APWA 2007

STANDARDS AND SPECIFICATIONS

LOGAN CITY AMENDMENTS

REVISION 12 MARCH 2008

SECTION 01 43 00
QUALITY ASSURANCE
AMMENDMENTS

PART 1 GENERAL

Change

1.3 INSTALLER

"B. Certificates: When required or request by ENGINEER, submit copy of installer's certifications issued by certification agency."

To

1.3 INSTALLER

"B. Certificates: When required or requested by ENGINEER, submit copy of installer's certifications issued by certification agency."

Change

1.4 MANUFACTURER

"C. Certificates: When required or request by ENGINEER, prove that manufacturer's products meet or exceeds specified requirements."

To

1.4 MANUFACTURER

"C. Certificates: When required or requested by ENGINEER, prove that manufacturer's products meet or exceeds specified requirements."

SECTION 01 43 40
RESIDENT SUPERINTENDENT
AMMENDMENTS

PART 1 GENERAL

Change

1.4 CONTRACTOR'S DUTIES

"C. Replace the Resident Superintendent with one acceptable to the ENGINEER when directed by the ENGINEER."

To

1.4 CONTRACTOR'S DUTIES

"C. Replace the Resident Superintendent with one acceptable to the ENGINEER or OWNER when directed by the ENGINEER or OWNER."

SECTION 01 45 00
QUALITY CONTROL
AMMENDMENTS

PART 1 GENERAL

Change

1.4 TESTING AGENCY

"F. Report report any non-compliance of materials and mixes to CONTRACTOR and ENGINEER immediately."

To

1.4 TESTING AGENCY

"F. Report any non-compliance of materials and mixes to CONTRACTOR and ENGINEER immediately."

SECTION 01 55 26
TRAFFIC CONTROL
AMMENDMENTS

PART 1 GENERAL

1.2 REFERENCES

Delete

"C. Work Zone Traffic Control Guide: Publication of the Utah LTAP Center."

1.3 SUBMITTALS

Change

"A. Traffic control plan within 10 days of receiving the Notice of Intent to Award"

To

"A. Traffic control plan within 10 days of receiving the Notice of Intent to Award on City of Logan projects, or upon submitting application for a Work in the Right-of-Way permit."

Change

"1.4 TRAFFIC CONTROL PLAN

A. Create a traffic control plan using the following resources. Resolve discrepancies between resources in descending order shown.

1. MUTCD
2. Work Zone Traffic Control Guide
3. ATSSA"

To

"1.4 TRAFFIC CONTROL PLAN

A. Create a traffic control plan in compliance with the MUTCD. Other sources may be referenced, but in no way displace the MUTCD."

PART 2 PRODUCTS

2.1 PAVEMENT MARKINGS, SIGNS, BARRICADES

Change

2.1 PAVEMENT MARKINGS, SIGNS, BARRICADES

"A. MUTCH"

To

2.1 PAVEMENT MARKINGS, SIGNS, BARRICADES

"A. MUTCD"

SECTION 01 57 00
TEMPORARY CONTROLS
AMMENDMENTS

PART 1 GENERAL

Add

"1.2 DESIGN

"A. Provide Professional Engineer or Professional Landscape Architect stamped design drawings and details, erosion control plan, and Storm Water Pollution Prevention Plan (SWPPP) identifying temporary controls. Deviation from the requirements in the documents provided must be approved by ENGINEER and OWNER prior to being implemented.

B. Where and if required, the CONTRACTOR shall implement additional measures to protect the public, environment, or surrounding property, either above or below ground. Implementation shall be in accordance to established City of Logan Best Management Practices (BMPs) and Standard Details, or as required to comply with the Logan City Code and other applicable laws.

C. Where alternative BMPs to the City of Logan BMPs and CONTRACT documents are preferred by the Contractor, the alternatives proposed must:
   1. Be submitted to the ENGINEER in writing, and allow at least one week for approval,
   2. Provide details of the BMP, identify where the BMP will be used, and quantify the unit amounts for the BMP to be used.
   3. Be stamped by a licensed professional engineer or professional landscape architect, and
   4. Include an installed unit cost for the BMP.

D. Approval of any alternatives shall be in accordance with Section 01 24 00 VALUE ANALYSIS.

1.3 FINES AND PENALTIES

A. CONTRACTOR is responsible to install, maintain, and ensure the adequacy of the temporary controls.

B. CONTRACTOR is solely responsible for any fines or penalties assessed under CITY, State, or Federal law for non-compliance resulting from improper maintenance of Temporary Controls, improper or lack of installation of Temporary Controls, or other negligence.

1.4 PERMITS

A. Obtain all necessary permits from the required CITY, State, and Federal Agencies and pay any required fees prior to initiating any work on the site including in part:

a. Notice of Intent (NOI) to construct if the site is larger than 1.0 acre from the Utah Division of Water Quality.
b. Notice of Termination (NOT) to end construction if the site requires a NOI.
c. Stream Alteration Permit from the State Engineers Office, Division of Water Rights if disturbing a natural water body in any way.
d. Groundwater discharge permit from the Utah Division of Water Quality if groundwater is being pumped to discharge from the site.
e. Construction dewatering permit from the Utah Division of Water Quality if water is being discharged from the site.
f. Wetlands Mitigation Permit from the United States Army Corp of Engineers if any wetlands are on the site.
g. Fire Hydrant Use Permit from the Logan City Water Department if water is used from a temporary connection or a fire hydrant for any purpose.
h. Any other permits that may be required by City, State, or Federal agencies.

