100 - GENERAL REQUIREMENTS

100.1 SCOPE OF WORK

The work provided for in these Specifications shall consist of furnishing all labor, materials, appliances, and equipment, and performing all work and operations in connection with the construction of items and all other incidental and related work as set forth in these Specifications and as directed by the Engineer to make a complete and finished job.

100.2 CONTRACT SPECIFICATIONS

The Specifications that shall govern the materials furnished and work performed in the construction of the work covered by the Contract or Contracts based thereon, are divided, classified, designated, and arranged as shown in the CITY OF OVERLAND PARK STANDARD SPECIFICATIONS in effect at the time of Letting, SPECIAL PROVISIONS TO THE CITY OF OVERLAND PARK STANDARD SPECIFICATIONS, if any, in effect at the time of the Letting, and PROJECT SPECIFIC SPECIAL PROVISIONS attached to the contract. No attempt has been made in the foregoing designated Specifications to segregate work to be performed by any trade, subcontract, or proposal item, under any one specification. Any segregation between trade or craft jurisdiction limits, and the establishment of subcontract limits, will be solely a matter of agreement between the Contractor and his employees and his subcontractors. The Specifications will govern the construction of the entire work, and the provisions thereof will govern each item and unit of work to which such provisions apply.

When reference is made to Engineer, it shall have the same meaning as consulting engineer as set forth in Paragraph GC-2 of the General Conditions.

100.3 STANDARD SPECIFICATIONS

The work shall conform to these Specifications and to the "Standard Specifications" where reference is made herein. Where reference is made in the Specifications and Contract Documents to "Standard Specifications," it shall mean that the reference is made to the current edition of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, Chapters 13.02, 13.03, 13.08, and 15.08 of the Overland Park Municipal Code, current edition of City of Overland Park Traffic Signal Specifications, current adopted edition of the Manual On Uniform Traffic Control Devices, and The City of Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations with such revisions, amendments, and supplements as are contained herein.

Sanitary Sewer construction shall be in accordance with the “Construction and Materials Specification” as prepared by the Johnson County Unified Wastewater Districts, and on file with the State of Kansas, Department of Health and Environment, Permit No. 20969.

All sanitary sewer service line work shall conform to requirements of the Johnson County Unified Wastewater Districts Service Line Design and Construction Standards, and the most recent edition of the BOCA National Plumbing Code.

100.4 CONTRACT DRAWINGS

The Contract Drawings or "Plans" on which the proposals and contracts are to be based, and which are to be supplemented by additional shop and dimension drawings of material and equipment and other drawings, where specified, are shown in the "Index of Sheets" on the cover sheet of the Plans.

100.5 MEASUREMENT AND PAYMENT

a. Method of Measurement

The completed work shall be measured by the units described in the Proposal under each bid item that is satisfactorily completed by the Contractor. At monthly intervals, beginning one month after the Notice to Proceed, the Contractor shall submit to the City Engineer an accurate record of the work completed.

b. Basis of Payment

The amount of completed work, measured as set forth above, shall be paid for at the contract unit price bid per item described in the Proposal and shall be full compensation for furnishing all materials, labor, equipment, tools, supplies and incidental related items necessary to complete the work in accordance with the Specifications. Work not measured separately for payment is subsidiary to the item to which it pertains.

100.6 MOBILIZATION OF EQUIPMENT

a. Description

Move required personnel, equipment, materials, supplies and incidentals to the project site prior to beginning work. This work includes other work and costs incurred before the project starts.

All equipment used by the Contractor having metal tracks shall not be driven over City streets other than those streets being constructed. Such equipment must be transported from one work area to the next work area.

Observe legal load restrictions when operating equipment, hauling equipment, or hauling materials on public roads; newly constructed/reconstructed base, pavement, and structures; and any existing base, pavement or structures that will remain in place. Assume responsibility for changes in legal load restrictions that occur after the project was let. Obtain the Engineer's written approval and a special permit to exceed legal load restrictions on the City street system and on newly constructed/reconstructed portions of the project.

Protect roadways and structures within project limits from damage. Observe curing periods before operating equipment or hauling loads on newly constructed pavement, reconstructed pavement, or structures. Do not haul loads of any size on pavement base, except when operations require equipment on pavement base to place material. The Contractor shall assume all responsibility for damages to roadways and structures caused by the Contractor from operating equipment or hauling loads.

No direct payment will be made for Mobilization as it shall be considered subsidiary to other bid items in the contract.

