Salina Airport Authority
3237 Arnold Avenue
Salina, KS 67401

Report 4 – Structural Condition Assessment

Hangars 504 and 606 and Building 655

MARCH 1, 2022

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TABLE OF CONTENTS

1.0 ASSIGNMENT 1

2.0 PROPERTY DESCRIPTION 1

3.0 EVENT SUMMARY 3

4.0 METEOROLOGICAL DATA 4

5.0 OBSERVATIONS 5

6.0 CONCLUSIONS 10

7.0 GENERAL REPAIR PROTOCOL 12

8.0 CLOSING 14

ATTACHMENTS

A. SITE LOCATION MAP AND AERIAL VIEW

B. METEOROLOGICAL DATA

C. AIRPORT BUILDING LAYOUT AND NUMBERS

D. SKETCHES BY VERTEX

E. PHOTOGRAPHIC DOCUMENTATION BY VERTEX

1.0 ASSIGNMENT

As requested by Zurich American Insurance Company ("Zurich"), The Vertex Companies, Inc. ("VERTEX") visited the municipal property of the Salina Airport Authority ("Insured") to evaluate the cause and extent of structural damage reportedly caused by elevated winds to multiple buildings, structures, and roofs. Christopher Leaton, PE inspected Hangar 504 and Building 655 on January 11, 2022. Christopher Leaton reinspected Hangar 504 and inspected hangar 606 on February 1, 2022. Christopher Leaton, PE prepared this report, and Isaac Gaetz reviewed the findings. The inspections included the taking of photographs, measurements, and observations. Maynard Cunningham (Salina Airport Authority) was present for both investigations, and Asheiki Preston (RMC Group) was present during our investigation on January 11, 2022.

2.0 PROPERTY DESCRIPTION

The property was a regional airport that was at 3237 Arnold Avenue located in Salina, Saline County, Kansas. The Salina Regional Airport was operated by the Salina Airport Authority. The Salina Airport Authority managed approximately (75) buildings, multiple hangars of various sizes and configurations, and other structures which included a water storage tank and a water tower. VERTEX inspected a total of sixteen structures including ten hangers and five buildings which were the subject of the investigation. Hangars 504 and 606 and Building 655 were the subject of this report. For the purposes of this report, Hangar Structure 504 faced west, and Hangar 606 and Building 655 faced east (see **Attachment A,** Location Map and Aerial View and **Attachment C**, Building Layout and Number).

Hangar 504

Hangar 504 was a hangar with a building addition on the east side. The building addition was the office and crew quarters and was the subject of this investigation. The hangar was constructed in 1981, and the addition was built in 1995. The addition had been reportedly remodeled in October 2019.[1]

The hangar was approximately 60 feet long in each horizontal direction. The building addition was approximately 20 feet wide (east-west direction) by 40 feet long (north-south direction). The hangar and addition were pre-engineered metal buildings. The roof and walls were covered by metal panels. The west elevation had bi-parting hangar doors. The interior of the building addition included a two-story, wood-framed structure whose members were independent of the exterior metal building shell. The addition interior walls were framed with 2x4 studs. The second floor was framed with wood trusses (see **Attachment D,** for Layout and **Attachment E**, Photos 1 thru 4).

Hangar 606

Hangar 606 included a main hangar with office areas on the east. The hangar was reportedly constructed in 1942.[2] The hangar was approximately 161 feet wide (east-west direction), not including the hangar door storage bays, by 212 feet long (north-south direction). The office areas were approximately 36 feet wide (east-west direction) by 212 feet long (north-south direction). The main hangar was the subject of this investigation. The hangar had steel bowstring roof trusses that were supported by concrete buttresses and foundations. The buttresses and trusses were spaced at approximately 20 feet in the north-south direction. The roof trusses spanned the width of the hangar in the east-west direction. The concrete buttresses were on the east and west elevations of the hangar. The north and south elevations had bi-parting hangar doors. When

[1] https://www.saline.org/Departments/Appraiser/Parcel-Lookup; Parcel ID 0850883403001003000
[2] https://www.saline.org/Departments/Appraiser/Parcel-Lookup; Parcel ID 0850883403001003000

opened, the bi-parting hangar doors were rolled into storage bays at each corner of the main hangar. The storage bays were brick structures approximately 26 feet wide (east-west direction) by 8 feet long (north-south direction). The main hangar roof and the hangar door end roofs were covered by metal roof panels. The north and south lower hangar door roofs were covered with a thermoplastic membrane. A brick chimney stack was adjacent to the north end of the east wall. The chimney was independent of the hangar (see **Attachment D,** for Layout and **Attachment E**, Photos 5 and 6).

Building 655

Building 655 was a storage facility that was approximately 200 feet wide (north-south direction) by 502 feet long (east-west direction). The storage facility included a warehouse, front office, loading bays, and a loading dock. The warehouse and front office were built in 1945, and the loading bays were added in 1985[3]. The southwest corner of the warehouse was the subject of this investigation. The warehouse was a wood-framed building that was supported by a concrete foundation. The roof had a low slope. The roof and walls were covered by metal panels (see **Attachment D,** for Layout and **Attachment E**, Photos 7 and 8).

3.0 EVENT SUMMARY

Maynard Cunningham reported on or around December 15, 2021, that elevated winds and windborne debris had affected multiple airport buildings, hangars, and roofs. He reported that the following structures had been affected:

[3] https://www.saline.org/Departments/Appraiser/Parcel-Lookup; Parcel ID 0850883403001003000

- Hangar 504 (2013 Kneubuhl Court): The east and south walls of building addition had been affected. The metal wall panels on the south wall had been bent and reattached. The metal support framing and wall panels on the east wall were loose and bent outward.
- Hangar 606 (2630 Arnold Avenue): The south roof edge of the thermoplastic roof had become detached the west end. The interior bottom of the west wall had been displaced inward for approximately (3) bays.
- Building 655 (2656 Arnold Avenue): The southwest building corner had been impacted by a windblown semitrailer.

4.0 METEOROLOGICAL DATA

VERTEX reviewed storm data as reported by the National Weather Service (NWS) for December 15, 2021. The NWS reported:

> *A low pressure system of historic strength led to a variety of high-end weather impacts from the central Plains to the Upper Midwest and Great Lakes December 15-16. An unprecedented December severe weather unfolded over portions of Minnesota and Wisconsin Wednesday evening, with the Storm Prediction Center issuing their farthest-north Moderate Risk for the month of December. A serial derecho moving at 60-80 mph tracked from Kansas to Wisconsin, resulting in over 560 reports of damaging wind and over 60 tornadoes. A total of 57 "significant severe" wind gusts (75+ mph) were reported, breaking the daily record of 53 set on August 10, 2020.*[4]

[4] https://www.weather.gov/mpx/HistoricStormDecember2021

VERTEX also reviewed monthly climate data for the Salina Regional Airport, and the greatest reported wind was 89 mph from the west-southwest on December 15, 2021 (see Attachment C, Meteorological Data).

5.0 OBSERVATIONS

VERTEX inspected the exterior and interior of Hangars 504 and 606 and Building 655. We observed the following conditions (see **Attachment A** for orientation, **Attachment D** for layout, and **Attachment E** for photographs):

Hangar 504 - Exterior

The metal panels on the south elevation were faded. The metal wall panels below the window were reported to have been loose and bent from elevated winds, and a board was reported to have been installed along the bottom of the upper story window to temporarily reattach the panels. The metal panels above and adjacent to the upper window were not apparently bent, and the flashing and seals were not loose. The fasteners above the window had a dulled appearance. A repair material appeared to have been installed above the right side of the window. The wall panel lapped joints were reversed below the window. A vertical strip of the metal panels at the lapped joints was not apparently discolored or faded. The fasteners at the lapped joints and the installed board had a bright appearance. The metal panels had jagged, sharp holes next to the installed fasteners. The hole edges had a bright appearance that was not discolored or faded (see Photos 9 thru 12).

The metal panels were loose and protruded outward several places above the two south windows on the south side of the east elevation. The metal panel fasteners appeared to have been installed in two rows at the apparent horizontal girt locations. The metal panels had missing fasteners at the horizontal rows and at several of the vertical lapped joints. The metal panels

were locally bent and/or torn at both the intact and the missing fastener locations. The metal panels on the lower south end of the east elevation could be moved inward when pushed by hand along the horizontal row of fasteners above the windows. The metal panels above the two south windows were displaced outward and had missing and partially withdrawn fasteners. The hole edges at the missing fasteners above the window had a bright and jagged appearance. The bottom edges of the metal panels above the southmost window were exposed, and the metal panels at the upper right corner protruded past the window approximately 3.25 inches, exposing the underlying fiberglass batt insulation. The metal panel was bent and torn at the upper left window corner. The exposed and torn edges of the metal panels had a bright appearance without apparent surface corrosion (see Photos 13 thru 16).

In the subsequent inspection of Hangar 504, the wall panels and trim had been removed by the insured's contractor at the southeast building corner to expose the metal girts and wood framing. VERTEX inspected the east and south elevations with a contractor provided manlift and operator. The metal panel fasteners had been removed at the southeast building corner. The contractor reported to have reconnected the lower girt on the east wall to the column of the metal building frame. The wall panels had multiple holes adjacent to the removed fasteners. The holes were locally bent and torn, and the hole edges had a bright appearance (see Photos 17 and 18).

The south wall girts were cold-formed bypass girts that were attached to stiffened cold-formed angles that were bolted to the outside south column face. The bypass girt bolted connections were tight, and the bolts had been installed with the threads upward. The nuts had been installed without washers into the short-slotted holes of the stiffened angles. The bolts and girt metal edges had corrosion from apparent surface rust. The beam-column and beam-beam frame connections were bolted without washers. The bolted connections were tight. The frame connection bolts had a dulled appearance (see Photos 19 and 20).

The east girts were flush mounted girts bolted to clips that were attached to the column webs. The girt bolted connections were tight, and the bolts had been installed with the threads upward. The nuts had been installed without washers into the short-slotted holes of the stiffened angles. The top surface of the clips at the short-slotted holes had darkened rings. The bottom girt south end connection was reported by the contractor to have had it bolts replaced (see Photo 21).

The girts and column were checked for level and plumb. The girts were within 0.5 of a degree from level. The column was within 0.1 and 0.2 of a degree from vertical plumb in its respective east-west and north-south directions. The exposed interior wood framing was 2x4 studs that supported floor and roof trusses. The wood trusses were not apparently fastened or strapped to the wood stud walls. The wood framing was within 0.3 of a degree of plumb in the north-south direction and was within 0.6 of a degree of plumb in the east-west direction (see Photo 22).

Hangar 504 - Interior

The kitchen east wall surface had numerous nail pops. The east wall was not laterally displaced and was 0.2 of a degree or less from plumb. The second-floor trusses had full bearing and were not apparently displaced or deformed. The floor trusses were within 0.2 of a degree from level in the east-west direction. The floor trusses had full bearing on the lower wall top plate. The trusses were not apparently fastened or strapped to the lower wall. The metal building lower girt for the east exterior wall in the wall cavity was visibly rotated along its long axis (see Photos 23 thru 26).

