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 DEPARTMENT OF SURVEYS.

 DEPARTMENT OF SURVEYS,  
*Philadelphia, Dec. 30, 1856.*

 To the Hon. RICHARD VAUX,  
 Mayor of Philadelphia;

SIR:—The season having arrived that calls for communications from the heads of departments to the chief executive of the city, relative to the condition and interests of their several offices, I take great pleasure in reporting that, during the past year, this department has continued to develop its usefulness, as the information sought by and afforded to our citizens fully attests, and each year will the amount, and consequently the value, of our records be augmented, not only by accumulation from returns of daily regulations and surveys extending the city plan now in progress, but by the compilation and arrangement of what can be collected from old and valuable documents transferred to this office at its organization. We have now, so far as lies within our power, made that disposition of the city archives in our charge, as will insure easy

reference without loss of valuable time, yet there is much information sought for at this department, not on record in any of the city offices, which should be upon our files, but cannot be obtained without the aid of Councils. To this point I will refer in this report for your consideration.

The meetings of the Board of Surveyors, during the past year, have been frequent, and the results of much value, not only in matters of direct interest to the city, but in the settlement of differences between individuals relating to partition lines, which otherwise might have become vexed questions for tedious and expensive litigation.

The great difficulty under which we labor is, that there is no uniformity in the acts of Assembly bearing upon matters of survey and regulations for the present limits of the city; the old laws enacted for the districts, as they existed previous to consolidation, have never been repealed, and, consequently, the duties required for one section of the city, without marked boundaries, sometimes covering parts of two survey districts, differ materially from those of other sections. This causes confusion. It is very desirable that one set of laws should cover the whole, as being more intelligible, besides simplifying business for all parties.

Again, there are cases where laws creating commissioners for the purpose of conducting the survey and regulations of particular districts of the city are in full force, and which either tend to delay the improvement of that district or deprive this department of supervision and direction in the very matters it should be most familiar with; these should be under its especial charge to insure perfect connections between sectional plans, and also that they be prepared with proper reference one to the other.

When surveys are conducted out of the control of the department, there is no certainty that either a properly graduated measure, or the accurate datum level is made use of; and after the plans are filed amongst our records, and are used by the district surveyors for the necessary subdivisions, serious discrepancies must be risked.

Another matter in which the interests of the city, we think, could be greatly advanced is, that there should be placed upon our record books a plot of the ground on which each and every house may be erected; this would prevent perplexing appeals, and secure the accurate division of properties, which, as now performed by the builders themselves, with imperfect measures, frequently places partition walls in positions very different from that recited in the deed. The ordinance under which we are now acting is not sufficiently definite in this particular, though the intention in framing it was evidently to cover the ground alluded to; its revision is very desirable, not only with reference to the question just spoken of, but that the schedule of rates payable to the surveyors and regulators, as well as their special duties for the emolument yearly allowed them by the city, shall be clearly defined. The ordinance now reads, "that they shall receive an annual salary of \$500, for keeping the public records, performing all services as a member of the Board of Surveyors and *all other official* services that may be required for the city," in addition "to such fees and charges as are provided for" in Section 11, which section particularizes the prices to be paid by individuals for regulation of lots, as well as a few items, for which the city is responsible, but does not cover the payment for surveys which are indispensable for the interests of the city, and which it would be unjust to expect to have performed as "*other official service*," when the actual outlay by the surveyor, for an ordinary sectional plan, often exceeds the amount voted as annual salary.

That these surveys, and the preparation of sectional plans should continue to be prosecuted is, we deem, imperative. Our suburban area is rapidly improving, and, in some instances, waiting only the extension of the city plan to be classed among the populous districts, and yield a *yearly revenue*, from increased taxation, far greater than the required amount to complete the preparatory surveys; these surveys, once completed, may well be considered capital invested,

