APPENDIX A

CITY AGREEMENTS

AGREEMENT ESTABLISHING SEWAGE AND WASTEWATER TREATMENT SERVICES FROM THE PAYSON WASTEWATER TREATMENT PLANT TO WOODLAND HILLS

THIS AGREEMENT (the "Agreement"), is made and entered into by and between WOODLAND HILLS CITY (WOODLAND HILLS) 170 West Autumn Leaf Circle, Woodland Hills, Utah 84653 and PAYSON CITY (PAYSON) 439 West Utah Avenue, Payson, Utah 84651, both entities are political subdivisions of the State of Utah.

WITNESSETH

WHEREAS, WOODLAND HILLS entered into a Memorandum of Understanding with PAYSON on September 19, 2005 wherein WOODLAND HILLS voluntarily determined that the interests and welfare of its citizens would best be served by having PAYSON provide sewage and wastewater treatment services to WOODLAND HILLS; and

WHEREAS, the Memorandum of Understanding provided that PAYSON would follow its normal procedures in designing and engineering a wastewater trunk line sufficient to service WOODLAND HILLS and Elk Ridge City, a neighboring community; and

WHEREAS, the design and engineering phase has been completed and the parties desire to enter into the following service agreement.

NOW, THEREFORE, be it mutually covenanted and agreed as follows:

SECTION ONE EFFECTIVE DATE, TERM AND DURATION

This Agreement shall be effective on the date it is signed by the parties, and shall continue for a period of up to fifty (50) years, unless sooner terminated as provided herein. Unless otherwise specifically provided, this Agreement shall automatically renew for additional five-year periods after the initial fifty (50) year term has expired.

SECTION TWO PURPOSE

This Agreement is established for the purpose of providing sewage and wastewater treatment services for WOODLAND HILLS through the Payson City sewage and wastewater treatment system.

SECTION THREE SCOPE OF SERVICE

PAYSON shall provide sewage and wastewater treatment services to the portions of WOODLAND HILLS commonly referred to as "the Meadows" and the Ted Hanks property.

WOODLAND HILLS agrees to limit the number of connections to the PAYSON wastewater treatment plant to Fifteen Hundred (1,500) total connections, unless otherwise agreed to in writing.

SECTION FOUR MANNER OF FINANCING

PAYSON shall finance the design, engineering and construction of the sewer trunk line by means of a revenue bond.

WOODLAND HILLS agrees that for each new equivalent residential unit (ERU) that is connected to the wastewater trunk line, WOODLAND HILLS agrees to pay to PAYSON an impact fee that is currently set at Two Thousand Five Hundred dollars (\$2,500). Payment shall be remitted within thirty-days (30) of being connected.

WOODLAND HILLS agrees to pay PAYSON a monthly fee of Twenty-Six dollars (\$26) per ERU connection. This fee is based upon the average usage for a Payson City resident less a one dollar discount per connection per month because Woodland Hills assumes responsibility for billing within the limits of Woodland Hills City. There is also a three (\$3) dollar per month charge for Payson City to maintain and repair the wastewater main lines within the limits of Woodland Hills City. Either party may request a review of the average usage of a Payson City resident. Only one review will be conducted annually. If the review shows a change in the average usage, the monthly fee shall reflect the change in the service fee. Payment shall be remitted to PAYSON monthly. WOODLAND HILLS shall be responsible to inform PAYSON by remitting the number of connections that are being served each month with the monthly payment. WOODLAND HILLS agrees to allow PAYSON to inspect and verify the number of active accounts upon request.

The parties understand and agree that the impact fee and the monthly service fee are subject to change by the Payson City Council. However, the cost to WOODLAND HILLS will only increase proportionate to the increase to the Payson City residents or by way of a review of the average Payson City usage as described above.

SECTION FIVE FILING OF AGREEMENT

A copy of this Agreement shall be placed on file in the Office of the City Recorder of each City and shall remain on file for public inspection during the term of this Agreement.

