

| Lp. | Podstawa                     | Opis i wyliczenia  | j.m. | Poszcz. | Razem   |
|-----|------------------------------|--|------|---------|---------|
| 1   |                              | <b>Demontaż instalacji zewnętrznych</b>  |      |         |         |
| 1   | KNR-W 4-02 0506-04           | Demontaż rurociągu stalowego o połączeniach spawanych o śr. 32 mm  | m    |         |         |
|     |                              | 65.00  | m    | 65.000  |         |
|     |                              |  |      | RAZEM   | 65.000  |
| 2   | KNR 4-051 0410-06 analogia   | Demontaż wpustu deszczowego.   | kpl. |         |         |
|     |                              | 2  | kpl. | 2.000   |         |
|     |                              |  |      | RAZEM   | 2.000   |
| 3   | KNR 4-051 0124-03            | Demontaż rurociągu z PCW o śr. zew. 225 mm   | szt. |         |         |
|     |                              | 131.00   | szt. | 131.000 |         |
|     |                              |  |      | RAZEM   | 131.000 |
| 4   | KNR 4-051 0409-01            | Demontaż studni rewizyjnych z kręgów betonowych o śr. 1000 mm w gotowym wykopie o głęb. 3 m  | kpl. |         |         |
|     |                              | 27   | kpl. | 27.000  |         |
|     |                              |  |      | RAZEM   | 27.000  |
| 5   | KNR 4-051 1221-0200 analogia | Demontaż zasuwy żeliwnej kołnierkowej-z obudową o średnicy nominalnej 100 mm.  | kpl. |         |         |
|     |                              | Demontaż istniejącej armatury znajdującej się na likwidowanym odcinku wodociągu  |      |         |         |
|     |                              | armatura do likwidacji 1   | kpl. | 1.000   |         |
|     |                              |  |      | RAZEM   | 1.000   |
| 6   | KNR 4-01 0108-02 analogia    | Wywóz zdemontowanych instalacji  | m³   |         |         |
|     |                              | 1.50   | m³   | 1.500   |         |
|     |                              |  |      | RAZEM   | 1.500   |
| 2   |                              | <b>Przyłącze wodociągowe</b>   |      |         |         |
| 2.1 |                              | <b>Roboty ziemne</b>   |      |         |         |
| 7   | kalk. własna                 | Inwentaryzacja geodezyjna - trasa zewnętrznej instalacji wodociągowej  | kpl. |         |         |
|     | 1                            | 1  | kpl. | 1.000   |         |
|     |                              |  |      | RAZEM   | 1.000   |
| 8   | KNR 2-01 0120-03 analogia    | Roboty pomiarowe przy liniowych robotach ziemnych - trasa zewnętrznej instalacji kanalizacji sanitarnej  | km   |         |         |
|     |                              | 0.066  | km   | 0.066   |         |
|     |                              |  |      | RAZEM   | 0.066   |
| 9   | KNR 1 0113-01                | Usunięcie warstwy ziemi urodzajnej (humusu) o grubości do 15 cm za pomocą spycharek  | m²   |         |         |
|     |                              | 66*0.9   | m²   | 59.400  |         |
|     |                              |  |      | RAZEM   | 59.400  |
| 10  | KNR 1 0113-02                | Usunięcie warstwy ziemi urodzajnej (humusu) za pomocą spycharek - do datek za dalsze 5 cm ponad 15 cm  | m²   |         |         |
|     |                              | Krotność = 5   |      |         |         |
|     |                              | 66*0.9   | m²   | 59.400  |         |
|     |                              |  |      | RAZEM   | 59.400  |
| 11  | KNR-W 2-01 0203-04           | Roboty ziemne wykonywane koparkami podsiębiernymi o pojemności łyżki 0.25 m³ w gruncie kat. III z transportem urobku samochodami samowyładowczymi na odległość do 1 km | m³   |         |         |
|     |                              | Przyjęto wykonanie mechaniczne 70%.  |      |         |         |
|     |                              | B1 - w1 3.03*(1.8-0.4)*0.9*0.7   | m³   | 2.672   |         |
|     |                              | w1-w2 10.12*(1.83-0.4)*0.9*0.7   | m³   | 9.117   |         |
|     |                              | w2-w3 30.32*(1.73-0.4)*0.9*0.7   | m³   | 25.405  |         |
|     |                              | w3-w4 22.25*(1.7-0.4)*0.9*0.7  | m³   | 18.223  |         |
|     |                              |  |      | RAZEM   | 55.417  |
| 12  | KNR-W 2-01 0301-02           | Ręczne roboty ziemne z transportem urobku samochodami samowyładowczymi na odległość do 1 km (kat. gruntu III)  | m³   |         |         |
|     |                              | Przyjęto wykonanie ręczne 30%.   |      |         |         |
|     |                              | B1 - w1 3.03*(1.8-0.4)*0.9*0.3   | m³   | 1.145   |         |
|     |                              | w1-w2 10.12*(1.83-0.4)*0.9*0.3   | m³   | 3.907   |         |
|     |                              | w2-w3 30.32*(1.73-0.4)*0.9*0.3   | m³   | 10.888  |         |
|     |                              | w3-w4 22.25*(1.7-0.4)*0.9*0.3  | m³   | 7.810   |         |
|     |                              |  |      | RAZEM   | 23.750  |
| 13  | KNR 2-01 0324-02             | Pełne umocnienie pionowych ścian wykopów liniowych o głęb. do 3m palami szalunkowymi (wypraskami) w gruntach nawodnionych kat.III-IV wraz z rozbiórką                  | m²   |         |         |



| Lp.                                 | Podstawa                           | Opis i wyliczenia  | j.m.   | Poszcz.  | Razem   |
|-------------------------------------|------------------------------------|--|--|--|---------|
|                                     | B1 - w1<br>w1-w2<br>w2-w3<br>w3-w4 | 66*1.7*2<br>3.03*1.8*2<br>10.12*1.83*2<br>30.32*1.73*2<br>22.25*1.7*2  | m <sup>2</sup><br>m <sup>2</sup><br>m <sup>2</sup><br>m <sup>2</sup><br>m <sup>2</sup> | 224.400<br>10.908<br>37.039<br>104.907<br>75.650 |         |
|                                     |                                    |  |  | RAZEM  | 452.904 |
| 14<br>d.2.<br>18 0511-01<br>1       | KNR-W 2-<br>18 0511-01<br>1        | Podłoża pod kanały i obiekty z materiałów sypkich grub. 10 cm z dowiezieniem piasku.   | m <sup>3</sup>   |  |         |
|                                     | B1 - w1<br>w1-w2<br>w2-w3<br>w3-w4 | 3.03*0.10*0.9<br>10.12*0.10*0.9<br>30.32*0.10*0.9<br>22.25*0.10*0.9  | m <sup>3</sup><br>m <sup>3</sup><br>m <sup>3</sup><br>m <sup>3</sup>                   | 0.273<br>0.911<br>2.729<br>2.003                 |         |
|                                     |                                    |  |  | RAZEM  | 5.916   |
| 15<br>d.2.<br>0501-09<br>1          | KNR 2-28<br>0501-09<br>1           | Obsypka rurociągu kruszywem dowiezionym z dowiezieniem piasku.   | m <sup>3</sup>   |  |         |
|                                     | B1 - w1<br>w1-w2<br>w2-w3<br>w3-w4 | 3.03*0.20*0.9<br>10.12*0.20*0.9<br>30.32*0.20*0.9<br>22.25*0.20*0.9  | m <sup>3</sup><br>m <sup>3</sup><br>m <sup>3</sup><br>m <sup>3</sup>                   | 0.545<br>1.822<br>5.458<br>4.005                 |         |
|                                     |                                    |  |  | RAZEM  | 11.830  |
| 16<br>d.2.<br>0236-01<br>1          | KNR 2-01<br>0236-01<br>1           | Zagęszczenie nasypów ubijakami mechanicznymi; grunty sypkie kat. I-III<br>- podsypka<br>- obsypka<br>poz.14+poz.15   | m <sup>3</sup><br>m <sup>3</sup>   | 17.746   |         |
|                                     |                                    |  |  | RAZEM  | 17.746  |
| 17<br>d.2.<br>0214-02<br>1          | KNR 1<br>0214-02<br>1              | Zasypanie wykopów .fund.podłużnych,punktowych,rowów,wykopów obiektowych spycharkami z zagęszcz.mechanicznym spycharkami (gr.warstwy w stanie luźnym 30 cm) - kat.gr. III-IV.<br>Przyjęto wykonanie mechaniczne.<br>(poz.9+poz.10+poz.11+poz.12)-(poz.14+poz.15)-0.29 | m <sup>3</sup><br>m <sup>3</sup>   | 179.931  |         |
|                                     |                                    |  |  | RAZEM  | 179.931 |
| 18<br>d.2.<br>0236-01<br>1          | KNR 2-01<br>0236-01<br>1           | Zagęszczenie nasypów ubijakami mechanicznymi; grunty sypkie kat. I-III<br>poz.17   | m <sup>3</sup><br>m <sup>3</sup>   | 179.931  |         |
|                                     |                                    |  |  | RAZEM  | 179.931 |
| 19<br>d.2.<br>0206-02<br>1 analogia | KNR 1<br>0206-02<br>1 analogia     | Roboty ziemne wykonywane koparkami podsiębiernymi o poj.łyżki 0.25 m3 w gr.kat. I-III w ziemi uprzednio zmag.w hałdach z transp.urobku na odl. 1 km sam.samowylad.<br>Odwóz nadmiaru gruntu.<br>poz.14+poz.15  | m <sup>3</sup><br>m <sup>3</sup>   | 17.746   |         |
|                                     |                                    |  |  | RAZEM  | 17.746  |
| 20<br>d.2.<br>0208-02<br>1 analogia | KNR 1<br>0208-02<br>1 analogia     | Dodatek za każdy rozp. 1 km transportu ziemi samochodami samowyladowczymi po drogach o nawierzchni utwardzonej(kat.gr. I-IV)<br>Dowóz piasku.<br>Krotność = 9<br>poz.19  | m <sup>3</sup><br>m <sup>3</sup>   | 17.746   |         |
|                                     |                                    |  |  | RAZEM  | 17.746  |
| 2.2                                 |                                    | <b>Roboty montażowe</b>  |  |  |         |
| 21<br>d.2.<br>0333-02<br>2          | KNR 4-01<br>0333-02<br>2           | Przebicie otworów w ścianach z cegieł o grubości 1 ceg. na zaprawie wapiennej<br>1   | szt.<br>szt.   | 1.000  |         |
|                                     |                                    |  |  | RAZEM  | 1.000   |
| 22<br>d.2.<br>0119-02<br>2 analogia | KNR 2-19<br>0119-02<br>2 analogia  | Rury ochronne o śr.nom. 150 mm<br>1.20   | m<br>m   | 1.200  |         |
|                                     |                                    |  |  | RAZEM  | 1.200   |
| 23<br>d.2.<br>18 0109-02<br>2       | KNR-W 2-<br>18 0109-02<br>2        | Sieci wodociągowe - montaż rurociągów z rur polietylenowych (PE, PEHD) o śr.zewnętrznej 75 mm<br>66.00   | m<br>m   | 66.000   |         |
|                                     |                                    |  |  | RAZEM  | 66.000  |
| 24<br>d.2.<br>0313-03<br>2          | KNR 2-28<br>0313-03<br>2           | Nawiertki na istniejących rurociągach PVC o śr. zewn. 160 mm<br>1  | kpl.<br>kpl.   | 1.000  |         |
|                                     |                                    |  |  | RAZEM  | 1.000   |



| Lp. | Podstawa                                       | Opis i wyliczenia   | j.m.              | Poszcz. | Razem  |
|-----|--|---|-------------------|---------|--------|
| 25  | KNR 2-28<br>d.2. 0308-02<br>2                  | Zasuwy żeliwne kielichowe z obudową na rurociągach PVC i PE o śr. nominalnej 80 mm  | szt.              |         |        |
|     |  | 1   | szt.              | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 26  | KNR-W 2-<br>d.2. 18 0111-02<br>2               | Sieci wodociągowe - połączenie rur polietylenowych ciśnieniowych PE, PEHD za pomocą kształtek elektrooporowych o śr.zewnętrznej 75 mm | złącz.            |         |        |
