

FILE NAME: U:\1762\CADD\KSTW\STP\_2506\p05b048\_Contract Plans.dgn  
 DATE/TIME: 12/20/2012  
 USER: 4866

| VERTICAL ALIGNMENT TABLE |            |           |           |        |                |            |     |                 |         |              |
|--------------------------|------------|-----------|-----------|--------|----------------|------------|-----|-----------------|---------|--------------|
| ELEMENT                  | POINT TYPE | STATION   | ELEVATION | LENGTH | ENTRANCE GRADE | EXIT GRADE | K   | MIDDLE ORDINATE | SSD/HSD | DESIGN SPEED |
| WARREN ROUTE 100         |            |           |           |        |                |            |     |                 |         |              |
| LINEAR                   | PVT        | 223+91.50 | 886.68    | 119.50 | 4.7360%        |            |     |                 |         | 50           |
|                          | POT        | 224+00.00 | 887.08    |        |                |            |     |                 |         |              |
|                          | POT        | 224+50.00 | 889.45    |        |                |            |     |                 |         |              |
|                          | POT        | 225+00.00 | 891.81    |        |                |            |     |                 |         |              |
| SYMMETRICAL PARABOLA     | PVC        | 225+11.00 | 892.34    | 450.00 | 4.7360%        | -0.9542%   | 79  | -3.20           | 413     | 50           |
|                          | PVC        | 225+11.00 | 892.34    |        |                |            |     |                 |         |              |
|                          | POC        | 225+50.00 | 894.09    |        |                |            |     |                 |         |              |
|                          | POC        | 226+00.00 | 896.05    |        |                |            |     |                 |         |              |
|                          | POC        | 226+50.00 | 897.70    |        |                |            |     |                 |         |              |
|                          | POC        | 227+00.00 | 899.03    |        |                |            |     |                 |         |              |
|                          | PVI        | 227+36.00 | 902.99    |        |                |            |     |                 |         |              |
|                          | POC        | 227+50.00 | 900.04    |        |                |            |     |                 |         |              |
|                          | POC        | 228+00.00 | 900.74    |        |                |            |     |                 |         |              |
|                          | POC        | 228+50.00 | 901.12    |        |                |            |     |                 |         |              |
|                          | VHIGH      | 228+85.54 | 901.20    |        |                |            |     |                 |         |              |
|                          | POC        | 229+00.00 | 901.19    |        |                |            |     |                 |         |              |
|                          | POC        | 229+50.00 | 900.94    |        |                |            |     |                 |         |              |
|                          | PVT        | 229+61.00 | 900.84    |        |                |            |     |                 |         |              |
| LINEAR                   | PVT        | 229+61.00 | 900.84    | 444.00 | -0.9542%       |            |     |                 |         | 50           |
|                          | POT        | 230+00.00 | 900.47    |        |                |            |     |                 |         |              |
|                          | POT        | 230+50.00 | 899.99    |        |                |            |     |                 |         |              |
|                          | POT        | 231+00.00 | 899.52    |        |                |            |     |                 |         |              |
|                          | POT        | 231+50.00 | 899.04    |        |                |            |     |                 |         |              |
|                          | POT        | 232+00.00 | 898.56    |        |                |            |     |                 |         |              |
|                          | POT        | 232+50.00 | 898.09    |        |                |            |     |                 |         |              |
|                          | POT        | 233+00.00 | 897.61    |        |                |            |     |                 |         |              |
|                          | POT        | 233+50.00 | 897.13    |        |                |            |     |                 |         |              |
|                          | POT        | 234+00.00 | 896.65    |        |                |            |     |                 |         |              |
| SYMMETRICAL PARABOLA     | PVC        | 234+05.00 | 896.61    | 300.00 | -0.9542%       | -4.9499%   | 75  | -1.50           | 420     | 50           |
|                          | PVC        | 234+05.00 | 896.61    |        |                |            |     |                 |         |              |
|                          | POC        | 234+50.00 | 896.04    |        |                |            |     |                 |         |              |
|                          | POC        | 235+00.00 | 895.10    |        |                |            |     |                 |         |              |
|                          | POC        | 235+50.00 | 893.82    |        |                |            |     |                 |         |              |
|                          | PVI        | 235+55.00 | 895.18    |        |                |            |     |                 |         |              |
|                          | POC        | 236+00.00 | 892.21    |        |                |            |     |                 |         |              |
| LINEAR                   | PVC        | 236+50.00 | 890.27    | 736.00 | -4.9499%       |            |     |                 |         | 50           |
|                          | PVC        | 236+50.00 | 890.27    |        |                |            |     |                 |         |              |
|                          | POC        | 237+00.00 | 888.00    |        |                |            |     |                 |         |              |
|                          | PVT        | 237+05.00 | 887.75    |        |                |            |     |                 |         |              |
|                          | PVT        | 237+05.00 | 887.75    |        |                |            |     |                 |         |              |
|                          | POT        | 237+50.00 | 885.52    |        |                |            |     |                 |         |              |
|                          | POT        | 238+00.00 | 883.05    |        |                |            |     |                 |         |              |
|                          | POT        | 238+50.00 | 880.57    |        |                |            |     |                 |         |              |
