

Residential Proximity Damage Study

This speech was presented at the International Right of Way Association International Seminar, Baltimore, Maryland, June 17, 1988. Mr. Lang researched this topic in conjunction with his appraisals for a street widening project at the request of Mr. Eric Thorpe, Director of Salt Lake City's Property Management Department. Mr. Thorpe has given his permission to release this information to the general public now that the residential portion of the widening project is completed. The amount of damages referred to in this study apply basically to the area in which the study was performed. However, the fundamental principles upon which the damages are estimated are relative and can be applied in any location.

■ WILLIAM R. LANG

The format of this presentation will be to give you a case study of a certain project. The project entailed the use of several specific case studies on damages.

We were fortunate to work with a very fine agency—Salt Lake City's Property Management Department under the direction of Eric Thorpe.

I will tell you about the evolution of the project and how it all came out in the end. This is not an explanation of "how to" do it; but of "how we did it." Perhaps some of what we did will be of use to you. We were very fortunate with the results. We hope

that the time you spend here will help you, too.

Let's see who's here today. How many are appraisers? DOT people? Local Public Agency folks?

In spring 1987, Salt Lake City Corporation advertised a project for a city street widening. It was the largest single appraisal project bid out in the history of the state, public or private, as far as I can tell. The project was from 9th South Street to 21st South Street, or 12 blocks. In Salt Lake there are seven city blocks to the mile, so this was 1.7 miles long, on both sides of the street. The property taken was from 1 foot to 12 feet deep into the properties. The new right of way line came within 8 or 9 feet of several homes and up to 4 feet from the side of one house.

The project totaled 182 parcels, or indi-

vidual ownerships, of which the majority (119) were residential. The balance were commercial corners, and the south end of the project was industrial.

Of these 119 residential parcels, some were cancelled. Only 106 were appraised. Of these 106, 28 (about one fourth) were considered damaged by us. I'll tell you how we came to that conclusion in a minute.

We were fortunate enough to get the contract. Another MAI and I formed a joint venture specifically for this job so that we wouldn't have to tie ourselves up completely to one project and we could still serve our other clients. We got the job even though we weren't the low bidder. My office has two associates and his had a residential appraiser, one associate, and three partner MAIs who could pick up any overload if it came. The job was scheduled to take 2 years.

We do not have a residential appraiser per se, so we associated with one for the occasion. We bid the job based on so many damaged, or complex appraisals, industrial or residential, and so many simple appraisals—meaning no damage. Before we put in our bid we measured each taking off the plans to get the distance to the house remaining in the after condition. This is how we estimated the houses that would be damaged, the ones that would require a complex appraisal.

Then, we proposed doing a Project File at the beginning. Besides such typical things as appraisal date, definitions, neighborhood data, utilities, flood map, and zoning, it was to contain:

1. Single Family Lot Valuation Section
2. Commercial Corner Valuation Section
3. Industrial Land Valuation Section
4. Landscape and Hardscape Costs Section
5. Market Rent Study
6. General Residential Market Study
7. Minimum Award
8. Residential Front Yard Proximity Study, our topic today.

There was a fee estimated for each large study, and we divided the work between us. If we have time you may have some questions on other parts of this project file. For instance, I have distributed copies of one residential market study and some of the duplex study on a rear table.

Let's go back to the front yard proximity damage study. Remember that I said that we believed that 28 houses or duplexes

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would be damaged and we based our bid on that estimate. Our fee on a damaged residential property was 1.6 times as much as a simple residential, so we wanted to make an accurate estimate. How did we do it?

I said that we estimated the remaining front yards off of the plans. We also estimated the front yards in the before condition off of the plans. Twenty percent of the houses built were closer than 25 feet from the present right of way line. The zoning only required a 15-foot setback, or the average of existing homes. Houses varied from 14 feet to 66.5 feet back from the right of way line in the before condition. With this variety, what was the norm? What depth from the right of way line would be considered damaged, and what would not?

One side of the street, the west side, had deeper front yards with older homes, some 70 years old—old farm houses. The street was fairly busy before the project (12,600 ADT). The west side had the deepest takings but also the deeper remainders. This was not the affected side.

The east side of the street had the shallowest front yards in the before condition. The houses were not as old, but most were 30 to 40 years old. They ranged in value from \$30–60,000, with the average being about \$47,600 for brick and \$35,200 for frame. The mean distance from the right of way line before the takings was 28.55 feet on the east side. The median was 28 feet and the mode was 28 feet. Guess what we thought the undamaged front yard was?

