

# Aerial Assets – New Hangar Facility

Canton, Michigan

## Construction Manager

D.J. Maltese Construction Corporation



Photos Courtesy: D.J. Maltese Construction Corporation

*The new helicopter hangar and corporate offices for Aerial Assets.*

In 2021 D.J. Maltese Construction Corporation met with the Aerial Assets owners to discuss the development and construction of a new helicopter hangar and corporate offices. They had been working with another builder and, after about a year of design and engineering, the project came in around one-and-a-half million over budget.

After reviewing the owners' requirements, D.J. Maltese offered to complete the project closer to their budget as a Design-Build using a pre-engineered building in lieu of their current conventional design. With their approval D.J. Maltese proceeded to redesign the facility, keeping the same size and features. It took six months to complete the construction documents, bid out the work, and start construction, which was to be completed in eleven months. This was delayed due to city and county construction issues that evolved after the engineering and permits were approved.

The first was the fire suppression system. Once the building was up Maltese submitted the final engineering for the fire suppression system, per their original outline. The city decided, after reviewing the code further, that a wet



*The offices have polished concrete floors in the restrooms, lobbies, and hallways, with carpet tile in the offices.*

fire suppression system would not be allowed and that a foam system would be required — which would add over \$600,000. However, the foam system has a high rate of failure, which causes the system to go off. The foam system would cause major damage to the he-

licopters and costs over \$100,000 for each clean up after going off. This was not acceptable to the owners, especially since the fire code is changing in a few years to not require foam systems. After months of fighting with the city to no avail, the city allowed the owners to re-





*Arial Assets's corporate offices.*



*One of the highlights of the project is the 110' x 20' sectional power sliding hangar door with 8' x 4' windows in each panel.*

duce the size of the hangar by installing a wall between the offices and hangar to reduce the size of the hangar and to fire coat the structural steel columns. Once the code changes they can remove the wall.

The second construction issue was the approach to the property. Once the engineering was approved Maltese started the concrete approach — only to be stopped by the county. They decided (after the plan was approved) that the approach should be wider and a deceleration lane needed to be added. Widening the approach required two power poles to be moved to allow for it to fit. With the

moving of the poles, the wider approach and the deceleration lane added a cost of over \$250,000.

The third issue was with the city. Keeping the project on schedule, Maltese installed hydro-seed for the lawn area in the fall of 2022. With the project complete in February, they requested a final Certificate of Occupancy, only to be told by the city that the hydro-seed was not acceptable and it needed to be replaced with sod. Even though the seed had rooted the City required it to be changed.

All these delays added about five

months to the schedule and thousands of dollars to the owner's cost. Even with this Maltese was still about \$800,000 under the owner's prior builder's cost.

One of the highlights of the project is the 110'x20' sectional power sliding hangar door with 8'x4' windows in each panel. The offices have polished concrete floors in the restrooms, lobbies, and hallways, with carpet tile in the offices. The hangar is heated with a direct-fired blow-thru space heater. The exterior walls of the building are 8'-high masonry using 4"-high color block; above that is vertical metal siding.

**Construction Manager**

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**Project Team**

**Architect**

Amy Baker Architect  
 1012 Owens Avenue, Royal Oak, MI 48067

**Structural Engineer**

Pinnacle Consulting Engineers, Inc.  
 6400 Lake Shore Street, Bloomfield, MI 48323

**Mechanical & Electrical Engineer**

D.J. Maltese Construction Corporation  
 412 N. Main Street, Plymouth, MI 48170

**Cost Estimator**

D.J. Maltese Construction Corporation  
 412 N. Main Street  
 Plymouth, MI 48170

**Civil Engineer**

Mason Brown Associates LLC  
 2708 Bridle Road  
 Bloomfield, MI 48304

**Landscape Architect**

Vert Verde Landscape Architecture  
 44960 Albert Drive, Plymouth, MI 48170

**Project General Description**

**Location:** Canton, Michigan  
**Date Bid:** Jan 2021  
**Construction Period:** Jul 2021 to Feb 2023  
**Site:** 1.82 acres.  
**Total Square Feet:** 19,752  
**Building Sizes:** First floor, 18,608; loft, 1,144; total, 19,752 square feet.  
**Building Height:** First floor, 28'8"; total, 28'8".  
**Number of Buildings:** One.  
**Basic Construction Type:** Pre-engineered.  
**Foundation:** Cast-in-place, slab-on-grade.  
**Exterior Walls:** CMU, steel.  
**Roof:** Metal.  
**Floors:** Concrete.  
**Interior Walls:** Metal stud drywall.



The exterior walls of the building are 8'-high masonry using 4"-high color block.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	479,000	12.94	24.25	—
GENERAL REQUIREMENTS	90,000	2.43	4.56	—
CONCRETE	576,800	15.58	29.20	Forming & accessories, reinforcing, cast-in-place, cutting & boring.
MASONRY	184,900	4.99	9.36	Unit.
METALS	785,000	21.21	39.74	Structural metal framing, joists, fabrications.
WOOD, PLASTICS & COMPOSITES	184,900	4.99	9.36	Rough carpentry, finish carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	277,450	7.50	14.05	Dampproofing & waterproofing, thermal protection, weather barriers, steep slope roofing, roofing & siding panels, flashing & sheet metal, roof & wall specialties & accessories.
OPENINGS	241,600	6.53	12.23	Doors & frames, specialty doors & frames, entrances, storefronts & curtain walls, windows, hardware, glazing.
FINISHES	281,460	7.60	14.25	Ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	17,400	0.47	0.88	Interior.
CONVEYING SYSTEMS	10,000	0.27	0.51	Other.
FIRE SUPPRESSION	94,210	2.54	4.77	Water-based fire-suppression system.
PLUMBING	73,342	1.98	3.71	Piping & pumps, equipment, fixtures.
HVAC	164,120	4.43	8.31	Air distribution, central equipment.
ELECTRICAL	241,610	6.53	12.23	Medium-voltage distribution.
<b>TOTAL BUILDING COSTS</b>	<b>3,701,792</b>	<b>100%</b>	<b>\$187.41</b>	
EXISTING CONDITIONS	24,600			Subsurface investigation, site clearing.
EARTHWORK	571,360			Earth moving, earthwork methods, excavation support & protection.
EXTERIOR IMPROVEMENTS	214,600			Bases, bollards & paving, improvements, irrigation, planting.
UTILITIES	174,000			Water, sanitary sewer, storm drainage, fuel distribution, electrical, communications.
<b>TOTAL PROJECT COST</b>	<b>4,686,352</b>			

**UPDATED ESTIMATE TO AUGUST 2023: \$239.78 PER SQUARE FOOT**

**Regional Cost Trends**  
 This project, updated to August 2023 in the selected cities of the United States.

EASTERN U.S.			CENTRAL U.S.			WESTERN U.S.		
Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost	
Atlanta, GA	\$182.80	\$3,610,702	Dallas, TX	\$175.68	\$3,470,026	Los Angeles, CA	\$301.50	\$5,955,314
Pittsburgh, PA	\$258.77	\$5,111,254	Kansas City, KS	\$251.65	\$4,970,577	Las Vegas, NV	\$289.63	\$5,720,853
New York, NY	\$356.11	\$7,033,836	Chicago, IL	\$322.87	\$6,377,345	Seattle, WA	\$265.89	\$5,251,931

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