

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM
REPORT **112**

JUNKYARD VALUATION
SALVAGE INDUSTRY APPRAISAL PRINCIPLES
APPLICABLE TO HIGHWAY BEAUTIFICATION

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AREAS OF INTEREST:
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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

Systematic, well-designed research provides the most effective approach to the solution of many problems facing highway administrators and engineers. Often, highway problems are of local interest and can best be studied by highway departments individually or in cooperation with their state universities and others. However, the accelerating growth of highway transportation develops increasingly complex problems of wide interest to highway authorities. These problems are best studied through a coordinated program of cooperative research.

In recognition of these needs, the highway administrators of the American Association of State Highway Officials initiated in 1962 an objective national highway research program employing modern scientific techniques. This program is supported on a continuing basis by funds from participating member states of the Association and it receives the full cooperation and support of the Federal Highway Administration, United States Department of Transportation.

The Highway Research Board of the National Academy of Sciences-National Research Council was requested by the Association to administer the research program because of the Board's recognized objectivity and understanding of modern research practices. The Board is uniquely suited for this purpose as: it maintains an extensive committee structure from which authorities on any highway transportation subject may be drawn; it possesses avenues of communications and cooperation with federal, state, and local governmental agencies, universities, and industry; its relationship to its parent organization, the National Academy of Sciences, a private, nonprofit institution, is an insurance of objectivity; it maintains a full-time research correlation staff of specialists in highway transportation matters to bring the findings of research directly to those who are in a position to use them.

The program is developed on the basis of research needs identified by chief administrators of the highway departments and by committees of AASHO. Each year, specific areas of research needs to be included in the program are proposed to the Academy and the Board by the American Association of State Highway Officials. Research projects to fulfill these needs are defined by the Board, and qualified research agencies are selected from those that have submitted proposals. Administration and surveillance of research contracts are responsibilities of the Academy and its Highway Research Board.

The needs for highway research are many, and the National Cooperative Highway Research Program can make significant contributions to the solution of highway transportation problems of mutual concern to many responsible groups. The program, however, is intended to complement rather than to substitute for or duplicate other highway research programs.

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This report was prepared by the contracting research agency. It has been reviewed by the appropriate Advisory Panel for clarity, documentation, and fulfillment of the contract. It has been accepted by the Highway Research Board and published in the interest of effective dissemination of findings and their application in the formulation of policies, procedures, and practices in the subject problem area.

The opinions and conclusions expressed or implied in these reports are those of the research agencies that performed the research. They are not necessarily those of the Highway Research Board, the National Academy of Sciences, the Federal Highway Administration, the American Association of State Highway Officials, nor of the individual states participating in the Program.

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FOREWORD

By Staff

Highway Research Board

The Highway Beautification Act of 1965 made several major changes in Federal policy regarding the control of junkyards. These changes have affected state and local programs. This report discusses principles of estimating the value of junkyards and reviews the legal cases that have been decided as relating to the various elements of compensation involved. Right-of-way engineers and agents, appraisers, attorneys, and other personnel engaged in the acquisition of property for highway purposes should find this report of special interest.

The 1965 Act provides for effective control of visible junkyard areas by screening, removal or relocation of all such facilities to at least 1,000 feet from the right-of-way of the Interstate and primary highway systems. These controls and changes to Federal policy affect state and local highway programs, their administrative procedures, and related legal and valuation elements. The studies conducted under this project treat the problem of junkyard valuation, general valuation principles of the salvage industry, and their legal ramifications.

Based on the assumption that compensation must be paid for the relocation, removal, or disposal of junkyards specified in the 1965 Act, it has been the objective of the legal portion of the research to review all decided cases and discuss all the various elements of compensation involved. The objective of the valuation portion of the research was to discuss all valuation principles and concepts applicable to junkyard use, including the separate treatment of different types of salvage industry establishments.

The research agency, Real Estate Research Corporation, analyzed the valuation and legal factors that would be encountered through the removal, setback, and screening of salvage yards, scrap processors, and auto wrecking storage yards. The research included a review of published information and the extensive real estate data kept on file by the agency. In addition, field work was conducted to include inspection of various types of auto wrecker facilities, interviewing or corresponding with highway right-of-way personnel in each of the 50 states, and interviewing members of the salvage industry.

The report discusses characteristics of the salvage industry components and identifies current valuation practices, including an overview of techniques used by a selected group of states. Furthermore, legal practices and procedures are discussed. The researchers include a discussion on the interpretation of the findings and how the findings of the research can be applied to practical problems.

The various highway personnel engaged in the acquisition and control of junkyards should find this document of practical use. References and citations are given to other literature to aid those wishing to study or research this problem in greater depth.

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The researchers conducted interviews and corresponded with many people in various endeavors during the course of their studies. Contributions were freely made, both by the participants named in the following and by members of their staffs. Grateful appreciation is expressed to all who helped. Participants included:

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JUNKYARD VALUATION

SALVAGE INDUSTRY APPRAISAL PRINCIPLES APPLICABLE TO HIGHWAY BEAUTIFICATION

SUMMARY

The Highway Beautification Act of 1965 provides for effective control of visible junkyard areas by screening or by removal, relocation, or disposal of all such facilities within 1,000 feet of the right-of-way of Interstate and primary system highways, if they are in unzoned areas as defined later.

Assuming compensation must be paid for relocation, removal, or disposal of junkyards, as specified in the 1965 Act, the legal research has included a review of all decided cases discussing the various elements of compensation involved. The research on valuation has been structured to an examination of the principles, concepts, and alternative methods of estimating value of salvage operations.

Principal Findings

According to people in components of the industry and to facts verified by the research study, those subsegments of the salvage industry that are inaccurately classified as junkyards include collectors, scrap processors, auto wreckers, refuse disposal areas, and similar facilities. General elements of value include: the definition of scrap of all kinds as personal property, the storage capacity of the land, zoning regulations, location improvements, other land uses in the vicinity, the volume of material to be processed or stored, and the economics of the industry.

The use of scrap by the steel industry governs the size and type of improvements in both an automobile wrecker's yard and the scrap processor's facility. The technological improvements that take place in the processing industry, such as the trend from balers to shearers or combinations, and now to shredders, can lead to obsolescence of the older methods. The storage capacities of the scrap yard and of the auto wrecker's facility are related to changing prices of scrap steel. The quality of the scrap governs its price and, in turn, governs the technological improvements and the demand capacity of storage facilities.

In general, the auto wrecker (graveyard) requires from one to five acres of land near the center of the city or from 10 to 30 acres in an outlying area. The scrap processor is commonly located on a 10- to 30-acre facility near the center of the market (most often the hub of the trading area). An auto wrecker needs only a small office and warehouse capacity, a landfill operation needs a small storage shed for movable machinery, but the scrap processor needs a more complex and expensive facility than the other segments of the industry; for example, shredders cost as much as \$2 or \$3 million.

All segments of this industry have problems very similar to those of such other types of land-intensive users as brickyards, concrete block manufacturers,

lumberyards, and similar outdoor storage facilities. The procedures of valuation should therefore be similar.

Screening can be accomplished within the existing right-of-way, extended right-of-way, or easement areas. The form of screening is open to the imagination of the planner and can include natural objects, plantings, and fencing. If the facility cannot be screened and is visible, it must be moved, relocated, or disposed of. If portions of the facility must be disposed of, the State may be required to either purchase the automobiles or other materials stored thereon or interrupt the business, or both. Business losses, if reimbursable, must be determined through a valuation of the business itself. Here, the economics of the industry becomes an element of value even greater than it is in the valuation of the real estate.

The recognized approaches to value (market data comparison, cost, and income) are all applicable to the valuation of any and all types of salvage, scrap, or disposal facilities. A survey of the procedures used by the various states did not uncover any unique or peculiar innovations for the appraisal of a salvage operation, nor did an analysis of approaches used by other appraisers. The cost and the market data comparison approaches have been mentioned most often as the best indicators of value.

The legal cases pertaining to the Beautification Act of 1965 are few, yet a majority (43 in 1969) of the states have adopted "junkyard control" acts. Of the decided cases found that bear on the subject, most were oriented to control by police power, through various types of zoning. Courts heretofore have distinguished between compensation in reimbursement for property taken, and losses and expenses beyond the value of the property taken. The distinction is artificial, and those states modeling statutes after the 1965 Act will have changed the judicial thinking on this distinction. The value of business has, in a minor way, become a fact in the 1968 Highway Act; it provides that in lieu of a relocation claim the highway displacee may elect to receive an amount equal to the average annual net earnings of the business, or \$5,000, whichever is less.

Evaluation of Findings

The methodology of valuation used in other more common types of appraisals can be followed in the appraisal of a salvage operation. It is not much of a step from the appraisal of a used car lot, a parking lot, or a brickyard to the appraisal of an auto wrecker's yard. The only unusual factors are the appearance of the materials stored and the not universally understood economics of the scrap industry. The scrap processor's facility is oriented to similar economic factors; the improvements tend to be classified as single-purpose or special use properties, and these can usually be best valued by the cost approach.

The valuation of a tract of land subject to an easement can be best valued if it is compared to sales of land subject to the same or similar easements. Thus, if the value of a site before the taking of a screening easement can be found by comparing it with sales without easements, the value after the taking can be best determined by comparing it with sales of land subject to similar easements. The difference should be equal to the value of the part taken and will often (but not always) include damages to the remainder. If effective control can be accomplished by screening within the extant right-of-way, this should be the preferred choice. The next best method would be similar to that carried out in Wisconsin; there, by

active cooperation with the salvage dealers association, the State has been successful in getting the auto wreckers to donate screening easements.

If, as a last resort, it becomes essential to move wrecked automobiles or scrap, it has been found advantageous to obtain three or more moving bids, since there is apt to be a wide divergency. In the case of a partial move, the owner should be consulted before selection of the salvage to be moved. The cost to move will vary with the quality of salvage, distance, and weight. If the owner is not given the opportunity to select the portions of his property to be moved, the State tends to become a partner in the normal business decision prerogatives of management. It may be less costly to allow the owner to make the decision. Further, it appears that statutorily—if the 1965 Act is used as a model—the business losses will be met, at least in part, through recoupment of moving or relocation expenses.

Valuation of land will be best accomplished through an analysis of sales of other lands within the area. Appropriate adjustments should be made upward or downward to reflect the differences caused by variances in time of sale, access, visibility, size, location, zoning, and all other pertinent items. Valuation of the improvements should generally be carried out by the cost approach, but the income and market approaches should be tested and used if at all possible. The cost approach—especially in the case of a special purpose property—will measure such factors as functional obsolescence of balers caused by the economics of size of the shredder. Further, this is the single best method to measure consequential items such as moving expenses, fencing, and landscaping costs.

Application of Findings

Examples of the approaches to valuation have been hypothesized to present an overview of possible conditions that will confront the appraiser or right-of-way personnel. To postulate the problems, statistical information on the economics of the industry and data from case studies have, wherever possible, been melded.

The income approach has been used for an auto wrecker's facility and its technique structured similarly to that of a hotel appraisal. An alternate technique would have been to use a straight income approach based on ground rent. In the landfill example, the income approach has been combined with the market approach.

In the example of business evaluation, the problem has been presented from the stock value point of view in one case, and from certified public accountants' method in the other. Both are reasonable, tested methods.

The cost approach has been found reliable in the valuation of an obsolete scrap processor facility.

The approach to the valuation of a screening easement is based on an analysis of the market data comparison approach. It will adequately measure all of the elements of value, loss, and damages.

In conclusion, it appears that, with a knowledge of the economics of the industry and with sound reasoning and prudent analysis, the appraisal of a salvage operation or its screening easement, or both, can be accomplished by correct application of extant appraisal methodology.

CHAPTER ONE

INTRODUCTION AND RESEARCH APPROACH**ASSIGNMENT AND PURPOSE**

The assignment has been to study the various valuation and legal principles and techniques related to public control of junkyards. Several major changes in federal policy regarding control of junkyards were made by the Highway Beautification Act of 1965, and these changes have affected the state and local programs on such matters and require valuation and legal studies.

Assuming that compensation must be paid for the relocation, removal, or disposal of junkyards specified in the Highway Beautification Act of 1965, the objectives of this study have been as follows:

1. The legal research should include a review of all the decided cases that discuss all the various elements of compensation involved.
2. The valuation research will include a general discussion of all principles and concepts of valuation that are applicable to the junkyard use. The valuation research should give careful and objective consideration to explanation of alternative methods of estimating compensation for all elements. Separate treatment, without advocacy, will be given to the methods of measuring business losses and other special damages. The valuation analysis should recognize and treat separately, if necessary, the different types of junkyard establishments.

Actual illustrations and case studies have been used.

HIGHWAY BEAUTIFICATION ACT

The Highway Beautification Act of 1965, signed into law on October 22, 1965, provides for:

- I. Control of outdoor advertising.
- II. Control of junkyards.
- III. Landscaping and scenic enhancement.

The actual control of advertising and also of junkyards remains in the hands of the states. Title II of the act provides minimum standards for the control of junkyards, scrap-metal-processing facilities, automobile wreckers, garbage-truck dumps, and the like that are located within 1,000 ft of the edge of the right-of-way along Interstate and Federal-aid primary systems.

Effective control may be achieved either by screening junkyards from view by such means as fencing or planting or by removing what cannot be screened. To provide for an orderly transition period, junkyards in existence on October 22, 1965, that cannot be screened and must therefore be removed may be allowed to remain until July 1, 1970 (16).

The only junkyards within 1,000 ft of Interstate and primary system highways that need not be screened or removed are those located in zoned or unzoned industrial areas (26).

An unzoned industrial area means an area not zoned by state or local law, regulation or ordinance. A junkyard shall be deemed to be in an unzoned industrial area when:

1. The junkyard is located within a distance of 1,000 feet of at least one industrial activity which is in continual operation for at least six months of the year and
2. There is no building or other structure within 1,000 feet of the junkyard which is used or designed for use as a residence.

States may, under certain conditions, compensate owners for removal, relocation, or disposal of their junkyards, and the federal government will reimburse the states for 75 percent of such costs.

Federal-aid highway funds apportioned to a state after January 1, 1968, shall be reduced by amounts equal to 10 percent of the amounts that would otherwise be apportioned to that state until such time as the state shall provide for effective control of junkyards. Effective control means that the junkyards shall be screened by natural objects, plantings, fences, or other appropriate means so as not to be visible from the main-traveled way of the system, or shall be removed from the site. Exceptions to the removal or screening of junkyards, auto graveyards, and scrap-metal-processing facilities within 1,000 ft of the nearest edge of the right-of-way are those zoned as industrial under authority of state law, or those not zoned under authority of state law but used for industrial activities as determined by several states. Any junkyard in existence on the date of enactment of the law that does not conform to the requirements, and that the Secretary of Transportation finds impractical to screen, shall not be required to be removed until July 1, 1970.

The following definitions are delineated in the law:¹

1. Junk—shall mean old or scrap copper, brass, rope, rags, batteries, paper, trash, rubber, debris, waste or junked, dismantled or wrecked automobiles or parts thereof, iron, steel and other old or scrap ferrous or nonferrous material.
2. Automobile Graveyard—shall mean any establishment or place of business which is maintained, used or operated for storing, keeping, buying or selling wrecked, scrapped, ruined or dismantled motor vehicles or motor vehicle parts.
3. Junkyard—shall mean an establishment or place of

¹ Pub. L. No. 89-285, 79 Stat. 1028, 1030, amending 23 U.S.C. § 136 (1965).

business which is maintained, operated or used for storing, keeping, buying or selling junk or for the maintenance or operation of an automobile graveyard and the term shall include garbage dumps and sanitary fills.

The Federal Highway Administration's interpretation of effective control denotes that each location must be treated individually to meet a specific condition; it is not the intent to conceal a place of active business but merely to soften the visual impact of the exposed junk (18).

RESEARCH APPROACH

The research approach has been to analyze the valuation and legal factors that would be encountered through the removal, setback, and screening provisions of the Highway Beautification Act if and when these factors are encountered in an analysis of salvage yards, scrap processors, and auto-wrecking storage yards. The guidelines outlined in this report are based on data obtained from various general sources including the following:

Library Data

Real Estate Research Corporation maintains an extensive library of private, institutional, and governmental statistics regarding urban trends and land values. In addition, its data bank contains current information on construction costs, highway locations, and other social and economic factors pertinent to urban and rural economic analyses. These sources of information have been drawn upon liberally where appropriate to this study.

Recorded Experience

For over 35 years Real Estate Research Corporation has been engaged in the study of real estate and the valuation of real estate, and in economic analyses of national, regional, and local markets. During this period there has been a systematic recording of data bearing on the operation of real estate markets, on critical analysis of economic factors, on valuation methodology, and on the impact of transportation patterns and growth on the community real estate market structure. A variety of data has been developed through this experience and this information has been drawn upon in connection with the present study.

Collateral Research

The research agency is continuously engaged throughout the United States in research market analysis and valuation and other analytical assignments for private organizations and governmental agencies; these involve projects relating in varying degrees to the present assignment. The tech-

niques employed, analyses undertaken, findings derived, and eventual conclusions set down in other studies have provided a valuable background of information for this report. During the past several years, the research agency has undertaken appraisals and market studies involving open land-use storage, such as lumberyards, sand and gravel processors, concrete block manufacturers, scrap-metal processors, and auto and truck wreckers. These last have been appraised in a wide variety of states, including Washington, Montana, South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania, and New York. Several of these completed and current studies have a direct bearing on the various aspects of this analysis and provide important background data.

Original Field Work and Research

In the course of extensive field investigations, interviews, library and other research, and in analysis of statutory and case law, the agency's personnel completed the following basic research programs:

1. They personally inspected and analyzed various types of auto-wrecker facilities, scrapyards, and scrap-processor facilities to appraise the properties for estimated fair market value.
2. They interviewed and corresponded with right-of-way personnel in each of the 50 state highway departments and received a rather broad response to questions concerning the concepts and procedures bearing on this study that are used in the individual right-of-way departments.
3. They reviewed pertinent published literature on the subject of the valuation of properties identified as junkyards in the Highway Beautification Act as these relate to value, screening and screening removal, and right-of-way acquisition.
4. They conducted research in each state of the case law applicable to the compensation and the policies and procedures that would fall under the requirements of the 1965 Highway Beautification Act.
5. They researched the legal statutory provisions that regulate junkyard control in each state.
6. They reviewed the definition of terms that recur in a study of this nature; these definitions are given in Appendix D.
7. They reviewed the basic fundamental principles of value.
8. They interviewed individual members of the industry active in industrial associations of scrap processors and auto wreckers.

CHAPTER TWO

FINDINGS

INDUSTRY DATA

Characteristics of the Salvage Industry Components

"Public control of junkyards" is an unfortunate generalized title meant to cover the activities of several land-use categories within the salvage industry—scrap processors, auto wreckers, and junk collectors. People in these separate industries, and particularly the scrap processors, are sensitive about this generalization. To understand the function of each of these groups it is first necessary to understand the scrap cycle, which is, as reported by the Institute of Scrap Iron and Steel (33):

The Scrap Cycle

Everything made of iron and steel eventually becomes scrap. The material wears out; it is destroyed by accidents or natural forces; or it becomes outdated and obsolete.

Such scrap is obsolete or obsolescence scrap, it provides about two-thirds of the 30 million or more tons of scrap arising in this country each year. The rest, industrial scrap, comes from the left-overs created when new iron and steel products are made.

All this scrap flows back to the mills and foundries through junk collectors, auto wreckers, and scrap processors. It is the processor, however, who is the funnel through which all of it must pass before it can be used again. The processor has the equipment and the know-how to manufacture a raw material suitable for remelting by mills and foundries.

When a new product serves out its useful life, it is salvaged for re-use. As scrap, it becomes an eternal product used again and again through the workings of the scrap cycle.

The auto wrecker is a part of this cycle. It is he who helps to keep the scrap processor supplied with raw materials.

A more detailed discussion of the characteristics of these various segments of the scrap industry follows.