100.7 INSPECTION OF WORK

The Contractor shall not commence placing concrete or backfilling of pipe/structures until such time as the City Engineer or his authorized representative has made inspection. Form location, grades, slopes and subgrade shall have been approved prior to placing any concrete.

100.8 BRACING AND SHORING

It shall be the contractor's responsibility to brace and shore existing structures during construction. Any additional damage to or collapse of existing structures during the contract period shall be the sole responsibility of the Contractor.

The Contractor shall brace and shore all trenches in full accordance with Occupational Safety and Health Standards - Excavations; Final Rule 29 CFR Part 1926.

Bracing and shoring shall not be paid for directly but shall be considered subsidiary to other bid items. No additional payment shall be considered for increased quantities of earthwork, asphalt removal and replacement, or increases in other items as a result of compliance with this specification.

100.9 TRENCH BACKFILL

Flowable Fill is required for all trenches within all paved portions of the ROW including future paving, if they are known, per the Manual for Infrastructure Standards For Right of Way Restoration and City of Overland Park Standard Details.

100.10 SAMPLING AND TESTING

All sampling and testing deemed necessary by the Engineer shall be performed by a Testing Laboratory selected by the City, except that all Asphaltic Concrete mix design and tests shall be performed by a Certified Testing Laboratory selected by the Contractor, as stated in specification section "Asphaltic Concrete Surface and Intermediate Course". The costs of all such tests, showing compliance with the Specifications, shall be paid by the City, except that all Asphaltic Concrete mix design and testing costs shall be paid by the Contractor. However, in the event that any test indicates non-compliance with the Specifications, additional testing will be paid for by the Contractor to determine acceptability of the material or methods. City reserves the right to weigh any selected truck as determined by the Engineer. The City shall only pay weighing costs and any additional costs shall be at the Contractor's expense.

100.11 TRAFFIC SAFETY

When working in the traveled way, the Contractor shall provide adequate and suitable barriers, signs, warning lights, flaggers, and all other equipment necessary to direct and reroute traffic and protect the public from moving or stationary vehicles, equipment, and materials, and other obstructions. Also, adequate protective warning lights and signs shall be provided to warn of any obstruction or excavation in the street, and easement area. All barricades, signs, lights and other protective devices in public right-of-way and easements shall be installed and maintained in conformity with applicable statutory requirements, the latest edition of the "Manual on Uniform Traffic Control Devices", and the "Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations".

The Police Department, Fire Department, and Med-Act shall be notified prior to closing a street with the approval of the City Engineer.

100.12 NOTIFICATION OF PROPERTY OWNERS

The Contractor shall provide advance notification to the adjacent property owners on all phases of the operations.

100.13 TREE AND PLANT PROTECTION

All trees and other vegetation which must be removed to perform the work shall be removed and disposed of by the Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the drawings. All trees and plants not removed shall be protected against injury from construction operations.

The Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades or fences around the drip line, and trimming low hanging branches to prevent damage from construction equipment. Barricade or fence shall not be removed without consent of the Engineer. When installing a pipe, or any other work that may damage the tree, hand excavating or tunneling methods shall be used. Where encroachment by vehicles or equipment is expected within the drip line of the tree, the contractor will be required to place at least a 6 inches layer of organic mulch on top of the affected area to offset possible compaction. Such trees shall not be endangered by stockpiling excavated material or storing equipment within the drip line of the tree. No backfill material exceeding 4 inches in depth shall be placed within the drip line area of any tree designated to be preserved without prior consent from the Engineer.

When excavation is required within the drip line of any protected tree, the contractor shall take extra measures to protect as many roots as possible. All roots to be cut or removed shall be "cut" with a

chain saw, trencher, or other methods as approved by the engineer that will leave a smooth cut surface. All roots exposed during excavation shall be protected to prevent the roots from drying out by covering the exposed area with canvas or burlap, peat moss, or mulch, and kept damp until the area has been backfilled. Where shown on the plans, trees requiring root removal of one third or more of the circumference of the root system, may require the pruning of limbs on the opposite side of the root removal or thinning the entire tree equally as directed by the Engineer. All pruning, repair, and replacement of trees and plants shall be performed by qualified nurserymen or arborists. Trees requiring trimming are as noted on the plans. This work shall not be paid for directly but shall be considered subsidiary to other bid items.

When the injury or removal of trees designated to be preserved cannot be avoided; each tree injured beyond repair or removed shall be replaced with a similar tree, or provide compensation to the City as determined by the Engineer.