|     |  | 4   | złącz.            | 4.000   |        |
|     |  |   |                   | RAZEM   | 4.000  |
| 27  | KNR-W 2-<br>d.2. 15 0132-07<br>2               | Zawory przelotowe i zwrotne instalacji wodociągowych z rur z tworzyw sztucznych o śr. nominalnej 65 mm                                | szt.              |         |        |
|     |  | 3   | szt.              | 3.000   |        |
|     |  |   |                   | RAZEM   | 3.000  |
| 28  | KNR-W 2-<br>d.2. 15 0141-01<br>2 analogia      | Wodomierze sprzężone o śr. nominalnej 50 mm   | kpl.              |         |        |
|     |  | 1   | kpl.              | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 29  | KNR INS-<br>d.2. TAL 0111-<br>2 06<br>analogia | Filtr osadnikowy siatkowy o śr.nom 65 mm  | szt.              |         |        |
|     |  | 1   | szt.              | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 30  | KNR 0-35<br>d.2. 0131-05<br>2                  | Urządzenia zabezpieczające wodę przed wtórnym zanieczyszczeniem, typ BA; śr. nominalna przyłączy 1 1/2"                               | szt.              |         |        |
|     |  | 1   | szt.              | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 31  | KNR 2-19<br>d.2. 0219-01<br>2 analogia         | Oznakowanie trasy przyłącza wodociągowego ułożonego w ziemi taśmą z tworzywa sztucznego   | m                 |         |        |
|     |  | 66.00   | m                 | 66.000  |        |
|     |  |   |                   | RAZEM   | 66.000 |
| 32  | KNR-W 2-<br>d.2. 18 0704-01<br>2 analogia      | Próba wodna szczelności sieci wodociągowych z rur typu HOBAS, PVC, PE, PEHD o śr.nominalnej 90-110 mm                                 | 200m -<br>1 prób. |         |        |
|     |  | 1   | 200m -<br>1 prób. | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 33  | KNR-W 2-<br>d.2. 18 0707-01<br>2 analogia      | Dezynfekcja rurociągów sieci wodociągowych o śr.nominalnej do 150 mm  | odc.20<br>0m      |         |        |
|     |  | 1   | odc.20<br>0m      | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 34  | KNR-W 2-<br>d.2. 18 0708-01<br>2 analogia      | Jednokrotne płukanie sieci wodociągowej o śr. nominalnej do 150 mm  | odc.20<br>0m      |         |        |
|     |  | 1   | odc.20<br>0m      | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 35  | kalk. własna<br>d.2. 2                         | Analiza laboratoryjna jakości wody  | próba             |         |        |
|     |  | 1   | próba             | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 3   |  | <b>Zewnętrzna instalacja kanalizacji sanitarnej</b>   |                   |         |        |
| 3.1 |  | <b>Roboty ziemne</b>  |                   |         |        |
| 36  | kalk. własna<br>d.3. 1                         | Inwentaryzacja geodezyjna - trasa zewnętrznej instalacji wodociągowej   | kpl               |         |        |
|     |  | 1   | kpl               | 1.000   |        |
|     |  |   |                   | RAZEM   | 1.000  |
| 37  | KNR 2-01<br>d.3. 0120-03<br>1 analogia         | Roboty pomiarowe przy liniowych robotach ziemnych - trasa zewnętrznej instalacji kanalizacji sanitarnej                               | km                |         |        |
|     |  | 0.126   | km                | 0.126   |        |
|     |  |   |                   | RAZEM   | 0.126  |
| 38  | KNR 1<br>d.3. 0113-01<br>1                     | Usunięcie warstwy ziemi urodzajnej (humusu) o grubości do 15 cm za pomocą spycharek   | m <sup>2</sup>    |         |        |
|     |  | 126*1.0   | m <sup>2</sup>    | 126.000 |        |



| Lp.             | Podstawa          | Opis i wyliczenia   | j.m.           | Poszcz. | Razem   |
|-----------------|-------------------|---|----------------|---------|---------|
| 39              | KNNR 1            | Usunięcie warstwy ziemi urodzajnej (humusu) za pomocą spycharek - do-<br>datek za dalsze 5 cm ponad 15 cm   | m <sup>2</sup> | RAZEM   | 126.000 |
| d.3. 0113-02    |                   | Krotność = 5  |                |         |         |
| 1               |                   | 126*1.0   | m <sup>2</sup> | 126.000 |         |
|                 |                   |   |                | RAZEM   | 126.000 |
| 40              | KNR-W 2-          | Roboty ziemne wykonywane koparkami podsiębiernymi o pojemności łyżki  | m <sup>3</sup> |         |         |
| d.3. 01 0203-04 |                   | 0.25 m <sup>3</sup> w gruncie kat. III z transportem urobku samochodami samowyla-<br>dowczymi na odległość do 1 km  |                |         |         |
| 1               |                   | Przyjęto wykonanie mechaniczne 70%.   |                |         |         |
|                 | B2-SS1            | 1.50*(1.66-0.4)*1.0*0.7   | m <sup>3</sup> | 1.323   |         |
|                 | SS1-SS2           | 10.78*(1.93-0.4)*1.0*0.7  | m <sup>3</sup> | 11.545  |         |
|                 | SS2-S9            | 20.29*(2.20-0.4)*1.0*0.7  | m <sup>3</sup> | 25.565  |         |
|                 | S9-SS3            | 9.72*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 11.567  |         |
|                 | SS3-S11           | 5.86*(1.92-0.4)*1.0*0.7   | m <sup>3</sup> | 6.235   |         |
|                 | S11-S12           | 7.80*(2.57-0.4)*1.0*0.7   | m <sup>3</sup> | 11.848  |         |
|                 | S12-SSW           | 14.47*(2.10-0.4)*1.0*0.7  | m <sup>3</sup> | 17.219  |         |
|                 | B3-SS2            | 1.50*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 1.785   |         |
|                 | B4-SS3            | 1.50*(1.1-0.4)*1.0*0.7  | m <sup>3</sup> | 0.735   |         |
|                 | B5-S10            | 1.25*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 1.488   |         |
|                 | B6-S10            | 6.44*(1.7-0.4)*1.0*0.7  | m <sup>3</sup> | 5.860   |         |
|                 | S10-S11           | 26.82*(3.00-0.4)*1.0*0.7  | m <sup>3</sup> | 48.812  |         |
|                 | B7-SS4            | 2.67*(3.35-0.4)*1.0*0.7   | m <sup>3</sup> | 5.514   |         |
|                 | SS4-S10           | 12.10*(3.3-0.4)*1.0*0.7   | m <sup>3</sup> | 24.563  |         |
|                 | B8-SS4            | 3.13*(3.35-0.4)*1.0*0.7   | m <sup>3</sup> | 6.463   |         |
|                 | wykop pod studnie | 4.90*4*(2.38-0.4)*0.7   | m <sup>3</sup> | 27.166  |         |
|                 | fi1000 o          |   |                |         |         |
|                 | śr.2,40m          |   |                |         |         |
|                 | wykop pod studnie | 3.14*4*(2.30-0.4)*0.7   | m <sup>3</sup> | 16.705  |         |
|                 | fi600 o śr.2,00m  |   |                |         |         |
|                 |                   |   |                | RAZEM   | 224.393 |
| 41              | KNR-W 2-          | Ręczne roboty ziemne z transportem urobku samochodami samowyla-<br>dowczymi na odległość do 1 km (kat. gruntu III)  | m <sup>3</sup> |         |         |
| d.3. 01 0301-02 |                   | Przyjęto wykonanie ręczne 30%.  |                |         |         |
| 1               |                   |   |                |         |         |
|                 | B2-SS1            | 1.50*(1.66-0.4)*1.0*0.3   | m <sup>3</sup> | 0.567   |         |
|                 | SS1-SS2           | 10.78*(1.93-0.4)*1.0*0.3  | m <sup>3</sup> | 4.948   |         |
|                 | SS2-S9            | 20.29*(2.20-0.4)*1.0*0.3  | m <sup>3</sup> | 10.957  |         |
|                 | S9-SS3            | 9.72*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 4.957   |         |
|                 | SS3-S11           | 5.86*(1.92-0.4)*1.0*0.3   | m <sup>3</sup> | 2.672   |         |
|                 | S11-S12           | 7.80*(2.57-0.4)*1.0*0.3   | m <sup>3</sup> | 5.078   |         |
|                 | S12-SSW           | 14.47*(2.10-0.4)*1.0*0.3  | m <sup>3</sup> | 7.380   |         |
|                 | B3-SS2            | 1.50*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 0.765   |         |
|                 | B4-SS3            | 1.50*(1.1-0.4)*1.0*0.3  | m <sup>3</sup> | 0.315   |         |
|                 | B5-S10            | 1.25*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 0.638   |         |
|                 | B6-S10            | 6.44*(1.7-0.4)*1.0*0.3  | m <sup>3</sup> | 2.512   |         |
|                 | S10-S11           | 26.82*(3.00-0.4)*1.0*0.3  | m <sup>3</sup> | 20.920  |         |
|                 | B7-SS4            | 2.67*(3.35-0.4)*1.0*0.3   | m <sup>3</sup> | 2.363   |         |
|                 | SS4-S10           | 12.10*(3.3-0.4)*1.0*0.3   | m <sup>3</sup> | 10.527  |         |
|                 | B8-SS4            | 3.13*(3.35-0.4)*1.0*0.3   | m <sup>3</sup> | 2.770   |         |
|                 | wykop pod studnie | 4.90*4*(2.38-0.4)*0.3   | m <sup>3</sup> | 11.642  |         |
|                 | fi1000 o          |   |                |         |         |
|                 | śr.2,40m          |   |                |         |         |
|                 | wykop pod studnie | 3.14*4*(2.30-0.4)*0.3   | m <sup>3</sup> | 7.159   |         |
|                 | fi600 o śr.2,00m  |   |                |         |         |
|                 |                   |   |                | RAZEM   | 96.170  |
| 42              | KNR 2-01          | Pełne umocnienie ponowych ścian wykopów liniowych o głęb.do 3m pala-<br>mi szalunkowymi (wypraskami) w gruntach nawodnionych kat.III-IV wraz z<br>rozbiórką | m <sup>2</sup> |         |         |
| d.3. 0324-02    |                   | 126*2.3*2   |                |         |         |
| 1               |                   |   |                |         |         |
|                 | B2-SS1            | 1.50*1.66*2   | m <sup>2</sup> | 579.600 |         |
|                 | SS1-SS2           | 10.78*1.93*2  | m <sup>2</sup> | 4.980   |         |
|                 | SS2-S9            | 20.29*2.20*2  | m <sup>2</sup> | 41.611  |         |
|                 | S9-SS3            | 9.72*2.10*2   | m <sup>2</sup> | 89.276  |         |
|                 | SS3-S11           | 5.86*1.92*2   | m <sup>2</sup> | 40.824  |         |
|                 | S11-S12           | 7.80*2.57*2   | m <sup>2</sup> | 22.502  |         |
|                 | S12-SSW           | 14.47*2.10*2  | m <sup>2</sup> | 40.092  |         |
|                 | B3-SS2            | 1.50*2.10*2   | m <sup>2</sup> | 60.774  |         |
|                 |                   |   | m <sup>2</sup> | 6.300   |         |



| Lp.                  | Podstawa          | Opis i wyliczenia  | j.m.           | Poszcz. | Razem    |
|----------------------|-------------------|--|----------------|---------|----------|
|                      | B4-SS3            | 1.50*1.1*2   | m <sup>2</sup> | 3.300   |          |