Collectors

Collectors (known as junk collectors) generally assemble any and all forms of waste material—paper, ferrous and nonferrous metals, and rags. These materials are sorted and sold to various scrap processors. A part of this is done by small entrepreneurs (collectors) who use a truck as their principal piece of equipment to scour the city and county and gather waste materials of all kinds, occasionally including obsolete automobiles. They often obtain scrap from small metal-working plants that do not have enough scrap to attract the interest of a processor or a broker.

These collectors may sell their rags and paper to paper mills and their iron and steel scrap directly to the scrap

processor. They may sell their mixed loads of waste materials to intermediate gathering places, one of whose functions is to assemble truckloads of ferrous scrap for sale and delivery to the scrap processor. To some degree, the number of collectors of scrap varies with the demand for and the price of scrap, for they can easily shift to the hauling of such other things as produce or building materials.

To a large extent, the collection operation also is performed by the scrap processors themselves, for they purchase such objects as obsolete ships, railroad equipment, and streetcar systems for processing into forms suitable for their customers. Processors, either directly or through subcontractors, obtain obsolete auto bodies from auto wreckers or other sources (17).

Scrap Processors

Scrap processors prefer to be considered as manufacturers. Several factors have led to their desire for this classification—namely, greater prestige, income tax considerations, zoning regulations, and the actual operation of the industry within the secondary metal market. Although many of the larger scrap processors do process several forms of scrap, they can be generally classified into three major categories, those handling ferrous metals, nonferrous metals, or used paper, rags, and miscellaneous special materials. These facilities are commonly located in urban areas zoned for industry, and rail accessibility is a necessary locational consideration.

Ferrous Scrap-Metal Processors (steel, iron).—Processors of ferrous metals are the most common, the most numerous, and generally the largest of the scrap processors, mainly because of the quantity and total value of the product handled. These processors operate scrapyards where unprepared or unprocessed scrap is received, segregated, reduced to specification size, and compressed, shredded, or otherwise processed into forms demanded by customers. The material that they purchase comes from industrial waste and by-products, auto wreckers' yards, junk collectors, or individuals who occasionally have scrap to sell.

The ferrous scrap processor usually has a substantial investment in processing equipment. The cost of equipment alone for these processors ranges from \$150,000 to more than \$3 million. Those processors at the lower end of this cost range are generally using equipment or methods that either are obsolete or are becoming so, and they are not as efficiently operated or as competitive as modern, well-designed scrap-processing businesses. Those scrap processors with investments in the upper cost ranges are

mostly those that handle large volumes and are located in metropolitan areas. Major installations are found in Houston, Kansas City, Cleveland, Chicago, and Los Angeles. The large volume of scrap processed enables these multimillion-dollar giants to amortize the cost of such expensive equipment as shredders.

Processed scrap is sold either directly or through a broker to the foundry or mill, where it will be used in the production of new iron or steel.

Nonferrous Scrap-Metal Processors.—A processor who specializes in nonferrous scrap obtains his raw material from industrial waste and by-products, from auto salvage yards, and from junk collectors who have already sorted the various metals. Because these metals are much more valuable per pound than iron or steel, huge piles of these metals are ordinarily not stored on a site for as long a time as is sometimes necessary for the ferrous metals awaiting economical transportation arrangements and adjusted market conditions. Therefore, in general, the nonferrous metals processor requires a much smaller yard and considerably less equipment.

Paper, Rags, and Miscellaneous Materials Processors.—Processors of paper, rags, and miscellaneous materials obtain their raw materials primarily from junk collectors, organization paper drives, and such sources as Goodwill Industries or the Salvation Army. In effect, the main function of the rag and paper processors is the gathering and baling of the material; the commodity is then sold to such manufacturers as paper companies for use as a raw material. The paper manufacturer also purchases scrap in the same form as the processor. The nature of these substances makes open-land storage not desirable, and this industry almost exclusively uses enclosed structures located in industrial areas. These processors have much lower equipment costs, but the expense of rented or purchased enclosed building space is higher than the metal processors' costs of outdoor storage.

Auto Wreckers (Parts Salvage Yards)

The operation of an auto parts salvage yard (also known as automobile graveyard) varies considerably with location and type of operation. These range from yards containing several acres and located in rural or peripheral urban locations to those located in commercial areas of the central city and operating from very small sites containing less than one acre of ground. A discussion of the operations of these two separate types of yards should reveal the reasons for their differences.

Large Yards in Outlying Locations.—Automobile graveyards in rural or peripheral urban areas can afford to spread out because of the low cost of land. The automobiles are usually parked, and sometimes inventoried in the yard and left intact. Only a few of the more valuable parts, such as generators and batteries, are removed and sold immediately. When a request is received for a specific part from a specific model of car, the wrecker either removes it himself or allows the customer to remove the part. The car is gradually cannibalized until it has few parts of value on it and so becomes scrap. In rural areas

located far from a scrap processor, the action of the scrap market at times makes it uneconomical for the auto salvage yard to even haul the remaining hulk over the processor's scales. In most cases, however, the yard must be cleared to make way for newly purchased cars. At this point, the auto salvage operator either removes the car himself or allows a contractor (collector) to do so at little or no cost. The collector hauls them to the scrap processor and retains the full consideration paid by the processor, less the collection operating expenses. Shredding equipment in the larger scrap processor yards is now making it possible for the processor to pay higher prices for automobiles and to thus service areas within a 300- to 500-mile radius.

Auto wreckers purchase their stock, either as recent-model wrecks or worn-out cars from garages, insurance companies, and individuals. Many of the parts from such yards are sold on a wholesale basis to other parts dealers located in the central city areas, as well as to local and walk-in trade.

Small, Intensively Used Sites.—Auto wreckers located within the major cities are closer to a larger market for their products and are generally on much smaller, more valuable sites. Because of higher land costs, zoning regulations, building codes, taxes, and such miscellaneous costs as permits, most of these auto wreckers immediately remove parts from the car and inventory and shelve them. Because of limited space, the remaining stripped automobiles are removed at regular intervals. This need for space often forces these in-town auto wreckers to remove their stripped cars from their sites regardless of the market for scrap, and thus to incur costs over and above the usual cost of removing them and selling them to the scrap processor.

Auto wreckers are generally tied to a "hot line" over which they can buy used auto parts at wholesale from other auto wreckers, primarily those located on larger tracts on outlying and rural land. The Business and Defense Administration quotes an estimate made by National Auto and Truck Wreckers Association of 8,000 auto salvage yards in the country in 1966 (17) and 15,600 in 1969 (11). (The researchers assume the variance is due to census methods rather than growth.)

Hot Lines.—There are usually four or five or more separate telephone hookups or hot lines operating in major metropolitan areas. These range from local lines used by most of the used auto parts dealers to those covering different areas or different groups of parts yards. These hot lines enable some yards, and especially those belonging to multiple lines, to operate on a wholesale basis. Parts are sold from one yard to another at an approximate 20 to 30 percent discount. Even some of the smaller in-town yards are members of several hot lines and act primarily as the final outlet for these parts. Such yards have a small, high-volume trade area and specialize in particularly fast moving items.

When one auto parts yard needs a particular part he announces it on the hot line, and it is automatically heard over a speaker in the office of every other member. If another yard has the part he merely presses a button,

identifies himself, and says, "I have the part for x number of dollars." If the price is right, the deal is made immediately.

Landfill Disposal Areas

Briefly, a landfill disposal facility serves as a collection center for any type of scrap, trash, and garbage. Generally, the facility is operated by a city—but this is not always true. The operation is basically simple: trash and garbage are picked up from residences by city employees, or independent collectors, hauled to the disposal area, dumped, hopefully saturated with water for better compaction, covered with earth, and compacted again.

As the land is filled (if it was a gravel pit, quarry, or significant depression) it can become more valuable if it has been accomplished as an engineered sanitary landfill operation. It is questionable if an open garbage or trash dump will show an increase in value.

Economics of the Salvage Industry

Demand and Supply

Four background facts are important to an understanding of the nature of the demand for scrap iron and steel (approximately one-half of total metallics): (1) Most grades of scrap constitute technically acceptable raw materials—when mixed appropriately with pig iron—for the production of steel and ferrous castings; (2) Most steel furnaces are technically capable of using substantially larger (or smaller) proportions of scrap than they do; (3) The nature of the process of originating scrap assures an amount of scrap steady enough to keep the market clear of available and acceptable scrap, yet not excessive from a technical point of view; (4) Scrap is sold in a relatively competitive market (21).

Demand Equals Supply.—Except for a portion of automotive scrap, the volume of scrap originated tends to move into the supply in its entirety, and to be purchased and consumed through the mechanism of changing prices. The presence of contaminants in No. 2 bundles (bales) and limits to the amount of this type of scrap that can be consumed account for the incomplete utilization of automotive scrap. Furthermore, the market reacts to such economic limitations as the cost of removing more of the contaminants (glass, rubber, plastic, etc.) and the cost of transporting autos. It has been estimated that virtually all of this scrap will be purchased and consumed when this type of scrap has been made fully acceptable and more valuable by expansion of shredding capacity or other improvement of the quality of processed scrap. These improvements are now under way.

Marginal Use, and Price.—As with any commodity traded in a free market, the price of scrap tends to be determined by its supply and demand and its value for marginal use; that is, when the uses are just barely justified at that price. Currently, the major marginal use of ferrous scrap metals appears to be in the open hearth furnaces of integrated steel producers. Since scrap's principal competitive raw material is hot metal, made by these producers

for their own use, purchased scrap tends to be attractive for their open hearths only when scrap prices are lower than the cost of making hot metal. (The scrap price must be lower to allow for the somewhat higher production costs involved in scrap use.)

The decline in scrap prices between 1959 and 1963 largely reflects the decline in hot metal costs and the related increase in blast furnace excess capacity. The unusually high scrap prices in 1956 and 1957 were due to shortages in the supply of ferrous raw materials needed to meet the high demand for steel in those years (21).

Recent increases in the price of scrap, however, are generally attributable to the increased productivity of smaller, local steel mills using electric furnaces and consuming large amounts of shredded scrap. In turn, this is increasing the obsolescence within the smaller scrap yards that rely on balers and, to some extent, on shears.

Variation in Demand, and Price.—The principal cause for the wide differences in use of scrap by type of producer and type of furnace is the varying economic value placed on scrap in these different uses. That is, the principal cause of overstocks in wrecking yards tends to be economic rather than technical. It is incorrect to reason that because one type of furnace uses a low percentage of scrap and because the relative importance of this type of furnace in steel production is expected to grow rapidly, the demand for scrap will decline. Rather, the furnace has the capacity for more scrap and will use it when the price is lower.

In a similar vein, the large growth in exports that took place since the mid-1950's was not due to a technical inability of domestic furnaces to use all the available acceptable scrap, but rather due to the relatively high value set on scrap by foreign producers, largely because of the great expansion of steel production abroad.

Scrap Price Changes

Changes in scrap prices paid by the consumer tend to revert to the originator of the scrap (e.g., the auto wrecker) in a mechanism similar to this: as scrap is originated, the originator tries to get rid of it fairly soon; because it tends to be a nuisance to him and is clogging his storage facilities, he is willing to sell it for what it will bring. When scrap price declines, the originator is offered less; when the price increases, the originator can get more for his scrap. The result is that the scrap dealer buys the scrap materials from the originator at a figure that tends to equal the price paid by the consumer of scrap (i.e., the iron and steel industry, here or abroad) minus the brokerage fee, processing and transportation costs, and an allowance for profit. Of course, the scrap processor or broker sometimes misgauges the market, and this may result in higher or lower short-run profits than had been anticipated.

The storage capacity of a scrap or wrecking yard is indirectly related to the changing prices of scrap; low scrap prices lead to an increased demand for larger storage areas.

Quality of Scrap

Processing methods and trends interact on the depreciation of processing equipment from obsolescence as the equipment used for processing governs the quality.

When the time comes that most or all automotive and similar scrap materials are processed into scrap of substantially higher quality (e.g., by shredding), the economics of quality scrap consumption will apply without significant modification to all scrap. The present economics of the consumption of No. 2 bundles illustrates this factor of obsolescence as follows: (1) The scrap produced in baling presses is relatively highly contaminated with non-ferrous metal and other impurities. Therefore, not all of it that is potentially available can be consumed. (2) The price of the No. 2 bundles is, for this reason, substantially less than that of high-quality scrap (generally running from \$8 to \$12 less per long ton than No. 1 heavy melting scrap). (3) Shredders are producing from wrecked automobiles scrap similar in quality to No. 1 melting scrap. The processing costs are higher than for most other forms of scrap, partly because of the need to preburn old automobiles (sometimes by the auto wrecker and sometimes by the scrap processor); transportation costs are higher because of the looser raw material shapes. (4) The net payment available to the originator, after subtracting the high processing and transportation costs, and an allowance for processor's profits, could very easily be negative (21), except, perhaps, in infrequent periods of very high demand for ferrous raw materials. Because of these negative payments of recent years, the originator of automotive scrap (auto wrecker) often lets it pile up in his yard when he has enough space. Obsolescence can thus be related to the size of the yard as well as to the process.

Summary of Economic Elements of Value

1. Over all, it appears that the demand for scrap is equal to the supply entering the market. This is a technical aspect and not always the same throughout the country. Thus, there could be dissimilar demands for storage capacity between areas.

2. Good quality (shredded) scrap has an excellent market. The need for large storage facilities, except on the processor's site, is decreasing. The collector's yard is being bypassed.

3. Demand for scrap influences, to a degree, the over-all demand for scrap storage sites. For example, a very strong demand for scrap will lessen the need for large storage sites.

4. Recent high prices for high-quality scrap will tend to render obsolete the processing facility using balers and/or shears.

5. Pileups of auto hulk wrecks can be caused by economic factors. For example, low price of scrap means a demand for larger, cheaper storage sites.

Environmental and Operational Requirements

Size

From observation and interviews, it has been determined that current size requirements for the various components of the salvage industry are:

1. *Auto Wreckers* (graveyards):

In high-density areas such as fringes of the business district	1-5 acres
In low-density outlying urban and rural areas	10-30 acres
2. *Scrap Processors*:

In high-density areas	10-30 acres
In low-density areas	(little demand)
3. *Landfill*:

In high-density areas	(little demand)
In low-density areas	100-300 acres

Location

In cases of scrap metal yards the operators may face a peculiar situation, that being that there virtually is no place left in the city where they could get licenses to run such ventures.

This author (37) has struck a significant locational constraint. The problem arises if the facilities need to be expanded, if a person wishes to start a new business, or if one is forced to relocate because of condemnation. In any of these events, zoning, licensing, and the lack of suitable sites are uncontrollable factors, which tend to create value in the existing business location that conforms to political requirements.

Our case studies have disclosed typical locational requirements for the various types of facilities:

Scrap Processors.—Scrap processors, because of the collection system, find it more economically convenient to locate in the core city of the metropolitan area. Logically, this should be near the hub of the market area to be serviced. Theoretically, it should be at a point equidistant from the perimeter ring of suppliers (the auto wreckers). However, the processors' raw material market includes other types of scrap, such as that salvaged from stamping plants. These plants are usually in or close to the major cities. In recent years the ferrous scrap industry has provided as much as 25 to 30 million tons per year of processed iron and steel for remelting. About 25 percent of this has been from automobiles (28). To capture his share of the market the processor's location must be convenient to all segments of the market. This 25 percent of scrap from auto hulks is of major importance; however, the other 75 percent of the market cannot be ignored.

Auto Wreckers.—Auto wreckers do not appear to have a typical site location. Our profile studies (Appendix A) indicate that suppliers of used auto parts desire in-town locations that make it possible to stockpile the several parts rather than the hulks. Low-overhead wreckers will locate in rural areas, but not always on prime highways. In our

case studies we found yards located by the owner's selection on (1) the bank of a river at the end of a block-long trail; (2) on a county road with only modest traffic volume; and (3) behind a new car sales and service agency on a high-volume traffic artery, but not visible from it.

Operators want other locational advantages. Being not more than a mile or so from town makes it convenient to ship small parts by bus. A location on a highway enables cartage companies to pick up larger parts at the yard more conveniently. An operator farther away or in a remote location would have to drop-ship to the over-the-road trucker.

The location should be easily accessible, even though visibility is not mandatory.

Landfill.—Landfill areas are generally on the periphery of the city, town, or village. In typical cases they are located in rural areas, but they can be closer to town if an abandoned gravel pit or similar site is available. Good access to the population served is an important ancillary factor in location.

Generally, the scrap processor needs a location on land zoned for industrial purposes; the auto wrecker is probably faced with similar constraints in the city, and this could be a factor driving him to locations in unzoned rural areas if no properly zoned sites are available closer to town. Landfill operations are not apt to be subject to zoning, since they are temporary interim uses that improve the land.

Facilities and Operations

Scrap Processors.—Scrap processors have the most complex and expensive facilities. The processor needs all of the usual utilities—high electrical voltage, natural gas, water, and sewer. Accessibility by heavy trucks must be assured on a year-round basis. In a northern climate, to locate such a business on a road that has springtime truck-weight limitations would create serious operating problems and immediate obsolescence. Normal procedures dictate that the raw material inputs (for example, scrap auto bodies) be flattened to some extent and hauled in by collectors from the wreckers' yards by the truckload (about five to thirty wrecks, or about one ton per auto hulk, to the load after compaction). Large-capacity truck scales will benefit this operation.

After processing, the scrap is usually loaded into gondola railroad cars and hauled to the purchaser. Rail service is, therefore, an essential need in the modern scrap-yard.

The equipment used by scrap iron and steel processors to manufacture a usable scrap product is generally in one of the following forms:

Baler.—Although being supplanted by the shredder, the baler is still a vital part of the industry. The baler is a hydraulically operated press into which wrecked automobiles are tumbled. Movable walls squeeze the hulks into a small pit where a hydraulic ram with a 400-ton thrust compacts the metal into rectangular bundles, known as No. 2 bundles. Impurities embedded in each bundle

are nonferrous metals and fabric either overlooked or impossible to remove when the hulks were hand-stripped and subjected to open burning, prior to baling.

Shearer.—In varying degrees, the baler is being supplemented or supplanted by a shearer with a large blade, which surpasses the efficiency of the baler. The shearer's alligator or guillotine cuts the automobile bodies into strips suitable for charging blast furnaces, but the hand-stripping and open-burning problems, although lessened, remain.

Shredder-Fragmentizer.—A shredding process has been developed that manufactures higher quality scrap. One such scrap processing yard, contiguous to the District of Columbia line, contains 28 acres next to the Penn Central right-of-way. This scrap yard has been described as containing 3,000 junked cars stacked at least 80 ft high in places (35). Obviously, the feasibility of fencing stacks of that height is open to question.

The shredding plant is roughly 300 ft long and 100 ft wide and takes up slightly less than one acre of land; the storage space for wrecked automobiles, yard equipment and access lanes occupy the rest of the acreage. Somewhere between 100 and 125 cars per acre are stored on the 28 acres of this facility. This particular electrically powered hydraulic plant pulverizes the automobiles into pellets the size of a baseball that have a much higher degree of purity and acceptability than the products of other processes. This particular shredder will dispose of from 60,000 to 75,000 wrecked automobiles per year at the rate of approximately 60 per hr.

The wrecked hulks are prepared for the shredder by cranes and shears to remove the roofs, and by other machinery that jerks out the seats. The crane deposits the remaining hulk in a horizontal chute. A pre-sizer with twin cutting edges slices the car with a force of 2,500 lb per sq in. and reduces the hulk into 5 or 6 chunks. A conveyor lifts these chunks to the top of the mill through a double series of "curtains" to entrap the dust. From here the chunks pass through a series of four banks of large drums; to these are attached extremely hard manganese sledges, weighing approximately 300 lb each, that reduce the chunks to smaller segments. One full cycle of the hammers takes about 8 to 10 sec.