We reasoned that houses had been bought and sold in this area with this typical front yard on this street for years, so the market must recognize 28 feet as normal. In addition, a new home would have to match the average of existing homes. Hence, we chose 28 feet as the typical undamaged front yard. By the way, we meas-

ured from the closest occupied wall, not porch, to the present right of way line, before and after.

If 28 feet were undamaged, what was total damage? We reasoned that if the right of way line hit the house that it had to go. It was 100% damaged.

So now we had the parameters. If the front yard was 28 feet after the taking, the front yard was the average for the area and not damaged. If the new right of way line touched the house, we believed damage to be total. Now what about between 28 feet and touching the house? How did damage increase?

We called the Right of Way Association for their bibliography. We asked the Right of Way Valuation Committee by letter. We called DOT in Washington looking for existing studies. Nothing that fit our situation turned up.

We went to the various agencies that are most involved with this type project, the state, county, and city to see what they had in their files. We were surprised at how little they had and also that they used different measures.

Salt Lake County has two separate studies dealing with proximity damages caused by front yard takings. One study involved a brick rambler built in 1959 and located at 3739 West 4700 South in Kearns. This 1,032-square-foot house sold in December 1976 after sales in the area that had not been affected by the widening. After adjustments for comparability (ours differed somewhat from those of the county) and deducting the taking, the study showed a total value loss of 13.14% caused by the front yard take. The front yard was reduced from 30 to 20 feet away from the house.

The second study was on a 40-year-old brick house located at 1586 East 3900 South. It involved a raised road with a retaining wall and a change in use to RM. It was not considered comparable because

of the change of use from low to high density.

The Salt Lake County formula attempts to measure damage by the width of the taking. The Utah Department of Transportation has a different concept. They measure the distance remaining between the house and the right of way in the "after condition." They base their damage formula on the premise that "an improvement that is in contact with the right of way line loses all of its value and should either be removed or destroyed." In our opinion, this concept of damage is the correct way to measure damages on a study of a house.

When 4100 South was widened, the new right of way line came within 11 feet of a house located at 2041 West 4100 South, which had a previous setback of 30 feet. It sold in November 1976 and was compared to a sale unaffected by the taking. The total value loss was 28%.

The UDOT files contained five other front yard residential damage studies. They are listed in the Table 1 as studies 3 through 7.

Salt Lake City has two residential properties on 1700 South in an M-1 zone that were purchased by the city at appraised values and later resold on competitive bids. The Van Guervan property located at 357 West was purchased by the city for \$43,364 before the widening. The total taking amounted to \$2,200. Deducting this from the purchase price indicates a value of \$41,164. The sale price after the widening was \$30,000, indicating a loss in value of 27.12%. This taking came within 11 feet, 3 inches of the house, and 6 feet 6 inches from the front porch.

The same method was used in the Bradshaw property located at 367 West. The original sale price before the widening was \$40,500. The taking was valued at \$1,937. Deducting this from the sale price leaves \$38,563 as compared to the resale after the widening of \$34,000. The indicated loss in value is 11.83%. The taking came within 11 feet, 4 inches of the house and 5 feet from the front porch.

These studies were made over a long period of time, I think almost 20 years, but that shouldn't matter because each was relative. We put these studies on a chart, each measured from the living area wall to the new right of way line. Then, we plotted them on a scattergram, a graph.

Figure 1 shows the amount of damage indicated by Salt Lake County's studies and UDOT's studies. We have plotted our find-

