State of Kansas
Laura Kelly, Governor

Department of Revenue
Mark A. Burghart, Secretary

Division of Property Valuation

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2025 Year Grain Elevator Appraisal Guide

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2025 Grain Elevator Guide Changes

The following are notable changes in the guide:

1. **Foreword added**
2. **Real vs. Personal Property information added**
3. **Updated Table of Contents**
4. **Updated tables from previous year's guide**
5. **Updated sales from previous year's guide**
6. **Updated PVD Excel Workbook**

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DIRECTIVE #19-048

TO: **County Appraisers**

SUBJECT: **Procedures and Guidelines for Valuing Property**

(This Directive Supersedes Directive #17-048)

This directive is adopted pursuant to the provisions of K.S.A. 79-505, and shall take effect and be in force from and after the Director's approval date for the 2020 valuation year and all subsequent valuation years.

The county appraiser shall follow the policies, procedures and guidelines set forth in the Division of Property Valuation's specifications, manuals, guides, schedules, memoranda, regulations, directives and other instructions, as promulgated by the Director. *See* K.S.A. 79-1456; *In re Appeal of the Director of Property Valuation*, 14 Kan.App.2d 348, 791 P.2d 1338 (1989), *rev. denied* 246 Kan. 767 (1990).

If the director of property valuation has developed and adopted methodologies to value specific types of property, the county appraiser is required to follow such methodologies. K.S.A. 2018 Supp. 79-1456(a). The following guides set forth methodologies to value specific types of property:

1) Personal Property Guide
2) Oil and Gas Appraisal Guide
3) Grain Elevator Appraisal Guide
4) Commercial Feedlot Appraisal Guide
5) Affordable Housing Appraisal Guide

Some guides are revised annually and may set forth the valuation year (tax year) to which they apply. If a guide is not revised annually, then the county appraiser shall utilize the most current version of the guide which precedes the valuation date. The division of property valuation will notify county appraisers of proposed changes in guides and of the adoption of new or revised guides.

In valuing personal property required to be valued at fair market value, the county appraiser may deviate from the values shown in such guides on an individual piece of personal property for just cause shown and in a manner consistent with achieving fair market value. K.S.A. 2018 Supp. 79-1456(b).

In valuing real and personal property, the county appraiser shall interpret appraisal and valuation guides in a manner consistent with statutes. "To be valid, rules or regulations of an administrative agency must be within the agency's statutory authority. Rules or regulations that go beyond that authority, violate the statute, or are inconsistent with the agency's statutory powers are void. Further, administrative rules and regulations must be appropriate, reasonable, and consistent with the law." *In re Tax Appeal of City of Wichita,* 277 Kan. 487, 495, 86 P.3d 513 (2004); *Wagner v. State of Kansas, et al.*, 46 Kan.App.2d 858, 862, 265 P.3d 577 (2011), *rev. denied* 294 Kan. 948 (2012).

The Orion computer assisted mass appraisal system is a tool for mass appraisal intended to facilitate performance of the three generally accepted appraisal methodologies of the sales comparison approach, the cost approach, and the income approach when data to perform each approach is readily available. When using the Orion computer assisted mass appraisal system for property required to be valued at fair market value, it is the responsibility of the county appraiser or appraiser's designee to consider all applicable valuation methodologies and any other appropriate factors and then to select the best indication of fair market value based on appraisal judgment. *See* K.S.A. 2018 Supp. 79-503a; Uniform Standards of Professional Appraisal Practice (USPAP). The county appraiser is expected to follow professionally recognized methods and techniques in order to maintain a high level of public trust in the appraisal practice.

David N Harper

Approved: March 24, 2019

David N. Harper
Director of Property Valuation

Foreword

The Grain Elevator Appraisal Guide and corresponding Excel Grain Elevator Workbook have been prepared per the authority of the following statutes.

1. All property in this state, real and personal, not expressly exempt therefrom, shall be subject to taxation per K.S.A. 79-101.

   K.S.A. 79-102 defines both real and personal property as:

   "'Real Property', 'real estate', and 'land'... shall include not only the land itself, all buildings, fixtures, improvements, mines, minerals, quarries, mineral springs and wells, rights and privileges appertaining thereto."

   "Personal Property shall include every tangible thing which is the subject of ownership, not forming part or parcel of real property..."

2. Each parcel of real property and all tangible personal property shall be appraised at fair market value per K.S.A. 79-501, except as provided in K.S.A. 79-1439.

   K.S.A. 79-503a defines "Fair market value" as "the amount in terms of money that a well informed buyer is justified in paying and a well informed seller is justified in accepting for property in an open and competitive market, assuming the parties are acting without undue compulsion." The statute further states the appraisal process used in the valuation of both real and personal property shall conform to generally accepted appraisal procedures.

3. K.S.A. 75-5105a provides for the Director of Property Valuation Division (PVD), of the Kansas Department of Revenue (KDOR), to devise and prescribe uniform assessment tools and guides to assist the county appraiser in establishing market value for real and personal property. This includes the application of the current PVD Excel Grain Elevator Workbook which shall be utilized by county appraisers as the official valuation tool and format for these properties. Any deviation from the current workbook must be approved by the Director of Property Valuation.

4. The county appraiser shall first conform to the values of such property as determined by use of schedules or methods prescribed in the Grain Elevator Appraisal Guide and the current Excel Grain Elevator Workbook per K.S.A. 79-1412a.

5. K.S.A. 79-1456 requires the county appraiser to follow policies, procedures, guidelines, as well as, developed and adopted methods for specific types of property as directed by the Director of Property Valuation. The county appraiser may then deviate from such guidelines on an **individual** property for just cause and in a manner consistent with establishing market value in accordance with the state statutes.

   Thus, the county appraiser shall use the Grain Elevator Appraisal Guide and the current Excel Grain Elevator Workbook prescribed by the Director of Property Valuation. If the grain elevator valuation estimated by use of the guide and current workbook does not reflect market value for an individual property in the judgment of the appraiser or the taxpayer, the appraiser has the authority to review and adjust the valuation to market value. Appropriate deviation from the guide and current workbook requires (i) just cause, (ii) on an individual property, and (iii) proper documentation. Any change made in the appraisal from the guide and workbook application must be supported by proper documentation and a copy of the valuation change must be furnished to the taxpayer in a timely manner sufficient to allow the taxpayer the right to appeal the valuation. Grain Elevator operator/taxpayer/tax representative requests for change from the guide and workbook value estimate must also be documented.

6. PVD Directive #19-048 requires the county appraiser to follow all policies, procedures, and guidelines set forth in the five named PVD guides, including the Grain Elevator Appraisal Guide.

7. Pursuant to KSA 75-5105a, the Kansas Department of Revenue, Division of Property Valuation prescribes and furnishes the Grain Elevator Appraisal Guide and current Excel Grain Elevator Workbook to all county appraisers***. For copies, please contact the county appraiser's office for the county in which the property is located or download from https://www.ksrevenue.gov/***

8. The administration of the ad valorem property tax is the jurisdiction of the county appraiser's office, in and for the county, in which the grain elevator is located. Any question or specific valuation concern should be directed to the county appraiser. Any equalization or payment under protest appeal should be scheduled with the county appraiser. For appeal information, please contact the county appraiser in which the grain elevator is located or download information from ***https://www.ksrevenue.gov/pvdforms.html***. Once connected to the site, scroll down to "Taxpayer Appeal Guides" then to "Property Tax Appeal Guides".

Real Property or Tangible Personal Property

It is the responsibility of the county appraiser to classify all real and personal property, taxable and exempt, per K.S.A. 79-1459. Classification for the purposes of ad valorem taxation is delineated in Article 11, Section 1 of the Kansas Constitution. Under this section, property subject to taxation is divided into two primary classes: 1) real; and 2) tangible personal property. Both classes contain several subclasses, each with its own assessment rate. Also see K.S.A. 79-1439.

Current law provides in part, "in determining the classification of property for ad valorem tax purposes, the county appraiser shall conform to the definitions of real and personal property in Kansas law and to the factors set forth in the personal property guide devised or prescribed by the Director of Property Valuation…" per K.S.A. 79-261(b)(1).

K.S.A. 79-102 defines both real and personal property as:

"'Real Property', 'real estate', and 'land'… shall include not only the land itself, all buildings, fixtures, improvements, mines, minerals, quarries, mineral springs and wells, rights and privileges appertaining thereto."

"Personal Property shall include every tangible thing which is the subject of ownership, not forming part or parcel of real property…"

It is sometimes difficult for the county appraiser to determine when property is personal property or real property, more specifically, when machinery or equipment becomes a fixture, hence real property. The Kansas Supreme Court has recognized the difficulty in separating real from personal property, particularly regarding fixtures. "It is frequently a difficult and vexatious question to ascertain the dividing line between real and personal property, and to decide on which side of the line certain property belongs." Atchison, Topeka & Santa Fe Railroad Co. v. Morgan, 42 Kan. 23, 21P. 809, 811 (1889).

Where the proper classification of commercial and industrial machinery and equipment is not clearly determined from the definitions of real and personal property provided in Kansas law, the appraiser shall use the three-part fixture law test as set forth in the personal property guide prescribed by the Director of Property Valuation pursuant to K.S.A. 75-5105a(b), and amendments thereto, and shall consider the following:

A. The **annexation** of the machinery and equipment to the real estate;

B. The **adaptation** to the use of the realty to which it is attached and determination whether the property at issue serves the real estate; and

C. The **intention** of the party making the annexation, based on the nature of the item affixed; the relation and situation of the party making the annexation; the structure and mode of annexation; and the purpose or use for which the annexation was made.

[K.S.A. 79-261(b)(2)]

The answer must be "YES" to all three questions before it can be said that personal property has become a fixture and thus part of the real property.

The Kansas Court of Appeals has applied the 3-part fixture law test in a case pertaining to the value of property for ad valorem taxation purposes. In re: Equalization Appeals of Total Petroleum, Inc., 28 Kan. App. 2d 295, 16 P.3d 981 (2000). This case also illustrates a unique situation where the 3-part fixture law test was applied to determine that massive oil tanks and oil refinery towers were real property. In Total Petroleum, the court concluded that the tanks and refinery towers were real property after reviewing (1) annexation, (2) adaptability and (3) intent.

The key factors influencing the Total Petroleum court decision included:

1. The massive size of the tanks and towers, and how they were affixed to the land:

- The tanks were built on-site by transporting huge pieces of sheet metal by semi-trucks and welding the metal into place until 3" thick.
- The towers were 120' tall and weighed 175,000 lbs. empty, without trays. They were installed 20' below ground in concrete and rebar with 1 $^{1}/_{2}$" anchor pedestals and were built to withstand 100 mph winds.

2. The tanks and towers were not portable and were never moved.
3. The land on which the tanks and towers were affixed was devoted to the placement of an oil refinery. Some of the property associated therewith, including the towers and tanks at issue, were specifically constructed for placement on that particular piece of land.

Much of the property, including the tanks and towers, would have to be cut into pieces in order to be removed from the land. Furthermore, the removal would result in environmental contamination of the land, which would have to be treated.

Three-Part Fixture Law Test Examined

The determination of whether property is real or personal must be made on a case-by-case basis. The three tests that comprise the three-part fixture law test are: (1) annexation; (2) adaptation; and (3) intent.

Annexation of the machinery and equipment to the real estate: How is the item under consideration physically annexed to the real property? Would removing the item cause a reduction in the fair market value of the realty? If so, the item may tend to be viewed as part of the real property. Would the item, once removed, require a significant amount of time or cost to restore the realty to its original condition? If so, the item may tend to be viewed as part of the real property.

Adaptation to the use of the realty to which it is attached: In the adaptability test, the focus is on whether the property at issue serves the real estate or a production process. For example, a boiler that heats a building is considered real property, but a boiler that is used in the manufacturing process is considered personal property.

Intent of the party making the annexation: Intent is based on the nature of the item affixed; the relation and situation of the party making the annexation; the structure and mode of annexation; and the purpose or use for which the annexation was made. K.S.A. 79-261(b)(2).

In other words, the appraiser should look at the objective data garnered from the first two tests, or from independent documents, which are documents prepared for purposes other than for a hearing on the issue of whether the property is real or personal. For example, a lease or financing agreement may reveal intent.

When classifying property for assessment purposes, the appraiser should examine all relevant factors and criteria. The information source, its applicability to the Kansas property tax laws and whether it can be used as a credible authority on appeal are all relevant factors to consider.

The basic factors for clarifying items as real or personal property are their designated use and purpose. The determination of whether property is real or personal must be made on a case-by-case basis. All three parts of the three-part fixture test must be satisfied for the item to be classified as real property per K.S.A. 79-261(b)(3).

Normally, the land and permanent structures on the land, mechanical and other features within the structure with a designed use for the safety and comfort of the occupants, and permanent land improvements added for the utilization of the land are considered real estate.

Items directly used for, and whose primary purpose is for a manufacturing process, are normally considered personal property. Personal property, by definition, includes all machinery and equipment, furniture, and inventory.

The following are standard references and should be recognized as general guidelines. Specific listed items may vary under certain conditions. The determination of whether property is real or personal must be made on a case-by-case basis and the three-part fixture test in K.S.A. 79-261 must be considered. The Division of Property Valuation may be of assistance for clarification when questions or uncertainties arise.

❖ **Improvements to Land Normally Considered Real Property**

Improvements ordinarily include retaining walls, piling and mats for general improvement of the site, private roads, paved areas, culverts, bridges, viaducts, subways, tunnels, fencing, reservoirs, dikes, dams, ditches, canals, private storm and sanitary sewers, private water lines for drinking, sanitary and fire protection, fixed wharves and docks, permanent standard gauge railroad tracks, and yard lighting.

❖ **Building Components Normally Considered Real Property**

Building and structural components ordinarily include foundation, walls, floors, roof, insulation, stairways, catwalks, partitions, loading and unloading platforms and canopies, systems designed for occupant comfort such as heating, lighting, air conditioning, ventilating, sanitation, fixed fire protection, and plumbing.

Grain Elevator Real Property vs Personal Property

The Kansas Court of Appeals released a ruling in July, 2022, finding that key components of a grain handling facility were personal property items and not fixtures. The appellate court utilized the three-part fixture test law in *Dodge City Cooperative Exchange v. Board of County Commissioners of Gray County*, Kansas, 62 Kan.App.2d 391,516 P.3d 615(2022), to determine that much of the elevator's commercial and industrial machinery and equipment (CIME) was not sufficiently annexed to the realty to be classified as fixtures. The court considered the degree of permanency of the CIME and other details surrounding an item's physical attachment and removability. Much of the CIME in question were large integral parts of the grain handling operation that were bolted to the grain storage bins.

The appellate court order provides some guidance; however, it is not all inclusive. The ruling emphasizes the use of the three-part fixture law test by the appraiser for all CIME in question.

Following is a general list of the grain elevator equipment considered real vs. personal property based on the court order.

Grain Elevator Real Property

- Elevator Storage
- Annex Storage

Grain Elevator Personal Property

- Aeration Components
- Connecting Bridges
- Conveyors
- Gates
- Loadout System Modules and Components
- Spouting
- Temperature and Monitoring Equipment
- Transitions

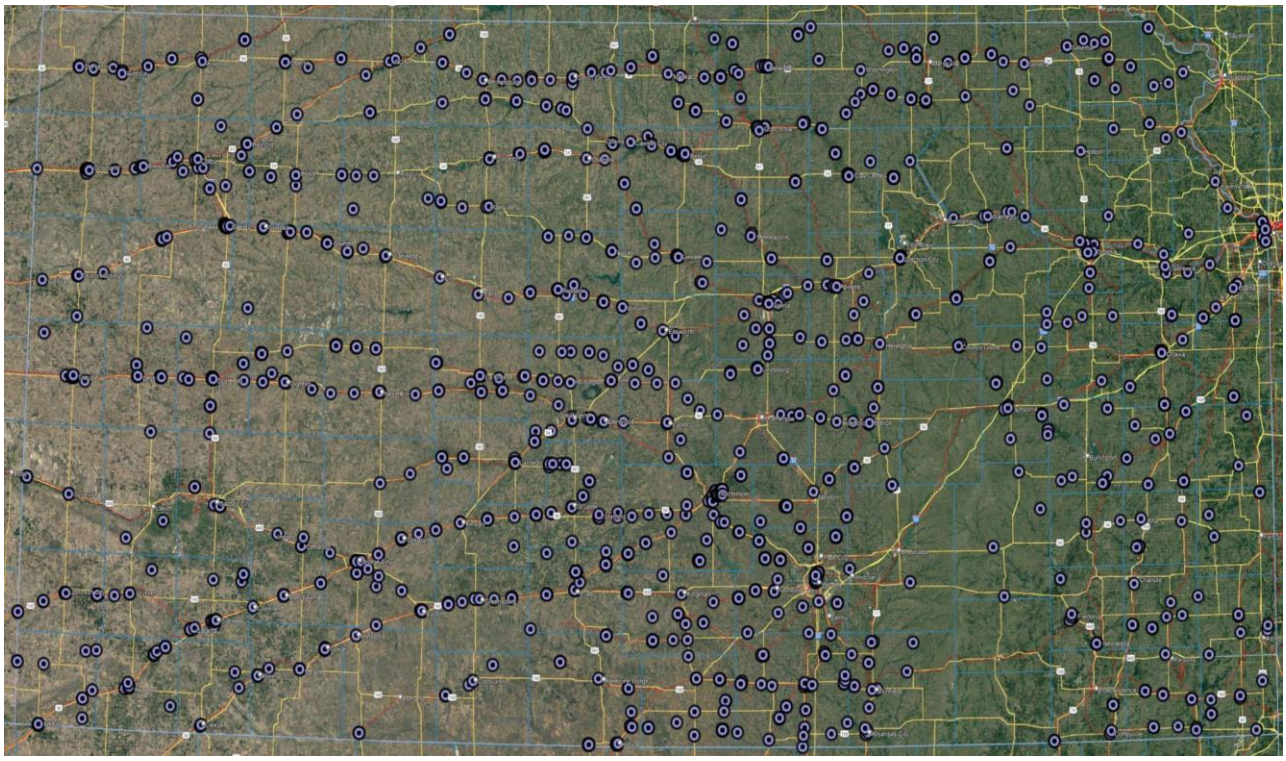
Please see annual Personal Property Guide for filing requirements and valuation information for grain elevator personal property.

Table of Contents

Section I - Introduction

The Grain Elevator Appraisal Guide and Excel Grain Elevator Workbook have been established for the mass appraisal of licensed grain elevator properties in Kansas. Commercial grain handling facilities are licensed either by the Kansas Department of Agriculture (KDA) or the United States Department of Agriculture (USDA) and may be located in all 105 counties.

In 2024 there were approximately one thousand four hundred thirty-six (1,436) parcels identified as grain elevator properties in Kansas using LBCS function code 9231, grain storage elevator. These facilities range from small local facilities to the major grain terminals in Salina, Wichita, and Hutchinson, Kansas. A map showing the general locations of the parcels is shown below:



Grain elevators are defined as facilities designed to stockpile and/or store grain.

There are many different variables such as grain price, production, location, type, and physical/operational characteristics that can affect a grain elevator's value.

Grain is a commodity with prices affected by weather, foreign exchange rates, international market conditions, and government programs. Higher prices allow elevator operators to offer premium prices to growers to obtain the grain they need to satisfy market demand resulting in transportation demand increasing. When demand lessens, the premium prices

are no longer offered, and growers often choose to store grain on their farms until price improves. Demand for transportation disappears during this time.

Basic Grain Elevator Operations

Elevators were designed to serve as assembly points to load grain for shipment. Grain merchandising strategies for elevators require consideration of various aspects including scheduling grain receipts, advanced purchasing arrangements, prior storage, and pricing methods. The basic product flow for the elevators may be summarized as receiving, cleaning and distribution, drying if needed, storage, and shipping. In addition, necessary maintenance and office functions are included.

The description of some elevator sites consists of more than grain storage, processing, and handling. Properties that include other forms of business operations such as fertilizer shops and convenience stores, must be appraised separately from the elevator operations. Additionally, large office structures that accommodate other business ventures must be appraised outside the elevator operation appraisal.

Grain elevators that are no longer utilized for commercial purposes should not be valued using this guide. Only commercial grain storage and handling facilities that are licensed by either the KDA or USDA should be considered when applying the Grain Elevator Appraisal Guide.

Grain elevators should be assigned the proper assessment classification and Land Based Classification Standard (LBCS) Function code, 9231 for grain elevator storage, to assist in identifying grain operations. Sales of elevator facilities should be identified on the record as elevator sales, including the sale of structures on leased ground. Tracking all sales in the future will assist in maintaining the accuracy of the guide. The non-operating facilities should be reclassified to a more appropriate LBCS function code based on the current use.

Receiving

Elevators receive grain by truck. Upon arrival, trucks are weighed on a platform scale, and the loads are sampled with a mechanical probe sampler. The sample is evaluated while the truck proceeds to the truck dump pit. Grain is conveyed from the receiving pit to a bucket elevator leg which is installed within the elevator or is a free standing structure.

Cleaning and Distribution

Grain flows from the head of the bucket elevator over a gravity cleaner to remove pieces of stalk, stones, and other foreign material. The grain may then move by gravity or conveyor to bin distribution, drying, or directly to load-out.

Storage

Storage bins accumulate grain for load-out. Aeration, fumigation, and temperature monitoring systems are incorporated for grain quality maintenance.

Shipping

Grain exits from bin bottoms and moves by gravity or conveyor to the shipping leg(s) (bucket elevator(s)). The grain then flows from the elevator head(s) to a surge bin ahead of the shipping scale. After weighing, the grain is sampled with a diverter mechanical sampler before entering the truck, rail car, barge or ship. Elevators which handle corn and/or soybeans are equipped with a scalper that precedes the scaling surge bin. The scalper removes stalk or cob material that is disallowed in some markets to control certain insects. The shipping system may include a pit and receiving conveyor in the rail load-out system so that grain may be unloaded. This system is intended to be used as a rail receiving unit.

Section II – Real or Personal Property Valuation

As stated in the Foreword of this guide, the county appraiser is required to value all property that is not expressly exempt, real and personal, in the county each year as prescribed by K.S.A. 79-101. Both real and personal property is valued at fair market value as of the January 1 appraisal date per K.S.A. 79-501 and K.S.A. 79-503. The county appraiser shall establish market value by conforming to methods and procedures provided in guides and tools furnished by the Director of Property Valuation (PVD), who has the authority to devise and prescribe guides to promote uniform and consistent statewide valuation provided in K.S.A. 75-5105a, K.S.A. 79-1412a, K.S.A. 79-1456, and PVD Directive #19-048.

The Grain Elevator Appraisal guide shall be used to value all real property licensed grain handling facilities. However, tangible personal property located on the parcel is valued using the Personal Property Appraisal Guide. Personal property should be listed with the county appraiser in the county of situs as it existed January 1 of the year. A copy of the Personal Property Appraisal Guide may be obtained from the county appraiser or PVD website. Intangible personal property is not subject to taxation in Kansas.

Real vs. Personal- Personal Property Court Case

Real vs personal property is addressed in detail in the Foreword pages of this guide.

In summary, in July of 2022, the Kansas Court of Appeals released a ruling, *Dodge City Cooperative Exchange v. Board of County Commissioners of Gray County*, Kansas, 62 Kan.App.2d 391,516 P.3d 615(2022), finding that key components of a grain handling facility are personal property items and not fixtures. To classify property for ad valorem tax purposes, K.S.A. 79-261 requires the county appraiser to conform to a) the definitions of real and personal property in Kansas law; and b) the factors set forth in the Personal Property Guide published by the Director of Property Valuation. Where the proper classification of Commercial Industrial Machinery & Equipment (CIME) is not clearly determined from the definitions of real and personal property provided in Kansas law, the appraiser shall use the three-part fixture law test as set forth in K.S.A. 79-261 and the Personal Property Guide prescribed by the Director of Property Valuation pursuant to K.S.A. 75-5105a(b), and amendments thereto, and shall consider the following where all three parts of the test must be satisfied before an item can be classified as real property:

A. Annexation
B. Adaptation
C. Intent

Section III – Grain Industry Overview

Area Analysis

The Dictionary of Real Estate Appraisal, 7th Edition defines a neighborhood as: *"A group of complimentary land uses"*. It may be best described as that part of a geographical area or community which comprises the immediate surroundings and primary environment for the appraised property. Normally, neighborhoods or market areas can be characterized by physical similarities, locale, and a homogeneous blending of property uses. Within any neighborhood, governmental, social, economic, and environmental forces influence supply and demand for real estate. Consequently, location is always a major factor in determining value, and in most neighborhoods, the inhabitants have a relationship based on a commonality of interests.

The neighborhood for the purpose of this appraisal guide consists of the entire state of Kansas. Because of the divergence in agricultural operations and the availability of market data in the state of Kansas, there was sufficient data to subdivide certain segments of the market data into two geographical regions, i.e. East, and West.

However, it is important to note that there were certain limitations in the quantity of market data to abstract accurate analysis to certain market segments in the sub-market neighborhoods.

It is also important from a consensus standpoint to provide certain background information for the overall state of Kansas. The following are tables depicting important factors for the state of Kansas. The first table shows harvested grain volumes for the state of Kansas, and the second table shows grain storage capacity for the state of Kansas.