SECTION SIX OPERATION AND MAINTENANCE

WOODLAND HILLS shall own and Payson City shall operate, repair and maintain the wastewater service mains that are connected to the wastewater trunk line located inside their municipal limits. PAYSON agrees to repair breaks and line failures of the service mains. PAYSON

agrees to own, operate and maintain the wastewater trunk line regardless of whether it is located within the municipal limits of Woodland Hills. Individual service laterals from each resident to the wastewater service main is the responsibility of the resident.

SECTION SEVEN NOTICE OF DEFAULT; CORRECTIVE ACTION

The failure of any party to comply with each and every term and condition of this Agreement shall constitute a breach of this Agreement. The defaulting party shall have thirty (30) days after receipt of written notice from the other party of any breach to correct the conditions specified in the notice, or if the corrections cannot be made within the thirty (30) day period, within a reasonable time if corrective action is commenced within thirty (30) days after receipt of the notice.

SECTION EIGHT RIGHTS AND REMEDIES

In the event of any breach hereunder and after the lapse of the cure period as per Section Six above, the non-breaching party shall have all the rights and remedies available under the laws of the State of Utah in effect. The rights and remedies of the parties hereto shall not be mutually exclusive, but shall be cumulative in all respects. The respective rights and obligations of the parties hereunder shall be enforceable in equity as well as at law or otherwise.

SECTION NINE GOVERNING LAW, JURISDICTION, AND VENUE

All questions with respect to the construction of this Agreement and all rights and liabilities of the parties shall be governed by the laws of the State of Utah. Jurisdiction and venue for the enforcement of this Agreement shall be found in the courts of Utah County, State of Utah.

SECTION TEN COSTS OF ENFORCEMENT

In the event of a breach of this Agreement, the non-breaching party shall be entitled to recover from the breaching party all of the non-breaching party's costs (including, but not limited to, courts fees and expert witness costs and attorneys fees associated with the enforcement of this Agreement.

SECTION ELEVEN NOTICE

Any written notice which must or may be given relating to this Agreement shall be sufficient if mailed postage prepaid, registered or certified mail, in the United States mail addressed to a party at the address given above. Notice shall be mailed to the attention of the City Mayor at the above address. Either party shall notify the other to designate a different address for mailing.

SECTION TWELVE TERMINATION

Any party may terminate this Agreement after the initial term at any time by giving the other party at least one year prior written notice of the same.

SECTION THIRTEEN GENERAL PROVISIONS

- A. <u>Severability.</u> In the event that any condition, covenant, or other provision herein contained is held to be invalid or void by any court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall in no way affect any other covenant or condition herein contained. If such condition, covenant, or other provision shall be deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.
- **B.** Entire Agreement. This Agreement contains the entire agreement between the parties. No promise, representation, warranty, or covenant not included in this Agreement has been or is relied upon by the parties. All prior understandings, negotiations, or agreements are merged herein and superseded hereby.
- **C.** <u>Amendments.</u> This Agreement may be modified only by a writing signed by each of the parties hereto.
- **D.** <u>Covenants and Conditions.</u> Each provision of this Agreement performable by each City shall be deemed to be both a covenant and a condition.
- E. <u>Not Assignable.</u> This Agreement is specific to the parties hereto and is therefore not assignable.
- **F.** Binding Effect. This Agreement shall bind the parties and their respective successors and assigns.
- G. <u>Captions</u>. The captions to the various Sections of this Agreement are for convenience and ease of reference only and do not define, limit, augment, or describe the scope, content, or intent of this Agreement or any part or parts of this Agreement.
- **H.** Time. Time is of the essence of each term, provision, and covenant of this Agreement.
- I. <u>Counterparts.</u> This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.
- J. <u>Gender and Number.</u> The singular number includes the plural whenever the context so indicates. The neuter gender includes the feminine and masculine, the masculine includes the

feminine and neuter, and the feminine includes the masculine and neuter, and each includes corporation, limited liability company, partnership, or other legal entity when the context so requires. The word "person" means person or persons or other entity or entities or any combination of persons and entities.