|                          | POT        | 239+00.00 | 878.10    |        |                |            |     |                 |         |              |
|                          | POT        | 239+50.00 | 875.62    |        |                |            |     |                 |         |              |
| SYMMETRICAL PARABOLA     | POT        | 240+00.00 | 873.15    | 350.00 | -4.9499%       | -2.2225%   | 128 | 1.19            | 693     | 50           |
|                          | POT        | 240+50.00 | 870.67    |        |                |            |     |                 |         |              |
|                          | POT        | 241+00.00 | 868.20    |        |                |            |     |                 |         |              |
|                          | POT        | 241+50.00 | 865.72    |        |                |            |     |                 |         |              |
|                          | POT        | 242+00.00 | 863.25    |        |                |            |     |                 |         |              |
|                          | POT        | 242+50.00 | 860.77    |        |                |            |     |                 |         |              |
|                          | POT        | 243+00.00 | 858.30    |        |                |            |     |                 |         |              |
|                          | POT        | 243+50.00 | 855.82    |        |                |            |     |                 |         |              |
|                          | POT        | 244+00.00 | 853.35    |        |                |            |     |                 |         |              |
|                          | PVC        | 244+41.00 | 851.32    |        |                |            |     |                 |         |              |
|                          | PVC        | 244+41.00 | 851.32    |        |                |            |     |                 |         |              |
|                          | POT        | 244+50.00 | 850.88    |        |                |            |     |                 |         |              |
|                          | POT        | 245+00.00 | 848.54    |        |                |            |     |                 |         |              |
|                          | POT        | 245+50.00 | 846.39    |        |                |            |     |                 |         |              |
| POT                      | 246+00.00  | 844.43    |           |        |                |            |     |                 |         |              |
| PVI                      | 246+16.00  | 842.66    |           |        |                |            |     |                 |         |              |
| POT                      | 246+50.00  | 842.68    |           |        |                |            |     |                 |         |              |
| POT                      | 247+00.00  | 841.11    |           |        |                |            |     |                 |         |              |
| POT                      | 247+50.00  | 839.75    |           |        |                |            |     |                 |         |              |
| PVT                      | 247+91.00  | 838.77    |           |        |                |            |     |                 |         |              |

| VERTICAL ALIGNMENT TABLE |                      |           |           |        |                |            |    |                 |         |              |
|--------------------------|----------------------|-----------|-----------|--------|----------------|------------|----|-----------------|---------|--------------|
| ELEMENT                  | POINT TYPE           | STATION   | ELEVATION | LENGTH | ENTRANCE GRADE | EXIT GRADE | K  | MIDDLE ORDINATE | SSD/HSD | DESIGN SPEED |
| WARREN ROUTE 100         |                      |           |           |        |                |            |    |                 |         |              |
| LINEAR                   | PVT                  | 247+91.00 | 838.77    | 439.50 | -2.2225%       |            |    |                 |         | 50           |
|                          | POT                  | 248+00.00 | 838.57    |        |                |            |    |                 |         |              |
|                          | POT                  | 248+50.00 | 837.46    |        |                |            |    |                 |         |              |
|                          | POT                  | 249+00.00 | 836.35    |        |                |            |    |                 |         |              |
|                          | POT                  | 249+50.00 | 835.23    |        |                |            |    |                 |         |              |
|                          | POT                  | 250+00.00 | 834.12    |        |                |            |    |                 |         |              |
|                          | POT                  | 250+50.00 | 833.01    |        |                |            |    |                 |         |              |
|                          | POT                  | 251+00.00 | 831.90    |        |                |            |    |                 |         |              |
|                          | POT                  | 251+50.00 | 830.79    |        |                |            |    |                 |         |              |
|                          | POT                  | 252+00.00 | 829.68    |        |                |            |    |                 |         |              |
|                          | PVC                  | 252+30.50 | 829.00    |        |                |            |    |                 |         |              |
|                          | PVC                  | 252+30.50 | 829.00    |        |                |            |    |                 |         |              |
|                          | POC                  | 252+50.00 | 828.58    |        |                |            |    |                 |         |              |
|                          | SYMMETRICAL PARABOLA | POC       | 252+50.00 |        |                |            |    |                 |         |              |
| POC                      |                      | 253+00.00 | 827.64    |        |                |            |    |                 |         |              |
| POC                      |                      | 253+50.00 | 826.89    |        |                |            |    |                 |         |              |
| PVI                      |                      | 253+93.00 | 825.39    |        |                |            |    |                 |         |              |
| POC                      |                      | 254+00.00 | 826.34    |        |                |            |    |                 |         |              |
| POC                      |                      | 254+50.00 | 825.97    |        |                |            |    |                 |         |              |
| POC                      |                      | 255+00.00 | 825.80    |        |                |            |    |                 |         |              |