100.14 WEEDS

The Contractor shall restrict the excessive growth of weeds, grasses, and other uncultivated vegetations within the project limits in accordance with the Overland Park Municipal Code. The Contractor shall cut down any excessive growth by mowing or trimming or as directed by the engineer.

No direct payment will be made for this work as it shall be considered subsidiary to other bid items in the contract.

100.15 RESTORATION

a. Pre-Restoration Meeting

The Contractor shall be responsible for scheduling a pre-restoration meeting within 1 (one) week prior to beginning final grading, select soil placement, and restoration of the sodded areas in the project. The time and location of the meeting shall be approved by the Project Engineer, with required attendance by the Contractor's superintendent and any/all subcontractors involved in the restoration. The purpose of this meeting is to discuss in detail the requirements of sod restoration in the Specifications. At this meeting the Contractor shall provide:

(1) A complete schedule of operations and proposed methods for soil preparation, sod placement, and watering.

(2) A list of the equipment to be used for soil preparation and compaction, fertilizer distribution, sod delivery, placement and rolling, and watering.

(3) The proposed source or sources of the sod, select soil, and water.

(4) A list or set of "marked up" plans indicating the proposed location of each type of sod.

(5) A list of at least 3 locations that the sod crew to be used on this project has placed sod within the previous 2 weeks.

100.16 UTILITY MEETINGS AND UTILITY ADJUSTMENT

It shall be the duty of the Contractor to notify the serving utility companies of pending construction operations and the schedule of same, prior to any work being done on this project. The Engineer will furnish plans to the utility companies for their records. These companies will relocate and adjust their own facilities at no cost to the Contractor, except for sanitary and storm sewers. The Contractor shall be responsible for the adjustment and protection of all sanitary and storm sewer facilities. Some minor grading and backfill work may be required of the Contractor at locations of utility adjustments. This work shall be considered subsidiary to other items of work.

The Contractor shall be responsible for holding periodic utility meetings with the City, the Engineer, and utility companies during the relocation of utility lines. The frequency of meetings will initially be bi-weekly (or more frequently if necessary) and then, as relocation work begins to diminish,

will be held more infrequently. The Contractor shall keep minutes of the meetings and send copies to all those in attendance.

100.17 EXCELLENCE IN CONSTRUCTION CONTRACTOR EVALUATION

The City will conduct an Excellence in Construction Contractor Evaluation on this project. The purpose of this program is to recognize contractors who perform well during construction projects, provide a mechanism to assist contractors in improving their performance on future projects, and establish expectations of contractors who contract with the City of Overland Park.

Copies of the Excellence in Construction Contractor Evaluation guidelines are available in the office of the City Engineer.

100.18 RIGHT-OF-WAY

Right-of-way and easements are currently available for this project.

The Contractor shall confine his construction operations to the right-of-way limits and easements provided for the project. Equipment or materials shall not be stored beyond these limits without the express approval of the owner of such property. The Engineer shall be informed as to any arrangements that Contractor makes on his behalf in these matters.

100.19 CONSTRUCTION LIMITATIONS

The construction sequence for the required work shall be in accordance with the traffic control as shown on the plans.

100.20 CONSTRUCTION SCHEDULE

After being awarded the contract, the Contractor shall immediately prepare a Critical Path Method (CPM) schedule for approval by the City Engineer that will ensure completion of the project within the contract time. This schedule shall be submitted and approved by the City Engineer before a Notice to Proceed is issued. No work on this contract shall begin until said schedule is approved. The City reserves the right to adjust the Contractor's schedule to coordinate with any other projects in the same area.

A. General Requirements

A computerized network diagram shall be included in the CPM schedule and shall serve as the 'Master Construction Schedule' for the Project, giving mathematical analysis (printout) of that network, which verifies and validates logic and planning and defines critical path. The approved schedule shall be kept on site with the superintendent and reviewed with Subcontractors each week. The CPM schedule shall be utilized for planning, organizing, and directing the work, for reporting progress, and requesting payment for work completed. The schedule shall be reviewed each week as part of the progress meeting. Abbreviations used in CPM schedules shall be clearly explained in a legend of symbols, either separate or attached. Scheduling software shall be compatible with Microsoft Project 2007.

B. Schedule Requirements

The CPM schedule shall clearly show sequential interdependencies, with activity duration and float clearly represented. Sequence(s) of activities with no float shall be clearly identified as Critical Path(s). The scheduling system shall be capable of baseline comparison analysis. Upon development and approval of the schedule, the Contractor shall 'freeze' the initial schedule as the baseline schedule. As work progresses, Contractor shall provide graphics displaying actual progress bars versus baseline or target bars. Activity durations shall be in calendar days.