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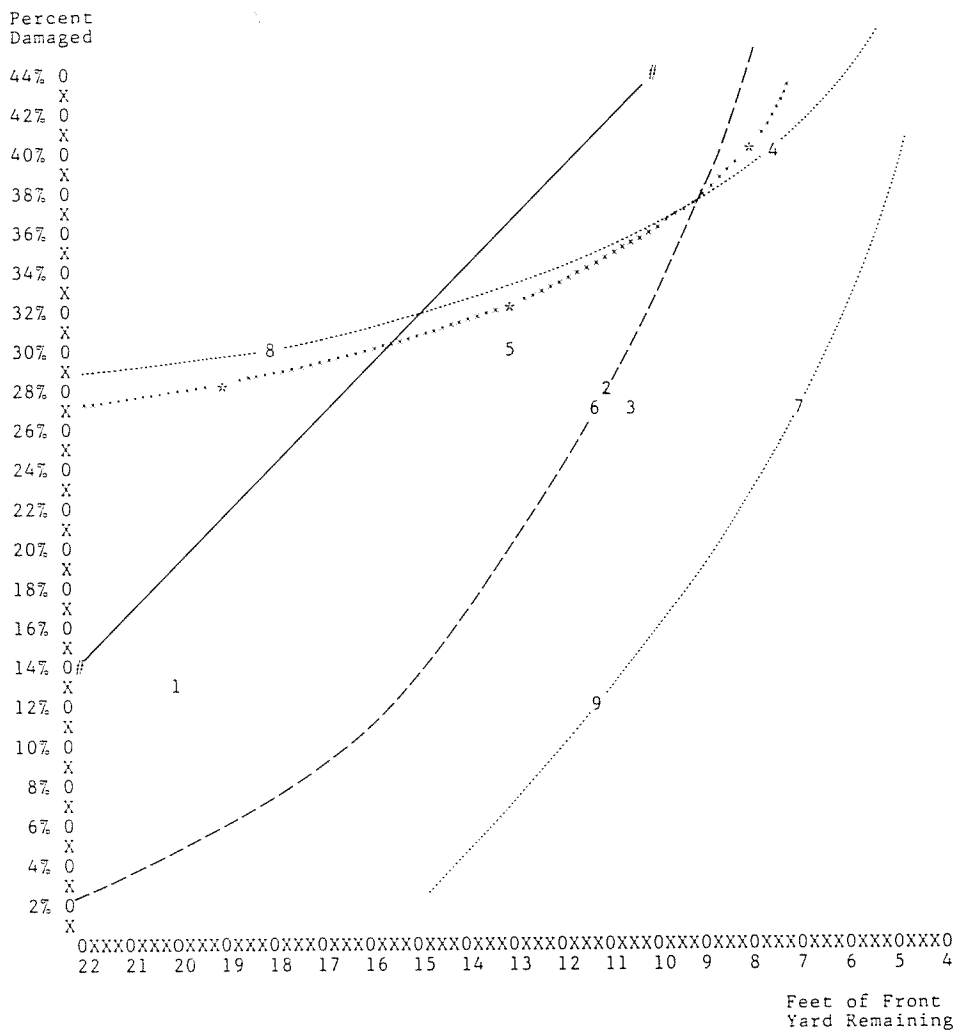


Fig. 1. 1-9 = Damage Study sales; # = Salt Lake County Damage Study samples; * = UDOT Damage Study samples. Indicated damage formula (dashed line); range of comparables (dotted line); Salt Lake County Damage Study (straight line); UDOT Damage Study (xxxx).

Table 1. Damage Study

City	Address	Front Yard*	% of Damage	Traffic	
				1975	1985
Kearns	3739 W. 4700 S.	20.0'	13.1%	12,850	23,700
SLC	2041 W. 3900 S.	11.0'	28%	15,000	22,600
Orem	575 E. Center St.	10.6'	27.3%	3,000	10,500
Lehi	410 E. State St.	7.5'	40%	7,300†	7,515
SLC	450 W. 90th South	13.0'	30%	9,080	19,175
SLC	357 W. 1700 S.	11.3'	27.1%	7,700	11,800
SLC	4566 S. Stratton	7.0'	27%	11,000	12,335
SLC	3004 S. Richmond	18.0'	30%	N/A	N/A
SLC	367 W. 1700 S.	11.3'	11.8%	7,700	11,800

* Feet of front yard remaining after taking.

† 1983 traffic count.

ings on the graph as well. The range of our results are curved in accordance with our belief in the disproportionately greater damages suffered by extremely reduced front yards. The dashed line indicates what we believe is the median of our results. The greatest number of studies gravitate toward this line.

To test our estimate of damage as indicated by our studies, we examined the change in traffic flows in each case (see Table 1). Tim Harpst at the Salt Lake City Engineer's office told us that since the widening involves primarily a turning lane, traffic efficiency as opposed to traffic volume will increase. He estimated a growth

in traffic of only one half of 1% per year (which is supported by past slow traffic growth).

Studies 6, 7, and 9 exhibit relatively low volume changes equivalent to what is expected in the subject neighborhood. Studies 3, 6, 7, and 9 have total traffic levels that, in the after conditions, are similar to the subject. It is interesting to note that all of these studies occur in the lower portion of our range, at or below the dashed line. This means that houses on streets with traffic increases and traffic volumes similar to the subject street suffer less damage than houses on streets with higher traffic volume.

