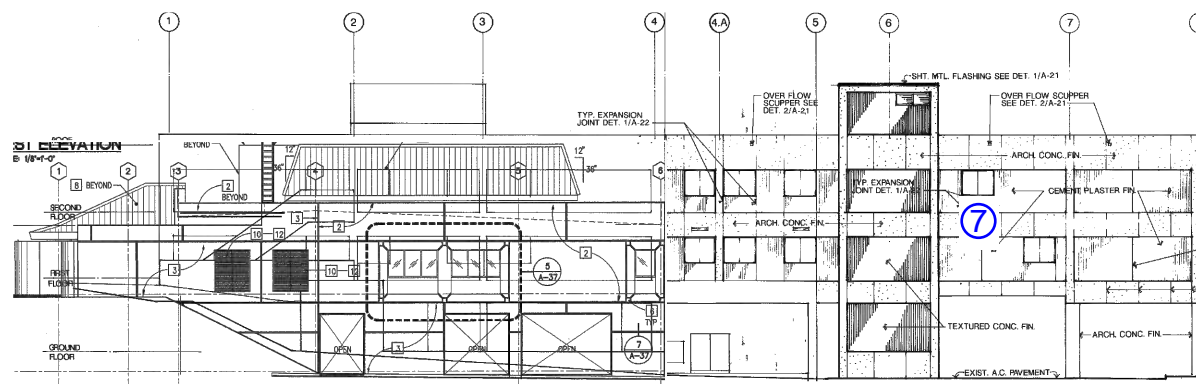
OBSERVATION - 8



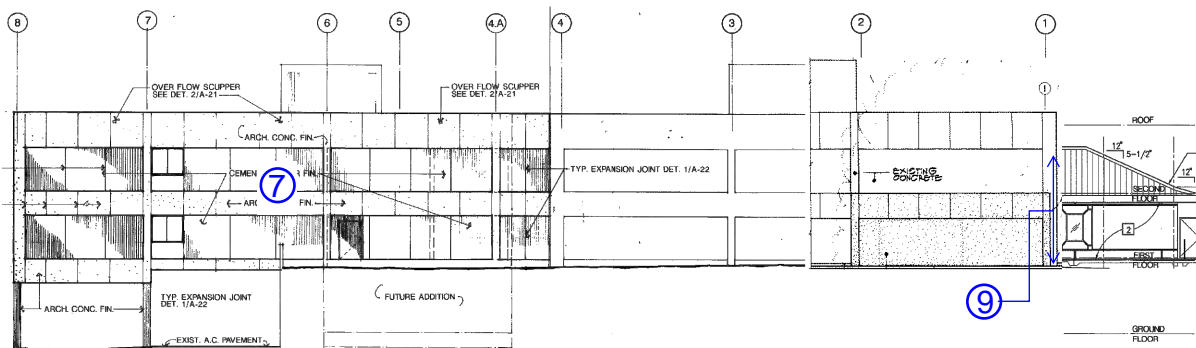
OBSERVATION - 9



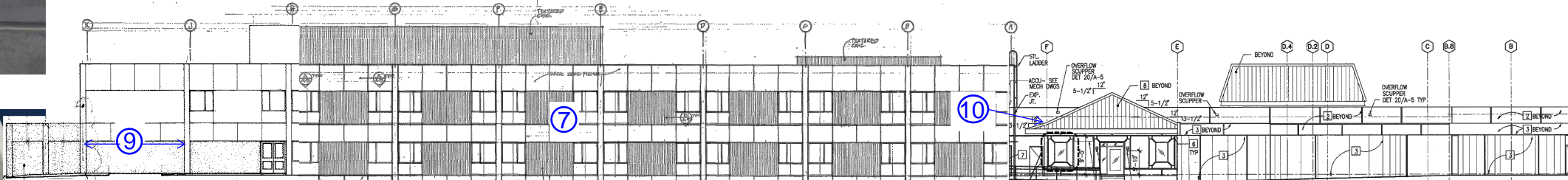
OBSERVATION - 10



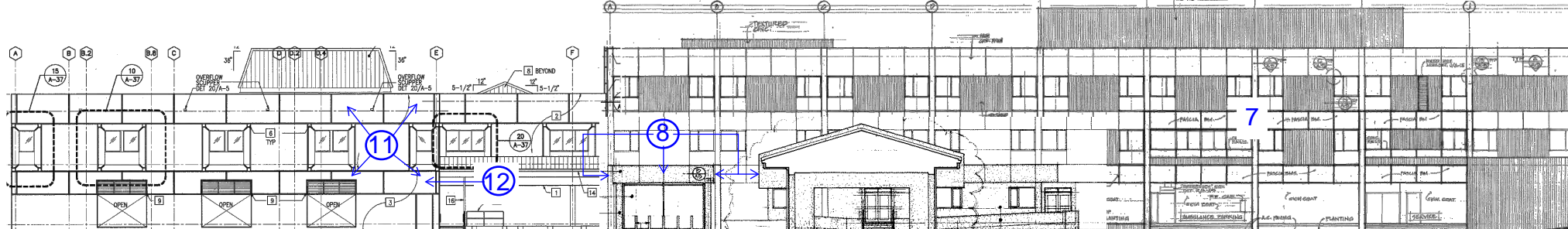
BUILDING ONE - NORTH ELEVATION



BUILDING ONE - SOUTH ELEVATION



BUILDING ONE - EAST ELEVATION



BUILDING ONE - WEST ELEVATION

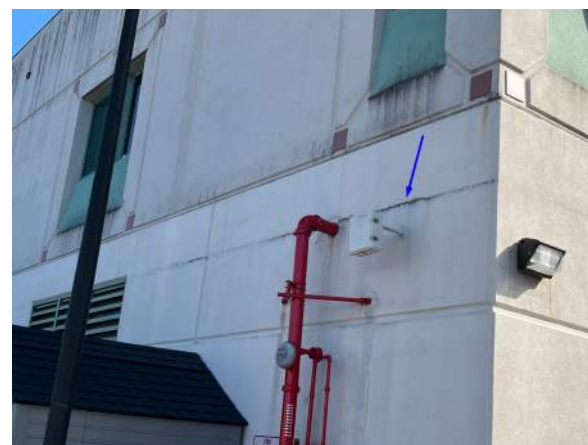
BUILDING 1 - EXTERIOR WALL OBSERVATIONS

WALL TYPES:
 - CONCRETE W/ DIRECT APPLIED CEMENT PLASTER FINISH (1972, 1989, AND 1996)
 - EIFS OVER CMU AND STEEL STUD FRAMAING (1998)

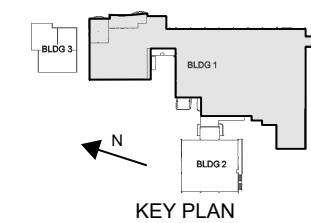
OBSERVATION NUMBERS:
 7 - WORN AND FADED EXTERIOR WALL PAINT FINISH (TYP.).
 8 - DISBONDED BUBBLING PAINT FINISH.
 9 - CRACKED AND DISBONDED CEMENT PLASTER FINISH.
 10 - IMPROPER FLASHING AT EIFS WALL TERMINATION.
 11 - STAINED EIFS FINISH FROM DIRT BUILD UP (TYP.).
 12 - LATERAL CRACKING AT EIFS FINISH.



OBSERVATION - 11



OBSERVATION - 12



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BUILDING ONE FAÇADE ASSESSMENT	
BUILDING EVELOPE ASSESSMENT	
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KONA COMMUNITY HOSPITAL	
ISSUE: 001	DATE: 07/1/2025
DRAWING NO.: B1-2	REF.: N/A
CHECKED: GSB	SCALE: NTS
DRAWN: LDB	PROJECT NO.: 25-9177.01