|                      | B5-S10            | 1.25*2.10*2  | m <sup>2</sup> | 5.250   |          |
|                      | B6-S10            | 6.44*1.7*2   | m <sup>2</sup> | 21.896  |          |
|                      | S10-S11           | 26.82*3.00*2   | m <sup>2</sup> | 160.920 |          |
|                      | B7-SS4            | 2.67*3.35*2  | m <sup>2</sup> | 17.889  |          |
|                      | SS4-S10           | 12.10*3.3*2  | m <sup>2</sup> | 79.860  |          |
|                      | B8-SS4            | 3.13*3.35*2  | m <sup>2</sup> | 20.971  |          |
|                      | wykop pod studnie | 4.90*4*2.38*2  | m <sup>2</sup> | 93.296  |          |
|                      | fi1000 o          |  |                |         |          |
|                      | śr.2,40m          |  |                |         |          |
|                      | wykop pod studnie | 3.14*4*2.30*2  | m <sup>2</sup> | 57.776  |          |
|                      | fi600 o śr.2,00m  |  |                |         |          |
|                      |                   |  |                | RAZEM   | 1347.117 |
| 43 d.3. 18 0511-01 1 | KNR-W 2-          | Podłoża pod kanały i obiekty z materiałów sypkich grub. 10 cm          | m <sup>3</sup> |         |          |
|                      | B2-SS1            | 1.50*0.10*1.0  | m <sup>3</sup> | 0.150   |          |
|                      | SS1-SS2           | 10.78*0.10*1.0   | m <sup>3</sup> | 1.078   |          |
|                      | SS2-S9            | 20.29*0.10*1.0   | m <sup>3</sup> | 2.029   |          |
|                      | S9-SS3            | 9.72*0.10*1.0  | m <sup>3</sup> | 0.972   |          |
|                      | SS3-S11           | 5.86*0.10*1.0  | m <sup>3</sup> | 0.586   |          |
|                      | S11-S12           | 7.80*0.10*1.0  | m <sup>3</sup> | 0.780   |          |
|                      | S12-SSW           | 14.47*0.10*1.0   | m <sup>3</sup> | 1.447   |          |
|                      | B3-SS2            | 1.50*0.10*1.0  | m <sup>3</sup> | 0.150   |          |
|                      | B4-SS3            | 1.50*0.10*1.0  | m <sup>3</sup> | 0.150   |          |
|                      | B5-S10            | 1.25*0.10*1.0  | m <sup>3</sup> | 0.125   |          |
|                      | B6-S10            | 6.44*0.10*1.0  | m <sup>3</sup> | 0.644   |          |
|                      | S10-S11           | 26.82*0.10*1.0   | m <sup>3</sup> | 2.682   |          |
|                      | B7-SS4            | 2.67*0.10*1.0  | m <sup>3</sup> | 0.267   |          |
|                      | SS4-S10           | 12.10*0.10*1.0   | m <sup>3</sup> | 1.210   |          |
|                      | B8-SS4            | 3.13*0.10*1.0  | m <sup>3</sup> | 0.313   |          |
|                      | wykop pod studnie | 4.90*4*0.10  | m <sup>3</sup> | 1.960   |          |
|                      | fi1000 o          |  |                |         |          |
|                      | śr.2,40m          |  |                |         |          |
|                      | wykop pod studnie | 3.14*4*0.10  | m <sup>3</sup> | 1.256   |          |
|                      | fi600 o śr.2,00m  |  |                |         |          |
|                      |                   |  |                | RAZEM   | 15.799   |
| 44 d.3. 0501-09 1    | KNR 2-28          | Obsypka rurociągu kruszywem dowiezionym                                | m <sup>3</sup> |         |          |
|                      | B2-SS1            | 1.50*0.20*1.0  | m <sup>3</sup> | 0.300   |          |
|                      | SS1-SS2           | 10.78*0.20*1.0   | m <sup>3</sup> | 2.156   |          |
|                      | SS2-S9            | 20.29*0.20*1.0   | m <sup>3</sup> | 4.058   |          |
|                      | S9-SS3            | 9.72*0.20*1.0  | m <sup>3</sup> | 1.944   |          |
|                      | SS3-S11           | 5.86*0.20*1.0  | m <sup>3</sup> | 1.172   |          |
|                      | S11-S12           | 7.80*0.20*1.0  | m <sup>3</sup> | 1.560   |          |
|                      | S12-SSW           | 14.47*0.20*1.0   | m <sup>3</sup> | 2.894   |          |
|                      | B3-SS2            | 1.50*0.20*1.0  | m <sup>3</sup> | 0.300   |          |
|                      | B4-SS3            | 1.50*0.20*1.0  | m <sup>3</sup> | 0.300   |          |
|                      | B5-S10            | 1.25*0.20*1.0  | m <sup>3</sup> | 0.250   |          |
|                      | B6-S10            | 6.44*0.20*1.0  | m <sup>3</sup> | 1.288   |          |
|                      | S10-S11           | 26.82*0.20*1.0   | m <sup>3</sup> | 5.364   |          |
|                      | B7-SS4            | 2.67*0.20*1.0  | m <sup>3</sup> | 0.534   |          |
|                      | SS4-S10           | 12.10*0.20*1.0   | m <sup>3</sup> | 2.420   |          |
|                      | B8-SS4            | 3.13*0.20*1.0  | m <sup>3</sup> | 0.626   |          |
|                      | wykop pod studnie | 4.90*4*0.20  | m <sup>3</sup> | 3.920   |          |
|                      | fi1000 o          |  |                |         |          |
|                      | śr.2,40m          |  |                |         |          |
|                      | wykop pod studnie | 3.14*4*0.20  | m <sup>3</sup> | 2.512   |          |
|                      | fi600 o śr.2,00m  |  |                |         |          |
|                      |                   |  |                | RAZEM   | 31.598   |
| 45 d.3. 0236-01 1    | KNR 2-01          | Zagęszczenie nasypów ubijakami mechanicznymi; grunty sypkie kat. I-III | m <sup>3</sup> |         |          |
|                      |                   | - podsypka   |                |         |          |
|                      |                   | - obsypka  |                |         |          |



| Lp. | Podstawa                             | Opis i wyliczenia  | j.m.           | Poszcz. | Razem   |
|-----|--------------------------------------|--|----------------|---------|---------|
|     |                                      | poz.43+poz.44  | m <sup>3</sup> | 47.397  |         |
|     |                                      |  |                | RAZEM   | 47.397  |
| 46  | KNNR 1<br>d.3. 0214-02<br>1          | Zasypanie wykopów .fund.podłużnych,punktowych,rowów,wkopów obiektowych spycharkami z zagęszcz.mechanicznym spycharkami (gr.warstwy w stanie luźnym 30 cm) - kat.gr. III-IV.<br>Przyjęto wykonanie mechaniczne.<br>(poz.38+poz.39+poz.40+poz.41+poz.43+poz.44)-1.93 | m <sup>3</sup> |         |         |
|     |                                      |  | m <sup>3</sup> | 618.030 |         |
|     |                                      |  |                | RAZEM   | 618.030 |
| 47  | KNR 2-01<br>d.3. 0236-01<br>1        | Zagęszczenie zasyłki ręcznej ubijakami mechanicznymi; grunty sypkie kat. I-III   | m <sup>3</sup> |         |         |
|     |                                      | poz.46   | m <sup>3</sup> | 618.030 |         |
|     |                                      |  |                | RAZEM   | 618.030 |
| 48  | KNNR 1<br>d.3. 0206-02<br>1 analogia | Roboty ziemne wykonywane koparkami podsiębiernymi o poj.łyżki 0.25 m <sup>3</sup> w gr.kat. I-III w ziemi uprzednio zmag.w hałdach z transp.urobku na odl. 1 km sam.samowylad.<br>Odwóz nadmiaru gruntu.<br>poz.45   | m <sup>3</sup> |         |         |
|     |                                      |  | m <sup>3</sup> | 47.397  |         |
|     |                                      |  |                | RAZEM   | 47.397  |
| 49  | KNNR 1<br>d.3. 0208-02<br>1 analogia | Dodatek za każdy rozp. 1 km transportu ziemi samochodami samowyladowczymi po drogach o nawierzchni utwardzonej(kat.gr. I-IV)<br>Dowóz piasku.<br>Krotność = 9<br>poz.48  | m <sup>3</sup> |         |         |
|     |                                      |  | m <sup>3</sup> | 47.397  |         |
|     |                                      |  |                | RAZEM   | 47.397  |
| 3.2 |                                      | <b>Roboty montażowe</b>  |                |         |         |
| 50  | KNR 4-01<br>d.3. 0333-06<br>2        | Przebiecie otworów w ścianach z cegieł o grubości 3 ceg. na zaprawie wapiennej   | szt.           |         |         |
|     |                                      | 7  | szt.           | 7.000   |         |
|     |                                      |  |                | RAZEM   | 7.000   |
| 51  | KNR-W 2-<br>d.3. 18 0408-02<br>2     | Kanały z rur PVC-U SDR34 SN8 160x4,7 z wydłużonym kielichem, łączonych na uszczelki gumowe   | m              |         |         |
|     |                                      | 126.00   | m              | 126.000 |         |
|     |                                      |  |                | RAZEM   | 126.000 |
| 52  | KNR-W 2-<br>d.3. 18 0513-01<br>2     | Studnie rewizyjne z kręgów betonowych o śr. 1000 mm w gotowym wykopie o głębok. 3m   | stud.          |         |         |
|     |                                      | 4  | stud.          | 4.000   |         |
|     |                                      |  |                | RAZEM   | 4.000   |
| 53  | KNR-W 2-<br>d.3. 18 0513-02<br>2     | Studnie rewizyjne z kręgów betonowych o śr. 1000 mm w gotowym wykopie za każde 0.5 m różnicy głęb.   | [0.5 m] stud.  |         |         |
|     |                                      | 2  | [0.5 m] stud.  | 2.000   |         |
|     |                                      |  |                | RAZEM   | 2.000   |
| 54  | KNNR 4<br>d.3. 1417-02<br>2          | Studzienki kanalizacyjne systemowe o śr 600 mm - zamknięcie rurą teleskopową   | szt            |         |         |
|     |                                      | 4  | szt            | 4.000   |         |
|     |                                      |  |                | RAZEM   | 4.000   |
| 55  | KNR 4-01<br>d.3. 0208-02<br>2        | Przebiecie otworów o powierzchni do 0.05 m <sup>2</sup> w elementach z betonu żwirowego o grubości do 20 cm.<br>Otwór w ścianie studni żelbetowych.  | szt.           |         |         |
|     |                                      | 8  | szt.           | 8.000   |         |
|     |                                      |  |                | RAZEM   | 8.000   |
| 56  | KNNR 4<br>d.3. 1427-01<br>2 analogia | Przejście szczelne przez ściany studni przy grubości ściany 20 cm - otwór o śr. 20 cm.   | szt            |         |         |
|     |                                      | poz.55   | szt            | 8.000   |         |
|     |                                      |  |                | RAZEM   | 8.000   |
| 57  | KNR 2-18<br>d.3. 0804-01<br>2        | Próba szczelności kanałów rurowych o śr.nom. 150 mm  | m              |         |         |
|     |                                      | poz.51   | m              | 126.000 |         |
|     |                                      |  |                | RAZEM   | 126.000 |
| 4   |                                      | <b>Przyłącze kanalizacji deszczowej</b>  |                |         |         |
