

| EARTHWORK | | | | | | | | | |
|--------------------|------------------|-----------------|----------|--------------------------------------|---------------------------------|--|------------|---------------------------------------|--------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| LOCATION | EARTH EXCAVATION | ROCK EXCAVATION | UNDERCUT | TOPSOIL STRIPPING & EARTH EXCAVATION | UNSUITABLE OR UNSTABLE MATERIAL | SUITABLE EXCAVATION ADJUSTED FOR SHRINKAGE | EMBANKMENT | EARTH BALANCE WASTE(+) OR SHORTAGE(-) | TOPSOIL EXCAVATION & PLACEMENT |
| STATION TO STATION | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD |
| STAGE 1 | | | | | | | | | |
| IL 47 | | | | | | | | | |
| 6277+00 TO 6311+00 | 10430 | | | 11877 | 9126 | 7823 | 36365 | -28543 | 2751 |
| 6311+00 TO 6636+34 | 84934 | 470 | 17211 | 77984 | 77765 | 64171 | 182501 | -118331 | 17430 |
| WHITEWILLOW RD | | | | | | | | | |
| 601+17 TO 608+19 | 1151 | | 1530 | | 1222 | 863 | 85 | 778 | 308 |
| JOLIET RD | | | | | | | | | |
| 701+00 TO 707+31 | 1031 | | | | | 773 | 327 | 446 | |
| TOWNHALL RD | | | | | | | | | |
| 903+59 TO 907+08 | 318 | | | | | 239 | 2 | 237 | |
| US 52 | | | | | | | | | |
| 995+00 TO 1008+13 | 695 | | | | | 521 | 1178 | -657 | |
| 1008+72 TO 1022+05 | 796 | | | | | 597 | 169 | 428 | |
| CHICAGO RD | | | | | | | | | |
| 1111+22 TO 1117+34 | 2843 | | | | -234 | 2132 | 7 | 2125 | 234 |
| PLATTVILLE RD | | | | | | | | | |
| 1300+92 TO 1309+05 | 4922 | | | | -220 | 3692 | 112 | 3580 | 220 |
| HELMAR RD | | | | | | | | | |
| 1509+91 TO 1516+50 | 2568 | | 278 | | 40 | 1926 | 64 | 1862 | 238 |
| STAGE 1A & 1B | | | | | | | | | |
| IL 47 | | | | | | | | | |
| 6449+54 TO 6451+00 | 117 | | | | -20 | 88 | 792 | -704 | 20 |
| US 52 | | | | | | | | | |
| 996+37 TO 1008+08 | 406 | | 628 | | 628 | 305 | 400 | -96 | |
| 1008+60 TO 1020+44 | 126 | | 998 | | 938 | 95 | 390 | -296 | 60 |
| STAGE 1 SUBTOTAL | 110337 | 470 | 20645 | 89861 | 89245 | 83223 | 222392 | -139169 | 21261 |
| STAGE 2 | | | | | | | | | |
| IL 47 | | | | | | | | | |
| 6451+00 TO 6451+77 | 50 | | | | -24 | 38 | 398 | -361 | 24 |
| 6591+00 TO 6635+87 | 10637 | | | 2573 | -22 | 7978 | 15465 | -7487 | 2595 |
| US 52 | | | | | | | | | |
| 995+00 TO 1007+96 | 484 | | 2461 | | 2008 | 363 | 254 | 109 | 453 |
| 1008+60 TO 1022+05 | 211 | | 763 | | 529 | 158 | 439 | -281 | 234 |
| STAGE 2 SUBTOTAL | 11382 | | 3224 | 2573 | 2491 | 8537 | 16556 | -8020 | 3306 |
| STAGE 3 | | | | | | | | | |
| IL 47 | | | | | | | | | |
| 6313+00 TO 6635+87 | 150848 | 442 | 22187 | 19987 | 18025 | 113578 | 78478 | 35100 | 24149 |
| JOLIET RD | | | | | | | | | |
| 705+00 TO 708+00 | | | | | | | 496 | -496 | |
| QUARRY RD | | | | | | | | | |
| 800+77 TO 801+95 | 230 | | | | -65 | 173 | 214 | -42 | 65 |
| TOWNHALL RD | | | | | | | | | |
| 900+50 TO 907+08 | 702 | | | | -140 | 527 | 46 | 481 | 140 |
| CHICAGO RD | | | | | | | | | |
| 1102+50 TO 1108+77 | 1239 | | 1513 | | 1294 | 929 | 15 | 914 | 219 |
| LISBON CENTER RD | | | | | | | | | |
| 1201+50 TO 1208+08 | 1359 | | 1496 | | 1072 | 1019 | 529 | 490 | 424 |
| NEWARK RD | | | | | | | | | |
| 1402+00 TO 1408+08 | 219 | | 1737 | | 1433 | 164 | 436 | -272 | 304 |