- **K.** <u>Waiver or Forbearance</u>. No delay or omission in the exercise of any right or remedy by any party hereto shall impair such right or remedy or be construed as a waiver. Any waiver of any breach must be in writing and shall not be a waiver of any other breach concerning the same or any other provision of this Agreement.
- L. <u>No Partnership, Joint Venture, or Third Party Rights</u>. Except as specifically set forth herein, nothing in this Agreement shall be construed as creating any partnership, joint venture, or business arrangement among the parties hereto, nor any rights or benefits to third parties.

IN WITNESS WHEREOF, the parties have signed and executed this AGREEMENT, after resolutions duly and lawfully passed, on the dates listed below.

DATED this 22 day of august, 2006.

PAYSON CITY

By: 15 11 5 BURTIS BILLS, Mayor

ATTEST:

JEANETTE CURTIS, City Recorder

TAH THE TENT OF TH

WOODLAND HILLS CITY

TOBY HARDING, Mayor

ATTEST:

City Recorder

AGREEMENT ESTABLISHING SEWAGE AND WASTEWATER TREATMENT SERVICES FROM THE PAYSON WASTEWATER TREATMENT PLANT TO ELK RIDGE

THIS AGREEMENT (the "Agreement"), is made and entered into by and between ELK RIDGE CITY (ELK RIDGE) 80 East Park Drive, Elk Ridge, Utah 84651 and PAYSON CITY (PAYSON) 439 West Utah Avenue, Payson, Utah 84651, both entities are political subdivisions of the State of Utah.

<u>WITNESSETH</u>

WHEREAS, ELK RIDGE entered into a Memorandum of Understanding with PAYSON on September 19, 2005 wherein ELK RIDGE voluntarily determined that the interests and welfare of its citizens would best be served by having PAYSON provide sewage and wastewater treatment services to ELK RIDGE; and

WHEREAS, the Memorandum of Understanding provided that PAYSON would follow its normal procedures in designing and engineering a wastewater trunk line sufficient to service ELK RIDGE and WOODLAND HILLS, a neighboring community; and

WHEREAS, the design and engineering phase has been completed and the parties desire to enter into the following service agreement.

NOW, THEREFORE, be it mutually covenanted and agreed as follows:

SECTION ONE EFFECTIVE DATE, TERM AND DURATION

This Agreement shall be effective on the date it is signed by the parties, and shall continue for a period of up to fifty (50) years, unless sooner terminated as provided herein. Unless otherwise specifically provided, this Agreement shall automatically renew for additional five-year periods after the initial fifty (50) year term has expired.

SECTION TWO PURPOSE

This Agreement is established for the purpose of providing sewage and wastewater treatment services for ELK RIDGE through the Payson City sewage and wastewater treatment system.

SECTION THREE SCOPE OF SERVICE

PAYSON shall provide sewage and wastewater treatment services to the all of the incorporated municipal limits of ELK RIDGE with the exception of all lands located East of 1600 West; North of 11200 South; South of the High Line Canal and West of Loafer Canyon Drive. The lands located within the above-described area cannot be sewered without the effluent being lifted to the wastewater trunk line.

Therefore the above-described area shall be serviced by Salem City, a neighboring community. ELK RIDGE agrees to limit the number of connections to the PAYSON wastewater treatment plant to Fifteen Hundred (1,500) total connections, unless otherwise agreed to in writing.

SECTION FOUR MANNER OF FINANCING

PAYSON shall finance the design, engineering and construction of the sewer trunk line by means of a revenue bond.

ELK RIDGE agrees to connect its existing customers to the newly constructed wastewater trunk line when it is constructed and comes online. ELK RIDGE also agrees to pay to PAYSON Two Hundred and Fifty Thousand dollars (\$250,000) for its existing customers that are connected to the trunk line. The payment shall be paid to PAYSON annually over a five-year period of Fifty Thousand dollars (\$50,000) per year. For each new equivalent residential unit (ERU) connected to the wastewater trunk line, ELK RIDGE agrees to pay to PAYSON an impact fee that is currently set at Two Thousand Five Hundred dollars (\$2,500). PAYSON agrees to allow ELK RIDGE to retain three hundred (\$300) of the impact fee for the impact to ELK RIDGE'S wastewater system. Payment shall be remitted within thirty-days (30) of being connected.