Kansas Annual Total Harvested Grain Volumes – (1,000 bu.)[1] http://quickstats.nass.usda.gov

Year	Wheat	Corn	Oats	Barley	Sorghum	Soybeans
2023	201,250	612,850	1,980	145	169,000	103,480
2022	244,200	510,600	1,025	165	105,300	129,800
2021	364,000	750,600	1,000	264	265,200	192,000
2020	281,250	766,488	832	306	238,000	194,750
2019	348,400	800,660	1,152	132	204,000	186,335
2018	277,400	642,420	882	186	233,200	201,670
Ave Production	286,083	680,603	1,145	200	202,450	168,006

Year	2023	2022	2021	2020	2019	2018
# OFF - Farm Facilities	690	690	700	700	700	715
OFF- Farm Capacity (1,000 BU)	1,220,000	1,200,000	1,200,000	1,200,000	1,175,000	1,150,000
ON - Farm Capacity (1,000 BU)	385,000	385,000	385,000	380,000	380,000	380,000
Ave OFF - Farm Cap per Facility	1,768,116	1,739,130	1,717,286	1,741,288	1,678,571	1,608,392

Most of the grain elevators, about 70%, are owned by cooperatives and about 59% have some sort of railroad access.[1]

In the past, the size and location of a grain elevator was largely affected by its mode of transportation. For many decades, country elevators were usually 10-15 miles apart. This allowed farmers to deliver their grain to the closest grain elevator. The country elevator then exported the grain to the end user (milling operation, bio-diesel plant, or ethanol plant) or a terminal.

The U.S. grain industry is in the process of a transition to shipments by shuttle trains as the prevailing rail methodology. In Kansas at least 22 elevators have shuttle train access.[2]This transition encompasses both domestic shippers and domestic receivers, which to this time generally have not employed shuttle train technology. Inland export shippers and export elevators have been using shuttle trains since the 1990's. Those who cannot or are unwilling to adapt to shuttle-train load-out and receipt will be bypassed by the emerging grain marketing-transportation system.

The industry does not view long-term storage as a viable means of sustaining the operation of facilities that will be built or retrofitted to serve a restructured U.S. grain marketing-transportation system. The capital burden of the railroads, which dictates limited time to load shuttle trains, also dictates high-speed load-out. High-speed load-out equipment is capital intensive and can be justified only by moving large volumes of grain. A relatively low valued commodity such as grain simply cannot support a capital-intensive technology, such as shuttle train load-out, unless the volumes handled are large. Thus, static storage as a means of cost recovery is not feasible, unless special conditions exist. Further impetus is given to the movement toward shuttle-train load-out facilities because the majority of U.S. grain is now

[1]http://ageconsearch.umn.edu/record/235964/files/AAEA%202016%20Paper_The%20Changing%20Competitive%20Structure%20of%20Kansas%20Grain%20Handling%20and%20Transportation%20Industry%20_O_Brien%20Briggeman_%20May%2025_%202016.pdf

[2]http://ageconsearch.umn.edu/record/235964/files/AAEA%202016%20Paper_The%20Changing%20Competitive%20Structure%20of%20Kansas%20Grain%20Handling%20and%20Transportation%20Industry%20_O_Brien%20Briggeman_%20May%2025_%202016.pdf

stored on farms. Consequently, facilities built for long-term storage in the past can no longer generate sufficient revenues from grain storage to sustain a viable organization.

The larger terminal elevators built in the 1950's, particularly in the Plains States, will not be replicated, except under special conditions. Neither will the grain marketing system be able to support a large population of shuttle train terminals. Simple production density can be used to estimate a maximum number of such facilities. Corn growing areas will be able to support more such facilities than wheat growing areas. Producers in wheat areas delivering to such facilities will incur greater delivery costs than producers in corn growing areas because, to be economically viable, the facilities will be farther apart in wheat country than in corn country.

Below are tables of shuttle train elevators in Kansas served by Burlington Northern Santa Fe (BNSF) and Union Pacific (UP). Notice there is some overlap between the two lists with some elevators being served by both of the railroads.

The BNSF Shuttle Train Elevators effective 2024:

City	Company Name
Abilene	Gavilon Grain LLC
Concordia	AgMark LLC
Collidge	The Scoular Company
Dodge City	ADM Grain
Ensign	Dodge City Coop Exchange
Garden City	WindRiver Grain, L.L.C.
Hugoton	United Prairie Ag LLC
Hutchinson	ADM Grain Co.
Hutchinson	ADM Grain Co.
Salina	Cargill, Inc.
Salina	The Scoular Company
Wellington	The Scoular Company
Wichita	Bartlett Grain Co., L.P.
Wichita	DeBruce Grain, Inc.
Wright	Right Coop Assn.

The UP Shuttle Train Elevators effective 2024:

City	Train Capacity
Abilene	100+
Atchison	100+
Atchison	75
Canton	100+
Colby	100+
Downs	100+
Glen Elder	100+
Great Bend	100+
Hanover	100+
Haviland	100+
Hutchinson	100+
Kansas City	75
Liberal	100+
New Cambria	100+
Ogallah	100+
Plains	100
Pratt	100+
Salina	100+
Sharon Springs	100+
Topeka	100+
Wakeeney	100+
Wichita	100+

Industry Background

As the capacity of grain elevators expands, their numbers continue to shrink. This is due to a variety of factors, some of which include the Conservation Reserve Program, growth of farms, the family farming change, bigger farms, and also the smaller number of farms. Local farm supply and grain marketing cooperatives are squeezed from three different directions. First, farmer-customer relationship is more important than ever before due to farms becoming larger as well as fewer in number. Secondly, the competition is also consolidating, creating a “survival of the fittest” marketplace. A third way that farm and grain cooperatives are feeling pressure is that their suppliers and grain marketing firms are also fewer and larger, thus limiting choice and bargaining power for local cooperatives. Just as mergers and joint ventures are occurring with other areas of the workforce, it is also happening in all phases of the agricultural business as well.

Changes in Transportation

Kansas ranks fifth in the US in the total road mileage which allows for easy grain transport with trucks. However, as time has evolved, so has the method used to transport grain. Several decades ago, trucks were the mainstay for transporting grain. Today, the railroad is the main transport of grain due to its ability to haul several thousands of bushels at once. In amount of railroad mileage Kansas ranks in the top ten states in the US with over 2,400 miles of Class I track and 1,900 miles of Class III (short line) track. The notion that size makes a difference is part of the grain shuttle program established in the late 1990's by the Burlington Northern Santa Fe (BNSF) railroad, one of the four major rail carriers in Kansas. Using shuttle trains, consisting of 100-110 cars, grain haulers get rate reductions. Shippers also need to commit to fixed numbers of trips over given periods of time, while both port elevators and country elevators must be able to load or unload the 110-car shuttle train in no more than 15 hours. Extensive trackage is also a requirement at the origins and destinations, i.e. one train of 112 ton covered hopper cars is 6,700 feet long (about 1.3 miles) and requires an open track of about 7,300 feet. Therefore, 25 car terminals are no longer competitive. The railways say they may not find short trains as profitable and rail rates are driving this type of expansion.

Shuttle Train Facility Requirements

BNSF has a number of requirements for shuttle train-loading locations:

- The facility must have sufficient trackage to allow the entire 110-car train plus three locomotives to arrive and depart without decoupling any railcars, whether on a straight siding parallel to the main line or a loop track. To do this on a straight track requires a siding nearly a mile and a half long, connecting to the main line on both ends, and a parallel 55-car track to move loaded cars past empty cars. A facility like this is not possible in every location. A loop track takes up at least 100 acres of land.
- The facility must be able to load or unload the train in a maximum of 15 hours. For most upgrades, this usually means increasing leg and conveyor capacity to load at a minimum of 40,000 to 50,000 bushels per hour (bph).
- The facility must be able to generate origin weights and grades. Most facility managers opt for a bulk weight loadout scale to accomplish origin weights, often with an automated software package that can automatically load to individual railcar capacities. In many cases, managers will contract with the Federal Grain Inspection Service (FGIS) or one of its official inspection agencies to generate origin grades during train loading.
- The facility must have a minimum of 440,000 bushels of upright storage in order to fill a BNSF shuttle train. In practice, more storage capacity is needed, since loading one train would

completely empty a 440,000-bushel elevator. However, it doesn't take a lot more than that. Often, terminal builders will opt for a minimal amount of storage to start with, and as the initial investment is paid down, will add more storage capacity later.

- BNSF has no financial requirements for its shuttle-loading partners. Since the rail carrier does not maintain ownership interest in shuttle-loading facilities, this remains a matter for shippers and their financial institutions.

- In general, BNSF prefers loop tracks wherever possible. This allows for continuous loading of a single string of railcars, without backing up or decoupling. Loop tracks also provide some safety advantages, again by eliminating coupling and decoupling of railcars. In addition, while the train is at the facility, much of it is far away enough from the loading point to discourage workers from climbing over railcar couplings to get from one part of the facility to another.

Among the BNSF's main requirements for loop track design:

- A minimum of 7,300 feet of track length
- Maximum track curvature of 7 degrees 30 minutes
- Maximum grade of 0.5%

Given the length and weight of a shuttle train, the rail carrier looks for as level a site as possible to minimize power required and potential for accidents. BNSF offers more information for shuttle-loading facilities and trackage by request at: http://www.bnsf.com/ship-with-bnsf/agricultural-products/index.page

Size of US Farms

The size of a farm in the United States can impact grain elevators. Usually, the big farms that generate large amounts of grain often choose to own and operate their own tractor-trailer trucks. This enables the farmers to haul their own grain greater distances. This is a factor when appraising grain elevators due to the fact that local farmers may or may not deliver grain to a localized area as they did several decades ago. With the capacity of owning their own tractor trailers, the farmers could choose to haul their grain to a terminal farther away in order to achieve a better price.

Ethanol Plants

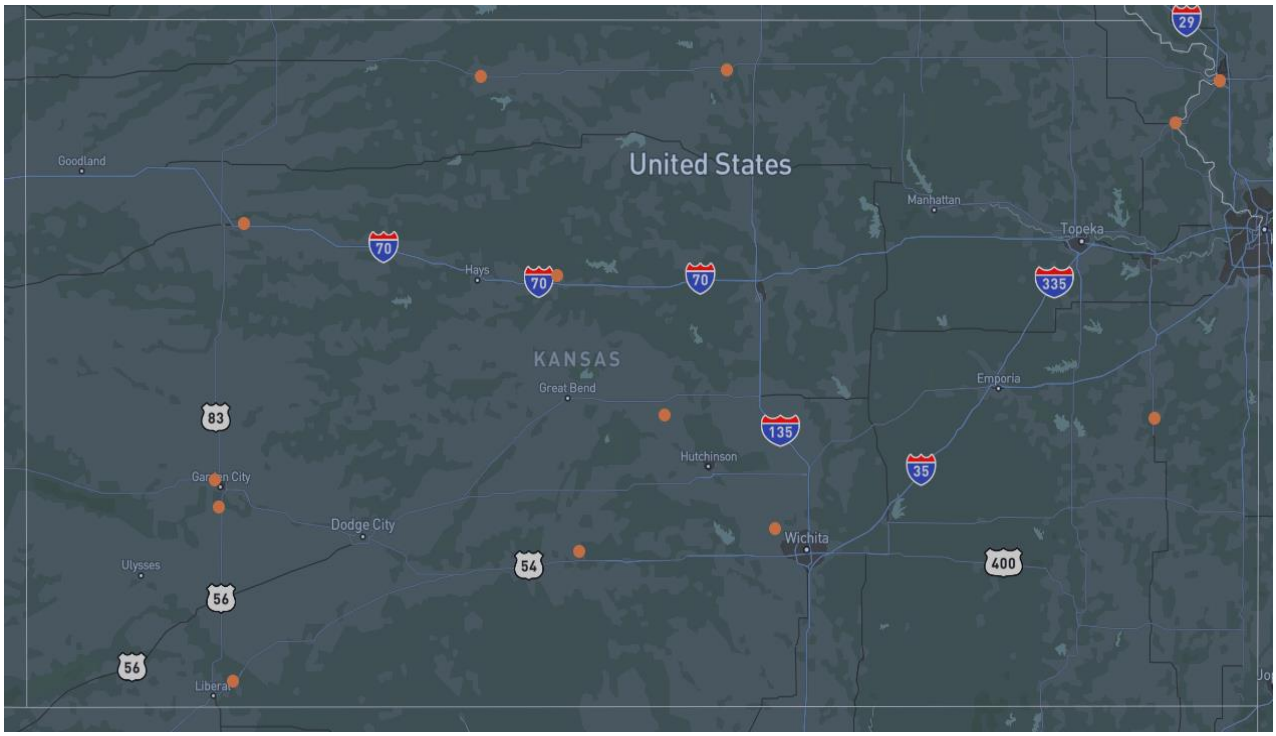
“Ethanol – which is distilled from corn essentially the way moonshine is – is blended into gasoline, both stretching the fuel's supply and making it burn cleaner."[3]

5 In Midwest Investment Boom, Corn-to-Fuel Plants Multiply, The Wall Street Journal - Online - March 9, 2005

“In many ways, 2022 was a banner year for the U.S. ethanol industry. Recovery from the COVID-19 pandemic continued, even as war in Ukraine and historic inflation created challenging economic conditions. As consumers around the globe faced record-high gas prices, U.S. ethanol provided relief at the pump and bolstered energy security. At 10.4 percent, ethanol comprised a record share of U.S. gasoline, and ethanol exports surged to their second-highest level ever.”

Kansas Ethanol Plants

According to the U.S. Energy Information Administration, there are currently 12 ethanol plans in Kansas that have a combined production capacity of roughly 610 million gallons per year. A map of the facilities from ethanolproducer.com is shown below:



3 In Midwest Investment Boom, Corn-to-Fuel Plants Multiply, The Wall Street Journal - Online - March 9, 2005

Plant	Location	Capacity
Pure Field Ingredients	Russell	N/A
Arkalon Energy LLC	Liberal	115,000,000
Kansas Ethanol	Lyons	80,000,000
Element	Colwich	70,000,000
Bonanza BioEnergy LLC	Garden City	62,000,000
Pratt Energy	Pratt	58,000,000
Western Plains Energy LLC	Oakley	50,000,000
East Kansas Agri-Energy	Garnett	48,000,000
Amber Wave	Phillipsburg	40,000,000
MGP Ingredients	Atchison	35,000,000
Reeve Agri Energy	Garden City	17,000,000
Nesika Energy	Scandia	10,000,000
Total	**12**	**585,000,000**

"Ethanol is a top customer for corn and Kansas Corn works to build market opportunities for ethanol and distillers grains. The state's 12 ethanol plants produce 610 million gallons of renewable, clean burning ethanol fuel and distillers grains, a high nutrient livestock feed, creating a market for 217 million bushels of corn and other grains. Distillers grains are sold wet as WDGS to nearby livestock feeders, or they are dried to make DDGS that can be sold to more distant markets or exported to other states or other countries."[4]

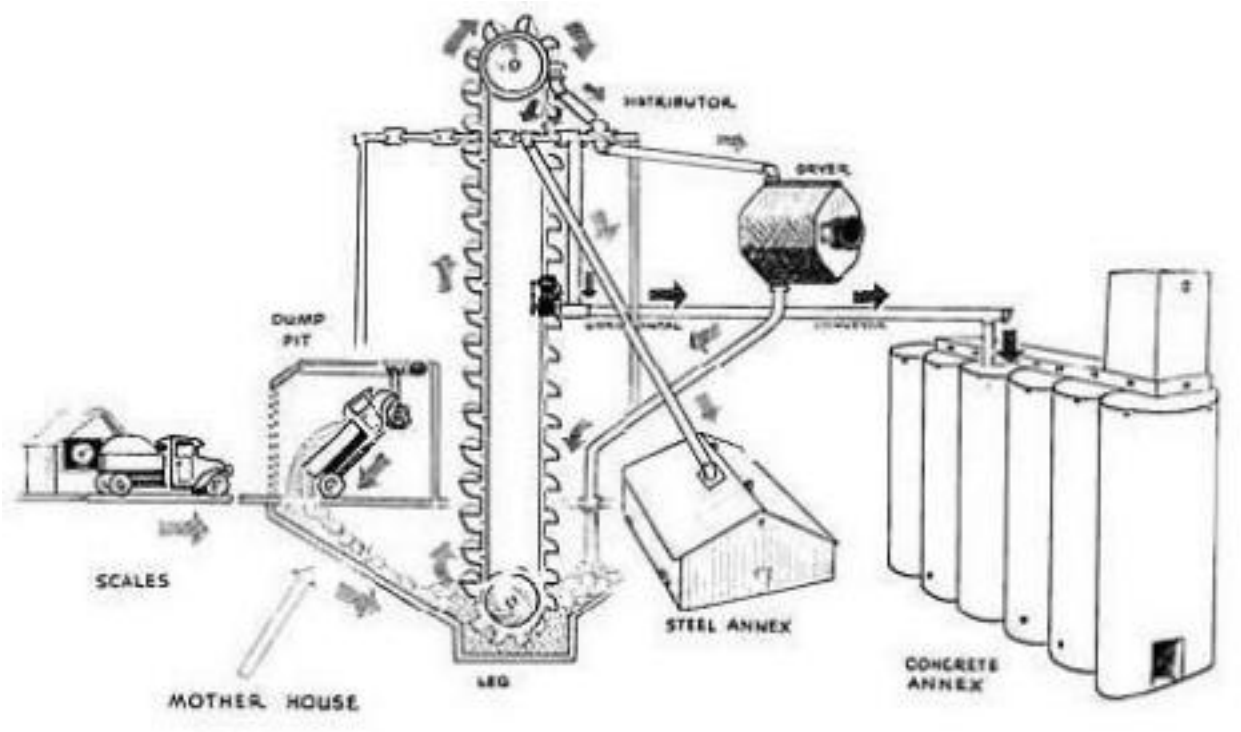
What happens when wheat is loaded into a grain elevator?

Scales, legs, cups, boots, and belts are a few of the things found at a Kansas grain elevator. After a combine cuts and cleans the wheat, the combine dumps the wheat kernels into a truck which heads to a grain elevator. At the elevator, there's a huge scale - big enough to weigh a semi-truck. One at a time, each full wheat truck drives onto the scale and is weighed. Once the truck is weighed, it drives off the scales and into a drive-thru opening in the grain elevator. The truck drives onto a huge grate. With the help of the elevator's workers, the truck driver lines up the back of the truck so that the wheat will fall out of the truck, through the grate, and into a big pit under the grate. The workers open sliding panels in the back of the truck's grain box. The truck raises the grain box up higher and higher until all the wheat slides to the back of the truck and falls out and through the grate.

[4] http://kscorn.com/ethanol/

Some trucks, especially old trucks, can't raise the grain box. Instead, the front wheels of the truck drive onto a lift, which picks up the front of the truck and raises it up so that the wheat will fall out the back of the grain box. Many of the larger, newer trucks have hoppers underneath the grain box. [9] http://biodiesel.org/production/production-statistics

Look inside a grain elevator



These are like funnels which are centered over the grate and opened. The wheat falls out without having to raise the truck or the grain box.

Once the truck is empty, the empty truck drives out of the grain elevator drive-thru and back to the scales, where it is weighed again. The grain elevator subtracts the empty weight from the full weight to know how much wheat the truck brought to the elevator.

While the wheat truck heads back to the wheat field for another load of wheat, the wheat is already moving inside the grain elevator. The wheat that was dumped through the grate is sliding down a sloped concrete path into a lower pit called the boot pit. The boot is at the bottom of the leg, which is the part of the grain elevator that picks up the grain and moves it to the top.

Inside the leg is a big belt that goes up and down - from the boot to the top of the leg. All up and down the belt are steel cups. Each cup is about the size of a shoe box. As the belt goes through the boot, each cup scoops up wheat kernels to carry to the top of the leg. As the belt

goes over the top and turns to go back down, the cup turns upside down and dumps the wheat. The wheat is moved into different storage areas in the grain elevator by funnels and conveyor belts (belts like those that move your food through the check-out stand at the grocery store or supermarket).

Types of Grain Elevators

Type of Operation

There are various types of grain elevators. Two basic types are country and terminal. Terminal grain elevators are subdivided into four more types or distinctions that include: railroad, storage, river, and port.

Country elevators are the most well-known type of grain elevator due to historic preference, and therefore, the most abundant. As a consequence, these grain elevators are often located in rural areas and small towns so that they can be close to the farms that produce the grain. They often receive the grain by truck. Country elevators often have a head house with several storage bins. Storage bins often are up-right steel bins, slip-form concrete silos, wooden crib, flat storage buildings, or a combination of several types.

Terminal elevators are a broad category that includes railroad, storage, barge and port. Most terminal elevators receive their grain from other elevators and export by truck, rail, barge or ship. How a grain terminal elevator ships the majority of its grain explains the specific type of grain terminal elevator.

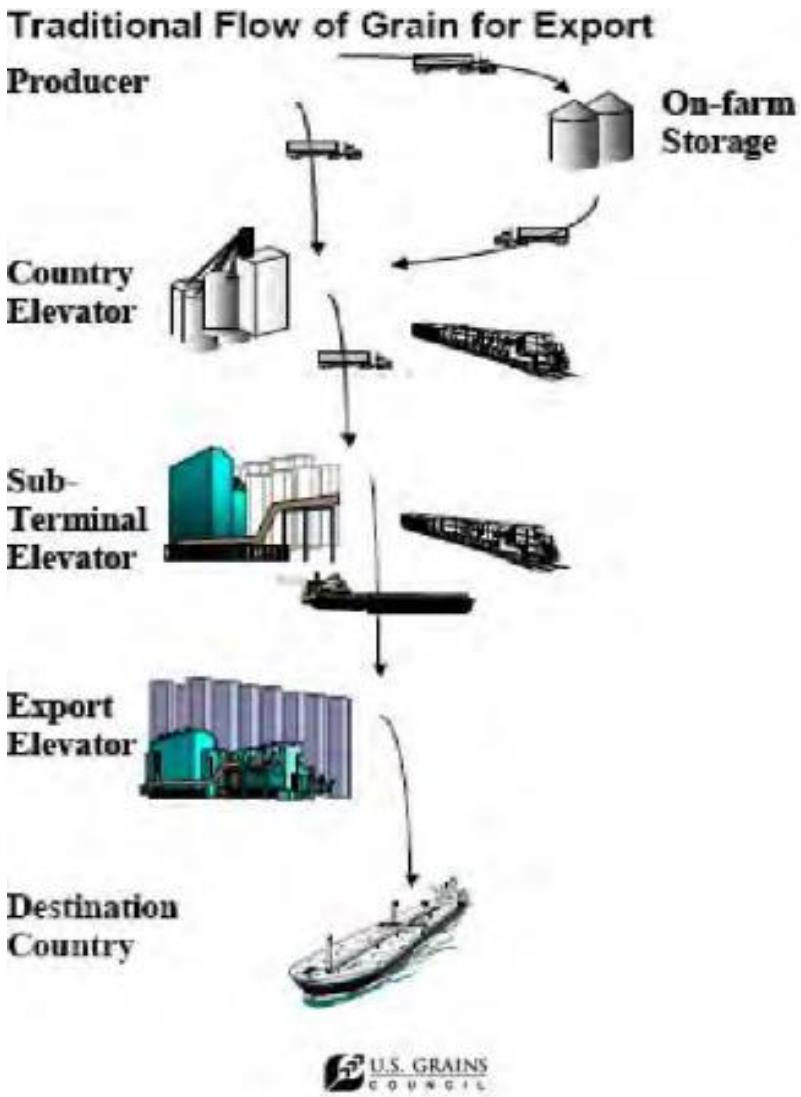
Rail terminals receive most of the grain by truck and export the grain by rail. Older rail terminals handled 50 to 56 car unit trains, while modern rail (shuttle) terminals handle 100 to 110 cars at a time. Most recently built shuttle train terminals do not have a large volume of storage capacity in comparison to their thruput. These elevators are built to ship more grain due to higher handling speeds. Rail terminals are increasingly becoming the leader of grain shipments.

Storage terminals are also known as inland terminals. These terminals have older mechanical systems that require extra manpower to operate. This is an economic disadvantage to this type of grain terminal elevator due to competition from newer or remodeled terminals. Most storage terminals are upright concrete and may have secondary storage in upright steel bins or flat storage. Some of these facilities are located in cities or communities which inhibit their ability to stage 100-110 car shuttle trains.

Barge terminals receive most of their grain from truck or rail, but often export the grain by

river barge. The majority of the grain shipped from barge/river terminals is destined for port elevators, or domestic processing plants. Barge/river terminals can vary in size and capacity. Due to barge/river terminals being able to ship a large quantity of grain at one time, they have the advantage of being the most economical mode of transportation among the different types of grain elevators. However, there are disadvantages to this type of terminal. One is the long shipping time it takes to get grain from one location to another. The second is the lack of consistency (flood, drought, etc.) of the river.

Port terminals are located along the coast of the United States. They receive their grain from truck, rail, or river barge, and export it by ocean-going vessels. As a result of their shipping capacity, port elevators often have several million bushels of storage capacity. Port elevators may be negatively impacted by storms or other natural disasters.

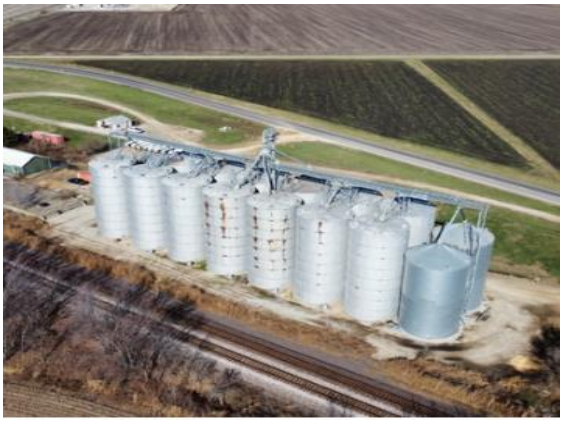


Types of Grain Storage (Elevator) Construction

Crib elevators are a North American invention which first originated about 100 years ago. Cribbed wood elevators are still common in the grain producing areas on the plains of Canada and the United States. Grain elevators have evolved and have been modified through the years, but the basic function of grain elevators remains the same – to receive, collect, blend and store grain between the time of harvest on the farm and when grain is marketed, shipped, processed or fed.

Steel bins were first introduced over fifty years ago as an alternative to wood crib elevators. The first steel bins had plate metal bolted or riveted together (photo at the bottom). These bins have been replaced by galvanized corrugated steel bins (photo to the left). Typically, these bins do not have a built-in elevator leg. Grain is loaded into these type bins by an external (free standing) elevator leg or is transferred from an adjoining elevator.