B. Not obtaining these permits may result in fines, penalties, or criminal charges resulting from negligence.

1.5 SUBMITTALS

A. Copy of all permits (1 copy of each)
B. SWPPP (in digital .pdf format)
C. Self inspection reports upon request of ENGINEER."

PART 2 PRODUCTS

Change

2.1 MATERIALS

"A. Temporary Materials: CONTRACTOR's choice."

To

2.1 MATERIALS

"A. Temporary Materials: CONTRACTOR's choice in accordance with standards and specifications. Materials used must provide the level of controls required."

PART 3 EXECUTION

Change

3.1 NOISE CONTROL

"B. Control construction noise in residential areas from 9:00 pm to 7:00 am."

To

3.1 NOISE CONTROL

"B. Control construction noise from 9:30 pm to 7:00 am, Holidays, and Sundays.

C. Comply with City of Logan Ordinance, Title 8.16, Sound and Vibration."

Add

3.2 DUST AND MUD CONTROL

"C. Comply with all requirements of the Storm Water Pollution Prevention Plan.

D. Install a tracking pad in accordance with City of Logan Standard Details as required in contract documents or as directed by ENGINEER.

E. Clean site entrance and exits regularly and daily in compliance with the erosion control plan and SWPPP."

Add

3.3 SURFACE WATER CONTROL

"F. Install and maintain all BMPs as identified in the SWPPP and the Erosion Control Plan in the construction drawings.

G. Maintain all surface water flow paths free from obstructions and debris including materials stored on site.

H. Stabilize site at the end of construction prior to demobilization and project close out in accordance with contract drawings."

Change

3.4 GROUNDWATER CONTROL

"A. Provide a dewatering system sufficient to maintain Excavations and foundations dry and free of water on a 24 hour basis.

B. Notify ENGINEER in writing, if groundwater conditions differ from conditions shown in the Bidding Documents, or in any soil test data that has been supplied.

C. Remove all dewatering facilities when no longer required.

D. Dispose of water in a manner that will not cause damage to adjacent areas or facilities."

To

3.4 GROUNDWATER CONTROL

"A. Obtain effected property owner permission to discharge water prior to initiating work. Provide a copy of this permission, in writing, to ENGINEER.

B. Provide a dewatering system sufficient to maintain Excavations and foundations dry and free of water on a 24 hour basis.

C. Notify ENGINEER in writing, if groundwater conditions differ from conditions shown in the Bidding Documents, or in any soil test data that has been supplied.

D. Remove all dewatering facilities when no longer required.

E. Dispose of water in a manner that will not cause damage to adjacent areas or facilities.

F. Comply with SWPPP BMP's, contract documents, General Permit, and all other permit requirements."

Add

3.5 POLLUTION CONTROL

"D. Identify with signing and other appropriate methods a storage area and containment location on site to store all fuels, chemicals, concrete wash outs, and other potential pollutants. Maintain and protect this location during construction and cleanup."

Add

3.6 EROSION CONTROL

"D. Comply with all requirements of the SWPPP and Erosion Control Plan."

SECTION 01 71 13
MOBILZATION AND DEMOBILZATION
AMMENDMENTS

PART 1 GENERAL

Change

1.2 DEFINITIONS

"B. Demobilzation includes removing all construction equipment and debris so site is left clean."

To

1.2 DEFINITIONS

"B. Demobilzation includes removing all construction equipment and debris so site is left clean, and site stabilization and maintenance until site is fully revegetated and restored."

PART 3 EXECUTION

Add

3.2 REMOVALS

"D. File Notice of Termination (NOT) (Section 01 57 00) with Utah Division of Water Quality, Department of Environmental Quality upon permanently stabilizing seventy (70) percent of the construction site. Provide a copy of the NOT to ENGINEER.

SECTION 01 78 39
PROJECT RECORD DOCUMENTS
AMMENDMENTS

PART 1 GENERAL

Change

1.1 SECTION INCLUDES

"A. Requirements for collecting, maintaining, updating, and submitting Record Documents."

To

1.1 SECTION INCLUDES

"A. Requirements for collecting, maintaining, updating, and submitting Record Documents and As-Built Survey."

Add

1.4 DOCUMENTS ON SITE

A. Keep at job site 1 copy of each of the following, if issued for the Work.

"10. Storm Water Pollution Prevention Plan
11. Copy of all required permits and conditions of permits."

Add

1.6 RECORDING

"I. As-Built Survey: Survey all key features constructed. All survey coordinates are to be in NAD 83, NAVD 88 coordinates associated with City of Logan base station. All coordinates are to be State Plane coordinates with at least two City of Logan monuments referenced. Deliver As-Built Survey in accordance with City of

Logan data dictionary for ArcView shapefile(s) and in AutoCAD file(s) compatible with current City of Logan versions."

SECTION 03 11 00
CONCRETE FORMING
AMMENDMENTS

Add

2.1 FORM MATERIALS

"D. Use metal forms for curb and gutter work unless directed otherwise by the City Engineer.

E. Ensure that all edge forms for sidewalk, pavements, and curb and gutters are sufficiently rigid to maintain line and grade."

SECTION 03 30 10
CONCRETE PLACEMENT
AMMENDMENTS

Add

3.1 PREPARATION

"E. Remove and regrade surfaces which contain frost, ice, mud, and water at no cost to the City."

SECTION 05 05 23
BOLTS, NUTS AND ACCESSORIES
AMMENDMENTS

Change

2.1 MATERIALS

"A. Bolts, Nuts, Accessories: Galvanized steel, Section 05 05 10 (except if stainless steel)."