| 4.1 |                                      | <b>Roboty ziemne - główny kanał kanalizacji deszczowej</b>   |                |         |         |
| 58  | d.4. kalk. własna<br>1               | Inwentaryzacja geodezyjna - trasa przyłącza kanalizacji deszczowej.  | kpl            |         |         |
|     |                                      | 1  | kpl            | 1.000   |         |
|     |                                      |  |                | RAZEM   | 1.000   |



| Lp.             | Podstawa                        | Opis i wyliczenia  | j.m.           | Poszcz. | Razem   |
|-----------------|---------------------------------|--|----------------|---------|---------|
| 59<br>d.4.<br>1 | KNR 2-01<br>0120-03<br>analogia | Roboty pomiarowe przy liniowych robotach ziemnych - trasa zewnętrznej instalacji kanalizacji deszczowej  | km             |         |         |
|                 |                                 | 0.431  | km             | 0.43    |         |
|                 |                                 |  |                | RAZEM   | 0.431   |
| 60<br>d.4.<br>1 | KNR 2-31<br>0307-03<br>analogia | Rozebranie nawierzchni z kostki betonowej 14x12 cm lub żuźlowej 14x14 cm na podsypce cementowo-piaskowej z wypełnieniem spoin zaprawą cementową.                                   | m <sup>2</sup> |         |         |
|                 |                                 | Rozebranie nawierzchni z kostki betonowej o grubości 8cm   | m <sup>2</sup> | 16.50   |         |
|                 |                                 | 16.50  |                | RAZEM   | 16.500  |
| 61<br>d.4.<br>1 | KNR 2-31<br>0511-03             | Nawierzchnie z kostki brukowej betonowej grubość 8 cm na podsypce cementowo-piaskowej.   | m <sup>2</sup> |         |         |
|                 |                                 | MATERIAŁ - KOSTKA Z ROZBIÓRKI.   | m <sup>2</sup> | 16.50   |         |
|                 |                                 | 16.50  |                | RAZEM   | 16.500  |
| 62<br>d.4.<br>1 | KNR 1<br>0113-01                | Usunięcie warstwy ziemi urodzajnej (humusu) o grubości do 15 cm za pomocą spycharek  | m <sup>2</sup> |         |         |
|                 |                                 | 431*1.0  | m <sup>2</sup> | 431.00  |         |
|                 |                                 |  |                | RAZEM   | 431.000 |
| 63<br>d.4.<br>1 | KNR 1<br>0113-02                | Usunięcie warstwy ziemi urodzajnej (humusu) za pomocą spycharek - do datek za dalsze 5 cm ponad 15 cm  | m <sup>2</sup> |         |         |
|                 |                                 | Krotność = 5   | m <sup>2</sup> | 431.00  |         |
|                 |                                 | 431*1.0  |                | RAZEM   | 431.000 |
| 64<br>d.4.<br>1 | KNR-W 2-<br>01 0203-04          | Roboty ziemne wykonywane koparkami podsiębiernymi o pojemności łyżki 0.25 m <sup>3</sup> w gruncie kat. III z transportem urobku samochodami samowyładowczymi na odległość do 1 km | m <sup>3</sup> |         |         |
|                 |                                 | Przyjęto wykonanie mechaniczne 70%.  |                |         |         |
|                 | RS1-SD1                         | 1.75*(1.85-0.4)*1.0*0.7  | m <sup>3</sup> | 1.776   |         |
|                 | SD1-SD2                         | 8.62*(1.90-0.4)*1.0*0.7  | m <sup>3</sup> | 9.05    |         |
|                 | SD2-SD3                         | 8.67*(2.00-0.4)*1.0*0.7  | m <sup>3</sup> | 9.710   |         |
|                 | SD3-SD4                         | 8.50*(2.00-0.4)*1.0*0.7  | m <sup>3</sup> | 9.520   |         |
|                 | SD4-SD5                         | 6.79*(2.10-0.4)*1.0*0.7  | m <sup>3</sup> | 8.080   |         |
|                 | SD5-SD6                         | 4.38*(2.20-0.4)*1.0*0.7  | m <sup>3</sup> | 5.519   |         |
|                 | SD6-S1                          | 6.62*(2.25-0.4)*1.0*0.7  | m <sup>3</sup> | 8.573   |         |
|                 | S1-SD7                          | 5.29*(2.31-0.4)*1.0*0.7  | m <sup>3</sup> | 7.073   |         |
|                 | SD7-T1                          | 7.88*(2.35-0.4)*1.0*0.7  | m <sup>3</sup> | 10.756  |         |
|                 | T1-S13                          | 11.66*(2.40-0.4)*1.0*0.7   | m <sup>3</sup> | 16.324  |         |
|                 | S13-SD15                        | 11.66*(2.28-0.4)*1.0*0.7   | m <sup>3</sup> | 15.345  |         |
|                 | SD15-SD8                        | 11.39*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 13.554  |         |
|                 | SD8-SD9                         | 9.58*(2.15-0.4)*1.0*0.7  | m <sup>3</sup> | 11.736  |         |
|                 | SD9-SD10                        | 11.25*(2.25-0.4)*1.0*0.7   | m <sup>3</sup> | 14.569  |         |
|                 | SD10-S4                         | 15.42*(2.20-0.4)*1.0*0.7   | m <sup>3</sup> | 19.429  |         |
|                 | RS32-SD19                       | 1.72*(1.80-0.4)*1.0*0.7  | m <sup>3</sup> | 1.686   |         |
|                 | SD19-SD18                       | 8.01*(1.90-0.4)*1.0*0.7  | m <sup>3</sup> | 8.411   |         |
|                 | SD18-S8                         | 7.03*(1.95-0.4)*1.0*0.7  | m <sup>3</sup> | 7.628   |         |
|                 | S8-SD17                         | 15.87*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 18.885  |         |
|                 | SD17-SD16                       | 11.29*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 13.435  |         |
|                 | SD16-SD15                       | 10.12*(2.10-0.4)*1.0*0.7   | m <sup>3</sup> | 12.043  |         |
|                 | SD15-S7                         | 4.03*(2.15-0.4)*1.0*0.7  | m <sup>3</sup> | 4.937   |         |
|                 | S7-S5                           | 18.76*(2.00-0.4)*1.0*0.7   | m <sup>3</sup> | 21.011  |         |
|                 | S5-SD14                         | 7.56*(2.10-0.4)*1.0*0.7  | m <sup>3</sup> | 8.996   |         |
|                 | SD14-SD13                       | 14.03*(2.50-0.4)*1.0*0.7   | m <sup>3</sup> | 20.624  |         |
|                 | SD13-S4                         | 17.19*(2.35-0.4)*1.0*0.7   | m <sup>3</sup> | 23.464  |         |
|                 | S4-SR                           | 8.02*(2.25-0.4)*1.0*0.7  | m <sup>3</sup> | 10.386  |         |
|                 | SR-SD12                         | 2.51*(2.30-0.4)*1.0*0.7  | m <sup>3</sup> | 3.338   |         |
|                 | SD12-SD23                       | 5.68*(2.30-0.4)*1.0*0.7  | m <sup>3</sup> | 7.554   |         |
|                 | SD23-SD11                       | 4.07*(2.35-0.4)*1.0*0.7  | m <sup>3</sup> | 5.556   |         |
|                 | SD11-SDW                        | 9.68*(2.20-0.4)*1.0*0.7  | m <sup>3</sup> | 12.197  |         |
|                 | S6-SD20                         | 8.74*(1.75-0.4)*1.0*0.7  | m <sup>3</sup> | 8.259   |         |
|                 | SD20-SD22                       | 8.46*(1.9-0.4)*1.0*0.7   | m <sup>3</sup> | 8.883   |         |
|                 | SD22-SD14                       | 7.77*(1.65-0.4)*1.0*0.7  | m <sup>3</sup> | 6.799   |         |
|                 | RS2-SD2                         | 1.78*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 0.872   |         |
|                 | RS3-SD3                         | 1.75*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 0.858   |         |
|                 | RS4-SD4                         | 1.76*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 0.862   |         |
|                 | RS5-S1                          | 2.61*(1.30-0.4)*1.0*0.7  | m <sup>3</sup> | 1.644   |         |
|                 | RS6-SD7                         | 2.87*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 1.205   |         |
|                 | RS7-SD15                        | 5.31*(1.15-0.4)*1.0*0.7  | m <sup>3</sup> | 2.788   |         |
|                 | RS8-SD8                         | 5.37*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 2.255   |         |
|                 | RS9-SD9                         | 5.41*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 2.272   |         |



| Lp.                  | Podstawa                            | Opis i wyliczenia  | j.m.           | Poszcz. | Razem   |
|----------------------|-------------------------------------|--|----------------|---------|---------|
|                      | RS10-SD10                           | 5.46*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 2.293   |         |
|                      | RS11-SD13                           | 8.15*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 3.423   |         |
|                      | RS12-SD13                           | 6.31*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 2.650   |         |
|                      | RS13-SD14                           | 6.52*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 3.195   |         |
|                      | RS14-SD20                           | 5.11*(1.66-0.4)*1.0*0.7  | m <sup>3</sup> | 4.507   |         |
|                      | RS15-S6                             | 12.69*(0.70-0.4)*1.0*0.7   | m <sup>3</sup> | 2.665   |         |
|                      | RS16-S6                             | 10.78*(0.70-0.4)*1.0*0.7   | m <sup>3</sup> | 2.264   |         |
|                      | RS17-S6                             | 2.94*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 1.235   |         |
|                      | RS22-S6                             | 6.47*(1.30-0.4)*1.0*0.7  | m <sup>3</sup> | 4.076   |         |
|                      | RS23-SD20                           | 2.88*(1.70-0.4)*1.0*0.7  | m <sup>3</sup> | 2.621   |         |
|                      | RS24-SD22                           | 3.01*(1.70-0.4)*1.0*0.7  | m <sup>3</sup> | 2.739   |         |
|                      | RS25-SD14                           | 4.76*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 2.332   |         |
|                      | RS26-SD15                           | 2.99*(1.30-0.4)*1.0*0.7  | m <sup>3</sup> | 1.884   |         |
|                      | RS27-SD16                           | 3.09*(1.35-0.4)*1.0*0.7  | m <sup>3</sup> | 2.055   |         |
|                      | RS28-SD17                           | 3.06*(1.45-0.4)*1.0*0.7  | m <sup>3</sup> | 2.249   |         |
|                      | RS29-S8                             | 3.17*(1.55-0.4)*1.0*0.7  | m <sup>3</sup> | 2.552   |         |
|                      | RS30-S8                             | 3.48*(1.00-0.4)*1.0*0.7  | m <sup>3</sup> | 1.462   |         |
|                      | RS31-S18                            | 1.80*(1.10-0.4)*1.0*0.7  | m <sup>3</sup> | 0.882   |         |
|                      | RS33-T1                             | 2.84*(2.20-0.4)*1.0*0.7  | m <sup>3</sup> | 3.578   |         |