from which a large percentage is at once derived, with a yearly increase. I would further observe, that though this department may appear to draw largely upon the treasury, yet the amount of appropriation asked for yearly, will (exclusive of salaries) decrease as the plotting of the city progresses, and, when completed, will preclude further calls for heavy damages, on account of injury to estates or suburban residences, which, without the planning, might, and in all probability would, be so arranged as to demand, with justice, heavy amounts from the city when its requirements would bring them within the street limits—the truthfulness of this may be seen by referring to the amount of damages paid for the opening of the late Township of Penn, in comparison with other sections where the planning was delayed. An early attention to the arrangement of the city plot over the rural districts will prevent the adoption of lanes and bye-roads as *fronts* of properties. These can now be disregarded and vacated at the proper time, without being embraced in the city plan, destroying either the direct line of streets or that rectangular form of blocks which is, in every particular, most acceptable and judicious. A still more cogent reason, if possible, is, that it is only from these plans that systems of drainage can be arranged, and without them the hasty construction of a sewer is often called for, the sizes for which it is impossible to determine with any regard to accuracy, and the city is either entailed with a heavy excess of expenditure, for the purpose of being on the safe side, or for the want of the proper proportions, is taxed with a heavy outlay to repair the evils committed, and, in either case, the amount could easily far exceed the cost of the plans necessary to contain proper data.

I, now, sir, beg leave to refer to some duties which devolve upon the Department of Highways, but properly belong to this, and are, no doubt, looked upon rather as an incubus, interfering with their already extended and arduous labors, viz: The charge and general direction for the construction of all culverts or drains built by individual enterprise. These should be

placed in this department. The form of ordinance has already, in a number of instances, received the approval of Councils, as well as the sanction of your honor, but, by adopting it as a general rule, it would facilitate operations and secure for our department records of great value. Another duty, which is a burden to the same department, is that of issuing permits for connections with culverts, and, as now arranged, can be but imperfect, as their office contains no record as to whether a culvert is in existence at the locality applied for, while this department is in possession of the only information relative to culverts that can throw light upon the value or injury that the connection asked for might be to the sewer; that these connections should be properly constructed, and their junctions with the sewers made in the most approved manner, is very necessary, as in the one case they may be beneficial, while in the other they would retard the flow and lessen the delivery of the sewer. Heretofore, there has been no note taken of these connections further than date of permit, but it is desirable that the location, level, material and gradient should be on record for reference, and, if placed in charge of this department, they would be constructed under the eye of the District Surveyor, in accordance with regulations made by the Board of Surveyors, and such returns thereof made for the files of this department as would be useful for reference by our citizens.

Another very great want is, that the location, sizes and gradients of all the sewers of our city are not known with accuracy. We have daily calls for information we should have relative to them, but we either do not possess it, or it is in such a meagre or unavailable shape as to be of comparative little value. All builders will, I feel assured, second me in asserting that such information would be of infinite value to them, and could be obtained without great expense to the city.

In conclusion, sir, I beg leave to state that much of this matter has been communicated to Councils in reports made by me during the past year, but as, in the multiplicity of their business and accumulation of

documents, they have been lost sight of, I take the liberty of thus calling your attention thereto, hoping, that should you think them worthy of consideration, a notice from you will meet with effective attention.

Respectfully submitted,

STRICKLAND KNEASS,

*Chief Engineer and Surveyor.*

## DEPARTMENT OF HIGHWAYS.

HIGHWAY DEPARTMENT,

*January 1st, 1857.*

Hon. RICHARD VAUX, Mayor :

DEAR SIR : I have the honor to acknowledge the receipt of your communication, requesting information in regard to the condition of this department. It affords me pleasure to furnish you with the following general statement of its affairs. The department is at present composed of one Chief Commissioner of Highways, two Commissioners, two Clerks, twenty-five Supervisors, six Watchmen of Bridges, and one Messenger.

All the highways, bridges, sewers, &c., are under the charge and supervision of this department. A statement in detail of the receipts and expenditures will be found annexed, marked respectively A and B. It will be seen that during the year 1856, the expenditures in this department, exclusive of damages paid for opening streets, amounted to \$333,498 17; of which amount, \$186,931 66 was expended up to July 16th, at which time I entered upon the discharge of my duties as head of this department.

By referring to the statement, it will be seen that during the latter portion of the year, although the work upon the public highways was continued up to December 25th, the expenditures amounted to but \$118,542 37.

As the balance remaining to the credit of item 2, for repaving and repairing streets, was inadequate to

meet the expenditures which would have been necessary, had many of them been repaved, the attention of the department was directed to putting them in such a state of repair as the public exigencies required—and at the present time, with a few exceptions, they are in good travelling condition.