| VLOW                     |                      | 255+20.12 | 825.78    |        |                |            |    |                 |         |              |
| POC                      |                      | 255+50.00 | 825.82    |        |                |            |    |                 |         |              |
| PVT                      |                      | 255+55.00 | 825.83    |        |                |            |    |                 |         |              |
| PVT                      |                      | 255+55.00 | 825.83    |        |                |            |    |                 |         |              |
| POT                      |                      | 256+00.00 | 825.95    |        |                |            |    |                 |         |              |
| POT                      |                      | 256+50.00 | 826.09    |        |                |            |    |                 |         |              |
| POT                      |                      | 257+00.00 | 826.22    |        |                |            |    |                 |         |              |
| LINEAR                   | POT                  | 257+50.00 | 826.36    | 355.50 | 0.2715%        |            |    |                 |         | 50           |
|                          | POT                  | 258+00.00 | 826.49    |        |                |            |    |                 |         |              |
|                          | POT                  | 258+50.00 | 826.63    |        |                |            |    |                 |         |              |
|                          | POT                  | 259+00.00 | 826.77    |        |                |            |    |                 |         |              |
|                          | PVC                  | 259+11.00 | 826.80    |        |                |            |    |                 |         |              |
|                          | PVC                  | 259+11.00 | 826.80    |        |                |            |    |                 |         |              |
|                          | POC                  | 259+50.00 | 827.00    |        |                |            |    |                 |         |              |
|                          | POC                  | 260+00.00 | 827.53    |        |                |            |    |                 |         |              |
|                          | POC                  | 260+50.00 | 828.37    |        |                |            |    |                 |         |              |
|                          | PVI                  | 260+61.00 | 827.20    |        |                |            |    |                 |         |              |
| SYMMETRICAL PARABOLA     | PVI                  | 260+61.00 | 827.20    | 300.00 | 0.2715%        | 3.9776%    | 81 | 1.39            | 386     | 50           |
|                          | POC                  | 261+00.00 | 829.51    |        |                |            |    |                 |         |              |
|                          | POC                  | 261+50.00 | 830.97    |        |                |            |    |                 |         |              |
|                          | POC                  | 262+00.00 | 832.74    |        |                |            |    |                 |         |              |
|                          | PVT                  | 262+11.00 | 833.17    |        |                |            |    |                 |         |              |
|                          | PVT                  | 262+11.00 | 833.17    |        |                |            |    |                 |         |              |
|                          | POT                  | 262+50.00 | 834.72    |        |                |            |    |                 |         |              |
|                          | PVC                  | 262+53.00 | 834.84    |        |                |            |    |                 |         |              |
|                          | PVC                  | 262+53.00 | 834.84    |        |                |            |    |                 |         |              |
|                          | POC                  | 263+00.00 | 836.55    |        |                |            |    |                 |         |              |
| SYMMETRICAL PARABOLA     | POC                  | 263+50.00 | 838.00    | 600.00 | 3.9776%        | -4.8599%   | 68 | -6.63           | 383     | 50           |
|                          | POC                  | 264+00.00 | 839.09    |        |                |            |    |                 |         |              |
|                          | POC                  | 264+50.00 | 839.82    |        |                |            |    |                 |         |              |
|                          | POC                  | 265+00.00 | 840.17    |        |                |            |    |                 |         |              |
|                          | VHIGH                | 265+23.05 | 840.21    |        |                |            |    |                 |         |              |
|                          | POC                  | 265+50.00 | 840.16    |        |                |            |    |                 |         |              |
|                          | PVI                  | 265+53.00 | 846.77    |        |                |            |    |                 |         |              |
|                          | POC                  | 266+00.00 | 839.77    |        |                |            |    |                 |         |              |
|                          | POC                  | 266+50.00 | 839.02    |        |                |            |    |                 |         |              |
|                          | POC                  | 267+00.00 | 837.90    |        |                |            |    |                 |         |              |
|                          | POC                  | 267+50.00 | 836.42    |        |                |            |    |                 |         |              |
|                          | POC                  | 268+00.00 | 834.56    |        |                |            |    |                 |         |              |
|                          | POC                  | 268+50.00 | 832.34    |        |                |            |    |                 |         |              |
|                          | PVT                  | 265+53.00 | 832.19    |        |                |            |    |                 |         |              |
| LINEAR                   | PVT                  | 265+53.00 | 832.19    | 33.00  | -4.8599%       |            |    |                 |         | 50           |
|                          | PVC                  | 268+86.00 | 830.59    |        |                |            |    |                 |         |              |

|  |   |
|--|---|
| <b>VERTICAL ALIGNMENT TABLE SHEET #5</b> | PROJECT NAME: WARREN - WAITSFIELD   |
|  | PROJECT NUMBER: STP 2506(1)   |
|  | FILE NAME: p05b048.dgn<br>PROJECT LEADER: D.E.G.<br>DESIGNED BY: M.J.M.<br>IPARM FILE: p05b048vat05.i |
|  | PLOT DATE: 12/20/2012<br>DRAWN BY: W.G.P.<br>CHECKED BY: D.E.G.<br>SHEET 158 OF 310                   |