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Executive Summary

This report estimates the economic impact of Oaklawn Hospital on the Marshall area and Calhoun County in 2001. In 2001, Oaklawn Hospital, located in the City of Marshall's central business district, employed a total of 549 workers, including 336 full-time employees, 103 part-time employees and 110 on-call or casual workers. The hospital paid approximately \$17.5 million in wages and salaries in 2001. Moreover, the hospital purchased more than \$832,000 in goods and services from Marshall area businesses and paid nearly \$450,000 in local taxes and public service fees during the year. Finally, it is estimated that 24 physicians are located in the area solely due to the presence of the medical facility.

The overall economic impact of the hospital is much greater than simply the number of people it employs or the size of its payroll, however. A portion of the money the hospital paid in wages, salaries and on locally produced goods and services was re-spent in the community, sometimes more than once. With each round of expenditures, these monies generated additional employment opportunities and more income to area residents.

In 2001, Oaklawn Hospital contributed \$24.2 million to the Gross Regional Product of the Marshall area. The ongoing operations of the medical center contributed \$6.6 million in salaries and wages in the area, on top of its payroll of \$17.5 million. Finally, the hospital generated an estimated 99 jobs in the area, in addition to its own 549 employees. For every 10 employees at the medical facility, another 1.8 jobs were created in the Marshall area, and for every \$1.00 in wages earned at Oaklawn Hospital another \$0.38 in wages and salaries were generated by area businesses.

The medical center is a major economic anchor of the city's central business district. Moreover, it is a key element in the area's quality of life and is strongly appreciated by many in the business community.

In 2001, Oaklawn spent \$7.8 million in construction costs to expand and renovate its facilities and plans to spend a similar amount, \$7.9 million, over 2002 and 2003. In short, the medical center continues to grow to meet the needs of the community. This growth will likely be heightened due to the unfortunate closure of Albion's Trillium Hospital in February of 2002.

Countywide, Oaklawn Hospital supported 182 workers, in addition to its 549 employees, for a total of 731 jobs. Moreover, the hospital was also responsible for \$12.5 million in additional wages and salaries in the county. The hospital contributed \$27.5 million to the county's gross regional product (GRP) in 2001.

Economic Impact Analysis of Oaklawn Hospital

This study offers an estimation of the economic impact of the day-to-day operations and current and future construction projects of Oaklawn Hospital on the greater Marshall area and Calhoun County. In short, we estimate the economic difference between the current local economy of the greater Marshall area and what it would be like in the purely hypothetical situation of Oaklawn's closure.

A major limitation of the study should be stated at the outset: we do not attempt to quantify the significant contribution the hospital makes to the quality of life of the residents and businesses in the greater Marshall area. We strongly believe that the presence of the hospital plays a major role in residential and business location decisions in the area as well as enhancing the general well being of its residents. While this study does not attempt to measure these important impacts, they should not be ignored.

In 2001, the hospital employed 336 full-time employees, 103 part-time employees and 110 "casual" employees who are used as needed, for a total of 549 employees. In 2001, its total payroll reached \$17.5 million. Moreover, the medical center spent more than \$832,000 on locally provided goods and services.

In addition to the economic impact of the hospital's day-to-day operations, Oaklawn Hospital spent \$7.8 million on new construction in 2001 and plans to spend an additional \$7.9 million during the next two years.

The full impact of Oaklawn Hospital is more than these direct hires and outlays, however. First, the full impact must include the consumer expenditures of its employees. Second, it must incorporate the impact of the additional rounds of economic activity that occur in the area. For instance, revenues from area's retailers and the hospital's local vendors are re-spent in the area through the consumer expenditures of their workers.

The methodology used to estimate the impact of Oaklawn Hospital on the greater Marshall area as well as Calhoun County is described later in this report. We now turn to the report's findings.

As shown in Table 1, Oaklawn Hospital supported 182 workers in Calhoun County in addition to its 549 employees, making its contribution to countywide employment a total 731 jobs. This is represented by an employment multiplier of 1.33, or in other words, every 10 workers at the hospital supported another 3.3 workers countywide. The hospital contributed a total of \$30.0 million in wages and salaries in the county in 2001. For every \$100 in wages and salaries paid by the hospital in 2001, an additional \$71 dollars in wages and salaries was earned in the county, as shown by its income multiplier of 1.71. Overall, Oaklawn Hospital's contribution to the Calhoun County Gross Regional Product was \$27.5 million in 2001. The Gross Regional Product is defined as the value of all final goods and services produced within the region (Calhoun County) minus the value of all supplies, materials, and services "imported" into the region to produce these final goods and services.