ELK RIDGE agrees to pay PAYSON a monthly fee of Twenty-Two dollars (\$22) per ERU connection. This fee is based upon the average usage for a Payson City resident less a two dollar discount per connection per month because Elk Ridge assumes responsibility for billing and repair of the wastewater main lines within the limits of Elk Ridge City. Either party may request a review of the average usage of a Payson City resident. Only one review will be conducted annually. If the review shows a change in the average usage, the monthly fee shall reflect the change in average usage. Payment shall be remitted to PAYSON monthly. ELK RIDGE shall be responsible to inform PAYSON by remitting the number of connections that are being served each month with the monthly payment. ELK RIDGE agrees to allow PAYSON to inspect and verify the number of active accounts upon request.

The parties understand and agree that the impact fee and the monthly service fee are subject to change by the Payson City Council. However, the cost to ELK RIDGE will only increase proportionate to the increase to the Payson City residents or by way of a review of the average Payson City usage as described above.

SECTION FIVE FILING OF AGREEMENT

A copy of this Agreement shall be placed on file in the Office of the City Recorder of each City and shall remain on file for public inspection during the term of this Agreement.

SECTION SIX OPERATION AND MAINTENANCE

ELK RIDGE shall own and repair the wastewater service mains and Payson City shall operate and maintain the wastewater service mains that are connected to the wastewater trunk line located inside their municipal limits. Elk Ridge agrees to repair breaks and line failures of the service mains. PAYSON agrees to own, operate and maintain the wastewater trunk line regardless of whether it is located within the municipal limits of Elk Ridge. Individual service laterals from each resident to the wastewater service main is the responsibility of the resident.

SECTION SEVEN NOTICE OF DEFAULT; CORRECTIVE ACTION

The failure of any party to comply with each and every term and condition of this Agreement shall constitute a breach of this Agreement. The defaulting party shall have thirty (30) days after receipt of written notice from the other party of any breach to correct the conditions specified in the notice, or if the corrections cannot be made within the thirty (30) day period, within a reasonable time if corrective action is commenced within thirty (30) days after receipt of the notice.

SECTION EIGHT RIGHTS AND REMEDIES

In the event of any breach hereunder and after the lapse of the cure period as per Section Six above, the non-breaching party shall have all the rights and remedies available under the laws of the State of Utah in effect. The rights and remedies of the parties hereto shall not be mutually exclusive, but shall be cumulative in all respects. The respective rights and obligations of the parties hereunder shall be enforceable in equity as well as at law or otherwise.

SECTION NINE GOVERNING LAW, JURISDICTION, AND VENUE

All questions with respect to the construction of this Agreement and all rights and liabilities of the parties shall be governed by the laws of the State of Utah. Jurisdiction and venue for the enforcement of this Agreement shall be found in the courts of Utah County, State of Utah.

SECTION TEN COSTS OF ENFORCEMENT

In the event of a breach of this Agreement, the non-breaching party shall be entitled to recover from the breaching party all of the non-breaching party's costs (including, but not limited to, courts fees and expert witness costs and attorneys fees associated with the enforcement of this Agreement.

SECTION ELEVEN NOTICE

Any written notice which must or may be given relating to this Agreement shall be sufficient if mailed postage prepaid, registered or certified mail, in the United States mail addressed to a party at the address given above. Notice shall be mailed to the attention of the City Mayor at the above address. Either party shall notify the other to designate a different address for mailing.

SECTION TWELVE TERMINATION

Any party may terminate this Agreement after the initial term at any time by giving the other party at least one year prior written notice of the same.