The west end of the living room was missing four acoustic ceiling tiles. The second-floor framing members above the ceiling tiles had full bearing and were not apparently displaced or deformed. The second-floor office and sleeping quarters had multiple nail pops on the east wall surface (see Photos 27 thru 29).

Hangar 606 - Exterior

The thermoplastic membrane was fastened to the rake trim along the edge of the lower south hangar door roof. The west end of the thermoplastic membrane was detached approximately (12) feet, starting near the southwest corner. The membrane fasteners were withdrawn, and the membrane was not apparently ripped or torn. Approximately (4) feet of the thermoplastic membrane were displaced upward approximately at the middle of the south edge of the roof (see Photos 30 thru 32).

The hangar roof and the walls between the concrete buttresses were covered corrugated metal panels. The wall had a partial height concrete wall approximately (3) feet tall the length of the west elevation except for the center bay. The roof and wall panels were attached and were not missing. The bottoms of the metal panels were not detached or laterally displaced. The gaps between the metal panel corrugations and concrete walls were not apparently sealed. The metal panels were bent at their joints but had no apparent gaps in the joints. No missing fasteners were observed at the metal panels. The metal panels had a repair sealant installed at several places, and the repair sealant was not apparently torn (see Photos 33 and 34).

The center bay was approximately opposite of the middle of the length of the displaced partition wall. The center bay had a louver at approximately 3/4 of the wall height. The upper half of the wall had multiple metal panels that apparently had been replaced. The metal panels for the upper half of the wall were offset from the face of the concrete frame by approximately (2) inches. The concrete buttresses and the partial height wall had numerous cracks. The crack edges and interior surfaces were rounded and weathered (see Photos 35 and 36).

Hangar 606 - Interior

The interior faces of the hangar walls had been covered with metal wall panels. The wall panels were manufactured in approximately (12) feet lengths that had been installed in rows on the

walls. Approximately the center (60) feet of the bottom west hangar wall had been displaced inward. The metal panels where the wall had been displaced was 1.8 degrees from vertical plumb. Measurements taken at a joint in concrete slab along the length of the wall indicated that the bottom of the wall had been displaced inward approximately (7) inches. The bottom angle for the interior wall was not locally bent or crippled. The wall panels and the bottom angle were not discolored or stained. The metal wall panels did not have missing fasteners, and the metal panels were not locally buckled or bent at the fasteners (see Photos 37 thru 40).

Building 655 - Exterior

The southwest wall corner had reportedly been impacted by a semitrailer. The semitrailer had been reportedly righted and placed in its position prior to the VERTEX inspection. The metal panels had been bent and torn approximately (4) feet north and (3.5) feet east of the building corner. The base angle to which the metal panels were attached was bent approximately (4.3) feet north of the building corner. The metal panels were bent and torn approximately (4) feet above the top of the loading dock concrete slab. The metal panel torn edges were jagged and had a bright appearance. The fractured wood framing and sheathing surfaces were rough and were not discolored or stained (see Photos 41 thru 43).

Building 655 - Interior

The south and west walls of the warehouse had been framed by 2x8 studs at approximately 16-inch centers. The walls were insulated, and the studs were horizontally blocked. The south wall sat on a concrete curb that extended approximately (12) inches around the southwest building corner to the north. The lower (8) feet of wall on the concrete curb was covered with plywood. The bottom of the west wall at the southwest building corner had been displaced inward several inches. The wall studs exposed to view were not found to be cracked or fractured (see Photos 44 thru 46).

6.0 CONCLUSIONS

Based on our investigation and within a reasonable degree of engineering certainty, it is the opinion of VERTEX that Hangars 504 and 606 and Building 655 had been affected by elevated winds and/or windborne debris impacts on or around December 15, 2021. The following components for each hangar and building were affected by elevated winds:

- Hangar 504: The metal panels for the east and south walls had been detached and displaced outward. The lower girt connection bolts had loosened at south end of the east wall, and the girt had been displaced downward and outward.
- Hangar 504: The east wall had nail pops to the drywall for the first and second floors. The living room had (4) acoustic ceiling tiles that had been displaced.
- Hangar 606: The edge of the thermoplastic membrane for the south lower hangar door roof had been lifted at two places for approximately (16) lineal feet.
- Hangar 606: Approximately (60) feet of the interior face of the west hangar wall long had been displaced inward.
- Building 655: The warehouse southwest corner had been impacted by the reported semitrailer.

Review of meteorological data indicated that elevated winds at approximately 89 mph from the west-southwest had occurred at the property of the Salina Regional Airport on or around December 15, 2021. These elevated winds would have been capable of affecting structural systems and building components. Additionally, the elevated winds would have been capable of generating windborne debris and overturning equipment and trailers that were not anchored.

The elevated winds appeared to have generated suction (outward) wind forces on the east and south elevations of Hangar 504. These outward winds forces appeared to have caused the metal

wall panel fasteners to fail, and/or the metal panels to have locally failed at the fasteners. The wind forces appeared to have also caused the south end connection of the lower girt to loosen and allowed the girt to lose attachment with the metal building column. The failure of the metal panels at their fasteners and the detachment of the girt appeared to have allowed wind into the floor and wall cavities. The wind pressure in these cavities appeared to have caused elastic movement of the structure and the nail pops on the east wall for the first and second floors and to have caused the displaced acoustic ceiling tiles in the family room. Although a girt and metal wall panels had been affected, these were not components of the lateral force-resisting system, and the lateral force-resisting system for the Hangar 504 addition had not been affected.

The elevated winds had affected Hangar 606. The elevated winds appeared to have produced wind uplift that caused the localized detachment of the thermoplastic roof at two places on the south lower hangar door roof. Additionally, the elevated winds appeared to have entered the wall cavities on the west hangar wall. While there were no detached or missing wall panels on the exterior of the west hangar wall, the winds could have entered between the bottoms of the corrugated metal panels and the concrete wall. Moreover, the greatest displacement of the west hangar wall appeared to be at the center bay where the wall panels were offset from the concrete frame. The winds appeared to have entered the into the wall cavities at these locations and caused the bottoms of the interior wall panels to become displaced. The lack of discoloration and staining to the interior wall panels and their base angle was an indicator that the wall movement had occurred recently, consistent with on or around December 15, 2021, in the weeks prior to the VERTEX inspection. The interior wall panels were not part of the lateral force-resisting system and did not appear to have affected the lateral force-resisting system for Hangar 606.

Lastly, the southwest building corner of building 655 appeared to have been impacted by the reported semitrailer by the elevated winds on or around December 15, 2021. The semitrailer was not anchored, and the elevated winds appeared to have caused the trailer to overturn and impact

the southwest building corner. The bright colored scuffs on the trailer side were indicators that the trailer had been recently overturned. Moreover, the semitrailer impact was localized and had not substantially affected the building structural load force-resisting system.

7.0 GENERAL REPAIR PROTOCOL

The City of Salina, Kansas had adopted the International Building Code (IBC), 2012 edition with local amendments at the time of this report. Per the 2012 IBC, structures which have sustained less than "Substantial Structural Damage" would be permitted to be restored to their pre-damaged state without further required code upgrades. The IBC defines "Substantial Structural Damage" as follows:

A condition where one or both of the following apply:

1. *In any story, the vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of the structure in any horizontal direction has been reduced by more than 33 percent from its pre-damage condition.*
2. *The capacity of any vertical gravity load-carrying component or any group of such components that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its pre-damage condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by this code for new building of similar structure, purpose, and location.*

Neither the vertical elements of the lateral force-resisting system nor vertical gravity load-carrying components for Hangars 504 or 606 had been affected. Although the exterior walls for Building 655 were part of the gravity system and vertical elements for the lateral force-resisting

system, the affected percentages were below the provisions for both Conditions 1 and 2. Consequently, none of these structures met the definitions of "Substantial Structural Damage" as outlined above.

Irrespective of insurance coverage, VERTEX offers the following general repair recommendations to address observed damages. All work should be performed in accordance with building codes adopted by the governing jurisdiction. All bracing and shoring should be designed by a qualified, registered design professional in the state of Kansas

One feasible repair is as follows:

Hangar 504:

- Remove and replace the metal panels for the east and south elevations of the building addition. Remove and replace the flashings and trims around the south door and east and south windows as required.
- Inspect the girt and frame connection bolts. Replace the bolts as required and install washers at short-slotted and oversized holes.
- Patch and paint the nail pops to the drywall for the east wall for the first and second floors.
- Replace the (4) acoustic ceiling tiles in the living room.

Hangar 606:

- Remove and reattach approximately (16) feet of the thermoplastic membrane edge at two places for the south lower hangar door roof. VERTEX recommends that the full roof be inspected by a qualified contractor.

- Remove, inspect, plumb, and reinstall approximately (60) lineal feet of the lower wall panels (12 feet high) and their base angle on the interior face of the west hangar wall.

Building 606:

- Replace approximately (8) lineal feet of exterior wall panels and base angle.
- Remove and replace approximately (4) 2x8 studs including their bottom and top plates as required.
- Remove and replace approximately (8) lineal feet of exterior wood sheathing and insulation the height of the 2x8 studs and as required for the replacement of the metal wall panels.

8.0 CLOSING

A visual inspection of the property was performed and reviewed as part of our investigation. Unless noted in this report, no destructive testing was performed. A complete analysis of the existing framing members or the connections for structural design capacity versus existing codes was not conducted. All repairs and construction should conform to the currently applicable Building Code. The repairs, including any temporary shoring that may be needed, should be specified, designed, and installed by properly licensed professionals familiar with that type of construction.

