

Federal funds boost C&S outlays

Like nearly everything else these days, railroad and rail-transit spending for communications and signaling is at record levels. Inflation is partly responsible—but there's also a lot of what the economists call "real growth" in the marketplace, largely due to big chunks of federal money now available for grade-crossing protection, for new transit systems, and for Amtrak's Northeast Corridor Improvement Project.

By one authoritative estimate, total rail-related C&S capital expenditures in the U.S. and Canada this year will add up to well over \$350 million. Of this an estimated \$200 million will go for signaling hardware, exclusive of labor and installation costs.

"We're going to have our largest year ever in terms of new orders booked, both domestic and overseas," says Glen E. Stinson, vice president and general manager of WABCO's Union Switch & Signal Division. GTE Lenkurt expects to double last year's record level of orders. Other suppliers surveyed by *Railway Age* are also optimistic. Nearly all of them cite the increasing flow of federal money into the industry as a principal reason for their optimism.

● **The federal factor.** The strongest shot in the arm from Washington will come when the Northeast Corridor project finally gets up a head of steam. More than \$260 million in NECIP funds will go for signaling improvements, with 1980 and 1981 shaping up as the peak buying years; another \$33 million is earmarked for communications.

The flow of federal funds is already strong elsewhere in the industry. One of the hottest segments of the C&S market this year will be grade-crossing protection, which is financed almost entirely by the federal government. Hardware sales in this area alone will add up to between \$70 million and \$80 million in 1979.

Rail-transit systems, which are 80% federally funded, will continue to boost C&S purchasing in 1979. The biggest spender this year will be Baltimore, which has budgeted \$21.5 million for signaling (75% for equipment) and \$6.2 million for communications (60% for equipment).

Class I railroad spending is also showing strength, especially where railroads are moving to increase their coal-hauling capacity. Burlington Northern plans to invest \$13.9 million in signaling in 1979, with about 70% going for equipment. BN's signaling budget last year was \$11 million.

The biggest outlays for C&S this year, according to a *Railway Age* survey of U.S. and Canadian railroads, are planned by Conrail, which has budgeted \$40.12 million for signaling (62% for equipment) and \$16.2

1979 C&S and EDP budgets

(with percentages for equipment)

30 selected railroads*

Railroad	Signaling	Communications	Data processing†
Alaska.....	\$ 300,000 (50%)	\$ 270,000 (80%)	\$ 713,000
Atlanta & St. Andrews Bay	250,000 (60%)	7,000 (100%)	131,000
Bangor & Aroostook	348,580 (60%)	119,000 (100%)	592,700
Belt Railway of Chicago..	570,000 (44%)	105,000 (25%)	—
Boston & Maine	3,300,000 (40%)	650,000 (55%)	1,600,000
Burlington Northern	13,872,000 (70%)	902,400 (76%)	—
CN Rail	28,000,000 (40%)	35,300,000 (9%)	42,400,000
Chessie.....	\$23,758,000 (Total C&S)		—
Conrail	40,120,000 (62%)	16,200,000 (90%)	44,300,000
Delaware & Hudson.....	750,000 (70%)	1,100 (95%)	1,600,000
D&RGW	2,250,000 (80%)	785,000 (80%)	700,000
Detroit & Mackinac	125,050 (82%)	6,500 (95%)	—
DT&I.....	410,000 (50%)	62,000 (85%)	—
Family Lines	4,936,500 (70%)	3,182,500 (65%)	6,051,000
Florida East Coast.....	1,830,600 (69%)	—	—
Frisco	2,500,479 (80%)	2,180,706 (55%)	—
Illinois Central Gulf	1,500,000 (50%)	11,000,000 (25%)	6,000,000
Long Island	7,264,000 (22%)	3,765,000 (18%)	4,493,634
Maine Central	450,000 (60%)	120,380 (100%)	—
Milwaukee Road.....	5,840,000 (69%)	336,000 (55%)	3,580,000
Missouri-Kansas-Texas ..	333,913 (80%)	63,900 (95%)	1,074,000
Missouri Pacific	3,318,000 (65%)	448,000 (80%)	4,441,000
Norfolk & Western	1,706,000 (50%)	187,000 (90%)	—
Ontario Northland	475,000 (30%)	4,100,000 (85%)	140,000
QNS&L	1,800,000 (33%)	830,000 (20%)	—
RF&P.....	1,342,661 (55%)	1,419,500 (92%)	—
Southern.....	5,205,380 (60%)	3,370,033 (65%)	4,492,000
TRRA of St. L.	126,400	—	—
TP&W	100,000 (80%)	15,000 (100%)	—
Union Pacific.....	—	11,850,000 (8%)	18,200,000