Table 1		
Calhoun County		
	Employment Impact	Income Impact (Millions \$)
Total	731	\$30.0
Multiplier *	1.33	1.71
Direct	549	\$17.5
Indirect	182	\$12.5
Construction	22	
F.I.R.E. **	11	
Retail	68	
Wholesale	2	
Services	68	
Government	8	
Other	3	
Gross Regional Product		\$27.5

* Multiplier = Total/Direct ** Finance, Insurance and Real Estate

As shown in Table 1, the 182 workers in the county, supported by the ongoing operations of Oaklawn Hospital, worked in a wide cross section of industries. County retailers employed approximately 37 percent of the supported workers or 68 individuals, the same as in services. Construction firms involved in both residential and nonresidential construction employed 22 of the impacted workers.

The impact on the Marshall area is, of course, smaller but still significant. We estimate that of 182 supported jobs, 99 were located in the Marshall area (Table 2). Every 10 employees at Oaklawn Hospital generated 1.8 additional jobs in the Marshall area. In addition, the hospital

generated \$6.6 million in wages and salaries in the Marshall area on top of its own \$17.5 million payroll. In other words, every \$100 in wages and salaries earned at the hospital created another \$38 in wages and salaries in the Marshall area in 2001. In a separate analysis we estimate that 7 of the 99 jobs in the Marshall area generated by the hospital were created through vendor purchases as shown in Table 3. Finally, the activities of Oakland Hospital accounts for \$24.2 million of Marshall area's Gross Regional Product. Again, the area's Gross Regional Product is defined as the value of all final goods and services produced within the area minus the value of all supplies, materials, and services "imported" into the area to produce these final goods and services.

Table 2 Marshall Area		
	Employment Impact	Income Impact (Millions \$)
Total	648	\$24.1
Multiplier *	1.18	1.38
Direct	549	\$17.5
Indirect	99	\$6.6
Construction	10	
F.I.R.E. **	5	
Retail	30	
Wholesale	0	
Services	50	
Government	3	
Other	1	
Gross Regional Product		\$24.2

* Multiplier = Total/Direct ** Finance, Insurance and Real Estate

In 2001, Oaklawn Hospital paid nearly \$450,000 in local taxes and public services fees (e.g. water and wastewater) as shown in Table 3. In addition, it purchased more than \$832,000 in goods and services from Marshall area businesses, which, as mentioned above, generated approximately 10 jobs in the area.

The economic impact of the current and future construction activity of the hospital is shown in Table 4. In 2001, the various construction projects at the hospital created an estimated 43 jobs on-site. In turn, through the consumer expenditures of these workers combined with the increased building supply vendor activities, an additional 15 jobs are generated in the county with three being located in the Marshall area. During the next two years, the hospital is planning to spend another \$7.9 million on construction projects. These projects will generate impacts extremely similar to the activities of 2001.

Table 3 Major Expenditures	
	2001 Expenditures in Marshall
Marshall Area Vendor Spending *	\$832,000
Private Employment Impact	10
Income Impact	\$324,000
Governmental Disbursements:	\$449,265
City Utilities	\$295,824
Marshall City Taxes	\$110,993
County Taxes	\$42,448

* Includes catering, printing, legal, marketing & medical services.

Table 4 Construction Project Impact		
	Calhoun County	Marshall Area
Current Expansion Emp Impact (2001)	58	43
Direct Construction Employment	43	43
Other Employment	15	0
Future/Planned Projects (2002-2003)	57	42
Direct Construction Employment	42	42
Other Employment	15	0

Methodology

The W.E. Upjohn Institute maintains an economic computer model especially designed to estimate the economic impact of changes in Calhoun County. The model was constructed by Regional Economic Models Incorporated (REMI) and contains three separate components that together capture the resulting total impact to the local economy due to a change in employment. These components are:

- An input-output model that estimates the impact on the local economy of changes in inter-industry purchases. This component of the model captures the impact of an increase in orders to local suppliers of goods and services, as well as, the impact of households increasing their purchases of consumer goods and services.

- A relative wage component that estimates the impact of the expected changes in the area's cost structure due to changes in economic activity. For instance when a major employer moves into the area, it can cause wages to increase across most all industries due to the increased demand for workers and other local resources. This boost in wages, while generating additional consumption expenditures, increases the cost of doing business in the area, making the area slightly less attractive to other industries.
- A forecasting and demographic component that forecasts the resulting changes in future employment and population levels due to a change in economic activity.