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OBSERVATION - 13



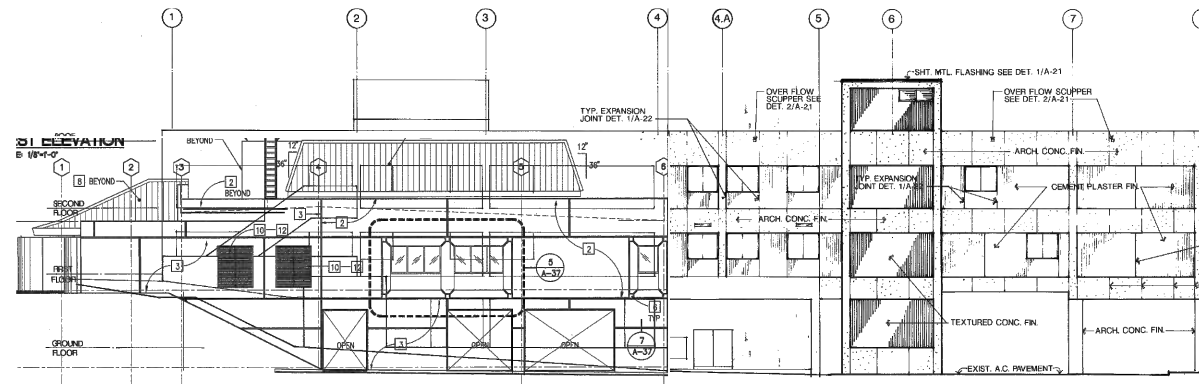
OBSERVATION - 14



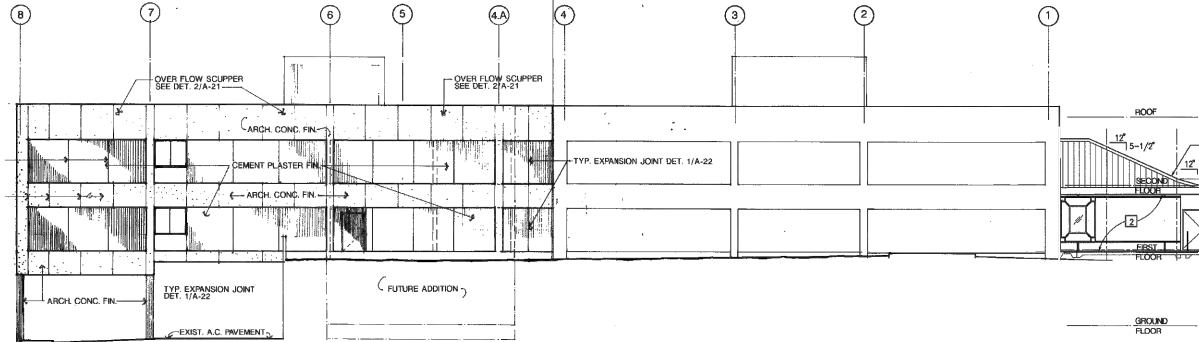
OBSERVATION - 15



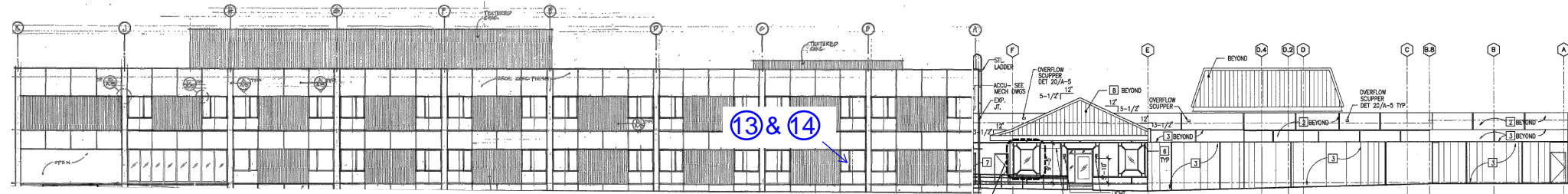
OBSERVATION - 16



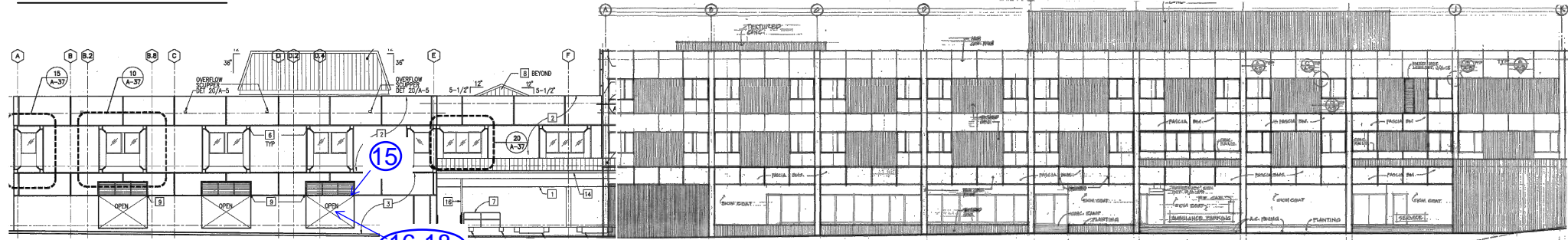
BLDG 1 - NORTH ELEVATION



BLDG 1 - SOUTH ELEVATION



BLDG 1 - EAST ELEVATION



BLDG 1 - WEST ELEVATION

BUILDING 1 - WINDOW / DOOR / LOUVER OBSERVATIONS

WINDOW TYPE: ANODIZED ALUMINUM BLOCK FRAME
 DOOR TYPE: PAINTED STEEL BLOCK FRAME
 LOUVERS: PAINTED STEEL BLOCK FRAME

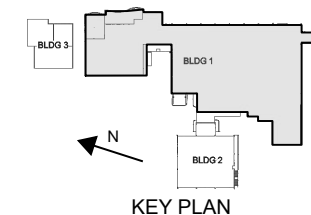
- OBSERVATION NUMBERS:**