To

2.1 MATERIALS

"A. Bolts, Nuts, Accessories: Zinc plated steel, Section 05 05 10 (except if stainless steel)."

SECTION 06 61 00
ROUGH CARPENTRY
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 13 34 19
METAL BUILDING
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 22 05 00
MECHANICAL GENERAL REQUIREMENTS
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 22 11 13
FACILITY WATER DISTRIBUTION PIPING
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 05 00
ELECTRICAL GENERAL REQUIREMENTS
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 05 13
CONDUCTORS AND CABLES
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 05 33
RACEWAY
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 05 34
ELECTRICAL BOXES AND FITTINGS
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 09 26
PANELBOARD
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 13 13
CIRCUIT BREAKER
AMMENDMENTS

Replace this section with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 29 13
MOTOR CONTROLLER
AMMENDMENTS

Delete this section and replace with project specific specifications compliant with the International Building Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010) and as defined by the Utah Code Annotated, Chapter 56, Title 58.

SECTION 26 56 19
ROADWAY LIGHTING
AMMENDMENTS

Change

"1.2 F. NFPA 70: National Electric Code"

To

"1.2 F. International Electric Code as adopted by the City of Logan (Logan City Code, Title 15, Chapter 4, Section 010)"

Change

All references in this section to the NFPA 70 to the International Electric Code.

SECTION 31 05 13
COMMON FILL
AMMENDMENTS

PART 2 PRODUCTS

Change

"**2.10 SOURCE QUALITY CONTROL**"

To

"**2.11 SOURCE QUALITY CONTROL**"

Add

"**2.10 PIT RUN**

A. Material: Gravel materials must be rock, stone, or other high quality mineral materials in combination.
B. Classifications GW, GM, ASTM D 3282.
C. Material must be well graded as demonstrated by gradation/sieve analysis.
D. Grading requirements as follows.

Sieve	Percent Passing By Weight
8"	100
4"	> 80
No. 4	> 65
No. 10	> 60
No. 200	0 - 5

SECTION 31 05 19
GEOTEXTILES
AMMENDMENTS

PART 3 EXECUTION

3.1 STABILIZING POOR LOAD BEARING SOILS

Add

"K. Cover fabric within 14 days of deployment."

3.5 SUBSURFACE DRAINAGE

Add

"G. Cover fabric within 14 days of deployment."

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROL AMMENDMENTS

PART 1 GENERAL

Change

1.2 Submittals,

A. Submit prior to using:

"3. Grass mixture listing"

To

1.2 Submittals,

A. Submit prior to using:

"3. Revegetation seed mixture listing"

PART 2 PRODUCTS

Change

2.1 MATERIALS

"E. Fiber Mulches: Straw, hay, wood or paper free from weeds or foreign matter detrimental to plant life"

To

"E. Fiber Mulches: Straw, hay, wood, paper, or Engineer approved compost free from weeds or foreign matter detrimental to plant life"

PART 3 EXECUTION

Add

3.4 MULCHES

"C. Apply seed mix onto prepared seed bed prior to applying compost mulch. If compost is used, mix compost with 50 percent wood chips. Incorporate tackifier into compost prior to application. Apply the greater of 1 inch in depth or as specified by the ENGINEER."

SECTION 31 23 16
EXCAVATION
AMMENDMENTS

PART 1 GENERAL

Add

"1.5 Permitting

A. Prior to initiating any excavation within Logan City, obtain the necessary permits. See Logan City Engineering Website for a listing of permits and the related contact information.

PART 3 EXECUTION

Change

3.10 TRENCH EXCAVATION

"D. In public thoroughfares and regardless of Trench depth, limit length of open Trenches to 200 lineal feet day or night. Provide barricading, Section 01 55 26. Protect Trenches over night."

To

"D. In public right of way and regardless of trench depth, trenches shall not be left open overnight. Backfill and compact excavations or provide a bridge plate sufficient for the required traffic loads."

Add

3.10 TRENCH EXCAVATION

"E. If the bottom of the trench is unsuitable for pipe foundation; notify the ENGINEER immediately before performing any further excavation. Upon receiving approval, over excavate a minimum of four (4) inches and replace with granular backfill material, sand, or pea gravel (31 05 13) as directed by ENGINEER."

"F. Protect trench and workers in trench in compliance with Occupational Safety and Health Administration; Labor (29 CFR, Part 1926 Current edition, Subpart P, Excavations)

Change

“3.11 Extra Excavation
3.12 Tolerance”

To

“3.12 Extra Excavation
3.13 Tolerance”

Add

“3.11 Tunneling and Boring

A. Obtain authorization from the City Engineer prior to tunneling or boring under existing curb and gutter, sidewalk, or pavement. The necessary approvals will include special construction requirements including grout backfill or others as appropriate.”

SECTION 31 41 00
SHORING
AMMENDMENTS

PART 1 GENERAL

Change

"1.2 UNIT PRICE – MEASUREMENT AND PAYMENT

1.3 DEFINITIONS

1.4 DESIGN OF PROTECTIVE SYSTEMS

1.5 SUBMITTALS"

To

"1.3 UNIT PRICE – MEASUREMENT AND PAYMENT

1.4 DEFINITIONS

1.5 DESIGN OF PROTECTIVE SYSTEMS

1.6 SUBMITTALS"

Add

"1.2 REFERENCES

A. Use only shoring and shielding systems in compliance with Code of Federal Regulations (CFR) 29, Part 1926, Subpart P, latest revision."

