

*Summary.*

|                 |                   |                  |
|-----------------|-------------------|------------------|
| Labor .....     | \$ 654.00         | 3.40 cts.        |
| Materials ..... | 875.00            | 4.55             |
|                 | <u>\$1,529.00</u> | <u>7.95 cts.</u> |

Distribution of oil = .388 gal. per sq. yd.

Distribution of grit = 1 cu. yd. on 67.3 sq. yds. surface.

Cost per square yard, about 8c.

Cost per mile (22 ft. wide), \$1,036.00.

Wage rates:—

|                |               |
|----------------|---------------|
| Teams .....    | 55c. per hour |
| Laborers ..... | 22c. " "      |
| Foremen .....  | 35c. " "      |

**Niagara River Boulevard—Tarvia "A" Treatment.**

Time—July, August, September and October.

Location—Boulevard, Station 293 south to Station 545.

Average haul—2.62 miles.

Surface treated—25,200 ft. × 18 ft. = 54,400 sq. yds.

*Labor.*

|                             | Total.            | Per sq. yd.      |
|-----------------------------|-------------------|------------------|
| Spreading ½-in. stone ..... | \$ 318.00         | .63 cts.         |
| Loading materials .....     | 313.00            | .62              |
| Hauling materials .....     | 740.00            | 1.47             |
| Heating Tarvia .....        | 382.00            | .76              |
|                             | <u>\$1,753.00</u> | <u>3.48 cts.</u> |

*Materials.*

|  |                   |                  |
|--|-------------------|------------------|
| ½-in. stone, 724 tons at \$1.10 ..                     | \$ 796.00         | 1.58 cts.        |
| Tarvia, 25,000 gals. at 10c. ....                      | 2,500.00          | 5.72             |
| Freight, \$342; demurrage, \$39..                      | 381.00            | 5.72             |
| Coal for roller and heating, 28.2 tons at \$5.42 ..... | 153.00            | .30              |
|  | <u>\$3,830.00</u> | <u>7.60 cts.</u> |

*Summary.*

|                 |                   |                   |
|-----------------|-------------------|-------------------|
| Labor .....     | \$1,753.00        | 3.48 cts.         |
| Materials ..... | 3,830.00          | 7.60              |
|                 | <u>\$5,583.00</u> | <u>11.08 cts.</u> |

Distribution of Tarvia, .46 gal. per sq. yd.

Distribution of grit, 1 cu. yd. on 90 sq. yds. surface.

Cost per square yard, \$11.08.

Cost per mile (18 ft. wide), \$1,162.00.

Wage rates:—

|                |               |
|----------------|---------------|
| Teams .....    | 45c. per hour |
| Laborers ..... | 20c. " "      |
| Foremen .....  | 30c. " "      |

**Rocmac Resurfacing—Section No. 4.**

Time—August to November, 1914.

Location—Boulevard, from Shipyard south, 1.286 miles.

Average haul—2.07 miles.

Surface treated—6,790 ft. × 18 ft. = 13,580 sq. yds.

*Labor.*

|                            | Total.            | Per sq. yd.       |
|----------------------------|-------------------|-------------------|
| Resurfacing (Rocmac) ..... | \$1,406.00        | 10.36 cts.        |
| Loading materials .....    | 650.00            | 4.78              |
| Hauling materials .....    | 1,394.00          | 10.27             |
| Rolling .....              | 246.00            | 1.81              |
|                            | <u>\$3,696.00</u> | <u>27.22 cts.</u> |

*Materials.*

|                                       |                   |                   |
|---------------------------------------|-------------------|-------------------|
| 2" stone (trap), 514 tons at \$1.80   | \$ 925.00         | 6.81 cts.         |
| Screenings, 560 tons at 90c. ....     | 505.00            | 3.72              |
| Rocmac, 10,473 gals. at 45c. ....     | 4,713.00          | 34.70             |
| Coal for roller, 17.46 tons at \$6.35 | 111.00            | .80               |
|                                       | <u>\$6,254.00</u> | <u>46.03 cts.</u> |

*Summary.*

|                 |            |            |
|-----------------|------------|------------|
| Labor .....     | \$3,696.00 | 27.22 cts. |
| Materials ..... | 6,254.00   | 46.03      |

\$9,950.00 73.25 cts.

Cost per square yard .....\$ 73.25

Cost per mile (18 ft. wide) .....\$7,736.00

Wage rates:—

|                |               |
|----------------|---------------|
| Teams .....    | 45c. per hour |
| Laborers ..... | 20c. " "      |
| Foremen .....  | 30c. " "      |

**Queen Victoria Park—Repairing Main Driveway.**

Time—Summer, 1914.

Location—Main driveway.

Average haul—

Surface treated—22,000 square yards.

*Labor.*

|                 | Total.            | Per sq. yd.      |
|-----------------|-------------------|------------------|
| Repairing ..... | \$ 403.00         | 1.83 cts.        |
| Loading .....   | 185.00            | .84              |
| Hauling .....   | 317.00            | 1.44             |
| Rolling .....   | 175.00            | .80              |
|                 | <u>\$1,080.00</u> | <u>4.91 cts.</u> |

*Materials.*

|                             |                  |                  |
|-----------------------------|------------------|------------------|
| 2-in. stone, 253 tons ..... | \$ 298.00        | 1.35 cts.        |
| Screenings, 238 tons .....  | 278.00           | 1.26             |
| Coal, 15 tons .....         | 77.00            | .35              |
|                             | <u>\$ 635.00</u> | <u>2.96 cts.</u> |

*Summary.*

|                 |            |           |
|-----------------|------------|-----------|
| Labor .....     | \$1,080.00 | 4.91 cts. |
| Materials ..... | 653.00     | 2.96      |

\$1,733.00 7.87 cts.

Cost per square yard, about 8c.

Cost per mile, 22-ft. roadway, \$1,036.00.

Wage rates:—

|                |               |
|----------------|---------------|
| Teams .....    | 55c. per hour |
| Laborers ..... | 22c. " "      |
| Foremen .....  | 35c. " "      |

**LONG LINES IN TRIANGULATION.**

The longest line in the United States Coast and Geodetic Survey triangulation is that from Toiyabe Dome, Nev., to Ragged Peak, Nev., about 227 miles. This was observed only in one direction. The line from Mount Shasta, Cal., to Mount Helena, Cal., is 192 miles in length, and that from Mount Ellen, Utah, to Mount Uncompahgre, Col., is 183 miles. The triangle formed by Wheeler Peak, Nev., Mount Nebo, Utah, and Pilot Peak, Nev., has sides of 148, 148 and 141 miles respectively.—August "Bulletin" of the U.S. Coast and Geodetic Survey.