ECONorthwest
ECONOMICS • FINANCE • PLANNING

DATE: January 13, 2020
TO: Monica Krueger, Oregon Metro
FROM: Mike Wilkerson and Bob Whelan, ECONorthwest
SUBJECT: Job impacts of transportation construction projects proposed by Metro

Overview. ECONorthwest conducted an economic impact analysis of major transportation construction projects across thirteen corridors proposed by Metro. To perform this analysis Metro provided ECONorthwest with spending data that was broken out by ten project types, including roadway, bridge, signal, and light rail work. Using this information, ECONorthwest used an input-output modeling built for Metro's Service Area across the eight categories that fall under the construction industry. Two of the ten categories excluded were right of way payments and vehicle purchases (electric buses and light rail trains).

Methodology. We performed an analysis of data from the U.S. Census of Construction for Oregon. It gave us the number of direct jobs and labor income (wages plus and benefits) for different types of construction and construction subcontractor sectors. We used this data and estimates of which construction sectors would be primarily engaged to calculate the number of direct jobs per million spent for each of the eight categories. Doing so requires considerable analysis because of the widespread practice of employing subcontractors in the construction industry.

Direct jobs are measured in full year equivalents of FYEs. One FYE equals twelve months of employment for one position at a construction company. They may be full-time or part-time, although typically construction sector jobs are primarily full-time. Direct jobs include those on-site and off-site. It covers not just construction workers but also managers, supervisors, office personnel, and others receiving paychecks from a construction sector.

The direct jobs for each construction sector reported by the Census does not include work by subcontractors. We accounted for these using output (sales) data from the Census. They report the annual output (sales) of construction sectors but also the amount spent on construction subcontractors. Using this, we reallocated subcontractor spending and determined how many direct jobs there would be for subcontractors. We then calculated the total direct jobs on a per million dollars of output.

We made two final adjustments. The first accounted for inflation, as measured by the Engineering News Record cost of construction index. The second was a small adjustment for changes in construction labor productivity, as reported by the U.S. Department of Labor. The result is the number of direct jobs and labor income per one million dollars of construction spending in 2019 for each of the eight categories.

Metro provided their estimates of construction spending by category and corridor. We allocated the construction spending, jobs, and labor income accordingly. We then totaled these figures for each corridor. The difference between construction spending and labor income is the non-labor or capital spending. That was used by an economic impact model developed for the Metro Service Area to determine secondary job impacts.

Secondary impacts arise from indirect spending at businesses resulting from the construction project and spending induced by the households of jobholders whose pay and benefits arise from the construction project. Only impacts occurring in the Metro Service Area were calculated.

Results. Table 1 lists the thirteen corridors and their direct and total job impacts on the Metro Service Area. Our analysis finds that the project would directly employ 16,452 FYEs in the construction industry each paying $98,103 in wages, salaries, and benefits. As workers spend their earnings and construction companies buy local goods and services, secondary impacts occur. When combined, the analysis discovers that the proposed projects would total 37,571 FYE jobs. These FYEs will be spread over several years. To understand the annual average, one would need to divide the FYEs by the number of years of the project.

Table 1: Select Economic Impacts on the Metro Service Area from the Transportation Construction Projects Proposed by Metro

Corridor	Construction Spending (MM $)	Construction Labor Income (MM $)	Annual Labor Income per Job	Direct Construction Jobs (FYE)	Secondary Jobs (FYE)	Total Job Impacts
McLoughlin	$137.2	$57.3	$100,851	568	700	1,268
C2C/181st	105.4	41.3	$89,264	463	551	1,014
Sunrise	53.4	20.7	$95,638	217	280	497
Central City	190.8	74.5	$89,744	830	995	1,825
162nd Ave.	73.3	29.2	$93,095	313	383	696
SWC	1,649.2	646.6	$104,929	6,162	8,507	14,670
Albina Vision	33.1	13.0	$86,374	150	173	323
TV Hwy.	411.1	165.5	$97,389	1,699	2,124	3,824
185th	163.3	64.3	$102,740	626	845	1,471
82nd	499.8	198.2	$92,014	2,153	2,608	4,762
Burnside	591.9	235.2	$94,870	2,480	3,042	5,521
Powell	91.2	36.0	$87,806	410	477	887
122nd	82.2	32.2	$84,760	380	431	812
Total	**$4,082.0**	**$1,614.0**	**$98,103**	**16,452**	**21,118**	**37,571**

Note: labor income is the sum of salaries, wages, and benefits. Jobs are expressed in full year equivalents (FYEs). All values in this table are in 2019 dollars.