Add

1.5 Design of Protective Systems

"C. Treat all soils within the Boundary of the City of Logan as Class C soils unless more stringent requirements are required as defined in CFR 29, Subpart P."

SECTION 32 01 05
INFORMATION, REGULATORY, AND WARNING SIGNS
AMMENDMENTS

PART 1 GENERAL

Add

1.4 SUBMITTALS

"C. Provide location, type, and signing description for approval by ENGINEER prior to beginning construction."

SECTION 32 01 91
TREE ROOT CUTTING
AMMENDMENTS

PART 3 EXECUTION

Change

3.1 AVOIDING ROOT CUTS

"A. When placing or replacing concrete sidewalk;
1. Adjust alignment to curve around, over or away from tree trunks. Do no proceed in this work until alignment has been reviewed by ENGINEER.
2. Adjust thickness and concrete contraction score marks.

B. When replacing concrete curb and gutter.
1. Adjust thickness and concrete contraction score marks over tree roots.
2. Do not vary gutter invert from straight grade."

To

3.1 AVOIDING ROOT CUTS

"A. When placing or replacing concrete sidewalk;
1. Contact ENGINEER when roots are encountered. Do not adjust alignment to curve around, over or away from tree trunks unless directed by ENGINEER.
2. Adjust thickness and concrete contraction score marks only when directed by ENGINEER.

B. When replacing concrete curb and gutter.
1. Adjust thickness and concrete contraction score marks over tree roots only if directed by ENGINEER.
2. Do not vary gutter invert from straight grade."

Change

3.2 CUTTING TREE ROOTS

"1. Never cut buttress roots [i.e. roots at the broadened based of the tree trunk] without written authorization of arborist. Avoid injury to trunk."

To

3.2 CUTTING TREE ROOTS

"1. Never cut buttress roots [i.e. roots at the broadened based of the tree trunk] without written authorization of CITY FORESTER. Avoid injury to trunk."

SECTION 32 01 93
PRUNING TREES
AMMENDMENTS

PART 3 EXECUTION

Add

1.3 SUBMITTALS

"C. Provide pruning plan to the CITY FORESTER for approval prior to performing any pruning. Identify method of pruning and any paints and disinfectants to be used and methods of application."

SECTION 32 12 05
ASPHALT CONCRETE
AMMENDMENTS

PART 2 PRODUCTS

Change

2.4 Mix Design

B. Selection of Design Aggregate Structure

1. Gradation: Maximum particle size is ½ compacted lift thickness.

"a. Target Gradation Curve must lie within one of the Master Grading Bands in the following table, or

b. If acceptable to ENGINEER, use fractionated proportioning to select or adjust gradation."

To

2.4 Mix Design

B. Selection of Design Aggregate Structure

1. Gradation: Maximum particle size is ½ compacted lift thickness.

"a. Target Gradation Curve: Use DM-3/4N gradation band within Logan City unless approved otherwise by ENGINEER.

b. Do not use fractionated proportioning to select or adjust gradation."

SECTION 32 84 23
UNDERGROUND IRRIGATION SYSTEMS
AMMENDMENTS

PART 2 PRODUCTS

Add

2.2 Valves

"D. Manual Automatic Self Draining Valve:

1. 3 inches and less: Full body brass stop and waste valve with full port ball valve rated for 200 psi static pressure minimum unless higher pressure is specified otherwise by ENGINEER.
2. Greater than 3 inches: Approval required by ENGINEER."

Change

2.4 BACKFLOW PREVENTER

A. Manufacturer's standard, to suit sprinkler system and the following.
"1. Double Check Valve."

To

2.4 BACKFLOW PREVENTER

A. Manufacturer's standard, to suit sprinkler system, BACKFLOW AND CROSS CONNECTION PROTECTION, Supplementary Section 33 11 05, and the following.
"1. Reduced Pressure Assembly."

PART 3 EXECUTION

Change

3.2 INSTALLATION

F. Manual Drains:

"1. Install per manufacturers recommendations on upstream and downstream side of backflow preventers and at lowest point along main pressure pipe."

To

3.2 INSTALLATION

F. Manual Drains:

"1. Install stop and waste valve per manufacturers recommendations on upstream side and manual valve on the downstream side of backflow preventers and manual drains at lowest point along main pressure pipe downstream of backflow preventers."

SECTION 32 93 13
GROUND COVER
AMMENDMENTS

PART 1 GENERAL

Add

1.4 Submittals

"D. All submittals in this section are subject to approval of the City Planning Department and City Forester."

SECTION 32 93 43
TREE
AMMENDMENTS

PART 1 GENERAL

Add

1.3 Submittals

"B. All submittals in this section are subject to approval of the City Planning Department and City Forester."

Add

1.8 General Spacing

"A. The maximum spacing in parkstrips will be 30 feet or less."

SECTION 33 05 03
COPPER PIPE
AMMENDMENTS

PART 2 PRODUCTS

Change

2.2 CONNECTIONS

"A. Flared or Compression."

To

2.2 CONNECTIONS

"A. Compression. Flared connections are not allowed in City of Logan."