SECTION THIRTEEN GENERAL PROVISIONS

- A. <u>Severability.</u> In the event that any condition, covenant, or other provision herein contained is held to be invalid or void by any court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall in no way affect any other covenant or condition herein contained. If such condition, covenant, or other provision shall be deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.
- **B.** Entire Agreement. This Agreement contains the entire agreement between the parties. No promise, representation, warranty, or covenant not included in this Agreement has been or is relied upon by the parties. All prior understandings, negotiations, or agreements are merged herein and superseded hereby.
- C. <u>Amendments.</u> This Agreement may be modified only by a writing signed by each of the parties hereto.
- **D.** <u>Covenants and Conditions.</u> Each provision of this Agreement performable by each City shall be deemed to be both a covenant and a condition.
- E. <u>Not Assignable.</u> This Agreement is specific to the parties hereto and is therefore not assignable.
- **F.** Binding Effect. This Agreement shall bind the parties and their respective successors and assigns.
- G. <u>Captions</u>. The captions to the various Sections of this Agreement are for convenience and ease of reference only and do not define, limit, augment, or describe the scope, content, or intent of this Agreement or any part or parts of this Agreement.
- **H.** <u>Time.</u> Time is of the essence of each term, provision, and covenant of this Agreement.

- I. <u>Counterparts.</u> This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.
- J. Gender and Number. The singular number includes the plural whenever the context so indicates. The neuter gender includes the feminine and masculine, the masculine includes the feminine and neuter, and the feminine includes the masculine and neuter, and each includes corporation, limited liability company, partnership, or other legal entity when the context so requires. The word "person" means person or persons or other entity or entities or any combination of persons and entities.
- **K.** <u>Waiver or Forbearance</u>. No delay or omission in the exercise of any right or remedy by any party hereto shall impair such right or remedy or be construed as a waiver. Any waiver of any breach must be in writing and shall not be a waiver of any other breach concerning the same or any other provision of this Agreement.
- L. <u>No Partnership, Joint Venture, or Third Party Rights</u>. Except as specifically set forth herein, nothing in this Agreement shall be construed as creating any partnership, joint venture, or business arrangement among the parties hereto, nor any rights or benefits to third parties.

IN WITNESS WHEREOF, the parties have signed and executed this AGREEMENT, after resolutions duly and lawfully passed, on the dates listed below.

DATED this day of Jack, 2006.

PAYSON CITY

By: BURTIS BILLS, Mayor

ATTEST:

By: LANKTE CURTIS, City Recorder

ELK RIDØE CITY

DENNIS DUNN, Mayor

ATTEST:

JANCE DAVIS, City Recorder

APPENDIX B

DESIGN STANDARDS

SECTION 5: SANITARY SEWER

1. SEWER DESIGN STANDARDS

a. All sanitary sewer installation and design shall comply with the Payson City's Wastewater Collection System Master Plan, and R317-3-2.

2. HYDRAULIC DESIGN CRITERIA

- a. Sewer lines shall be designed to maintain a flow velocity of two feet per second (2 fps) during peak flows.
- b. Where design velocities are projected to be greater than fifteen feet per second (15 fps), the sewers and manholes shall be protected against displacement by erosion and impact.
- c. For hillside developments, special considerations should be given to sewer pipe and manhole designs:
 - i. Pipes on slopes greater than 15% should have concrete pipe anchors installed at distances no greater than 36'. Pipes on slopes greater than 35% slope should have pipe anchors installed every 24'. An exception to this requirement may be made if the pipe material is fusion welded HDPE, or restrained joint PVC. The location and spacing of anchors on HDPE or restrained joint pipe shall be as directed by the City Engineer.
 - ii. Design of steep slope transitions to mild slopes may require special design considerations as approved by the City Engineer. Manholes where supercritical flow transitions to subcritical should be identified in plans and the method to mitigate hydraulic jumps or turbulence through the manhole should be submitted to the City Engineer for approval.
- d. Sanitary sewers shall be designed to carry the peak discharge based on State of Utah R317-10-9(2)(b) and adapted to Payson City specific indoor use patterns as defined below:
 - i. $Q = 6.95 \times N^{0.64}$, where
 - N = number of equivalent residential units

 Based on an estimated wastewater production (includes infiltration) of 201 gallons per unit OR 56 gallons per person
 - Q = Peak flow in gallons per minute
- e. The Ten States Standard for peaking discharge calculate will also be acceptable as an alternate calculation.