|                      | wykop pod studnie fi1200 o śr.2,60m | 5.30*1*(2.30-0.4)*0.7  | m <sup>3</sup> | 7.049   |         |
|                      | wykop pod studnie fi1000 o śr.2,40m | 4.90*7*(2.10-0.4)*0.7  | m <sup>3</sup> | 40.817  |         |
|                      | wykop pod studnie fi600 o śr.2,00m  | 3.14*19*(2.20-0.4)*0.7   | m <sup>3</sup> | 75.172  |         |
|                      | wp1 -S4                             | 2.74*(1.05-0.4)*0.7  | m <sup>3</sup> | 1.247   |         |
|                      | wp2 -S5                             | 11.39*(1.15-0.4)*0.7   | m <sup>3</sup> | 5.980   |         |
|                      |                                     |  |                | RAZEM   | 556.790 |
| 65 d.4. 01 0203-04 1 | KNR-W 2-                            | Roboty ziemne wykonywane koparkami podsiębiernymi o pojemności łyżki 0.25 m3 w gruncie kat. III z transportem urobku samochodami samowyladowczymi na odległość do 1 km<br>Przyjęto wykonanie ręczne 30%. | m <sup>3</sup> |         |         |
|                      | RS1-SD1                             | 1.75*(1.85-0.4)*1.0*0.3  | m <sup>3</sup> | 0.761   |         |
|                      | SD1-SD2                             | 8.62*(1.90-0.4)*1.0*0.3  | m <sup>3</sup> | 3.879   |         |
|                      | SD2-SD3                             | 8.67*(2.00-0.4)*1.0*0.3  | m <sup>3</sup> | 4.162   |         |
|                      | SD3-SD4                             | 8.50*(2.00-0.4)*1.0*0.3  | m <sup>3</sup> | 4.080   |         |
|                      | SD4-SD5                             | 6.79*(2.10-0.4)*1.0*0.3  | m <sup>3</sup> | 3.463   |         |
|                      | SD5-SD6                             | 4.38*(2.20-0.4)*1.0*0.3  | m <sup>3</sup> | 2.365   |         |
|                      | SD6-S1                              | 6.62*(2.25-0.4)*1.0*0.3  | m <sup>3</sup> | 3.674   |         |
|                      | S1-SD7                              | 5.29*(2.31-0.4)*1.0*0.3  | m <sup>3</sup> | 3.031   |         |
|                      | SD7-T1                              | 7.88*(2.35-0.4)*1.0*0.3  | m <sup>3</sup> | 4.610   |         |
|                      | T1-S13                              | 11.66*(2.40-0.4)*1.0*0.3   | m <sup>3</sup> | 6.996   |         |
|                      | S13-SD15                            | 11.66*(2.28-0.4)*1.0*0.3   | m <sup>3</sup> | 6.576   |         |
|                      | SD15-SD8                            | 11.39*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 5.809   |         |
|                      | SD8-SD9                             | 9.58*(2.15-0.4)*1.0*0.3  | m <sup>3</sup> | 5.030   |         |
|                      | SD9-SD10                            | 11.25*(2.25-0.4)*1.0*0.3   | m <sup>3</sup> | 6.244   |         |
|                      | SD10-S4                             | 15.42*(2.20-0.4)*1.0*0.3   | m <sup>3</sup> | 8.327   |         |
|                      | RS32-SD19                           | 1.72*(1.80-0.4)*1.0*0.3  | m <sup>3</sup> | 0.722   |         |
|                      | SD19-SD18                           | 8.01*(1.90-0.4)*1.0*0.3  | m <sup>3</sup> | 3.605   |         |
|                      | SD18-S8                             | 7.03*(1.95-0.4)*1.0*0.3  | m <sup>3</sup> | 3.269   |         |
|                      | S8-SD17                             | 15.87*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 8.094   |         |
|                      | SD17-SD16                           | 11.29*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 5.758   |         |
|                      | SD16-SD15                           | 10.12*(2.10-0.4)*1.0*0.3   | m <sup>3</sup> | 5.161   |         |
|                      | SD15-S7                             | 4.03*(2.15-0.4)*1.0*0.3  | m <sup>3</sup> | 2.116   |         |
|                      | S7-S5                               | 18.76*(2.00-0.4)*1.0*0.3   | m <sup>3</sup> | 9.005   |         |
|                      | S5-SD14                             | 7.56*(2.10-0.4)*1.0*0.3  | m <sup>3</sup> | 3.856   |         |
|                      | SD14-SD13                           | 14.03*(2.50-0.4)*1.0*0.3   | m <sup>3</sup> | 8.839   |         |
|                      | SD13-S4                             | 17.19*(2.35-0.4)*1.0*0.3   | m <sup>3</sup> | 10.056  |         |
|                      | S4-SR                               | 8.02*(2.25-0.4)*1.0*0.3  | m <sup>3</sup> | 4.451   |         |
|                      | SR-SD12                             | 2.51*(2.30-0.4)*1.0*0.3  | m <sup>3</sup> | 1.431   |         |
|                      | SD12-SD23                           | 5.68*(2.30-0.4)*1.0*0.3  | m <sup>3</sup> | 3.238   |         |
|                      | SD23-SD11                           | 4.07*(2.35-0.4)*1.0*0.3  | m <sup>3</sup> | 2.381   |         |
|                      | SD11-SDW                            | 9.68*(2.20-0.4)*1.0*0.3  | m <sup>3</sup> | 5.227   |         |
|                      | S6-SD20                             | 8.74*(1.75-0.4)*1.0*0.3  | m <sup>3</sup> | 3.540   |         |
|                      | SD20-SD22                           | 8.46*(1.9-0.4)*1.0*0.3   | m <sup>3</sup> | 3.807   |         |
|                      | SD22-SD14                           | 7.77*(1.65-0.4)*1.0*0.3  | m <sup>3</sup> | 2.914   |         |
|                      | RS2-SD2                             | 1.78*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 0.374   |         |
|                      | RS3-SD3                             | 1.75*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 0.368   |         |



| Lp.             | Podstawa            | Opis i wyliczenia  | j.m.           | Poszcz.      | Razem          |
|-----------------|---------------------|--|----------------|--------------|----------------|
|                 | RS4-SD4             | 1.76*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 0.370        |                |
|                 | RS5-S1              | 2.61*(1.30-0.4)*1.0*0.3  | m <sup>3</sup> | 0.705        |                |
|                 | RS6-SD7             | 2.87*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.517        |                |
|                 | RS7-SD15            | 5.31*(1.15-0.4)*1.0*0.3  | m <sup>3</sup> | 1.195        |                |
|                 | RS8-SD8             | 5.37*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.967        |                |
|                 | RS9-SD9             | 5.41*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.974        |                |
|                 | RS10-SD10           | 5.46*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.983        |                |
|                 | RS11-SD13           | 8.15*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 1.467        |                |
|                 | RS12-SD13           | 6.31*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 1.136        |                |
|                 | RS13-SD14           | 6.52*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 1.369        |                |
|                 | RS14-SD20           | 5.11*(1.66-0.4)*1.0*0.3  | m <sup>3</sup> | 1.932        |                |
|                 | RS15-S6             | 12.69*(0.70-0.4)*1.0*0.3   | m <sup>3</sup> | 1.142        |                |
|                 | RS16-S6             | 10.78*(0.70-0.4)*1.0*0.3   | m <sup>3</sup> | 0.970        |                |
|                 | RS17-S6             | 2.94*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.529        |                |
|                 | RS22-S6             | 6.47*(1.30-0.4)*1.0*0.3  | m <sup>3</sup> | 1.747        |                |
|                 | RS23-SD20           | 2.88*(1.70-0.4)*1.0*0.3  | m <sup>3</sup> | 1.123        |                |
|                 | RS24-SD22           | 3.01*(1.70-0.4)*1.0*0.3  | m <sup>3</sup> | 1.174        |                |
|                 | RS25-SD14           | 4.76*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 1.000        |                |
|                 | RS26-SD15           | 2.99*(1.30-0.4)*1.0*0.3  | m <sup>3</sup> | 0.807        |                |
|                 | RS27-SD16           | 3.09*(1.35-0.4)*1.0*0.3  | m <sup>3</sup> | 0.881        |                |
|                 | RS28-SD17           | 3.06*(1.45-0.4)*1.0*0.3  | m <sup>3</sup> | 0.964        |                |
|                 | RS29-S8             | 3.17*(1.55-0.4)*1.0*0.3  | m <sup>3</sup> | 1.094        |                |
|                 | RS30-S8             | 3.48*(1.00-0.4)*1.0*0.3  | m <sup>3</sup> | 0.626        |                |
|                 | RS31-S18            | 1.80*(1.10-0.4)*1.0*0.3  | m <sup>3</sup> | 0.378        |                |
|                 | RS33-T1             | 2.84*(2.20-0.4)*1.0*0.3  | m <sup>3</sup> | 1.534        |                |
|                 | wykop pod studnie   | 5.30*1*(2.30-0.4)*0.3  | m <sup>3</sup> | 3.021        |                |
|                 | fi1200 o            |  |                |              |                |
|                 | śr.2,60m            |  |                |              |                |
|                 | wykop pod studnie   | 4.90*7*(2.10-0.4)*0.3  | m <sup>3</sup> | 17.493       |                |
|                 | fi1000 o            |  |                |              |                |
|                 | śr.2,40m            |  |                |              |                |
|                 | wykop pod studnie   | 3.14*19*(2.20-0.4)*0.3   | m <sup>3</sup> | 32.216       |                |
|                 | fi600 o śr.2,00m    |  |                |              |                |
|                 | wp1 -S4             | 2.74*(1.05-0.4)*0.3  | m <sup>3</sup> | 0.534        |                |
|                 | wp2 -S5             | 11.39*(1.15-0.4)*0.3   | m <sup>3</sup> | 2.563        |                |
|                 |                     |  |                | <b>RAZEM</b> | <b>238.630</b> |
| 66<br>d.4.<br>1 | KNR 2-01<br>0324-02 | Pełne umocnienie pionowych ścian wykopów liniowych o głęb.do 3m palami szalunkowymi (wypraskami) w gruntach nawodnionych kat.III-IV wraz z rozbiórką | m <sup>2</sup> |              |                |
|                 | RS1-SD1             | 1.75*1.85*2  | m <sup>2</sup> | 6.475        |                |
|                 | SD1-SD2             | 8.62*1.90*2  | m <sup>2</sup> | 32.756       |                |
|                 | SD2-SD3             | 8.67*2.00*2  | m <sup>2</sup> | 34.680       |                |
|                 | SD3-SD4             | 8.50*2.00*2  | m <sup>2</sup> | 34.000       |                |
|                 | SD4-SD5             | 6.79*2.10*2  | m <sup>2</sup> | 28.518       |                |
|                 | SD5-SD6             | 4.38*2.20*2  | m <sup>2</sup> | 19.272       |                |