SECTION 33 05 05
DUCTILE IRON PIPE
AMMENDMENTS

PART 2 PRODUCTS

Delete

2.1 PIPE AND FITTINGS

A. Buried Applications

"6. Bronze wedges with current capacity of 400 amps each for each joint as follows:

Pipe Diameter	No. of Wedges
less than 10"	2
10"	3
12"	4
greater than 12"	6"

SECTION 33 05 06
POLYETHYLENE PIPE
AMMENDMENTS

PART 1 GENERAL

Add

1.2 REFERENCES

"N. AWWA C906, Polyethylene (PE) Pressure Pipe and Fittings, 4 in. (100 mm) Through 63 in. (1,575 mm), For Water Distribution and Transmission.
O. AWWA C904, Cross-Lined Polyethylene (PEX) Pressure Pipe, ½ in. (12mm) Through 3 in. (76 mm), for Water Service.
P. AWWA C901, Polyethylene (PE) Pressure Pipe and Tubing, ½ in. (13 mm) Through 3 in. (76 mm), for Water Services."

PART 3 EXECUTION

Change

3.1 INSTALLATION

"B. Water distribution and Transmission, Section 33 12 19"

To

3.1 INSTALLATION

"B. Water distribution and Transmission, Section 33 11 00."

SECTION 33 05 07
POLYVINYL CHLORIDE PIPE
AMMENDMENTS

PART 1 GENERAL

Add

1.2 REFERENCES

"P. AWWA C905, Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14 in. Through 36 in.
Q. AWWA C909, Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe, 4 in. Through 24 in. (100 mm Through 600 mm), For Water Distribution."

SECTION 33 05 20
BACKFILLING TRENCHES
AMMENDMENTS

PART 2 PRODUCTS

Add

2.2 ACCESSORIES

"D. Tracer Wire: 12 gauge single strand direct bury shielded wire."

PART 3 EXECUTION

Add

3.3 Pipe Zone

"E. The following Common Fill (31 05 13) are not allowed for the pipe zone.

1. Recycled Fill.
2. Clay
3. Sand in the presence of water
4. Pea Gravel in the presence of water
5. Top Soil
6. Pit Run"

Change

3.4 TRENCH ABOVE PIPE ZONE

"D. Install continuous plastic line marker directly over buried lines 18 inches below finished grade."

To

3.4 TRENCH ABOVE PIPE ZONE

"D. Install continuous plastic line marker directly over buried lines 30 inches above top of line, but not less than 18 inches below finished grade. When less than 48 inches of cover, install 18 inches below finished grade

or as directed by ENGINEER. Install tracer wire on top of non-metallic pipes."

Add

3.4 TRENCH ABOVE PIPE ZONE

"E. The following Common Fill (31 05 13) are not allowed for the trench above the pipe bedding unless specifically approved by the City Engineer.

1. Recycled Fill
2. Clay
3. Sand
4. Pea Gravel
5. Native, unless approved by the ENGINEER.

F. Install tracer wire in contact with the exterior of the full length of the non-metallic water pipe. All wire shall be looped such that non-metallic pipes can be are located entire length and dead ended or fully looped at valves, water meters, and fire hydrants."

SECTION 33 08 00
COMMISSIONING OF WATER UTILITIES
AMMENDMENTS

PART 3 EXECUTION

Change

3.6 PIPE TESTING SCHEDULE

C. Sanitary Sewers:
"2. Obstructions and deflection test."
"5. Video inspection."

To

3.6 PIPE TESTING SCHEDULE

C. Sanitary Sewers:
"2. Obstructions and deflection test on non-concrete pipes larger than 18" ."
"5. Video inspection for all mains and laterals."

Change

3.6 PIPE TESTING SCHEDULE

E. Storm Drains:
"2. Obstructions and deflection test."
"5. Video inspection."

To

3.6 PIPE TESTING SCHEDULE

E. Storm Drains:
"2. Obstructions and deflection test on non-concrete pipes larger than 18."
"5. Video inspection for all mains and laterals with slopes less than one (1) percent."

Change

3.6 PIPE TESTING SCHEDULE

F. Potable Water System:

"1. Obstruction and deflection test.
2. Pressure test.
3. Disinfection (Section 33 13 00)."

To

3.6 PIPE TESTING SCHEDULE

F. Potable Water System:

"1. Obstruction and deflection test on non-ductile iron pipe 18 inches or greater.
2. Disinfection (Section 33 13 00).
3. Pressure test."

SECTION 33 11 00
WATER DISTRIBUTION AND TRANSMISSION AMMENDMENTS

PART 1 GENERAL

ADD

1.2 REFERENCES

"H. BACKFLOW AND CROSS CONNECTION PROTECTION, Supplementary Section 33 11 05."

Change

1.3 PERFORMANCE REQUIREMENTS

A. Depth of Cover
"1. 48 inches minimum to top of pipe, service line, or as indicated in local building code. 72 inches maximum unless ENGINEER authorizes otherwise."

To

1.3 PERFORMANCE REQUIREMENTS

A. Depth of Cover
"1. 60 inches minimum to top of pipe, service line, or as indicated in local building code. 72 inches maximum unless ENGINEER authorizes otherwise."

PART 2 PRODUCTS

Change

2.3 VALVE BOX

"A. Buried Valves In Traffic Areas: 2 piece, cast iron, screw adjustable sleeve, 5-1/4 inch shaft, with a drop lid."

To

2.3 VALVE BOX

"A. Buried Valves In Traffic Areas: 2 piece, cast iron, 5-1/4 inch shaft, with a drop lid. Screw adjustable sleeves are not allowed."

Change

2.6 TAPPING SADDLES

"A. Provide bronze alloy, ductile iron, or stainless steel saddles with stainless steel double straps.

B. Provide tapping saddles that have a minimum rated working pressure of 300 psi, neoprene Buna N gaskets, and bronze tapered threads."

To

2.6 TAPPING SADDLES

"A. Provide epoxy coated ductile iron, or stainless steel saddles with stainless steel double straps.