- f. Non-residential wastewater contributions may be converted into a Payson City ERU using estimates from *Wastewater Engineering* (Metcalf and Eddy, latest edition).
- g. Minimum Manning's "n" value is 0.013.
- h. Buoyance of sewers shall be considered and flotation of the pipe shall be prevented with appropriate construction where high groundwater conditions are anticipated.
- i. Velocity Calculations for gravity sewers: Manning's Equation (Gravity):

$$V = \frac{1.486}{n} \times (R_H)^{\frac{2}{3}} \times S^{\frac{1}{2}}$$

Where: V = velocity in feet/second

n = coefficient of roughness (Manning), n = 0.013

S = slope of energy grade line, ft/ft

R_H = hydraulic radius, ft

= <u>cross-sectional area of flow</u> (ft²) or <u>diameter</u> (in.) wetted perimeter 48

3. SANITARY SEWER PIPE SIZE AND TYPE

- a. Sanitary sewer pipes shall be designed such that peak flow depths do not exceed 50 percent of the pipe diameter for pipes 12-inch and smaller; or 65 percent of the pipe diameter for pipes 15-inch or greater.
- b. Minimum main line size shall be eight inches (8") in diameter.
- c. Minimum depth of a sewer main, to top of pipe, will be not less than forty eight (48") below subgrade of roadway.
- d. Sanitary sewers shall be designed of sufficient depth to permit sewer laterals from basements to be connected. Exceptions may be granted in subdivisions or areas in which no basements are to be constructed. A note shall be made on the plat to prohibit basements in these areas.
- e. Allowable sanitary sewer main pipe material for all projects shall be green PVC SDR 35, or High Density Polyethylene (HDPE).
- f. Horizontal clearance to any culinary water line shall be at least 10 feet (10') edge to edge per R309-550 and R317-3-2.
 - i. Any other utility crossing the sewer main shall do so as close to a right angle as possible.

- ii. For waterline crossings, the water shall be a minimum of eighteen inches (18") above the sewer.
- g. Unless otherwise accepted and approved by the City Engineer, the minimum slopes shall be the following:

i.	Eight inch (8") sewer lines:	0.40%
ii.	Ten inch (10") sewer lines:	0.28%
iii.	Twelve inch (12") sewer lines:	0.22%
iv.	Fifteen inch (15") sewer lines:	0.15%
v.	Eighteen inch (18") sewer lines:	0.12%
vi.	Twenty one (21") and larger sewer lines:	0.10%

h. Sewer main lines shall be located along the centerline of the road.

4. SANITARY SEWER MANHOLES

- a. Sewer manholes shall be installed:
 - i. At a maximum spacing of four hundred feet (400').
 - ii. At all changes in grade, size or alignment, and at all intersections with other main lines.
 - iii. At the end of main lines (no cleanouts allowed).
 - iv. Manholes are required on laterals six inches (6") or larger at the intersection with a sewer main line twelve inches (12") in diameter or less.
- b. Sewer manholes shall be sized based on the following:
 - i. Manholes shall conform to APWA Standard Plan 411.
 - ii. Five foot (5') diameter for sewers under twelve inches (12") diameter.
 - iii. Five foot (5') diameter for sewers twelve inches (12") diameter and larger, or when three (3) or more pipes intersect the manhole.
 - iv. Five foot (5') diameter manholes requires at three way manholes, 90° bends, over fifteen inches (15") and eighteen inches (18") pipes, manholes over fifteen feet (15') deep, and in manholes with over one foot (1') drop in manhole.
 - v. Six foot (6') diameter manholes required for pipes twenty four inches (24") and greater, at three (3) way manholes, where the deflection exceeds 90°, and where height of manhole exceeds sixteen feet (16').
- c. Sanitary sewer thirty inches (30") frame and cover shall conform to APWA Standard Plan 402.
- d. Sanitary sewer cover collar for sanitary sewer manhole shall comply with APWA Standard Plan 413.