- 13 - TYPICAL ANODIZED ALUMINUM BLOCK FRAME WINDOW
 - 14 - CRACKED PAINT OVER SEALANT JOINT
 - 15 - STEEL CORROSION AT LOUVER FRAME
 - 16 - SEALANT JOINT FAILURE
 - 17 - WINDOW GASKET REPAIR
 - 18 - SEALANT JOINT FAILURE



OBSERVATION - 17



OBSERVATION - 18



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BUILDING ONE WINDOW ASSESSMENT	
BUILDING ENVELOPE ASSESSMENT	
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OBSERVATION - 19



OBSERVATION - 20

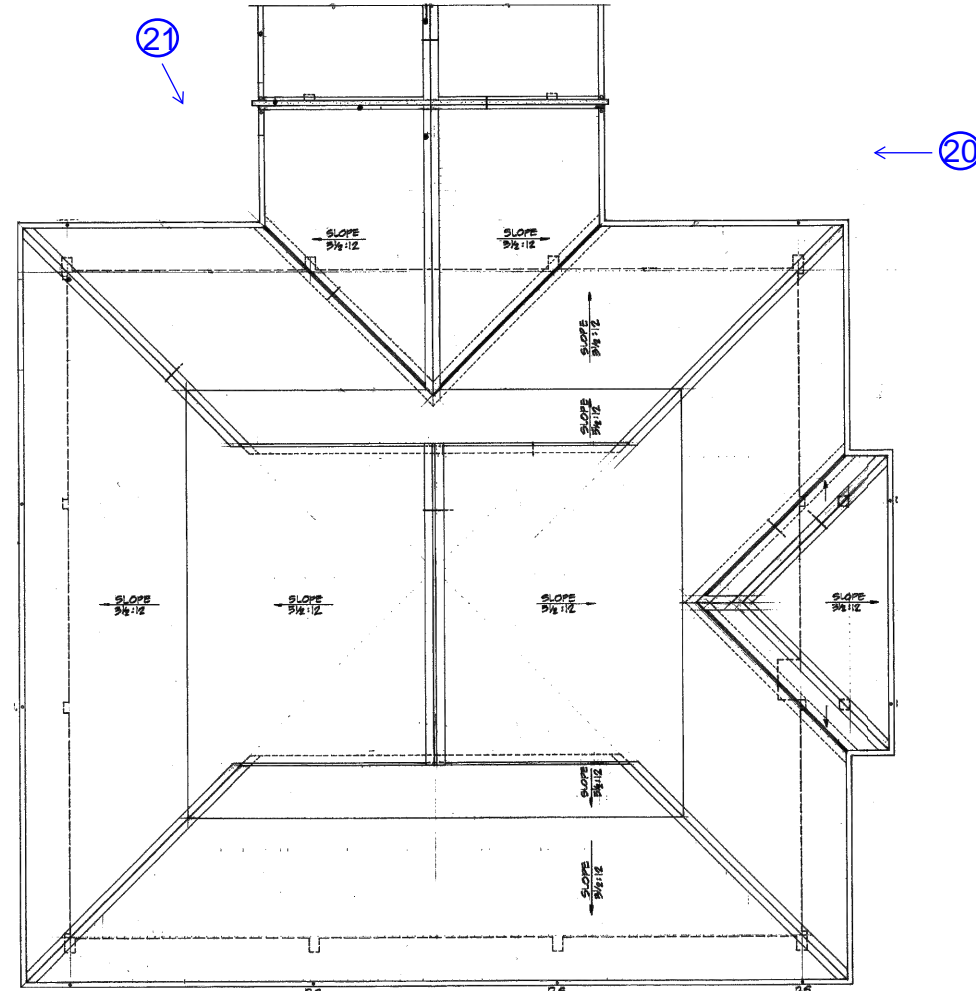


OBSERVATION - 21

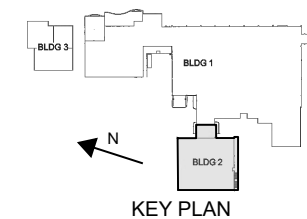
BUILDING 2 - STEEP SLOPE ROOF OBSERVATIONS