Studies that were made in other neighborhoods where traffic increased to a dramatically higher level are found above the dashed line in the upper portion of our range. This means that total traffic and traffic projections influence the degree of damage, in our opinion. These results were expected and tend to confirm our findings. In cases where residential front yards are significantly reduced, increased traffic correlates with increased damage to the improvements.

The dashed line tends to be an average in relation to total traffic volume and future traffic projections, as well as a statistical average.

The dashed line tends to be the upper limit of damage in areas of traffic volumes and projections comparable to the subject area. The county and UDOT studies are higher, perhaps because the traffic at their study sites is higher.

We believe that damages are relative. Some properties were damaged in the before conditions. Remember, I said that 20%, or 17 houses on one side of the street, were built closer than 25 feet. If a house was 15 feet from the right of way line in the before condition, and this was reduced to 10 feet in the after condition, we took the relative difference or about 19% (Figure 2).

We took this study and put it in the project file. One propitious thing happened at this point. We suggested that copies of the project file be given to the city councilmen for the area. Then we met with the local neighborhood council and representatives before we began appraising. We listened to their concerns and we explained how we came up with land, rental, and house values from the general studies. They could see that we had been thorough. One problem that I've always had with apprais-

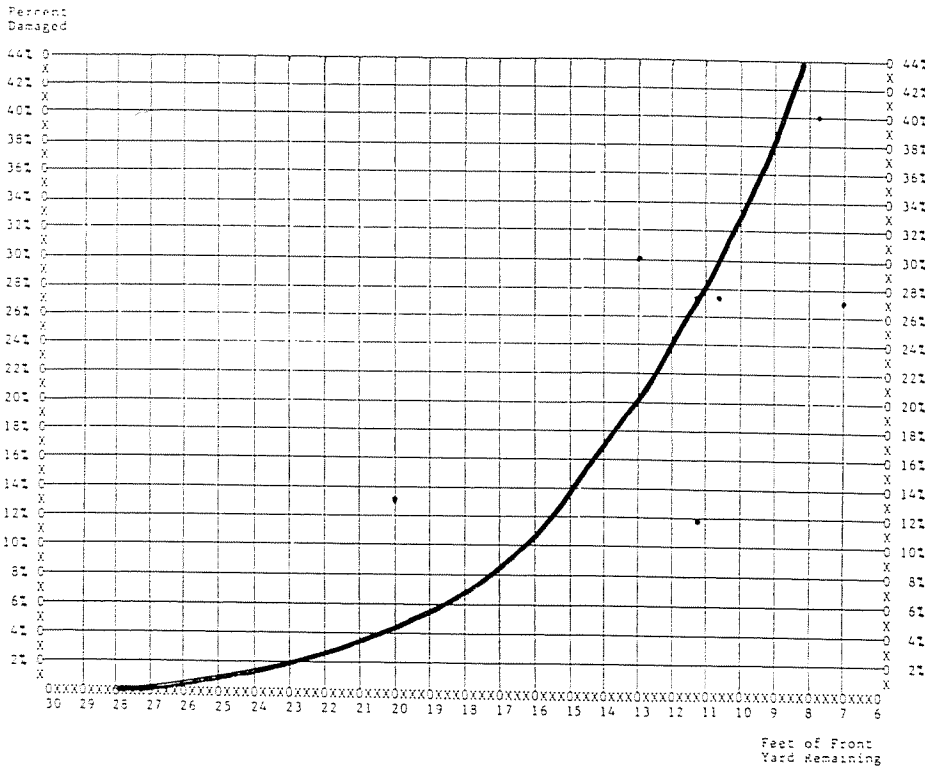


Fig. 2. Residential front yard proximity damage curve.

als is that appraisers come up with three comparables, especially in houses. They could be any three—high or low. How does the reader know whether they truly represent the market? We always give general data that establishes ranges, parameters in the local market for whatever property type we're appraising, offices, land, industrial buildings, etc. So we extended this to houses and rentals. These house studies were very helpful in determining our lot values also, but that is another story.

How did it all turn out? We finished in one year . . . and we did not have one single condemnation out of the entire 106 house appraisals. This is a tribute to the able city negotiators, but I think it also speaks for the methodology, primitive as it was, scientifically. It also speaks for using a log of general data to establish parameters, and for convincing the neighborhood leadership that we had done so. **IRMA**

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