*Selected from railroads that had budget information available at this time.

†Most equipment leased.

Transit systems

System	Signaling	Communications	Data processing
Baltimore Metro	\$21,530,000 (75%)	\$ 6,169,000 (60%)	—
BART.....	3,000,000 (50%)	3,000,000 (50%)	\$ 1,000,000
GRCTA (Cleveland)	717,000 (50%)	1,097,000 (85%)	784,000
MARTA (Atlanta).....	4,750,000 (50%)	4,230,000 (40%)	21,500
MUCTC (Montreal).....	2,900,000 (53%)	100,000 (50%)	2,500,000
PATCO (Lindenwold).....	2,467 (40%)	50,000 (70%)	202,000
PATH (N.Y.-N.J.)	3,262,000	816,000	7,000
SEPTA (Philadelphia)	2,500,000 (20%)	—	—
Toronto Transit.....	3,500,000 (65%)	520,000 (20%)	55,000
WMATA	40,000,000(35-40%)	1,500,000 (30%)	—

million for communications (90% for equipment), plus \$44.3 million for data processing. Another big spender will be CN Rail: \$38 million for signaling (40% for equipment) and \$35.3 million for communications (9% for equipment).

Meanwhile, export markets for U.S. C&S suppliers are strengthening. Union Switch & Signal, which is equipping a big new freight yard in Rotterdam, has just landed a \$15-million contract to signal a major commuter system in Europe.

● **The suppliers' view.** *Railway Age* asked key suppliers in the C&S field for their views on the state of business over both the long and the short terms. Here is a sampling of their replies:

R.F. Anderson, manager, marketing administration, General Railway Signal: "1979 should be another excellent year for both orders and shipments. The favorable trends of the past few years are expected to continue in the short term. If the business slowdown that many economists forecast for late 1979 takes place, then the prospects for '80 and '81 would not be as bright. . . . The main-line railroads represent significant potential for the signaling industry in the next five years. High-speed corridor projects and programs that result from mergers and consolidations should provide many opportunities for growth."

Robert E. Harmon, chairman and president, SAB Harmon Industries: "1979 is anticipated to be a record year both in the area of new orders and shipments. Sales are forecast to increase better than 30% while shipments are also expected to go up dramatically. . . . We feel that the market that has the greatest potential is in the systems area, both in railroads and rapid transit. More, and more timely, accurate information such as car location, motive power situation, and real-time train data,

etc., is needed by railroad management. We are optimistic for both the short- and long-term future."

J.M. Sherwood, manager of marketing, Solar Power Corp., sees prospects for 1979 as "excellent." He is "moderately" optimistic for the short term and "extremely" optimistic for the long term.

K.S. Durey, vice president-marketing, GTE Lenkurt: "We anticipate another strong year in sales to the railroad industry in 1979. In fact, the company expects to double last year's record railroad bookings. To help meet the demands of our customers and to meet delivery schedules, GTE Lenkurt has purchased and is operating a 142,000-square-foot manufacturing facility on a 17-acre site in El Paso, Tex." He sees fiber optics and digital microwave radio as important areas of growth: "Fiber optic systems afford railroad operations trouble-free communications circuits that can operate within the high-level electromagnetic interference and noise environment of high voltage, electric motors, train engine ignition noise, and switches. The glass fibers carry significantly more communications channels than copper cable. Since it is interference-free, optical fiber cable can closely parallel power lines along the right-of-way between stations, without experiencing the would-be hazardous environment of high-voltage induction and short circuits causing resultant danger to personnel. . . .

"As more and more railroads use computer data to control their operations, digital radio will continue to increase in importance. The efficiency and cost savings of digital radio is a major consideration since it allows direct interface between data terminals and transmission equipment. Since transmission quality is relatively independent of system length, it can transmit much higher bit rates compared to analog radio

and it is directly compatible with current and future digital PABX's."

W.E. Trantham, Jr., vice president-railway products, Marine Electric Railway Products Division: "Our prospects for the coming five years look most promising if the present indicators hold true. The demand for installation of more and more effective safety equipment will remain constant, both from federal regulations and from the individual railroads' desires to cut costs from preventable derailments which can be detected by safety equipment. . . . One thing which could affect current ordering is the serious winter weather in the Midwest which has caused several midwestern railroads to defer safety equipment buys for at least six months and probably a year due to unanticipated costs in wire and signal circuit replacements caused by the ice storms. Offsetting this, though, are the large amounts of capital investments planned by the eastern and southern and western railroads. . . . The transit market has just recently started for our company, and orders prospects look very favorable."

Ed Rowland, vice president, sales-railroads, McGraw-Edison: "We anticipate that our secondary battery market will continue to grow during 1979 with the rapid transit and railway signaling fields providing the greatest growth potential. Our secondary battery plant operation will be moved during the course of 1979 to a larger manufacturing facility, thus increasing our production capabilities proportionately. Our outlook for the future of the railroad market is quite optimistic."

H.R. Thorp, vice president, Servo Corp. of America: "I'm optimistic. With good management by the railroads and a political awareness of the railroads' potential to help solve the nation's energy-ecology problems, then this must be a growth industry." ■

RAILROAD COMMUNICATIONS INSTALLED IN 1978

	Radio Units	Intercommunications		Channelizing Equipment		Telephone		Computer I/O units	Microwave Stations
		No. of Systems	Loudspeakers & Telephones	Carrier Units Terms. & Rep.	Data Sets	Exchanges	Stations Available		
Alaska	45	2	10	2	—	—	—	—	—
Algoma Central	11	—	—	—	—	—	—	—	—
A&SAB	9	—	—	—	—	—	—	—	—
AT&SF	750	2	50	2	160	—	—	42	2
B&M	60	—	—	4	5	—	—	20	—
BN	736	9	114	76	114	—	—	—	3
CN Rail	2,015	—	—	—	—	1	—	230	—
Chessie	1,285	—	—	—	—	—	—	—	—
C&IM	4	—	—	—	—	—	—	—	—
Conrail	3,685	—	—	—	—	—	—	—	—
D&H	36	—	—	—	—	—	—	—	—
D&RGW	104	—	—	12	—	—	—	—	—
D&M	4	—	—	2	—	—	—	—	—
DT&I	40	—	—	—	—	2	247	—	—
Family Lines	894	11	125	24	25	2	400	30	2
GB&W	2	—	—	—	—	—	—	—	—
ICG	785	—	—	100	30	2	80	25	7
LI	24	—	—	—	—	1	—	—	—
MEC	2	—	—	—	—	—	—	—	—
Milwaukee	7	1	—	21	17	—	—	17	—
MKT	19	—	—	—	—	—	—	—	—
MP	418	—	—	—	2	1	225	—	4
NW	445	—	—	—	25	—	—	—	—

	Radio Units	Intercommunications		Channelizing Equipment		Telephone		Computer I/O units	Microwave Stations
		No. of Systems	Loudspeakers & Telephones	Carrier Units Terms. & Rep.	Data Sets	Exchanges	Stations Available		
QNS&L	10	—	—	6	—	—	—	—	—
SLSF	125	2	75	1	—	1	200	—	1
Southern	504	1	4	480	55	2	300	—	14
SP	1,641	9	—	98	270	1	850	190	97
TRRA	10	—	—	—	—	—	—	—	—
TP&W	10	—	—	—	—	—	—	—	—
UP	700	1	60	300	250	—	50	100	15
Vermont	2	—	—	—	—	—	—	—	—