|                 | SD6-S1              | 6.62*2.25*2  | m <sup>2</sup> | 29.790       |                |
|                 | S1-SD7              | 5.29*2.31*2  | m <sup>2</sup> | 24.440       |                |
|                 | SD7-T1              | 7.88*2.35*2  | m <sup>2</sup> | 37.036       |                |
|                 | T1-S13              | 11.66*2.40*2   | m <sup>2</sup> | 55.968       |                |
|                 | S13-SD15            | 11.66*2.28*2   | m <sup>2</sup> | 53.170       |                |
|                 | SD15-SD8            | 11.39*2.10*2   | m <sup>2</sup> | 47.838       |                |
|                 | SD8-SD9             | 9.58*2.15*2  | m <sup>2</sup> | 41.194       |                |
|                 | SD9-SD10            | 11.25*2.25*2   | m <sup>2</sup> | 50.625       |                |
|                 | SD10-S4             | 15.42*2.20*2   | m <sup>2</sup> | 67.848       |                |
|                 | RS32-SD19           | 1.72*1.80*2  | m <sup>2</sup> | 6.192        |                |
|                 | SD19-SD18           | 8.01*1.90*2  | m <sup>2</sup> | 30.438       |                |
|                 | SD18-S8             | 7.03*1.95*2  | m <sup>2</sup> | 27.417       |                |
|                 | S8-SD17             | 15.87*2.10*2   | m <sup>2</sup> | 66.654       |                |
|                 | SD17-SD16           | 11.29*2.10*2   | m <sup>2</sup> | 47.418       |                |
|                 | SD16-SD15           | 10.12*2.10*2   | m <sup>2</sup> | 42.504       |                |
|                 | SD15-S7             | 4.03*2.15*2  | m <sup>2</sup> | 17.329       |                |
|                 | S7-S5               | 18.76*2.00*2   | m <sup>2</sup> | 75.040       |                |
|                 | S5-SD14             | 7.56*2.10*2  | m <sup>2</sup> | 31.752       |                |
|                 | SD14-SD13           | 14.03*2.50*2   | m <sup>2</sup> | 70.150       |                |
|                 | SD13-S4             | 17.19*2.35*2   | m <sup>2</sup> | 80.793       |                |
|                 | S4-SR               | 8.02*2.25*2  | m <sup>2</sup> | 36.090       |                |
|                 | SR-SD12             | 2.51*2.30*2  | m <sup>2</sup> | 11.546       |                |
|                 | SD12-SD23           | 5.68*2.30*2  | m <sup>2</sup> | 26.128       |                |
|                 | SD23-SD11           | 4.07*2.35*2  | m <sup>2</sup> | 19.129       |                |
|                 | SD11-SDW            | 9.68*2.20*2  | m <sup>2</sup> | 42.592       |                |



| Lp.             | Podstawa                            | Opis i wyliczenia   | j.m.           | Poszcz. | Razem    |
|-----------------|-------------------------------------|---|----------------|---------|----------|
|                 | S6-SD20                             | 8.74*1.75*2   | m <sup>2</sup> | 30.590  |          |
|                 | SD20-SD22                           | 8.46*1.9*2  | m <sup>2</sup> | 32.148  |          |
|                 | SD22-SD14                           | 7.77*1.65*2   | m <sup>2</sup> | 25.641  |          |
|                 | R32-SD2                             | 1.78*1.10*2   | m <sup>2</sup> | 3.916   |          |
|                 | R33-SD3                             | 1.75*1.10*2   | m <sup>2</sup> | 3.850   |          |
|                 | R34-SD4                             | 1.76*1.10*2   | m <sup>2</sup> | 3.872   |          |
|                 | R35-S1                              | 2.61*1.30*2   | m <sup>2</sup> | 6.786   |          |
|                 | R36-SD7                             | 2.87*1.00*2   | m <sup>2</sup> | 5.740   |          |
|                 | R37-SD15                            | 5.31*1.15*2   | m <sup>2</sup> | 12.213  |          |
|                 | R38-SD8                             | 5.37*1.00*2   | m <sup>2</sup> | 10.740  |          |
|                 | R39-SD9                             | 5.41*1.00*2   | m <sup>2</sup> | 10.820  |          |
|                 | R310-SD10                           | 5.46*1.00*2   | m <sup>2</sup> | 10.920  |          |
|                 | R311-SD13                           | 8.15*1.00*2   | m <sup>2</sup> | 16.300  |          |
|                 | R312-SD13                           | 6.31*1.00*2   | m <sup>2</sup> | 12.620  |          |
|                 | R313-SD14                           | 6.52*1.10*2   | m <sup>2</sup> | 14.344  |          |
|                 | R314-SD20                           | 5.11*1.66*2   | m <sup>2</sup> | 16.965  |          |
|                 | RS15-S6                             | 12.69*0.70*2  | m <sup>2</sup> | 17.766  |          |
|                 | RS16-S6                             | 10.78*0.70*2  | m <sup>2</sup> | 15.092  |          |
|                 | RS17-S6                             | 2.94*1.00*2   | m <sup>2</sup> | 5.880   |          |
|                 | RS22-S6                             | 6.47*1.30*2   | m <sup>2</sup> | 16.822  |          |
|                 | RS23-SD20                           | 2.88*1.70*2   | m <sup>2</sup> | 9.792   |          |
|                 | RS24-SD22                           | 3.01*1.70*2   | m <sup>2</sup> | 10.234  |          |
|                 | RS25-SD14                           | 4.76*1.10*2   | m <sup>2</sup> | 10.472  |          |
|                 | RS26-SD15                           | 2.99*1.30*2   | m <sup>2</sup> | 7.774   |          |
|                 | RS27-SD16                           | 3.09*1.35*2   | m <sup>2</sup> | 8.343   |          |
|                 | RS28-SD17                           | 3.06*1.45*2   | m <sup>2</sup> | 8.874   |          |
|                 | RS29-S8                             | 3.17*1.55*2   | m <sup>2</sup> | 9.827   |          |
|                 | RS30-S8                             | 3.48*1.00*2   | m <sup>2</sup> | 6.960   |          |
|                 | RS31-S18                            | 1.80*1.10*2   | m <sup>2</sup> | 3.960   |          |
|                 | RS33-T1                             | 2.84*2.20*2   | m <sup>2</sup> | 12.496  |          |
|                 | wykop pod studnie fi1200 o śr.2,60m | 5.30*1*2.30*2   | m <sup>2</sup> | 24.380  |          |
|                 | wykop pod studnie fi1000 o śr.2,40m | 4.90*7*2.10*2   | m <sup>2</sup> | 144.060 |          |
|                 | wykop pod studnie fi600 o śr.2,00m  | 3.14*19*2.20*2  | m <sup>2</sup> | 262.504 |          |
|                 |                                     |   |                | RAZEM   | 1987.483 |
| 67<br>d.4.<br>1 | KNR-W 2-<br>18 0511-01              | Podłoża pod kanały i obiekty z materiałów sypkich grub. 10 cm | m <sup>3</sup> |         |          |
|                 | RS1-SD1                             | 1.75*0.10   | m <sup>3</sup> | 0.175   |          |
|                 | SD1-SD2                             | 8.62*0.10   | m <sup>3</sup> | 0.862   |          |
|                 | SD2-SD3                             | 8.67*0.10   | m <sup>3</sup> | 0.867   |          |
|                 | SD3-SD4                             | 8.50*0.10   | m <sup>3</sup> | 0.850   |          |
|                 | SD4-SD5                             | 6.79*0.10   | m <sup>3</sup> | 0.679   |          |
|                 | SD5-SD6                             | 4.38*0.10   | m <sup>3</sup> | 0.438   |          |
|                 | SD6-S1                              | 6.62*0.10   | m <sup>3</sup> | 0.662   |          |
|                 | S1-SD7                              | 5.29*0.10   | m <sup>3</sup> | 0.529   |          |
|                 | SD7-T1                              | 7.88*0.10   | m <sup>3</sup> | 0.788   |          |
|                 | T1-S13                              | 11.66*0.10  | m <sup>3</sup> | 1.166   |          |
|                 | S13-SD15                            | 11.66*0.10  | m <sup>3</sup> | 1.166   |          |
|                 | SD15-SD8                            | 11.39*0.10  | m <sup>3</sup> | 1.139   |          |
|                 | SD8-SD9                             | 9.58*0.10   | m <sup>3</sup> | 0.958   |          |
|                 | SD9-SD10                            | 11.25*0.10  | m <sup>3</sup> | 1.125   |          |
|                 | SD10-S4                             | 15.42*0.10  | m <sup>3</sup> | 1.542   |          |
|                 | RS32-SD19                           | 1.72*0.10   | m <sup>3</sup> | 0.172   |          |
|                 | SD19-SD18                           | 8.01*0.10   | m <sup>3</sup> | 0.801   |          |
|                 | SD18-S8                             | 7.03*0.10   | m <sup>3</sup> | 0.703   |          |
|                 | S8-SD17                             | 15.87*0.10  | m <sup>3</sup> | 1.587   |          |
|                 | SD17-SD16                           | 11.29*0.10  | m <sup>3</sup> | 1.129   |          |
|                 | SD16-SD15                           | 10.12*0.10  | m <sup>3</sup> | 1.012   |          |
|                 | SD15-S7                             | 4.03*0.10   | m <sup>3</sup> | 0.403   |          |
|                 | S7-S5                               | 18.76*0.10  | m <sup>3</sup> | 1.876   |          |
|                 | S5-SD14                             | 7.56*0.10   | m <sup>3</sup> | 0.756   |          |
|                 | SD14-SD13                           | 14.03*0.10  | m <sup>3</sup> | 1.403   |          |
|                 | SD13-S4                             | 17.19*0.10  | m <sup>3</sup> | 1.719   |          |
|                 | S4-SR                               | 8.02*0.10   | m <sup>3</sup> | 0.802   |          |
|                 | SR-SD12                             | 2.51*0.10   | m <sup>3</sup> | 0.251   |          |



| Lp.             | Podstawa            | Opis i wyliczenia                       | J.m.           | Poszcz. | Razem  |
|-----------------|---------------------|---|----------------|---------|--------|
|                 | SD12-SD23           | 5.68*0.10                               | m <sup>3</sup> | 0.568   |        |
|                 | SD23-SD11           | 4.07*0.10                               | m <sup>3</sup> | 0.407   |        |
|                 | SD11-SDW            | 9.68*0.10                               | m <sup>3</sup> | 0.968   |        |
|                 | S6-SD20             | 8.74*0.10                               | m <sup>3</sup> | 0.874   |        |
|                 | SD20-SD22           | 8.46*0.10                               | m <sup>3</sup> | 0.846   |        |
|                 | SD22-SD14           | 7.77*0.10                               | m <sup>3</sup> | 0.777   |        |
|                 | RS2-SD2             | 1.78*0.10                               | m <sup>3</sup> | 0.178   |        |