PRIMARY ROOF SYSTEM: PRE-FINISHED GALVANIZED STEEL STANDING SEAM METAL ROOF PANELS.

OBSERVATION NUMBERS:
 19 - ROOF OVERVIEW
 20 - ROOF OVERVIEW
 21 - ROOF OVERVIEW



BUILDING TWO - ROOF PLAN



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OBSERVATION - 22



OBSERVATION - 23



OBSERVATION - 24



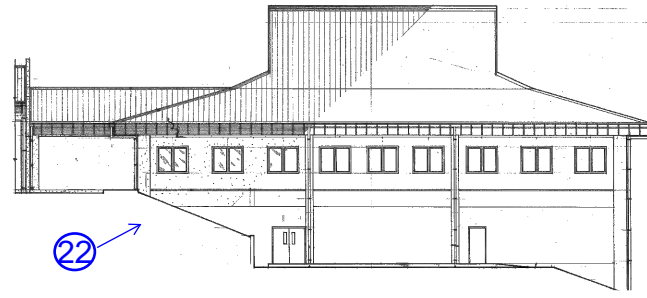
OBSERVATION - 25



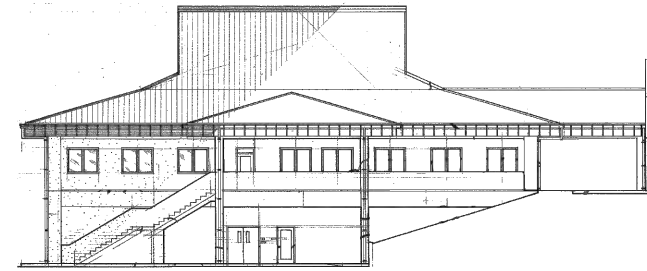
OBSERVATION - 26



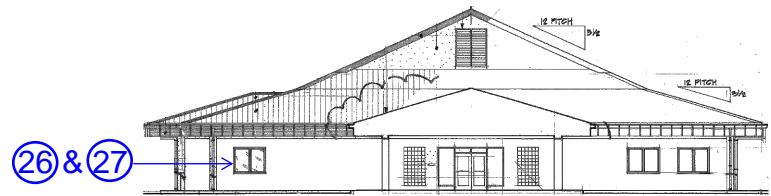
OBSERVATION - 27



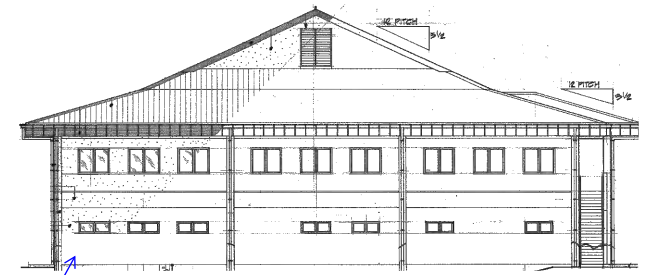
BUILDING TWO - NORTH ELEVATION



BUILDING TWO - SOUTH ELEVATION



BUILDING TWO - EAST ELEVATION



BUILDING TWO - WEST ELEVATION

BUILDING 2 - EXTERIOR WALL OBSERVATIONS

WALL TYPE: CONCRETE WITH DIRECT APPLIED CEMENT PLASTER FINISH

OBSERVATION NUMBERS:

- 22 - NORTH ELEVATION OVERVIEW
- 23 - SOUTHWEST ELEVATION OVERVIEW
- 24 - EAST ELEVATION MAIN ENTRY OVERVIEW
- 25 - NORTHWEST ELEVATION OVERVIEW
- 26 - CRACKED CONCRETE AT PUNCHED WINDOW
- 27 - CRACKED CONCRETE AT STAIRWAY WALLS

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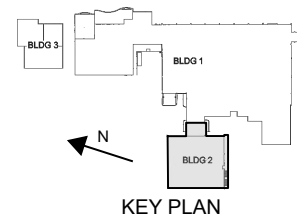
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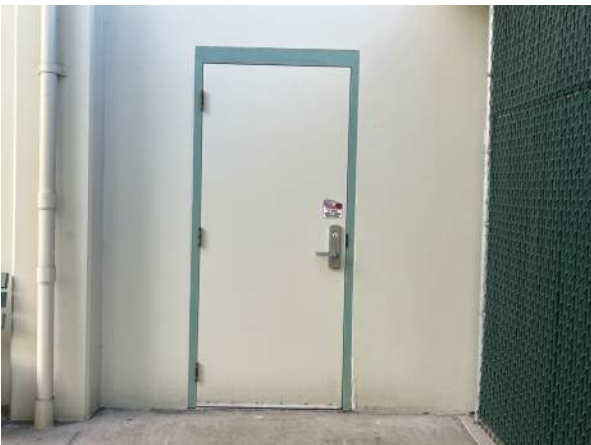
OBSERVATION - 28