RAILROAD SIGNALING INSTALLED IN 1978

	Highway Grade Crossings Protected by		Block Signals & Traffic					Safety Detectors	Misc. Signal Units
	Flashing-light Signals	Flashing-light Signals & Gates	Road Miles	Switches	Electric Locks	Signals	Train Stops Cab Signals		
Alaska	3	—	—	—	—	—	—	—	—
A&SAB	2	3	—	—	—	—	—	—	—
AT&SF	31	99	—	5	13	—	—	12	46
B&M	5	12	—	3	—	4	—	—	—
BN	61	169	41.1	20	2	73	—	14	—
CN Rail	57	20	183	99	11	272	—	2	—
CP Rail	39	5	5	—	—	—	—	12	12
Chessie	47	55	38	17	6	30	—	1	—
C&IM	2	—	—	—	—	—	—	—	—
Conrail	159	46	133.8	75	30	39	—	508	32
D&H	—	—	—	5	—	5	—	—	—
D&RGW	—	6	—	—	6	—	—	52*	—
D&M	3	—	—	—	—	—	—	—	—
DT&I	—	3	—	—	—	—	—	—	—
Family Lines	125	259	63	17	20	58	—	10	2
FEC	—	59	—	—	—	—	—	—	—
GB&W	4	—	—	—	—	—	—	—	—
ICG	61	25	4	1	—	3	—	4	—
LI	—	16	—	—	—	—	—	—	—
MEC	16	1	—	—	—	—	—	—	—
Milwaukee	34	10	2	2	6	12	—	2	—
MKT	8	9	38.8**	—	—	—	—	—	—
MP	45	55	80	16	11	48	—	13	—
Monongahela	—	—	—	—	—	—	—	2	—
MW	22	21	91	12	20	57	—	—	—
QNS&L	—	—	—	4	—	—	—	1	—
SLSF	25	23	9	4	6	—	—	6	—
Southern	71	149	80	26	75	140	—	11	—
SP	20	181	—	—	2	—	—	71	—
TRRA***	—	—	—	—	—	—	—	—	—
TP&W	6	—	—	—	—	—	—	—	—
Vermont	4	—	—	—	—	—	—	—	—

*Incl. 10,000-ft. slide fence.

**Coded track.

***Installed cantilever and grade-crossing predictors in lieu of conventional circuitry.

TRANSIT COMMUNICATIONS INSTALLED IN 1978

	Radio Units	Intercommunications		Channelizing Equipment		Telephone		Computer I/O units	Microwave Stations
		No. of Systems	Loudspeakers & Telephones	Carrier Units Terms. & Rep.	Data Sets	Exchanges	Stations Available		
GCRTA (Cleveland)	9	—	2	—	—	—	—	—	—
GO Transit (Toronto)	42	—	86	—	—	—	—	—	—
MARTA	185	4	1,382	20	—	1	250	20	2
PATH	6	12	—	—	—	—	—	—	1
MUCTC (Montreal)	30	—	—	—	—	325	9	—	—
PATCO (Lindenwold)	14	—	—	6	—	—	—	—	—
TTC (Toronto)	134	1	1	16	16	—	—	1	—
WMATA	15	5	550	10	—	—	—	—	—

TRANSIT SIGNALING INSTALLED IN 1978

	Highway Grade Crossings Protected by		Block Signals & Traffic					Safety Detectors	Misc. Signal Units
	Flashing-light Signals	Flashing-light Signals & Gates	Road Miles	Switches	Electric Locks	Signals	Train Stops Cab Signals		
Edmonton	1	—	—	—	—	—	—	2	—
GCRTA (Cleveland)	—	—	.7	4	—	4	—	—	—
MARTA	—	—	8	83	—	114	13	—	—
MUCTC (Montreal)	—	—	5.5	15	15	—	—	23	—
PATH	—	—	—	12	—	20	20	—	1
TTC (Toronto)	—	—	6.17	48	40	214	153	—	—
W M A T A	—	—	14	67	—	84	—	—	—