The crushed pieces are conveyed to a series of magnetic drums that separate the iron and steel from the nonferrous metal and plastic and other trash. A triple series of belts runs from the magnetic drum: one carries the iron and steel, a second, the nonferrous parts, and the third, the dirt and debris; more dirt is sifted out of the iron and steel by the jiggle of the conveyor. A last hand sorting takes place on this conveyor to pick up stray pieces of copper and other nonmagnetic metals that may have slipped through. The last conveyor dumps the scrap iron and steel pellets into gondola railroad cars.

Maintenance of a shredder is of vital importance. It has been indicated that over 100 bolts must be tightened each day and that it is important to inspect the machinery quite often for oil leaks and cracks. And even though the manganese sledges are extremely hard, they must be switched every two weeks and replaced once a month.

In addition to the processing equipment, the processor's yard—if it is up-to-date—will run water, gas, and acetylene lines to strategic places. An office building and a warehouse are usual necessities. Yard equipment will include magnetic cranes, clamshells, and similar movable equipment.

Auto Wreckers.—Auto wreckers require improvements of a modest nature. Usually these are limited to a small office, a parts storage shed or warehouse, and fencing. The yard will generally need one or two tow trucks and a movable crane, and would benefit from large-capacity truck scales. Utilities, except for telephone and electricity, are not essential; but usually water and sewer are demanded. Railroad service is not needed.

Landfill.—Landfill operations and open dumps must be located on an all-weather road. Utilities desirable for a sanitary landfill are water and electricity. Generally, there will be a modest shelter to house equipment, rest rooms and a small office. Rail service will not generally be needed except in those larger metropolitan areas where new methods of compaction and transportation are being tried out. A cyclone fence to retain blowing papers and trash is a desirable and, in most cases, essential environmental requirement.

Yard equipment will be limited to the required number of earth movers, bulldozers, and trucks, and truck scales would be desirable.

Rag and Paper Processors.—Processors of rags and paper will generally need only a warehouse, preferably fireproof, with office space. Accessibility to a railroad is desirable but not essential. Truck scales and all of the usual utilities are desirable in this type of operation.

Junk Collectors.—Junk collectors need only a yard for storage, outside movable cranes and trucks, and possibly truck scales and a small warehouse.

Comparability in Land Use

The specific concern in this study is with forms of industrial real estate.

The basic economic and market principles applicable to real estate analysis in general are equally applicable to industrial real estate. What sets industrial real estate apart from other types of real estate is the manner in which it is used, the type of user occupying it and the processes which it houses.¹⁴

This fundamental and basic description (20) of the function of industrial real estate is equally applicable to junkyards whose utilization is directed toward providing a site that is suitable for the location and is used for open storage or processing of material. The market value is a direct function of the type of activity that may be conducted on the premises and of the efficiency that the realty imparts to the performance of this activity. Scrap processors' yards are similar to other types of industrial activities, are normally in industrial areas, and are properly zoned for such uses. This conformance to zoning is not always true of other salvage operations—often there are no such requirements.

Generally, zoning ordinances limit junkyards to manu-

facturing or industrial districts, as these commonly constitute the lowest type of land utilization. The scrap and waste material establishments, primarily those engaged in assembling, breaking up, sorting, and wholesale distributing of scrap and waste materials (including auto wreckers engaged in dismantling automobiles for scrap), are classified under Miscellaneous Wholesalers. Second-hand automotive tire and battery and accessory dealers engaged in the sale of used automobile parts, accessories, tires, batteries, etc., are categorized under the major retail trade group of Miscellaneous Retail Stores. All of these are standard industrial classifications (31). The classification of scrap processors as wholesalers appears to be open to some argument; scrap processing could be a type of manufacturing, but regardless of the classification, wholesalers are, in general, considered to be a part of industry.

The characteristics of salvage utilization of the land are not unique as such. While a scrap-processing plant is a single-purpose improvement, there is no measurable quality that makes the location a "single-purpose site," for the operation could generally be carried on at another location, other things being equal. On the other hand, there may be restrictions on the land reflected by zoning ordinances, legal statutory requirements, or other land-use controls that may either relegate the land to single-purpose nature, as a junkyard, or restrict the land from that type of use. Generally speaking, the type of utilization, regardless of whether it is an automobile graveyard, a scrap processor, or a dump, results in a high degree of immobility on the part of the operator. For obvious reasons the dump, including the materials deposited within a dump, would be considered immovable. Scrap piles and automobiles that appear to be abandoned are usually in a state of transition, no matter how slow the process from scrap to finished steel may seem. In the interim, the site where the material is located is being utilized for open storage. The sheer bulk and weight of the material stored contributes to this extremely limited mobility. The lack of space, which is sometimes the result of the high value of the land and often of the condition of the scrap market, results in material piled in seemingly higher and higher piles. Yet the fundamental land use is similar to that of other industries.

Case Study 3 (Appendix B), makes note of other land uses that have a high degree of similarity to auto salvage or scrap yards. In Case 3, on the side next to the combination scrap-processing and auto-wrecking storage yard is a brick storage yard; on the other side of the salvage yard is a lumberyard. Both are used for open land storage of material. Similar uses would include concrete block manufacturers, pipe plants, pole yards, used car lots, used farm machinery lots, automobile manufacturers, taconite plants, coal yards, and other types of mineral storage areas. And many other industries have a need for open land-use storage for raw materials and finished products.

It appears that the valuation of a site used as a scrap or automobile salvage storage area may be subject to the same type of analysis as other lands used for open storage. It also appears that permissive zoning may be an often irreplaceable advantage.

Other Elements of Environmental Value

In general, all vacant lands have elements varying in degree of importance with every type of land use, but the following elements of value appear to apply to all types of valuation problems, including scrapyards, auto salvage yards, and sanitary landfill operations:

Zoning.—Because of uses allowed, the type of zoning can lead to a difference in value.

Size and Shape of the Parcel.—In general, size is an element of value; an extremely large tract will tend to sell at a lower unit value (value per sq ft or per acre) than a much smaller tract. An unusual, irregular shape will generally be harder to develop and will thus sell for less than a typical rectangular plot. Naturally, street frontage and depth also are important factors that bear on value, and a change in these could result in a difference in value. There should be sufficient space for expansion of storage areas, in keeping with the economic factors of supply and demand.

Access.—Access is of major importance to salvage operations. An auto salvage dealer for example, does sell to the ultimate consumer and so must be accessible to him. It has been concluded that the visibility of auto parts to passing traffic is not too important to this business; it is enough for most patrons to know that the parts could be in the yard, since it is quite often essential for them to physically inspect the parts before buying. A scrap processor, on the other hand is generally not in a competitive market to the extent that he must locate his operation to be visible to passing traffic, but he does need access to an all-weather, hard-surfaced road, and to a railroad spur.

Water frontage with suitable docking facilities on inland waterways or on the ocean is not of major importance to the auto salvage land use, the sanitary landfill, or the other types of junkyard storage. In a few locations scrap processors have found it desirable to be located next to the waterfront, but this does not appear to be a mandatory requirement except for those participating in the export of processed scrap—more than 5 million tons each year.

Available Utilities.—Electricity, sewer, and water are probably important to a scrap processor, less so to the auto salvage yard, and of even less importance to the average sanitary landfill program.

Foundation and Subsoil Conditions.—The scrap processor must have at least a portion of his site on subsoil stable enough to support heavy machinery. This can be accomplished by piling, but piling can add more than \$1.00 per sq ft to the land costs. Generally, however, an open land-use storage facility can be located on the most marginal land and, in fact, this is often the case.

Topography.—Topography is a factor important to the types of facilities under study. For example, a depleted gravel pit or stone quarry can be used for a landfill operation, yet this would be unsuitable for an auto salvage operation. The automobile wrecker seems to regard land sloping up from the highway as no major problem; on the contrary, it appears to allow him to better display his wares. Unfortunately this upgrade makes it harder

to screen from the main-traveled part of the highway, because, as the partially dismantled cars rise higher and higher on the hillside next to the highway, the higher the fence must be at the grade of the highway. This type of topography, when used by an auto wrecker, might very well be a case for relocation.

Scrap-processing land is generally as level as possible. There is a great deal of movement of machinery, trucks, and railroad cars in and out of the yard, enough to make an unlevel surface not only undesirable but generally unworkable.

Adequate Drainage.—Standing water resulting from poor drainage or topography, in addition to being a nuisance, may cause paved areas and building floor slabs to buckle.

Reasonable Taxation.—Real estate, personal property, and income taxes should be equitable.

Market Orientation.—Orientation to market is a factor in site valuation; the site must be near the supplier and the user.

In conclusion, most of the environmental elements of value attributable to other land uses are applicable to the salvage industry in varying degrees.

Future Trends in the Salvage Industry

Technical Innovations

The shredder is perhaps the most significant innovation in the scrap industry during the last four or five years. The locations of 69 of these constructed by the end of 1969 are given in Table 1.

The U. S. Department of Commerce has estimated that 9,033,000 automobiles were taken in by wreckers in 1969, roughly the equivalent of 9 million tons. Shredders now have the capacity to handle about 45 to 50 percent of the annual volume of wrecked cars. Since the capacity of the shredders is large, many operators will go far afield to secure junk auto bodies as raw material to keep their units operating at optimum load. This will probably result in an increasing use of special crews equipped with portable car flatteners and large flatbed trucks (5).

Some scrap industry authorities predict that by the early 1970's most large- and medium-sized urban areas of the nation will have at least one shredder installation, and the majority of automotive hulks will be processed by this method. At present, shredder scrap is selling in a price range well above other similar ferrous-content scrap. If this condition continues, the shredder should have a major impact on solving the problems of automotive scrap prices and related nonferrous metal contamination (11).

At present, a number of companies manufacture shredders and several others have expressed their intention of entering the field in the near future. Competition is driving prices down into feasible ranges for small- and medium-sized scrapping operations, and there are indications that prices may be lowered still further in the years to come. Prices now range from about \$500,000 for the small units to over \$3 million for units handling up to 100 or more tons of scrap per hour.

Scrap shredders serve several useful functions for the automobile wrecking industry. The shredder enables the steel industry to make more use of scrap metal created by the auto wrecker. It provides alternate markets for the auto wrecker. As the end quality is better, the auto wrecker will obtain higher prices and be more apt to dispose of his auto hulks.

In 1969, use of the baler was still important. As the shredder is improved and enters into wider use, it could cause rapid obsolescence depreciation in scrap processing facilities that rely on balers and shears.

Political Trends

Pollution in all its forms is subject to increased scrutiny. More and more cities are placing restrictions on open burning, and this renders many expensive incinerators obsolete. Because of its construction and design, the shredder can still be used to incinerate—but baler and shear yards will undergo another form of obsolescence, and so will the auto wrecker who has been burning hulks; soon he will have to sell them to the shredder without prior burning.

Subsidies to auto wreckers are being considered for hulks sold to wreckers. Payment by the government, or through taxes by way of the processor, is being discussed as a means of clearing auto wreckers' sites.

Research is under way at the U.S. Bureau of Mines Metallurgy Research Center in Salt Lake City to develop methods to produce clean ferrous scrap from autos. Methods being explored are use of chemicals and use of pollution-free incinerators.

Effects of Trends on Value

Future trends point to potential obsolescence of some of the present-day equipment of scrap processors, including balers, shears, and incinerators. There could be a slight decrease in the number of auto wreckers if scrap prices increase sufficiently; however, this is not a likely event. The appraiser must be aware of the economics of the scrap market and be alert to technological advances that could lead to obsolescence.

SPECIAL CONSIDERATIONS

Screening Concepts

The Beautification Law provides that salvage yards in non-industrial areas, if not moved, must be screened by one of several methods and at government expense if they are within 1,000 ft of the edge of the right-of-way.

Screening by Natural Objects

Natural objects can include topography, rock formations, wooded areas, and similar elements. Obviously, this type of screening will only be possible if the property owner has sufficient land that is developed or can be developed for the same use behind these objects.

TABLE 1

GEOGRAPHIC DISTRIBUTION OF AUTO SCRAP SHREDDER PLANTS IN THE UNITED STATES^a

GEOG. DIVISION	NO. OF PLANTS ^b	EST. ANN. CAPACITY (NET TONS)	PROPORTION OF U. S. TOTAL (%)
New England	4	205,000	5.0
Middle Atlantic	7	480,000 ^c	11.5
E. North Central	19	1,470,000 ^c	35.4
W. North Central	4	252,000	6.0
South Atlantic	7	265,000 ^c	6.3
E. South Central	5	261,000	6.3
W. South Central	6	198,000	4.7
Mountain	7	350,000	8.4
Pacific	10	682,000	16.4
All	69	4,163,000 ^c	100.0

^a As of April 1969.

^b Operating, under construction, or definitely planned for 1969.

^c May also include some plants using other than auto scrap.

Source: Business and Defense Services Administration, U. S. Dep't Commerce estimates; based on information from the Institute of Scrap Iron and Steel, and data from the auto wrecking industry association.

Screening by Planting

Planting, of course, means trees or bushes. These should grow to a sufficient height to shield or soften the view; however, there appears to be no minimum requirement for height.

Screening by Fencing

Fencing is an optional method, but a fence will be of only limited value if, for example, the site rises above the grade of the highway or slopes away. Such cases as these will probably be subject to administrative discussion.

Moving Concepts

If the junkyard cannot be effectively screened it must be removed from sight (at government expense, for the owner must be compensated). Moving can entail heavy costs if the auto hulks have to be handled carefully. The operator obviously has foreseen a profit in purchasing a vehicle and will have paid as much as \$1,000 for some of these vehicles. This means that he expects to sell undamaged parts, fenders, doors, etc., to recoup, and he can't if they have been damaged in the move. Moving costs for removal or relocation cannot be related entirely to the value of scrap at the processor's if there are late-model marketable parts still in place on the car. Therefore, it would appear that a thorough inspection and inventory must be made, and, further, that at least three different estimates of the moving cost should be obtained.

Business Losses

The value of a business rests in the anticipated profits or earnings after taxes. If an auto wrecker has been forced to move vehicles from which he expects to make a profit and the only new location available differs substantially

(as by having a greatly inferior accessibility) there may be a reduction in earnings. If cars are damaged enroute to a new location, there could very likely be a reduction in earnings. Thus, a move is likely to bring about a change in earnings. Another possible reduction is that old customers might not follow a business to its new location.

Until recent years business losses resulting from a taking, as distinguished from losses to business real property, were held to be noncompensable because:

1. The agency is not taking the business.
2. The business can be moved to another location.
3. The value of the business as such is the result of the special ability and acumen of the owner.
4. Granting such compensation would open the door to exorbitant and fraudulent claims.
5. The value of the business is difficult to prove.

The courts are constantly passing on exorbitant and fraudulent claims and matters of proof in various fields such as workmen's compensation and negligence and business losses in other fields.

Is it not surprising the state finds so little difficulty in establishing rules for valuation when a man dies and his representatives appraise and file a tax return which at that point values his business yet there is so much difficulty on the part of the state in valuing a business while the owner is alive and subject to condemnation.(10)

Hannoch submits for consideration that the basis of the valuation of business might be the profits of the owner, as disclosed by his federal income tax return for a year or a period of years or by an average over the years, since these would be rarely exaggerated or inflated.

Obviously, the volume of business is important in certain types of appraisals, and that volume is strongly related to location. There are countless examples of shopping centers, discount stores, and other types of retail facilities, garages, hairdressers, barber shops, and other services, as well as other types of establishments and businesses where the rent paid for a real estate improvement relates directly to the gross sales volume of the business. It can be argued that the gross sales volume does not subject the management of the business to scrutiny, for it does not provide for any deductions on the ordinary business expenses that are necessary to produce this gross volume.

On the other hand, it can be argued just as strenuously that the management of the business had the foresight to select a specific location that, by its very nature, accounts for a large percentage of the actual gross sales; for example, a service station on a particular corner that is leased to an oil company at \$0.01 per gallon of gross sales.

While it has been said to be good valuation practice for the value of the site to reflect exceptional circumstances and strategic business values, it is submitted that this type of thinking could, and should, have limitations.

CURRENT VALUATION PRACTICES

Recognized Appraisal Techniques

Three generally recognized approaches to value used by such important appraisal groups as the American Institute

of Real Estate Appraisers and the Society of Real Estate Appraisers are recognized by most governmental and political subdivisions. There are degrees of modification, amplification, and techniques, refinements of the basic approaches, that are sometimes known by different names. However, those discussed here are generally considered basic.

Market Data Comparison Approach to Value

In the market data comparison approach, previous sales and offerings of similar salvage yards and land within the neighborhood are examined and compared. Often, sales and offerings in similar areas that have progressed through the same stage of life cycle are analyzed. These market data are compared on the basis of some unit of comparison and adjusted for those value factors that lead to a difference in price or value or both. The factors could include the time of sale, location, topography, size of the tract, accessibility, the supply and demand of available sites, and other economic considerations. Use productivity must be measured for most businesses, and land users have productivity limitations and site requirements that are common or unique to their particular types of industry. In addition, in the salvage industry the various elements of value previously delineated are considered. In analyzing the comparable factors of physical improvements, the building under appraisal is compared to component parts of the sale property, which are adjusted for such factors as the age, type of construction, design, deterioration, functional problems, and obsolescence. Other economic factors, such as tax levels, rental trends, and expenses, and over-all demand for such levels, are also compared.

Cost Approach to Value

The cost approach is based on the value of the land as found through the market data comparison approach. To this is added the depreciated value of the building, which is determined through an analysis of the cost to construct, new, at the date of the appraisal, less depreciation from such causes as physical deterioration, functional obsolescence, and economic obsolescence. The last is based on rental levels and a possible rental loss, if any, for the property in its extant location, as opposed to a more ideal location. The functional obsolescence caused by trends within the industry can be measured by this approach. An example is the development of the shredder, which is supplanting other methods of production.

Income Approach to Value

The income approach is based on the capitalization of the net annual income, as derived from projections of the gross rental income, from which, in turn, are deducted the necessary real estate expenses and vacancy reserves. In some cases, the net annual income is capitalized to produce an over-all value, and in others the residual net income to the building is capitalized together with the value of the land. In either case, the basic data for this valuation technique come from the market. Rent levels, land values,

expense ratios, and, therefore, economic factors bear heavily on an estimate reached by this technique.

By this approach, the same factors common to the other approaches (such as the date of valuation, economic rent levels, and the value of the land found through comparison) all relate to the market at a specific point in time. Each of the approaches described is related to the market demand for property in a given place at a specific point in time. Each is related to economic factors and other influences of supply and demand.

State Techniques

A sampling of valuation methods used in various states indicated some procedural variations. The questions asked each state were the same. The cases were selected by the right-of-way personnel, who also supplied the answers.

Garberville, California (auto salvage)

Taking:	About 15% of land
Value before:	Not appraised
Value after:	Not appraised
Part taken:	\$5,650
Did taking include junk?	No
Was screening included?	No
Did severance include scrap?	Yes—Cost to move scrap (\$350)
Innovation:	Cost to move scrap

Macon, Georgia (auto salvage)

Taking:	9% of land
Value before:	\$388,000
Value after:	\$235,400
Part taken:	\$75,600
Did taking include junk?	No
Was screening included?	No
Grace period to move:	60 days (State requested owner to move at his own expense, but believe jury awarded moving expense.)
Did severance include scrap?	No
Innovation:	None

Rink Creek, Oregon (auto salvage) (Coos Bay/Roseburg Highway)

Taking:	13.6%
Value before:	\$41,900
Value after:	\$25,625
Part taken:	\$16,275 (including \$650, the cost to screen)
Did taking include junk?	No, personal property
Grace period to move:	55 days
Innovation:	Cost approach for buildings; market approach for houses and land; cost to cure to mitigate damages.