B. Provide tapping saddles that have a minimum rated working pressure of 300 psi, neoprene Buna N gaskets, and bronze straight threads. Tapered threads are not allowed on tapping saddles."

Change

2.7 SERVICE CONNECTIONS

"A. Type K copper pipe; Section 33 05 03 with flare type 200 psi compression fittings in accordance with AWWA C800. If materials used in main line are non-copper, provide a plastic nipple to separate the metals."

To

2.7 SERVICE CONNECTIONS

"A. Type K copper pipe; Section 33 05 03 with 200 psi compression fittings in accordance with AWWA C800. If materials used in main line are non-copper, provide a plastic nipple to separate the metals.

B. PE Pipe, AWWA C901 pipe with 200 psi compression fittings and ratings in accordance with AWWA C800."

Change

2.8 ACCESSORIES

"C. Corporation Stops: All bronze with tapered threads.
F. Grease: Non-Oxide"

To

2.8 ACCESSORIES

"C. Corporation Stops: All bronze with straight threads and saddle. Corp stop valve shall be a full port ball balve.
F. Grease: Non-Oxide food grade required where contact with potable water is possible. Non-Oxide poly-fm for all exposed buried metal surfaces for bolts, nuts, washers, and restraints."

PART 3 EXECUTION

Change

3.4 INSTALLATION – PIPE AND FITTINGS

"H. Wedges: Install metal wedges on all metal pipe systems."

To

3.4 INSTALLATION – PIPE AND FITTINGS

"H. Joint Restraint: Install PVC pipe MJ fittings with Mega Lug or equivalent followers.

I. Install Mega Lug or equivalent joint restraint system 60 feet upstream and downstream of valves unless directed otherwise by ENGINEER drawings."

Change

3.8 INSTALLATION – SERVICE LINES

"A. Replace Existing Water Service Line

1. Follow AWWA C800, Utah public drinking water regulations, and Utah plumbing code requirements.

2. When replacing water service lines, replace old service lines with type K copper pipe, Section 33 05 03.

B. Looping Existing Water Service:

1. Minimum pipe diameter ¾ inch.

2. Pinching tools used to close and open service lines may be used only if allowed by ENGINEER. When service line pinches cannot be returned to previous shape or flow, remove and replace damaged portion of pipe.

5. For copper to copper connections use brass flare couplings."

To

3.8 INSTALLATION – SERVICE LINES

"A. Replace Existing Water Service Line

1. Follow AWWA C800, Utah Division of Drinking Water Rules and Regulations (R309), and International Building Code requirements.

2. When replacing water service lines, replace old service lines with type K copper pipe, Section 33 05 03 or PE AWWA C901 pipe for service lines less than three inches.

3. Service taps shall be more than 24 inches from nearest tap unless a greater distance is required by pipe manufacturer.

B. Looping Existing Water Service:

1. Minimum pipe diameter 1 inch.

2. Pinching tools are not allowed for repair or work on existing copper services. Use liquid nitrogen to spot freeze the line.

5. For copper to copper connections use brass compression fittings. Flared end fittings are not allowed."

SECTION 33 12 16
WATER VALVES
AMMENDMENTS

PART 1 GENERAL

Add

1.2 REFERENCES

"G. AWWA C515, Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service."

PART 2 PRODUCTS

Change

2.1 VALVES - GENERAL

"G. Rated Working Pressure: 150 psi unless indicated."

To

2.1 VALVES - GENERAL

"G. Rated Working Pressure: 250 psi unless indicated."

Change

2.2 GATE VALVES

"A. Material: Cast iron body, bronze mounted. Furnish valves 3 inches through 48 inches that conform to the requirements of AWWA C509, non-rising stem design with "O" ring seals."

To

2.2 GATE VALVES

"A. Material: Cast iron body, bronze mounted. Furnish valves smaller than 12 inches that conform to the requirements of AWWA C509, non-rising stem design with "O" ring seals." Valves 12 inches and larger shall be Butterfly Valves.

PART 3 EXECUTION

Add

3.1 INSTALLATION

"D. Valves isolating construction from existing system shall only be operated by OWNER. Any deviation from this will be treated as a Class B Misdemeanor.

SECTION 33 12 19
HYDRANTS
AMMENDMENTS

PART 2 PRODUCTS

Change

2.1 DRY- BARREL FIRE HYDRANT

"A. Cast iron compression type, AWWA C502, opening against pressure and closing with pressure, base valve design, 150 psi working pressure, with ¼ inch diameter minimum tapping and bronze plug in standpipe.

1. Size 5-1/4 inch valve opening.
2. Direction to Open Hydrant: Counterclockwise.
3. Size and Shape of Operating and Cap Nuts: Pentagon, 1-1/2 inch point to flat.
4. Hose Nozzles: Two 2-1/2 inch National Standard Thread, cap, gasket, and chain.
5. Pumper Nozzle: One 4-1/2 inch National Standard Thread, cap, gasket, and chain.
6. Depth to Burial: 48 inches or consistent with main depth.
7. Connection to Main: 6 inches flanges or mechanical joint.
8. Pressure: 150 psi working pressure and 300 psi hydrostatic pressure.
9. Inlet Bottom Connection: 6 inches mechanical joint or flanged in accordance with AWWA C110 and AWWA C111, designed to allow separation at the sidewalk level when hydrant is sheared off.
10. Automatic Drain: Opens as the hydrant is closed."