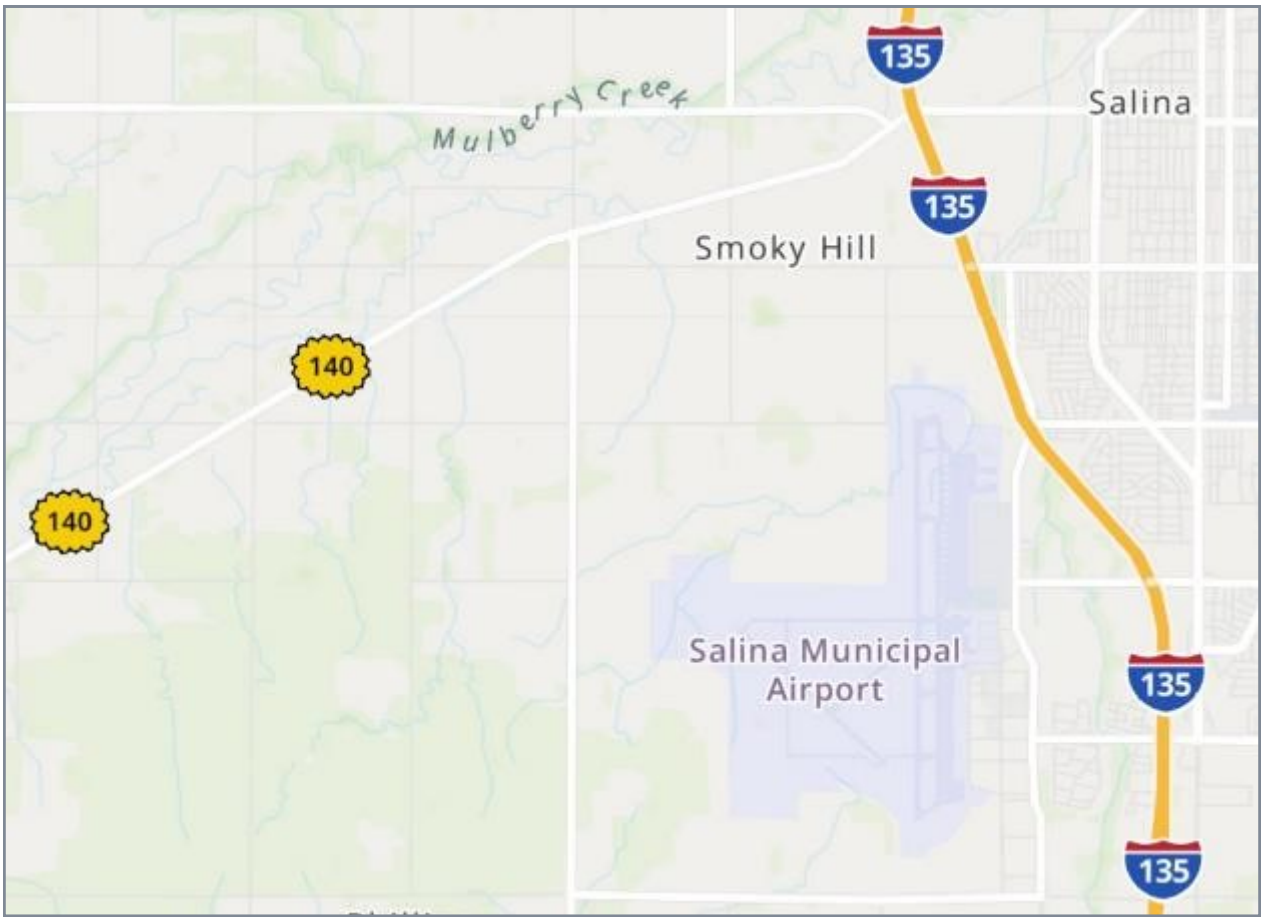
This report was prepared for the exclusive use of Zurich and is not intended for any other purpose. VERTEX has not reviewed the applicable insurance policy, if any, for the purpose of forming an opinion as to coverage and is not offering a coverage opinion. Our report was based on observed site conditions and the information available at the time of our inspection. We reserve the right to amend this report and our conclusions if new information becomes available

and revisions are necessary and warranted. Not all photographs taken by VERTEX during the site inspection were included with this report. Additional photographs in our records are available upon request.

If you have questions or comments, please contact Christopher Leaton or Isaac Gaetz at (888) 298-5162. We appreciate this opportunity to assist Zurich and the policy holder.

ATTACHMENT A:

SITE LOCATION MAP



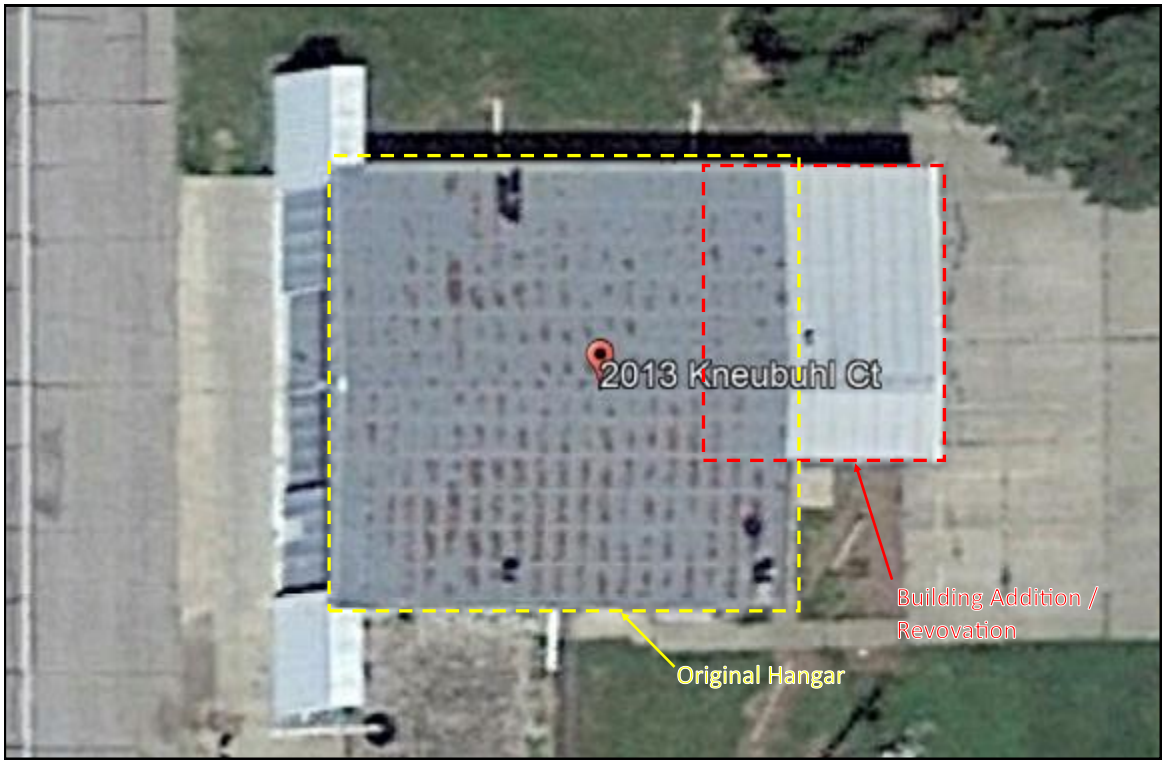
ATTACHMENT A:

AERIAL VIEW

Airport Aerial View

ATTACHMENT A:

AERIAL VIEW



Building / Hangar 504 Aerial View
(2013 Kneubuhl Court)

ATTACHMENT A:

AERIAL VIEW

Building 606 Aerial View
(2630 Arnold Avenue)

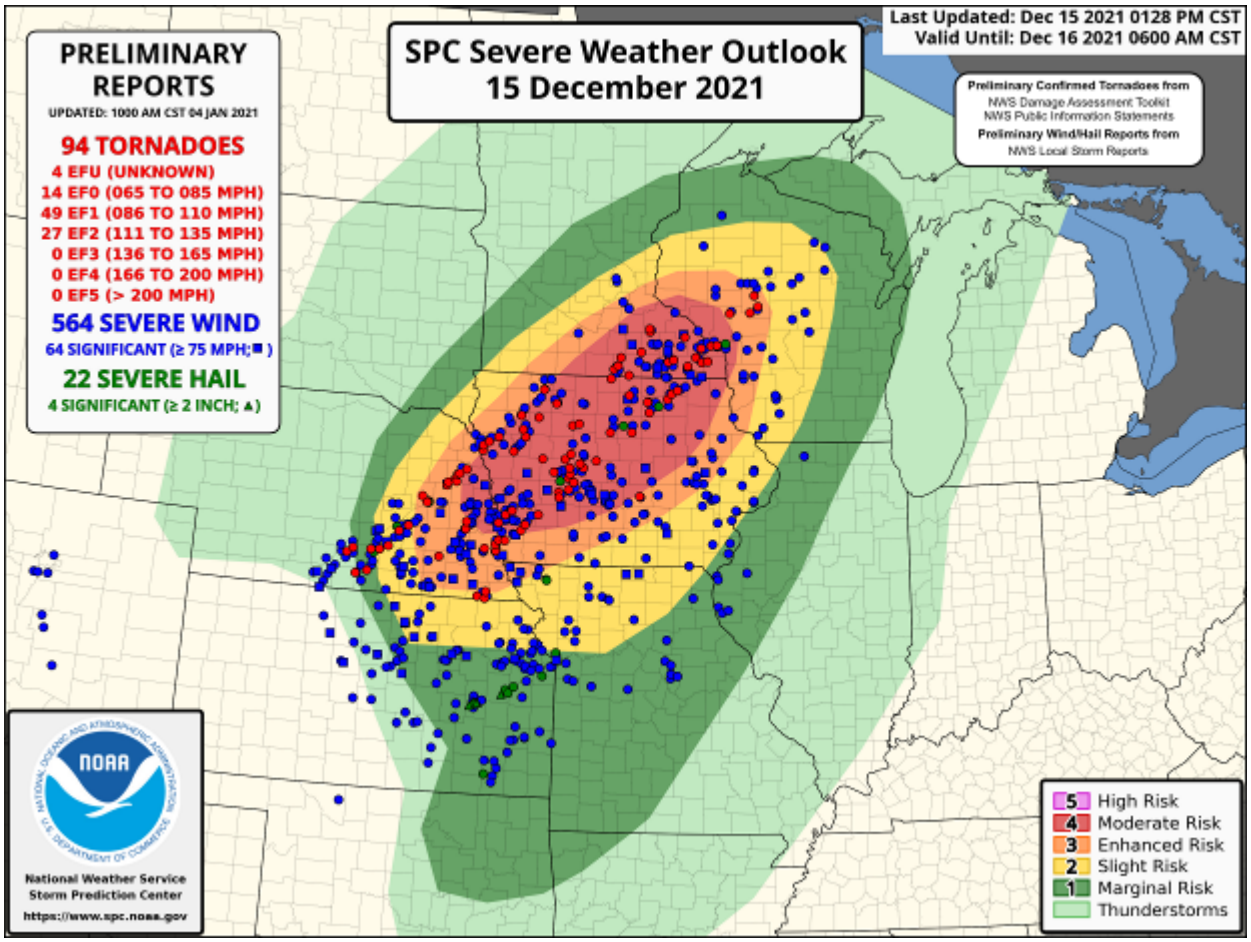
ATTACHMENT A:

AERIAL VIEW

Building 655 Aerial View
(2656 Arnold Avenue)

ATTACHMENT B:

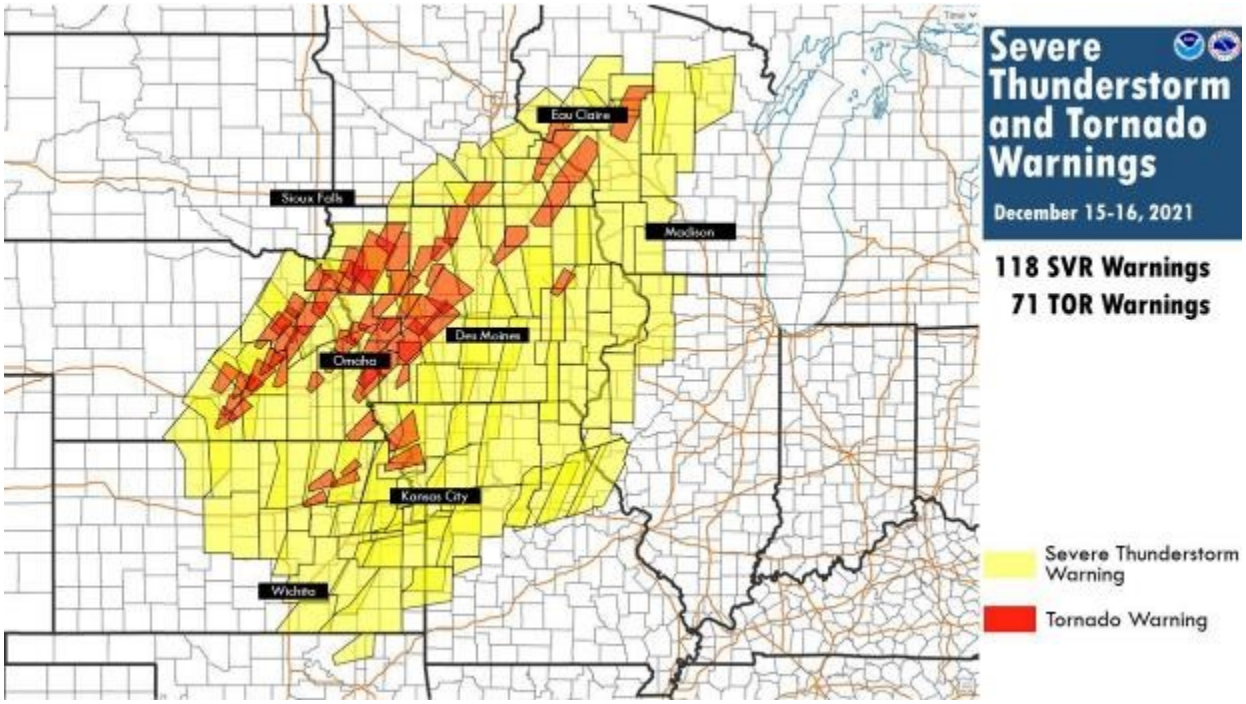
METEOROLOGICAL DATA



Reference: https://www.weather.gov/mpx/HistoricStormDecember2021

ATTACHMENT B:

METEOROLOGICAL DATA



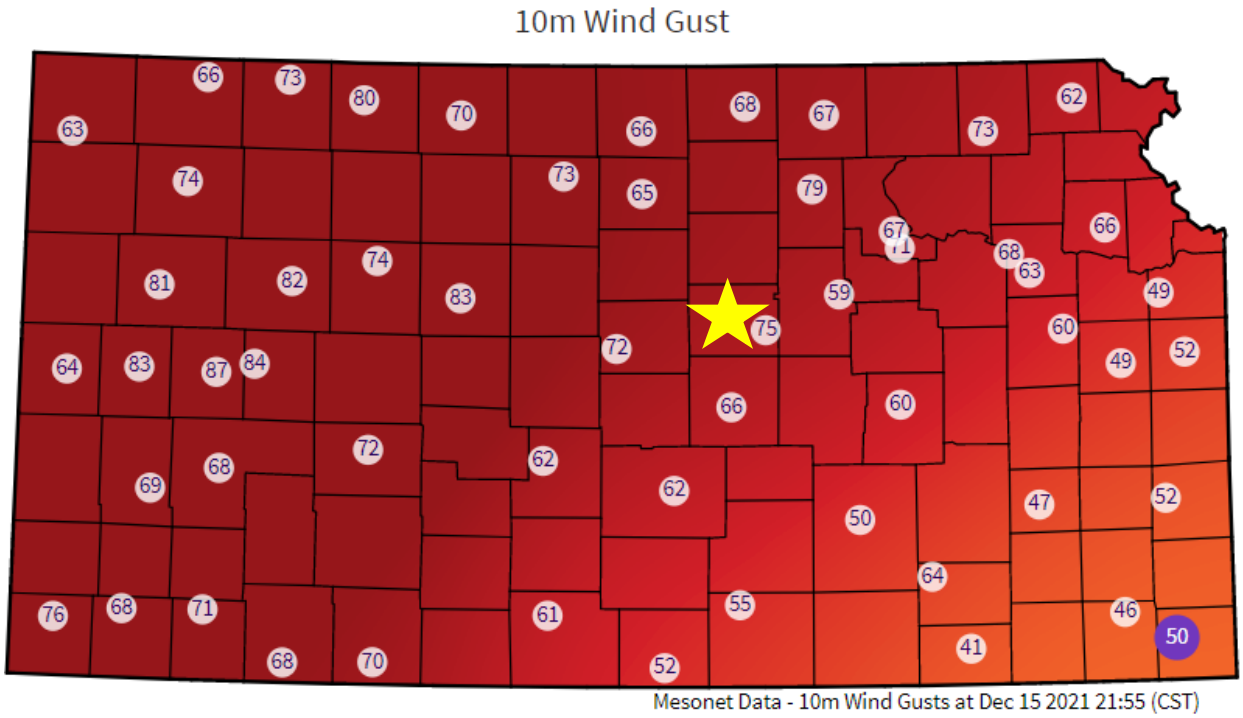
Reference: https://www.weather.gov/mpx/HistoricStormDecember2021

ATTACHMENT B:

METEOROLOGICAL DATA

24HR Peak Winds (mph)

Russell Municipal Airport	100	3.2 E New Cambria (UPR)	95	Salina Regional Airport	89
K-61 @ K-153 Interchange McPherson	85	Hutchinson Municipal Airport	84	5.7 NW Smolan (UPR)	78
2.4 W Bunker Hill	75	Wichita	71	1.9 NE Durham	70
Wichita Eisenhower Airport	69	1.8 N Marion	68	Allen Co. Airpt. Iola	68
2.8 W Langdon (UPR)	66	Newton City County Airpt	66	El Dorado Memorial Airpt	66
Colonel James Jabara Airport	66	6.4 E Kanopolis (UPR)	64	Mcconnell AFB	63
Great Bend Municipal Airpt	63	I-35 bridge over Whitewater River	63	Augusta	63
Lyons-Rice County Municipal Airp	62	Lyons Rice Co. Municipal Airpt	62	Rose Hill	62
0.8 W Canton (UPR)	61	Chanute Martin Johnson Airpt	61	I-135 @ 17th St.	61
US-54 - Eureka	60	Lloyd Stearman Field Airport	60	Tallgrass Prairie	58
Strother Field Airport	58	Beech Factory Airport	58	Kingman	58
Haysville	57	Coffeyville Municipal Airpt	56	0.7 SW Whitewater	55



Reference: https://www.weather.gov/ict/event_2021Dec15thWindFireSVR

ATTACHMENT B:

METEOROLOGICAL DATA

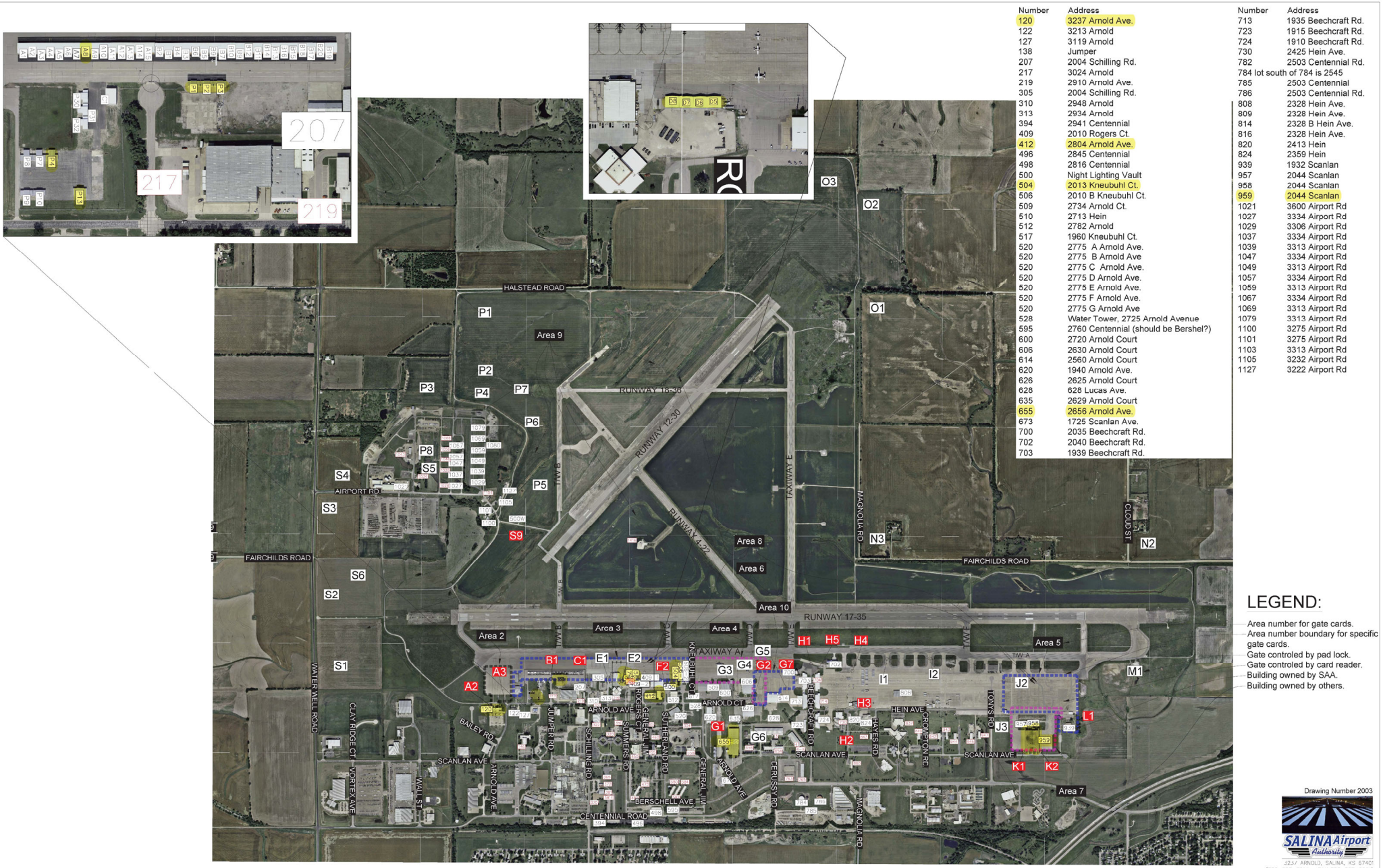
000
CXUS53 KICT 082307
CF6SLN
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALINA KS
MONTH: DECEMBER
YEAR: 2021
LATITUDE: 38 47 N
LONGITUDE: 97 39 W

TEMPERATURE IN F:							:PCPN:		SNOW:	WIND			:SUNSHINE:		SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
									12Z	AVG	MX	2MIN						
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	69	29	49	12	16	0	0.00	M	M	6.1	16	230	M	M	0		21	220
2	72	37	55	18	10	0	0.00	M	M	4.2	12	240	M	M	0		16	250
3	65	34	50	14	15	0	T	M	M	9.8	22	20	M	M	0		30	30
4	53	29	41	5	24	0	0.00	M	M	8.0	15	150	M	M	2		19	150
5	63	38	51	15	14	0	0.00	M	M	14.8	37	350	M	M	1	1	46	350
6	38	24	31	-4	34	0	0.00	M	M	12.0	35	340	M	M	0		44	340
7	47	25	36	1	29	0	0.00	M	M	10.7	21	200	M	M	1		29	190
8	59	20	40	6	25	0	0.00	M	M	10.6	20	170	M	M	0		29	170
9	65	34	50	16	15	0	0.00	M	M	9.0	23	300	M	M	0		31	310
10	70	32	51	17	14	0	0.00	M	M	16.8	32	320	M	M	2		45	340
11	49	22	36	2	29	0	0.00	M	M	11.1	31	330	M	M	1		42	310
12	56	30	43	10	22	0	0.00	M	M	12.8	25	190	M	M	0		32	190
13	60	25	43	10	22	0	0.00	M	M	5.8	16	160	M	M	0	8	21	160
14	64	38	51	18	14	0	0.00	M	M	12.5	23	190	M	M	0		36	170
15	76	13	45	12	20	0	0.00	M	M	25.1	61	260	M	M	4	1378	88	250
16	48	27	38	6	27	0	0.00	M	M	5.0	8	100	M	M	0		8	100
17	50	19	35	3	30	0	0.00	M	M	6.5	12	350	M	M	0		12	350
18	30	10	20	-12	45	0	0.00	M	M	9.9	16	340	M	M	2		29	310
19	43	12	28	-4	37	0	0.00	M	M	15.0	23	190	M	M	0		32	170
20	46	19	33	1	32	0	0.00	M	M	9.0	18	360	M	M	0		23	360
21	52	13	33	1	32	0	0.00	M	M	4.2	14	320	M	M	0	8	20	70
22	61	17	39	8	26	0	0.00	M	M	9.7	22	210	M	M	0		29	210
23	61	30	46	15	19	0	0.00	M	M	8.1	20	200	M	M	0	12	26	200
24	70	36	53	22	12	0	0.00	M	M	9.9	23	190	M	M	0	1	29	190
25	54	28	41	10	24	0	0.00	M	M	4.7	14	310	M	M	0		16	310
26	64	29	47	16	18	0	0.00	M	M	12.1	28	280	M	M	1		39	270
27	59	30	45	14	20	0	0.00	M	M	8.6	30	310	M	M	0		38	290
28	52	21	37	6	28	0	0.00	M	M	14.9	26	310	M	M	1		32	310
29	30	18	24	-7	41	0	T	M	M	7.5	15	10	M	M	7		21	20
30	50	18	34	3	31	0	0.00	M	M	6.5	15	180	M	M	3		21	160
31	49	21	35	5	30	0	0.00	M	M	13.4	24	350	M	M	3		30	360
SM	1725	778		755		0	0.08	M		314.3			M		28			
AV	55.6	25.1								10.1	FASTST		M	M	1		MAX(MPH)	
									MISC ---->		61	260					88	250

https://forecast.weather.gov/product.php?site=ICT&issuedby=SLN&product=CF6&format=CI&version=2&glossary=0

Airport Building Layout & Number



Number	Address
120	3237 Arnold Ave.
122	3213 Arnold
127	3119 Arnold
138	Jumper
207	2004 Schilling Rd.
217	3024 Arnold
219	2910 Arnold Ave.
305	2004 Schilling Rd.
310	2948 Arnold
313	2934 Arnold
394	2941 Centennial
409	2010 Rogers Ct.
412	2804 Arnold Ave.
496	2845 Centennial
498	2816 Centennial
500	Night Lighting Vault
504	2013 Kneubuhl Ct.
506	2010 B Kneubuhl Ct.
509	2734 Arnold Ct.
510	2713 Hein
512	2782 Arnold
517	1960 Kneubuhl Ct.
520	2775 A Arnold Ave.
520	2775 B Arnold Ave
520	2775 C Arnold Ave.
520	2775 D Arnold Ave.
520	2775 E Arnold Ave.
520	2775 F Arnold Ave.
520	2775 G Arnold Ave
528	Water Tower, 2725 Arnold Avenue
595	2760 Centennial (should be Bershel?)
600	2720 Arnold Court
606	2630 Arnold Court
614	2560 Arnold Court
620	1940 Arnold Ave.
626	2625 Arnold Court
628	628 Lucas Ave.
635	2629 Arnold Court
655	2656 Arnold Ave.
673	1725 Scanlan Ave.
700	2035 Beechcraft Rd.
702	2040 Beechcraft Rd.
703	1939 Beechcraft Rd.

Number	Address
713	1935 Beechcraft Rd.
723	1915 Beechcraft Rd.
724	1910 Beechcraft Rd.
730	2425 Hein Ave.
782	2503 Centennial Rd.
784 lot south of 784 is 2545	
785	2503 Centennial
786	2503 Centennial Rd.
808	2328 Hein Ave.
809	2328 Hein Ave.
814	2328 B Hein Ave.
816	2328 Hein Ave.
820	2413 Hein
824	2359 Hein
939	1932 Scanlan
957	2044 Scanlan
958	2044 Scanlan
959	2044 Scanlan
1021	3600 Airport Rd
1027	3334 Airport Rd
1029	3306 Airport Rd
1037	3334 Airport Rd
1039	3313 Airport Rd
1047	3334 Airport Rd
1049	3313 Airport Rd
1057	3334 Airport Rd
1059	3313 Airport Rd
1067	3334 Airport Rd
1069	3313 Airport Rd
1079	3313 Airport Rd
1100	3275 Airport Rd
1101	3275 Airport Rd
1103	3313 Airport Rd
1105	3232 Airport Rd
1127	3222 Airport Rd

LEGEND:

- Area number for gate cards.
- Area number boundary for specific gate cards.
- Gate controled by pad lock.
- Gate controled by card reader.
- Building owned by SAA.
- Building owned by others.

Drawing Number 2003

SALINA Airport Authority
3237 ARNOLD, SALINA, KS 67401
(785-827-3914 FAX: 785-827-2221)

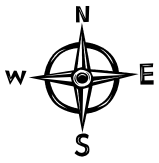
NONE : REVISIONS
KRB : DESIGNED BY
KRB : DRAWN BY
1" = 1200', 16" X 24" Sheet : SCALE
10/31/20, 09-47 : DATE

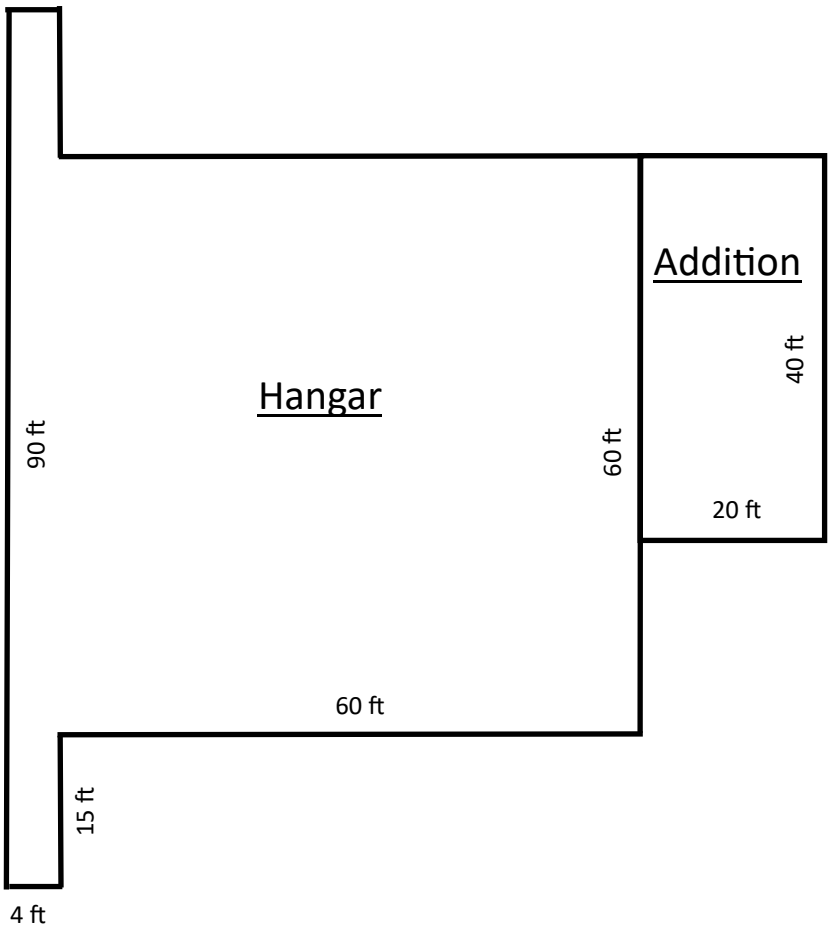
0 1200

SALINA AIRPORT AUTHORITY STAFF PLANS
Buildings Owned By SAA And Gate Numbers

SHEET 3

F:\Public\Facility_Master\ACAD\StaffPlans\2003BuildingsOwnedBySAA.dwg

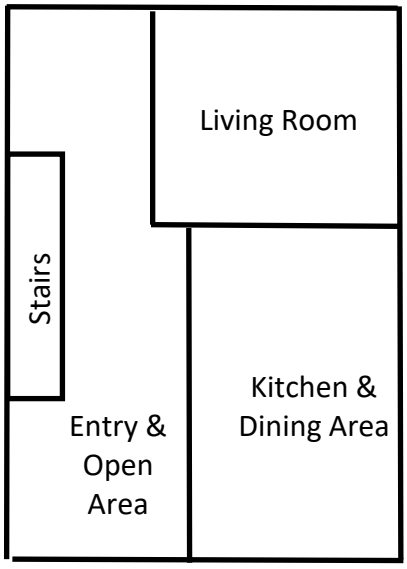




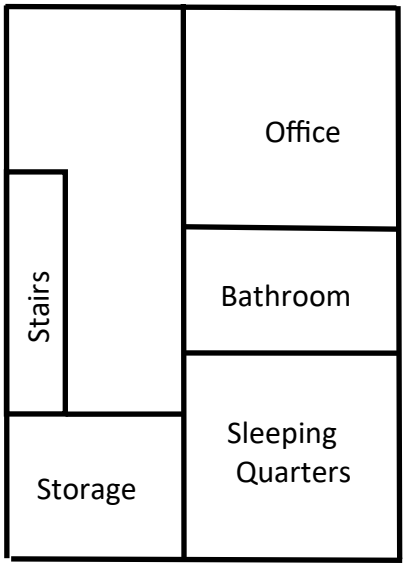
Hangar 504 Layout

Not to Scale

Reference: https://www.saline.org/DesktopModules/SalineCounty/ParcelSearch/Sketch.aspx?



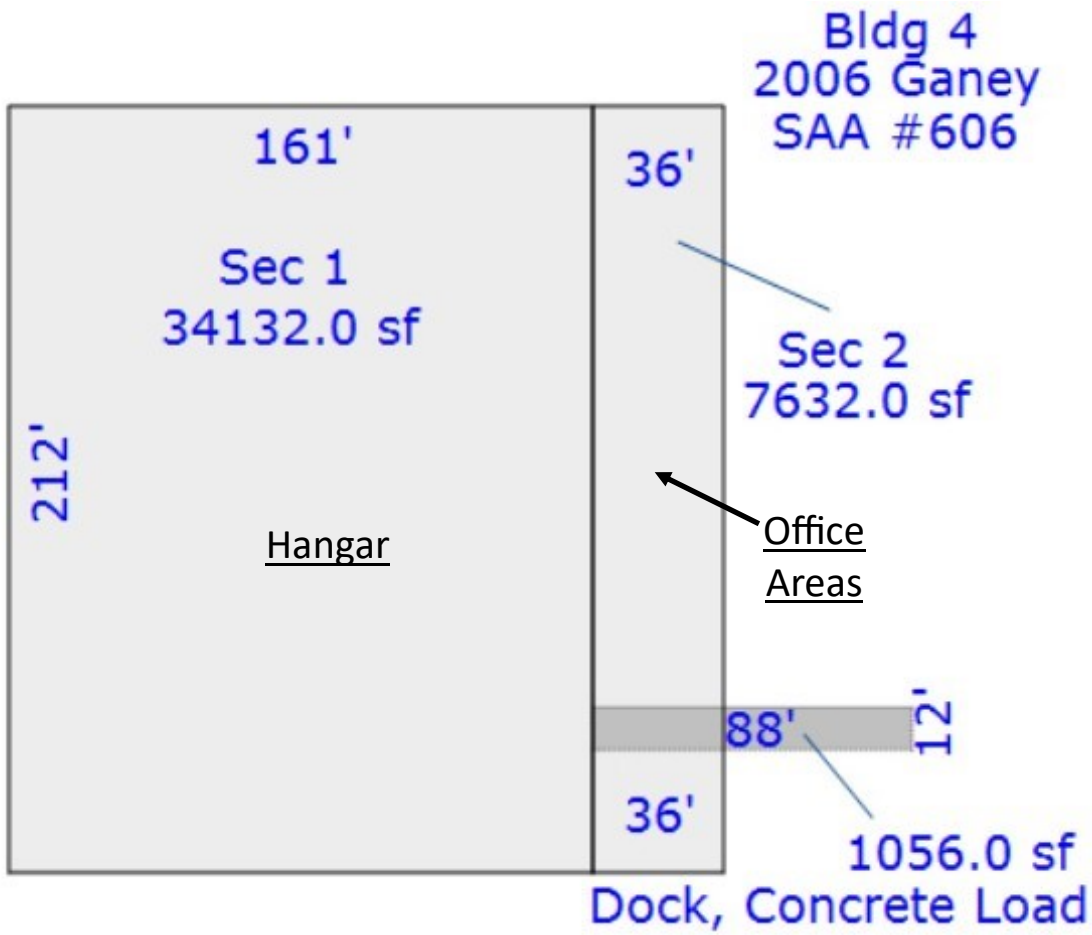
1st Floor Plan
Not to Scale



2nd Floor Plan
Not to Scale

Hangar 504 Addition

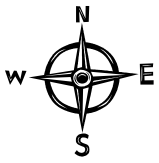
Not to Scale

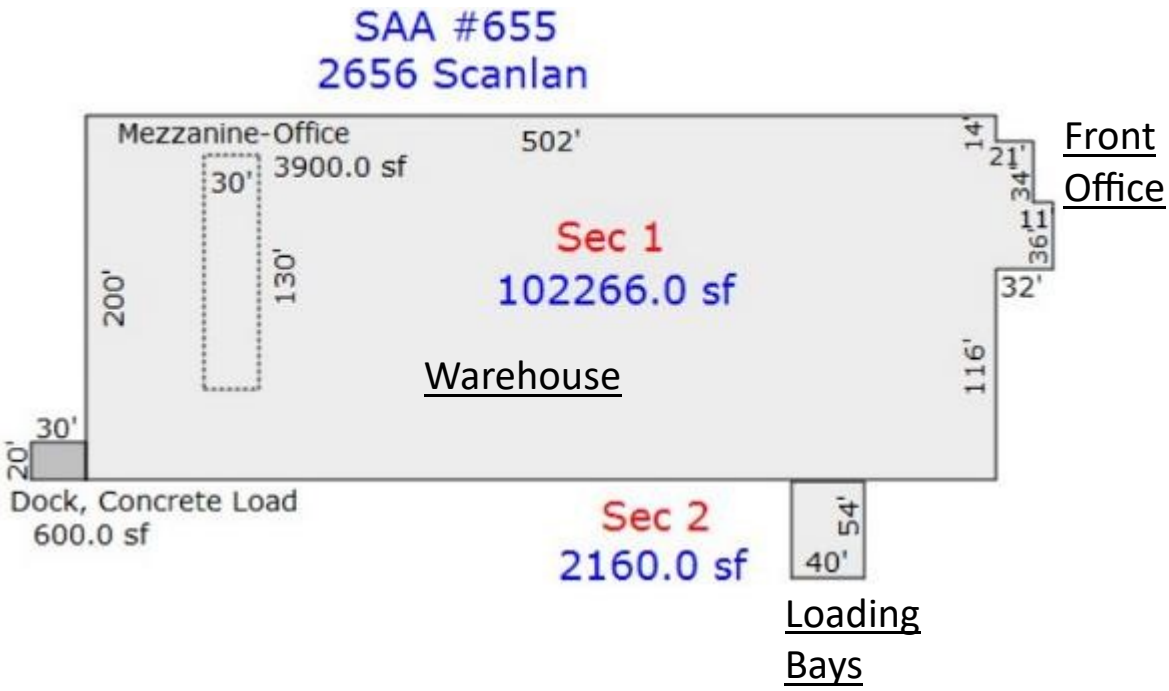


Hangar 606 Layout

Not to Scale

Reference: https://www.saline.org/DesktopModules/SalineCounty/ParcelSearch/Sketch.aspx?





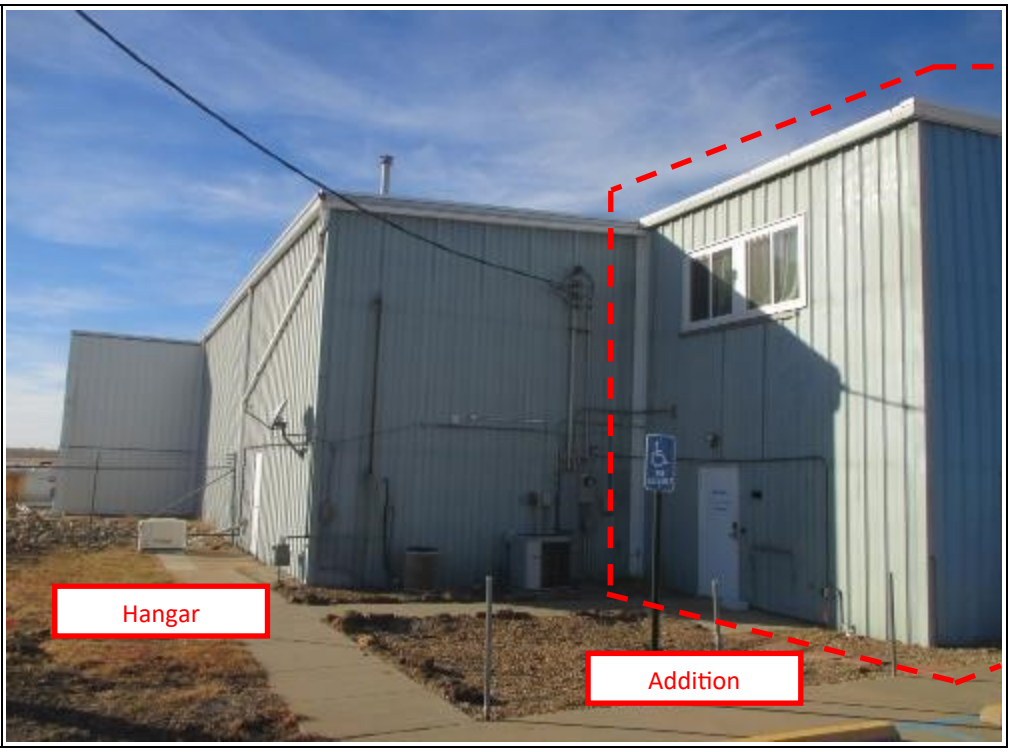
Building 655 Layout

Not to Scale

Reference: https://www.saline.org/DesktopModules/SalineCounty/ParcelSearch/Sketch.aspx?

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 1 **Description:** Hangar 504: View of the south elevation of the building addition (red dashed outline).	

Photograph: 2 **Description:** Hangar 504: View of the east elevation of the building addition	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 3 **Description:** Hangar 504: View of the north elevation of the building addition and hangar (red dashed line).	
Photograph: 4 **Description:** Hangar 504: Interior view of the building addition first-floor living areas and kitchen.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 5 **Description:** Hangar 606: View of the south and west elevations.	

Photograph: 6 **Description:** Hangar 606: View of the east and north elevations.	

