

| Sort | Grp | Material | ltem | From Surface Model | To Surface Model | area (sq ft) | depth (ft) | Unfac- tored volume (cu ft) | Unfac- tored volume (cu yd) | Expan- sion Factor (%) | Factored (Uncom- pacted) Volume (cu yd) |
|------|------------------------------|------------------|--|--------------------------|------------------------|-----------------|------------|--------------------------------------|--------------------------------------|---------------------------------|---|
| 1.1 | Grass to Asphalt | Topsoil Excavate | Strip 6" topsoil | n/a | n/a | 4920 | 0.50 | 2460 | 91.1 | 0% | 91.1 |
| 1.2 | Grass to Asphalt | Subsoil Excavate | Cut subsoil to proposed subgrade | Ex-6in | Pro- 15.5in | 4920 | varies | 34.29 | 1.3 | 0% | 1.3 |
| 1.3 | Grass to Asphalt | Subsoil Place | Fill subsoil to proposed subgrade | Ex-6in | Pro- 15.5in | 4920 | varies | -6570.06 | -243.3 | 0% | -243.3 |
| 1.4 | Grass to Asphalt | Gravel Place | Place 1' depth gravel base | n/a | n/a | 4920 | -1.00 | -4920 | -182.2 | 0% | -182.2 |
| 1.5 | Grass to Asphalt | Asphalt Place | Place 3.5" asphalt | n/a | n/a | 4920 | -0.29 | -1432 | -53.0 | 0% | -53.0 |
| 2.1 | Grass to Grass | Topsoil Excavate | Strip 6" topsoil | n/a | n/a | 55015 | 0.50 | 27507.50 | 1018.8 | 0% | 1018.8 |
| | Grass to | · | Cut subsoil to proposed | | | | | | | | |
| 2.2 | Grass Grass to | Subsoil Excavate | subgrade Fill subsoil to proposed | Ex-6in | Pro-6in | 55015 | varies | 3418.81 | 126.6 | 0% | 126.6 |
| 2.3 | Grass Grass to | Subsoil Place | subgrade | Ex-6in | Pro-6in | 55015 | varies | -112617.04 | -4171.0 | 0% | -4171.0 |
| 2.4 | Grass Grass to 5- | Topsoil Place | Place 6" topsoil | n/a | n/a | 55015 | -0.50 | -27507.50 | -1018.8 | 0% | -1018.8 |
| 3.1 | inch Concrete | Topsoil Excavate | Strip 6" topsoil | n/a | n/a | 490 | 0.50 | 245 | 9.1 | 0% | 9.1 |
| 3.2 | | Subsoil Excavate | Cut subsoil to proposed subgrade | Ex-6in | Pro-8inch | 490 | varies | 77.31 | 2.9 | 0% | 2.9 |
| 3.3 | Grass to 5- | Subsoil Place | Fill subsoil to proposed subgrade | Ex-6in | Pro-8inch | 490 | varies | -10 | -0.4 | 0% | -0.4 |
| 3.4 | | Concrete Place | Place 5"of concrete | n/a | n/a | 490 | -0.42 | -204 | -7.6 | 0% | -7.6 |
| 3.5 | Grass to 5- inch Concrete | Gravel Place | Place 3" of gravel | n/a | n/a | 490 | -0.25 | -123 | -4.5 | 0% | -4.5 |
| 4.1 | Grass to 7- inch Concrete | Topsoil Excavate | Strip 6" topsoil | n/a | n/a | 2416 | 0.50 | 1208 | 44.7 | 0% | 44.7 |
| 4.2 | Grass to 7- inch Concrete | Subsoil Excavate | Cut subsoil to proposed subgrade | Ex-6in | Pro- 10inch | 2416 | varies | 0.00 | 0.0 | 0% | 0.0 |
| 4.3 | Grass to 7- inch Concrete | Subsoil Place | Fill subsoil to proposed subgrade | Ex-6in | Pro- 10inch | 2416 | varies | -10386 | -384.7 | 0% | -384.7 |
| 4.4 | Grass to 7- inch Concrete | Concrete Place | Place 5" of concrete | n/a | n/a | 2416 | -0.58 | -1409 | -52.2 | 0% | -52.2 |
| 4.5 | Grass to 7- inch Concrete | Gravel Place | Place 3" of gravel | n/a | n/a | 2416 | -0.25 | -604 | -22.4 | 0% | -22.4 |
| 5.1 | | Topsoil Excavate | Strip 6" topsoil | Ex-6in | Pro-18in | 817 | 0.50 | 408 | 15.1 | 0% | 15.1 |
| 5.2 | Grass to Curb | Subsoil Excavate | Cut subsoil to proposed subgrade | Ex-6in | Pro-18in | 817 | varies | 23.42 | 0.9 | 0% | 0.9 |
| | Grass to Curb | | Fill subsoil to proposed subgrade | Ex-6in | | 817 | varies | -1020 | -37.8 | 0% | -37.8 |
| | Grass to Curb | | Place 12" concrete curb | n/a | n/a | 817 | -1.00 | -817 | -30.2 | 0% | -30.2 |
| 5.5 | Grass to Curb | Gravel Place | Place 6" of gravel | n/a | n/a | 817 | -0.50 | -408 | -15.1 | 0% | -15.1 |
| 6.1 | Gravel to Curb | Topsoil Excavate | Strip 6" topsoil | Ex-9in | Pro-18in | 308 | 0.75 | 231 | 8.6 | 0% | 8.6 |
| 6.2 | Gravel to Curb | Subsoil Excavate | Cut subsoil to proposed subgrade | Ex-9in | Pro-18in | 308 | varies | 23.07 | 0.9 | 0% | 0.9 |
| | | Subsoil Place | Fill subsoil to proposed subgrade | Ex-9in | Pro-18in | 308 | varies | -81 | -3.0 | 0% | -3.0 |
| | Gravel to Curb | | Place 12" concrete curb | n/a | n/a | 308 | -1.00 | -308 | -11.4 | 0% | -11.4 |
| 6.5 | Gravel to Curb Gravel to | Gravel Place | Place 6" of gravel | n/a | n/a | 308 | -0.50 | -154 | -5.7 | 0% | -5.7 |
| 7.1 | Grass Gravel to | Topsoil Excavate | Strip 6" topsoil Cut subsoil to proposed | n/a | n/a | 148 | 0.50 | 74 | 2.7 | 0% | 2.7 |
| 7.2 | | Subsoil Excavate | subgrade Fill subsoil to proposed | Ex-6inch | Pro-6inch | 148 | varies | 0 | 0.0 | 0% | 0.0 |
| 7.3 | | Subsoil Place | subgrade | Ex-6inch | Pro-6inch | 148 | varies | -215 | -8.0 | 0% | -8.0 |
| 7.4 | Grass Gravel to | Topsoil Place | Place 6" of topsoil | n/a | n/a | 148 | -0.50 | -74 | -2.7 | 0% | -2.7 |
| 8.1 | Asphalt Gravel to | Gravel Excavate | Strip 9" of gravel Cut subsoil to proposed | n/a | n/a Pro- | 3583 | 0.75 | 2687 | 99.5 | 0% | 99.5 |
| 8.2 | Asphalt | Subsoil Excavate | subgrade Fill subsoil to proposed | Ex-6in | 15.5in | 3583 | varies | 14.47 | 0.5 | 0% | 0.5 |
| 8.3 | | Subsoil Place | subgrade | Ex-6in | Pro- 15.5in | 3583 | varies | -2316.51 | -85.8 | 0% | -85.8 |
| 8.4 | Gravel to Asphalt | Gravel Place | Place 1' depth gravel base | n/a | n/a | 3583 | -1.00 | -3583 | -132.7 | 0% | -132.7 |
| 8.5 | Gravel to Asphalt | Asphalt Place | Place 3.5" asphalt | n/a | n/a | 3583 | -0.29 | -1043 | -38.6 | 0% | -38.6 |