To

2.1 DRY- BARREL FIRE HYDRANT

"A. Cast iron compression type, AWWA C502, opening against pressure and closing with pressure, base valve design, 250 psi working pressure, with ¼ inch diameter minimum tapping and bronze plug in standpipe.

1. Size 5-1/4 inch valve opening.
2. Direction to Open Hydrant: Counterclockwise.

3. Size and Shape of Operating and Cap Nuts: Pentagon, 1-1/2 inch point to flat.
4. Hose Nozzles: Two 2-1/2 inch National Standard Thread, cap, gasket, and chain.
5. Pumper Nozzle: One 4-1/2 inch National Standard Thread, cap, gasket, and chain.
6. Depth to Burial: 60 inches or consistent with main depth.
7. Connection to Main: 6 inches flanges or mechanical joint.
8. Pressure: 250 psi working pressure and 300 psi hydrostatic pressure.
9. Inlet Bottom Connection: 6 inches mechanical joint or flanged in accordance with AWWA C110 and AWWA C111, designed to allow separation at the sidewalk level when hydrant is sheared off.
10. Automatic Drain: Opens as the hydrant is closed.
11. Hydrant Flag: Solid metal flag installed on 2.5 inch nozzle. Available from City of Logan Water Division.
12. Hydrant Brands Allowed:
    a. Clow Medallion
    b. Mueller Super Centurion
    c. No Equals allowed."

PART 3 EXECUTION

Change

3.2 INSTALLATION

"B. Install so bottom of hydrant base flange is even or less than 4 inches above grade."

To

3.2 INSTALLATION

"B. Install so bottom of hydrant base flange is between 4 inches and 8 inches above final grade."

Change

3.2 INSTALLATION

"E. Coal tar and tape wrap steel pipe"

To

3.2 INSTALLATION

"E. Grease coat and cover with approved 8 mil polyethylene bag for unprotected ductile iron and steel parts."

Change

3.2 INSTALLATION

"G. Install thrust blocks , Section 33 12 19."

To

3.2 INSTALLATION

"G. Install thrust blocks , Section 33 11 00."

SECTION 33 12 33
WATER METER
AMMENDMENTS

PART 2 PRODUCTS

Change

2.1 METERS FOR SYSTEM PIPING

"A. Materials and Construction: AWWA C704

1. Cast iron bodies with 175 psi working pressure flanged connections.
2. Built-in straightening vanes.
3. Working pressure: 150 psi
4. Polyethylene plastic propeller.
5. Stainless steel shaft with stainless steel ball bearings, lubricated by means of a singe pressure fitting.

B. Accuracy: Plus or minus 2 percent of scale for velocities over 1 foot per second.

C. Totalizer: six digits reading in units indicated."

To

2.1 METERS FOR SYSTEM PIPING

"A. Provided by OWNER unless indicated otherwise."

Change

2.4 METER BOXES

A. Meters to 1" Service: Plastic or asphalt-dipped corrugated metal. Fiber meter boxes are not acceptable. Provide a meter box with frame and cover sufficient strength to withstand loadings in vehicular traffic areas without breaking.
B. Meters 1-1/2 inches and Larger: Reinforced concrete with a minimum clearance of 12" from each side of meter plumbing.

TO

2.4 METER BOXES

A. Meters to 1” Service: 21 inch inside diameter by 60” minimum deep white corrugated-smooth walled HDPE or Precast Concrete meter box. Provide meter box with frame and cover from D&L Supply, Model-L2240-15 to receive 2 inch Neptune meter antenna.
B. Meters 1-1/2 inches and Larger: Reinforced concrete with a minimum clearance of 12” from each side of meter plumbing. Provide frame and cover from D&L Supply, Model B5019-03 to receive 2” Neptune meter antenna.

SECTION 33 13 00
DISINFECTION
AMMENDMENTS

PART 1 GENERAL

Change

1.4 SUBMITTALS

"C. Disinfection Report: 3 copies"
"D. Bacteriological Report: 3 copies"

To

1.4 SUBMITTALS

"C. City of Logan Disinfection Report: 3 copies"
"D. City of Logan Bacteriological Report: 3 copies"

PART 3 EXECUTION

Change

3.2 DISINFECTION OF WATER LINES

"A. Use one method defined under AWWA C651 that is acceptable to ENGINEER.
B. After pressure testing per Section 33 08 00, flush system through hydrants or if a hydrant does not exist, install a tap sufficient size to provide 2.5 feet per second flushing velocity in the line.
C. Starting at outlet closest to water source, bleed water from each outlet until chlorine residual reaches outlet. Repeat process at each outlet throughout system.
D. Collect bacteriological water sample at end of line to be tested. If sample fails bacteriological test, flush system and retest.
E. If flushing does not produce a passing bacteriological test disperse disinfectant throughout system to obtain 10 to 25 ppm of free chlorine residual.

F. Flush the chlorinated water from the main until chlorine measurements show the concentration in the water leaving the main is no higher than that generally prevailing in the system or is acceptable for domestic use.
G. After a negative bacteriological sample is obtained, let the system relax for 24 hours. Flush and collect a subsequent bacteriological sample for testing. If the subsequent test is negative then water line is acceptable."