Omaha, Nebraska (scrap processor)

Taking:	4.7%
Value before and after:	Not Available
Part taken:	
Land & improvements	\$62,525
Damages to leasehold and cost of relocating scrap and machinery	185,770
Total	\$248,295
Did taking include junk?	Cost to move junk
Grace period to move:	9 mo
Innovation:	None

Rapid City, South Dakota (auto salvage)

Taking:	Relocation based on bids
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Maynardville, Tennessee (auto salvage)

Taking:	20%
Value before:	\$4,500
Value after:	\$3,000
Part taken:	\$1,500
Did taking include junk?	No
Did severance include cost to move junk?	\$10 per car
Grace period to move:	
Part on right-of-way	90 days
Balance	1 yr
Innovation:	None

Observation

It appears the states as sampled are not using major innovations in the appraisal process except as these apply to moving costs. The cost approach and market approach are mentioned most often as the methods used for valuation.

LEGAL PRACTICES AND PROCEDURES

Highway Beautification Act (1965)

The 89th Congress found and declared that the establishment and use and maintenance of junkyards in areas adjacent to the Interstate System and the primary system should be controlled in order to protect the public investment in such highways, to promote the safety and recreational value of public travel, and to preserve natural beauty.

Under threat of fiscal sanctions, each state receiving Federal-aid highway funds must provide effective control of the establishment and maintenance of outdoor junkyards that are within 1,000 ft of the nearest edge of the right-of-way and visible from the main-traveled way along the Interstate System and the primary system, except for those that are operated in areas either zoned industrial under local law or not zoned under local law but used for industrial purposes. Effective control has been defined by Congress to mean that by January 1, 1968, subject junkyards were to be screened by natural objects, planting, fences, or other appropriate means so as not to be visible

from the main-traveled way of the system, or were to have been removed from sight. Subject junkyards in existence on the date of enactment of the Highway Beautification Act (October 22, 1965) that did not conform to the requirements therein set forth and that could not, as a practical matter, be screened, were to be removed from sight, effective July 1, 1970.

The Highway Beautification Act provides that just compensation shall be paid the owner for the relocation, removal, or disposal of specified junkyards:

(a) Those lawfully in existence on the date of enactment of said Act;

(b) Those lawfully along any highway made a part of the Interstate or primary system on or after enactment of this Act and before January 1, 1968; and

(c) Those lawfully established on or after January 1, 1968.

Needless to say, the Highway Beautification Act of 1965 marks a significant change in federal policy toward control of roadside junkyards. The impact on state and local programs is even more significant, especially from a legal and valuation point of view. In this regard, the ostensible purpose of this report is to review all of the decided cases under the act and to discuss the various elements of compensation involved.

Statutory Law

Of the state jurisdictions receiving Federal-aid highway funds, 43 have adopted so-called "junkyard control acts" of one type or other (Appendix C).

Case Law

As of the date of this report, there are no reported cases that discuss the validity of the federal act itself or that are concerned with issues of just compensation arising from its implementation. Of those reported, in each instance the case challenges the validity of the state junkyard control act.

Farley v. Graney

In *Farley v. Graney* [146 W.Va. 22, 119 S.E.2d 833 (1960)] the plaintiff sought a declaratory judgment as to the construction and validity of an act relating to "the establishment, maintenance, operation and licensing of junkyards." The plaintiff operated an automobile salvaging and dismantling business that restored and sold used parts. The state act prescribed a 100-foot setback from all state primary and secondary roads, together with requisite fencing of all junkyards in operation prior to the effective date of the act. The plaintiff's property was located at the junction of a primary and a secondary road; at its widest point, the property was 345 feet wide. With the superimposition of the 100-foot setback, the plaintiff was left with a usable tract only 145 feet wide that tapered to a point 500 feet away. The improvements (buildings necessary to the conduct of the plaintiff's business) lying within the expanded right-of-way setback cost \$10,000; the requisite fencing would cost \$6,500.

In holding that the statute requiring a highway travelers'

unobstructed view and regulating the location of abutting junkyards did not violate due process (i.e., constitute an abuse of the police power, inasmuch as it was predicated primarily on aesthetic considerations) the court said:

We must bear in mind that the Plaintiff's property has not been 'taken', nor has his business been prohibited. The Plaintiff still has his property and he may make a restricted use of it in his junk business, he may devote it to other uses, or he may engage in the junk business at a different location.

The exercise here to the police power has, in effect, taken 58 percent of plaintiff's usable tract devoted to legitimate business purposes and left him with the option of removing at his own expense his \$10,000 improvements, relocating or rebuilding said improvements elsewhere within the unrestricted area of the tract, moving his junk inventory to inside the unrestricted area remaining, if feasible or possible, and erecting at his sole expense a \$6,000 fence to screen his unsightly inventory. Nothing can be said of the interruption of business necessitated by this relocation nor of the diminution of the intrinsic market value of the tract as a whole resulting from such regulation.

Jasper v. Kentucky

In *Jasper v. Kentucky* [375 S.W.2d 709 (1964)] the constitutionality was tested of a junkyard act prohibiting, among other things, the operations of junkyards within 2,000 feet of the center line of any road unless the requisite permit has been obtained. Conduct of the prescribed activity within the specifically delineated area was declared to be a public nuisance.

The court stated:

The obvious purpose of this Act is to enhance the scenic beauty of our roadways by prohibiting the maintenance of unsightly vehicle graveyards within the view of travelers thereon. While there may be a public safety interest promoted, the principal objective is based upon esthetic considerations. Though it has been held that such considerations are not sufficient to warrant the invocation of the police power, in our opinion the public welfare is not so limited

The police power is as broad and comprehensive as the demands of society make necessary

The right to conduct a business is subordinate to the police power of the State reasonably exercised in the public interest

The policy to be followed in promoting the public welfare is a legislative matter. If there is a legitimate basis for the policy, the Courts may not question it

In our opinion, there was a real and substantial justification for adoption of some regulative policy with respect to the conduct of this kind of business enterprise. (375 S.W.2d, at 711.)

State v. Buckley

State v. Buckley [16 Ohio St. 2d 128, 243 N.E.2d 67 (1968)] deals with an action wherein the county attorney sought to abate a nuisance defined under a so-called junkyard statute, and defendant Buckley cross-petitioned for declaratory judgment to test the constitutionality of the

action. It is interesting to note that in the challenged act, junkyard is defined to mean:

. . . [A]n establishment . . . other than an establishment having facilities for processing iron, steel, or nonferrous scrap and whose principal product is scrap iron and steel or nonferrous scrap for sale for remelting purposes, which is maintained or operated for the purpose of storing, keeping, buying, or selling junk, or for the maintenance or operation of an automobile graveyard . . . (16 Ohio St. 2d, at 129.)

The county attorney sought to abate the stacking of junk cars so high as to be visible to passing motorists above the statutorily prescribed minimum fence height of six feet. The constitutional challenge is whether aesthetic considerations justify such an exercise of the police power.

The court held:

We think aesthetic considerations can support these statutes, because interference with the natural aesthetics of the surrounding countryside caused by an unfenced or inadequately fenced junkyard is generally patent and gross, and not merely a matter of taste. Certainly the junkyard here, wherein junk cars are stacked so that they are visible many feet above the top of the fence, is patently offensive, and it cannot be unconstitutional as applied, either because the offensiveness in this fact situation is only a matter of taste or because the surrounding area has not aesthetic value to preserve. (16 Ohio St. 2d, at 132.)

Directing itself to the issue of equal protection, the court went on to say:

We think that the exemption of scrapyards is neither arbitrary nor unreasonable. Unlike junkyards, which are merely storehouses for junk cars, scrapyards consume the junk cars within their confines, and thus help to alleviate the eyesores of automobile graveyards dotting the countryside. Also, by consuming vehicles, a scrapyard occupies far less space than would a junkyard which stored the number of vehicles the scrapyard handles over a period of time. It may well be that the General Assembly saw fit to exempt scrap processing dealers to stimulate efforts to remove junk instead of store it. Certainly we cannot say that junkyards are not a conspicuous example of modern roadside blight. (16 Ohio St. 2d, at 134.)

In its distinction between scrap processing and storage or warehousing, has the court condoned legislation artificially stratifying the complex process of metal reclamation? Is there a real distinction that should be made here in the ecology of metal reclamation, or is this merely another recognition of the hierarchy of land uses?

Burnham v. State Highway Department

The case of *Burnham v. State Highway Department* [224 Ga. 543, 163 S.E.2d 698 (1968)] tests state legislation enacted at the instance of and modeled after the Federal Highway Beautification Act of 1965. The Georgia State Highway Department sought to enjoin Burnham from allegedly maintaining a junkyard within 1,000 feet of the nearest edge of the right-of-way of a Federal-aid primary highway. The defendant appealed from granting of an interlocutory injunction.

The State act provided that any junkyard coming into

existence after the effective date of the act, and which could not be made to conform to the requirements of said act, would constitute a nuisance subject to being abated. Such is the instant case.

Precedent to enactment of a junkyard control act a constitutional amendment was adopted expressly authorizing the legislature to zone land adjacent to the highway described, to a distance of 1,000 feet, for the express purpose of controlling the establishment of junkyards. The court held:

The provisions of the Act declaring that junkyards established in contravention of the law would be unlawful and subject to being removed and destroyed had the effect of zoning such areas adjacent to the designated highways, and conferred upon the Highway Department sufficient authority to bring this action. (163 S.E. 2d, at 701.)

The judgment was, however, reversed pending further evidence that the junkyard in question was within 1,000 feet of the highway and that any of the automobiles located therein and visible from the highway were within 1,000 feet of said roadway.

The four cases just described are the only cases decided under state junkyard control acts that have been reported to date. The issue of just compensation has not yet reached the appellate level.

As cited earlier, the act provides that nonconforming junkyards, in existence on the date of enactment and for which screening is determined to be infeasible, shall not be required to be removed until July 1, 1970. In compliance with the United States Constitution and the constitutions of substantially every State, the act requires that just compensation be paid to a property owner for the relocation, removal, or disposal of his junkyard.

Historically, courts, both State and Federal, have distinguished between compensation to reimburse for property taken and compensation for losses or expenses incident to the taking that have been incurred over and above the value of property taken. Unless statutorily prescribed, the vast majority of jurisdictions disallow just compensation for relocation expenses, an expense over and above the value of the property taken. Uniform adoption of junkyard control act(s) by the various States using the Highway Beautification Act as a model may have put an end to this artificial distinction.

1968 Highway Act, Chapter 5 of Title 23, United States Code

The Federal Highway Administration, U.S. Department of Transportation, has promulgated certain interim operating procedures regulating relocation assistance and payment in accordance with the 1968 Act. This act became effective August 23, 1968, and requires that the payments and services prescribed in it be provided by the State to the extent that such States are able to comply. It is interesting to note that these payments and services become compulsory July 1, 1970, a date of some significance under the 1965 Highway Beautification Act. A number of state legislatures will be considering statutory or even constitutional changes in order to comply.

Specifically, the 1968 Highway Act provides that any business displaced by a Federal-aid highway program is entitled to receive a payment for reasonable moving expenses. The term "business" applies to any lawful activity conducted primarily for the purchase and resale, manufacturing, processing, or marketing of products, commodities, or any other personal property. The term "moving expenses" includes the cost of dismantling, disconnecting, crating, loading, insuring, temporarily storing, transporting, unloading, and reinstalling personal property (including service charges in connection with effecting such reinstallations), exclusive of the cost of any additions, improvements, alterations, or other physical changes in or to any structure in connection therewith, and necessary temporary lodging and transportation of eligible persons.

Granted that the 1968 Act liberalizes an otherwise inequitable denial of just compensation for reasonable and necessary relocation or moving expenses, the exclusion of the cost of any additions, improvements, alterations or other physical changes to any structure affected by the move may put the displacee in another situation where he is denied just compensation. Whereas his former operation did not conform to applicable local building codes or state industrial safety standards, it was legal, and it was sheltered by local grandfather laws; relocation may require a very expensive compliance with local building code or industrial commission standards for new construction, or may preclude him from reestablishing machinery once it has been severed from a legal, though noncomplying, integration.

A seemingly arbitrary restriction that the distance of the move should not exceed 50 miles may prove to be unreasonable in certain rural areas, depending on local situations.

Moving Costs

Traditionally, business or commercial tenants or lessees received little consideration by the courts of claims for reimbursement of moving costs, the rationale being that the tenancy or leasehold interest was terminated by the taking under eminent domain, and on the termination of said tenancy or leasehold, the tenant or lessee was required to move in any event. However, it is not reasonable to assume that such a termination resulting from condemnation

is as predictable and anticipatable as the expiration of the term of a predetermined, negotiated term of lease that provided the necessary amortization period for the expenses of moving into and out of the leasehold.

The regulations promulgated after the 1968 Highway Act no longer perpetuated this absurdity. An unqualified provision has been adopted that a "business displaced by a Federal-aid highway project is entitled to receive a payment for reasonable moving expenses." The previous owner-occupant restriction is nowhere to be found.

Of singular significance is the adequacy of the Federal participation in reimbursing the States for relocation payments. The Federal share of the initial \$25,000 of relocation payments to any displaced person on account of any acquisition or displacement occurring prior to July 1, 1970, is set at 100 percent. The Federal reimbursement for relocation payments made in excess of \$25,000 to any one person and for costs incurred by the State in providing and administering the relocation assistance program and services, and for costs incurred after June 30, 1970, are determined in accordance with the appropriate Federal pro rata share for the class of funds involved.

Business Losses

Where, perhaps, the courts could be faulted for their rationale in denying just compensation for relocation and moving costs, it is understandable that the courts would resist entering the highly subjective and speculative area of business damages. In the absence of statutory direction, the majority of jurisdictions, again State and Federal, define just compensation exclusive of losses to the business being operated on the condemned real estate.

The Highway Act of 1968 has undertaken an assault on this difficult issue by determining by statute a just compensation grant payable for business interruption, loss of good will, lost profits, or any other of a myriad of business damage claims. The Highway Act of 1968 provides that, in lieu of a relocation claim, the highway displacee may elect to receive an amount equal to the average annual net earnings of the business or \$5,000, whichever is less. Although this appeals primarily to the so-called "mom and pop" type of operation, it is a step in the right direction.

INTERPRETATION, APPRAISAL, AND APPLICATION

INTERPRETATION AND APPRAISAL OF FINDINGS

The Salvage Industry

The word "salvage" appears to offer a more acceptable and superior description of this industry than "junk."

Although the findings have been directed broadly toward identification of all of the possible industrial activities that are affected by the Highway Beautification Act, scrap iron and steel yards, auto wreckers, and refuse dumps (landfill operations) are the worst offenders and probably will be subject to the greatest future scrutiny.

The salvage of rags and paper is generally under better control, since these products have to be stored in enclosed warehouses for protection. To fence these facilities appears unnecessary.

Current and rapidly expanding environmental controls are generally relegating garbage and trash dumps to landfill operations. This type of disposal appears to improve the character of the land and, if proper compaction and prompt application of cover are carried out, there is no reasonable probability that the area will become unsightly. Yet the assurance that the necessary covering actions are carried out with dispatch makes administrative control and policing mandatory. Screening may become advisable; if so, it may be the only prudent method of assuring conformity with the 1965 Act. Obviously, it would be impossible to move such a facility.

Collection yards used for storage of all manner of salvaged material—such as scrap iron, copper, brass, rope, rags, batteries, paper, trash, rubber, and similar objects—would be subject to the same treatment as an automobile wrecking yard. Even if at times it may not be apparent, storage in the collector's yard is generally methodical, and like things are stored together. Such yards will be subject to the statutory requirements on screening, moving, and relocation.

The auto wrecker's storage yard will be subject to the Beautification Act provisions, but unlike the collector's yard it will not always be possible to move masses of wrecked cars, unless they are old models or those for which there is little or no demand. However, if the price of scrap is in an upward spiral, and if the shredders and similar techniques are improved and developed, demand will cause the scrap to move into the scrap cycle at an accelerated rate.

It appears that the economics of the scrap industry must be considered thoroughly in the valuation of an auto wrecker's facility or business. Other important valuation factors may be zoning, or lack of it, and such physical factors as size, shape, and topography and, of course, locational demand. In varying degrees, all of these factors are similar to those analyzed in other types of valuation studies.

The scrap processor depends on scrap market factors similar to those of the wrecker. Yet, his locational needs differ; for example, the processor requires a central location but the wrecker does not. There are differences in the degree to which the elements of value under consideration must be analyzed, as in the difference in methodology for analysis of a single-family home and an industrial warehouse. The types of data gathered, investigated, and reviewed in the home and warehouse differ in character—yet the techniques used are much the same. However, as there are important variances, it should not be inferred that each scrap-processing plant will require similar valuation techniques. These will change as the complexity of the improvements changes.

Unimproved Land Uses

The automobile, and storage requirements for it, has developed a notable example of intensive use of unimproved land. Automobiles are stored in the open long before they become dismantled hulks ready for the scrap processor. For example, as soon as they come off the assembly line, new cars must be parked, each on about 200 sq ft of land plus access lanes allocated for this use.

Parking lots in downtown core areas and around churches, modern shopping centers, taverns, mortuaries, and industrial plants, for example, are valued for that type of use in most appraisals. Used-car lots, and even new-car lots, contiguous to modern outlying automobile sales and service agencies, are valued by comparing sales of similar sites suitable for the same purpose.

From the used-car lot it is not one giant step down to the auto wrecker's lot, for there are various levels of used-car lots along the way—measured in terms of price of automobile. In the valuation of any of these automobile-oriented land uses, the value of the business is not taken into consideration—except as it applies to the rental value of the land and to gross rental income—if related to percentage rentals.

Similar land uses for storage purposes will be found in concrete block plants, another use requiring a large quantity of land for open-air storage of heavy materials; lumber-yards and coalyards would be similar uses; in each, materials are stored temporarily in the open until sold, but if the yard is moved the owner of the material will usually take his products along with him.

Other types of open storage can be observed in or near towns and cities of all sizes. It is common to see farm machinery (new, used, or obsolete) stored near small towns, quite often on railroad land. Such land is rented to the farm machinery merchant at a fair market rent equivalent to the desired interest return on the market value of the land. Pole yards, pipe storage areas, propane

tank storage, and fertilizer tanks are also examples of material stored in the open.

In general, it can be said that there will be no unique or peculiar methodology used to appraise the fair market value of land devoted to any of these uses.

Improved Special Purpose Properties

Generally speaking, a special purpose improvement has been constructed for one particular use.

Examples of special purpose structures are extremely common and include: cement plants, cement mixing plants, concrete block plants, refineries, grain elevators, phosphate beneficiation plants and other mining operations, cold storage plants, laundries, churches, and many other similar open-air, partially enclosed, or fully enclosed structures.

The scrap processor also uses special purpose structures and equipment. These improvements could include the baler, mounted on a concrete platform and enclosed with concrete block walls; shears, mounted on concrete and including a control house and conveyor system; and more modern and sophisticated shredding equipment.

There appears to be a significant relationship in the characteristics of the single-purpose structures used by the scrap-processing industry and those used by other manufacturing and processing operations.

Special Considerations

Screening

It appears that the right-of-way departments of many of the state highway departments have not yet begun to take screening easements from property owners. Rather, most of the states are temporizing by attempting to screen within the right-of-way. This latter course appears to have a great deal of merit, for when it is possible to make use of this device, the cost of screening may quite often be less than the cost of acquiring an easement or a relocation site.

As an alternative to screening within the right-of-way, it appears that, when screening is possible, it can be accomplished within a restricted easement. This type of easement restricts the right to certain types of use within the area, yet permits the state the right to screening uses. Generally, depending on the width, the owner could continue to use the land within the easement area as long as it did not interfere with the objectives of the beautification laws.

Gunning (9) recognized the problem of valuing restricted easements when he stated:

In estimating the loss of marketability as a result of the imposition of a restricted easement the appraiser scans for possible reactions of the market as a glider pilot senses where thermo updrafts might be forming. He might estimate a probable value loss of 30 percent assuming the whole tract were imposed with an easement which might ordinarily be highly subjective, but valid if based upon the appraisers experience which has given him hints on the effects of adverse influences.