Concrete elevators were constructed as a safe alternative to the wood crib elevators that were subject to fire and/or explosion. Concrete elevators are the most expensive to construct but have the longest physical life. Concrete elevators come in many designs and configurations. Older concrete elevators consist of a head house, galley, tunnel, numerous bins, interstices, work areas, elevator shafts, etc. Newer concrete bins are being designed as free-standing structures with external elevator legs.



Flat storage grain warehouses were widely developed in the 1970's as an affordable means for storing government warehouse grain. These structures were typically wood or steel framed buildings with heavy gauge galvanized corrugated iron siding and roof covering. Most served as additional storage to existing elevators. Grain was loaded into them by means of a conveyor belt or screw conveyor located at the apex of the roof. Load-out was by either an in-ground screw conveyor or a portable load out conveyor. These structures were some of the most affordable types of grain storage to construct. However, they are the most expensive to operate, due to the manpower requirements at load-out. With the phase out of the Commodity Credit Corporation (CCC) program in the late 1980's, much of the flat storage facilities became obsolete and were converted into other uses.

This guide is designed for the appraisal of commercial grain storage facilities. This includes those licensed by the Kansas Department of Agriculture or the USDA. The Kansas Department of Agriculture list may be obtained at this website: The Kansas Department of Agriculture can also be contacted through their website: www.agriculture.ks.gov. The facilities licensed by US Department of Agriculture are listed on the following website: https://internet-dotnet.fsa.usda.gov/approved_whses/ugrsa/report_UGRSA.asp?StateAbbr=KS&StateName=KANSAS&StateCode=20

Grain Elevator - Improvement Analysis

Construction Features

A complete property description includes information about the details and condition of the building's exterior, interior, and mechanical systems. Although there is no prescribed method for describing all the buildings, the following outline may be used to establish a format for building descriptions.

A careful, detailed, and accurate identification and analysis of all pertinent physical attributes is necessary in every appraisal. This section requires two studies:

1. Description of all construction features to provide the data for the replacement cost new estimate, physical, market, and income comparisons.

2. Analysis of the construction to identify any item exhibiting deterioration or obsolescence. This study provides background data for depreciation in the cost analysis and for items of appropriate consideration in the direct sales comparison and/or income capitalization approach sections of the report.

The following improvements description is based on personal inspection(s) of the subject property, data in the public records, and the building plans.

Comments and/or Suggestions: Your checklist should include a discussion of the size, age, use, quality, and specifications used in the description of the use. Remodeling, date of completion, etc. should be covered.

During the inspection it is important to note any areas of accelerated physical deterioration and/or functional obsolescence. These items may indicate a greater amount of depreciation in the Cost Approach. Accelerated physical deterioration and/or functional obsolescence may also limit the utility of some of the grain storage capacity within the grain elevator, which could influence the analysis in the Sales Comparison (Market) Approach. Accelerated physical deterioration may indicate inadequate maintenance.

Section IV – Data Analysis and Valuation

Highest and Best Use Analysis

According to *The Dictionary of Real Estate Appraisal, 7th Edition,* highest and best use is the reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.

The Appraisal of Real Estate, 15th Edition states: A fundamental concept of highest and best use is the idea that highest and best use is viewed from two perspectives:

- The use of the real estate based on the presumption that the parcel of land is vacant or can be made vacant by demolishing any improvements (i.e., as vacant or as if vacant)
- The use that should be made of the real estate as it exists (i.e., as currently improved or as if improved as proposed)

The highest and best use of land as though vacant and the highest and best use of the real estate as improved are connected but distinctly different concepts.

The analysis of land as though vacant focuses on alternative uses of the land, with appraisers analyzing each reasonably probable use. In the analysis of highest and best use of land as though vacant, appraisers seek the answers to several questions:

- Should the land be developed or left vacant?
- If left vacant, when would future development be financially feasible?
- If developed, what kind of improvements should be built?

In contrast, when appraisers analyze the highest and best use of the real estate as improved, the focus on alternative uses considers three possible actions related to the current improvements:

1. Retain the improvements.
2. Modify the improvements in some way, such as conversion, renovation, or alteration.
3. Demolish the improvements and redevelop the land.

The analysis of the highest and best use of the real estate as improved answers a different question than the analysis of the land as though vacant:

- Should the existing improvements on the property be maintained in their current state, should they be altered in some manner to make them more functionally efficient, or should they be demolished to create a vacant site for a different use?
- If renovation or redevelopment is warranted, when should they occur?

Given that grain elevators parcels are improved properties the focus should be on whether the highest and best use as improved is to retain the improvements, modify the improvements, or demolish the improvements.

When determining the highest and best use of a grain elevator, there are many different factors to consider.

- Which type of grain elevator is it?
  - This could be a country, rail terminal, storage terminal, barge terminal, or port terminal.
- What is the elevator's primary type of construction?
  - The structures are concrete, steel bin, flat warehouse, and wood cribs or a combination of these types of structures.
- Is the elevator financially feasible?
  - In order to identify a subject's market area, the appraiser needs to determine where an elevator receives its grain, also known as its "drawing" area. Typically, terminal elevators receive grain from the large area via semi-truck. A country elevator's market area is smaller and will likely receive its grain from a 20-mile radius or less.
  - What is the future demand for the services provided by the elevator? Determine if competitors (shuttle train terminals, ethanol plants, biodiesel plants, etc.) will be influencing the market, which can affect a grain elevator's highest and best use.
  - One test is looking at the subject's mean thru-put and how this compares to other elevators in the market. Past historical volume statements can provide good estimates that make it possible to estimate thru put, although it is good to keep in mind that crops will vary from year to year. It is recommended that a 5 to 10 year study period be reviewed. This is not always feasible and with the sales database it was not possible to obtain the thru put for most of the sales.
  - If available, past financial statements can provide good estimates on income potential, although it's good to keep in mind that crops and incomes will vary from year to year. It is recommended that a 5 to 10-year study period be reviewed. It is important to note that there are no financial reporting standards. The arrangement of incomes and expenses will vary from elevator to elevator. Financial records were not available for most of the sales database and most of the time will be difficult to obtain.
- Does the value produced by the existing improvements exceed the value of the underlying land, less demolition costs?

Approaches to Value

The *Appraisal of Real Estate, 15th Edition* states on page 29 that "In assignments to develop an opinion of market value, the ultimate goal of the valuation process is a well-supported value conclusion that reflects all of the pertinent factors that influence the market value of the property being appraised. To achieve this goal, an appraiser uses three different approaches to value.

1. In the cost approach, value is indicated by the current cost of reproducing or replacing the improvements, less depreciation, plus land value.

2. In the sales comparison approach, value is indicated by analysis of sales of comparable properties appropriately adjusted for differences from the subject property.

3. In the income capitalization approach, value is indicated by the present value of a property's earning power, based on the capitalization of income.

Traditionally, specific appraisal techniques are applied within the three approaches to derive indications of real property value. One or more approaches to value may be used depending on which approaches are necessary to produce credible assignment results, given the intended use."

Kansas statutes, which are detailed in the Foreword of this guide, provide the Director of Property Valuation the authority to devise or prescribe guides, and to develop tools and methods for the appraisal of specific types of properties. PVD Directive #19-048 outlines the guides published for certain, specialized types of properties. The Grain Elevator Appraisal Guide is included in this Directive for the valuation of licensed grain facilities.

The Grain Elevator Appraisal Guide is designed to establish fair market value for the real property of a licensed grain facility.

Kansas law provides in part, "in determining the classification of property for ad valorem tax purposes, the county appraiser shall conform to the definitions of real and personal property in Kansas law and to the factors set forth in the personal property guide devised or prescribed by the Director of Property Valuation…" per K.S.A. 79-261(b)(1).

K.S.A. 79-102 defines both real and personal property as:

"'Real Property', 'real estate', and 'land'… shall include not only the land itself, all buildings, fixtures, improvements, mines, minerals, quarries, mineral springs and wells, rights and privileges appertaining thereto."

"Personal Property shall include every tangible thing which is the subject of ownership, not forming part or parcel of real property…"

Where the proper classification of Commercial Industrial Machinery & Equipment (CIME) is not clearly determined from the definitions of real and personal property provided in Kansas law, the appraiser shall use the three-part fixture law test as set forth in K.S.A. 79-261 and the Personal Property Guide prescribed by the Director of Property Valuation pursuant to K.S.A. 75-5105a(b), and amendments thereto, and shall consider the following where all three parts of the test must be satisfied before an item can be classified as real property:

A. Annexation
B. Adaptation
C. Intent

When considering the approaches to value, one must attempt to exclude the contribution of business and personal property, tangible & intangible, from the value conclusions. Therefore, deductions are needed when determining the applicable value indications from the Income Capitalization and Sales Comparison Approaches.

Cost Approach

The Appraisal of Real Estate, 15th Edition discusses the methodology of the cost approach on page 525, "In the cost approach, appraisers compare the replacement cost of the subject improvements to the cost to develop similar improvements as evidenced by the cost of construction of substitute properties with the similar utility as the subject property. The estimate of development cost is adjusted for market-extracted losses in value caused by the age, condition, and utility of the subject improvements or for locational problems. The land value as if unimproved is then added, usually based on comparison with sales of comparable sites with the same or a similar highest and best use. The sum of the value of the land and the improvements is adjusted for any existing property rights (e.g., leased fee, leasehold interests) included with the subject property…"

The Cost Approach is based upon three independent analyses. The estimated replacement cost new must be analyzed based upon the data collected during the property inspection. The total replacement cost new (RCN) must then be reduced by depreciation. Market abstracted depreciation as an annual factor is discussed in detail later in this section. After the deduction for depreciation, the land value is then added to arrive at a property value indication.

Estimating the Subject's Land Value

In valuation it is necessary to establish an independent land value. It will be useful in comparing the value indications from the three approaches and in adjusting the value estimated within the Sales Comparison Approach. For the purpose of this guide, the land value abstracted from the sales was not exclusively based upon the county appraiser's estimated land value. It is important to remember that large tracts of land may be valued on an agricultural use basis, which may not be representative of market value.

Cost Analysis

In the appraisal of a grain elevator, it is necessary to have an accurate description of the subject property. With this information as a basis, it is then necessary to apply the appropriate replacement cost for the various buildings and components of the subject grain storage (elevator). The data collected during the property inspection and described on the form included earlier in this guide will provide a basis for the cost analysis. The M&S was used as the basis for the replacement costs in the cost approach in the Grain Elevator Guide. Excerpts of some of the pages from this publication are included in the addendum of this guide. The Grain Elevator Workbook previously discussed in the property description portion of this guide is set up in an Excel spreadsheet format which will allow the insertion of the appropriate per unit cost for the various buildings and components of the subject grain elevator.

M&S requires two adjustments to the cost, stated within the manual. The current cost multipliers are the multipliers for bringing cost published in the manual pages up to date. The multipliers are republished monthly and are based primarily on the Building Cost Indexes. The local multipliers reflect local cost conditions and are designed to adjust the basic cost to each locality. They are based on weighted labor and material costs, including local sales tax, but do not include any new construction rebate where applicable. Local multipliers apply to all cost in the manual, but not to any cost indexes or replacement cost multipliers. The local multipliers, when applied to the total replacement cost, will adjust for variations in component costs as a whole for a particular geographic area. But they may not adequately adjust when applied to specific components or Unit in Place cost.

The local multipliers for Kansas include 15 different towns and cities as well as a general classification for the state as a whole. It is important to apply the correct local multiplier when adjusting the total replacement cost new to a specific property. PVD recommends the utilization of the closest geographic area to the subject property in the selection of a local multiplier.

Depreciation Analysis

Traditional approaches for depreciating grain elevators use an estimated age-life of up to 100 years. This can vary based on the type of construction. For purposes of this guide the Property Valuation Division has established a depreciation floor of 5% good for all types of storage. This only applies to structures that are licensed and currently being used for grain storage. Consideration is given to these numbers when analyzing the market abstracted data in order to arrive at the depreciated replacement cost new (RCNLD) for this Grain Elevator Appraisal Guide.

Age is a very interesting term. The IAAO Glossary for Property Appraisal and Assessment, Third Edition has the following definitions for age:

Age

A generic term referring to the length of time a property has existed.

Actual Age

The number of years that have elapsed since the completed construction of an improvement; also referred to as historical age or chronological age

Chronological Age

The age of an item as measured from when the item was new to a specified date. Often referred to as the Historical Age.

Effective Age

The age of a property based on the amount of observed deterioration and obsolescence, which may be less than, greater than, or equal to the chronological age.

Effective age analysis should begin with the actual age of an improvement, then adjustments are made based upon maintenance and repair of said improvement. For an improvement that has been upgraded and/or is in above average condition for its age, its effective age may be less than its actual age. Conversely, for improvements that have been poorly maintained and are in below average condition for their age, their effective age may be greater than their actual age.

The purpose of this portion of the Grain Elevator Appraisal Guide is to abstract the indicated accrued depreciation from *all causes* to arrive at an annual depreciation factor for the various

types of grain storage (elevator) facilities in Kansas.

Grain handling and storage facilities are generally considered to be single use, special-purpose type properties and may suffer from functional and economic obsolescence to a greater degree than many other types of industrial or commercial property. Measuring the proper amount of physical deterioration and/or obsolescence is the difficult part of the Cost Approach. It is accepted that a market analysis will generally provide the best estimate of total accrued depreciation.

The M&S cost was utilized in the analysis of the sales in this guide to determine market abstracted depreciation rates. A similar cost analysis to that described previously was applied to each sale to derive an estimated replacement cost new. The adjusted sales price (sales price minus land value, non-grain asset value, tangible personal property value, and intangible property value) was then subtracted from the new RCN to derive an estimate of total accrued depreciation ($) for each sale. This amount was then divided by the replacement cost new to calculate depreciation as a percentage of the replacement cost new. The percentage of replacement cost new was further refined by dividing the total accrued depreciation percentage by the effective age of the sale to determine an annual depreciation factor. The market abstracted depreciation factors for the various types of facilities and locales within Kansas will be discussed later in this depreciation analysis.

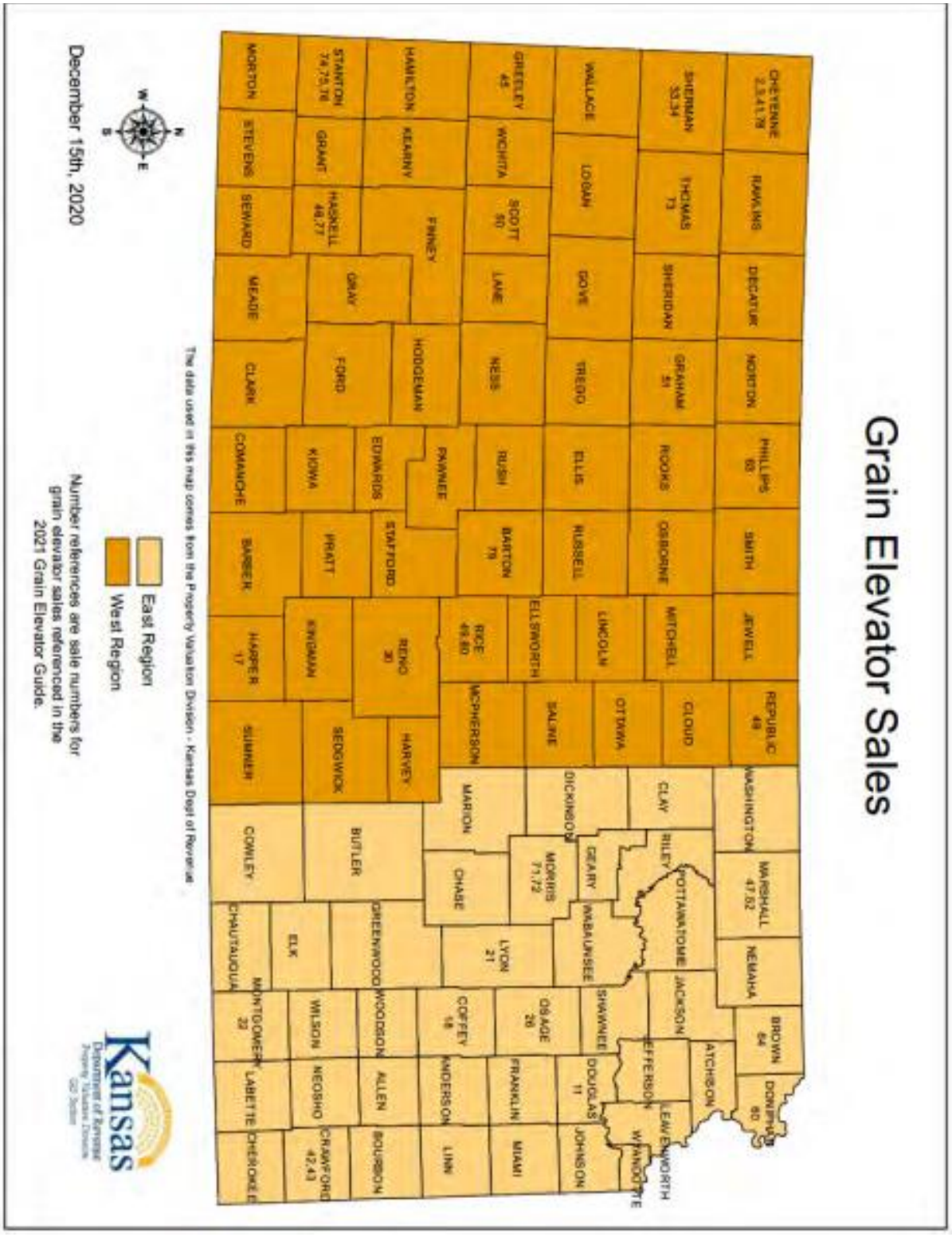
There are several examples of functional obsolescence that can be identified by appraisers during the inspection. A few potential examples of functional obsolescence are listed below, but there could be other examples of functional obsolescence.

- A property having no permanent loading or unloading system.

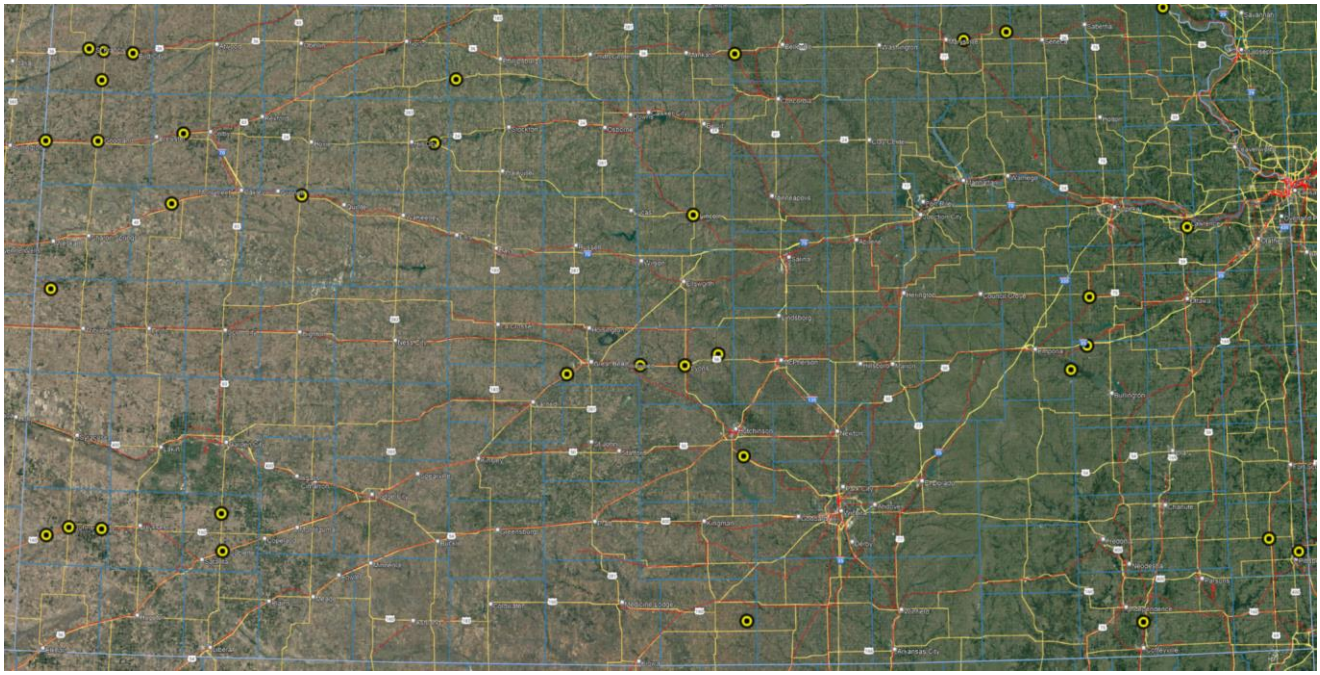
- Only having a one leg system when a two-leg system with higher flow capacity is necessary.

- If an operation was designed on a rail spur with train loading and unloading features, but the rail line has been abandoned and no longer services that area.

Map of East / West Region



Map of Analyzed Sales



The database utilized in this Grain Elevator Appraisal Guide included 35 local Kansas sales that sold between 2010 and 2022. These 35 sales are used for the depreciation analysis along with the sales comparison approach. The individual write-ups of each transaction are included in the addendum of this guide.

The sales were segregated according to principal storage type (concrete, steel, or mixed). Principal storage type for this guide is interpreted to mean the type of storage which represents 75% or more of total replacement cost new. If the subject property does not have a single storage type representing 75% or more of total replacement cost new, the property is considered "Mixed". Annual depreciation rates were analyzed according to type of storage, location, size, and age.

Total accrued depreciation abstracted from the database ranged from 16.27% to 97.6% with a mean of 71.92% and median of 77.91%. The annual depreciation factor ranged from 1.04% to 4.05% with a mean of 1.72% and a median of 1.57%. For purposes of this guide the Property Valuation Division has established a depreciation floor of 5% good for all types of storage. Thus, individual structures on a property with excessive depreciation were capped at 95% as included in all table analysis in this guide.

Annual depreciation rate by storage type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	15	1.07%	1.49%	1.43%	2.04%
Steel	10	1.39%	1.86%	1.82%	2.43%
Mixed	10	1.04%	1.91%	1.61%	4.05%

Annual depreciation rate by location

Location	# Properties	Low	Mean	Median	High
East	10	1.39%	1.82%	1.83%	2.43%
West	25	1.04%	1.62%	1.54%	4.05%
Statewide	35	1.04%	1.72%	1.57%	4.05%

Annual depreciation by storage capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	20	1.07%	1.70%	1.68%	2.50%
1,000,000 bu & Over	15	1.04%	1.74%	1.56%	4.05%

Annual depreciation by age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	13	1.32%	2.01%	1.82%	4.05%
40 Years & Over	22	1.04%	1.54%	1.49%	2.04%

Regional Market Analysis

Kansas has been separated into two markets (East and West). These regional sub-markets may provide greater local support for market analysis; however, it is important to consider the limitations created by subdividing the data. In some instances, there may be very few transactions upon which to base a market analysis. Please remember that supporting market data is the best defense/support for an opinion of depreciation.

Each of the regions will be analyzed in a similar manner to the summarized analysis of the total database described in the previous section.

East Region Analysis

The database utilized in this Grain Elevator Appraisal Guide included 10 sales in the East Region. Total accrued depreciation abstracted from the database ranged from 16.27% to 97.6% with a mean of 69.19% and a median of 76.95%. The annual depreciation factor ranged from 1.39% to 2.43% with a mean of 1.83% and a median of 1.83%. For purposes of this guide the Property Valuation Division has established a depreciation floor of 5% good for all types of storage. Thus, individual structures on a property with excessive depreciation were capped at 95% as included in all table analysis in this guide.

Annual depreciation rate by storage type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	3	1.43%	1.64%	1.51%	2.00%
Steel	6	1.39%	1.87%	1.83%	2.43%
Mixed	1	2.09%	2.09%	2.09%	2.09%

Annual depreciation by storage capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	8	1.39%	1.87%	1.91%	2.43%
1,000,000 bu & Over	2	1.43%	1.62%	1.62%	1.82%

Annual depreciation by age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	4	1.39%	1.93%	1.95%	2.43%
40 Years & Over	6	1.43%	1.75%	1.80%	2.00%

West Region Analysis

The database utilized in this Grain Elevator Appraisal Guide included 25 sales in the West Region. Total accrued depreciation abstracted from the database ranged from 21.28% to 97.5% with a mean of 73% and a median of 82.39%. The annual depreciation factor ranged from 1.04% to 4.05% with a mean of 1.68% and a median of 1.54%.

Annual depreciation rate by storage type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	12	1.07%	1.46%	1.43%	2.04%
Steel	4	1.57%	1.83%	1.77%	2.22%
Mixed	9	1.04%	1.89%	1.55%	4.05%

Annual depreciation by storage capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	12	1.07%	1.60%	1.47%	2.50%
1,000,000 bu & Over	13	1.04%	1.76%	1.56%	4.05%

Annual depreciation by age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	9	1.32%	2.05%	1.73%	4.05%
40 Years & Over	16	1.04%	1.46%	1.44%	2.04%

Reconciliation of Depreciation

The Dictionary of Real Estate Appraisal, 7th Edition defines Reconciliation Criteria as:

"The criteria that enable an appraiser to form a meaningful, defensible conclusion about the final value opinion. Value indications are tested for the appropriateness of the approaches and adjustments applied, the accuracy of the data, and the quality and quantity of evidence analyzed."

It is recommended that several different annual depreciation factors be considered for each property. Consideration should be given to the factors that are the most important in analyzing the subject grain storage (elevator) facility.

All the previous annual depreciation factors are based upon a quantity of data. It is also important for the appraiser to review individual sales and select those which are most like the subject. The annual depreciation rates from these sales should be considered along with the database annual depreciation rate indications.

As explained in the definition of reconciliation, the conclusion should be based upon the appropriateness, accuracy, and quantity of evidence. If location is the most important characteristic, then the depreciation factor from the geographical table should be given the most weight in analysis; however, there may be several characteristics which are relevant to the conclusion of the annual depreciation factor.

Once an annual depreciation factor is selected, then it must be applied to the effective age of the subject property to arrive at a total depreciation (all causes). It must then be subtracted from the Replacement Cost New (RCN) of the subject property to arrive at the depreciated cost new (RCNLD).

Sales Comparison Approach

The Appraisal of Real Estate, 15th Edition discusses the methodology of the cost approach on page 351, "*In the sales comparison approach, an opinion of market value is developed by comparing properties similar to the subject property that have recently sold, are listed for sale, or are under contract (i.e., for which purchase offers and a deposit have been recently submitted). A major premise of the sales comparison approach is that an opinion of the market value of a property can be supported by studying the market's reaction to comparable and competitive properties.*"

Analysis of Improved Sales

The database utilized in this Grain Elevator Appraisal Guide included 35 sales. The time frame for these sales ranged from 2010 through 2022. The sales represented all types and sizes of facilities. The smallest sale had a storage capacity of 65,000 bushels. The largest sale had a licensed capacity of 5,735,722 bushels. The individual write-ups of each transaction are included in the addendum of this guide. **Please note the net sale prices per bushel shown in the comparable write-ups include the underlying land value but exclude tangible and intangible personal property.** All sales were in Kansas.

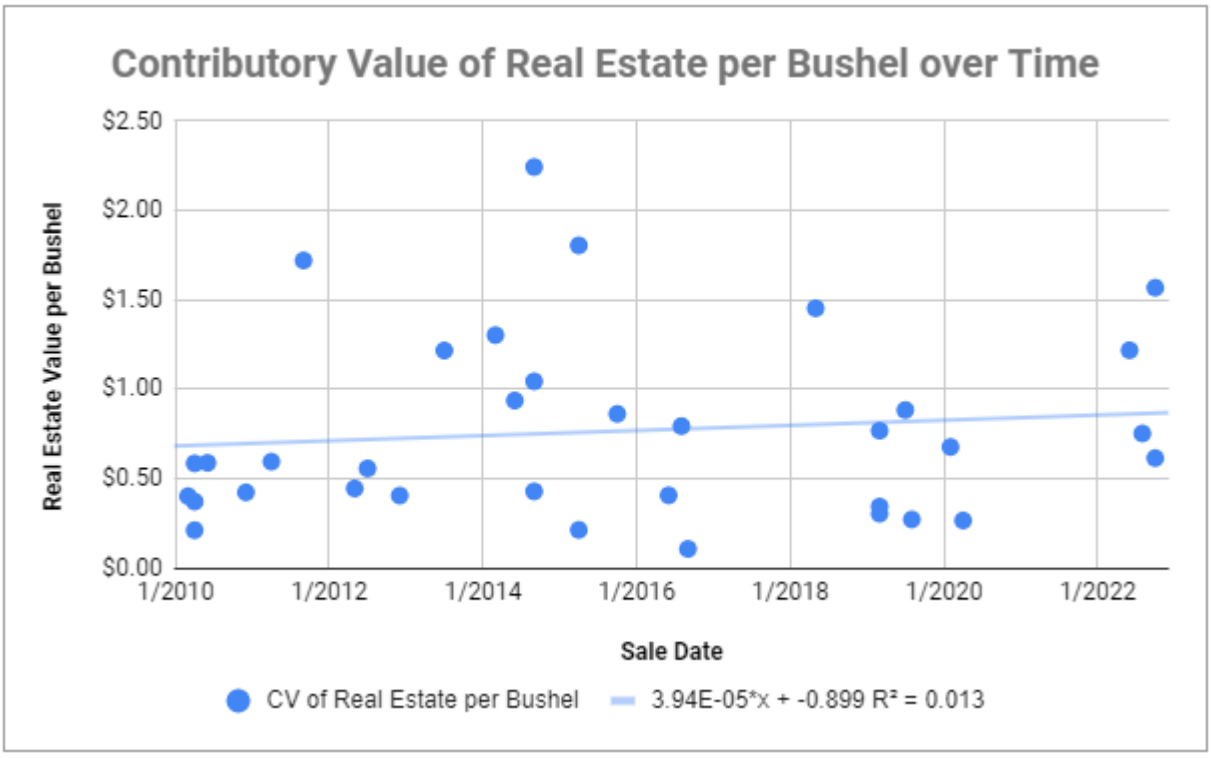
Kansas County Appraisers are required to value grain elevators based upon the fair market value of the real property. K.S.A. 79-503a defines fair market value for property tax purposes, and K.S.A. 79-102 defines real property for property tax purposes. With certain exceptions that are not directly applicable in this guide, intangible personal property is not subject to taxation in Kansas and is likewise beyond the scope of this guide. Thus, this guide will define the property it purports to value, and that property cannot include tangible or intangible personal property.

The sales prices of the transactions in the database were adjusted to comply with K.S.A. 79-503a and K.S.A. 79-102. The adjusted sales price excluded non-grain asset value, personal property value, and intangible property value.

Statewide Database Analyses

The simplest form of analysis is based upon a price per bushel of storage capacity. The overall net price database ranged from $0.11 per bu. to $2.24 per bu. with a mean of $.76 per bu. and a median of $0.59 per bu.

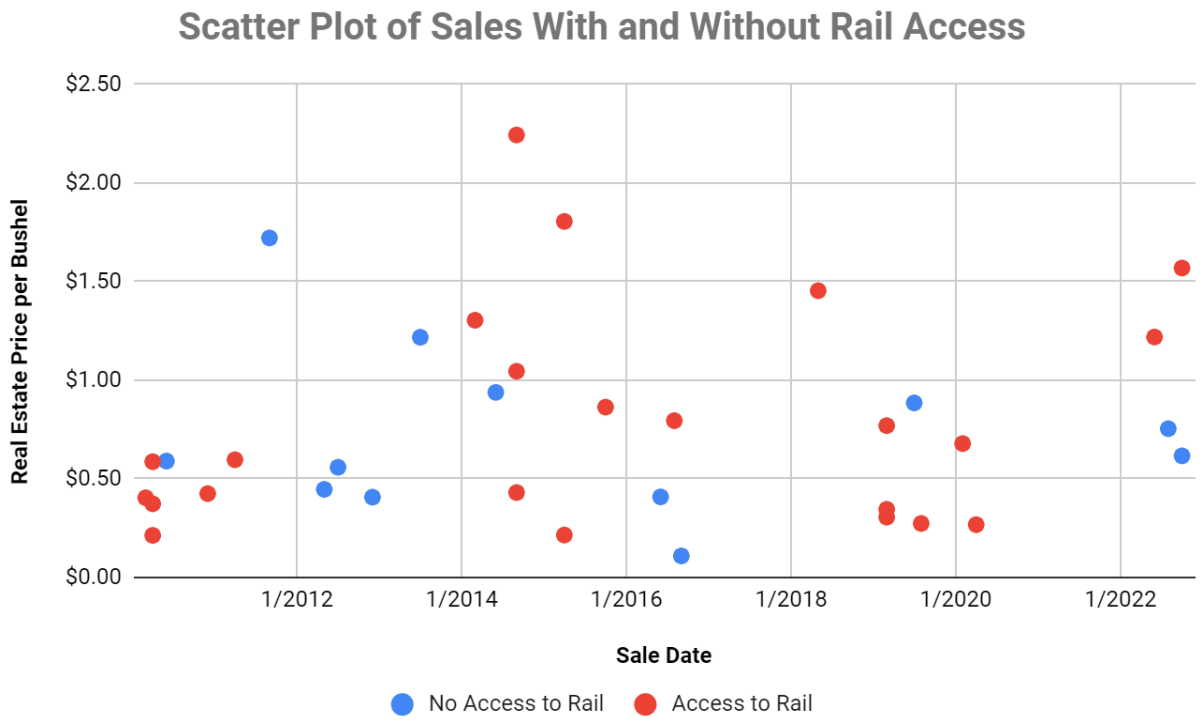
The first thing we considered is whether there is any change in sale prices due to market conditions over the 12 year time period that the sales were collected. A curve-fit analysis is shown below that shows the relationship between the sale price per bushel and the sale date.



The curve-fit analysis shown above plots the 35 sales analyzed herein. The real estate value per bushel is the sale price less any non-real estate and non-grain improvements. As can be seen, there appears to be a very slight upward trend. However, the R2 is very low, at roughly 1%. The R2 is an indication of the variance in the data, meaning that an R2 of 1.0 indicates that 100% of the variance is explained by the independent variable. In this case, that is the sale date. The line of best fit equation indicates a very small upward trend, but given the lack

of correlation in the data it is likely that there has been minimal appreciation over the time period analyzed. Therefore, no adjustments for market conditions are required.

We also considered whether there was any correlation between the sales located along a railroad line or not. We grant that this is a small dataset, but no correlation could be found between sales along a railroad line and those not along a railroad line. Please note that the vast majority of grain elevators are near railroad lines.



Sale Price per Bushel Based on Rail Access					
Access to Rail	**No. of Sales**	**Minimum**	**Maximum**	**Average**	**Median**
No	12	$0.11	$1.72	$0.72	$0.60
Yes	23	$0.21	$2.24	$0.79	$0.59

As can be seen above, the sales with rail access tend to sell for a higher price per bushel. However, this is largely driven by one sale that occurred in 2015. If the high and low sales for each dataset are removed, the average of sales with rail access drops to $0.75 per bushel and the average of the sales without rail access decreases slightly to $0.68 per bushel. However, it should be noted that the median prices per bushel are right in line with each other. Therefore, there does not appear to be a strong correlation due to having rail access alone. We note the small dataset as well as other variables at play including location, age, bushel

capacity and construction type that can impact the price per bushel for a grain elevator.

Next, we have analyzed the comparable sales based on storage type, location within the state, total bushel capacity, and size.

Net Price Per Bushel by Storage Type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	15	$0.11	$0.86	$0.61	$2.24
Steel	10	$0.21	$0.77	$0.69	$1.80
Mixed	10	$0.21	$0.61	$0.49	$1.30

Net Price Per Bushel by Location

Location	# Properties	Low	Mean	Median	High
East	10	$0.11	$0.72	$0.57	$1.80
West	25	$0.21	$0.78	$0.68	$2.24
Statewide	35	$0.11	$0.76	$0.59	$2.24

Net Price Per Bushel by Storage Capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	20	$0.21	$0.84	$0.59	$2.24
1,000,000 bu & Over	15	$0.11	$0.66	$0.68	$1.30

Net Price Per Bushel by Age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	13	$0.21	$0.90	$0.79	$2.24
40 Years & Over	22	$0.11	$0.68	$0.51	$1.72

East Region Analysis

The database utilized in this Grain Elevator Appraisal Guide included 10 sales in the East Region. The overall net price per bushel abstracted from the database ranged from $0.11 to $1.80 per bu. with a mean of $.72 per bu. and a median of $.57 per bu.

Net Price Per Bushel by Storage Type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	3	$0.11	$0.80	$0.58	$1.72
Steel	6	$0.21	$0.71	$0.52	$1.80
Mixed	1	$0.41	$0.41	$0.41	$0.41

Net Price Per Bushel by Storage Capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	8	$0.21	$0.79	$0.57	$1.80
1,000,000 bu & Over	2	$0.11	$0.45	$0.45	$0.79

Net Price Per Bushel by Age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	4	$0.56	$0.94	$0.69	$1.80
40 Years & Over	6	$0.11	$0.58	$0.44	$1.72

West Region Analysis

The database utilized in this Grain Elevator Appraisal Guide included 25 sales in the West Region. The price per bushel abstracted from the database ranged from $0.21 per bu. to $2.24 per bu. with a mean of $.78 per bu. and a median of $0.68 per bu.

Net Price Per Bushel by Storage Type

Storage Type	# Properties	Low	Mean	Median	High
Concrete	12	$0.27	$0.88	$0.68	$2.24
Steel	4	$0.41	$0.86	$0.91	$1.22
Mixed	9	$0.21	$0.62	$0.42	$1.30

Net Price Per Bushel by Storage Capacity

Size	# Properties	Low	Mean	Median	High
999,999 bu & Under	12	$0.21	$0.88	$0.74	$2.24
1,000,000 bu & Over	13	$0.27	$0.69	$0.68	$1.30

Net Price Per Bushel by Age

Age	# Properties	Low	Mean	Median	High
39 Years & Under	9	$0.21	$0.89	$0.88	$2.24
40 Years & Over	16	$0.27	$0.72	$0.60	$1.57

Reconciliation of the Sales Comparison Approach

The Dictionary of Real Estate Appraisal, 7th Edition defines Reconciliation Criteria as:

"The criteria that enable an appraiser to form a meaningful, defensible conclusion about the final value opinion. Value indications are tested for the appropriateness of the approaches and adjustments applied, the accuracy of the data, and the quality and quantity of evidence analyzed."

It is recommended that several units of comparison be considered for each property. Consideration should be given to the factors that are the most important in analyzing the subject grain storage (elevator) facility. If the primary type of construction is the most important characteristic, then the per unit price from the main storage type table for per bushel of storage should be given the greatest weight in analysis.

All of the previous per unit prices are based upon a quantity of data. It is also important for the appraiser to review individual sales and select those which are most like the subject. The per unit price from these sales should be considered along with the database per unit price indications.

Consider all physical and economic factors in the selection of individual sales for comparison. As explained in the definition of reconciliation, the conclusion should be based upon the appropriateness, accuracy, and quantity of evidence. If location is the most important characteristic, then the price per bushel factor from the geographical table should be given the most weight in analysis; however, there may be several characteristics which are relevant to the conclusion of the price per bushel factor. The characteristics/factors considered to be most relevant should remain consistent in both the Sales Comparison Approach and Cost Approach methods of analysis.

It is important to consider all the factors/characteristics influencing the various value indications of the Sales Comparison Approach and reconcile them into a final value indication.

The two value indications (per bushel of storage and per bushel of allocated storage) are based upon the storage capacity of the subject property.

Income Capitalization Approach

The Appraisal of Real Estate, 15th Edition discusses the application of the income approach on page 432, "Although there are various income capitalization techniques available to appraisers, certain steps are essential in applying the income capitalization approach. Before applying most capitalization techniques, an appraiser works down from potential gross income to net operating income. To do this, the appraiser will

1. Research the income and expense data for the subject property and comparables.

2. Estimate the potential gross income of the property by adding the rental income and any other potential income.

3. Estimate the vacancy and collection loss.

4. Subtract vacancy and collection loss from total potential gross income to arrive at the effective gross income of the subject property. (If the potential income is estimated net of the impact of vacancy, then it must be added after the deduction for vacancy and collection loss, not before.)

5. Estimate the total operating expenses for the subject by adding fixed expenses, variable expenses, and a replacement allowance (where applicable).

6. Subtract the estimate of total operating expenses from the estimate of effective gross income to arrive at net operating income. (Deductions for capital items may also be necessary at various points in time through the projection period to calculate the cash flow used in discounted cash flow analysis.)

7. Apply one or more of the direct or yield capitalization techniques to this data to generate an estimate of value via the income capitalization approach.

8. If necessary, calculate a rent-up adjustment for the value indication that accounts for the cost of leasing up the property or for needed capital improvements (including an appropriate estimate of entrepreneurial incentive)."

Income Analysis

There are substantial inherent problems with attempting to conduct a standard Income Capitalization Approach to value a grain elevator. The standard Income Capitalization Approach assumes that renting or leasing is common, and that valid sales of rented or leased properties are available. The sales of rented or leased properties provide overall

capitalization rates. The grain storage/elevator industry is similar to other specialized industrial facilities in that these properties are most always owner-occupied, and they rarely sell. Thus, there are few rents available, and even fewer market derived overall capitalization rates.

In estimating the income for a grain elevator, consideration must be given to the fact that this is a special use property. An investigation of the market indicated there were a few leases of grain elevators or terminals.

The information for the income approach was not available for the sales included in this guide

Reconciliation of Value Indications and Final Value Estimate

The Appraisal of Real Estate, 15th Edition discusses the application of the income approach on page 600, "In the valuation process, more than one approach to value is usually applied, and each approach typically provides a different indication of value. Reconciliation is the process in which different indications of value are converted into a value conclusion. If two or more approaches are used, appraisers must reconcile the value indications. Moreover, several value indications may be derived in a single approach. In the sales comparison approach, for example, the analysis of each comparable sale produces an adjusted sale price, which is an indication of value for the subject property. The various units of comparison applied to sales may also produce different value indications. For example, apartment properties may be analyzed in terms of price per unit or price per room, and office buildings in terms of price per square foot of gross building area or price per square foot of rentable area. In an analysis of income, different indications of value can result from applying income multipliers to specific types of income, directly capitalizing net income, and discounting cash flows.

Appraisers resolve multiple value indications derived within a single approach as part of the application of that approach. After resolving multiple value indications within a single approach, an appraiser applies the same process to the value indications of multiple approaches, providing the client with clear analyses of why the results of one (or more) of the approaches to value is given more weight than the results of the others."

Reconciliation as described above is the process of reconciling the various independent value indications into a single value estimate. Each value indication should include its own inherent strengths and/or weaknesses.

This is the reconciliation of the Grain Elevator Appraisal Guide. This reconciliation is based upon the data, analyses and conclusions included in the guide. The concepts of reconciliation are applied as they would be in an appraisal; however, they will be applied to the information contained in this guide and may not be directly transferable to an individual appraisal assignment.

Historically in the ad valorem valuation process, significant consideration has been placed upon the Cost Approach to value. However, in real life the buyers and sellers of grain elevators place limited reliance upon this method of valuation. Most commercial and industrial market participants rely upon the Income Capitalization Approach in formulating their purchasing and selling decisions. Reliance upon the Sales Comparison Approach may be weakened by the lack of comparable data and the uniqueness of each facility.

The Cost Approach to value is considered a reasonable method of valuation for new or nearly new properties. This approach relies upon numerous mathematical calculations and some judgment. The area of judgment deals with the quantification of accrued depreciation as applied to the reproduction cost new of the improvements. The third component of the cost approach is land valuation. It is typically supported by local market data. The major weakness of this approach is the fact that most grain elevators are not new or nearly new. Secondly, for older facilities, the determination of the appropriate amount of accrued depreciation is subjective.

In this guide the cost estimate is based upon a national cost service (M&S). The measurement of accrued depreciation is based upon the abstraction of depreciation from a large database of grain elevator transactions. The land value is based upon a locally supported land valuation. The major weakness in the Cost Approach is typically the poorly supported estimate of accrued depreciation; however, in this guide, accrued depreciation is one of the best supported units of comparative analysis.

The Sales Comparison Approach is based upon the comparison of market data (sales) to the subject property. The selection of comparable (most similar) sales is the most difficult part of this approach. In most cases, the availability of sales data is limited, and their direct comparability is questionable. The main weakness in this approach is determining the comparability of the sales to the subject property. The strength of this approach is based upon the concept of substitution, i.e. a buyer would not pay more for a given asset than the price of an equally similar asset.

In final reconciliation it is necessary to consider the value indications by each of the two approaches and determine their individual appropriateness, accuracy and quantity of supporting evidence. Variances in the indicated values may provide insight into the reasoning

for higher or lower value indications. In conclusion, it is the appraiser's responsibility to rightly interpret the two value indications and to reconcile a single value indication for the subject property.

The two approaches were each analyzed based upon their appropriateness, accuracy, and quantity of supporting evidence. The Cost and Sales Comparison Approaches are considered to be equally strong in all three categories.

Section V – Excel Grain Elevator Workbook Instructions

The Grain Elevator Appraisal Guide and Excel Grain Elevator Workbook have been established for the mass appraisal of licensed grain elevator properties in Kansas. As stated previously in this guide, the county appraiser shall establish market value by conforming to methods and procedures provided in guides and tools furnished by the Director of Property Valuation (PVD), who has the authority to devise and prescribe guides to promote uniform and consistent statewide valuation provided in K.S.A. 75-5105a, K.S.A. 79-1412a, K.S.A. 79-1456, and PVD Directive #19-048. The Excel Grain Elevator Workbook provided in conjunction with this guide is required for use in valuing all licensed grain elevator properties.

The Excel Grain Elevator Workbook (workbook) provides the appraiser the ability to value each licensed grain facility utilizing both the cost and sales comparison approach. The workbook consists of multiple worksheets identified by different colored tabs. The base cover sheet tab, value reconciliation tab, and data entry-cost worksheet tab are structured to be printed for ease in filing or use as hard copy documents. The workbook template requires user input throughout the worksheet tabs in the light-yellow shaded cells. Other colored cells are locked and will populate and/or calculate automatically from the entered data. The Interpolation tabs contain details about specific costs.

Steps for Data Entry

1. The user begins with the Cover Sheet tab. Enter data; light-yellow cells are required entry on this sheet.
2. Go to the Data Entry-Cost sheet tab next. This sheet regulates the Cost Approach data and calculations.
3. Enter Section 1 data on the Data Entry-Cost sheet by specific color coded and alpha-numeric section.
    a) Total Bushel Capacity field- User may enter each line with individual capacity per single unit OR the user may enter total capacity for all identical units, not capacity for each unit.
    b) #Identical Improvements- field is not a multiplier. If user enters individual capacity, then 1 unit is required. If user enters total capacity for multiple identical units, the number units is required. Field is used to determine rate on Interpolation tab for individual storage unit. Ex. If total capacity for 3 identical units is 224,000 bushels, each unit rate calculated on Interpolation tab would be for 8,000 bushel capacity, and that rate would populate Data Entry- Cost tab rate for line to multiply by total bushels.

4. Each color coded, alpha-numeric section line ties to the section's color coded Interpolation tab. Go to Interpolation tab to enter data, make interpolations, etc… results will populate back on Data Entry-Cost sheet. **Corrugated Steel bins require a diameter and height entered on Interpolation tab to populate rate on Data Entry-Cost sheet.**
5. Go to Section 2 once all Section 1 entry complete with all Interpolation tab entries, rates and RCNs.
6. Section 2 M&S cost and local multipliers determined by Cover Sheet tab entry for region and zip code.
7. Go to Depreciation Analysis tab- Comparable sales search and selection may be conducted on this tab for both depreciation and sales comparison. Selected depreciation rate will populate on Data Entry-Cost worksheet. **Land value is not included for depreciation and Cost approach.**
8. Complete Data Entry-Cost worksheet with RCNLD and RCNLD/bushel. Results will populate Value Reconciliation tab and a Net $/Bu is calculated.
9. Go to Sales Comparison tab- Sales for this approach are populated from the Depreciation Analysis tab's search and selection of sales. The determined Net $/Bu rate will populate the Value Reconciliation tab. **Land value IS included for Net $/Bu rate for Sales Comparison approach.**
10. Go to the Value Reconciliation tab- Reconcile value between the Cost and Sales Comparison approaches. Choose final value rate Net $/Bu for final value calculation.
11. There are additional tabs in workbook for Even and Pack calculations, M&S Multipliers, and M&S Commercial Valuation Service- brown book Sec 17, pages 50-56, for grain elevators.

Addendum

Glossary

Fair Market Value

The amount in terms of money that a well-informed buyer is justified in paying and a well-informed seller is justified in accepting for property in an open and competitive market, assuming that the parties are acting without undue compulsion. (K.S.A. 79-503a).

K.S.A. 79-503a also requires a county appraiser to consider several factors when determining the fair market value of property for property tax purposes. Among the factors required to be considered and applied are the three generally accepted approaches to value: (1) sales; (2) cost; and (3) income.

K.S.A. 79-102

The terms "real property," "real estate," and "land," when used in this act, except as otherwise specifically provided, shall include not only the land itself, but all buildings, fixtures, improvements, mines, minerals, quarries, mineral springs and wells, rights and privileges appertaining thereto.

The term "personal property" shall include every tangible thing which is the subject of ownership, not forming part or parcel of real property.

The words "personal property," when used in this act in their general sense, shall include all taxable property other than real property, as hereinbefore defined.

Annex

Grain elevator annexes are buildings used to hold farm field crops purchased by them for resale. A grain elevator annex may be constructed from concrete, metal or wood. An annex differs from an elevator in that it does not include an elevator leg within the structure. Typically, grain is transferred to and from an annex by a conveyor system attached to an adjoining grain elevator. Grain annexes may include a galley for loading grain into the bins and a tunnel for removing grain from the bins.

Blending

Once the grain is graded, it can be segregated accordingly. Then, when the elevator ships and sells grain, it can blend grains with excess damage and/or moisture content with grain of a superior grade. The goal is to achieve an overall blend that just meets the higher-grade standard and, thus, receives the higher price. For example, say an elevator pays a lower price for grain with excess damage. This grain is then “blended-off” with grain that has very little damage. The final

blend just meets the specified allowable damage level, and all of the grain is sold at the higher price.

Bulk Loader/Scale
Structure/equipment which contains scale, and storage garners. It is computer controlled for regulation of how much grain is to be loaded.

Bushel
A unit of measure containing 2,150.42 cubic inches, 56 pounds or corn, or 60 pounds of wheat or soybeans.

Car Size
Hopper cars of 268,000 pounds to 286,000 pounds.

Commercial Grain Handling Facility
This facility must have a warehouse license/certificate in order to receive, store and merchandise grain. A USDA Federal license or a Department of Agriculture license from the state does represent a commercial grain handling license.

Drying Points
A percentage point refers to the degree of moisture removed from a commodity.

Ethanol Plant
This is a facility that processes corn and other grains into Ethanol. Ethanol is a renewable resource-based petroleum fuel additive or substitute.

Gallery
A covered walkway above the elevator bins which generally house conveying equipment.

Grading
When grain is delivered to an elevator, it is normally graded based on a variety of factors such as moisture content, damaged kernels, and the presence of foreign materials. Small grains, particularly wheat and barley, may also be graded for protein content. The price paid for the grain will vary depending on the results of the grading. A lower price is normally paid for grain with damage and/or moisture content above specified levels. ("Appraising Industrial Properties" p. 281-309)

Grain Elevators
Grain elevators are buildings used by grain elevator companies to hold farm field crops purchased by them for resale. A grain elevator may be constructed from concrete, metal or wood and includes the office, unloading areas and annexes. These buildings, grain handling equipment and M&E systems installed or attached to the buildings are regarded to be real property.

Handling Speed
This refers to the number of bushels per hour handled by elevator legs, transfer belts and drag conveyors.

Headhouse
A structure that normally encloses elevator legs, load-out scales, and any cleaning and grading that may be present. The head house may or may not have storage bins. The headhouse is usually higher than the top of the adjoining storage silos to allow for gravity flow from the distributors into the load-in conveyors. ("Appraising Industrial Properties" p. 281-309)

Interstice

The space formed between physically connected circular concrete silos. The interstices themselves become storage bins. ("Appraising Industrial Properties" p. 281-309)

Jump Form Construction
A type of concrete construction completed in stages rather than a continuous pouring process. Also known as jack form construction. Obvious five-foot breaks and a rougher exterior than slip form.

Leg
Shorthand for elevator leg, the vertical conveying mechanism that elevates grain. ("Appraising Industrial Properties" p. 281-309)

Licensed Capacity
Capacity of commercial grain storage may be licensed by either the Kansas Department of Agriculture or the US Department of Agriculture. Additional information about Kansas state-licensed grain warehouses by Kansas Department of Agriculture may be obtained at this website: https://agriculture.ks.gov/divisions programs/grain-warehouse The Kansas Department of Agriculture may also be contacted through their website: www.agriculture.ks.gov. The list of facilities licensed by US Department of Agriculture may be obtained at this website:

https://internet-dotnet.fsa.usda.gov/approved_whses/ugrsa/report_UGRSA.asp?StateAbbr=KS&StateName=KANSAS&StateCode=20

Load-in
The process of receiving grain into the elevator. ("Appraising Industrial Properties" p. 281-309)

Load-out
The process of discharging grain from the elevator into a truck, rail car, or other vessel. ("Appraising Industrial Properties'' p. 281-309)

Loading Capacity
Maximum handling speed at which an elevator can out-load grain. It is expressed as Bu/Hr (bushels per hour)

Mean
A measure of central tendency. The sum of the values divides a set d by the number of values.

Median
The value of the middle item in an uneven number of items arranged or arrayed according to size, or the arithmetic average of the two central items in an even number of items similarly arranged. A positional average that is not affected by the size of extreme values.

Origination
The point or area from which grain originates. ("Appraising Industrial Properties" p. 281-309)

Receiving Capacity
Maximum handling speed at which an elevator can in-load grain. It is expressed as Bu/Hr (bushels per hour).

Receiving Pit
Normally is an in-ground hopper-like structure where grain is initially received. Incoming grain is unloaded from trucks or rail cars into the receiving pit, where it is then conveyed to a leg and transferred into the elevator. Receiving pits may be designated for truck receiving, rail receiving, or both. It may also be referred to as a receiving dump, pit, dump/pit, truck dump, or rail pit. Most receiving pits are rated in bu. (bushels of capacity). Some new elevators are utilizing high speed conveyor-based dump stations which do not have a designated pit capacity but are controlled by the capacity of the receiving belt.

Shuttle Train Terminal
Predominant mode of transportation is by rail. Receive grain typically by truck so they have high-speed receiving capabilities. Shuttle trains consist of 100 to 110 cars. Shuttle Train Terminals may be shipping or receiving and sometimes both types of facilities. These facilities must have the railroad siding capacity to stage 100 to 110 cars and necessary locomotives (power). Handling (load-out) speeds may range from 25,000 to 50,000 + bushels per hour. Most Class I railroad companies require that Shuttle Trains be loaded or unloaded in a structured time frame (14 to 24 hours).

Slip Form Construction
A type of concrete construction that is a continuous pouring process in which the forms are supported by the concrete poured previously.

Stem Wall
Foundation under a grain bin which is elevated 5 to 8 feet which allows for a tunnel for horizontal handling of grain.

Storage Capacity
The number of bushels an elevator is physically capable of holding. In addition, most commercial grain elevators will have a storage capacity associated with a state or federal grain license, referred to as licensed storage capacity or licensed capacity. The licensed capacity and physical capacity of a given elevator can vary but are often similar. ("Appraising Industrial Properties" p. 281-309)

Thru-put
((bushels received + bushels shipped) ÷ 2) Often referenced on an annual basis, i.e., annual thru put. It is also referred to as put-thru. ("Appraising Industrial Properties'' p. 281-309)

Truck Elevator/Terminal
A Grain Elevator facility which has no out-loading of rail car trains. May have rail siding but is not being used. Usually serves as a collection point to feed shuttle train elevators/terminals. Oftentimes these elevators are the older smaller elevators and sometimes larger elevators that have lost their rail service.

Turning Ratio
(Annual thru put ÷ storage capacity) A measure for analyzing the volume of grain handled by an elevator relative to its storage capacity. It is often referred to as turns-of-the-house or turns. ("Appraising Industrial Properties'' p. 281-309)

Unit Train Terminal
Predominant mode of transportation is by rail. Receive grain typically by truck so they have high speed receiving capabilities. Grain elevator facility which has the capability of out-loading and/or receiving 50-56 rail car trains. Handling (load-out and/or receiving) speeds may range from 15,000 to 25,000 bushels per hour.

Wood Cribbed
A type of construction where dimensional lumber typically 2 x 10's, 2 x 6's, or 2 x 4's, are horizontally stacked. Usually, metal clad to protect the wood from the elements.

CALCULATOR METHOD

GRAIN ELEVATORS

Grain elevators are for the processing and storage of grain. Most facilities may consist of a combination of structures as listed below or from other categories in this section. Any separate offices, warehouses, or other non-farm structures should be priced from other sections of this manual.

Costs are based on total licensed bushel capacity of the elevator and/or annex facility except for steel tanks and bins which are priced on a cost-per-tank basis. Special foundation work such as pilings or extremely large concrete pads are not included and must be added separately.

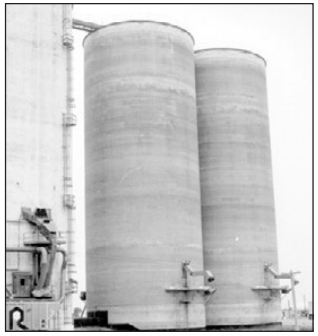
ELEVATOR costs will include the complete headhouse (working house), tunnel, conveyor gallery and storage tanks or bins commensurate with the type and size of facilities listed.

ANNEX costs are for vertical storage facilities. They are to be used for elevators when there is an exposed leg system and no headhouse or for additional detached storage which utilizes the headhouse of the original elevator as well as its basic machinery. If the annex has a headhouse, it should be priced from the elevator cost tables, using the total capacity of both the elevator and the annex.

1. Metal-clad elevator with bolted steel annex tanks.

2. Metal-clad elevator with metal-clad annex.

3. Concrete elevator and annex.



4. Concrete annex.

TOTAL BUSHEL CAPACITY	COST PER BUSHEL			
	WOOD CRIB/METAL CLAD		CONCRETE (Slip Form Construction)	
	ELEVATOR	ANNEX	ELEVATOR	ANNEX
8,000	26.50	-----	-----	-----
10,000	24.35	-----	-----	16.15
15,000	20.70	-----	-----	14.60
20,000	18.55	11.25	20.95	13.60
25,000	16.90	10.20	19.85	12.85
30,000	15.75	9.46	19.00	12.30
40,000	14.10	8.40	17.70	11.45
50,000	12.90	7.62	16.70	10.80
75,000	11.00	6.38	15.10	9.77
100,000	9.85	5.63	14.05	9.08
150,000	8.43	4.74	12.70	8.23
200,000	7.49	4.17	11.85	7.65
250,000	6.89	3.80	11.20	7.23
300,000	6.40	3.49	10.70	6.92
400,000	5.72	3.10	9.98	6.44
500,000	5.18	2.83	9.41	6.09
750,000	-----	-----	8.49	5.52
1,000,000	-----	-----	7.94	5.11
2,000,000	-----	-----	6.67	4.30
over 2,000,000	-----	-----	6.02	3.90

NOTES: For attached covered elevator driveway, add 57.00 to 126.00 per square foot. For detached annex silos without tunnel and conveyor gallery, deduct 610.00 to 665.00 per running foot of silo.

Deduct 0.75 to 0.97 per bushel for lack of intersticing.

Deduct 0.59 to 0.87 per bushel for concrete jump form construction.

For single concrete silos, use annex costs and add 5%. For concrete staves, deduct 30%. For commercial installations, like a terminal grain elevator, which are used to dry, clean, blend, and store grain, add an additional 10%. For industrial bulk applications, like cement, coal, fiber glass, fly ash, ore and sand, add an additional 5%.

SUMMARY OF ILLUSTRATIONS

1. The cost of the metal-clad elevator should be priced from the Wood Crib/Metal-Clad Elevator table and based on a per bushel capacity of the elevator storage only. The annex should be priced from the Bolted Steel Tank costs on the following page based on capacity per tank and adjusting for any conveyor tunnel and gallery.

2. Both the elevator and the annex are metal clad. Because the annex has a headhouse, they should both be priced from the Metal-Clad Elevator table entering the table with their combined total bushel capacity.

3. This combination of concrete elevator and concrete annex should be priced from both the Concrete Elevator and Concrete Annex tables since the annex does not have a headhouse. The tables should be entered at each of their respective total bushel capacities. The additional outside leg on the elevator structure, the covered driveway and small office are not included in the table costs.

4. This concrete annex should be priced from the Concrete Annex table.

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GRAIN ELEVATORS

STEEL TANKS

BUSHEL CAPACITY (Per tank)	HEAVY BOLTED STEEL (Cost per bushel)
15,000	4.20
20,000	4.02
25,000	3.87
30,000	3.74
35,000	3.67
40,000	3.59
50,000	3.46
60,000	3.35
80,000	3.19
100,000	3.08
125,000	2.97
150,000	2.88
175,000	2.83
200,000	2.74

NOTES: For used oil tanks, refer to Section 61.

For heavy corrugated utility bins, see Page 54.

Add 383.00 – 406.00 per running foot for the tunnel and 224.00 – 261.00 for the conveyor gallery.

Add 0.16 – 0.27 per bushel for aeration systems.

HORIZONTAL STORAGE

The following costs are for horizontal or flat storage without loading and/or unloading systems. Design loads vary and costs may vary by plus or minus 20%. For attached loading and/or unloading systems within the structure, add 5% of per bushel capacity.

For greater detail, see storage buildings on Pages 24 and 27.

TOTAL BUSHEL CAPACITY	COST PER BUSHEL		
	WOOD	STEEL	CONCRETE
50,000	2.66	2.92	3.57
75,000	2.50	2.79	3.36
100,000	2.35	2.66	3.23
150,000	2.24	2.53	3.05
200,000	2.11	2.40	2.92
250,000	2.06	2.35	2.84
300,000	1.98	2.27	2.79
400,000	1.89	2.22	2.66
500,000	1.83	2.12	2.61
750,000	1.72	2.01	2.47
1,000,000	1.63	1.95	2.34
2,000,000 and over	1.49	1.76	2.12

MACHINERY AND EQUIPMENT

The cost for machinery and equipment is very flexible, depending on the exact job the elevator performs. The lower end of the range represents storage only, and the higher end of the range includes processing equipment. There is an overlap in the cost of the types of equipment.

When pricing new equipment having a greater flow capacity, a higher cost rank should be used than when pricing older elevators utilizing original equipment. The higher rank costs include newer computerized terminal facilities.

All costs should be applied to total licensed capacity of both the elevator and the annexes it serves.

TOTAL BUSHEL CAPACITY	COST PER BUSHEL			
	LOW	AVERAGE	GOOD	EXCELLENT
8,000	3.23	3.91	4.75	5.75
10,000	3.10	3.78	4.56	5.54
15,000	2.87	3.49	4.23	5.17
20,000	2.74	3.29	4.03	4.92
25,000	2.63	3.18	3.90	4.75
30,000	2.54	3.09	3.78	4.61
40,000	2.41	2.90	3.58	4.39
50,000	2.31	2.83	3.45	4.22
75,000	2.12	2.63	3.21	3.97
100,000	2.05	2.50	3.08	3.78
150,000	1.88	2.32	2.86	3.51
200,000	1.78	2.22	2.73	3.38
250,000	1.70	2.11	2.63	3.25
300,000	1.65	2.05	2.54	3.13
400,000	1.54	1.95	2.41	3.02
500,000	1.50	1.86	2.32	2.89
750,000	1.36	1.75	2.14	2.73
1,000,000	1.33	1.63	2.06	2.61
2,000,000	1.16	1.46	1.83	2.31
over 2,000,000	1.11	1.36	1.76	2.24

NOTE: For railroad spurs, see Section 66.

LOCAL MULTIPLIERS

While published Local Multipliers in Section 99 may effectively be applied in many locations in which elevators are built, considerations of regional economic influences should be made for elevators in remote rural areas.

DEPRECIATION

As with determining Local Multiplier adjustments for grain elevators, depreciation, too, is sensitive to local economic conditions. While functional obsolescence and physical deterioration may be estimated by comparing the elevator structure to other like structures of size and year built, fluctuations in the grain market, accessibility to railroad services and other influences of economic obsolescence can have a significant impact on depreciation.

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CALCULATOR METHOD

BUCKET ELEVATORS

(Costs in bushels per hour)

The costs apply to bucket elevators with the following characteristics: Painted construction; alloyed head shaft; double drum head and boot pully; Holz lagging; 3-ply 330 rubber belt; head explosion vents; jack bolts under the head bearings; SCM/SC series bearings; throat wiper; access doors at the head, boot, inspections section and lagging access.

CAPACITY (Bu/Hr)	DISCHARGE HEIGHT (feet)													
	20	30	40	50	60	70	80	90	100	110	120	130	140	150
500	55.00	62.00	69.00	75.00	81.00	89.00	-----	-----	-----	-----	-----	-----	-----	-----
750	39.25	44.00	49.00	53.50	59.00	64.00	-----	-----	-----	-----	-----	-----	-----	-----
1,000	31.00	34.75	38.50	42.50	45.75	49.75	53.50	58.00	61.50	65.00	69.00	72.00	76.00	79.50
1,500	22.25	24.90	27.50	30.25	33.00	35.50	38.25	40.50	43.75	45.75	48.75	51.50	53.50	57.00
2,000	17.60	19.65	21.75	23.75	25.75	27.75	30.00	32.00	31.75	36.00	38.25	40.00	42.50	44.50
3,000	12.70	14.10	15.50	16.90	18.35	19.85	21.35	22.75	24.20	25.50	27.00	28.50	30.00	31.25
3,500	11.15	12.40	13.65	14.95	16.15	17.45	18.70	20.00	21.30	22.45	23.75	25.00	26.25	27.50
4,000	10.00	11.15	12.25	13.35	14.50	15.60	16.70	17.85	19.00	20.15	21.15	22.25	23.40	24.55
5,000	8.35	9.26	10.20	11.10	12.05	12.95	13.85	14.80	15.65	16.60	17.55	18.40	19.35	20.35
6,000	7.19	7.98	8.75	9.53	10.30	11.15	11.95	12.70	13.50	14.25	15.00	15.75	16.60	17.45
7,000	6.35	7.06	7.72	8.43	9.08	9.77	10.45	11.15	11.85	12.55	13.25	13.90	14.60	15.25
8,000	5.69	6.31	6.92	7.52	8.16	8.74	9.34	9.98	10.55	11.20	11.80	12.40	13.05	13.65
10,000	-----	-----	-----	6.27	6.74	7.25	7.75	8.27	8.75	9.26	9.75	10.25	10.75	11.25

NOTES: Add for discharge transition, each: 6" round, 545.00 ; 8" round, 590.00; 10" round, 665.00; 12" round, 730.00; 14" round, 780.00; 16" round, 850.00. For spouting, add per linear foot: 6", 36.75 – 82.50; 8", 43.25 – 96.50; 10", 75.00 – 137.00 ; 12", 118.00 – 183.00; 14", 131.00 – 206.00; 16", 137.00 – 224.00
For receiving pit, add 3.10 – 5.43 per bushel.

HORIZONTAL DRAG (U-TROUGH) CONVEYORS

(Standard bottom discharge)

	DRIVE AND TAIL SECTION		U-TROUGH COMPLETE W/ CHAIN AND PADDLES	BYPASS INLET	
DIA.	LENGTH	COST	COST/LINEAR FOOT	LENGTH	COST
6"	28"	4700.00	352.00	13"	1130.00
9"	32"	5550.00	383.00	18"	1290.00
12"	40"	8000.00	489.00	21"	1830.00
14"	46"	8500.00	550.00	24"	1960.00
16"	52"	12500.00	770.00	27"	3250.00
18"	58"	14400.00	930.00	30"	3500.00
20"	64"	16300.00	1030.00	------	-----
24"	75"	19800.00	1160.00	37"	4650.00

COST EXPLANATION

When calculating the cost of a drag conveyor, first determine the overall length. Then take the overall length minus drive and tail length (of the selected drag) and bypass inlet if needed. This number represents the length of the trough needed. Next, multiply that number by the cost per foot for the trough. (Costs do not include the drive.) Cost are for example purposes only.

EXAMPLE: 9" drag conveyor, 60' length
Drive and tail, 32" long
Bypass inlet, 18" long
60' (720") – 32" (head and tail section) – 18" (bypass inlet)= 670" = 55' 10"

Drive and tail section	$ 3,600
Bypass inlet	835
U-trough (55.83' x $265)	14,795
Total Cost	**$19,230**

DRYERS

(dry/cool, 25% to 15%)

CONTINUOUS-FLOW BUSHELS PER HOUR GRAIN (RICE)				BATCH TYPE BUSHELS PER HOUR GRAIN (RICE)	
CAPACITY	COST	CAPACITY	COST	CAPACITY	COST
300 (575)	98250.00	1,875 (3,550)	401000.00	150 (285)	56000.00
400 (750)	123000.00	2,000 (3,800)	422000.00	200 (380)	65250.00
500 (950)	146000.00	2,250 (4,300)	461000.00	270 (515)	77500.00
600 (1,150)	169000.00	2,500 (4,750)	500000.00	390 (740)	100000.00
700 (1,350)	188000.00	2,750 (5,250)	537000.00		
800 (1,500)	208000.00	3,250 (6,200)	612000.00		
900 (1,700)	230000.00	3,500 (6,650)	645000.00		
1,000 (1,900)	250000.00	4,000 (7,600)	718000.00		
1,200 (2,300)	284000.00	4,250 (8,100)	751000.00		
1,500 (2,800)	338000.00	4,500 (8,550)	787000.00		

NOTE: For heat recovery systems, add 10%.

LOADING – UNLOADING SYSTEMS

AUGER-TYPE CONVEYORS		BELT-TYPE CONVEYORS	
DIAM.	COST/LIN. FT.	WIDTH	COST/LIN. FT.
6"	98.00	12"	169.00
8"	134.00	18"	261.00
10"	176.00	24"	306.00
12"	238.00	30"	352.00
14"	277.00	36"	375.00
16"	345.00	48"	482.00

MAN LIFTS

Uncoded, electrically operated personnel lifts..... 11200.00 – 15000.00
add cost per stop 6400.00

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CALCULATOR METHOD

FARM STORAGE

CONCRETE STAVE AND CONCRETE POURED SILOS

(Costs include foundation, chute, ladder and dome roof)

DIAMETER (feet)	SILO* UNLOADER	HEIGHT (feet) 30 STAVE	30 POURED	40 STAVE	40 POURED	50 STAVE	50 POURED	60 STAVE	60 POURED	70 STAVE	70 POURED	80 STAVE	80 POURED	90 STAVE	90 POURED
10	12400.00	15700.00	-----	20800.00	-----	26100.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
12	13100.00	16500.00	24000.00	22400.00	31600.00	27900.00	39700.00	33200.00	47500.00	-----	-----	-----	-----	-----	-----
14	13800.00	19200.00	27700.00	25700.00	36500.00	31800.00	45600.00	38100.00	54500.00	44300.00	63750.00	-----	-----	-----	-----
16	14600.00	19900.00	28400.00	26400.00	38000.00	33100.00	47400.00	39400.00	56750.00	46100.00	66250.00	52500.00	75500.00	-----	-----
18	15300.00	21400.00	30800.00	28400.00	41000.00	35700.00	51000.00	42700.00	61250.00	49800.00	71500.00	56750.00	81500.00	63750.00	91250.00
20	16300.00	24000.00	34500.00	31800.00	46100.00	40000.00	57250.00	47900.00	68750.00	55750.00	80250.00	63750.00	91250.00	71500.00	103000.00
22	17000.00	28000.00	40100.00	37100.00	53250.00	46200.00	66500.00	55500.00	79500.00	64500.00	92750.00	73750.00	106000.00	83000.00	119000.00
24	17900.00	-----	-----	-----	-----	53250.00	76500.00	63750.00	91750.00	74250.00	107000.00	84500.00	122000.00	95250.00	137000.00
30	18900.00	-----	-----	-----	-----	-----	-----	86750.00	111000.00	101000.00	130000.00	115000.00	149000.00	129000.00	165000.00

		100 STAVE	100 POURED	110 STAVE	110 POURED	120 STAVE	120 POURED	130 STAVE	130 POURED
30'	18900.00	144000.00	185000.00	-----	204000.00	-----	224000.00	-----	241000.00

* Silo unloader costs include motor, auger and tripod, but exclude any electrical work such as hookup. Add for gunite or epoxy interior finish and for access piping below.

For flat roof, deduct 7.93 per square foot of area. For no roof, deduct 14.95

Concrete Stave

Concrete Poured

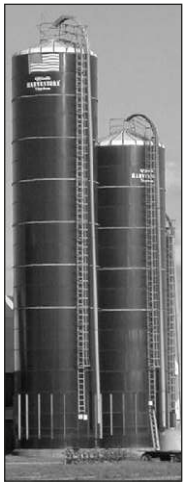
TYPICAL SILO ACCESS PIPING

30' high..... 915.00
40' high..... 1190.00
50' high..... 1440.00
60' high..... 1720.00
70' high..... 1990.00
80' high..... 2240.00
90' high..... 2470.00
100' high..... 2750.00

GUNITE AND EPOXY INTERIOR FINISH

(per linear foot)

16' diameter.. 176.00 – 199.00
20' diameter.. 199.00 – 214.00
24' diameter.. 224.00 – 254.00
30' diameter.. 277.00 – 290.00



Harvestore® Silos

PORCELAIN SILO ADJUSTMENTS

14' automatic unloader	46600.00	–	56750.00
17' automatic unloader	48400.00	–	58250.00
20' automatic unloader	52500.00	–	63250.00
25' automatic unloader	58250.00	–	70000.00
31' automatic unloader	63250.00	–	73000.00
14', 17', 20' sweep–arm auger (new tube and screw)	7050.00		
14', 17', 20' sweep–arm auger (used)	5250.00		

NOTE: For non-glass lined steel silos, deduct 35%.

PORCELAIN SILOS (Harvestore®)

Cost complete including foundation, but not unloader

DIA.	HEIGHT	COST NEW	COST PRE-OWNED/REBUILT		
14'	23'	50750.00	33500.00	–	36700.00
	32'	56500.00	36700.00	–	40100.00
	41'	66750.00	43200.00	–	51000.00
17'	31'	72000.00	44800.00	–	52750.00
	40'	78250.00	51000.00	–	57500.00
	49'	88000.00	52750.00	–	59000.00
20'	28'	76500.00	41400.00	–	52750.00
	32'	83000.00	43200.00	–	54250.00
	33'	88000.00	44800.00	–	57500.00
	38'	92750.00	52750.00	–	59000.00
	41'	96000.00	56000.00	–	62250.00
	43'	97500.00	56000.00	–	64000.00
	50'	107000.00	57500.00	–	68750.00
	59'	118000.00	60750.00	–	73750.00
	68'	134000.00	64000.00	–	76500.00
	77'	150000.00	70500.00	–	78250.00
	87'	169000.00	73750.00	–	81500.00
25'	34'	149000.00	64000.00	–	78250.00
	42'	159000.00	70500.00	–	83000.00
	43'	163000.00	73750.00	–	89500.00
	51'	183000.00	78250.00	–	92750.00
	60'	186000.00	81500.00	–	96000.00
	69'	205000.00	94500.00	–	107000.00
	79'	230000.00	101000.00	–	115000.00
	88'	251000.00	109000.00	–	120000.00
31'	70'	290000.00	153000.00	–	170000.00
	80'	318000.00	157000.00	–	179000.00
	89'	354000.00	170000.00	–	188000.00

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CALCULATOR METHOD

FARM STORAGE

STEEL GRAIN BINS

Costs are averages for utility-type storage bins, usually found on farms and co-ops. For heavy industrial types, see Section 61. The standard bin includes a door and manhole erected on buyers' slab. Cost of drying bin includes floor, auger tube, steel columns and beam supports for plenum assembly, fans and heat. Height is to top of shell. The maximum capacity in bushels includes the volume of the cone.