The CPM schedule shall include pre-construction tasks, construction tasks (bid items), shop drawing submittal and approval process, material and equipment ordering and delivery, submittal of as-built drawings, clean up and punchlist, inspection coordination activities, utility relocation, final inspection and certificate of completion, and final payment. Submittal activities shall be scheduled to allow sufficient time for materials and equipment to be procured and installed, even if the submittal is unacceptable and resubmittal is required. The CPM schedule shall reflect anticipated delays, such as weather delays.

Contractor shall submit the initial schedule, complete revisions, and periodic reports in three hard copies, one reproducible and two prints or plots, and one copy digitally on CD or DVD. This schedule shall include the completed network program consisting of GANTT chart and mathematical analysis within 10 days of the executed contract. Allow 5 days for the City Engineer to review. Contractor shall submit the schedule of submittal activities extracted from the master schedule within 10 days after receipt of Notice to Proceed. During the preparation period, Contractor shall review this information with the City Engineer.

Submittals to the City Engineer of initial and monthly CPM schedule charts shall include three sets of all reports as outlined below. Plots shall be color, blueline, printed or photocopied prints and, if segmentally generated, fully assembled. Highlight the critical path when the critical path is not clearly defined.

The Contractor will participate in the Engineer's review and evaluation of submitted network diagrams and mathematical analysis of diagrams. Resubmit revisions necessary due to review within 5 days after the review. Contractor and major Subcontractors shall review the network CPM schedule before final submittal.

C. Report Formats –

Standard set of reports submitted each month including initial submittals shall consist of a GANTT chart of entire project. Progress bar chart shall include target or baseline comparison bars. Bar positions shall be early start/early finish with float clearly defined. GANTT charts shall include a tabulation of each activity. For each activity on the GANTT charts furnish the following:

- Initial/submittal schedule shall include a list of responsible contractors and suppliers, task description, duration, start date, end date, latest start date, latest end date, total slack or float time in calendar days and current schedule bar in Gantt view.

- Progress schedule updates shall include a list of responsible contractors and suppliers, task description, duration, actual start date, actual finish date, percentage completion, remaining duration in calendar days and current schedule bar in Gantt view.

Graphics outlined above shall comply with the following criteria unless noted otherwise:

1. Sheet size of diagram shall be 11 by 17 inches minimum and time scaled in month as the major timescale and weeks as the minor timescale unless approved otherwise.
2. On each page include a title block containing at a minimum the following information –
    a. Project Title
    b. Project Number
    c. Contractor’s Business Name

d. Date of Submittal and Revision (The Date shown must clearly show the current preparation date and separately the revision date of the current schedule - this is a hard date entered and not an auto or status date)

e. Submit a separate Legend Page of Symbols and Abbreviations as applicable.

3. Prepare and submit to the City Engineer upon request additional charts, reports, and current copy on disk of Project program.

D. CPM Schedule Implementation and Monitoring

Monthly CPM schedule charts and reports shall accompany the Contractor's pay request for work completed. Where the Contractor is shown to be behind schedule, provide accompanying written summary, cause, and explanation of planned remedial action. CPM schedules shall reflect those instances, modifications or other alterations to the schedule, which have an impact on the final completion or interim target dates within the schedule. Payments or portions of payments may be withheld by the City Engineer, upon failure to maintain scheduled progress of the work as shown on the approved CPM schedule. Failure to prepare, submit and maintain a CPM schedule as specified shall be cause for rejection of other schedules submitted and for possible delay of payment. Float time belongs to the project, not to the Contractor or to the City Engineer, and may be utilized by both parties.

E. Schedule Changes And Updates

At a minimum the Contractor shall update and submit the CPM Schedule for review weekly. A weekly update is required unless agreed upon by the City Engineer. Monthly submittal of the CPM schedule and approval by the City Engineer is required prior to payment for work completed. Activities added to the CPM schedule shall be submitted by the Contractor on schedule charts. It is the City Engineer's intent that the project be managed and operated according to the CPM schedule. Payment requests may be held up until the CPM schedule is brought back into compliance with the contract documents.

Once the CPM schedule is submitted and approved by the City Engineer Contractor shall identify any modifications to activity durations, logic, values, or descriptions resubmit for approval. Such adjustments shall not impact the contracted completion date. Requests for time extensions are addressed in the General Conditions of these contract documents.