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| LOCATION | EARTH EXCAVATION | ROCK EXCAVATION | UNDERCUT | TOPSOIL STRIPPING & EARTH EXCAVATION | UNSUITABLE OR UNSTABLE MATERIAL | SUITABLE EXCAVATION ADJUSTED FOR SHRINKAGE | EMBANKMENT | EARTH BALANCE WASTE(+) OR SHORTAGE(-) | TOPSOIL EXCAVATION & PLACEMENT |
| STATION TO STATION | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD |
| HELMAR RD | | | | | | | | | |
| 1501+03 TO 1508+09 | 1777 | | | | -148 | 1333 | 216 | 1117 | 148 |
| STAGE 3A | | | | | | | | | |
| US 52 | | | | | | | | | |
| 996+37 TO 1008+60 | 95 | | 1190 | | 918 | 71 | 174 | -103 | 272 |
| 1015+00 TO 1020+44 | 30 | | 141 | | 92 | 23 | 72 | -50 | 49 |
| STAGE 3 SUBTOTAL | 156499 | 442 | 28264 | 19987 | 22481 | 117816 | 80676 | 37140 | 25770 |
| STAGE 4 | | | | | | | | | |
| IL 47 | | | | | | | | | |
| 6260+00 TO 6311+50 | 42636 | | | 168 | -8791 | 31977 | 5127 | 26850 | 8959 |
| 6311+50 TO 6318+50 | 1113 | | | 129 | -174 | 835 | 2120 | -1285 | 303 |
| WHITEWILLOW RD | | | | | | | | | |
| 609+79 TO 616+00 | 1466 | | 1045 | | 546 | 1100 | 1765 | -666 | 499 |
| JOLIET RD | | | | | | | | | |
| 701+00 TO 709+11 | 1429 | | | | -447 | 1072 | 118 | 954 | 447 |
| STAGE 4 SUBTOTAL | 46644 | | 1045 | 297 | -8866 | 34983 | 9130 | 25853 | 10208 |
| TOTAL | 324862 | 912 | 53178 | 112718 | 105351 | 244559 | 328754 | -147189 | 60545 |
| WASTE IN STAGE 3 & 4 (NOT AVAILABLE FOR EMBANKMENT IN STAGES 1 & 2) 62993 | | | | | | | | | |
| USE PAY ITEM TOTALS BELOW | | | | | | | | | |

INFORMATION:
 SHRINKAGE FACTORS: EARTH EXCAVATION: 25%
 ROCK EXCAVATION: 25%

UC = UNDERCUT (FROM CROSS-SECTIONS)
 C = CUT (FROM CROSS-SECTIONS)
 TSE = TOPSOIL STRIPPING & EARTH EXCAVATION
 TSP = TOPSOIL EXCAVATION & PLACEMENT (COLUMN 8)

COLUMN 1 - LOCATION FROM PLANS
 COLUMN 2 - CUT QUANTITIES FROM CROSS SECTIONS (C)
 COLUMN 3 - QUANTITIES FROM CROSS SECTIONS
 COLUMN 4 - UNDERCUT QUANTITIES FROM CROSS SECTIONS (UC)
 COLUMN 5 - TOPSOIL STRIPPING & EARTH EXCAVATION QUANTITIES FROM CROSS SECTIONS (TSE)
 COLUMN 6 - CUT MATERIAL THAT IS DETERMINED TO BE EITHER UNSTABLE OR UNSUITABLE FOR USE IN EMBANKMENT
 = COLUMN 4 (UC) + COLUMN 5 (TSE) - COLUMN 10 (TSP)
 COLUMN 7 - = (COLUMN 2) x (1-EARTH EXCAVATION SHRINKAGE FACTOR) + COLUMN 3 x (1-ROCK EXCAVATION SHRINKAGE FACTOR)
 COLUMN 8 - QUANTITIES FROM CROSS SECTIONS
 COLUMN 9 - = COLUMN 7 - COLUMN 8
 COLUMN 10 - QUANTITIES FROM CROSS SECTIONS, THESE QUANTITIES ARE NOT INCLUDED IN EARTH EXCAVATION OR EMBANKMENT

PAY ITEMS:
 COLUMN #2 IS EARTH EXCAVATION = 324862 CU YD
 COLUMN #3 IS ROCK EXCAVATION = 912 CU YD
 COLUMN #6 IS REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL = 105351 CU YD
 COLUMN #9 IS FURNISHED EXCAVATION = 147189 CU YD
 COLUMN #10 IS TOPSOIL EXCAVATION & PLACEMENT = 60545 CU YD

- NOTES:**
- THE TOP 12 INCHES OF THE EXISTING SOILS WITHIN THE LIMITS OF THE PROPOSED PAVEMENT SHALL BE REMOVED (TSE) AS SHOWN IN THE CROSS SECTIONS. THIS WORK SHALL BE PAID FOR AS REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS, OR IF USED FOR TOPSOIL PURPOSES, TOPSOIL EXCAVATION AND PLACEMENT (TSP).
 - ALL SOILS SHALL BE TESTED BEFORE BEING INCORPORATED INTO THE NEW EMBANKMENT. THE ENGINEER RESERVES THE RIGHT TO RE-CLASSIFY ANY OF THE UNSUITABLE MATERIAL AND USE IT AS EMBANKMENT MATERIAL FOR SIDESLOPES OR IN SOD COVERED RAISED MEDIANS.
 - THE EXISTING SUBGRADE SOILS MAY BE PRONE TO SWELLING UPON WETTING. THEREFORE, AT LOCATIONS WHERE NEW EMBANKMENT FILL HEIGHT IS GREATER THAN 2 FEET AND LESS THAN 8 FEET, THE TOP 6 INCHES OF SUBGRADE SOILS SHOULD BE DISKED, DRIED, AND RECOMPACTED BETWEEN +2% AND +4% OF THE OPTIMUM MOISTURE CONTENT AND BETWEEN 90% AND 95% OF THE STANDARD DRY DENSITY.
 - ALL SOILS USED FOR EMBANKMENT SHALL HAVE LL LESS THAN 50%, PI BETWEEN 12% AND 20%, A MAXIMUM DRY DENSITY GREATER THAN 90 PCF, AND ORGANIC CONTENT LESS THAN 10%.
 - REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL INCLUDES EXCAVATION OF MATERIAL.
 - EXCESS MATERIAL FROM STAGE 3 & 4 NOT AVAILABLE WHEN STAGE 1 AND 2 ARE TO BE CONSTRUCTED. FURNISHED EXCAVATION QUANTITY INCLUDES MATERIAL REQUIRED FOR STAGE 1 & 2.