I regret to say that the practical operation of the system adopted for cleansing the highways does not give satisfaction to the public; nor does it receive the approbation of this department. The brief experience that has been afforded me leads to the conclusion, that a different one should be substituted for it.

The city is now divided into districts, and being cleansed by contract. The contracts having been in each case awarded to the lowest bidder. Competition for the work induced many to propose and engage it, who can only be made to comply with the terms of their contracts by incessant and continuous threats of prosecution, or of employing others to do the work at their cost. Others have bid for the work at very low prices, without any serious intention of engaging it, simply with a view of preventing responsible bidders from obtaining it at a reasonable rate of compensation. Probably under no system that can be devised will the streets be kept in such a condition as to prevent some persons from complaining, but under circumstances such as those referred to, it is certainly impossible to prevent them from being made.

It is made the duty of the Supervisors, by the ordinance organizing the department, to superintend and take charge of the men in the employment of the city in their respective districts; and their attention is especially directed to the repairs of the public highways. In the matter of cleansing the streets, they are unable under the present arrangements to render efficient assistance, as the men employed in doing the work are not subject to their control, and are not in any way recognized as employees by the department. The Supervisors therefore are compelled to listen to complaints which they have not the power to remedy, and the department is held responsible for grievances



which can never be thoroughly redressed but by a change of system.

Philadelphia has always been famed for the cleanliness of her streets; and I am persuaded that even at the present time no city in the Union will compare with her in this respect. It shall be my endeavor to leave no remedy untried to maintain this character for our city.

But it must be borne in mind that the contract price for cleansing streets, for the year commencing October 1st, 1856, and ending with October, 1857, is but about sixty thousand dollars for the entire city, being thirty per cent. less than was paid for doing the same work for the two last years, notwithstanding a very large area of paved streets has been added, and is embraced in the present contracts.

The cost of cleansing the city of New York, I am credibly informed, is annually about five hundred per cent. more than the amount paid here, although the area of its paved streets is not near as great as that of this city.

I would also call your attention to the matter of sewers and sewerage, as at present organized. This department is charged with the construction, repair and supervision of all culverts, inlets and drains. I am fearful that, at no distant day, the city will be put to serious inconvenience and great expense, as the system, in all its details, is very imperfect and defective; and I would add, also, that the ordinance upon the subject of drains from private properties into our culverts is equally defective with the system itself—so much so as to render nugatory all the efforts of the department to compel a proper observance of them.

I would especially invite your attention to this matter, and would suggest for your consideration whether it would not be well to recommend a complete revision of the system, and all ordinances appertaining to it, with the view of inducing such changes as would relieve this department from its supervision over them, and place the responsibility in a new department, or in one where it more properly belongs.

The officers of this department are about to commence operations to carry into effect the ordinance approved September 16th, 1856, entitled "An Ordinance to effect uniformity in the numbering of houses." It is made the duty of this department to furnish owners or occupiers of houses with the number by which the respective properties may be hereafter known and designated. This done, our duty ceases; and it then devolves upon the Police Department to see that the provisions of the ordinance are complied with. That a correct and uniform numbering of houses is very desirable, and that it will be found ultimately advantageous, few doubt—every effort will, therefore, be made to proceed as rapidly as possible; and due notice will be given your department, in order that it may be prosecuted in such a manner as its importance demands.

I regret that it is not in my power to furnish you with the number of paved and unpaved streets, with their measurement, or the length of culverts and sewers in this city. This could only be arrived at by a careful examination and investigation; and, with the clerical force engaged in the office at the present time, would seriously embarrass us, were we to attempt even an approximate calculation. Indeed, it would be a work of labor to ascertain the number of feet of streets paved and repaved during the past year, as the only statistical information in the office is the bills for materials and work done upon them. A record of matter of this kind should be kept in this office, for present and future reference; and I would willingly lend assistance, if additional force could be procured to enable me to accomplish it.

Yours, respectfully,

JOHN M'CARTHY,

*Chief Commissioner of Highways.*

A.