The model generates two separate “realities” for 2001, one with Oaklawn Hospital and the other without Oaklawn. It is the difference between the two that estimates the economic impact of the hospital on the county.

In preparing this impact we made the assumption that the county's other medical facilities, in particular the Battle Creek Health System, would not enlarge their existing facilities to meet the demand generated by the absence of Oaklawn. This may be an unrealistic assumption. Our estimate does incorporate the fact that with hypothetical closure of Oaklawn, there will be medical personnel seeking employment which will dampen labor costs. Due solely to lower labor costs in the county, we estimate that other county medical facilities would increase their employment by 12 individuals.

In estimating the impact of the hypothetical closing of Oaklawn Hospital on the Marshall area, several factors were considered. First, we identified the residential location of the hospital's employees. As shown on Table 6, 240 of the hospital's employees lived in the greater Marshall zip code areas (49068 and 49014), accounting for 43.7 percent of the hospital's workforce. Another 200 employees lived in Calhoun County but outside of the Marshall zip code areas, while 109 resided outside the county.

The second factor considered were retail opportunities offered in the greater Marshall area as compared to the rest of the county. As shown in Table 5, 11 percent of the county's retailers were located in Marshall according to the 1997 *Census of Retail Trade* published by the U.S. Bureau of Census.

In determining the market areas of neighboring communities, Reilly's “Law of Retail Gravitation” is often used. Reilly's law suggests that the market boundary between neighboring areas is based on their population base and distance.¹ According to the calculation, Marshall's market area reached approximately five miles from the city's center, which places it near the

¹Mathematically, according to Reilly the boundary between two areas can be estimated by the equation:

$$B = (\sqrt{p/(1+p)}) * d \quad \text{where}$$

B = boundary line from the larger of the two communities

p = the proportion (pop of the larger/pop of the smaller)

d = distance between the two communities.

western border of Marshall Township. Due to these factors, we estimate that approximately 44 percent of the economic impact of Oaklawn Hospital would take place in Marshall.

1997 Economic Census - Retail Establishments	City of Marshall #	City of Marshall % of Calhoun
Total	63	11.1%
Autos	6	9.2%
Furniture	4	14.8%
Electronics/Appliances	4	17.4%
Building/Garden Supply	9	15.8%
Food & Beverage Stores	5	7.6%
Health/Personal Care	3	6.5%
Gas Stations	2	12.5%
Gas Stations w/Conv. Store	4	8.0%
Clothing	6	8.3%
Sports/Hobby/Books	4	10.0%
General Merchandise	1	4.3%
Office/Stationary/Gift	5	21.7%
Misc	10	16.9%

Source: U.S. Economic Census

Zip Code	General Area Name	Number of Employees
49068	Marshall	198
49017	Battle Creek	45
49014	Marshall Twp	42
49224	Albion	36
49245	Homer	31
49015	Battle Creek	31
49033	Newton Twp	21
49092	Tekonsha	18
49284	Clarence Twp	7
49029	Burlington Twp	5
49011	Athens	3
49051	Leroy Twp	3
	Out of County	109

Countywide, it is possible that many of the jobs supported by the hospital's activities could be supported by the expansion of other medical providers in Oaklawn's absence. Thus, these jobs are not truly dependent on Oaklawn. On the other hand, due to the change in the focal point of support, the effected jobs in the Marshall area would be dispersed to other locations in the county.

Finally, one of the more challenging aspects of this report is determining what medical services would be offered in Marshall in the purely hypothetical event of Oaklawn Hospital's closure. In preparing this study we used the assumption that not only will existing county medical facilities not expand, but also no new facilities, such as a prompt care facility or clinic would open in Marshall.

Conclusions

Oaklawn Hospital and its activities supported 99 jobs for Marshall area residents, which created a total of \$6.6 million in wages and salaries in addition to its payroll of \$17.5 million. Overall, the hospital contributed \$24.2 million in the Marshall GRP.

Countywide, Oaklawn Hospital supported about 182 workers in addition to its 549 employees in 2001. The hospital supported a total of \$30.0 million in wages and salaries in the county. In total, the hospital contributed an estimated \$27.5 million to the Calhoun County's gross regional product in 2001.

In many respects this report is incomplete. The economic impact of Oaklawn Hospital cannot be measured solely in the number of additional jobs or extra dollars in wages and salaries that it generates in the community. The presence of a well-respected and professionally staffed hospital adds immeasurably to the area's quality of life. Through one-on-one interviews, Marshall's business leaders spoke of the benefits that the hospital brings to the area's quality of life as well as its importance for the treatment of workplace injuries.