To

3.2 DISINFECTION OF WATER LINES

"A. Use one method defined under AWWA C651 that is acceptable to ENGINEER. Fill line to required residuals.
B. Starting at outlet closest to water source, bleed water from each outlet until chlorine residual reaches outlet. Repeat process at each outlet throughout system.
C. Flush system through hydrants or if a hydrant does not exist, install a tap sufficient size to provide 2.5 feet per second flushing velocity in the line.
D. Collect bacteriological water sample at end of line to be tested. If sample fails bacteriological test, flush system and retest.
E. If flushing does not produce a passing bacteriological test disperse disinfectant throughout system to obtain 10 to 25 ppm of free chlorine residual.
F. Flush the chlorinated water from the main until chlorine measurements show the concentration in the water leaving the main is no higher than that generally prevailing in the system or is acceptable for domestic use.
G. After a negative bacteriological sample is obtained, let the system relax for 24 hours. Flush for thirty (30) seconds and collect a subsequent bacteriological sample for testing. If the subsequent test is negative then water line is acceptable.
H. Pressure testing per Section 33 08 00."

Change

3.5 FIELD QUALITY CONTROL

"B. Disposal of Disinfectant
1. Legally dispose of disinfecting water and ensure no chlorine buildup or damage to the environment."

To

3.5 FIELD QUALITY CONTROL

"B. Disposal of Disinfectant

1. Legally dispose of disinfecting water and ensure no chlorine buildup or damage to the environment.
2. Dechlorinate any water discharged prior to discharge to the storm water system or natural water bodies. Discharge to the sanitary sewer system is not allowed without approval of the ENGINEER and LOGAN CITY ENVIRONMENTAL DEPARTMENT."

SECTION 33 31 00
SANITARY SEWERAGE SYSTEMS
AMMENDMENTS

PART 1 GENERAL

Change

1.3 PERFORMANCE REQUIREMENTS

"A. Vertical Cover: Unless indicated otherwise, 2 feet minimum for laterals and 4 feet when subjected to light construction equipment loads."

To

1.3 PERFORMANCE REQUIREMENTS

"A. Vertical Cover: Unless indicated otherwise, 3 feet minimum for laterals and 4 feet when subjected to light construction equipment loads."

PART 2 PRODUCTS

Change

2.2 MORTAR, GROUT AND CONCRETE

"B. Grout: Cement, Section 03 61 00"

To

2.2 MORTAR, GROUT AND CONCRETE

"B. Grout: Cement based shrinkage resistant grout, Section 03 61 00"

Change

2.3 MANHOLES

"D. Frame and Cover: Scoriated, asphalt coated, heavy duty, ductile iron; Section 05 56 00 with flat top design meetin load rating H-20 and appropriate utility lettering. Shape, size and lifting device as indicated.

E. Pipe Connectors: Resilient ASTM C923. Sand mortar grout pipe connectios."

To

2.3 MANHOLES

"D. Frame and Cover: 30 inch, similar to D&L Supply Model A-1181 or approved equal; Section 05 56 00 with flat top design meeting load rating HS-20 with pick hole, air vents, and labeled "SEWER".

E. Pipe Connectors: Resilient ASTM C923. Grout pipe connections.

Add

"2.4 LATERAL CONNECTIONS

A. Existing Sewer Mains: Use ROMAC, no equivalent, sewer tapping saddle with stainless steel straps. For laterals 6 inches or smaller,

B. New Sewer Mains: Use preformed wye of same materials as sewer main located at 45 degrees above centerline. This also applies to new subdivisions."

PART 3 EXECUTION

Change

3.3 INSTALLATION - MANHOLES

"D. Provide elevations and pipe inverts for the inlets and outlets indicated.

E. When structures occur in pavements, mount frame and cover ½ inch below finished surface, elsewhere set 3 inches above finished grade. Provide a concrete Cover Collar between the frame and asphalt Pavement."

To

3.3 INSTALLATION - MANHOLES

"D. Provide elevations and pipe inverts for the inlets and outlets indicated. Form inverts of channels smooth with a semi-circular cross section. Bends and turns shall be a smooth long-radius curve with the point of curvature beginning at the inlet of the pipe and ending within 12 inches of the outlet.

E. When structures occur in pavements, mount frame and cover ½ inch below finished surface, elsewhere set 3 inches above finished grade. Provide asphalt compacted tight to the frame of the manhole lid.

F. Where three or more pipes enter a manhole or where one or more of the pipes are 12 inches or larger, install a 60 inch inside diameter manhole; all others install a 48 inch manhole."

Change

3.5 TAP CONNECTIONS – 6 INCHES AND SMALLER

"A. Field cutting into new or existing piping will not be permitted unless written permission is obtained from ENGINEER.

B. Make connections to existing pipe and underground structures, so connections will conform as nearly as practible to requirements specified for new work.

C. use commercially manufactured wyes for branch connections. Spring wyes into existing line and encase entire wye, plus 6 inches overlap, with not less than 6 inches of concrete.

D. For taps into existing 24 inches or larger piping, or to underground structures, cut opening into unit sufficiently large to allow 3 inches of concrete to be packed around entering connection. Cut ends of connection passing through pipe or structure wall to conform to shape of and parallel with inside wall, unless otherwise indicated. Grout connection to provide smooth transition inlet into pipe."

To

3.5 TAP CONNECTIONS – 6 INCHES AND SMALLER

“A. Field cutting into new piping will not be permitted unless written permission is obtained from ENGINEER. Laterals shall be installed into new piping using wyes or tees with rubber ring type gaskets.

B. Existing pipes shall be tapped using a round hole tap and a ROMAC stainless steel, with two stainless steel straps, sanitary sewer tapping saddle.

C. For taps into existing underground structures, cut opening into unit sufficiently large to allow installation of KOR-N-SEAL Manhole boot. Cut ends of connection passing through pipe or structure wall to conform to shape of and parallel with inside wall, unless otherwise indicated. Grout connection to provide smooth transition inlet into pipe.”