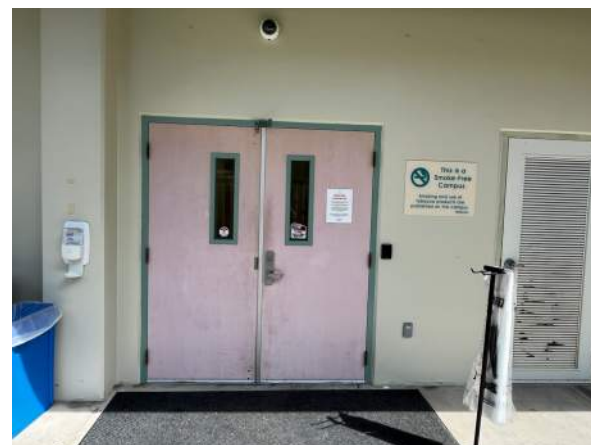
OBSERVATION - 29



OBSERVATION - 30



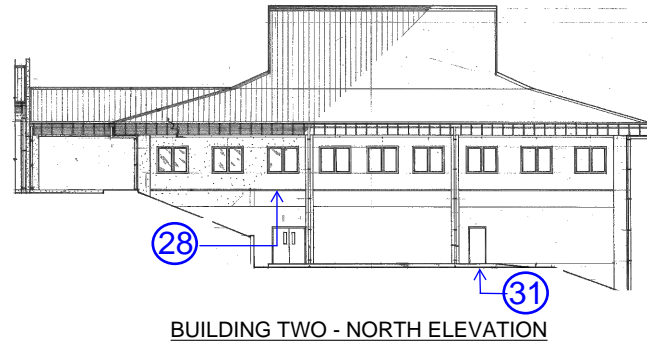
OBSERVATION - 31



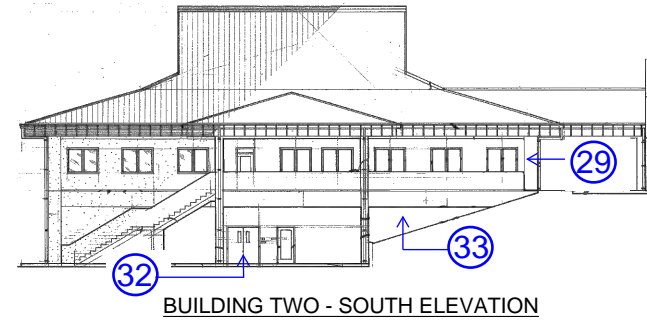
OBSERVATION - 32



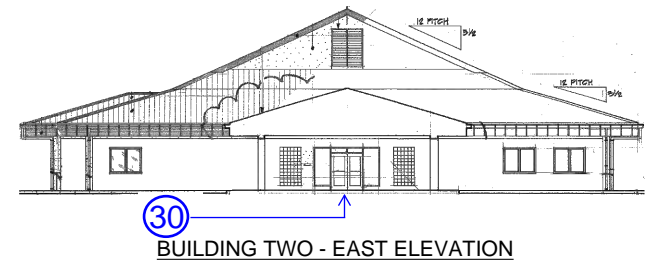
OBSERVATION - 33



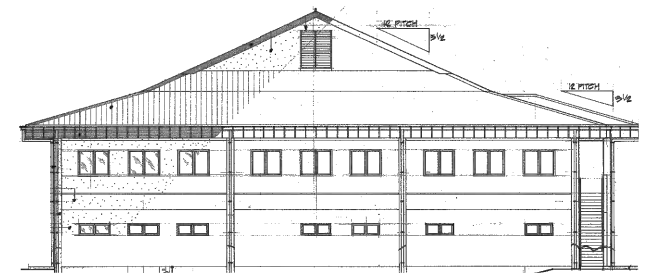
BUILDING TWO - NORTH ELEVATION



BUILDING TWO - SOUTH ELEVATION



BUILDING TWO - EAST ELEVATION



BUILDING TWO - WEST ELEVATION

BUILDING 2 - WINDOW / DOOR / OBSERVATIONS

WINDOW & DOOR TYPE: ANODIZED ALUMINUM BLOCK FRAME
LOUVER: PAINTED STEEL BLOCK FRAME

OBSERVATION NUMBERS:

- 28 - ANODIZED ALUMINUM BLOCK FRAME WINDOWS (TYP.)
- 29 - ANODIZED ALUMINUM BLOCK FRAME WINDOWS (TYP.)
- 30 - ANODIZED ALUMINUM BLOCK FRAME DOOR / WINDOW (TYP.)
- 31 - PAINTED STEEL DOOR (TYP.)
- 32 - PAINTED STEEL DOOR WITH WORN PAINT FINISH (TYP.)
- 33 - PAINTED STEEL LOUVERS (TYP.)

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BUILDING TWO WINDOW ASSESSMENT

BUILDING EVELOPE ASSESSMENT
KONA COMMUNITY HOSPITAL

KONA COMMUNITY HOSPITAL

PROJECT NO.:
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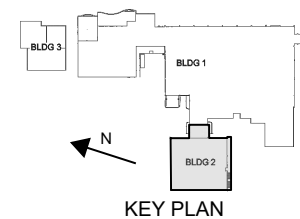
ISSUE: 001

DATE: 07/1/2025

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OBSERVATION - 34



OBSERVATION - 35

BUILDING 3 - STEEP SLOPE ROOF OBSERVATIONS:

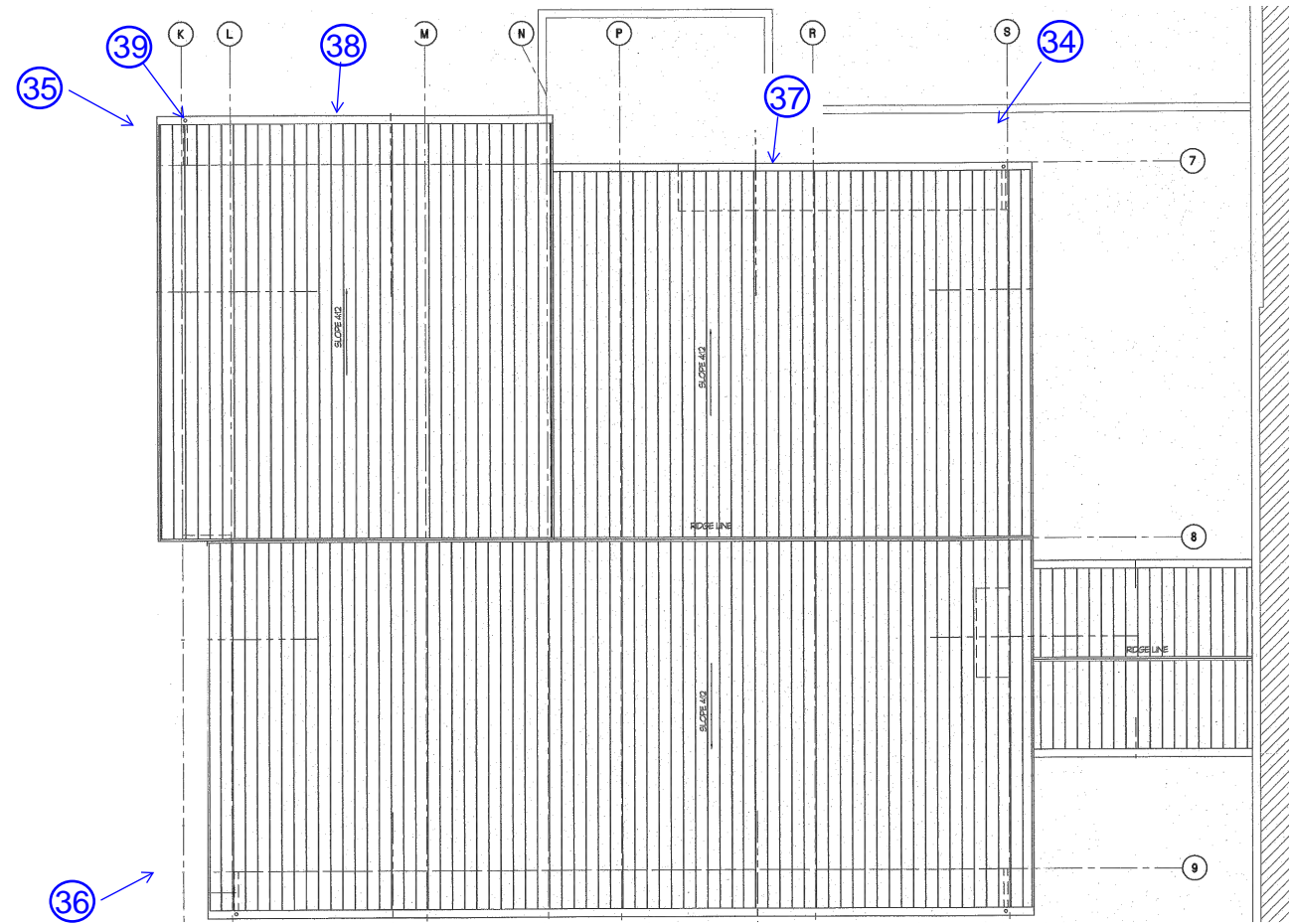
PRIMARY ROOF SYSTEM: PRE-FINISHED GALVANIZED STEEL STANDING SEAM METAL ROOF PANELS.
ROOF SLOPE: 4" PER FOOT DEPENDING ON LOCATION

OBSERVATION NUMBERS:

- 34 - ROOF OVERVIEW
- 35 - ROOF OVERVIEW
- 36 - ROOF OVERVIEW
- 37 - VEGETATION GROWTH AT ROOF GUTTERS
- 38 - VEGETATION GROWTH AT ROOF GUTTERS
- 39 - DECOUPLED GUTTER TO DOWNSPOUT CONNECTION (TYP.)



OBSERVATION - 36



BUILDING THREE - ROOF PLAN



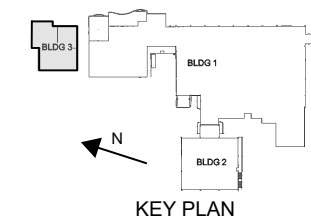
OBSERVATION - 37



OBSERVATION - 38



OBSERVATION - 39



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BUILDING THREE ROOF ASSESSMENT		ISSUE: 001	REF: N/A
BUILDING EVELOPE ASSESSMENT		DATE: 07/1/2025	
KONA COMMUNITY HOSPITAL		DRAWING NO.: B3-1	
KONA COMMUNITY HOSPITAL		CHECKED: GSB	SCALE: NTS
PROJECT NO.: 25-9177.01		DRAWN: LDB	