It is not a simple problem to determine the value of an easement. Estimating the value of a restricted easement is apt to present difficulties if comparable market data are impossible to find. Yet, the best possible method

of estimating the value of land subject to an easement is to use sales of sites subject to the same easement or similar types of easement. The terms of substitute easements used must be examined if a similar one does not exist. The easement will limit full use of specified activities on the land but may not curtail the primary land use. On the other hand, if imposed under the Highway Beautification Act, it may entirely wipe out the primary use of such a facility as a junkyard; for most junkyards are probably located within 1,000 ft of primary and interstate highways. This change in use will occur if, for some reason, the yard cannot be effectively screened, as happens when it is lower than or rises above grade. A screening easement thus will not always serve the purpose, yet, if taken, the land will be usable for other purposes.

Regardless of the method used in the condemnation, whether by an easement or by relocation, there must be effective control, or the purposes of the Highway Beautification Act will be nullified. Effective control means that junkyards shall be screened by natural objects, plantings, fences, or other appropriate means, so as not to be visible from the main traveled way of the system, or shall be removed from sight (unless zoned or in an industrial area).²

The automobile wrecker's yard has the reputation of being one of the most unsightly forms of roadside blight afflicting the national landscape. In its attempt to control these by screening the State is faced with certain decisions before arriving at the most effective methods at the least possible cost (23).

There are various approaches to the screening, and these are illustrated in the approach in Illinois. The Illinois Division of Highways has not screened or relocated any junkyards under the Highway Beautification Act of 1965. However, they hope to screen a small number soon, and, although short on experience, they do have definite plans on the procedures to be used. The final decision on methodology will be based on the following steps:³

1. They will examine the feasibility of screening the junkyard entirely on the existing right-of-way.
2. If Step 1 is not possible, they will examine the feasibility of screening the yard by using the existing right-of-way and some additional right-of-way.
3. If neither of the first two steps is possible, they will examine the feasibility of screening the junkyard entirely on new right-of-way, but preferably on easements rather than fee.
4. If it is not found to be possible to effectively screen the junkyard, they will have it removed.

If the junkyard in Illinois must be moved, moving costs will be paid (assuming that a current \$3,000 limit is broadened); a restrictive easement will be obtained so the land can no longer be used for a junkyard; appraisals will be obtained for the purpose of estimating any reduction in market value caused by the restriction placed on the

² Pub. L. 89-285.

³ Austin, Allen R., Engineer of Right-of-Way, Illinois Division of Highways. Letter dated May 23, 1969.

land; estimates of the costs to move the material will also be obtained. The total payment (compensation) will be the amount of the reduction in market value of the land plus the cost to move the junk.

The Chief of Negotiations and Training, Department of Transportation, State of Wisconsin, states that to date the state has purchased no junkyards under this program and, further, that they have no authority to condemn such interest. In the interim, while awaiting passage of the necessary permissive legislation, Wisconsin has been successful in getting many auto salvage yards to donate screening easements over strips of their land adjacent to state trunk highways. This arrangement was worked out with the cooperation of the Wisconsin Salvage Dealers Association. When feasible, the Division of Highways has planted trees on these easements in an attempt to screen the junkyards.

As of April 7, 1969, the Alabama Highway Department had not relocated, removed, or disposed of any junkyards as specified in the Highway Beautification Act of 1965. Their efforts have been limited to screening junkyards by plants and by solid fencing on existing right-of-way.

Relocation Expenses

It appears from the case studies in the appendices that the economics of the scrap cycle are closely related to movement and storage. Profits are related to the number of moves and the distance traveled. The automobile wrecker uses from 200 to 300 sq ft of land, including access space, to store a car or truck throughout the dismantling stages, which could last for a period of ten years in the case of a current model. The operator may have considered the cost to carry the land to be equal to a prudent return on its market value. For example, 300 sq ft of land at a value of \$1.00 per sq ft would have a rental value of \$27 per year, at a return of 9 percent per year. This single factor could be the reason most of the automobile graveyards are located on cheap land in the country. Obviously, the same storage cost would be less—at the same rate on land worth \$500 per acre, the storage cost (rent) would be only about \$0.38 per year.

After the car has been completely dismantled, the hulk of scrap weighs about one ton, according to industry. The cost to move this by truck is about \$5.00 per ton or more. Current railroad freight rates range from about \$7.50 to \$9.00 per ton and are related to location and distance of the haul. If the car is only partially dismantled, the cost to move it is greater. To preserve the marketable portions of the car (such as fenders, doors, and hoods) it is essential to handle these with care.

It appears there are at least three major factors to consider in the moving of salvage:

1. The gross tonnage to be moved.
2. The distance to be moved.
3. The quality of the product—that is, is it a partially dismantled vehicle; a completely dismantled vehicle; or pure scrap.

Surveys indicate that there are no outstanding innova-

tions being used by the states to arrive at an estimate of moving costs. Although it may not be an accepted practice to obtain more than one bid on moving costs, it appears that this should be a mandatory requirement. Case Study 4, Appendix F, dramatically points out the reason to obtain at least three, and preferably more bids on moving costs for, in this case, there was more than a 54 percent spread between the low bid of \$73,000 and the high of \$112,700 for moving eight acres of pure scrap piled 15 to 20 ft high. When the scrap is in the form of partially dismantled automobiles (those with saleable parts remaining) the cost to move each ton will be higher because of the necessity of protecting the parts from such further damage as to render them unsaleable. In the case studies in Appendix F, there appears to be no reason to doubt the cost of \$37.50 per car to move those with saleable parts in Minnesota compared to a cost of \$13.46 per car in California for more thoroughly dismantled hulks. Studies show that costs were reduced to about \$3.65 per ton for a fully dismantled car.

Business Losses

The Highway Act of 1968, in allowing the owner of a small enterprise the option of receiving \$5,000 or an amount equal to the average annual net earnings (whichever is less) has brought the value of a business into the appraisal process. It does not appear that the intent is to compensate for a permanent loss of business, because at the time of passage, businesses were being evaluated on the stock exchange at from five to twenty times annual earnings, with an average at close to fifteen times. Of course, there were exceptions from as low as one to as much as fifty or more times. The important fact is that the legislature is now considering the issue of business losses. Until now, the theory has been that the only taking has been that of the real estate and not of the business conducted at the location. It has generally been held that the value of a strategic, well-located site will be reflected in the resulting business volume.

It appears prudent that if the value of a business is to be taken into consideration, there should be a full disclosure of net earnings of the company for a past period of years. Logically, this can only be provided by an audited balance sheet or by income tax returns. In most screening cases the owner is not being driven out of business, and business will only be interrupted. However, the net earnings could suffer a temporary diminution—or enhancement—if the location is significantly changed, and, in the case of a processor, it could be essential to construct a new processing plant before an extant plant is vacated or moved, to avoid a business interruption.

Legal Concepts

As alluded to previously, of the 50 states, the District of Columbia, and Puerto Rico, 44 have adopted some type of junkyard control legislation. Of these 44 jurisdictions with some form of junkyard control, 38 states have adopted acts patterned generally after the Federal Act in providing for just compensation for any taking. On the other hand, six jurisdictions, including Puerto Rico, retained or adopted junkyard control legislation predicated strictly on the

state's police power to determine if the abuse is an abatable nuisance. Even in the event that a specific state has adopted a federally patterned junkyard control act, it may not be entirely clear whether just compensation is payable without Federal funding and participation.

Whereas the business damage claim to recoup moving or relocation expenses has been met statutorily, at least in part, loss of "good will" goes uncompensated. Historically, the failure of the courts to allow this claim under just compensation stems, not from the denial of its existence, but from its difficulty of proof. Opponents to the establishment of loss of good will as compensable injury deny its existence under a rationale that the only property subject to a taking is real property, and not the intangible personal property known as good will—the entrepreneurship or mercantile acumen of the owner-occupant or even of the tenant under lease doing business on the subject of the taking. These opponents conjure up the specter of fraudulent claims and make frequent assertions regarding the speculative and subjective nature of the proof of loss of good will. Some element of speculation arises in all questions of valuation, and expression of opinions is necessarily predicated on purely subjective considerations. But is good will bought and sold in the market place in any other way? Some jurisdictions (such as Florida, Vermont, and New York) have lifted the lid, so to speak, statutorily. In light of existing precedence, state and Federal statutory authorization is the only way good will or other incidence of a taking can be considered as just compensation.

In the instance of junkyards, an involuntary relocation may prove to be more often impossible than fatal to the perpetuation of the going business. The locational aspects of good will of junkyards can partly be reflected in land value. As the scarcity of relocation resources for junkyards increases, so must the value of existing sites. Consideration must be given to the question, then, of whether the taking involves merely a real estate acquisition that will result in a relocation to an equally adaptable site, or whether the taking will result in a business termination. If the acquisition will necessarily bring about a business termination because of the impossibility of a reasonable relocation and reestablishment of the business, some authority exists for the proposition that the market value of the land taken may reflect the value of the business and profits therefrom. The authorities consider that this is not a separate element of damage but an additional attribute of the land. (See *Paper v. District of Columbia Redevelopment Land Agency*, 287 F.2d 141 (C.C.A.D.C. 1960), or *Housing Authority of City of Bridgeport v. Lustig*, 139 Conn. 73, 90 A.2d 169 (1952).

Valuation Concepts

Land Value

Because sound market data are important in the appraisal of land, a thorough analysis must be conducted, together with a search for information concerning sales of properties within the area under consideration.

Case Studies 2, 5, and 6, in Appendix B, denote that the value of land for scrap-processing yards is closely related to the value of other industrial land within the

same area. Other case studies and observation and inspection of the location of various scrapyards confirmed this. Automobile wrecking yards also appear to have values very similar to those of other types of land use within the same area. In Appendix B, Case Study 2 denotes a high similarity of value for a wrecking-salvage yard and a propane storage area located next to it. Case Study 3 is an analysis of three lease situations and denotes similar ground rents and values for contiguous uses for a lumberyard, machinery display, and auto salvage and wrecking.

All of the case study information analyzed appears to refute an approach to the estimate of land value used by the North Dakota State Highway Department in Case Study 1, Appendix B. In that appraisal of an auto wrecking yard, the appraiser took the position that the value of the land with partially dismantled automobiles was less because of the use, and that it increased in value after the removal.

Each analysis of land sales must be structured to enable the appraiser to recognize the similarities and dissimilarities of each sale—the use to which the land is put is not always as important as the highest and best use. As in the appraisal of any site, there will be reasons to adjust the sale price of each land sale examined. The adjustments should be made for:

Time.—Adjustment for time is related to the effect of general inflation or deflation; this will also reflect change in supply and demand.

Accessibility.—Adjustment for access appears to be important, yet there are examples in the case studies investigated indicating that this is not always true for the auto wrecker. In Appendix A, Profile 4, the owner stated that his business dropped to a trickle during road construction. Yet, in Profile 6 the owner, by choice, was located at the end of a winding dirt trail. It would appear that accessibility is not always a major factor in the case of an auto wrecker, but that access to rail and to an all-weather road is of major importance to the scrap processor. Although it is an important element of value, the access factor is not much more critical than in many other types of land use.

Visibility.—Scrap processors generally do not depend on a location that will be visible to passing traffic. There is little, if any, impulse buying or selling in the scrap-processing business. The auto wreckers in the market area know the location of each of the scrap processors because they want to obtain prices from each one before disposing of wrecked automobiles. Auto salvage yards, on the other hand, usually rely on retail trade and thus generally, but not always, tend to choose a location for maximum exposure to the largest number of possible customers. However, as we have noted, in our case studies we have found auto wreckers located by choice on sites visible only from the air or from water or by traffic on little-traveled back roads.

It was found that a number of state auto wrecker associations are very cooperative in screening their yards or allowing them to be screened. It thus appears that the entire frontage of a wrecker's yard need not be visible to passing traffic. Another factor relating to visibility is the

small-site location of some auto wreckers on high-value land within the city. Usually these owners do not display the entire wrecked hulk, but rather, by systematic demolition on purchase, will dismantle a wrecked car, sort and catalog the parts, and store them inside a building. In most cases sales are made over a hot-line telephone system to buyers who at the time of purchase could be located in a different part of the city, in another town, or even in another state. The ultimate purchaser in some cases will be a service garage, which will order over the phone. Thus, in a significant number of cases, the buyer never sees the auto wrecker's yard—in fact, he may not even know where the part he purchased came from. Thus, it does not appear that visibility is a significant factor in the case of scrap processors or auto salvage yards.

Size.—The size of a scrap processor's yard must be related to the volume of business being handled. This factor is also true for the auto wrecker, but size is also related to the type of operation. The used parts dealer within the city near the core of the central business district is located on one acre or less. Yet, the auto wrecker on the outskirts of the city, where land is cheaper, will need 30 acres, or possibly more. In each case, the need for space is related to the method of doing business as well as to the value of the land.

A scrap processor will need space for storing his raw material and finished product. Obviously, a shredder that will process 400 to 600 auto wrecks each day will need considerable space. Although the required area will not be equivalent to a 500-car parking ramp, since the autos will have been crushed and piled in stacks, there will nevertheless be a need for about ten or more acres in the smallest shredder site. This size factor will scale downward to about three to five acres for those operators with balers.

Location.—Location is always an important factor and element of value. The location dictates the prices of similar land in the vicinity.

After reducing each of the sale sites into a unit of measurement, either the sale price per square foot or per acre, the unit price is adjusted for each of the foregoing elements of value and for any others considered essential in determining the superiority or inferiority of the sale site as compared to the site under appraisal.

In each appraisal of a salvage yard the value of the land is a significant factor. It is more important to the automobile wrecking yard than to the scrap processor because of the nature of the improvements. In the former, with few improvements other than a small office and possibly a warehouse, the land value is in many cases much greater than the value of the improvements; in the case of the scrap processor, the land value could be from 20 to more than 50 percent of the total value.

The land value is important in the appraisal of any single-purpose property because the cost approach is important in over-all valuation. In the valuation of land, the uses permitted by zoning or the exceptions granted by permit for nonconforming uses can create impacts on the value of a site. In the cases of auto wreckers and scrap processors, these governmental restrictions could point to a unique value peculiar to a specific site. For example, if

one of these facilities is located on a site zoned for commercial use, yet is being permitted to use the site for scrap processing, the site could be worth more, or less, for its use variance, especially if no other sites are available within the market area for such a use.

The impact of zoning and exceptions on value have been succinctly pointed out by a Rhode Island appraiser. There, and in other states, an exception is needed to use a certain property for a purpose for which a zoning exception must be obtained, even under the same zoning classification. An example is cited for a salve and powder manufacturer who wanted to buy land in an industrial area in which a zoning variance was needed for manufacture of the company's product (the site was zoned for residential use). A variance was obtained, and a brick building was erected in 1956; two years later a warehouse containing 15,000 square feet was added. In March 1963, the buildings and land were put on the market; after several months a buyer was found who was willing to pay \$350,000, provided the zoning was changed to industrial. There was a great deal of objection at a city council meeting, and the request was denied. The property was again placed on the market and another buyer was found; he agreed to pay \$275,000 if the zoning board of review would give a variance for his type of business, the manufacture of jewelry items. Residents who had objected to a zoning change did not object to a variance. In this case, the sellers, who sold at the lower figure, would have received 27 percent more if the property had been properly zoned in the first case (27).

Additional, perhaps countless, examples of similar cases could be cited of sales and offerings involving single-family residential properties demonstrated to have been sold for more if zoned for multi-family residential. It is also possible to cite examples of various types of commercial and residential property sold to major oil companies—probably within every state of the union—when the oil company has agreed under option to pay a specific amount of money contingent on obtaining a rezoning, a permit, or an exception.

The foregoing examples relate to the value of a specific piece of property that has been properly zoned or licensed for scrap, salvage, auto wrecking, or junkyard purposes, and they indicate the importance of permitted uses in an analysis of value. The land should be valued as if vacant and available for improvement to its highest and best use. When any parcel is encumbered with an improper improvement, any penalty accruing is charged first against the value of the improvement and not the land. The economic basis for this assumption is the fact that land extends into perpetuity and any improvement has a limited life.

In estimating values, as indicated by the comparable land sales or by land residual process, prime consideration in the examples was given to the legal use that would result in the highest present use of the land. In general, a proposed use that will economically justify the investment in land as well as the new improvements constitutes a proper use of the site.

Cost Approach to Value

The cost approach to value is an appraisal technique; here the estimate is based on the value of the land considered as vacant and available for improvements to highest and best use, plus the depreciated value of the improvements. Any unit cost factors applied in estimating reproduction cost have to be formulated by use of nationally recognized, published cost manuals and compared, if possible, with updated original cost of the particular improvement and costs of similar improvements.

Depreciation is the loss in capital value from any cause. It is an effect caused by one or a combination of any of three elements: physical deterioration, functional obsolescence, and economic obsolescence.

Physical deterioration represents observed value loss from wear and tear and action of the elements. If inspection reveals that structure maintenance has been good, the physical life of the improvements has been preserved. Conversely, poor maintenance will tend to lower the value.

Functional obsolescence is that element of accrued depreciation brought about by changes in architecture, human desires, and numerous other changes resulting from progress. Improvements such as those in a scrap-processing yard are built for a specific purpose and to meet the requirements of the processor. In an estimate of fair market value, the layout of the existing facility and its efficiency, taken from the viewpoint of the owner, are not as important to a typical potential user as the property's over-all adaptability. Outdated improvements—for example, balers, if they are entirely supplanted by shredders in the future—may not meet the exact requirements of a prospective (shredder) purchaser, owing to their poor adaptability, so an additional discount from cost, less physical deterioration, may be required to offset this obsolescence factor created by impaired usability.

Economic obsolescence is caused by changes external to the property and results in an impairment of desirability or useful life. In some cases, this has been caused by a change in optimum land use. Value is not an inherent characteristic of real estate, but depends on the desires of individuals; it will vary from person to person and from time to time as individual desires change. A structure cannot have value unless it has utility, is relatively scarce, and the combination of these two has aroused the desire of a purchaser who has the resources to buy. The amount of value depends on the greatest potential use.

If the economics of a steel industry dictate an inordinate demand for scrap, and thus extremely high prices, there could easily be a rapid and healthy increase in the value of both scrap-processor and automobile wrecking yards. In a recent article substantiated with extensive citations covering case law, Julius Sackman (29) discusses cost as criterion and evidence of value as a check on the other approaches to value and as support of the experts' valuation estimate. In summary, he concludes that cost as evidence of market value should be restricted to those cases where:

1. The property involved is unique.
2. The property involved is a specialty.

3. There is confident proof of an absence of market data.

Despite its weakness, reproduction cost gives a deceptive appearance of greater objectivity than either of the other two approaches. When utilized it can be properly evaluated only if it is remembered that:

1. Except in unusual situations reproduction cost fixes the ceiling for value.
2. Reproduction cost should usually be given maximum weight when the other approaches are unavailable.
3. Full allowance should be made for physical and functional depreciation.

In the case of a shredder operation—because it is such a recent innovation—the cost approach appears to be the only useful technique for measurement of value. At this time, there will be few sales of such facilities, they will probably be in different cities, and rental data will be even less plentiful. In the case of a baler operation, however, there will have been greater numbers of sales and, because of the technological changes, there will have been functional and economic obsolescence. However, before the advent of the shredder sales may have been made at higher unit values than those sales made after the shredder made its entry into the market, an example of a depreciation factor caused by obsolescence.

The cost approach applied to an auto wrecking yard will perhaps not be as reliable as the market approach because of the limited contribution of the structures. However, it should be used—especially in those cases with reasonably recent improvements—as a check on the other techniques. Variations of the cost approach will be needed in the screening and relocation processes and will serve as an aid in the measurement of the part taken, the cost of screening, and the relocation of the facility in the cases of moving expenses, fencing costs, and landscaping and planting costs.

It does not appear that the cost approach can be eliminated from the appraisal process in the valuation of a special purpose property or of one that has to be screened. It will produce a reliable base in the correlation of value and damages and should therefore receive consideration.