ATTACHMENT E:

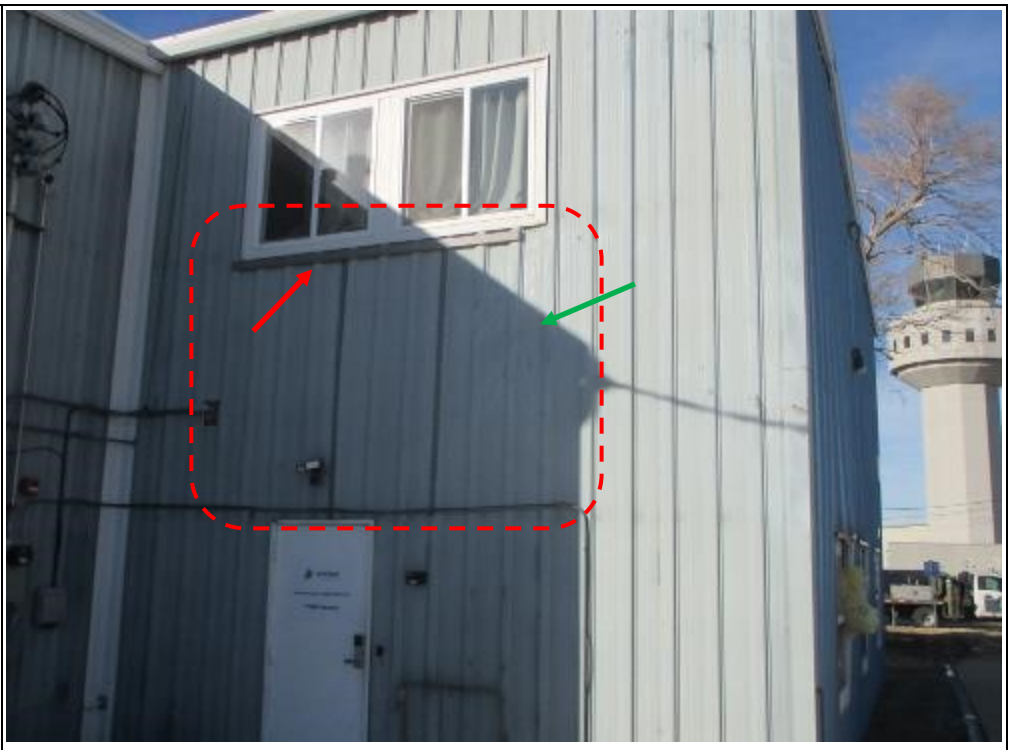
PHOTOGRAPHIC DOCUMENTATION

Photograph: 7 **Description:** Building 655: View of the south elevation.	

Photograph: 8 **Description:** Building 655: View of the west elevation.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 9 **Description:** Hangar 504: View of the south elevation of the building addition. The panels below the upper window were reported to have been loose and bent due to elevated winds. A board was reported to have been installed below the window (red arrow). The bottom right metal panel had been bent (green arrow).	
Photograph: 10 **Description:** Hangar 504: View of the flashing and metal panels upon the upper window.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 11 **Description:** Hangar 504: View of the bottom of the upper story window.	

Photograph: 12 **Description:** Hangar 504: View of a fasteners installed on a metal panel seam. Note the hole in the metal panel adjacent to the fastener.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 13 **Description:** Hangar 504: View of the two south windows on the east elevation. The joints around the windows were not even and uniform. The metal panels above and adjacent to the windows protruded outward (red arrows).	

Photograph: 14 **Description:** Hangar 504: View of the top of the southmost window on the east elevation. The metal panel was bent and torn at the upper left window corner (red arrows).	

ATTACHMENT E:

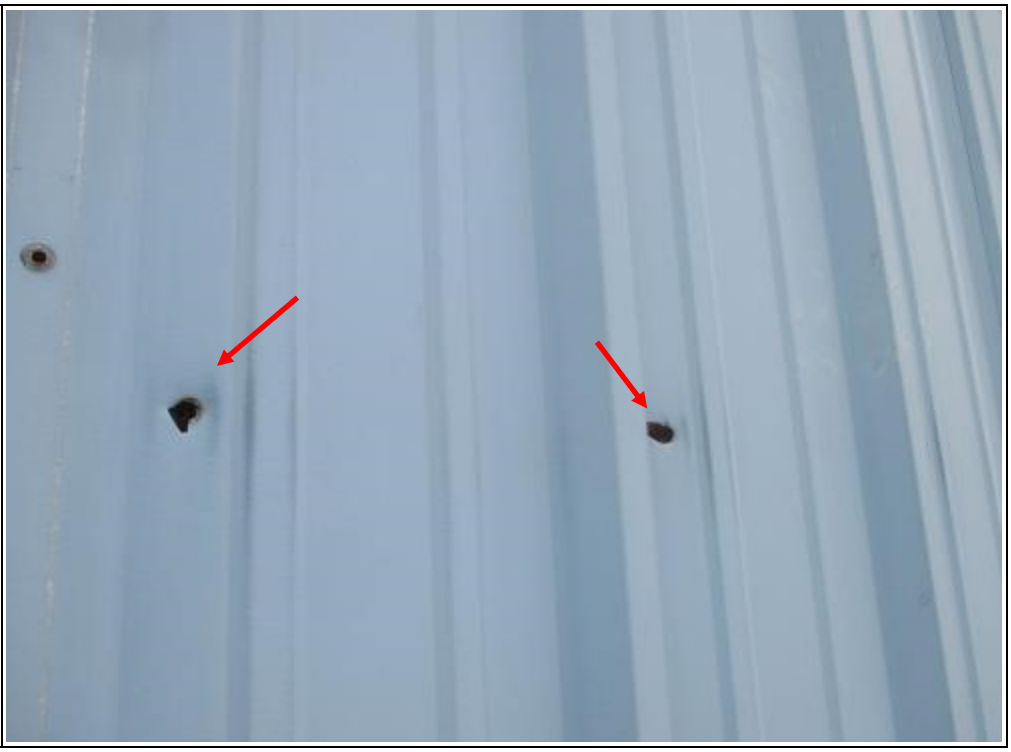
PHOTOGRAPHIC DOCUMENTATION

Photograph: 15 **Description:** Hangar 504: Closeup of the metal panels above the south window on the east elevation.	

Photograph: 16 **Description:** Hangar 504: Closeup of the upper right corner of the south window on the east elevation.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

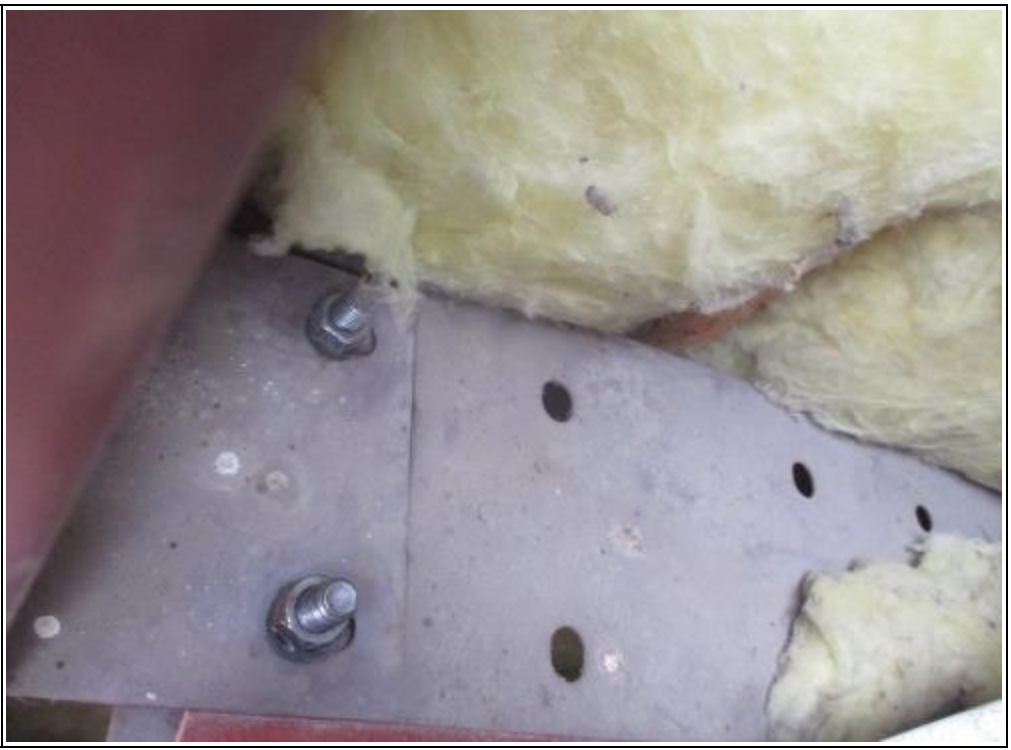
Photograph: 17 **Description:** Hangar 504: View of the exposed girts and wood framing where the metal panels and trim had been removed at the southeast corner of the building addition.	
Photograph: 18 **Description:** Hangar 504: Closeup of the holes at two missing fasteners for a wall panel (red arrows).	

Photograph: 19 **Description:** Hangar 504: View of an upper girt connection for the south wall.	

Photograph: 20 **Description:** Hangar 504: View of the framed connection bolts above the column of the metal building frame at the southeast building corner.	

ATTACHMENT E:

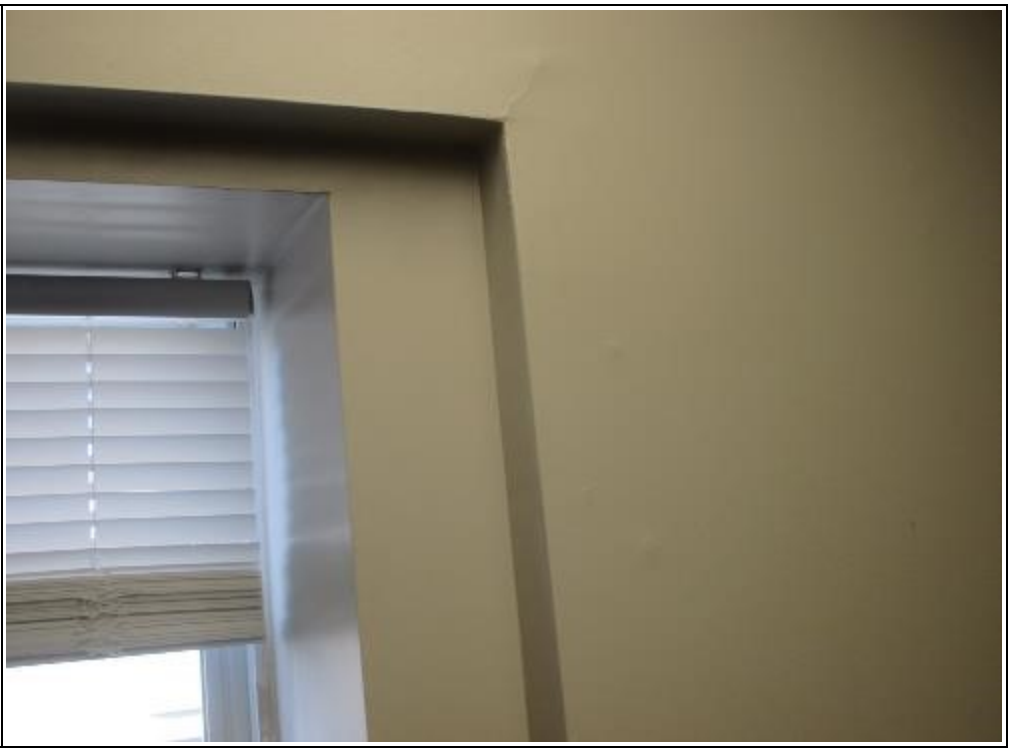
PHOTOGRAPHIC DOCUMENTATION

Photograph: 21 **Description:** Hangar 504: View of the girt-column connection for the girt above the window on the east elevation.	

Photograph: 22 **Description:** Hangar 504: View of a level reading taken on a south wall girt. Note the truss was not apparently fastened or strapped to the wall framing.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 23 **Description:** Hangar 504: View of nail pops to the drywall adjacent to the south side of the south kitchen window.	
Photograph: 24 **Description:** Hangar 504: View of a plumb reading taken on the east kitchen wall.	

PHOTOGRAPHIC DOCUMENTATION

Photograph: 25 **Description:** Hangar 504: View of the trusses above the kitchen.	
Photograph: 26 **Description:** Hangar 504: View of the wall cavity for the east kitchen wall. The metal building girt was rotated (red arrow).	

ATTACHMENT E:

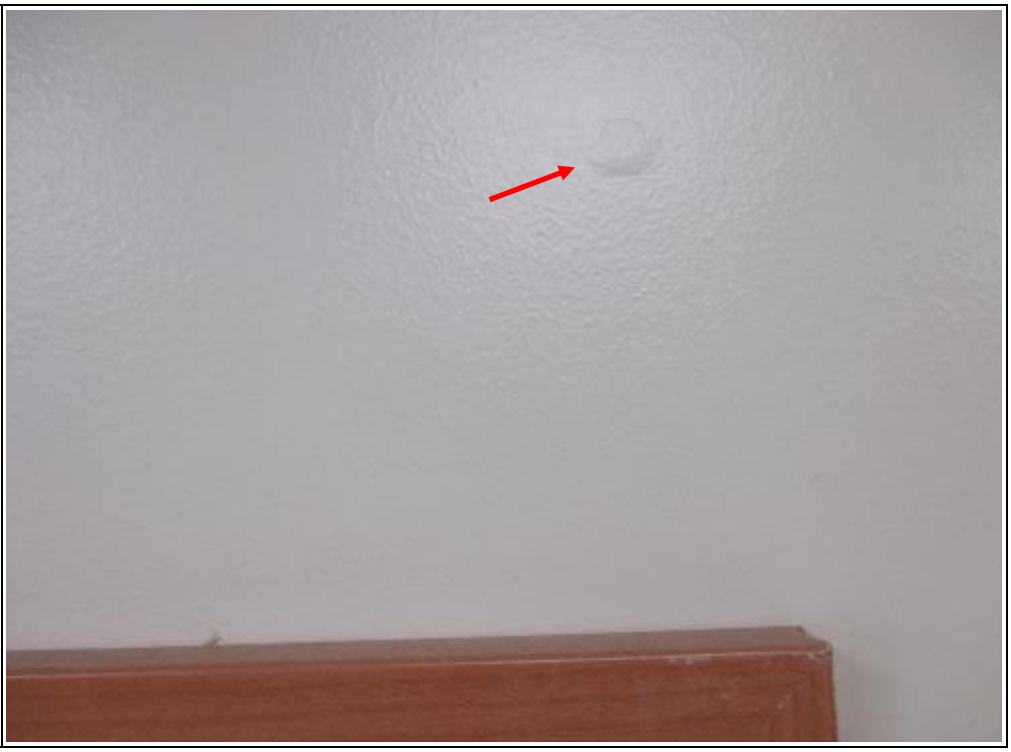
PHOTOGRAPHIC DOCUMENTATION

Photograph: 27 **Description:** Hangar 504: View of missing acoustic ceiling tiles at the west end of the first-floor living room.	

Photograph: 28 **Description:** Hangar 504: View of the floor framing above the missing acoustic ceiling tiles in the living room.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 29 **Description:** Hangar 504: View of a nail pop (red arrow) on the east wall of the second-floor office.	
Photograph: 30 **Description:** Hangar 606: View of the thermoplastic membrane detachment (red arrow) at the west side of the south lower hangar door roof.	

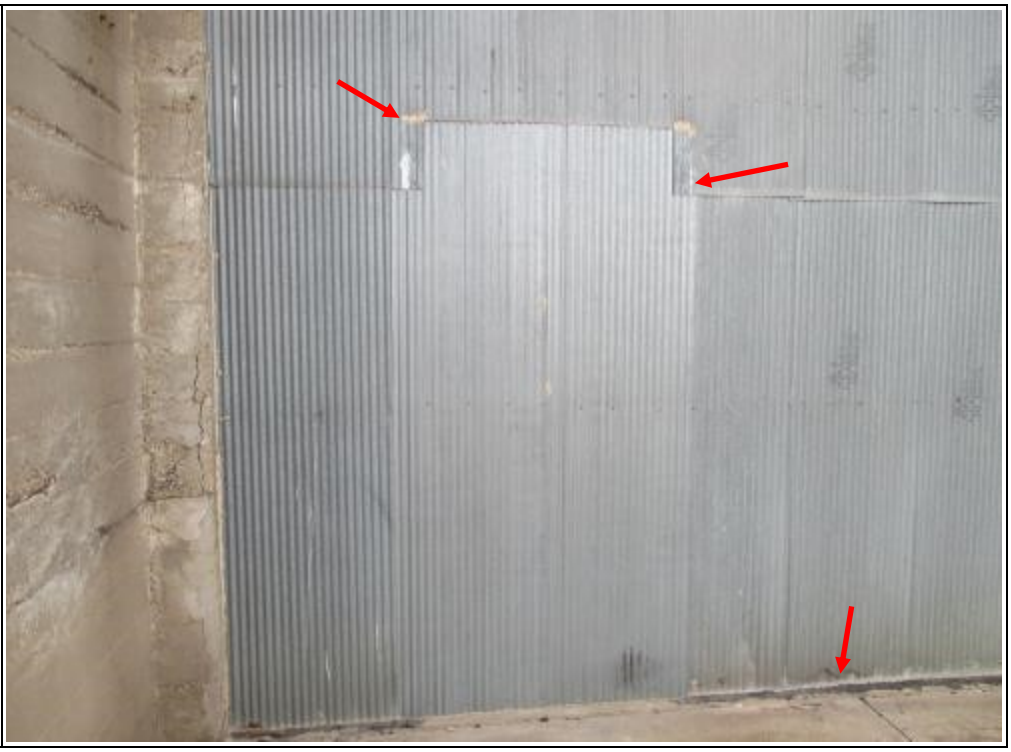
ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 31 **Description:** Hangar 606: Closeup of the detached thermo-plastic membrane.	

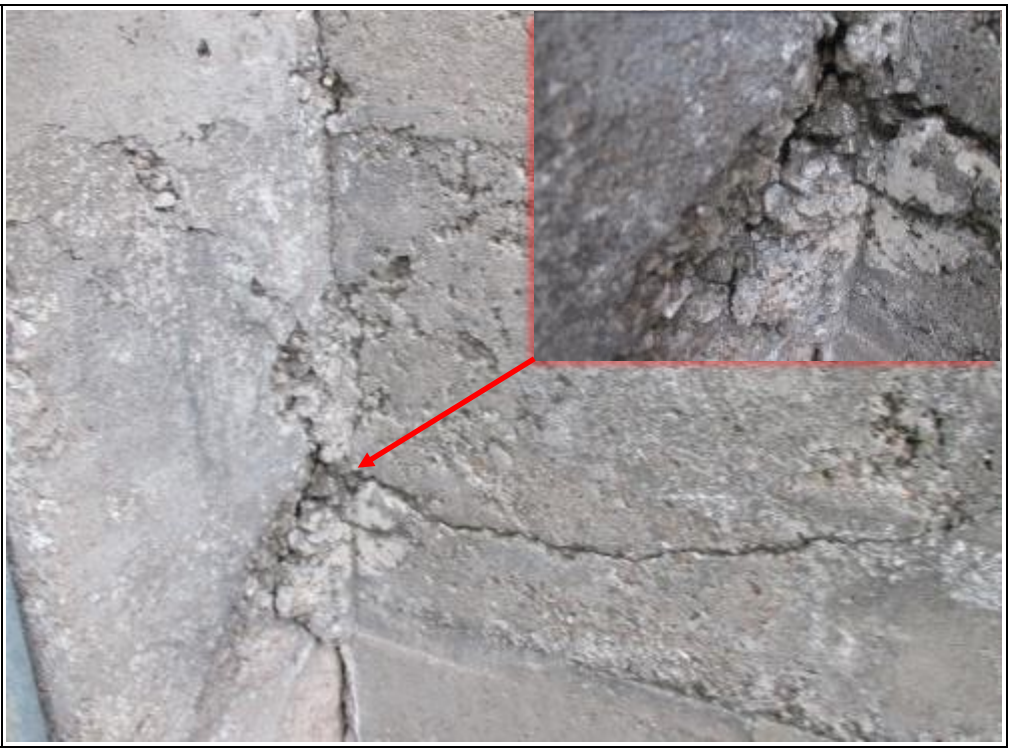
Photograph: 32 **Description:** Hangar 606: View of the vertical displacement of the thermoplastic membrane along the south edge of the lower south hangar door roof.	

Photograph: 33 **Description:** Hangar 606: View of the west hangar wall. The middle three bays of the interior partition wall on the hangar west side had been laterally displaced inward (red rectangle).	

Photograph: 34 **Description:** Hangar 606: Partial view of the metal wall panels at the center bay on the hangar west side. Not the repair sealant at several places (red arrows).	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 35 **Description:** Hangar 606: View of the top half of center bay wall. The upper half of the wall had multiple panels that had been apparently been replaced. The metal panels were offset from the face of the concrete frame approximately (2) inches (red arrow).	
Photograph: 36 **Description:** Hangar 606: View of a crack in a concrete buttress.	

Photograph: 37 **Description:** Hangar 606: View of the hangar west wall. The bottom of the interior wall was displaced approximately (7) inches.	

Photograph: 38 **Description:** Hangar 606: Additional view of the hangar west wall that had been laterally displaced (red arrow).	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 39 **Description:** Hangar 606: View of a plumb reading taken on the hangar west wall.	
Photograph: 40 **Description:** Hangar 606: View of a measurement taken to a joint in the concrete slab.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 41 **Description:** Building 655: View of the southwest corner of the warehouse at the loading dock that had been reportedly been impacted. The metal panels had been bent and torn north and east of the building corner. The wood framing and sheathing had been fractured.	

Photograph: 42 **Description:** Building 655: View of scuffs to the side of the trailer that reportedly struck the building corner. The trailer was reported to have been righted prior to the VERTEX inspection.	

ATTACHMENT E:

PHOTOGRAPHIC DOCUMENTATION

Photograph: 43 **Description:** Building 655: Closeup of the southwest corner of the warehouse at the loading dock. The metal panel torn edges were jagged and bright. The fractured wood surfaces were rough and were not discolored or stained.	
Photograph: 44 **Description:** Building 655: Interior view of the walls at the southwest warehouse corner.	

PHOTOGRAPHIC DOCUMENTATION

Photograph: 45 **Description:** Building 655: View of the bottom of the south-west wall corner.	

Photograph: 46 **Description:** Building 655: View of the wall above the re-portedly impacted southwest wall corner.