*Financial Statement, Department of Highways, &c., for the year ending 31st December, 1856.*

To Appropriation as per Ordinance approved 28th March, 1856, \$360,500 00

| CR.                                      | <i>Expenditures.</i> |              |
|--|----------------------|--------------|
| By Paving intersections,                 | \$16,945 14          |              |
| Repairing and repaving streets,          | 90,332 69            |              |
| Grading streets and roads,               | 21,112 98            |              |
| Repairing roads,                         | 37,800 69            |              |
| Paving footways,                         | 4,836 04             |              |
| Repairing culverts and inlets,           | 14,975 57            |              |
| Repairing bridges,                       | 9,915 79             |              |
| Cleansing paved streets, markets, &c.,   | 82,430 04            |              |
| Cleansing and repairing unpaved streets, | 10,684 16            |              |
| Repairing City Railroad,                 | 6,022 10             |              |
| Wells and pumps,                         | 2,323 20             |              |
| Salaries,                                | 26,644 79            |              |
| Girard avenue, 24th ward,                | 4,555 90             |              |
| "    "    20th    "                      | 175 88               |              |
| Printing, stationery, &c.,               | 1,290 92             |              |
| Insurance on bridges,                    | 1,100 00             |              |
| Index boards,                            | 200 00               |              |
| Office expenses,                         | 1,024 46             |              |
| Incidentals,                             | 1,127 82             |              |
| Balance,                                 | 27,001 83            |              |
|  | \$360,500 00         | \$360,500 00 |

Of the foregoing amount, there was expended up to July 16, when the present incumbent entered upon the duties of his office, - - - \$186,931 66  
 And, subsequently, for work done and materials furnished prior to that date, the sum of - - - 28,024 14

Amounting in the aggregate to the sum of \$214,955 80  
 Leaving a balance of \$145,544 20 for the remainder of the year, of which amount there has been expended \$118,542 37; leaving a balance to the credit of the department amounting to \$27,001 83.

*Recapitulation.*

|  |   |
|--|---|
| To annual appropriation, 28th March, 1856, - - - -   | \$360,500 00                            |
| Warrants issued prior to 16th July, 1856, - - -  | \$186,931 66                            |
| Warrants issued subsequent to July 16, for work done and materials furnished prior to that date, - | 28,024 14                               |
| Warrants issued for work and materials subsequent to July 16, 1856, - -                            | 118,542 37                              |
| Balance to credit of department, - - - -   | 27,001 83                               |
|  | <u>\$360,500 00</u> <u>\$360,500 00</u> |

In addition to the above, there remain unpaid, for work done and materials furnished during the year 1856, bills amounting in the aggregate to over \$3,000.

## B.

*Receipts of Department of Highways, &c., for the year ending 31st December, 1856.*

|  |            |                    |
|--|------------|--------------------|
| From Licenses—                           |            |                    |
| Omnibuses, - - -                         | \$4,980 00 |                    |
| Hacks and private carriages, - - -       | 972 50     |                    |
| Carts, wagons, drays and barrows, - - -  | 2,397 50   |                    |
| Hack drivers, - - -                      | 12 00      |                    |
|  | <hr/>      |                    |
| Total from licenses, - - -               |            | \$8,362 00         |
| Permits—                                 |            |                    |
| To occupy streets, - - -                 | 678 50     |                    |
| To construct vaults, - - -               | 1,150 75   |                    |
|  | <hr/>      |                    |
| Total permits, - - -                     |            | 1,829 25           |
| Sewers—                                  |            |                    |
| Permits to enter, - - -                  | 1,870 00   |                    |
| Annual rents, - - -                      | 2,139 80   |                    |
| Fractional rents, - - -                  | 192 67     |                    |
| Repairing over openings to sewers, - - - | 479 50     |                    |
|  | <hr/>      |                    |
| Total sewers, - - -                      |            | 4,681 97           |
| Railroad turnouts, - - -                 | 50 00      |                    |
| Paving streets and footways, - - -       | 2,933 36   |                    |
| Miscellaneous, - - -                     | 2,114 89   |                    |
|  | <hr/>      |                    |
|  |            | 5,098 25           |
|  |            | <hr/>              |
| Total receipts from all sources, - - -   |            | <u>\$19,971 47</u> |