Income Approach to Value

The income approach, or the process of converting the future potential benefits of a property to its present worth, is another avenue for estimating the value of a property. This approach has its greatest usefulness in the valuation of income-producing properties, for such properties are usually purchased because of their income-producing potential.

The reliability of this approach depends on four conditions:

1. The reasonableness of the estimate of anticipated net annual income.
2. The duration of the net annual income, usually the remaining economic life of the improvement.
3. The capitalization rate.
4. The method of converting income to capital.

Scrapyards and automobile salvage yards are not primarily investment-type properties, which usually sell on the basis of their income or by comparison with prices of other such properties currently in the market, yet it is possible to utilize the approach.

Obviously, in making appraisals of properties such as these, consideration must also be given to the fair rental value of the property as of the date of appraisal. Fair rental may be defined as "the monetary amount reasonably expectable for the right to the agreed use of the various spaces of real property as established by competition in the rental market," or if market data are inadequate, "that amount which will amortize the value of the remaining capital investment plus a fair return of interest, returned during the useful life of the property." The fair rental estimates should be based on the terms and conditions of assumed typical leases and on the services furnished by the lessor in comparison with comparable space in the immediate area.

The common method of utilizing this approach is to estimate the rental value of the real estate, deduct vacancy reserves and all of the normal annual expenses from the yearly income, and, after first deducting the return on the land, capitalize the residual income. In the case of scrap processors, the property is generally owner-occupied; however, this is not always true. In the case of the auto wrecker, it is not uncommon to find him on rented land besides the railroad tracks, and often small salvage-baler processing operations are located in similar places. In small towns, it is possible to find a processor combining his operations with the auto wrecking business.

Case Study 2, Appendix B, presents a case of a combined processing and wrecking operation. The site is contiguous to, but not within, the city limits, and is not zoned. A railroad had leased this site to the salvage operator, on a net basis, at \$3,750 per year. The operator had installed trackage, a small office building, and a corrugated metal fence; the improvements were in very poor condition. The railroad sold this land to the tenant in 1969 at \$37,500, or \$0.50 per sq ft for the 75,000 sq ft and equivalent to the capitalization of the net income at 10 percent. A site abutting on the north and used for open storage also sold at \$0.50 per sq ft in the same year. The sale was for the land only, as the lessee owned the small office building. (On a sale of the whole, the structures would have contributed a nominal value.) Situations similar to Case Study 2 were found in other states and locations. In each case the value of the salvage yard could have been determined by first estimating the net rental and then capitalizing at going rates in the area. The net rent would, of course, have been the residual had the ground lease been on a gross basis, with the owner paying taxes, insurance, and other normal real estate expenses. Naturally, as the number and complexity of the improvements increase, the rental value of the facility will go up so as to provide the proper yield on the investment in processing equipment.

Although no shredder operations were discovered that were under lease, it is conceivable that a small number could exist. The rentals could have been determined for a new structure by relating annual rent to cost to provide a

prudent yield on the investment. Another method would have been to fix a minimum rent and a percentage rent based on the gross sales of processed scrap. Such a percentage rental factor could also be used in the case of an automobile wrecker, by relating the rent to a percentage of gross sales. Even a landfill operation could be rented on a percentage basis, or even on a fee basis, with the fees computed from the number of tons of refuse dumped.

If the rentals of these facilities are being determined in the market on a percentage basis it will become incumbent on the appraiser to obtain a knowledge of the scrap industry, its gross sales, and its net income. There is nothing unusual in this approach, for in shopping centers, for example, it is common to base rentals on a percentage of the gross sales.

The use of a percentage of the gross is a common rental factor in refuse disposal and landfill operations. The trucker normally is charged a fee to dump his load, and the fee is usually at a rate per ton; if traced back far enough this rate can be determined to be a percentage of the rate charged to pick up the refuse.

Market Data Comparison Approach

The comparable sales, or market data comparison approach, is a technique predicating the value estimate on prices paid under actual market conditions and current listings. Though the latter are often conjectural, they assist in setting the upper limits of value. In the case of a scrap processor or auto wrecker, the market data approach is one of the most difficult to apply because of the general dissimilarity of properties under consideration. During the period of making this appraisal, it is essential to find out and analyze the sales prices of various types of properties in the immediate area to determine their range.

It is apparent that the reliability of the market data approach in the case of a salvage operation is dependent on several fundamentals. First, the properties constituting the market data must have a reasonable degree of comparability with the property under appraisal. Comparability can depend not only on the time elapsed between the sale of the comparable property and the date of appraisal but, more importantly, on the trends in value during this period. For a reasonable degree of comparability, there must be an absence of unusual conditions affecting the sale of the various properties that constitute the market data. A prolonged period of intended or impending condemnation can certainly be an important factor, also, as well as the verification of the sales prices and such circumstances surrounding the sales as financing, rent, or physical condition at the time of sale.

The difficulty in the application of this comparative approach stems from the fact that two properties are rarely the same, and this is particularly true of salvage yards. Yet there are similarities; there are usually locational advantages and disadvantages to be considered, differences in construction, condition, size, amount of land, facilities furnished or available, additional improvements, rentals, functional deficiencies, and conditions of sales. Therefore, in analyzing the market data, it is imperative to reduce the sales prices to common denominators so as to relate the

degree of comparability to the properties under appraisal.

These common denominators can be considered to be indicators only if there are no hard and fast rules to govern their application. In selecting an indicator for any specific parcel, the following items are but a few of many that must be considered and for which individual adjustments must accordingly be made:

1. Location of the site within the block, as well as within the neighborhood and general area.

2. Frontage, usable width, depth, usable depth, ingress, and egress.

3. Improvement: type, construction, age, condition, usability, convertibility, number of improvements on the site, percentage of lot coverage, placement of improvements on the site.

4. Rents, occupancy, and services furnished, as compared with similar properties.

5. Over-all demand for a particular type of property in a particular location.

Extreme care is necessary in adjusting these indicators, since many of these items will affect each indicator differently. In general, most of these factors will apply to the scrap processor rather than the auto wrecker. In each case, however, the approach will be tied to the market data approach to land value because of the high ratio of land to improvements.

APPLICATION OF FINDINGS

In general, it can be said that there is nothing unique or mysterious about the methods used to appraise salvage yards, automobile wreckers' facilities, scrap processors' yards, or refuse disposal areas. A knowledge of the economics of each is essential to each valuation analysis, and a familiarity with the terms common to the industry will be helpful. Examples of the approaches to value are presented here to provide an overview of possible situations. The examples are not intended to include every possible situation.

Example 1: Income Approach—Auto Wrecker

Example 1 presents one method of using an income approach to value. A postulated automobile-wrecking facility worth \$440,000 is typical, according to the national averages presented by the U.S. Department of Commerce. The site is average in size (15 acres), and the value of the site has been arbitrarily estimated by market data comparison at \$380,000. The improvements on this site consist of an office building and warehouse and some old, frame fencing. The total area of the buildings is 10,000 sq ft and their depreciated value about \$50,000. In addition to the fixed improvements, this facility has two tow trucks, a crane and other equipment, to a value of \$10,000. The yard has six employees, the average in the industry, according to computations from Business and Defense Services Administration data (11). The annual business of the facility is average: 578 automobiles were purchased during the course of the year at an average cost of

\$334; these were sold as parts and hulks to achieve a gross return of \$587 per vehicle.

An alternate appraisal technique could be considered for processing this income stream into the value of the real estate. This is based on business volume, management, and the value of the real estate. It is a method more common to the appraisal of a hotel, nursing home, or similar operation, where the facilities and the business appear to be closely related.

The following presented do not apply to every market:

Annual gross sales volume: (578 autos @ \$587)	\$340,000
Annual expenses:	
Cost of autos (578 @ \$334),	190,000
Gross profit:	\$150,000
Annual expenses:	
Taxes	\$ 12,000
Insurance	1,000
Salaries & Social Security	38,000
Miscellaneous	7,000
Partial sales expense	\$ 58,000
Net income (including income tax, profits, and management expenses):	\$ 92,000
Return on equipment: (value found by cost and/or comparison; \$10,000 @ 10% return of capital and 10% return on capital)	2,000
	\$ 90,000
Entrepreneurial profit and overhead: (50%):	45,000
Net income available for real estate:	\$ 45,000
Interest return on the land: (\$380,000 @ 10%)	38,000
Income imputable to improvements:	\$ 7,000
Improvement value: (\$7,000 capitalized @ 14%)	\$ 50,000
Value of land found by market data approach	380,000
Real estate value estimated by income approach	\$430,000
Value of equipment	10,000
Value of real estate & equipment	\$440,000

This analysis is a hypothetical example based on industry averages and it should be used only as a guide and the approach to it should be tempered with essential modifications. A normal income approach would be used for a straight rental situation.

Example 2: Income Approach—Landfill Refuse Disposal

The typical landfill dumping operation can be valued by the income approach to value if data are gathered on the costs and rates being charged within the market area for refuse disposal. Information must be gathered on the monthly pick-up charges per residence for both compacted and noncompacted refuse. Then the capacity of the disposal area must be estimated. The methods used in this approach to value can be observed in the following example of a hypothetical refuse disposal area: The plan is to fill an old gravel pit to the height of the surrounding land. The 10-acre site contains an area of about 40,000 sq yd depressed an average of 42 ft or about 14 yd below the surface. The depression will hold about 400,000 cu yd of fill, exclusive of the cover stock. The county has proposed a rate of \$0.50 per compacted cu yd as a dumping rate. The cost to compact and fill the dump each day (inclusive of depreciation and yield on the equipment) is estimated

at \$0.15 per cu yd. The rent to the land owner is 50 percent of the dumping rate, or about \$0.25 per cu yd.

A recapitulation of the income approach for this hypothetical refuse area follows:

Gross potential rental income:		
(400,000 cu yd @ \$0.25 per cu yd)		\$100,000
Estimated annual rent: (5 yr)		20,000
Vacancy reserve:		
(None; this is a county lease)		-0-
Effective gross annual income		<u>\$ 20,000</u>
Annual real estate expenses:		
Taxes	\$1,000	
Insurance (liability)	250	
Management	750	
Miscellaneous	1,000	
		<u>\$ 3,000</u>
Net annual income for five-year period		<u>\$ 17,000</u>

Present worth of \$17,000 per year for a period of five years has been discounted at 12% because of current market conditions and interest rates on other types of securities. The factor (Inwood) is 3.605 and denotes a value of the income stream of:

\$60,285

By comparison it has been determined that land at normal grade in this vicinity has been trading at \$10,000 per acre in recent transactions. The residual value of the land (10 acres at \$10,000) will be equal to \$100,000, discounted at 12% to the end of the five-year period of filling. The Inwood factor at 12% is 0.5674. Thus, \$100,000 @ 0.5674 equals:

56,740
\$117,025

From which the per acre value is \$11,700.

In this example, it appears that the depleted gravel pit can be worth more per acre than the surrounding land. Because it is highly possible that a landfill operation will increase the value of the land and also make it aesthetically more acceptable, the plot will require only temporary screening. Obviously, it will not be possible to move the average landfill operation.

Example 3: Business Valuation, General

It is common in accounting and in the stock exchange—but not in the appraisal of real estate—to value a business on the basis of its volume. There are a number of approaches, including but not limited to the following:

1. The net book value per share is determined from the records of the company as of the close of business of the calendar month next preceding the month in which the valuation is required to be made. The net book value computation should be made on the accrual basis, the completed contract method of accounting, or a cash basis. The records should be those reflecting the net income or earnings.

2. Ten times the company's average net earnings per

share is a sound base, with the net earnings computed on the cash or accrual basis, or on the completed contract method of accounting determined as follows:

(a) First, determine the net income of the company for the three completed fiscal years immediately preceding the fiscal year in which the appraisal is required to be made. The net income is to be determined from the annual audit reports of the company prepared by the public accountants regularly employed to audit its books and records.

(b) Second, to net income as determined under subparagraph (a) above, add the net income of the company for the complete calendar months subsequent to the last complete fiscal year of the company and prior to the calendar month in which the appraisal is required to be made. The net income for each calendar month can be determined from the earnings statements for said months as prepared by the company, and without audit.

(c) Third, determine the total number of complete calendar months comprising the sum of the periods set forth in subparagraphs (a) and (b) and divide the total by 12.

(d) Fourth, divide the total net income of the company for the sum of the periods determined under subparagraphs (a) and (b) by the result obtained under subparagraph (c).

3. If the shares of the company appraised are listed on any stock exchange, or, if not so listed, they have an established fair market value by reason of being regularly traded in established over-the-counter channels, then the fair market value of the company would be the product of the market value of each share multiplied by the total number of shares.

Example 4: Valuation of the Average Auto Wrecker's Business

Statement of Operations for the Year

Sales (578 cars @ \$587)		\$339,000
Purchases (578 cars @ \$334)		193,000
Gross profit		<u>\$146,000</u>
Salary & benefits of owner	\$20,000	
Wages & benefits of employees (6 @ \$8,000)	48,000	
Property taxes	12,000	
Utilities	5,000	
Repairs & maintenance	4,000	
Telephone	1,000	
Supplies	2,000	
Insurance	1,000	
Bookkeeping & legal expenses	2,000	
Operating expenses		<u>\$ 95,000</u>
Profit before depreciation and income taxes		\$ 51,000

Indicated value of business:

Investment (at 12%) needed to produce \$51,000
a year before income taxes \$425,000

Source: Real Estate Research Corporation estimates based on *The Auto Wrecking and Dismantling Industry*. Average gross purchases, sales, prices, and labor force were extracted from that survey.

Example 5: Cost Approach—Scrap Processor—Baling Operation

Example 5 is not an example of a specific case, but is used to portray what could happen in five years as a result of technological advances.

This hypothetical operation is that of a scrap processor with a five-year old baler and located in a city (population 1,500,000) next to a site with a new \$3 million shredder.

Improvements:

Main warehouse and office (10 years old)			
Cost new today, 8,355 sq ft @ \$9.35 per sq ft	\$ 79,372		
Depreciation from all sources (25%)	<u>19,802</u>		
Depreciated value		\$ 59,500	
Metal warehouse (65 years old)			
Cost new today, 1,065 sq ft @ \$4.00 per sq ft	\$ 4,260		
Depreciation from all sources	<u>3,860</u>		
Depreciated value		\$ 400	
Concrete baler house (5 years old)			
Cost new today (without equipment)			
915 sq ft @ \$12.00 per sq ft	\$ 11,000		
Depreciation calculation:			
Physical deterioration (10%)	\$1,100		
Functional obsolescence: Because of the capacity of the new shredder, which is taking major portion of metro area business, this plant is now operating at about 10% capacity (Less physical deterioration charged previously)	8,800		
Economic obsolescence	<u>0</u>		
Depreciation total for baler house	\$ 9,900		
Depreciated value of baler house		\$ 1,100	
Depreciated value of 3 buildings			\$61,000
Trackage: Depreciated value of 200 ft @ \$10 per ft			2,000
Fencing: 1,000 lineal ft (cost new \$4 per ft, depreciated 20%)			3,200
<i>Equipment:</i>			
Cost when new (5 years old)			
Truck scale	\$ 10,000		
Railroad scale	25,000		
Baling press	175,000		
Auto incinerator	<u>100,000</u>		
Total equipment cost		\$310,000	
Depreciation of equipment (postulated)			
Physical (Assume nominal 10%)	\$ 31,000		
Functional (Assume a future use for the scales but only limited use for the press and incinerator because of shredder operation nearby.)	247,000		
Economic obsolescence	<u>0</u>		
Depreciation total for equipment		\$278,000	
Depreciated value of equipment		\$32,000	
Estimated value of improvements			\$ 98,200
Value of land (found previously)			<u>200,000</u>
Value estimate by cost approach			\$298,200
or,			<u>\$300,000</u>

Example 6: An Approach to the Estimate of Damages Due to the Taking of a Screening Easement

Site: 500 ft of highway frontage, 1,300 ft deep, containing 15 acres, or about 650,000 sq ft.

Utilization: Automobile wrecking and storage of dismantled cars; adjacent to highway and visible from it.

Effective control of screening can be accomplished by:

1. Fencing along a line parallel to and 200 ft from highway.

2. A screening easement taken by State—a strip 200 ft wide for 500 ft along highway, 2.34 acres, or 100,000 sq ft.

3. Relocation, by State, of the 330 automobiles (at 300 sq ft per car) now stored on the easement; about 100 are fairly new acquisitions, 100 have been partially dismantled, and 130 are ready for the scrap processor. Four firms have submitted bids to move the cars; these bids range from \$7,000 to \$11,000.

(a) Screening by fencing will cost about \$5 per ft for 500 ft, or about \$2,500.

Market Data: Three tracts, each with modest improvements similar to those of subject, and containing 10 acres, 15 acres, and 20 acres, sold within the past year at \$12,000, \$12,900, and \$13,000 per acre, respectively. Each tract had highway frontage, and proposed long-range uses varied from residential to commercial. After adjustment, the value of the subject is estimated at \$12,500 per acre for 15 acres before the taking, or about \$187,500.

The effects of the taking will include:

1. A change from no setback, under current utilization, to a 200-ft setback.

2. A change in visibility: It has been concluded that this is an important element of value for this type of use, but will not make or break the venture.

3. A change in access: It will be essential to construct a road 200 ft long from the highway right-of-way.

4. An irrevocable reduction in size, and thus of parking spaces and inventory storage. Fortunately the warehouse and office were farther than the proposed screen line from the highway, so under a continued use they can remain. The question posed is: "Does the taking of 2.3 acres from the 15-acre tract render the balance of 12.7 acres unusable or obsolete as an auto wreckers yard?" Based on the analysis of the area and the economics of the industry presented previously, it does not appear to, for these storage yards range in size from one to 30 acres throughout the country.

5. Expenses of relocation—a place to put 330 vehicles: this is a decision for the owner, not the State. Unlike one of the case studies, in most jurisdictions the State cannot buy or condemn contiguous land for private use, and in this case neither can the owner. A further question is, "Can or should the State be placed in the position of selecting that part of the vehicle inventory to be moved or disposed of?" If the State does, it can be accused of entering a business decision on the disposal of personal property inventory, yet it may not be clearly able to compensate for business losses. The alternative is to allow the owner to select those vehicles to be relocated or disposed of. His selections may or may not all be within the easement area; perhaps he does not wish to dispose of all of his 1960 models because of the current parts market, nor may he particularly want to sell the newer current models. Or perhaps he would like to sell his completely dismantled vehicles to the processor, if the scrap market is temporarily up.

The problem: Most of the vehicles he wants to keep—and each of these could be worth several hundred dollars to him—are in the proposed easement area. Those he would sell are in scattered locations. To allow selection will increase and probably double the moving costs because of added movement in shifting the inventory. The low bidder (\$7,000) confirmed that this type of move would cost about \$14,000, for it would be twice as much work; but it would still be less costly to the State than the alternatives.

By allowing the owner selection privileges, and since the owner wishes to remain where he is, the State in effect has not been forced into:

1. Purchasing the inventory at its discounted present worth. However, this would possibly be classified as reimbursement for business expenses and might not be possible in some states.

2. Moving the vehicles to another site. Because the new site may not be owned by the subject property owner, the inventory might have to be placed on State land. Land acquired by excess taking would be satisfactory, if it could be screened. Under this method, the owner would suffer consequential damages.

3. Acquiring all of the property—land and vehicles.

Valuation after the taking: The market data examined disclosed at least three sales of property that would be similar to the subject after the taking. The first was located nearby, and it contained 12 acres, had 600 ft of highway frontage that was subject to an unbuildable easement for a power line, 150 ft wide, measured from the highway right-of-way; the sale price was \$9,200 per acre. The second sale had 18 acres, 400 ft of highway frontage, subject to a flowage easement in a strip 300 ft wide along the highway; this sold recently at \$8,500 per acre. The third sale contained 20 acres and was contiguous to the rear of the subject. It had no highway access, being accessible from a county road; it sold last year at \$8,750 per acre.