|                 | RS3-SD3             | 1.75*0.10                               | m <sup>3</sup> | 0.175   |        |
|                 | RS4-SD4             | 1.76*0.10                               | m <sup>3</sup> | 0.176   |        |
|                 | RS5-S1              | 2.61*0.10                               | m <sup>3</sup> | 0.261   |        |
|                 | RS6-SD7             | 2.87*0.10                               | m <sup>3</sup> | 0.287   |        |
|                 | RS7-SD15            | 5.31*0.10                               | m <sup>3</sup> | 0.531   |        |
|                 | RS8-SD8             | 5.37*0.10                               | m <sup>3</sup> | 0.537   |        |
|                 | RS9-SD9             | 5.41*0.10                               | m <sup>3</sup> | 0.541   |        |
|                 | RS10-SD10           | 5.46*0.10                               | m <sup>3</sup> | 0.546   |        |
|                 | RS11-SD13           | 8.15*0.10                               | m <sup>3</sup> | 0.815   |        |
|                 | RS12-SD13           | 6.31*0.10                               | m <sup>3</sup> | 0.631   |        |
|                 | RS13-SD14           | 6.52*0.10                               | m <sup>3</sup> | 0.652   |        |
|                 | RS14-SD20           | 5.11*0.10                               | m <sup>3</sup> | 0.511   |        |
|                 | RS15-S6             | 12.69*0.10                              | m <sup>3</sup> | 1.269   |        |
|                 | RS16-S6             | 10.78*0.10                              | m <sup>3</sup> | 1.078   |        |
|                 | RS17-S6             | 2.94*0.10                               | m <sup>3</sup> | 0.294   |        |
|                 | RS22-S6             | 6.47*0.10                               | m <sup>3</sup> | 0.647   |        |
|                 | RS23-SD20           | 2.88*0.10                               | m <sup>3</sup> | 0.288   |        |
|                 | RS24-SD22           | 3.01*0.10                               | m <sup>3</sup> | 0.301   |        |
|                 | RS25-SD14           | 4.76*0.10                               | m <sup>3</sup> | 0.476   |        |
|                 | RS26-SD15           | 2.99*0.10                               | m <sup>3</sup> | 0.299   |        |
|                 | RS27-SD16           | 3.09*0.10                               | m <sup>3</sup> | 0.309   |        |
|                 | RS28-SD17           | 3.06*0.10                               | m <sup>3</sup> | 0.306   |        |
|                 | RS29-S8             | 3.17*0.10                               | m <sup>3</sup> | 0.317   |        |
|                 | RS30-S8             | 3.48*0.10                               | m <sup>3</sup> | 0.348   |        |
|                 | RS31-S18            | 1.80*0.10                               | m <sup>3</sup> | 0.180   |        |
|                 | RS33-T1             | 2.84*0.10                               | m <sup>3</sup> | 0.284   |        |
|                 | wykop pod studnie   | 5.30*0.10                               | m <sup>3</sup> | 0.530   |        |
|                 | fi1200 o śr.2,60m   |   |                |         |        |
|                 | wykop pod studnie   | 4.90*7*0.10                             | m <sup>3</sup> | 3.430   |        |
|                 | fi1000 o śr.2,40m   |   |                |         |        |
|                 | wykop pod studnie   | 3.14*19*0.10                            | m <sup>3</sup> | 5.966   |        |
|                 | fi600 o śr.2,00m    |   |                |         |        |
|                 |                     |   |                | RAZEM   | 52.163 |
| 68<br>d.4.<br>1 | KNR 2-28<br>0501-09 | Obsypka rurociągu kruszywem dowiezionym | m <sup>3</sup> |         |        |
|                 |                     | (431*1.0*0.2)+73.97                     | m <sup>3</sup> | 160.170 |        |
|                 | RS1-SD1             | 1.75*0.20                               | m <sup>3</sup> | 0.350   |        |
|                 | SD1-SD2             | 8.62*0.20                               | m <sup>3</sup> | 1.724   |        |
|                 | SD2-SD3             | 8.67*0.20                               | m <sup>3</sup> | 1.734   |        |
|                 | SD3-SD4             | 8.50*0.20                               | m <sup>3</sup> | 1.700   |        |
|                 | SD4-SD5             | 6.79*0.20                               | m <sup>3</sup> | 1.358   |        |
|                 | SD5-SD6             | 4.38*0.20                               | m <sup>3</sup> | 0.876   |        |
|                 | SD6-S1              | 6.62*0.20                               | m <sup>3</sup> | 1.324   |        |
|                 | S1-SD7              | 5.29*0.20                               | m <sup>3</sup> | 1.058   |        |
|                 | SD7-T1              | 7.88*0.20                               | m <sup>3</sup> | 1.576   |        |
|                 | T1-S13              | 11.66*0.20                              | m <sup>3</sup> | 2.332   |        |
|                 | S13-SD15            | 11.66*0.20                              | m <sup>3</sup> | 2.332   |        |
|                 | SD15-SD8            | 11.39*0.20                              | m <sup>3</sup> | 2.278   |        |
|                 | SD8-SD9             | 9.58*0.20                               | m <sup>3</sup> | 1.916   |        |
|                 | SD9-SD10            | 11.25*0.20                              | m <sup>3</sup> | 2.250   |        |
|                 | SD10-S4             | 15.42*0.20                              | m <sup>3</sup> | 3.084   |        |
|                 | RS32-SD19           | 1.72*0.20                               | m <sup>3</sup> | 0.344   |        |
|                 | SD19-SD18           | 8.01*0.20                               | m <sup>3</sup> | 1.602   |        |
|                 | SD18-S8             | 7.03*0.20                               | m <sup>3</sup> | 1.406   |        |
|                 | S8-SD17             | 15.87*0.20                              | m <sup>3</sup> | 3.174   |        |
|                 | SD17-SD16           | 11.29*0.20                              | m <sup>3</sup> | 2.258   |        |
|                 | SD16-SD15           | 10.12*0.20                              | m <sup>3</sup> | 2.024   |        |
|                 | SD15-S7             | 4.03*0.20                               | m <sup>3</sup> | 0.806   |        |
|                 | S7-S5               | 18.76*0.20                              | m <sup>3</sup> | 3.752   |        |
|                 | S5-SD14             | 7.56*0.20                               | m <sup>3</sup> | 1.512   |        |
|                 | SD14-SD13           | 14.03*0.20                              | m <sup>3</sup> | 2.806   |        |



| Lp.       | Podstawa                            | Opis i wyliczenia   | j.m.           | Poszcz.  | Razem    |
|-----------|-------------------------------------|---|----------------|----------|----------|
|           | SD13-S4                             | 17.19*0.20  | m <sup>3</sup> | 3.438    |          |
|           | S4-SR                               | 8.02*0.20   | m <sup>3</sup> | 1.604    |          |
|           | SR-SD12                             | 2.51*0.20   | m <sup>3</sup> | 0.502    |          |
|           | SD12-SD23                           | 5.68*0.20   | m <sup>3</sup> | 1.136    |          |
|           | SD23-SD11                           | 4.07*0.20   | m <sup>3</sup> | 0.814    |          |
|           | SD11-SDW                            | 9.68*0.20   | m <sup>3</sup> | 1.936    |          |
|           | S6-SD20                             | 8.74*0.20   | m <sup>3</sup> | 1.748    |          |
|           | SD20-SD22                           | 8.46*0.20   | m <sup>3</sup> | 1.692    |          |
|           | SD22-SD14                           | 7.77*0.20   | m <sup>3</sup> | 1.554    |          |
|           | RS2-SD2                             | 1.78*0.20   | m <sup>3</sup> | 0.356    |          |
|           | RS3-SD3                             | 1.75*0.20   | m <sup>3</sup> | 0.350    |          |
|           | RS4-SD4                             | 1.76*0.20   | m <sup>3</sup> | 0.352    |          |
|           | RS5-S1                              | 2.61*0.20   | m <sup>3</sup> | 0.522    |          |
|           | RS6-SD7                             | 2.87*0.20   | m <sup>3</sup> | 0.574    |          |
|           | RS7-SD15                            | 5.31*0.20   | m <sup>3</sup> | 1.062    |          |
|           | RS8-SD8                             | 5.37*0.20   | m <sup>3</sup> | 1.074    |          |
|           | RS9-SD9                             | 5.41*0.20   | m <sup>3</sup> | 1.082    |          |
|           | RS10-SD10                           | 5.46*0.20   | m <sup>3</sup> | 1.092    |          |
|           | RS11-SD13                           | 8.15*0.20   | m <sup>3</sup> | 1.630    |          |
|           | RS12-SD13                           | 6.31*0.20   | m <sup>3</sup> | 1.262    |          |
|           | RS13-SD14                           | 6.52*0.20   | m <sup>3</sup> | 1.304    |          |
|           | RS14-SD20                           | 5.11*0.20   | m <sup>3</sup> | 1.022    |          |
|           | RS15-S6                             | 12.69*0.20  | m <sup>3</sup> | 2.538    |          |
|           | RS16-S6                             | 10.78*0.20  | m <sup>3</sup> | 2.156    |          |
|           | RS17-S6                             | 2.94*0.20   | m <sup>3</sup> | 0.588    |          |
|           | RS22-S6                             | 6.47*0.20   | m <sup>3</sup> | 1.294    |          |
|           | RS23-SD20                           | 2.88*0.20   | m <sup>3</sup> | 0.576    |          |
|           | RS24-SD22                           | 3.01*0.20   | m <sup>3</sup> | 0.602    |          |
|           | RS25-SD14                           | 4.76*0.20   | m <sup>3</sup> | 0.952    |          |
|           | RS26-SD15                           | 2.99*0.20   | m <sup>3</sup> | 0.598    |          |
|           | RS27-SD16                           | 3.09*0.20   | m <sup>3</sup> | 0.618    |          |
|           | RS28-SD17                           | 3.06*0.20   | m <sup>3</sup> | 0.612    |          |
|           | RS29-S8                             | 3.17*0.20   | m <sup>3</sup> | 0.634    |          |
|           | RS30-S8                             | 3.48*0.20   | m <sup>3</sup> | 0.696    |          |
|           | RS31-S18                            | 1.80*0.20   | m <sup>3</sup> | 0.360    |          |
|           | RS33-T1                             | 2.84*0.20   | m <sup>3</sup> | 0.568    |          |
|           | wykop pod studnie fi1200 o śr.2,60m | 5.30*0.20   | m <sup>3</sup> | 1.060    |          |