- e. Manholes shall be placed within ten feet (10') of the upstream and downstream ends of casing pipes.
- f. The minimum elevation difference between the flow line of incoming and outgoing lines in manholes (minimum drop) as calculated at the inside manhole wall shall meet the more restrictive of the following criteria (or as directed by the City Engineer):
 - i. Slope of connecting lines: Minimum slope to 5%.
 - 1. Less than 5%: 0.1'
 - 2. 5% and above: Drop required to match slope of connecting lines. Provide smooth transition through manhole.
 - ii. Angle between incoming and outgoing line less than 110 degrees: 0.5'.
 - iii. A detail of the manhole base, including a section along the length of the flow line, shall be required for manholes with a connecting line with a slope of 20% or greater, or when requested by City personnel.
 - iv. To approximately maintain the flow energy gradient in manholes where pipe diameters change, the elevation of the 0.8 depth of the incoming pipe shall be placed at the same elevation as the 0.8 depth of the outgoing pipe, with additional allowance for the drop through manholes as discussed above.
 - v. Where a wastewater main line intersects with a manhole located on a major collector or trunk line (12" or greater), the crown of the incoming wastewater line shall match the crown of the collector or trunk line or whichever criteria is stricter as discussed above.

5. SANITARY SEWER LATERALS

- a. Minimum sanitary sewer lateral size for residential land use shall be four inches (4") in diameter.
- b. Minimum sanitary sewer lateral size for commercial, industrial and manufacturing land uses shall be 6 inches (6") in diameter.
- c. Lateral size shall be based on the number of fixture units in the residence and slope of lateral. Up to ninety (90) fixture units shall be allowed per each four inch (4") lateral set at a two percent (2%) slope.
- d. No roof drains, storm drains, foundation drains, or sub-drains shall be connected to the sanitary sewer system.
- e. The minimum slope for a four inch (4") lateral shall be 2.00%.
- f. The minimum slope for a six inch (6") lateral shall be 1.00%
- g. Connection of sanitary sewer laterals shall be at 2:00 and 10:00 o'clock.

- h. Cleanouts shall be required every 100 feet (100') and at angle points.
- i. Pretreatment will generally be required for each use producing a sewer load different from a standard residential unit. Grease traps shall conform to APWA Standard Plan 441.
- j. Sanitary sewer lateral connections shall comply with APWA Standard Plan 431.
- k. All sanitary sewer design must comply with the Payson City Standards or as approved by the City Engineer.
- 1. All unused sanitary sewer service line shall be abandoned at sewer main line

6. EASEMENTS

- a. Minimum twenty foot (20') wide public utility easements (PUE) are required for all publicly owned and maintained sewer main lines located on private property.
- b. Sewer easements shall extend ten feet (10') beyond dead end manholes.

7. SEWAGE LIFT STATIONS

- a. Sewage lift stations, where required, shall be designed to conform to all requirements of the State Administrative Rules, and shall be approved by the City Engineer.
- b. Pumps for lift stations should be sized to accommodate peak flows as calculated using the Tens State Standard for its given service area.
- c. Velocity of force main shall be never less than three feet per second(3 fps).
- d. Air relief valves may be required to prevent air lock. Air vent shall be filtered to prevent odor with an approved device.
- e. No segment of force main shall have zero slope.
- f. Force main shall be installed with tracer wire.
- g. Lift stations shall be built where required to pump sewage from low elevation areas into an existing or proposed gravity system.
- h. Lift stations shall be enclosed in a permanent structure as approved by the City Engineer.
- i. Lift station enclosures shall be sized adequately to accommodate all the required pumps, wet wells, all required plumbing items, electrical equipment, and all the appurtenant items, as approved by the City Engineer.
- j. Equipment for a SCADA system shall be provided inside the lift station. The SCADA system shall be compatible to the City's system and shall be approved by the City Engineer or his designee.
- k. Property for lift stations shall be deeded to the City, if it will be owned and maintained by the City, or the Home Owner Association, or Business Owner

- Association, if maintained by a private entity. Sufficient property shall be provided to allow for full reconstruction of the lift station on site.
- 1. Lift stations shall be provided with standby power systems as required by the State Code.

APPENDIX C

MAP BOOK





























