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OBSERVATION - 40



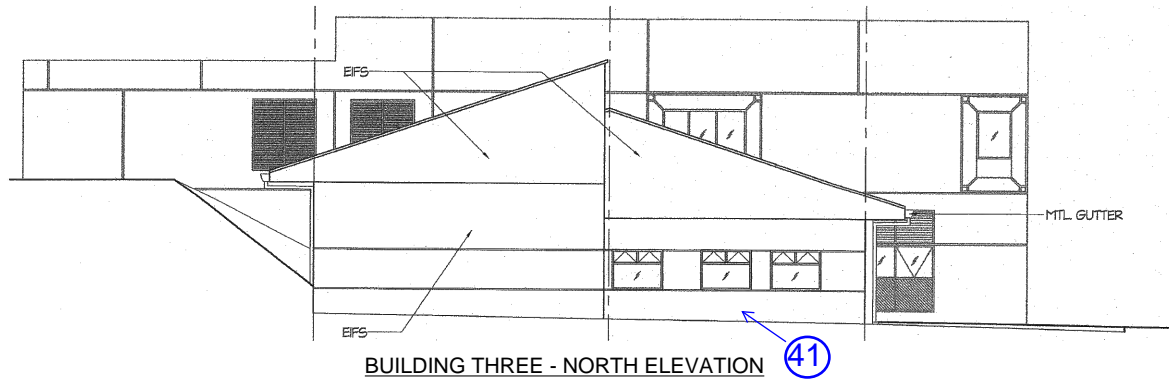
OBSERVATION - 41



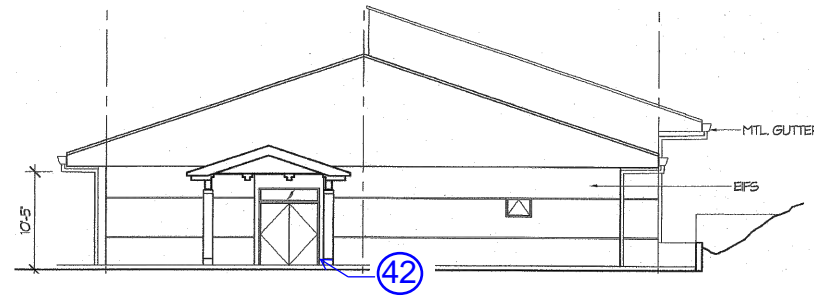
OBSERVATION - 42



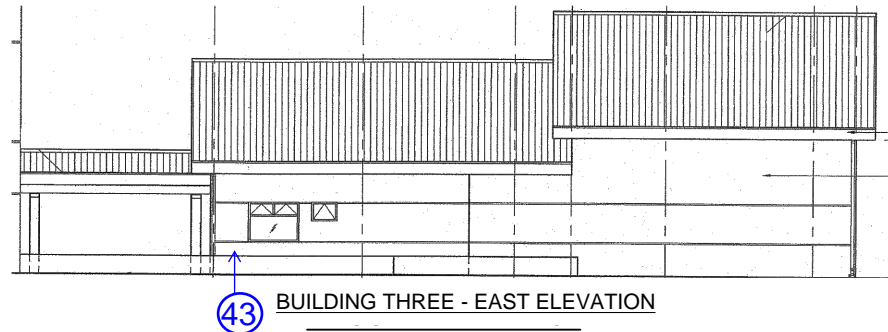
OBSERVATION - 43



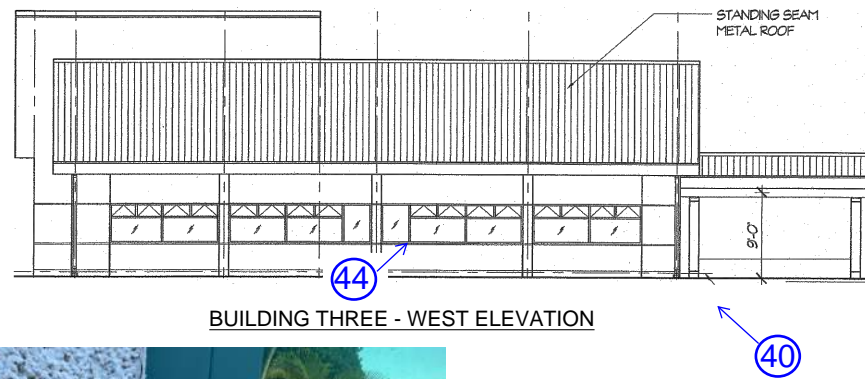
BUILDING THREE - NORTH ELEVATION 41



BUILDING THREE - SOUTH ELEVATION 42



BUILDING THREE - EAST ELEVATION 43



BUILDING THREE - WEST ELEVATION 44



OBSERVATION - 44

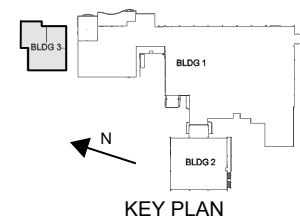
BUILDING 3 - EXTERIOR WALL OBSERVATIONS:

WALL TYPE:
EIFS CLADDING OVER CONCRETE, CMU, AND STEEL STUD WALLS

- OBSERVATION NUMBERS:**
 40 - SOUTHWEST ELEVATION OVERVIEW
 41 - NORTH ELEVATION OVERVIEW
 42 - SOUTH ELEVATION MAIN ENTERANCE
 43 - EAST ELEVATION WALL MOUNTED UTILITIES
 44 - HAIRLINE CRACKS AT WINDOW / EIFS INTERFACE (TYP.)

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BUILDING TWO FAÇADE ASSESSMENT		ISSUE: 001	DATE: 07/11/2025	DRAWING NO.: B3-2	REF.: N/A
BUILDING EVELOPE ASSESSMENT					
KONA COMMUNITY HOSPITAL					
KONA COMMUNITY HOSPITAL					
PROJECT NO.: 25-9177.01	DRAWN: LDB	CHECKED: GSB	SCALE: NTS		



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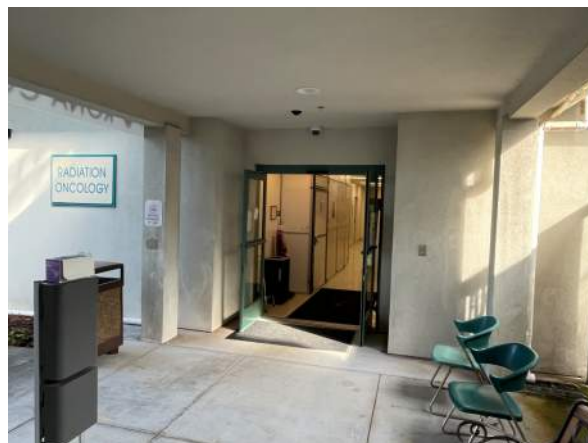
OBSERVATION - 46