|           | wykop pod studnie fi1000 o śr.2,40m | 4.90*7*0.20   | m <sup>3</sup> | 6.860    |          |
|           | wykop pod studnie fi600 o śr.2,00m  | 3.14*19*0.20  | m <sup>3</sup> | 11.932   |          |
|           |                                     |   |                | RAZEM    | 264.496  |
| 69 d.4. 1 | KNR 2-01 0236-01                    | Zagęszczenie nasypów ubijakami mechanicznymi; grunty sypkie kat. I-III  | m <sup>3</sup> |          |          |
|           |                                     | poz.67+poz.68   | m <sup>3</sup> | 316.659  |          |
|           |                                     |   |                | RAZEM    | 316.659  |
| 70 d.4. 1 | KNNR 1 0214-02                      | Zasypanie wykopów .fund.podłużnych,punktowych,rowów,wkopów obiektowych spycharkami z zagęszcz.mechanicznym spycharkami (gr.warstwy w stanie luźnym 30 cm) - kat.gr. III-IV. Przyjęto wykonanie mechaniczne. poz.62+poz.63+poz.64+poz.65+poz.67+poz.68 | m <sup>3</sup> |          |          |
|           |                                     |   | m <sup>3</sup> | 1974.079 |          |
|           |                                     |   |                | RAZEM    | 1974.079 |
| 71 d.4. 1 | KNR 2-01 0236-01                    | Zagęszczenie zasypki ręcznej ubijakami mechanicznymi; grunty sypkie kat. I-III  | m <sup>3</sup> |          |          |
|           |                                     | poz.70  | m <sup>3</sup> | 1974.079 |          |
|           |                                     |   |                | RAZEM    | 1974.079 |
| 72 d.4. 1 | KNNR 1 0206-02 analogia             | Roboty ziemne wykonywane koparkami podsiębiernymi o poj.łyżki 0.25 m3 w gr.kat. I-III w ziemi uprzednio zmag.w hałdach z transp.urobku na odl. 1 km sam.samowład. Odwóz nadmiaru gruntu. poz.69   | m <sup>3</sup> |          |          |
|           |                                     |   | m <sup>3</sup> | 316.659  |          |
|           |                                     |   |                | RAZEM    | 316.659  |
| 73 d.4. 1 | KNNR 1 0208-02 analogia             | Dodatek za każdy rozp. 1 km transportu ziemi samochodami samowyladowczymi po drogach o nawierzchni utwardzonej(kat.gr. I-IV) Dowóz piasku. Krotność = 9   | m <sup>3</sup> |          |          |



| Lp.        | Podstawa                                  | Opis i wyliczenia   | j.m.           | Poszcz. | Razem   |
|------------|---|---|----------------|---------|---------|
|            |   | poz.72  | m <sup>3</sup> | 316.659 |         |
|            |   |   |                | RAZEM   | 316.659 |
| <b>4.2</b> |   | <b>Roboty montażowe - główny kanał kanalizacji deszczowej</b>   |                |         |         |
| 74         | KNR-W 2-<br>d.4. 18 0408-02<br>2          | Kanały z rur PVC-U SDR34 SN8 160x4,7 z wydłużonym kielichem, łączonych na uszczelki gumowe  | m              |         |         |
|            |   | 115.00  | m              | 115.000 |         |
|            |   |   |                | RAZEM   | 115.000 |
| 75         | KNR-W 2-<br>d.4. 18 0408-03<br>2          | Kanały z rur PVC-U SDR34 SN8 200x5,9 z wydłużonym kielichem, łączonych na uszczelki gumowe  | m              |         |         |
|            |   | 315.70  | m              | 315.700 |         |
|            |   |   |                | RAZEM   | 315.700 |
| 76         | KNR-W 2-<br>d.4. 18 0513-01<br>2          | Studnie rewizyjne z kręgów betonowych o śr. 1000 mm w gotowym wykopie o głębok. 3m  | stud.          |         |         |
|            |   | 7   | stud.          | 7.000   |         |
|            |   |   |                | RAZEM   | 7.000   |
| 77         | KNR-W 2-<br>d.4. 18 0513-01<br>2 analogia | Studnie rewizyjne z kręgów betonowych o śr. 600 mm w gotowym wykopie o głębok. 3m   | stud.          |         |         |
|            |   | 4   | stud.          | 4.000   |         |
|            |   |   |                | RAZEM   | 4.000   |
| 78         | KNNR 4<br>d.4. 1417-02<br>2               | Studzienki kanalizacyjne systemowe o śr 600 mm - zamknięcie rurą teleskopową  | szt.           |         |         |
|            |   | 19  | szt.           | 19.000  |         |
|            |   |   |                | RAZEM   | 19.000  |
| 79         | d.4. kalk. własna<br>2                    | Separator tłuszczów zintegrowany z osadnikiem:<br>- przepływ 3 [l/s];<br>- przepływ maksymalny 30 [l/s];<br>- pojemność osadnika 1200 l;<br>- średnica 1240 mm;<br>- waga 4400 kg.  | kpl.           |         |         |
|            |   | 1   | kpl.           | 1.000   |         |
|            |   |   |                | RAZEM   | 1.000   |
| 80         | KNR 2-33<br>d.4. 0705-02<br>2 analogia    | Wykonanie elementów odwodnienia ustrojów niosących - wpusty deszczowe   | elem.          |         |         |
|            |   | 2   | elem.          | 2.000   |         |
|            |   |   |                | RAZEM   | 2.000   |
| 81         | KNNR 4<br>d.4. 0220-04<br>2               | Czyszczaaki żeliwne kanalizacyjne uszczelniane sznurem i zaprawą cementową lub folią aluminiową o śr. 150 mm  | szt.           |         |         |
|            |   | 18  | szt.           | 18.000  |         |
|            |   |   |                | RAZEM   | 18.000  |
| 82         | KNR 2-18<br>d.4. 0804-01<br>2             | Próba szczelności kanałów rurowych o śr.nom. 150 mm   | m              |         |         |
|            |   | poz.74  | m              | 115.000 |         |
|            |   |   |                | RAZEM   | 115.000 |
| 83         | KNR 2-18<br>d.4. 0804-02<br>2             | Próba szczelności kanałów rurowych o śr.nom. 200 mm   | m              |         |         |
|            |   | poz.75  | m              | 315.700 |         |
|            |   |   |                | RAZEM   | 315.700 |
| <b>4.3</b> |   | <b>Roboty ziemne - drenaże odwadniające</b>   |                |         |         |
| 84         | d.4. ka k. własna<br>3                    | Inwentaryzacja geodezyjna - trasa kanałów drenarskich.  | kpl            |         |         |
|            |   | 1   | kpl            | 1.000   |         |
|            |   |   |                | RAZEM   | 1.000   |
| 85         | KNR 2-01<br>d.4. 0120-03<br>3 analogia    | Roboty pomiarowe przy liniowych robotach ziemnych - trasa rur drenarskich.  | km             |         |         |
|            |   | 0.287   | km             | 0.287   |         |
|            |   |   |                | RAZEM   | 0.287   |
| 86         | KNR-W 2-<br>d.4. 01 0203-04<br>3          | Roboty ziemne wykonywane koparkami podsiębiernymi o pojemności łyżki 0.25 m <sup>3</sup> w gruncie kat. III z transportem urobku samochodami samowyladowczymi na odległość do 1 km<br>Wykop pod drenaże odwadniające.<br>SDr1 0.7*1.2*46.00<br>SDr2 0.7*1.3*80.00<br>SDr3 (0.7*1.2*41)+(0.7*1.0*15*8) | m <sup>3</sup> |         |         |
|            |   |   | m <sup>3</sup> | 38.640  |         |
|            |   |   | m <sup>3</sup> | 72.800  |         |
|            |   |   | m <sup>3</sup> | 118.440 |         |



| Lp. | Podstawa                                  | Opis i wyliczenia  | j.m.                                 | Poszcz.              | Razem                  |
|-----|---|--|--------------------------------------|----------------------|------------------------|
| 87  | KNR 2-01<br>d.4. 0610-02<br>3             | Drenaż - podsypka filtracyjna ze żwiru lub pospółki w gotowym suchym wykopie z przygotowaniem kruszywa<br><br>286.13*0.6*0.5   | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>85.839  | 229.880<br><br>85.839  |
| 88  | KNR 2-01<br>d.4. 0236-01<br>3             | Zagęszczenie nasypów ubijkami mechanicznymi; grunty sytkie kat. I-III<br><br>poz.87  | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>85.839  | 85.839<br><br>85.839   |
| 89  | KNR 2-28<br>d.4. 0501-09<br>3 analogia    | Wymiana gruntu pod drenaże na piasek<br><br>poz.86-poz.87-(0.10*286.13*0.9)  | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>118.289 | 118.289<br><br>118.289 |
| 90  | KNR 2-01<br>d.4. 0236-01<br>3             | Zagęszczenie nasypów ubijkami mechanicznymi; grunty sytkie kat. I-III<br><br>poz.89  | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>118.289 | 118.289<br><br>118.289 |
| 91  | KNR 1<br>d.4. 0214-02<br>3                | Zasypanie wykopów .fund.podłużnych,punktowych,rowów,wykopów obiektowych spycharkami z zagęszcz.mechanicznym spycharkami (gr.warstwy w stanie luźnym 30 cm) - kat.gr. III-IV.<br>Przyjęto wykonanie mechniczne.<br>poz.86-poz.87-poz.89   | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>25.752  | 25.752<br><br>25.752   |
| 92  | KNR 1<br>d.4. 0206-02<br>3 analogia       | Roboty ziemne wykonywane koparkami podsiębiernymi o poj.łyżki 0.25 m3 w gr.kat. I-III w ziemi uprzednio zmag.w hałdach z transp.urobku na odl. 1 km sam.samowylad.<br>Odwóz nadmiaru gruntu.<br>poz.87+poz.89  | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>204.128 | 204.128<br><br>204.128 |
| 93  | KNR 1<br>d.4. 0208-02<br>3 analogia       | Dodatek za każdy rozp. 1 km transportu ziemi samochodami samowyladowczymi po drogach o nawierzchni utwardzonej(kat.gr. I-IV)<br>Dowóz piasku.<br>Krotność = 9<br>poz.92  | m <sup>3</sup><br><br>m <sup>3</sup> | RAZEM<br><br>204.128 | 204.128<br><br>204.128 |
| 4.4 |   | <b>Roboty montażowe - drenaże odwadniające</b>   |                                      |                      |                        |
| 94  | KNR 2-01<br>d.4. 0611-04<br>4 analogia    | Drenaż rurowy jednorzędowy w uprzednio przygotowanej obsypce w wykopie suchym - rury kamionkowe pełne lub perforowane 100-150 mm - ułożenie rur drenarskich fi 126/113x50m PVC-u, karbowanych, perforowanych na całym obwodzie, z otworami 2,5 x 5,0 mm, o sztywności obwodowej min. SN-5<br>41.00   | m<br><br>m                           | 41.000               | 41.000                 |
| 95  | KNR 2-01<br>d.4. 0611-04<br>4 analogia    | Drenaż rurowy jednorzędowy w uprzednio przygotowanej obsypce w wykopie suchym - rury kamionkowe pełne lub perforowane 100-150 mm - ułożenie rur drenarskich fi 92/80 PVC-u, karbowanych, perforowanych na całym obwodzie, z otworami 2,5 x 5,0 mm, o sztywności obwodowej min. SN-7<br>245.13  | m<br><br>m                           | 245.130              | 245.130                |
| 96  | KNR 2-18W<br>d.4. 0517-0200<br>4 analogia | Studzienki kanalizacyjne systemowe "VAWIN". Studzienka o średn.315-425 mm - zamknięcie rurą teleskopową. pokrywa żeliwna bez wpustu - studzienka inspekcyjna DN600 z osadnikiem ze zwieńczeniem pokrywą żeliwną (ślepa kineta z PP, odcinek trzonowej rury karbowanej z PP SN-4, teleskopowy adapter do włączów, żelbetowy pierścień odciążający, włącz żeliwny typu ciężkiego D400 fi 600 mm, podłączenie "in-situ")<br>5 | szt<br><br>szt                       | 5.000                | 5.000                  |
|     |   |  |                                      | RAZEM                | 5.000                  |