The valuation after the taking is predicated on the same amount of land. However, 2.3 acres of the original 15 acres is now subject to the beautification easement prohibiting the use of the land along the highway for the storage of wrecked automobiles. The highest and best use of the whole property after the taking is for a use similar to that of an auto wrecker. There are no other uses fronting on the highway in this neighborhood except scattered, old, low-priced, single-family dwellings. There appears to be a market at this time for land for investment. This property will be reduced in useable size and will no longer front on the highway unless in some other eventual use. The highest and best use of the land after the taking remains the same. Further, the property has now become more oriented to its backland. Sales of this backland property and site subject to easements point to a range in value of from \$8,500 to \$9,200 per acre. After adjustment it appears that the 15 acres subject to the easement after the taking should be valued at \$9,000 per acre, or \$135,000.

The foregoing illustration produced the following results:

Value of the whole before the taking:	\$187,500
Value of the remainder after the taking:	135,000
Value of the part taken and damages:	\$ 52,500

Another way of considering this problem is to relate the value before the taking to a unit of measurement. An appropriate unit would be parking stalls. After deducting the building area, at 300 sq ft per car, about 2,150 cars could be parked on the 15 acres. The value before the

taking, at \$187,500, is equivalent to about \$87.50 per stall. After the taking there will be room to park only about 1800 cars; at \$87.50 per stall this equals \$157,500; at \$75 per stall the value is \$135,000. The reduction in unit value from \$86 to \$75 is about 12.8%. Actually, about 15.3% of the parking was irrevocably removed and, in addition, there was a loss because of setbacks.

In addition to the loss in value and damages there would, of course, be the \$14,000 moving expense of the vehicles parked and the \$2,500 for fencing, which were previously estimated to total \$16,500. The total value of the part taken and damages to the remainder shown in this example would therefore equal \$69,000. (It is important to note that this is a theoretical illustration and not a factual case.

The damages could very easily be much less or much more.) The fact remains that the owner of this property has lost forever the spaces for about 330 cars.

U.S. Department of Commerce averages indicate that the gross annual profit per car to an auto wrecker is \$253; this, multiplied by 330 equals about \$80,000. This could be still another way of examining the problem. It has been determined that a portion of the marketable parts are sold as soon as the vehicle is received; therefore, instead of being worth \$253, the average could be closer to \$150 for each of 330 vehicles—a total of \$49,000, plus fencing. But this method of examination is open to serious questions of reliability.

CHAPTER FOUR

CONCLUSIONS AND SUGGESTED RESEARCH

The word "junkyard" is inaccurate and unacceptable to various members of the salvage industries to which it is applied. Although it is not descriptive of scrap processors, automobile and truck wreckers, refuse disposal areas, or other land uses it purports to encompass, there is now no question that these are subject to screening if they are located within 1,000 ft of a highway and visible from it.

In researching the elements of value it was determined that only in type and degree do these differ from valuation concepts considered in other appraisals. The valuation approaches are similar to those used in other land-use storage operations. None of the appraisal personnel of the state highway departments interviewed have noticed any innovations, any distinctive appraisal techniques unique to salvage operation.

The case law applicable to the 1965 Highway Beautification Act is rare and limited in scope. The imposition of police power constraints does not appear to fall within the intent of the 1965 Act, if moving costs are not reimbursed.

The economics of the scrap industry has a definite impact on the size, shape, location, and market for scrap-processing facilities and automobile wreckers' yards. As an example, the shredder is rendering the baler obsolete, and thus the market for a scrapyards equipped with improvements designed for the baler is on the downgrade, while a shredder-equipped yard is on the way up.

Pile-ups in wrecking yards are factors that are economic rather than technical. If more effort is directed at recycling scrap, the need for large-sized wrecking yards will be reduced. Furthermore, a subsidy paid to the scrap industry would tend to reduce the need for large storage yards. Small subsidies might encourage wreckers to quicker

use of the processor and in the long run, if combined with screening within the right-of-way, might be less expensive to the state than screening easements alone. It is possible that studies and calculations could lead to the conclusion that it would be less costly for the state to buy automobile junkyards and process the scrap than to build higher and higher fences or pay for moving costs.

From this analysis it has been concluded that locational considerations related to visibility and access are important but not major factors in either the auto wrecking or scrap processors' site selection, and screening appears to be acceptable to major segments of the industry. But proper zoning or permission to operate is a major factor; the scrap processor will usually be located on a site properly zoned for industrial uses and thus will not always be subject to control under the Highway Beautification Act of 1965. On the other hand, the wrecker will usually be controllable under the Act. Landfill operations generally will not need highway access, and visibility will not be a factor; screening of these would be essential for only short-term periods.

Technological innovations cause obsolescence in the scrap industry. The shredder is the most recent and it is causing a diminution in numbers of baler facilities, as well as a change in the holding and storage patterns of auto wreckers' yards, and on future size requirements for them. A shredder within a market area will probably help increase the demand for auto salvage, for the volume of scrap in process must continue at high levels because of the high investment in equipment.

The 1968 Act specifies that the Federal share of moving expenses will be 100 percent of the first \$25,000 and more

dependent on the appropriate Federal pro rata fair share for the class of funds involved. The assumptions made in the study of the 1965 Act were that all moving expenses would be paid.

As business losses seem to be encroaching on the area of just compensation, it will be essential for appraisers to expand their knowledge of this aspect of valuation or to retain competent consultants.

Moving costs cannot always be determined on a ton-per-mile basis if the partially dismantled cars involved are, for example, new or undamaged parts of a body. It is suggested that a minimum of three firm bids, and preferably four, be obtained for each move.

In general, there will be no unique or peculiar methodology necessary to appraise the land being used for wrecked-car storage, scrap storage, or refuse disposal. The major valuation problems will be in estimating relocation (i.e., moving) costs.

Scrap-processing facilities will be subject to the same type of valuation treatment accorded other single-use or special purpose properties. The cost approach will probably dominate and be given the greatest weight.

Screening would, of course, be far less expensive if it could be accomplished by the state within extant right-of-way lines. If that cannot be accomplished the next best solution would be to acquire the narrowest possible easement that could be used to effectively screen the salvage operation. If it is not practical or legally possible to obtain an easement, then the fee should be acquired. The practical aspects of removal of the junkyard would be determined by the least expensive relative costs of: (1) Removal—meaning acquisition of the essential rights. (2) Moving costs. (3) Value of the easement. (4) Value of the fee. Engineering data on width and length of screening easements will have to be gathered and supplied to appraisers. Further, the appraiser should be given the authority to obtain firm bids from movers, or the state should supply this information.

The most important type of market information in the valuation of a restricted easement would be sales of property affected by similar restrictions. As much of this information as possible should be provided the appraiser, as well as specification of the exact requirements and/or limitations that will be placed on the property by an easement.

When it is impossible to relocate an auto wrecker because of zoning constraints (yet when it has to be relocated under the Beautification Act), the acquisition will result in a business termination. It would appear proper here to compensate for taking not only the real estate but the business too. Permissive zoning (and/or permission to not conform) can create an enhancement in the value of land.

All of the usual and typical appraisal techniques are appropriate in the appraisal of a salvage facility. The cost approach would seem more appropriate in the appraisal of a shredder processing facility than of an auto wrecker's yard, while the market data comparison approach would appear more satisfactory in valuation of the latter.

Finally, it is believed that the valuation principles and concepts common to the usual appraisal process can be utilized in the appraisal of auto wrecking yard operations and scrap-processing facilities, and landfill operations. The economics of the scrap cycle must be thoroughly analyzed in the appraisal of the first two facilities. Business losses can be measured by an appraisal of the value of the enterprise, but one of the greatest problems that will be encountered in the valuation of the business will be the reticence of the salvage people to disclose operating profits. However, it should be obvious that if the owner of such an operation is talking about a loss of business he will have to disclose just how he arrived at that conclusion.

The case studies that have been used in the Appendices to this report are factual accounts. The examples used in the previous discussion on the application of findings are, in all cases, hypothetical situations based on the factual matter presented throughout the report.

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APPENDIX A

PROFILES OF THE AUTOMOBILE WRECKING INDUSTRY

Intensive in-depth interviews were carried out with members of the auto and truck wreckers' association. The wrecker yards selected were considered typical and were in communities ranging from less than 1,000 to more than 1,000,000 in population.

PROFILE 1—Parts Company in Community with Population of Less Than 1,000

This parts company operates on 10 acres of land along U.S. Highway 12 and is completely within the 1,000-ft setback required by the Beautification Act. The business has been operating since about 1960. The owner formerly operated on five acres of ground; when he purchased an adjoining five acres, the county would not give him a permit to use the new five-acre portion as a wrecking yard unless he erected a 10-ft fence in front of all of the area except for a small section already hidden from the road by trees. This firm is a member of a "hot line auto parts service" and approximately 50 to 60 percent of its parts sales are over the hot line.

The owner states it is advantageous for the yard to be located on the highway and within a mile of town so they can ship small parts from the bus depot; cartage companies will pick up large parts at the yard. The owner claims that if he were not located near a town or on a highway the cartage companies would not pick up at his place of business, but would require him to bring the parts to their terminal.

He also claims that the required fencing, which he is erecting a little at a time during slack periods, is decreasing the amount of on-site auto parts sales. He usually parks the autos that are late models or in heavy demand along the front of the lot near the road, and reportedly he can attribute approximately 25 percent of his on-site sales to people who have seen the autos from the road.

If he were forced to move, he states that approximately one-half of his inventory would be worth moving to a new wrecking yard, and the remainder would likely be shipped to a scrap processor. He believes that the present value of his inventory in relation to his assets is in the ratio of three to one.

The county did not reimburse this wrecker for the cost of erecting the fence but considered the granting of a permit for the additional five acres to be sufficient payment. The owner feels they should pay at least half of the cost of erecting the fence.

Observation.—The elements of value, and hence of compensation, in this case, are:

1. Size, ten acres are better than five.

2. A permit to operate is valuable but is not equivalent to the cost of a fence.

3. Location on a main highway is important for sales and service.

4. Location near a town and intercity bus stop is important.

5. Fencing decreases business.

6. About one-half of inventory is worth moving; the remainder would be scrap.

PROFILE 2—Wrecker Located near City with Population of 50,000

About 1960, this wrecker purchased an 80-acre farm on a county road; he lives in the house and has one man hired full time to operate a 20-acre auto parts yard. He is not a member of any hot line and sells all of his parts locally. The remaining 60 acres of the farm are leased for agricultural purposes. The barn has been converted into a parts house. He has had no fencing requirements or such other problems as relocation. In addition to his auto parts business, he is an auctioneer making approximately 40 auction sales per year, and his wife runs a bicycle shop.

Observation.—Location in an out-of-way place does not appear profitable, as evidenced by these added sources of income.

PROFILE 3—Wrecker in Community with Population of 2,500

This man has moved his yard once, but not because any government body forced him to move. He said: "If anybody wants to make me move, they had better come out with a gun to do it." If he had to go through moving again, he claimed, he would "just quit business." When he receives a car he takes out all of the parts that he thinks are saleable and also removes copper, batteries, and other valuable components that can be sold to secondary metal dealers. He hauls (about 50 miles) only the more valuable scrap metal, such as copper, and hauls his old auto bodies to the shredder in the metropolitan area in the winter when he is not so busy "selling auto parts or delivering sod."

His permit to operate a wrecking yard cost him over \$300. This permit is valid for as long as he remains in business and is supposedly a one-time fee.

Observation.—In this case,

1. A move in a small community creates a hardship for the owner.

2. A secondary source of income is important if the location is in a small community.

PROFILE 4—Parts Company in Metropolitan Area with Population of More Than 1,000,000

This parts company occupies 27 acres and is almost completely full of cars. The owner has not removed a body since 1946, when the price for an old body was \$31 and he figured that he lost money by taking it to the scrap processor. Consequently, he has many parts for very old cars. He leaves the parts in the cars until they are sold, and then he or one of his men removes the part. No one else is allowed on the lot.

At one time the location was on a two-lane highway and the owner operated a Rambler and Kaiser automobile dealership and a gasoline service station in addition to his auto parts business, which was at the rear of his other businesses. When the U.S. Highway was widened to four lanes he lost access to southbound traffic; in addition, the highway widening took the buildings and pump area occupied by the automobile dealership and the gasoline station. The oil company that he represented advised him that, because of the loss of traffic from both directions, it would not be feasible to reenter the gasoline business. The owner believes he was inadequately compensated because he was paid only for the bricks, mortar, and the land, and not for the loss of the automobile dealership and gasoline station business. During the ensuing year and a half to two years that the highway construction was taking place, "even my auto parts business trickled to near nothing."

The owner stated that in the used auto parts business there are particular times when one type or group of types of automobiles are more in demand than others and a dealer in used auto parts bids higher for these cars because he knows he can move them at a profit. This dealer had such an inventory at the time of the taking and highway construction, but because his place was so inaccessible, "being far out and difficult to reach because of highway construction," these auto parts became obsolete in his yard.

This man is now very bitter and feels that he has not been justly compensated. When asked what he would do if he were required to move again, he said he would not. He said he "would either take a shotgun and blow the 'blank, blank's' heads off or demand that they buy my business, putting the cash in my hand, and I would walk away and forget about it." When asked how he would figure what his business was worth, he replied, "No other auto parts man, no matter how experienced, would be able to find much in my yard and I would probably have to take it 'over the scales'" (meaning, to the processor). To him the parts down in his yard are worth about \$2 million.

This owner claims no benefit from drive-by traffic who can see parts from the road. The front of his yard is lined with automobiles, parked somewhat as they would be in a used-car lot. In his judgment, these cars are the most unpopular autos—those least likely to look like a junker through removal of fenders or parts—and thus his yard would look more like a used-car lot. He emphasized, "this is my 'screen,' and if those 'blank, blank, blank' want to

make me put up a fence they are going to have to screen all of the used-car lots too."

Observation.—The elements of value, in this case, for an auto parts business are:

1. The location must be accessible.
2. Business profits are related to demand for parts from certain car models.
3. Profits can be developed only if lot is accessible.
4. The complications involved in moving the business from one location to another are significant and expensive.
5. The value of the business is closely related to the scrap value, less transportation.
6. There is no great benefit in having the automobiles and parts visible from passing traffic.
7. An effective screen might be "whole cars" in the front.

PROFILE 5—Auto Parts Firm in Fringe Community of Major Metropolitan Area

This auto parts firm is operated from a 23-acre site that is 300 feet off a county road and rather secluded. The yard has a wire fence 6 ft high and has about 500 pine trees planted all around it. Although these trees are small now, their purpose is to eventually hide the auto parts yard.

The fence was installed at a cost of approximately \$2,500; this, a fairly new concrete block building, and the 23 acres plus improvements indicate the owner of the yard has approximately \$45,000 invested.

The acreage was purchased by another auto wrecking company, which constructed the improvements approximately four years ago after being forced by Urban Renewal Authorities to relocate from the core city. They had been in their close-in previous location for 18 years prior to relocation. They went out of business after 18 months on the present site.

The lot had been inactive for one and one-half to two years when it was leased to the present operator. He paid them \$3,600 for the inventory—automobile hulks—and pays \$300 per month rent for the real estate, on a three-year lease. Many of the automobiles were scrapped during the winter months and he has since built his own inventory.

This transaction supports the contention of other parts dealers that inventory is not worth nearly as much to another man. It was of some benefit to the lessee, however, to have some inventory so that he could start business right away.

Depending on the market, the present tenant feels that he either breaks even or gains or loses a slight amount when hauling auto hulks to the processor, but that it is necessary to keep the yard clean, and that this is an essential task, in some cases a cost of doing business.

Observation.—In this case,

1. An "out-of-way" location does have value and sales appeal.
2. Screening is not a detriment, but a marketable asset.
3. Scrap prices are not always a catalyst to the movement of bodies to the processor; often the need for more space outweighs the price factor.

4. This case also parallels others cited in that the inventory becomes less valuable if it is not utilized for a period of time, since the market for certain types of cars will pass it by.

PROFILE 6—Auto Wrecker in Community with Population of More Than 100,000

This auto parts supplier is completely out of sight of street or highway traffic. Access is circuitous and difficult.

The owner recently moved to his location from his previous site leased under a 30-day cancelable lease. At the time the lease was terminated all of his wrecked cars were hauled to the scrap processor and sold at the market.

This auto wrecker is now in the process of clearing out a part of his new yard that was flooded. The scrap processor will pay only about 60 percent as much as expected for his wrecked autos, for they have residual mud and dirt embedded in them as a result of the flood.

The owner has stated that the business has lessened because he is "out-of-sight." However, he is still purchasing

land contiguous to his operation and evidently intends to remain in business, for, in addition, he is filling in some of the low land areas.

Observation.—Some of the normal valid elements of value in this case appear to have changed:

1. The auto wrecker's facility is so effectively screened from a main thoroughfare that people can barely find it even if they are on the road leading from the main thoroughfare to his site approximately one to two blocks away.

2. The site is visible from the air and from the abutting river, but it cannot be seen from any existing street.

3. This auto wrecker evidently finds it profitable to haul his wrecked cars to the scrap processor, even though he receives only a fraction of the going price and less than \$10 per car.

4. Since his usable acreage is estimated at between seven and ten acres, it does not appear that this wrecker has enough room to allow automobiles to be stored for any great length of time, and thus a constant turnover of outdated or unsaleable cars is necessary.

APPENDIX B

VALUATION CASE STUDIES OF SCRAP PROCESSORS AND AUTOMOBILE WRECKING YARDS

It appears to be a fundamental concept that the value of land, regardless of use, should be based on the highest and best use of the site. There does not appear to be any valid reason to deviate from this concept in the valuation of scrapyards, junkyards, or automobile wrecking sites. It is hard to reconcile the position that high mounds of scrap located on a site will reduce the value of the land—any more than an obsolete hotel will, for example. In the case of the hotel, which is included in the purchase price of the site, it will be the purchaser who bears the cost of removal. Conversely, in the case of the scrapyard, it will probably be the owner of the scrap who sells it in the normal scrap market.

Regardless of this concept—there appear to be other opinions such as that demonstrated in the following case study.

CASE STUDY 1—Auto Wrecking Company

Location: North Dakota; State Highway 32; next to city limits; city with less than 50,000 population.

Size: 300 x 300 ft (about two (2) acres).

Improvements: Quonset (24 x 64 ft), with office.

Land Use: Automobile storage (partially wrecked and junked cars); scrap storage.

Valuation: North Dakota State Highway Department.

Valuation (before the taking):

Land: 2 acres @ \$250 per acre \$ 500

Improvements (depreciated) 7,500

Total value \$8,000

Valuation (after the taking):

Land: "cleared and cleaned up"

2 acres @ \$500 per acre \$1,000

Improvements, depreciated 7,500

Total value \$8,500

A North Dakota State Highway Department letter dated May 19, 1969, states: "It is the considered value of this appraiser that the site has been improved because of moving of all car bodies, scrap metal and scrap metal and junk by _____ \$ 500"

Observation.—The elements of value and compensation were for the value of the land and moving costs.

In the foregoing case study the final settlement by the state was \$16,000. Moving costs, including \$1,500 for a

new site, totaled \$16,500. This compares to the owner's estimate of \$16,060. The enhancement in the value of the land (because the scrap was no longer there) was deducted from the State's estimated moving cost. This award by the State did "not include monetarily an approximate three-week business disruption period, added insurance costs because of two locations, and added tax costs because of two business locations."

CASE STUDY 2—Auto Wrecking and Scrap-Processing Yard

Location: Minnesota; contiguous to the city limits, city of about 50,000.

History: This study involves two parcels of land located next to each other in an industrial park area. Any possible commercial use would have been enjoyed by the corner parcel (scrapyard) before the other; however, no immediate change in the highest and best use is foreseen. One parcel was used for scrap (open) storage, the other for propane tank (open) storage at the time of sale.