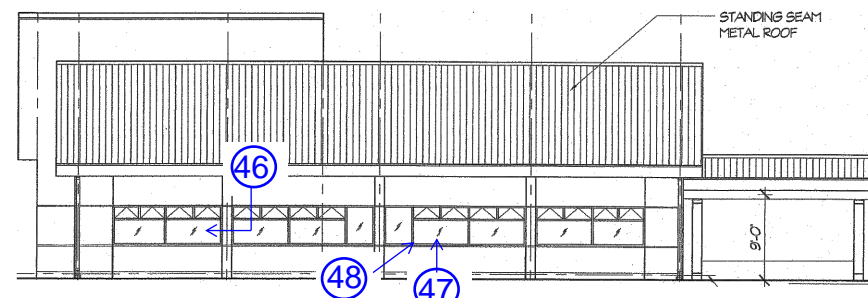
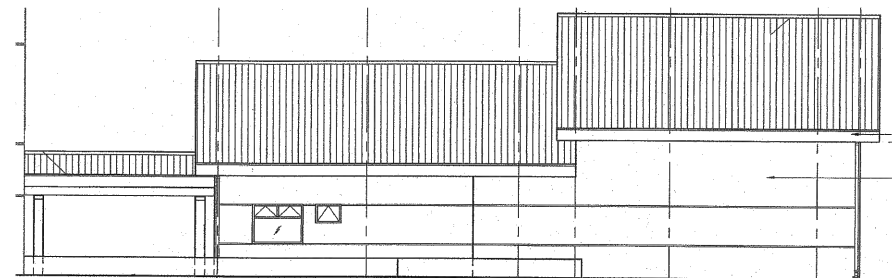
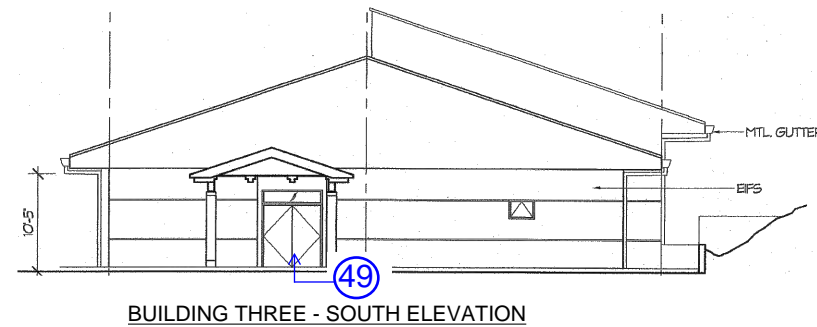
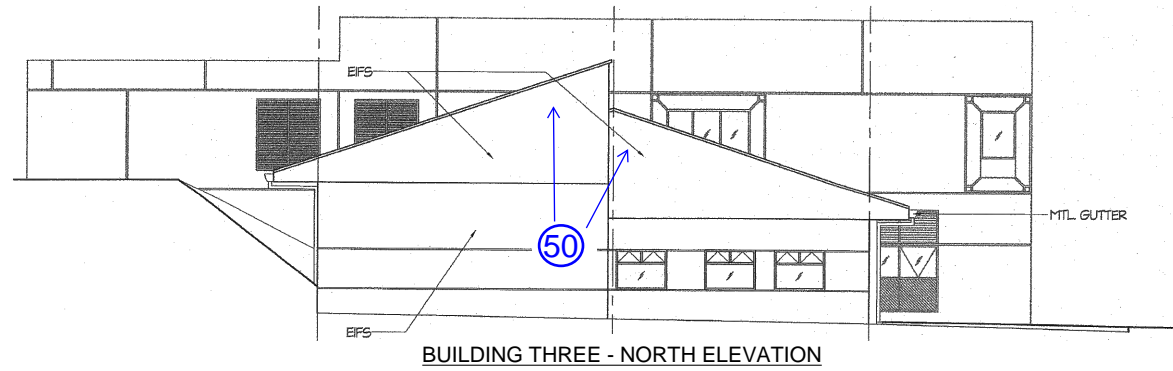
OBSERVATION - 47



OBSERVATION - 48



OBSERVATION - 49



OBSERVATION - 50

BUILDING 3 - WINDOW OBSERVATIONS

WINDOW / DOOR TYPE: PRE-FINISHED ALUMINUM BLOCK FRAME
 LOUVER: PAINTED STEEL BLOCK FRAME

OBSERVATION NUMBERS:

- 46 - PRE-FINISHED ALUMINUM BLOCK FRAME WINDOWS (TYP.)
- 47 - PRE-FINISHED ALUMINUM BLOCK FRAME WINDOWS (TYP.)
- 48 - HAIRLINE CRACKS AT WINDOW / EIFS INTERFACE (TYP.)
- 49 - PRE-FINISHED ALUMINUM BLOCK FRAME MAIN ENTRY DOOR
- 50 - PAINTED STEEL LOUVERS (TYP.)

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BUILDING THREE WINDOW ASSESSMENT

BUILDING ENVELOPE ASSESSMENT
 KONA COMMUNITY HOSPITAL

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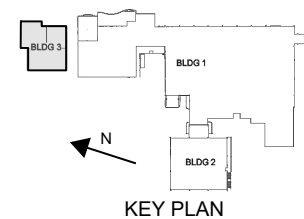
SCALE:
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ISSUE: 001

DATE: 07/11/2025

DRAWING NO.:
B3-3

REF.:
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