BIN DIAMETER (feet)	EAVE HEIGHT (feet)	MAXIMUM CAPACITY (bushels)	COST W/OUT DRYING BIN	COST WITH DRYING BIN	SLAB FLOOR
15'	7	1,257	6950.00	10100.00	940.00
	11	1,792	9100.00	13400.00	1030.00
	15	2,329	10900.00	15900.00	1180.00
	18	2,864	12400.00	17900.00	1360.00
18'	11	2,647	10100.00	14800.00	1260.00
	15	3,422	12600.00	18200.00	1310.00
	18	4,189	14300.00	20700.00	1360.00
	22	4,973	16700.00	-----	1440.00
	26	5,748	18800.00	-----	1530.00
	33	7,299	23500.00	-----	1600.00
	40	8.849	27900.00	-----	1720.00
	48	10,400	31900.00	-----	1830.00
21'	11	3,693	11200.00	16200.00	1730.00
	15	4,753	14300.00	20700.00	1790.00
	18	5,813	17300.00	25200.00	1860.00
	22	6,874	20300.00	-----	1990.00
	26	7,934	22700.00	-----	2090.00
	33	10,055	28300.00	-----	2270.00
	40	12,175	31900.00	-----	2400.00
	48	14,296	35200.00	-----	2575.00
24'	11	4,949	13700.00	20000.00	2190.00
	15	6,344	16700.00	24600.00	2300.00
	18	7,739	20900.00	30300.00	2400.00
	22	9,134	24100.00	-----	2550.00
	26	10,528	27400.00	-----	2675.00
	33	13,318	32600.00	-----	2825.00
	40	16,107	36500.00	-----	3025.00
	48	18,897	39300.00	-----	3225.00
27'	11	6,409	16200.00	23800.00	2825.00
	15	8,182	20100.00	29100.00	2950.00
	18	9,955	24000.00	34400.00	3050.00
	22	11,728	27400.00	-----	3275.00
	26	13,500	31000.00	-----	3475.00
	33	17,046	38700.00	-----	3600.00
	40	20,591	42000.00	-----	3850.00
	48	24,137	44900.00	-----	4125.00
30'	15	10,278	24400.00	35200.00	3250.00
	18	12,473	28800.00	41700.00	3425.00
	22	14,668	33100.00	-----	3600.00
	26	16,863	36800.00	-----	3925.00
	33	21,252	44000.00	-----	4250.00
	40	25,624	48600.00	-----	4625.00
	48	30,031	52250.00	-----	4950.00
36'	15	15,297	34300.00	49800.00	4800.00
	18	18,473	38900.00	56750.00	5100.00
	22	21,648	45300.00	-----	5300.00
	26	24,823	50750.00	-----	5650.00
	33	31,174	57250.00	-----	5900.00
	40	37,524	63750.00	-----	6300.00
	48	43,875	72500.00	-----	6750.00
	59	53,400	86000.00	-----	7200.00
42'	15	21,416	43700.00	63750.00	6700.00
	18	25,738	51250.00	74500.00	7050.00
	22	30,060	57750.00	-----	7300.00
	26	34,382	62500.00	-----	7800.00
	33	43,026	74000.00	-----	8150.00
	40	51,670	86750.00	-----	8750.00
	48	60,314	101000.00	-----	9300.00
	59	73,279	120000.00	-----	10000.00
48'	15	26,749	48900.00	75250.00	8750.00
	18	34,394	62000.00	90500.00	9150.00
	22	40,039	71500.00	-----	9450.00
	26	45,684	80500.00	-----	10200.00
	33	56,974	98750.00	-----	10700.00
	40	68,264	117000.00	-----	11300.00
	48	79,554	136000.00	-----	12300.00
	59	96,488	161000.00	-----	13100.00
60'	15	56,170	97500.00	-----	13500.00
	26	73,810	126000.00	-----	14200.00
	40	109,092	183000.00	-----	14900.00
	48	126,732	212000.00	-----	16200.00
	59	152,870	253000.00	-----	17600.00
	64	165,563	270000.00	-----	20200.00

BIN DIAMETER (feet)	EAVE HEIGHT (feet)	MAXIMUM CAPACITY (bushels)	COST W/OUT DRYING BIN	COST WITH DRYING BIN	SLAB FLOOR
75'	32	147,000	250000.00	-----	20900.00
	40	176,000	295000.00	-----	23200.00
	48	206,000	340000.00	-----	27700.00
	59	246,000	401000.00	-----	29900.00
	64	266,000	426000.00	-----	31500.00
90'	32	221,000	365000.00	-----	30300.00
	40	263,000	429000.00	-----	33400.00
	48	305,000	492000.00	-----	39400.00
	59	358,223	575000.00	-----	45600.00
105'	32	306,180	507000.00	-----	41300.00
	40	363,558	596000.00	-----	45600.00
	48	420,936	684000.00	-----	53750.00
	59	500,000	808000.00	-----	62000.00

DIAMETER (feet)	TOTAL HEIGHT	CAPACITY (bushels)	CAPACITY (tons)	COST	SLAB BASE
15'	33	4,030	100.75	21300.00	1160.00
	41	5,220	130.50	25200.00	1280.00
	49	6,400	160.00	29400.00	1360.00
	57	7,580	189.50	32900.00	1440.00
18'	34	5,980	149.50	30100.00	1520.00
	42	7,810	195.25	36700.00	1600.00
	50	9,530	238.25	41100.00	1750.00
	58	11,250	281.25	48000.00	1890.00
	63	12,396	310.00	52250.00	2010.00
21'	35	8,340	208.50	39300.00	2080.00
	43	10,640	266.00	49000.00	2320.00
	51	12,950	323.25	58250.00	2470.00
	59	15,260	381.50	65750.00	2550.00
	65	16,800	420.00	69250.00	2675.00
24'	36	11,170	279.25	48600.00	2750.00
	44	14,170	354.25	63500.00	2900.00
	52	17,170	429.25	79250.00	3250.00
	60	20,170	504.25	88250.00	3600.00
	66	22,170	554.25	92000.00	3850.00
30'	39	18,347	458.75	91000.00	4325.00
	47	23,048	576.25	106000.00	4650.00
	55	27,749	693.75	119000.00	4875.00
	63	32,450	811.25	134000.00	4975.00
	69	35,584	889.50	140000.00	5100.00

ADJUSTMENTS

Auger and drive..... 580.00
plus 56.50 to 68.50 per foot of bin diameter
Add for spreaders..... 1130.00 to 1700.00 each
Aeration systems..... Add 0.16 to 0.27 per bushel

Stirrators..... 264.00 to 402.00 per foot of bin diameter
Ladders..... 97.50 plus 13.95 per linear foot
Add for safety cages ..... 27.00 to 33.75 per foot installed

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FARM STORAGE

HOPPER BOTTOM FEED BINS

Costs are averages of typical feed hoppers with roof, manhole and ladder, including necessary steel structural supports and concrete footings. Height is overall, from ground level to top of tank. Capacity in tons is figured at 50 pounds per bushel.

STEEL HOPPER BOTTOM FEED BINS

DIAMETER	OVERALL HEIGHT	CAPACITY (cubic feet)	CAPACITY (bushels)	CAPACITY (tons)	COST
6’	10’	149	120	3.0	2600.00
	16’	299	240	6.0	3675.00
	21’	448	360	9.0	4175.00
	25’	597	480	12.0	4700.00
	28’	747	600	15.0	5200.00
7’	11’	195	157	4.0	3550.00
	14’	297	239	6.0	3825.00
	16’	399	321	8.0	4125.00
	19’	501	403	10.0	4425.00
9’	14’	373	300	7.5	5350.00
	17’	570	458	11.5	6400.00
	20’	739	594	14.8	6950.00
	22’	908	730	18.3	7400.00
	25’	1,078	866	21.8	8050.00
	28’	1,244	1,000	25.0	8500.00
	31’	1,406	1,130	28.3	8800.00
12’	20’	1,083	870	21.8	12000.00
	25’	1,674	1,345	33.8	13600.00
	31’	2,271	1,825	45.8	15500.00
	36’	2,862	2,300	57.5	16700.00
	42’	3,459	2,780	69.5	18200.00

NOTE: For larger hopper bins, see Page 54.

SCALES

TYPE	PLATFORM SCALES CAP. (lb.)	PLATFORM SCALES COST	TRUCK SCALES CAP. (tons)	TRUCK SCALES COST	R.R. TRACK SCALES CAP. (tons)	R.R. TRACK SCALES COST	HOPPER SCALES CAP. (tons)	HOPPER SCALES COST
Portable	1,000	2350.00	20	49800.00	150	140000.00	25	44900.00
(beam type)	2,000	3825.00	30	58000.00	175	158000.00	36	56500.00
Fixed	4,000	13900.00	40	66500.00	200	176000.00	75	98000.00
	6,000	18500.00	50	75250.00	250	219000.00	100	107000.00
	10,000	26700.00	60	85000.00	300	277000.00		
	20,000	43200.00	70	98000.00	350	341000.00		
			80	99500.00				

NOTES: Costs of truck and track scales include reinforced concrete pit and platform, with steel scale mechanism. For wood platform, deduct 6%. For card printer, add 2220.00 to 3400.00. For steel plate over platform, add 5%. For remote-control electronic reader, add 10300.00 to 13900.00

FIBERGLASS HOPPER BOTTOM FEED BINS

DIAMETER	OVERALL HEIGHT	CAPACITY (cubic feet)	CAPACITY (bushels)	CAPACITY (tons)	COST
6’	11’	130	104	2.5	3800.00
7’	13’	228	183	4.5	4950.00
8’	16’	400	321	8.0	6400.00
	21’	525	422	10.5	8250.00
10’	19’	550	442	11.0	15600.00
	21’	700	563	14.0	17600.00
	23’	850	683	17.0	19600.00
	25’	1,000	804	20.0	21400.00
	27’	1,150	924	23.0	23700.00
	29’	1,300	1,045	26.3	26300.00
	31’	1,450	1,165	29.3	29200.00
	33’	1,600	1,286	32.3	32300.00
	35’	1,750	1,406	35.3	35400.00
	37’	1,900	1,527	38.3	38300.00
	39’	2,050	1,647	41.3	41000.00

STEEL TANKS

CAPACITY (bushels)	COST
500,000	1034000.00
600,000	1238000.00
700,000	1440000.00
800,000	1644000.00
900,000	1846000.00
1,000,000	2047000.00
Costs do not include loading system or other features.	

CONVERSION SYSTEMS

1 cubic foot = .8036 bushels

1 bushel = 1.2444 cubic feet

1 gallon = .1337 cubic feet = .1074 bushels

To calculate a grain bin’s bushel capacity according to eave height:

$$\left(\frac{\textit{Diameter of Bin}}{2}\right)^2 \text{ x } 3.1416 \text{ x } .8036 \text{ x } \textit{Height to Eave}$$

To calculate the capacity of a grain bin’s cone in bushels:

$$\frac{1}{3}\left(\frac{\textit{Diameter of Bin}}{2}\right)^2 \text{ x } 3.1416 \text{ x } .8036 \text{ x } \textit{Height of Cone}$$

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CALCULATOR METHOD

FARM STORAGE

HORIZONTAL SILOS

(Cost per linear foot of length)

BUNKER SILOS (Above ground)	WIDTH (feet) 20	30	40	50	60	80	100
Tilt–up concrete panels and precast wall supports, sealed	498.00	560.00	620.00	660.00	685.00	760.00	795.00
Poles and braces, tilt–up concrete panels, concrete floor	360.00	406.00	443.00	482.00	515.00	560.00	610.00
Cantilevered poles, plywood or T&G walls, concrete floor	306.00	360.00	398.00	436.00	475.00	530.00	575.00

TRENCH SILOS (Below ground)							
Concrete wall panels and floor, sealed	482.00	575.00	630.00	745.00	800.00	915.00	1030.00
Plywood or T&G walls, concrete floor	352.00	443.00	530.00	605.00	665.00	795.00	910.00
Dirt trench, plastic lined, no flooring	94.50	136.00	176.00	224.00	254.00	336.00	413.00

HORIZONTAL SILO ADJUSTMENTS

Add or deduct 8% for each foot of deviation from 12' base height. For concrete tilt-up panels on bunker silos 16' and over, add 10% for each foot of deviation from 12' base height. For asphalt floor, deduct 1.23 per square foot. For roof cover, add 3.77 to 5.76 per square foot. For end walls, add per linear foot: 8' high, 111.00; 12' high, 160.00; 16' high, 214.00.

CORN CRIB BINS

(Each)

CYLINDRICAL WIRE MESH (Including metal cone roof)

DIAMETER (feet)	HEIGHT TO EAVE (feet)	CAPACITY (bushels)	COST RANGE
8	8	134.1	600.00 – 880.00
	12	201.1	835.00 – 1260.00
	16	268.1	1070.00 – 1620.00
10	12	314.2	1230.00 – 1850.00
	16	418.9	1580.00 – 2440.00
	20	523.6	1940.00 – 3000.00
12	12	452.4	1700.00 – 2650.00
	16	603.2	2190.00 – 3400.00
	20	754.0	2700.00 – 4250.00
	24	904.8	3175.00 – 5050.00
14	16	821.0	2925.00 – 4575.00
	20	1,026.3	3550.00 – 5700.00
	24	1,231.5	4250.00 – 6800.00
16	16	1,072.3	3700.00 – 6000.00
	20	1,340.4	4550.00 – 7400.00
	24	1,608.5	5450.00 – 8800.00
	28	1,876.6	6350.00 – 10300.00

NOTES: Bushel capacity varies greatly with ear size and moisture content.
Deduct 4.32 per square foot for lack of slab.
Deduct 4.14 – 5.43 per square foot if the bin has no roof.

NOTE: For wood bins, see Page 25.

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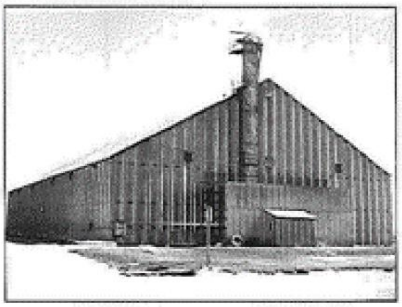
Appendix B: M&S Interpolation Calculation

It may be necessary to interpolate between unit values if the capacity (or other unit) is not listed in the M&S table. Assume a flat steel storage facility has a 220,000 bushel capacity and you are using the following table.

HORIZONTAL STORAGE

The following costs are for horizontal or flat storage without loading and/or unloading systems. Design loads vary and costs may vary by plus or minus 20%. For attached loading and/or unloading systems within the structure, add 5% of per bushel capacity.



For greater detail, see storage buildings on Pages 24 and 27.

TOTAL BUSHEL CAPACITY	COST PER BUSHEL		
	WOOD	STEEL	CONCRETE
50,000	$1.73	$1.91	$2.33
75,000	1.62	1.81	2.20
100,000	1.53	1.73	2.11
150,000	1.45	1.64	1.99
200,000	1.38	1.56	1.91
250,000	1.35	1.53	1.86
300,000	1.29	1.47	1.81
400,000	1.24	1.44	1.73
500,000	1.20	1.39	1.70
750,000	1.12	1.31	1.60
1,000,000	1.07	1.27	1.52
2,000,000 and over	.97	1.15	1.39

- The 220,000 capacity falls between 200,000 and 250,000 on the table.
- Determine the difference in the unit costs AND the bushel capacity from the table. The number being sought is 220,000 bushels so you would look directly above and below this number to determine the differences to calculate. In this case you would use the following information.
- The costs are $1.56 for 200,000 and $1.53 for 250,000. The calculation is as follows:
  Rate for steel 200,000 bu. $1.56
  Rate for steel 250,000 bu. -$1.53
  = **$0.03 cost difference**
- Calculate the difference in cost $0.03 / difference in bushel capacity 50,000 bu. = $0.0000006
- Multiply the factor of $0.0000006 x 20,000 bu. difference between the actual and 200,000 bu. low benchmark = $0.012
  $1.56 - $0.012 = $1.548

  OR
- Multiply the factor of $0.0000006 x 30,000 bu. difference between the actual and 250,000 bu. high benchmark = $0.018
  $1.53 + $0.018 = $1.548
  Either method results in the same $1.55 per bushel rounded

Note: Many times the cost difference will be much larger making the interpolation process much more significant.

Appendix C: Pack and Even Example

WA-310

U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency
BIN CHART BY SECTION

Name : COMARK GRAIN MARKETING ELEVATORS
Location : CHENEY KS

LICENSE / CODE NO. : 3-9839

Section Number : 14V Container Number	Capacity	Effective Depth	Air Space	Grain Depth	BU Per Foot	Test Wt. Per Bushel	Base Pack	Grain PkFactor	Kind Grade	Kind Grade
001	44,399	26.2			1,547.0		10.0			
002	44,399	26.2			1,547.0		10.0			
003	197,942	48.2			3,792.0		10.0			

28,674 Add 10.0000 % 586 to even. Section Code: 8-4108

316,000 Total Capacity of Section 14V Location : LENORA, KS, NORTON

Section Number 14V

316,000 bushels=**Total licensed capacity** of the 3 corrugated steel bins – Section 14V

286,740 bushels=**Total volume bushel capacity** before pack & even addition (44,399 + 44,399 + 197,942)

-28,674 bushels = **Pack** addition specified from bin chart above (286,740 bu. x 10%)

-586 bushels = **Even** addition - Total licensed capacity 316,000 minus (286,740 + pack addition of 28,674)

286,740 bushels reported + 28674 pack + 586 even = Total licensed capacity of 316,000 bushels

Licensed Capacity 316,000 bushels/286,740 before Pack & Even bushels = 1.1020436 factor

#	Structure	Cap before P&E		P&E Factor		Adjusted Total
001	Corrugated Steel Bin	44,399	x	1.1020436	=	48930 bu
002	Corrugated Steel Bin	44,399	x	1.1023436	=	48930 bu
003	Corrugated Steel Bin	197,942	x	1.1020436	=	218140 bu
				Total	=	316,000 bu

Appendix D: Bin Chart Instructions

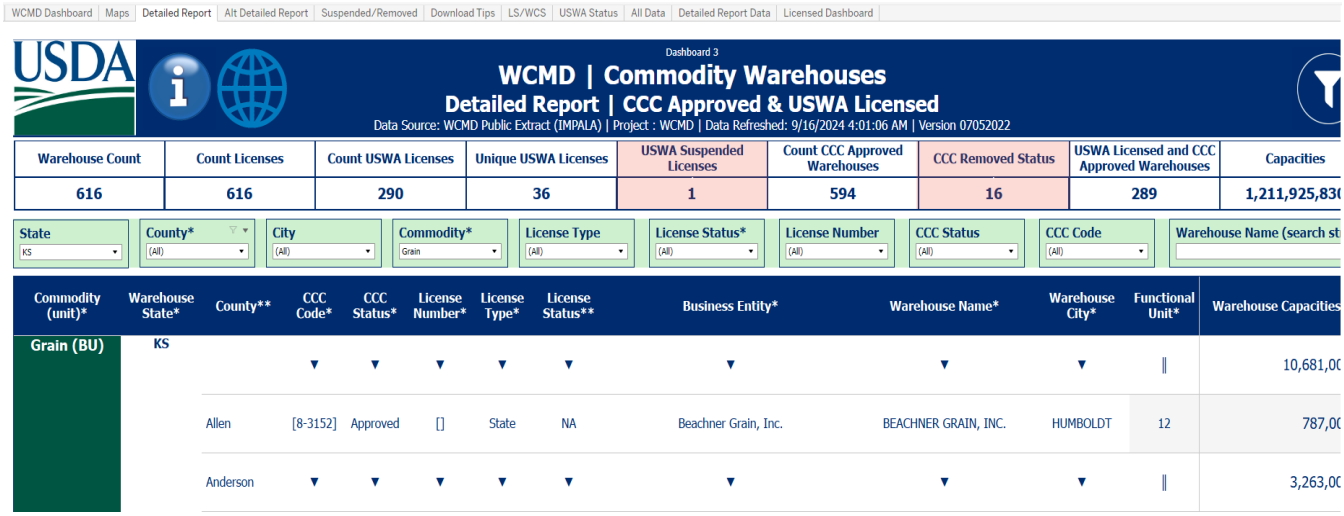
Grain Elevator Bin Chart Request

The bin charts are very helpful when valuing grain facilities as they show bushel capacities and locations of licensed bins on the site. Licensed grain elevator facilities are required to display the bin chart diagram(s) at the facility for OSHA purposes. So, the charts can be requested from the local elevator facilities. Visiting the local elevator could also be an opportunity for the appraiser to obtain information about the facility and to build a rapport with the elevator management.

Bin charts can also be requested online but, it does take an open records request to initiate the process. To request a bin chart, the requester must first determine whether the facility is licensed by the state or federal government. Requesters can also go to the United States Department of Agriculture (USDA) Warehouse and Commodity Management Division (WCMD) interactive website at the link below to determine the license type if not known. The Division of Property Valuation will also post a list of all licensed grain elevators on the PVD Orion website.

https://publicdashboards.dl.usda.gov/t/MRP_PUB/views/WCMDDashboard/WCMDDashboard?%3AisGuestRedirectFromVizportal=y&%3Aembed=y

Here you will find the data warehouse dashboard where you can filter information by state, county, city license type etc. Both state and federal information in stored on this site. Once in the site, you will want to select the ***"Detailed Report"*** (see below) from the various tab options at the top of the web page. This will only display storage facilities with capacities in your filtered area.



How to Request a Record

Once you know the information you want to request, you will then have to formally request it from the state or federal agency (depending on the license type). The Kansas Department of Agriculture has a Kansas Open Records Act (KORA) request option on the ***Public Resources*** tab of its website. Enter the following web address to be directed to the Kansas open records information and request form, or email to the USDA at the email address provided below.

State of Kansas Request – Use the following website link to make your request. Upon completion of the form, you will receive a confirmation email. Be sure to check your junk mail folder if you do not immediately receive the email.

https://www.agriculture.ks.gov/public-resources/open-records-request-form

Federal Request – It is best to put a reference to ***FOIA*** (Freedom of Information Act) in the subject line. This lets the recipient know the email is a FOIA request.

Email to Mark Brooks at: ams.foia@usda.gov - The email should be specific as possible AND include a snip it from the data warehouse page.

Email example:

Mr. Brooks,

I would like to request the **licensed storage capacity** and **bin chart** information for the following grain warehouses located in _____ County –_____, Kansas location.

County**	CCC Code*	CCC Status*	License Number*	License Type*	License Status**	Business Entity*	Warehouse Name*	Warehouse City*
Atchison	[8-3681]	Approved	[3-10197]	Federal	Issued	Jackson Farmers, Inc.	Jackson Farmers Elevator	Lancaster
	[9-0072]	Approved	[3-9602]	Federal	Issued	Bartlett Grain Company, L.P.	BARTLETT ELEVATOR (EASTERN)	ATCHISON
	[9-3066]	Approved	[3-10091]	Federal	Issued	Cargill, Incorporated	Cargill West Elevators	ATCHISON
	[9-3098]	Approved	[3-9739]	Federal	Issued	Bunge North America, Inc.	BUNGE MILLING ATCHISON ELEVATOR	ATCHISON

NOTE: For either of the warehouse type requests (State or Federal), you should include a "Snipit" from the data warehouse website. This will ensure the request covers the specific elevator facility.

Appendix E: Grain Elevator Sales

Miscellaneous Information

Abstractions and Negative Value

When applying the abstraction formula in estimating the contributing value of the grain storage structure assets, some of the sale components have little or no contributing value with a few structures reflecting negative values. These structures are mostly comprised of older components that are near the end of the usable physical life. Some of the operators stated that flat storage structures, although licensed, are not being used or are the last place management selected to store grain. This is usually due to the inefficient manual unloading methods required to empty the facility. Management of some of the sale properties indicated they are retaining older non-used licensed storage for emergency overflow while others state future demolition of the older storage may occur to accommodate the site area for new construction. When buyers demolish licensed storage after a sale transaction closes, the capacity of those structures is not included in the contributing value abstractions of the sale assets. If after a sale the new ownership converts licensed storage to other non-grain storage uses such as bagged feed, seed, and fertilizer storage, those structures are included in the assets contributing value abstractions but not considered as a grain storage asset in the analysis.

The abstractions show that older flat storage and some of the older upright steel bins and tanks appear to have little or no measurable contributing value in some areas. However, if the grain storage assets of a sale property are only comprised of older structures that are being used, some measurable contributing value does exist. Properties having a higher percentage of newer storage construction in most instances cause the limited or non-use of the older flat storage and marginal upright steel resulting in a reduction of management's utility of the asset and a lower contributing value of the structure to the overall value of the property. Flat storage that is not licensed and is being implemented for storage of other non-grain items should be valued through the Orion CAMA system.

When completing the abstraction process, there are cases when the execution of the abstraction formula results in a $0 contributing value for a structure. There are also cases when the formula results in a negative contributing value for that structure. If the value of a non-grain asset is allowed to fall below $0, additional value is transferred to the grain storage assets by default. Therefore, when negative values such as these are encountered, the values are defaulted to $0 so as not to attribute additional value to the grain assets.

Premium Value

Sometimes the strength of the sale price reflects a premium paid for the property assets. Some analysts may attribute the premium or overage paid to "blue sky," "good will" or "going concern" to control the grain storage assets in an aggressive or competitive market. In some cases, these outlying sales indicate the need for additional investigation to ensure all of the sale component assets are included in the abstraction analysis and that the price reported on transaction documents is an accurate declaration of all of the consideration paid for a property. As a result of a follow-up review, it would not be uncommon for an adjustment to be made for these intangible assets. If a firm number can be documented from a contract document, by visiting with a facility manager or a source familiar with the sale, the number is generally considered.

Depreciation Floor

Traditional approaches for depreciating grain elevators used an estimated age-life of up to 60 years depending on the structure type. For purposes of this guide the Property Valuation Division has implemented the following economic lives in the table below when abstracting data to arrive at the depreciated replacement cost new (RCNLD). These economic lives apply to structures that are licensed and currently being used for grain storage.

The appraiser will encounter active licensed grain storage structures indicating 100% or greater depreciation, thus indicating a cost value of $0 or a negative amount. While the structure may be at the end of its economic life, PVD believes such structures still have some contributory value to the property. Therefore, PVD has established a depreciation floor for the indicated percent good assignment in the abstraction process. This would seem to support sound appraisal judgment by not allowing an active licensed structure to be allocated at $0 or a negative value. The maximum depreciation for all types of storage is 95% and economic life is 60 years.