North Star Dog Park

City of Madison Public Works Contract 8/7/2019 Date Revised:

Computation Summary

Positive volumes are cuts (material available), negative volumes are fills (material needed)

| Row Labels -f | Sum of Factored (Uncompacted) Volume (cu yd) |
|------------------|--|
| Asphalt Place | -91.6 |
| Subsoil Excavate | 133.0 |
| Subsoil Place | -4933.9 |
| Topsoil Excavate | 1190.1 |
| Topsoil Place | -1021.5 |
| Concrete Place | -59.8 |
| Gravel Place | -362.7 |
| Grand Total | -5146.3 |

Reorganized into bid table items

| Bid Item | Quantity | Units | Relation to Table Above |
|------------------|----------|-------|-----------------------------------|
| 20101 Excavation | | | = Subsoil Excavate + Topsoil |
| Cut | 1323 | CY | Excavate |
| 20202 Fill - | | | = Subsoil Excavate + Subsoil |
| Borrow | 4801 | CY | Place |
| 20221 Topsoil | 6117 | SY | = (Topsoil Place)/167 |
| 40102 Crushed | | | |
| Aggregate Base | | | |
| Course Gradation | | | = (Gravel Place) * -2 ton/cubic |
| No. 2 | 725 | tons | yard |
| 40202 HMA | | | |
| Pavement 4 LT | | | = Asphalt Place * -2.16 ton/cubic |
| 58-28 S | 197.9 | tons | yard |

City of Madison Department of Public Works **PARKS DIVISION**

City-County Building, Suite 104 210 Martin Luther King, Jr. Blvd. Madison, WI 53703



PROJECT:

NORTH STAR DOG PARK

439 MILKY WAY MADISON, WI 53718

Although every effort has been made in preparing these plans and checking them for accuracy, the contractor and subcontractors must check all details and dimensions of their trade and be responsible for the same.

| ГЕМ | DATE | | |
|------------------------|------------|--|--|
| ADVERTISED TO BID: SCL | 08/29/2019 | | |
| ADDENDUM #1 | 09/11/2019 | | |
| ADDENDUM #2 | 09/16/2019 | | |
| ADDENDUM #3 | 09/18/2019 | | |
| ADDENDUM #4 | 09/24/2019 | | |

PUBLIC WORKS PROJECT #: 8441

SHEET TITLE:

DESIGN CALCULATIONS

SHEET NUMBER: