PAVING AND DRAINAGE GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ISSUED BY THE CITY OF DURANT STANDARD CONSTRUCTION SPECIFICATIONS.

2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS. CONCRETE FOR INLET AND DRAINAGE STRUCTURES SHALL BE TYPE I, CLASS 'F', 4200 PSI STRENGTH AT 28 DAYS.

3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.

7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO ODOT. BARRICADES AND PROJECT SIGNS SHALL ALSO MEET CITY CODE.

8. UNLESS OTHERWISE NOTED, THE STORM DRAIN LINES MAY BE OF THE FOLLOWING MATERIALS:
   A. CLASS III, RCP C-76 (CIRCULAR), C-506 (ARCH), C-507 (ELLIPTICAL)
   B. ADS N-12
   C. HANCOR HI-Q

INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

9. STORM SEWER JOINT MATERIALS MAY BE OF THE FOLLOWING:
   A. RAM-NECK
   B. CON-SEAL
   C. CEMENT GROUT

INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

10. STORM SEWER CONNECTIONS FOR NEW INTERCEPTING MAINS SHALL BE FACTORY WYES FOR 48" AND SMALLER PIPE.

11. ALL HEADWALLS SHALL BE POURED IN PLACE.

12. GRADING OF ALL HANDICAPPED SPACES AND ROUTES SHALL CONFORM TO STATE, LOCAL AND FEDERAL REGULATIONS. THE MAXIMUM CROSS FALL SHALL BE 2% (1' IN 50') AND THE MAXIMUM SLOPE FOR INGRESS/EGRESS ALONG THE ROUTE SHALL BE 5% (1' IN 20'), AND A 2% MAXIMUM SLOPE IN ANY DIRECTION MUST BE MAINTAINED WITHIN THE FIRST 5' FROM ANY ENTRY OR EXIT OF A BUILDING OR LANDING AREA.

13. FINAL PAVING, CURB AND SIDEWALK ELEVATIONS SHALL BE PLACED AT THE PROPOSED GRADE ELEVATIONS WITHIN PLUS OR MINUS 0.05 FEET.

14. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.

15. IF REQUIRED BY CONSTRUCTION, POWER POLES TO BE BRACED AND/OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

16. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.

17. DRAINAGE SHALL BE MAINTAINED AWAY FROM ALL FOUNDATIONS, BOTH DURING AND AFTER CONSTRUCTION.

18. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.

19. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).

20. REFER TO THE PAVING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION RELATED TO SAID CONSTRUCTION.

21. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT BOND AND THREE WAY CONTRACTS TO THE CITY AND OWNER AS REQUIRED.

WATER AND SANITARY SEWER GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE CITY OF DURANT STANDARD CONSTRUCTION SPECIFICATIONS.

2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS.

3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.

7. NOT USED.

8. ALL WATER MAINS 12" IN DIAMETER OR LESS SHALL BE DUCTILE IRON CLASS 51 WITH CATHODIC PROTECTION (8 MIL. POLYWRAP) OR PVC C-900, DR 14, CLASS 200 (DR 18, CLASS 150 IF 8 INCHES OR LESS).

9. ALL WATER MAINS UNLESS OTHERWISE NOTED SHALL HAVE A MINIMUM COVER OF 48 INCHES (4" THRU 8"); 60 INCHES (10" THRU 12"); 72 INCHES (14 INCHES AND LARGER) TO THE TOP OF PIPE BELOW FINISHED GRADES.

10. ALL WATER SERVICES TO BE INSTALLED IN ACCORDANCE TO CITY REQUIREMENTS.

11. ALL SANITARY SEWER PIPE TO BE PVC SDR-35, UNLESS OTHERWISE NOTED.

12. CONTRACTOR TO TEST WATER AND SANITARY SEWER LINES IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.

13. ALL METER BOXES TO BE LOCATED IN NON-TRAFFIC AREAS.

14. FIRE SPRINKLER LINE TO BE SIZED AND INSTALLED BY A STATE LICENSED FIRE SPRINKLER CONTRACTOR.

15. FIRE HYDRANTS SHALL BE PLACED 3 FEET FROM THE BACK OF CURB LOCATED AS SHOWN ON THE PLANS. THE FIRE HYDRANT SHALL BE CITY APPROVED AND PAINTED TO BE COLOR CODED PER CITY REQUIREMENTS.

16. ALL UTILITIES INSTALLED OUTSIDE OF AN EASEMENT SHALL BE INSTALLED BY A LICENSED PLUMBER AND INSPECTED BY THE CITY CODE ENFORCEMENT.

17. ALL DUCTILE IRON FITTINGS SHALL BE OF THE MECHANICAL JOINT TYPE OR SLIP JOINT AND SHALL BE CLASS D, OR CLASS 250 ON SIZES 12 INCHES AND SMALLER IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-110-64 AND C-111-64.

18. CONCRETE BLOCKING SHALL BE PROVIDED ON WATER MAINS AT ALL TEES, BENDS AND FIRE HYDRANTS PER STANDARD CITY SPECIFICATIONS. PAYMENT FOR CONCRETE BLOCKING SHALL BE SUBSIDIARY TO PIPE INSTALLATION AND SHALL BE INCLUDED IN THE BID PRICE THEREOF.

19. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.

20. TRENCH BACK FILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE CITY STANDARD SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT.

21. NOT USED.

WATER AND SANITARY SEWER GENERAL NOTES CONT.:

22. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.

23. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.

24. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).

25. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES FLOW LINES PRIOR TO BEGINNING CONSTRUCTION.

26. CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACK FILL. AFTER CURB AND PAVING IS COMPLETE, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OR PAVING WITH A RED LETTER 'S' IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS.

27. THE CONTRACTOR TO INSTALL THE WATER SERVICES TO A POINT 2 FEET FROM BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING HAS BEEN COMPLETED AND THE FINE GRADING BEHIND THE CURB AND PAVING AREAS. EACH SERVICE LOCATION SHALL BE MARKED ON THE CURB OR PAVING WITH A BLUE LETTER "W" IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS AND TIED TO PROPERTY CORNERS ON THE "RECORD DRAWINGS"

28. VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER FINAL GRADING AND ALIGNMENT HAS BEEN COMPLETED, THE CONTRACTOR SHALL POUR A CONCRETE PAD BLOCK (24"X24"X6") AROUND ALL VALVES AS TO PROVIDE THE FINISHED GRADE OF THE PAD TO BE EQUAL TO THE FINISHED GRADES ADJACENT TO THE VALVES.

29. WHEN WATER AND SANITARY SEWER MAINS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE (9) FEET TO EACH OTHER IN ALL DIRECTIONS AS MEASURED FROM THE OUTSIDE OF THE PIPES. PARALLEL LINES SHALL BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED OR MAINTAINED, THE FOLLOWING GUIDELINES SHALL APPLY:

A. WHERE A SANITARY SEWER PARALLELS A WATER LINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF 2 FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER.

B. WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF SIX INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF SEWER PIPE MUST BE CENTERED ON THE WATERLINE.

C. WHERE A SANITARY SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM OF TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.

D. WHERE A SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.

E. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO BE INSTALLED PARALLEL TO AN EXISTING SEWER THAT SHOWS NO EVIDENCE OF LEAKAGE AND THE WATERLINE IS INSTALLED ABOVE THE SEWER A MINIMUM OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBPARAGRAPHS (A) OR (D) OF THIS PARAGRAPH.

F. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO CROSS OVER (BY TWO FEET OR MORE) EXISTING SEWER SHOWING NO EVIDENCE OF LEAKAGE. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THEN THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBSECTIONS (C) OF (D) OF THIS PARAGRAPH.

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KEY PLAN

REVISIONS

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GENERAL NOTES SHEET

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