Storage Type	Economic Life	Dep Max	Min Pct Good
Upright Concrete	60 years	95%	5%
Bolted Steel	60 years	95%	5%
Steel	60 years	95%	5%
Wood Crib Metal Clad	60 years	95%	5%
Concrete Stave	60 years	95%	5%
Flat Storage	60 years	95%	5%

Appendix F: Grain Elevator Sale Summary

Sale #	Storage Type	Region	Sale Year	Age	Annual Depreciation	Storage Capacity	Net Sales Price	Net Price / Bu
1	Steel	West	2019	11	2.22%	714,000	$630,350	$0.88
2	Steel	East	2016	13	1.82%	1,652,000	$1,309,699	$0.79
3	Steel	East	2015	48	1.84%	223,000	$47,388	$0.21
4	Steel	East	2015	12	1.39%	555,000	$1,001,131	$1.80
5	Steel	West	2014	14	1.57%	1,804,000	$1,689,165	$0.94
6	Steel	East	2010	27	2.43%	222,000	$130,456	$0.59
7	Steel	East	2014	41	1.75%	933,000	$399,262	$0.43
8	Steel	West	2016	38	1.73%	869,231	$352,908	$0.41
9	Steel	East	2012	45	1.98%	65,000	$28,869	$0.44
10	Steel	West	2013	29	1.82%	1,996,714	$2,428,187	$1.22
11	Mixed	West	2010	36	2.50%	347,111	$73,176	$0.21
12	Mixed	West	2010	16	4.05%	1,097,736	$440,700	$0.40
13	Mixed	West	2020	39	1.32%	2,173,937	$1,470,683	$0.68
14	Mixed	West	2010	52	1.66%	167,000	$70,564	$0.42
15	Mixed	West	2014	39	1.54%	2,633,920	$2,748,509	$1.04
16	Mixed	East	2012	37	2.09%	415,308	$231,002	$0.56
17	Mixed	West	2019	46	1.94%	3,034,720	$919,983	$0.30
18	Mixed	West	2015	54	1.46%	786,000	$677,161	$0.86
19	Mixed	West	2014	53	1.04%	5,735,722	$7,470,020	$1.30
20	Mixed	West	2019	59	1.55%	1,025,000	$351,640	$0.34
21	Concrete	East	2016	67	1.47%	1,146,253	$122,040	$0.11
22	Concrete	West	2022	68	1.29%	1,608,587	$1,209,758	$0.75
23	Concrete	West	2018	64	1.07%	597,583	$867,885	$1.45
24	Concrete	West	2014	26	1.71%	951,294	$2,133,376	$2.24
25	Concrete	West	2022	64	1.43%	394,005	$242,035	$0.61
26	Concrete	East	2010	43	2.00%	872,999	$510,468	$0.58
27	Concrete	West	2011	42	2.04%	2,109,078	$1,253,566	$0.59
28	Concrete	East	2011	51	1.51%	412,000	$708,651	$1.72
29	Concrete	West	2019	62	1.50%	1,847,232	$500,780	$0.27
30	Concrete	West	2022	50	1.39%	851,760	$1,335,018	$1.57
31	Concrete	West	2022	56	1.47%	837,758	$1,019,869	$1.22
32	Concrete	West	2020	81	1.20%	250,445	$66,396	$0.27
33	Concrete	West	2019	54	1.58%	1,052,000	$807,478	$0.77
34	Concrete	West	2012	65	1.43%	276,415	$111,809	$0.40
35	Concrete	West	2010	64	1.41%	2,030,758	$753,420	$0.37

Appendix G: Grain Elevator Sales Reports

Sale Number	1

Region	**County**
West	Cheyenne

Sale Month / Year: 7/2019

Total Sale Price	$2,050,000
Land Value	12,820
Amt PP / BV	1,354,547
Non- Grain Structure RCNLD	$65,103
Net Sales Price	$630,350
Seller	Busse Enterprises
Buyer	Scoular Company
Situs Address	1892 Road E, Hwy 27, St Francis, KS

Weighted Avg Age	11.2
Total Depreciation %	24.84%
Annual Depreciation %	2.22%
Total Accured Depreciation	$204,041
Total Grain Storage	714,000
Net price per Bu:	$0.88
Concrete Storage %	0.00%
Wood Frame / Metal Clad %	0.00%
Upright Steel %	100.00%
Flat %	0.00%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
St. Francis	Steel Bin	2012	7	146,242	$198,889	11.67%	$175,685
St. Francis	3 Steel Bins @ 146,168	2010	9	438,726	$596,667	15.00%	$507,167
St. Francis	2 Steel Bins @ 54,242	2000	19	108,538	$151,953	31.67%	$103,835
St. Francis	2 Steel Bins @ 9,135	1982	37	18,280	$39,119	61.67%	$14,996
St. Francis	Steel Hopper Bin	1982	37	2,214	$11,734	61.67%	$4,498

Sale Number	2

Region	County
East	Marshall

Sale Month / Year: 8/2016

Total Sale Price	$3,932,465
Land Value	21,530
Amt PP / BV	2,033,368
Non- Grain Structure RCNLD	$589,399
Net Sales Price	$1,288,169
Seller	Axt $1,309,699 oany
Buyer	Nemaha County COOP
Situs Address	Axtell, KS

Weighted Avg Age	13.44
Total Depreciation %	24.50%
Annual Depreciation %	1.82%
Total Accured Depreciation	$417,923
Total Grain Storage	1,652,000
Net price per Bu:	$0.78
Concrete Storage %	0.00%
Wood Frame / Metal Clad %	$0.79
Upright Steel %	100.00%
Flat %	0.00%

Railroad Service

Location	Number of Cars
Axtell	25

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Axtell	2 Steel Bins @ 130,200	2000	16	260,400	$317,688	26.67%	$232,971
Axtell	Steel Bin	2000	16	136,156	$166,110	26.67%	$121,814
Axtell	2 Steel Bins @ 79,247	1982	34	158,494	$199,702	56.67%	$86,538
Axtell	Steel Bin	1986	30	163,679	$194,778	50.00%	$97,389
Axtell	Steel Bin	1986	30	114,291	$141,721	50.00%	$70,860
Axtell	2 Steel Bins @ 4,953	1985	31	9,906	$24,765	51.67%	$11,970
Axtell	2 Steel Bins @ 404,537	2014	2	809,074	$970,889	3.33%	$938,526

Sale Number	3

Region	County
East	Crawford

Sale Month / Year: 4/2015

Total Sale Price	$150,000
Land Value	11,480
Amt PP / BV	62,768
Non- Grain Structure RCNLD	$39,844
Net Sales Price	$47,388
Seller	Beachner Grain
Buyer	Producers COOP Assoc of
Situs Address	Girard, KS

Weighted Avg Age	48.02
Total Depreciation %	88.34%
Annual Depreciation %	1.84%
Total Accured Depreciation	$271,995
Total Grain Storage	223,000
Net price per Bu:	$0.21
Concrete Storage %	0.00%
Wood Frame / Metal Clad %	0.00%
Upright Steel %	100.00%
Flat %	0.00%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Girard	6 Steel Bins @ 22,087	1960	55	132,522	$200,108	90.00%	$20,011
Girard	Steel Bin	1980	35	86,386	$101,072	58.33%	$42,113
Girard	2 Steel Hopper Bins @ 2,046	1960	55	4,092	$19,232	90.00%	$1,923

Sale Number	4

Region	**County**	**Sale Month / Year:**
East	Crawford	4/2015

Total Sale Price	$4,199,500	**Weighted Avg Age**	11.7
Land Value	135,464	**Total Depreciation %**	16.27%
Amt PP / BV	3,003,768	**Annual Depreciation %**	1.39%
Non- Grain Structure RCNLD	$194,601	**Total Accured Depreciation**	$168,259
Net Sales Price	$1,001,131	**Total Grain Storage**	555,000
		Net price per Bu:	$1.80
Seller	KAMO Grain, Inc	**Concrete Storage %**	0%
Buyer	Scoular Company	**Wood Frame / Metal Clad %**	0%
Situs Address	Pittsburg, KS	**Upright Steel %**	100%
		Flat %	0%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Pittsburg	2 Steel Bins @ 41,113	1990	25	88,226	$183,510	41.67%	$107,048
Pittsburg	2 Steel Bins @ 30,699	1990	25	61,398	$136,304	41.67%	$79,510
Pittsburg	2 Steel Bins @ 67,070	2008	7	134,140	$222,672	11.67%	$196,694
Pittsburg	2 Steel Bins @ 44,293	2008	7	88,586	$184,259	11.67%	$162,762
Pittsburg	Steel Bin	2011	4	169,558	$276,380	6.67%	$257,954
Pittsburg	3 Steel Hopper Bins @ 1,851	1990	25	5,553	$35,484	41.67%	$20,699
Pittsburg	Steel Hopper Bin	1990	25	1,012	$6,487	41.67%	$3,784
Pittsburg	Steel Hopper Bin	2008	7	2,381	$12,453	11.67%	$11,000
Pittsburg	2 Steel Hopper Bins @ 2,073	2008	7	4,146	$21,684	11.67%	$19,154

Sale Number	5

Region	**County**	**Sale Month / Year:**
West	Haskell	6/2014

Total Sale Price	$3,725,652	**Weighted Avg Age**	13.56
Land Value	185,395	**Total Depreciation %**	21.28%
Amt PP / BV	1,788,881	**Annual Depreciation %**	1.57%
Non- Grain Structure RCNLD	$247,606	**Total Accured Depreciation**	$406,531
Net Sales Price	$1,689,165	**Total Grain Storage**	1,804,000
		Net price per Bu:	$0.94
Seller	Providence Grain LLC	**Concrete Storage %**	0.00%
Buyer	Hansen-Mueller Co	**Wood Frame / Metal Clad %**	0.00%
Situs Address	Sublette, KS	**Upright Steel %**	100.00%
		Flat %	0.00%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Sublette	4 Steel Bins @ 121,439	1999	15	485,756	$563,477	25.00%	$422,608
Sublette	2 Steel Bins @ 459,604	2000	14	919,208	$1,038,705	23.33%	$796,341
Sublette	2 Steel Hopper Bin @ 3,431	2000	14	6,862	$24,703	23.33%	$18,939
Sublette	2 Steel Bins @ 73,661	2002	12	147,322	$178,260	20.00%	$142,608
Sublette	Steel Hopper Bin	2002	12	878	$5,268	20.00%	$4,214
Sublette	Steel Hopper Bin	2002	12	1,096	$5,535	20.00%	$4,428
Sublette	2 Steel Bins @ 121,439	2004	10	242,878	$281,738	16.67%	$234,782

Sale Number	6

Region	County
East	Lyon

Sale Month / Year:
6/2010

Total Sale Price	$300,000
Land Value	8,330
Amt PP / BV	108,501
Non- Grain Structure R	$61,043
Net Sales Price	$130,456
Seller	Hartford Elevator Inc
Buyer	Miller Elevator
Situs Address	Hartford, KS

Weighted Avg Age	27.26
Total Depreciation %	66.29%
Annual Depreciation %	2.43%
Total Accured Depreci	$240,197
Total Grain Storage	222,000
Net price per Bu:	$0.59
Concrete Storage %	0.00%
Wood Frame / Metal Cla	0.00%
Upright Steel %	100.00%
Flat %	0.00%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Hartford	2 Steel Hopper Bins @1,000	1980	30	2,000	$11,440	50.00%	$5,720
Hartford	Steel Bin	1980	30	50,000	$86,000	50.00%	$43,000
Hartford	Steel Bin	1980	30	70,000	$117,600	50.00%	$58,800
Hartford	Steel Bin	1986	24	75,000	$126,000	40.00%	$75,600
Hartford	Steel Bin	1986	24	25,000	$57,750	40.00%	$34,650

Sale Number	7

Region	County
East	Marshall

Sale Month / Year: 9/2014

Total Sale Price	$1,660,000
Land Value	35,730
Amt PP / BV	1,141,041
Non- Grain Structur	$119,697
Net Sales Price	$399,262
Seller	
Buyer	
Situs Address	Home, KS

Weighted Avg Age	40.51
Total Depreciation %	70.95%
Annual Depreciation %	1.75%
Total Accured Depreciation	$887,847
Total Grain Storage	933,000
Net price per Bu:	$0.43
Concrete Storage %	0%
Wood Frame / Metal Clad %	14%
Upright Steel %	86%
Flat %	0%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Home	Wood Crib Metal Clad Elevator	1915	99	27,000	$290,250	90.00%	$29,025
Home	2 Steel Bins @ 171,118	1983	31	342,236	$386,727	51.67%	$186,918
Home	2 Steel Bins @ 190,382	1987	27	380,764	$430,263	45.00%	$236,645
Home	2 Steel Bins @ 54,285	1981	33	108,570	$123,770	55.00%	$55,696
Home	Steel Bin	1981	33	22,783	$32,808	55.00%	$14,763
Home	Steel Bin	1981	33	29,021	$40,629	55.00%	$18,283
Home	2 Bolted Steel Tanks @ 11,313	1950	64	22,626	$63,353	90.00%	$6,335

Sale Number	8

Region	County	Sale Month / Year:
West	Phillips	6/2016

Total Sale Price	$1,500,000	**Weighted Avg Age**	38.4
Land Value	25,590	**Total Depreciation %**	66.58%
Amt PP / BV	1,058,940	**Annual Depreciation %**	1.73%
Non- Grain Structure RCNLD	$88,152	**Total Accured Depreciation**	$652,185
Net Sales Price	$352,908	**Total Grain Storage**	869,231
		Net price per Bu:	$0.41
Seller	N Terry Nelson	**Concrete Storage %**	0%
Buyer	Rangeland COOP	**Wood Frame / Metal Clad %**	0%
Situs Address	206 S Douglas & East Walnut, Logan, KS	**Upright Steel %**	81%
		Flat %	19%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Logan	Steel Bin	1975	41	135,597	$166,784	68.33%	$52,815
Logan	2 Steel Bins @ 88,905	1975	41	177,810	$225,819	68.33%	$71,509
Logan	Steel Bin	1975	41	19,137	$31,193	68.33%	$9,878
Logan	2 Steel Bins @ 25,218	1975	41	50,436	$78,176	68.33%	$24,756
Logan	3 Steel Bins @ 112,258	1982	34	336,774	$417,600	56.67%	$180,960
Logan	Flat Storage	1975	41	149,477	$260,090	68.33%	$82,362

Sale Number	9

Region	**County**	**Sale Month / Year:**
East	Coffey	5/2012

Total Sale Price	$150,000	**Weighted Avg Age**	44.85
Land Value	10,360	**Total Depreciation %**	88.95%
Amt PP / BV	81,848	**Annual Depreciation %**	1.98%
Non- Grain Structure RCNLD	$39,283	**Total Accured Depreciation**	$149,039
Net Sales Price	$28,869	**Total Grain Storage**	65,000
		Net price per Bu:	$0.44
Seller	Leb Grain Company	**Concrete Storage %**	0%
Buyer	Lohmeyer & Lohmeyer	**Wood Frame / Metal Clad %**	23%
Situs Address	North Elm & Broadway, Lebo, KS	**Upright Steel %**	77%
		Flat %	0%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Lebo	Metal Clad Elevator	1960	52	3,000	$62,940	86.67%	$8,392
Lebo	2 Steel Bins @ 20,000	1967	45	40,000	$57,600	75.00%	$14,400
Lebo	Steel Hopper Bin	1969	43	10,000	$31,200	71.67%	$8,840
Lebo	Steel Hopper Bin	1972	40	10,000	$31,200	66.67%	$10,400
Lebo	2 Steel Hopper Bin 2 @ 1,000	1980	32	2,000	$11,000	53.33%	$5,133

Sale Number	10

Region	**County**	**Sale Month / Year:**
West	Greeley	7/2013

Total Sale Price	$5,020,000	**Weighted Avg Age**	28.84
Land Value	120,470	**Total Depreciation %**	52.36%
Amt PP / BV	2,271,744	**Annual Depreciation %**	1.82%
Non- Grain Structure F	$320,069	**Total Accured Depreciation**	$2,536,724
Net Sales Price	$2,428,187	**Total Grain Storage**	1,996,714
		Net price per Bu:	$1.22
Seller	Tribune Grain LLC	**Concrete Storage %**	0%
Buyer	Scoular Company	**Wood Frame / Metal Clad %**	5%
Situs Address	Tribune, NW Tribune & Inland Station, KS	**Upright Steel %**	76%
		Flat %	19%

Railroad Service

Location	**Number of Cars**
Inland Station/Tribune	Unknown Number

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Tribune	Wood Crib Metal Clad Elevator	1949	64	27,985	$306,995	90.00%	$30,700
Tribune	Steel Bin	2007	6	173,055	$377,260	10.00%	$339,534
Tribune	Steel Hopper Bin	2007	6	2,583	$13,044	10.00%	$11,740
Tribune	Steel Bin	2009	4	247,192	$521,575	6.67%	$486,803
Tribune	Steel Bin	2013	1	67,105	$148,973	1.67%	$146,490
Tribune	4 Bolted Steel Tanks @ 15,564	1949	64	62,616	$226,670	90.00%	$22,667
Tribune	3 Steel Bins @ 59,727	1975	38	179,181	$451,536	63.33%	$165,563
Tribune	Steel Bin	1975	38	1,710	$10,602	63.33%	$3,887
Tribune	Steel Bin	1975	38	12,591	$38,906	63.33%	$14,266
Tribune	Steel Bin	1985	28	123,770	$299,523	46.67%	$159,746
Tribune	Steel Bin	1985	28	127,331	$306,868	46.67%	$163,663
Tribune	Steel Bin	2010	3	59,727	$150,512	5.00%	$142,986
Tribune	Steel Hopper Bin	2010	3	2,690	$14,042	5.00%	$13,340
Tribune	4 Steel Hopper Bins @ 7,422	1970	43	29,688	$128,846	71.67%	$36,506
Tribune	Steel Bin	1996	17	155,241	$397,417	28.33%	$284,815
Tribune	Steel Bin	1996	17	72,699	$194,106	28.33%	$139,110
Tribune	Steel Bin	2003	10	261,086	$684,045	16.67%	$570,038
Tribune	Flat Storage	1948	65	196,627	$513,196	90.00%	$51,320
Tribune	Flat Storage	1961	52	193,837	$505,915	86.67%	$67,455

Sale Number	11

Region	**County**
West	Reno

Sale Month / Year: 4/2010

Total Sale Price	$195,000
Land Value	12,458
Amt PP / BV	46,361
Non- Grain Structure	$75,463
Net Sales Price	$73,176
Seller	C.B. Showalten
Buyer	Mark Nissley
Situs Address	3419 E Lawrence, Yoder, KS

Weighted Avg Age	36.25
Total Depreciation %	90.66%
Annual Depreciation %	2.50%
Total Accured Depreciation	$589,362
Total Grain Storage	347,111
Net price per Bu:	$0.21
Concrete Storage %	30%
Wood Frame / Metal Clad %	0%
Upright Steel %	70%
Flat %	0%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Yoder	Conc Slip Elevator	1951	59	25,830	$332,174	90.00%	$33,217
Yoder	Steel Bin	1961	49	9,901	$18,614	81.67%	$3,413
Yoder	2 Steel Bins @ 120,094	1985	25	240,188	$278,618	41.67%	$162,527
Yoder	2 Steel Bins @ 35,596	1983	27	71,192	$85,430	45.00%	$46,987

Sale Number	12

Region	County
West	Cheyenne

Sale Month / Year: 3/2010

Total Sale Price	$1,250,000
Land Value	17,150
Amt PP / BV	743,715
Non- Grain Structure RCNLD	$65,585
Net Sales Price	$440,700
Seller	Douglas-Sager Grain Co
Buyer	Frontier Ag Inc.
Situs Address	2874 US Hwy 36, Bird City, KS 67731

Weighted Avg Age	16.07
Total Depreciation %	65.09%
Annual Depreciation %	4.05%
Total Accured Depreciation	$789,716
Total Grain Storage	1,097,736
Net price per Bu:	$0.40
Concrete Storage %	0%
Wood Frame / Metal Clad %	0%
Upright Steel %	70%
Flat %	30%

Railroad Service

Location	Number of Cars
Bird City	20

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Bird City	2 Steel Bins @ 10,991	1977	33	21,982	$38,249	55.00%	$17,212
Bird City	2 Steel Bins @ 11,041	1975	35	22,082	$38,423	58.33%	$16,009
Bird City	Steel Bin	1977	33	11,237	$19,552	55.00%	$8,799
Bird City	Steel Bin	1980	30	33,172	$43,787	50.00%	$21,894
Bird City	Steel Bin	1995	15	105,846	$124,898	25.00%	$93,674
Bird City	Steel Bin	1996	14	115,276	$136,026	23.33%	$104,286
Bird City	Steel Bin	1999	11	480,000	$542,400	18.33%	$442,960
Bird City	Steel Flat Storage	1991	19	308,141	$452,967	31.67%	$309,528

Sale Number	13

Region	County	Sale Month / Year:
West	Barton	2/2020

Total Sale Price	$2,600,000	**Weighted Avg Age**	39.41
Land Value	36,030	**Total Depreciation %**	51.93%
Amt PP / BV	1,094,992	**Annual Depreciation %**	1.32%
Non- Grain Structure RCNLD	$34,325	**Total Accured Depreciation**	$1,549,911
Net Sales Price	$1,470,683	**Total Grain Storage**	2,173,937
		Net price per Bu:	$0.68
Seller	Mid Kansas Agri Co	**Concrete Storage %**	0%
Buyer	Great Bend COOP	**Wood Frame / Metal Clad %**	0%
Situs Address	355 SW 60th Ave, Dundee, KS	**Upright Steel %**	69%
		Flat %	31%

Railroad Service

Location	Number of Cars
Dundee	Unknown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Dundee	Steel Bin	1990	30	263,509	$332,021	50.00%	$166,011
Dundee	Steel Bin	2007	13	276,844	$348,823	21.67%	$273,245
Dundee	Steel Bin	2013	17	117,000	$149,760	28.33%	$107,328
Dundee	2 Steel Bins @ 260,000	2009	11	520,000	$655,200	18.33%	$535,080
Dundee	4 Bolted Steel Tanks @ 74,583	1960	60	298,332	$707,047	90.00%	$70,705
Dundee	4 Steel Hopper Bins@ 3,625	1960	60	14,500	$50,605	90.00%	$5,061
Dundee	2 Steel Hopper Bins @ 7,250	1960	60	14,500	$43,500	90.00%	$4,350
Dundee	Steel Flat Storage	1958	62	669,252	$1,023,956	90.00%	$102,396

Sale Number	14

Region	County
West	Cheyenne

Sale Month / Year:
12/2010

Total Sale Price	$125,000
Land Value	
Amt PP / BV	36,330
Non- Grain Structure RCNLD	$18,106
Net Sales Price	$70,564

Seller	Douglas - Sager Grain Co.
Buyer	Jonathan Waters
Situs Address	Wheeler, KS

Weighted Avg Age	52.01
Total Depreciation %	86.49%
Annual Depreciation %	1.66%
Total Accured Depreciation	$451,661
Total Grain Storage	167,000
Net price per Bu:	$0.42
Concrete Storage %	0%
Wood Frame / Metal Clad %	46%
Upright Steel %	54%
Flat %	0%

Railroad Service

Location	Number of Cars
Wheeler	8

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Wheeler	2 Steel Bins @ 30,047.5	1976	34	60,095	$73,917	56.67%	$32,031
Wheeler	2 Bolted Steel Tanks @ 13,594	1960	50	27,188	$74,767	83.33%	$12,461
Wheeler	2 Bolted Steel Tanks @ 21,635	1960	50	43,270	$111,204	83.33%	$18,534
Wheeler	Wood Crib/ Metal Clad Elevator	1949	61	36,447	$349,891	90.00%	$34,989

Sale Number	15

Region	**County**
West	Logan - Scott

Sale Month / Year:
9/2014

Total Sale Price	$4,500,000
Land Value	20,240
Amt PP / BV	1,417,797
Non- Grain Structure RCNLD	$333,693
Net Sales Price	$2,748,509
Seller	Winona Feed & Grain
Buyer	Scoular Company
Situs Address	Winona & Pence, KS

Weighted Avg Age	39.47
Total Depreciation %	60.85%
Annual Depreciation %	1.54%
Total Accured Depreciation	$4,240,130
Total Grain Storage	2,633,920
Net price per Bu:	$1.04
Concrete Storage %	61%
Wood Frame / Metal Clad %	0%
Upright Steel %	34%
Flat %	5%

Railroad Service

Location	**Number of Cars**
Winona	Unknown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Pence	2 Steel Bins @ 52,793	1966	48	105,946	$126,076	80.00%	$25,215
Pence	Steel Bin	1966	48	181,807	$212,714	80.00%	$42,543
Pence	Steel Bin	1973	41	30,176	$39,531	68.33%	$12,518
Pence	Steel Bin	1977	37	52,973	$63,038	61.67%	$24,165
Pence	Steel Hopper Bin	1985	29	2,190	$10,271	48.33%	$5,307
Pence	Steel Hopper Bin	1985	29	1,233	$8,015	48.33%	$4,141
Pence	Steel Bin	2009	5	210,272	$241,813	8.33%	$221,662
Pence	Steel Bin	2010	4	212,403	$244,263	6.67%	$227,979
Winona	Steel Bin	1977	37	151,566	$172,785	61.67%	$66,234
Winona	Steel Bin	1977	37	151,724	$172,965	61.67%	$66,303
Winona	Bolted Steel Tank	1965	49	358,120	$651,778	81.67%	$119,493
Winona	Conc Slip Elevator	1946	68	95,498	$889,086	90.00%	$88,909
Winona	Conc Slip Annex	1951	63	179,506	$924,456	90.00%	$92,446
Winona	Conc Slip Annex	1957	57	315,129	$1,405,475	90.00%	$140,548
Winona	2 Conc Jump Annex @ 189,115	2006	8	378,230	$1,917,626	13.33%	$1,661,943
Winona	Steel Flat Storage	1961	53	207,147	$321,078	88.33%	$37,459

Sale Number	16

Region	County
East	Osage

Sale Month / Year: 7/2012

Total Sale Price	$860,000
Land Value	62,400
Amt PP / BV	272,280
Non- Grain Structure RCNLD	$356,718
Net Sales Price	$231,002
Seller	Dayoff Elevators
Buyer	MFA Enterprises
Situs Address	N 3rd St, Osage City KS 66523

Weighted Avg Age	36.92
Total Depreciation %	77.05%
Annual Depreciation %	2.09%
Total Accured Depreciation	$565,943
Total Grain Storage	415,308
Net price per Bu:	$0.56
Concrete Storage %	10%
Wood Frame / Metal Clad %	13%
Upright Steel %	32%
Flat %	44%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Osage City	Conc Stave	1950	62	10,368	$109,382	90.00%	$10,938
Osage City	Wood Crib Metal Clad Elevator	1950	62	9,948	$158,173	90.00%	$15,817
Osage City	2 Steel Bins @ 71,810	1981	31	143,620	$165,163	51.67%	$79,829
Osage City	2 Steel Bins @ 11,567	1968	44	23,134	$39,096	73.33%	$10,426
Osage City	Steel Bin	1968	44	11,667	$19,717	73.33%	$5,258
Osage City	Steel Flat Storage	1986	26	216,571	$335,685	43.33%	$190,222

Sale Number	17

Region	**County**	**Sale Month / Year:**
West	Stanton	3/2019

Total Sale Price	$2,830,000	**Weighted Avg Age**	45.82
Land Value	6,260	**Total Depreciation %**	88.79%
Amt PP / BV	1,857,871	**Annual Depreciation %**	1.94%
Non- Grain Structure RCNLD	$52,146	**Total Accured Depreciation**	$7,237,953
Net Sales Price	$913,723	**Total Grain Storage**	3,034,720
	$919,983	**Net price per Bu:**	$0.30
Seller	ADM Company	**Concrete Storage %**	59%
Buyer	Skyland Grain LLC	**Wood Frame / Metal Clad %**	0%
Situs Address	Big Bow, KS	**Upright Steel %**	30%
		Flat %	12%

Railroad Service

Location	**Number of Cars**
Big Bow	Unkown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Big Bow	Conc Slip Elevator	1953	66	505,000	$3,338,050	90.00%	$333,805
Big Bow	Conc Slip Annex	1962	57	557,000	$2,333,830	90.00%	$233,383
Big Bow	Steel Bin	1998	21	474,000	$559,320	35.00%	$363,558
Big Bow	Steel Bin	2010	9	980,000	$1,156,400	15.00%	$982,940
Big Bow	Steel Flat Storage	1971	48	518,720	$757,331	80.00%	$151,466

Sale Number	18

Region	County
West	Cheyenne

Sale Month / Year: 10/2015

Total Sale Price	$1,425,000
Land Value	63,612
Amt PP / BV	686,974
Non- Grain Structure	$60,865
Net Sales Price	$677,161
Seller	Bartlett Grain Company
Buyer	St Francis Mercantile Equity Exchange
Situs Address	St Francis, KS

Weighted Avg Age	53.55
Total Depreciation %	77.91%
Annual Depreciation %	1.46%
Total Accured Depreciation	$2,164,468
Total Grain Storage	786,000
Net price per Bu:	$0.86
Concrete Storage %	74%
Wood Frame / Metal Clad %	0%
Upright Steel %	26%
Flat %	0%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
St. Francis	Conc Slip Elevator	1950	65	349,289	$2,500,909	90.00%	$250,091
St. Francis	Steel Bin	1994	21	436,711	$524,053	35.00%	$340,635

Sale Number	19

Region	County	Sale Month / Year:
West	Republic	3/2014

Total Sale Price	$13,700,000	**Weighted Avg Age**	52.77
Land Value	128,650	**Total Depreciation %**	54.65%
Amt PP / BV:	5,702,683	**Annual Depreciation %**	1.04%
Non- Grain Structure RCNLD:	$527,297	**Total Accured Depreciation**	$8,846,845
Net Sales Price	$7,470,020	**Total Grain Storage**	5,735,722
		Net price per Bu:	$1.30
Seller	Hansen-Mueller Co	**Concrete Storage %**	55%
Buyer	Farmway COOP	**Wood Frame / Metal Clad %**	0%
Situs Address	Belleville, Courtland & Scandia, KS	**Upright Steel %**	8%
		Flat %	37%

Railroad Service

Location	Number of Cars
Belleville	60

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Republic	Steel Hopper Bin	1999	15	1,941	$10,637	25.00%	$7,978
Republic	3 steel Hopper Bins @ 5,371	1986	28	16,113	$52,528	46.67%	$28,015
Republic	Steel Hopper Bin	1986	28	2,005	$10,987	46.67%	$5,860
Republic	Steel Bin	1999	15	113,789	$131,995	25.00%	$98,996
Republic	Steel Bin	1999	15	136,601	$158,457	25.00%	$118,843
Republic	2 Steel Hopper Bins @ 2,260	1986	28	4,520	$24,770	46.67%	$13,210
Republic	2 Steel Hopper Bins @ 2,259	1986	28	4,518	$24,759	46.67%	$13,205
Republic	2 Steel Bins @ 296,998	1986	28	593,996	$671,215	46.67%	$357,982
Republic	Conc Slip Elevator	1951	63	157,366	$1,293,549	90.00%	$129,355
Republic	Conc Slip Annex	1953	61	307,958	$1,382,731	90.00%	$138,273
Republic	Conc Slip Annex	1957	57	304,676	$1,371,042	90.00%	$137,104
Republic	Conc Slip Elevator	1958	56	212,756	$1,623,328	90.00%	$162,333
Republic	Conc Slip Annex	1959	55	329,572	$1,456,708	90.00%	$145,671
Republic	Conc Slip Elevator	1959	55	266,584	$1,919,405	90.00%	$191,940
Republic	Conc Slip Annex	1972	42	414,416	$1,732,259	70.00%	$519,678
Republic	Flat Storage	1958	56	1,376,880	$2,698,685	90.00%	$269,868
Republic	Flat Storage	1958	56	1,492,031	$2,909,460	90.00%	$290,946

Sale Number	20

Region	County
West	Stanton

Sale Month / Year: 3/2019

Total Sale Price	$1,012,000
Land Value	5,200
Amt PP / BV	644,496
Non- Grain Structure RCNLD	$15,864
Net Sales Price	$351,640
Seller	ADM COmpany
Buyer	Skyland Grain LLC
Situs Address	First Avenue, Manter KS

Weighted Avg Age	58.94
Total Depreciation %	91.37%
Annual Depreciation %	1.55%
Total Accured Depreciation	$3,670,217
Total Grain Storage	1,025,000
Net price per Bu:	$0.34
Concrete Storage %	73%
Wood Frame / Metal Clad %	0%
Upright Steel %	0%
Flat %	27%

Railroad Service

Location	Number of Cars
Manter	Unkown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Manter	Conc Slip Elevator	1956	63	500,000	$3,305,000	90.00%	$330,500
Manter	Steel Flat Storage	1971	48	525,000	$777,000	80.00%	$155,400

Sale Number	21

Region	County	Sale Month / Year:
East	Doniphan	9/2016

Total Sale Price	$178,800	**Weighted Avg Age**	66.57
Land Value	19,020	**Total Depreciation %**	97.60%
Amt PP / BV	28,067	**Annual Depreciation %**	1.47%
Non- Grain Structure RCNLD	$28,693	**Total Accured Depreciation**	$4,188,497
Net Sales Price	$122,040	**Total Grain Storage**	1,146,253
		Net price per Bu:	$0.11
Seller	Fairview Grain LLC	**Concrete Storage %**	76%
Buyer	Ag Partner COOP	**Wood Frame / Metal Clad %**	0%
Situs Address	105 Hwy 7, Market Street & S First Street, White Cloud, KS	**Upright Steel %**	24%
		Flat %	0%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
White Cloud	Conc Slip Elevator	1940	76	319,965	$2,338,944	90.00%	$233,894
White Cloud	Conc Slip Annex	1940	76	197,007	$1,615,457	90.00%	$161,546
White Cloud	2 Steel Bins @ 153,144	1980	36	306,288	$370,608	60.00%	$148,243
White Cloud	Steel Bin	1980	36	322,993	$384,362	60.00%	$153,745

Sale Number	22

Region	County	Sale Month / Year:
West	Rice	8/2022

Total Sale Price	$1,500,000	**Weighted Avg Age**	68.29
Land Value	103,160	**Total Depreciation %**	88.01%
Amt PP / BV	275,746	**Annual Depreciation %**	1.29%
Non- Grain Structure RCNLD	$14,496	**Total Accured Depreciation**	$8,124,661
Net Sales Price	$1,209,758	**Total Grain Storage**	1,608,587
		Net price per Bu:	$0.75
Seller	Archer-Daniels-Midland Company	**Concrete Storage %**	78%
Buyer	Central Praire Co-op, A Kansas Coop	**Wood Frame / Metal Clad %**	0%
Situs Address	27th Rd, Little River	**Upright Steel %**	22%
		Flat %	0%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Little River	Conc Slip Annex	1912	90	28,085	$288,995	90.00%	$28,899
Little River	Conc Slip Annex	1935	87	113,399	$826,679	90.00%	$82,668
Little River	Conc Slip Elevator	1955	67	59,424	$787,962	90.00%	$78,796
Little River	Conc Slip Annex	1955	67	605,958	$2,920,718	90.00%	$292,072
Little River	Conc Slip Annex	1957	65	229,606	$1,400,597	90.00%	$140,060
Little River	3 Bolted Steel Tanks @ 190,705	1960	62	572,115	$1,264,374	90.00%	$126,437

Sale Number	23

Region	**County**	**Sale Month / Year:**
West	Thomas	5/2018

Total Sale Price	$1,720,000	**Weighted Avg Age**	63.53
Land Value	9,750	**Total Depreciation %**	67.94%
Amt PP / BV	568,247	**Annual Depreciation %**	1.07%
Non- Grain Structure RCNLD	$283,869	**Total Accured Depreciation**	$1,818,244
Net Sales Price	$867,885	**Total Grain Storage**	597,583
		Net price per Bu:	$1.45
Seller	Barlett Grain Company	**Concrete Storage %**	82%
Buyer	Scoular Company	**Wood Frame / Metal Clad %**	0%
Situs Address	407 Bartlett Drive, Levant, Ks	**Upright Steel %**	18%
		Flat %	

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Levant	Conc Slip Elevator	1950	68	351,583	$2,513,818	90.00%	$251,382
Levant	2 Steel Bins @123,000	1975	43	246,000	$297,660	71.67%	$84,337

Sale Number	24

Region	County
West	Rice

Sale Month / Year:
9/2014

Total Sale Price	$3,100,000
Land Value	199,600
Amt PP / BV	879,899
Non- Grain Structure RCNLD	$86,726
Net Sales Price	$2,133,376
Seller	Silica Grain LLC
Buyer	Gavilon Grain LLC
Situs Address	Silica, KS

Weighted Avg Age	26.45
Total Depreciation %	45.15%
Annual Depreciation %	1.71%
Total Accured Depreciation	$1,591,579
Total Grain Storage	951,294
Net price per Bu:	$2.24
Concrete Storage %	90%
Wood Frame / Metal Clad %	0%
Upright Steel %	10%
Flat %	0%

Railroad Service

Location	Number of Cars
Silica	60

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Silica	Steel Bin	1980	34	111,884	$132,023	56.67%	$57,210
Silica	Steel Bin	1980	34	115,702	$136,528	56.67%	$59,162
Silica	2 Conc Jump Silos @ 256,996	2011	3	513,992	$2,035,408	5.00%	$1,933,638
Silica	3 Conc Stave Silos @ 29,703	1954	60	89,109	$546,238	90.00%	$54,624
Silica	Conc Stave	1954	60	29,196	$234,152	90.00%	$23,415
Silica	2 Conc Staves @ 29,473	1954	60	58,946	$402,012	90.00%	$40,201
Silica	Conc Stave	1954	60	29,796	$238,964	90.00%	$23,896
Silica	Conc Stave	1954	60	2,669	$38,113	90.00%	$3,811

Sale Number	25

Region	**County**	**Sale Month / Year:**
West	Graham	10/22

Total Sale Price	$350,000	**Weighted Avg Age**	64.48
Land Value	13,200	**Total Depreciation %**	92.26%
Amt PP / BV	43,296	**Annual Depreciation %**	1.43%
Non- Grain Structure RCNLD	$64,669	**Total Accured Depreciatior**	$2,728,247
Net Sales Price	$242,035	**Total Grain Storage**	394,005
		Net price per Bu:	$0.61
Seller	Frontier Ag Inc,	**Concrete Storage %**	76%
Buyer	Timothy & Brenda Werth	**Wood Frame / Metal Clad %**	0%
Situs Address	2567 355th Ave, Bogue KS	**Upright Steel %**	6%
		Flat %	17%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Bogue	Conc Slip Elevator	1958	64	206,727	$2,003,185	90.00%	$200,318
Bogue	3 Bolted Steel Tanks @ 12,426	1950	72	37,278	$127,864	90.00%	$12,786
Bogue	Steel Flat Storage	1958	64	150,000	$312,000	90.00%	$31,200

Sale Number	26

Region	County	Sale Month / Year:
East	Montgomery	4/2010

Total Sale Price	$885,000	**Weighted Avg Age**	42.55
Land Value	$40,570	**Total Depreciation %**	85.10%
Amt PP / BV	162,040.73	**Annual Depreciation %**	2.00%
Non- Grain Structure RCNLD	$212,491	**Total Accured Depreciation**	$2,683,017
Net Sales Price	$510,468	**Total Grain Storage**	872,999
		Net price per Bu:	$0.58
Seller	SEK Grain Inc	**Concrete Storage %**	95%
Buyer	Midwest Fertilizer Inc	**Wood Frame / Metal Clad %**	0%
Situs Address	Coffeyville, KS; Liberty, KS and rural area, Montgomery County, KS	**Upright Steel %**	5%
		Flat %	0%

Railroad Service

Location	Number of Cars
Coffeyville / Liberty	Unknown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Coffeyville	Conc Slip Elevator	1954	56	508,000	$3,114,040	90.00%	$311,404
Liberty	Conc Jump Annex	2006	4	205,750	$925,875	6.67%	$864,150
Liberty	Steel Hopper Bin	1977	33	2,914	$12,355	55.00%	$5,560
Liberty	Steel Bin	1977	33	8,469	$18,124	55.00%	$8,156
Liberty	Steel Bin	1977	33	5,557	$12,726	55.00%	$5,726
Liberty	Steel Bin	1977	33	20,567	$29,616	55.00%	$13,327
Liberty	Steel Bin	1977	33	73,776	$84,842	55.00%	$38,179
Liberty	2 Steel Bins @ 14,760	1977	33	29,520	$50,479	55.00%	$22,716
Liberty	Steel Hopper Bins 2 @ 888	1977	33	1,776	$10,656	55.00%	$4,795
Liberty	3 Bolted Steel Tanks @ 5,557	1977	33	16,670	$38,341	55.00%	$17,253

Sale Number	27

Region	County	Sale Month / Year:
West	Sherman	4/2011

Total Sale Price	$2,300,000	**Weighted Avg Age**	42.27
Land Value	62,193	**Total Depreciation %**	86.09%
Amt PP / BV	802,328	**Annual Depreciation %**	2.04%
Non- Grain Structure RCNLD	$244,106	**Total Accured Depreciation**	$7,371,439
Net Sales Price	$1,191,373	**Total Grain Storage**	2,109,078
		Net price per Bu:	$0.56
Seller	Kanarado COOP Assoc	**Concrete Storage %**	97%
Buyer	Frontier Ag inc.	**Wood Frame / Metal Clad %**	0%
Situs Address	$1,253,566	**Upright Steel %**	3%
		Flat %	$0.59

Railroad Service

Location	Number of Cars
Kanorado	33

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Kanorado	Conc Slip Elevator	1945	66	168,000	$1,360,800	90.00%	$136,080
Kanorado	Conc Slip Elevator	1955	56	200,142	$1,549,099	90.00%	$154,910
Kanorado	Conc Slip Elevator	1960	51	220,000	$1,665,400	85.00%	$249,810
Kanorado	Conc Slip Annex	1961	50	259,156	$1,212,850	83.33%	$202,142
Kanorado	Conc Slip Annex	1967	44	311,780	$1,384,303	73.33%	$369,148
Kanorado	Conc Slip Annex	1977	34	220,000	$1,073,600	56.67%	$465,227
Kanorado	Conc jump Annex	1993	18	300,000	$1,200,000	30.00%	$840,000
Kanorado	Conc Jump Annex	2000	11	300,000	$1,200,000	18.33%	$980,000
Kanorado	20 Steel Bins @ 6,500	1961	50	130,000	$250,900	83.33%	$41,817

Sale Number	28

Region	**County**
East	Douglas

Sale Month / Year: 9/2011

Total Sale Price	$1,300,000
Land Value	182,770
Amt PP / BV	394,461
Non- Grain Structi	$196,887
Net Sales Price	$708,651

Seller	Acorn East, LLC
Buyer	Ottawa Cooperative Asso
Situs Address	2001 Moodie Road, Lawerence, KS 66044

Weighted Avg Age	51
Total Depreciation %	76.85%
Annual Depreciation %	1.51%
Total Accured Depreciation	$1,746,114
Total Grain Storage	412,000
Net price per Bu:	$1.72
Concrete Storage %	98%
Wood Frame / Metal Clad %	0%
Upright Steel %	2%
Flat %	0%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Lawerence	Concrete Slip Elevator	1960	51	153,756	$1,270,025	85.00%	$190,504
Lawerence	Concrete Slip Annex	1960	51	232,026	$1,118,365	85.00%	$167,755
Lawerence	2 Bolted Steel Tanks @ 13,109	1960	51	26,218	$72,624	85.00%	$10,894

Sale Number	29

Region	County	Sale Month / Year:
West	Haskell	8/2019

Total Sale Price	$950,000	**Weighted Avg Age**	62.37
Land Value	9,970	**Total Depreciation %**	93.73%
Amt PP / BV	449,220	**Annual Depreciation %**	1.50%
Non- Grain Structure RCNLD	$0	**Total Accured Depreciation**	$7,342,112
Net Sales Price	$500,780	**Total Grain Storage**	1,847,232
		Net price per Bu:	$0.27
Seller	Sublette Enterprises	**Concrete Storage %**	82%
Buyer	Sublette COOP	**Wood Frame / Metal Clad %**	5%
Situs Address	West Lalande Ave, Sublette, KS	**Upright Steel %**	0%
		Flat %	13%

Railroad Service

Location	Number of Cars
Sublette	Unkown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Sublette	Conc Slip Elevator	1940	79	82,503	$913,308	90.00%	$91,331
Sublette	Conc Slip Elevator	1956	63	200,000	$1,778,000	90.00%	$177,800
Sublette	Conc Slip Annex	1956	63	550,000	$2,464,000	90.00%	$246,400
Sublette	4 Conc Staves @14,007	1930	89	56,030	$404,537	90.00%	$40,454
Sublette	Conc Slip Annex North	1977	42	365,000	$1,810,400	70.00%	$543,120
Sublette	Metal Clad Elevator	1930	89	43,699	$448,352	90.00%	$44,835
Sublette	Steel Flat Storage	1957	62	550,000	$863,500	90.00%	$86,350

Sale Number	30

Region	**County**	**Sale Month / Year:**
West	Lincoln	10/2022

Total Sale Price	$2,500,000	**Weighted Avg Age**	50.09
Land Value	16,280	**Total Depreciation %**	69.61%
Amt PP / BV	1,105,380	**Annual Depreciation %**	1.39%
Non- Grain Structure RCNLD	$59,602	**Total Accured Depreciation**	$3,021,118
Net Sales Price	$1,335,018	**Total Grain Storage**	851,760
		Net price per Bu:	$1.57
Seller	Walker Products Company, Inc	**Concrete Storage %**	87%
Buyer	The Scoular Company, Inc	**Wood Frame / Metal Clad %**	0%
Situs Address	414 S 6th St, Indiana TWP, KS	**Upright Steel %**	0%
		Flat %	13%

Railroad Service

Location	**Number of Cars**

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Lincoln	Conc Slip Elevator	1954	68	107,271	$1,227,180	90.00%	$122,718
Lincoln	Conc Slip Annex	1954	68	108,107	$796,749	90.00%	$79,675
Lincoln	Conc Slip Annex	1964	58	172,770	$1,133,371	90.00%	$113,337
Lincoln	Conc Slip Annex	2012	10	201,403	$1,266,825	16.67%	$1,055,687
Lincoln	Wood Flat Storage	1960	62	262,209	$440,511	90.00%	$44,051

Sale Number	31

Region	County
West	Gove

Sale Month / Year: 6/2022

Total Sale Price	$1,469,838
Land Value	11,280
Amt PP / BV	441,797
Non- Grain Structure RCNLD	$8,172
Net Sales Price	$1,019,869
Seller	Frontier Ag, Inc
Buyer	High Plains Ag, LLC
Situs Address	Grainfield, KS

Weighted Avg Age	56.12
Total Depreciation %	82.39%
Annual Depreciation %	1.47%
Total Accured Depreciation	$4,718,503
Total Grain Storage	837,758
Net price per Bu:	$1.22
Concrete Storage %	100%
Wood Frame / Metal Clad %	0%
Upright Steel %	0%
Flat %	0%

Railroad Service

Location	Number of Cars
Grainfield	Unkown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Grainfield	Conc Slip Elevator	1950	72	101,319	$1,172,261	90.00%	$117,226
Grainfield	Conc Slip Annex	1959	63	524,444	$2,606,487	90.00%	$260,649
Grainfield	Conc Jump Annex	1995	27	211,995	$1,212,611	45.00%	$666,936

Sale Number	32

Region	County	Sale Month / Year:
West	Rice	4/2020

Total Sale Price	$100,000	**Weighted Avg Age**	81.13
Land Value	23,700	**Total Depreciation %**	97.50%
Amt PP / BV	8,890	**Annual Depreciation %**	1.20%
Non- Grain Structure RCNLD	$24,714	**Total Accured Depreciation**	$1,665,188
Net Sales Price	$66,396	**Total Grain Storage**	250,445
		Net price per Bu:	$0.27
Seller	ADM Company	**Concrete Storage %**	100.00%
Buyer	Centra Prairie COOP	**Wood Frame / Metal Clad %**	0.00%
Situs Address	321 N East Ave, Lyons, KS	**Upright Steel %**	0.00%
		Flat %	

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Lyons	Conc Slip Elevator	1931	89	78,567	$879,165	90.00%	$87,916
Lyons	Conc Slip Annex	1945	75	171,878	$1,027,830	90.00%	$102,783

Sale Number	33

Region	County	Sale Month / Year:
West	Stanton	3/2019

Total Sale Price	$2,158,000	**Weighted Avg Age**	54.39
Land Value	6,400	**Total Depreciation %**	85.81%
Amt PP / BV	1,322,106	**Annual Depreciation %**	1.58%
Non- Grain Structure RCNLD	$28,416	**Total Accured Depreciation**	$4,845,249
Net Sales Price	$807,478	**Total Grain Storage**	1,052,000
		Net price per Bu:	$0.77
Seller	ADM Company	**Concrete Storage %**	100%
Buyer	Skyland Grain LLC	**Wood Frame / Metal Clad %**	0%
Situs Address	304 West Highland Ave, Johnson City, KS	**Upright Steel %**	0%
		Flat %	0%

Railroad Service

Location	Number of Cars
Johnson City	Unknown

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Johnson City	Conc Slip Elevator	1953	66	562,000	$3,624,900	90.00%	$362,490
Johnson City	Conc Slip Form Annex	1983	36	490,000	$2,107,000	60.00%	$842,800

Sale Number	34

Region	County	Sale Month / Year:
West	Harper	12/2012

Total Sale Price	$165,000	**Weighted Avg Age**	65.42
Land Value	12,825	**Total Depreciation %**	93.48%
Amt PP / BV	27,051	**Annual Depreciation %**	1.43%
Non- Grain Structure RCNLD	$26,140	**Total Accured Depreciation**	$1,418,182
Net Sales Price	$111,809	**Total Grain Storage**	276,415
		Net price per Bu:	$0.40
Seller	Danville Cooperativer Asso	**Concrete Storage %**	100.00%
Buyer	Schmidt Family Land & Cat	**Wood Frame / Metal Clad %**	0.00%
Situs Address	Freeport, KS	**Upright Steel %**	0.00%
		Flat %	0.00%

Railroad Service

Location	Number of Cars

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Freeport	Conc Slip Elevator	1941	71	42,415	$483,107	90.00%	$48,311
Freeport	Conc Slip Annex	1941	71	174,000	$903,060	90.00%	$90,306
Freeport	Conc Stave Annex	1970	42	60,000	$407,400	70.00%	$122,220

Sale Number	35

Region	County	Sale Month / Year:
West	Sherman	4/2010

Total Sale Price	$1,382,063	**Weighted Avg Age**	64.27
Land Value	53,920	**Total Depreciation %**	90.51%
Amt PP / BV	467,920	**Annual Depreciation %**	1.41%
Non- Grain Structure RCNLD	$160,723	**Total Accured Depreciation**	$6,671,964
Net Sales Price	$753,420	**Total Grain Storage**	2,030,758
		Net price per Bu:	$0.37
Seller	Mueller Enterprises	**Concrete Storage %**	100.00%
Buyer	Scoular Company	**Wood Frame / Metal Clad %**	0.00%
Situs Address	17th & Main, Goodland, KS	**Upright Steel %**	0.00%
		Flat %	0.00%

Railroad Service

Location	Number of Cars
Goodland	28

Grain Stuctures

Location	Structure	Year Built	Age	Capacity (Bu)	RCN	% Depr	RCN less All Depr
Goodland	Conc Slip Elevator	1948	70	268,186	$1,928,257	90.00%	$192,826
Goodland	Conc Slip Annex	1954	64	498,538	$1,984,181	90.00%	$198,418
Goodland	Conc Slip Annex	1956	62	1,264,034	$4,044,909	90.00%	$404,491