Both parcels were owned by a railroad. Each parcel had been under a 30-day cancelable lease for many years. Both tenants had modest improvements, including fencing. There were no conditions involved in the sale (such as rail traffic requirements). Each parcel had been appraised about six months previously as if free, clear land ready for development; the appraisals were within about 10 percent of the ultimate higher sale prices.

Each sale appears to have been an open market transaction; at least, each was subject to substantially the same adjustments and conditions.

Parcel A

Area: 75,000 sq ft (150 × 500 ft).
Date of Sale: February 1969.
Use: Scrap processing and auto wrecking yard.
Sale Price: \$0.50 per sq ft (equipment owned by lessee).

Parcel B

Area: 60,000 sq ft (250 × 240 ft).
Date of Sale: June 1969.
Use: Open storage propane tanks.
Sale Price: \$0.50 per sq ft.

Observation.—The sales are contiguous. Adjustments would be nominal. Although Parcel A is on the corner, there is little or no corner influence because of lack of traffic. The slight rise in values in four months would have probably caused an offsetting adjustment to the influence of the corner.

It appears there was no measurable difference in price due to scrapyard use. The industrial land use price of each was quite similar to four other sales in the same block in early 1969.

CASE STUDY 3—Auto Wrecking Yard and Scrap-Processing Facility

Location: North Dakota; city; more than 100,000 population.

History: This study involves three contiguous parcels of land, A, B and C, which are briefly described as follows:

A. The scrap-processing—auto wrecking yard contains 9.35 acres and is rented at \$2,700 per yr, net. Capitalized at 10 percent the net income denotes a land value of \$2,920 per acre.

B. A tract of land abutting A, utilized as a lumber yard with outside storage, contains 9.16 acres and is rented at \$2,800 per yr, net. Capitalized at 10 percent, the net income denotes a land value of \$3,030 per acre.

C. A tract of land one-half block from B is utilized for a tenant-owned road equipment sales agency (outside display and a warehouse), contains 10.07 acres, and is rented at \$2,500 per yr, net. Capitalized at 10 percent the net income denotes a land value of \$2,500 per acre.

Observation.—The foregoing lease data demonstrate the similarity in value of land used for various industrial uses of open land storage. It appears the market does not reflect or place a significantly higher or lower value on land that is used for scrap, processing, auto wrecker, or other types of open land storage. Nor, does the market appear to distinguish a measurable difference for other higher industrial-type land uses.

CASE STUDY 4—Auto Wrecker's Yard

Location: North central state; metropolitan area; 1.5 million population.

Size: 132,600 sq ft.

Improvements: Small office building in poor condition.
Offering Price: \$30,000.

Land Use: Storage of wrecked automobiles (between 200 and 250 partially stripped cars). There are two tow trucks and one crane, all old. All of the above will be included in the sale price.

Sale Price: About \$0.22 per sq ft of land area.

Observation.—The junked cars are old, and parts are in little demand. The operator of a similar business on the abutting site is aware of the offering but is not interested in buying. He stated: "The inventory in that yard is practically worthless, hardly worth hauling away." The elements of value pointed out are:

1. Old, wrecked auto bodies have little demand other than as scrap. To appraise the market value of the inventory, details must be obtained or estimated within reason.
2. The value of the land is dominant.

CASE STUDY 5—Scrap-Processing Facility

Location: Illinois, city; more than 3 million population.

This company has a shredder, and the indicated total cost for the installation, excluding land, was \$3 million. The machine operates on a full 8-hr basis and requires no downtime. Eighty percent of the metal is taken from automobile hulks; the rest is reclaimed from stoves, refrigerators, water tanks, and any other types of scrap. Operating costs were not divulged because they were confidential.

It is the belief of the owner that this is a special purpose industrial property similar to other types of special purpose industries. It is the owner's opinion that valua-

tion of this installation should be by cost approach, and he was extremely emphatic on the point. He also emphasized that the valuation of the installation would be the same as any other industrial plant.

In this case, the owner indicated the need for a central area and for railroad trackage and indicated that they could afford to pay the same amount for land that any other industrial user could pay, but that they could not afford to go to some remote areas.

Observation.—It appears that the valuation of a scrap-processing plant would indeed be a single-purpose property type of appraisal in which the cost approach would probably be given more weight than some of the other approaches until more of these new plants have been sold on the open market.

Location is a definite factor in this type of operation, for transportation of the raw material and finished-product distribution must be simplified under the collector-distributor process. Rail service appears to be a necessity to a scrap-processing operation such as this.

CASE STUDY 6—Scrap Processor

Location: Illinois; city; more than 3 million population.

The owner was interviewed to confirm our observations on this type of operation. It was his opinion that a scrap-processing facility is a typical industrial operation, whereas collectors and auto wreckers represent an interim use of

land for storage. This owner was reluctant to talk about his expenses of operation but indicated that expenses do vary significantly, depending on the type of operation involved in the facility.

He further stated that the cost of land would be quite similar to the cost for other industrial lands; he indicated that he had recently acquired adjoining land at \$3.00 per square foot and that he would have paid more if it had been the going market price.

In this owner's mind, the shredder operation and scrap processors need rail accessibility; auto wreckers can occupy outlying and fringe area locations.

Observation.—We believe that this owner was candid in his remarks, and the remarks tend to solidify the elements of value for a scrap processor. A typical profile would be one who is:

1. Located in a metropolitan area.
2. Located on rail trackage.
3. Generally located in an area zoned for industrial purposes.
4. Located on land that has an industrial land value.
5. Because of the type of operation, the use of cranes and the rapid movement of raw material into new, modern shredders, it is important to be able to store the old automobile hulks close to the processing plant; this means that the piles get quite high at times, and that it would not be feasible to try to fence in an operation and expect to completely cover the piles of scrap.

APPENDIX C

INDEX PROFILE OF STATE BEAUTIFICATION LEGISLATION AND CASE LAW

STATE	EFFECTIVE DATE	TYPE	CASES REPORTED	STATUTES
Alabama	9/8/67	Federal	None	Ala. Code 1958, Tit. 23, §§ 64 (S) et seq.
Alaska	68	Federal	None	Alas. Stat. 1962, §§ 19.27.010 et seq.
Arizona	No junkyard control legislation	—	—	—
Arkansas	67	Federal	None	Ark. Stat. Ann. 1947, 76-2513 et seq.
California	66	Federal	None	Cal. Streets & Hwys. Code §§ 745 et seq.
Colorado	2/11/66	Federal	None	Colo. Rev. Stat. 1963 Ann. 120-16-1 et seq.
Connecticut	10/1/67	Federal	None	Conn. Gen. Stat. 1958, §§ 13a-123c et seq.
Delaware	4/4/68	Federal	None	Del. Code Ann. §§ 1201 et seq.
District of Columbia	No junkyard control legislation	—	—	—
Florida	1/1/66	Police power	None	Fla. Stat. Ann. §§ 861.13 et seq.
Georgia	4/6/67	Federal	None	Ga. Code Ann. 95-2700. et seq.
			<i>Burnham v. State Highway Dep't</i> 224 Ga. 543, 163 S.E.2d 698 (1968)	

STATE	EFFECTIVE DATE	TYPE	CASES REPORTED	STATUTES
Hawaii	5/4/66	Federal	None	Hawaii Rev. Stats. §§ 264-87
Idaho	3/20/67	Federal	None	Idaho Code, 40-2850.
Illinois	67	Federal	None	Ill. Ann. Stats. 121 § 461 et seq.
Indiana	67	Federal	None	Burns Ind. Stat. Ann. 36-3530. et seq.
Iowa	No junkyard control legislation		—	—
Kansas	67	Federal	None	Kan. Stats. Ann. 68-2201 et seq.
Kentucky		Police power	<i>Jasper v. Commonwealth</i> 375 S.W.2d 709 (1964)	Ky. Rev. Stats. Ann. §§ 177.905 et seq.
Louisiana	7/27/66	Federal	None	La. Rev. Stats. § 48:461.09 et seq.
Maine	5/11/66	Federal	None	Me. Ann. Stats. Ann. 30 § 2460
Maryland	1/1/68	Federal	None	Md.—Ann. Code Art 89B §§ 239 et seq.
Massachusetts	12/67	Federal	None	Mass. Ann. Laws Ch. 140B
Michigan	7/11/66	Federal	None	Mich. Comp. Laws Ann. §§ 252.201 et seq.
Minnesota	1/1/69	Police power	None	Minn. Stat. Ann. § 161.242
Mississippi	6/16/66	Federal	None	Miss. Code Ann. §§ 8059.5-31 et seq.
Missouri	8/4/66	Federal	None	Vernon's Ann. Mo. Stats. §§ 226.650 et seq.
Montana	10/22/65	Federal	None	Mont., Rev. Code Ann. §§ 32-4513 et seq.
Nebraska	No junkyard control legislation		—	—
Nevada	No junkyard control legislation		—	—
New Hampshire	10/22/65	Federal	None	N.H. Rev. Stats. Ann. Ch. 249-B
New Jersey	9/6/68	Police power	None	N.J. Stats. Ann. §§ 2A:170-69.7 et seq.
New Mexico	66	Federal	None	N.M. Stats. 1953 Ann. §§ 55-11-9 et seq.
New York	4/27/67	Federal	None	McKinney's Consol. Laws Ann., Bk. 24, Part I, Hwys § 89
North Carolina	7/6/67	Federal	None	N.C. Genl. Stats. §§ 136-141 et seq.
North Dakota	12/3/65	Federal	None	N.D. Cent. Code Ann. §§ 24-16-01 et seq.
Ohio		Police power	<i>State v. Buckley</i> 16 Ohio St. 2d 128, 243 N.E.2d 66 (1968)	Page's Ohio Rev. Code Ann. §§ 4737.0S et seq.
Oklahoma	4/1/68	Federal	None	Okla. Stats. Ann. Title 69 §§ 1251 et seq.
Oregon	6/30/67	Federal	None	Ore. Rev. Stat. §§ 377.605 et seq.
Pennsylvania	1/1/67	Federal	None	Pardon's Pa. Stat. Ann. 36 § 2719.1 et seq.
Rhode Island	5/6/66	Federal	None	Gen. Laws of R. I. 24-14-1 et seq.
South Carolina	3/24/66	Federal	None	Code of Laws of S. C. §§ 33-581 et seq.
South Dakota	2/14/66	Federal	None	S.D. Comp. Laws Ann. Ch. 31-30-1 et seq.
Tennessee	67	Federal	None	Tenn. Code Ann. §§ 54-2301 et seq.
Texas	No junkyard control legislation		—	—
Utah	67	Federal	None	Utah Code Ann. §§ 27-12-137.1 et seq.
Vermont	3/14/66	Federal	None	Vt. Stats. Ann. T. 19 § 1561 et seq.
Virginia	4/4/68	Federal	None	Va. Code §§ 33-279.3
Washington	No junkyard control legislation		—	—
West Virginia	7/1/67	Federal	<i>Farley v. Graney</i> 146 W.Va. 22, 119 S.E.2d 833 (1960)	W.Va. Code §§ 17-23-1 et seq.
Wisconsin	No junkyard control legislation		—	—
Wyoming	10/22/65	Federal	None	Wyo. Stats. §§ 33-259.1 et seq.
Puerto Rico	7/1/66	Police power	None	Laws of P.R. Ann. Title 10, Cl. 41 §§ 971 et seq.

APPENDIX D

DEFINITIONS OF TERMS *

AUTOMOBILE GRAVEYARD—Any establishment or place of business which is maintained, used, or operated for storing, keeping, buying, or selling wrecked, scrapped, ruined, or dismantled motor vehicles or motor vehicle parts. Ten or more such dismantled vehicles will constitute an automobile graveyard unless a smaller number is designated by agreement with the Secretary.

APPRAISAL—An expert's estimate of the value of real property, incorporated in a fully documented and supported written report.

CONFORMING—To be in agreement with the provisions of the Highway Beautification Act of 1965, and the standards agreed upon by the State and the Secretary.

ERECT—Construct, build, raise, assemble, place, affix, attach, create, paint, draw, or in any other way bring into being or establish.

ESTIMATOR—An employee or fee estimator of a highway department qualified to establish reproduction costs, depreciation charges, retention values, salvage values, moving values, etc., but not necessarily the establishment of land and/or improvement values unless he is also so qualified.

JUNK—Old or scrap copper, brass, rope, rags, batteries, paper, trash, rubber debris, waste, or junked, dismantled or wrecked automobiles, or parts thereof, iron, steel and other old or scrap ferrous or nonferrous material.

JUNKYARD—An establishment or place of business which is maintained, operated, or used for storing, keeping, buying or selling junk, or for the maintenance or operation of an automobile graveyard, and the term shall include garbage dumps and sanitary fills.

* As presented in Policy and Procedure Memorandum No. 80-9, Bureau of Public Roads, Federal Highway Administration, Department of Transportation, March 31, 1967.

LANDSCAPING—Plantings and related work contributing to the aesthetic and functional design of the highway.

PROPERTY, PERSONAL—Those items so defined by the individual State laws and set out by the chief legal officer of the State highway department.

PROPERTY, REAL—The physical land and appurtenances thereto which, by the State laws, become affixed to and a part of the physical land.

RETENTION VALUE—The amount to be deducted from the total compensation due an owner for his right to retain and remove an item or items from the area.

RIGHT-OF-WAY—That land area dedicated to public use for the highway and its maintenance; usually the area acquired by the State for permanent use as a public highway. For purposes of the Highway Beautification Act, the term right-of-way does not include permanent or temporary easements or rights for supplementary highway appurtenances such as for drainage channels, borrow areas, etc.

RIGHT-OF-WAY LINE—The dividing line between the right-of-way and abutting property. (Where the right-of-way line is indeterminate, the State and the division engineer may reach written agreement either on a Statewide basis for highway types or by individual projects, as to the acceptable right-of-way width to be used for beautification control area designation purposes.)

SALVAGE VALUE—The in-place market value of an item, or items, which would be paid by a prudent purchaser with the purchaser to detach and remove the item(s) from the area.

SCENIC STRIP—An area of land adjacent to the right-of-way of a Federal-aid highway used for the restoration, preservation and enhancement of scenic beauty adjacent to the highway.

TRAVELED WAY—The portion of the roadway for the movement of vehicles exclusive of shoulders and auxiliary lanes.

TRAVELED WAY (MAIN)—The traveled way on which through traffic is carried. It does not include such facilities as frontage roads, auxiliary lanes and ramps.

APPENDIX E

SELECTED EQUIPMENT COSTS—1969

Price range of shredder—1969 (Shredder capacity is 40 to 100 cars per hour)	\$500,000—\$3,000,000
Truck scale	\$10,000
Railroad scale	\$25,000
Alligator shear & conveyor	\$ 8,500
Guillotine shear	\$200,000
Bailing press	\$175,000
Auto incinerator	\$250,000
Cast iron drop	\$ 1,500
Truck crane	\$35,000
Railroad crane	\$75,000
Crawler crane	\$40,000
Magnets	\$ 6,500

Source: Institute of Scrap Iron and Steel.

APPENDIX F

CASE STUDIES OF MOVING COSTS

CASE STUDY 1—Minneapolis, Minnesota. Auto wrecking company located on the fringe of the central business district.

Site: Irregular in shape; 33,242 sq ft.

Improvements: Two older, small, one-story buildings (10,500 sq ft).

Land Use: Used auto parts business.

Estimated contents:

200 Partially dismantled automobiles

50 Fully dismantled automobiles (scrap)

Miscellaneous tires, scrap, etc.

History of Move: The owner was allowed to move as much of the stored material as he wished. At the time of the taking (June, 1966), the State would pay moving costs only up to \$3,000.

The owner moved about 200 cars to Osseo, Minnesota, a distance of about 20 miles. The State Highway Department was forced to move the balance of the scrap and junk to temporary storage less than 300 ft away.

Cost to Move: The owner estimated that it cost him \$7,450 to move 200 partially dismantled cars to Osseo—about \$37.25 per car.

The State paid \$1,240.15 to move about 50 fully dismantled automobiles and an undetermined number of loads of miscellaneous scrap.

CASE STUDY 2—Garberville, California.

Site: Approximately one acre, 43,560 sq ft.

Taking: 15%, or about 6,500 sq ft.

Land Use: Auto salvage.

At 250 sq ft per car there would have been approximately 26 partially dismantled automobiles within the part taken.

Value of Part Taken: \$5,650 or about \$0.87 per sq ft.

Moving Costs: These were determined by independent study and estimated at \$350. The moving costs would have been equivalent to \$13.46 per automobile or between \$0.05 and \$0.06 per sq ft of land area within the part taken.

CASE STUDY 3—Omaha, Nebraska, at Eighth and Douglas Streets.

Site: The exact dimensions were unavailable; however, it was determined that this was a partial taking for highway purposes and that about 4.7% of the whole property was taken.

Land Use: Scrap processing.

Value of Part Taken: \$62,525 for the land and improvements taken. \$185,770 for damages to leasehold and cost to relocate the machinery and equipment.

CASE STUDY 4—St. Paul, Minnesota.

An example of the cost to move plain scrap steel a distance of one mile appears in a case of a scrap processor in St. Paul. The Housing and Redevelopment Authority acquired the entire property of a scrap processor. This site contained an area of approximately eight acres. Scrap was piled an average of about 15 feet over the area. The following bids were received by the urban renewal authorities for the relocation of the scrap:

Railroad No. 1	\$ 73,000
Railroad No. 2	\$ 81,000
Truck Transfer No. 1	\$ 88,000
Truck Transfer No. 2	\$112,700

This cost is equivalent to a range of from \$3.65 to \$5.63 per ton. As the HUD requirements allow only up to \$25,000 for moving costs, the authority's dilemma was resolved by allowing the scrap processor a large moving period. Because the authority needed portions of the land immediately, the entire site was acquired and paid for and then leased back to the scrap processor for the period of time he needed to process and dispose of the scrap through normal marketing channels. It appears that a limitation on moving costs will, in many cases, cause injury to the property owner in a condemnation.

CASE STUDY 5—Ohio.

ESTIMATED COST OF RELOCATING SCRAP PROCESSING PLANT *
(BASED ON 1965 COSTS EXCLUSIVE OF LAND)

ITEM	FOUNDATION, INCLUDING PIT, CAISSONS, OR PILING, WHERE NECESSARY	BUILDING, INCLUDING ELEC., HEATING, ETC.	DISMANTLING, MOVING, REASSEMBLING	TOTAL COST
Galland-Henning baler	\$25,000	\$10,000	\$25,000†	\$ 60,000
Harris BS702 shear	25,000	10,000 (& tower)	25,000†	60,000
Alligator shear	5,000	1,000	3,000†	9,000
Water wells (2)				5,000
Railroad track	3,800 ft @ \$20 per ft (used rail). Cost to remove old installation prohibitive.			76,000
Turnouts, switches	10 @ \$1,000 each			10,000
Fencing	3200 ft @ \$3 per ft			9,600
Gates, railroad and access				2,000
Land preparation	Grading, surveys, engineering, drainage, sewers, driveways, stoning			40,000
Concrete prep. pad	Slabbing feeder, dock high			5,000
Signs, lights, paging system, etc.				10,000
Office				25,000
Warehouse, metals	Dock high			40,000
Docks, canopies, storage cars, etc.				20,000
Scale, pit & foundation	\$10,000		\$ 3,000†	13,000
Incinerator	25,000	\$ 5,000	25,000† 5,000 drain	60,000
Maintenance shop		20,000		20,000
Propane facilities			5,000	5,000
ADT & certified alarm systems			5,000	5,000
High-power elec. lines & transf.	(Main lines underground)			25,000
Equipment movement—cranes			10,000 (with frt.)	10,000
Inventory, supplies, parts, equip.			25,000	25,000
	Total estimated cost exclusive of land			\$534,600
Land valuation	Difference in price between new land and old selling price			40,500
				<u>\$575,100</u>

* Estimate based on use of own personnel and supervision; costs subject to adjustment for time and location. Source: Survey of Ohio members of Institute of Scrap Iron & Steel.

† Add a minimum of 50% increase in cost if riggers and machine movers are used.