

RESOLUTION OF THE RIDGWAY TOWN COUNCIL, STATE OF COLORADO,
AMENDING THE TOWN STANDARD SPECIFICATIONS,
GENERAL REQUIREMENTS AND TYPICAL
DRAWINGS FOR INFRASTRUCTURE

THE RIDGWAY TOWN COUNCIL DOES RESOLVE AS FOLLOWS:

WHEREAS, the Town Council adopted by Resolution No. 01-03 on April 11, 2001 the Town Standard Specifications, General Requirements and Typical Drawings for Infrastructure dated 1992 and updated in 1995; and


WHEREAS, subsequently the same was amended by Resolution 01-04 on July 11, 2001; and

WHEREAS, the Town Engineer has prepared Addendum 2 dated June 14, 2006 which details changes and additions to said standard specification and typical drawings; and

WHEREAS, the Town Council wishes to adopt said changes and additions.

NOW, THEREFORE, BE IT RESOLVED the Town Council of the Town of Ridgway, Colorado that the attached document entitled "Town of Ridgway Standard Specifications and Typical Drawings, Addendum #2 - 6/14/06" shall be added to, and shall amend, the Town of Ridgway Standard Specifications, General Requirements and Typical Drawings for Infrastructure.

APPROVED AND ADOPTED this 14th day of June, 2006.



Pat Willits, Mayor

ATTEST:



Pam Kraft, CMC
Town Clerk

TOWN OF RIDGWAY

STANDARD SPECIFICATIONS AND TYPICAL DRAWINGS – 1992

ADDENDUM #2 – 6/14/06

The following additions and changes are hereby incorporated in the Town of Ridgway Standard Specifications and Typical Drawings for Infrastructure Construction dated 1992 and updated in 1995:

Change: Page 1-19, Paragraph 22.01. Change the 2nd sentence to read: " All buried facilities and lines (including but not limited to water, sewer, power, phone, gas, and cable) shall be tied to permanent surface monuments at 200' minimum intervals, using centerline monuments when available, or other permanent monuments.

Add: Page 1-19, Paragraph 22.01. Add the following after the 3rd sentence. "For water services also include the horizontal distance from the closest valve box to each service connection. For sewer services include the distance from a manhole along the main to the service connection and the depth from the sidewalk to the invert at the dead end stub."

Add: Page E-6, at end of Excavation to Grade sub-section add new paragraph to read: "Where utilities are to be installed in fill, construct fill a minimum of 2' above top of pipe prior to excavation for utility installation."

Add: Page E-8, At end of Placing Bedding Material sub-section: Add: "Where Class II bedding material has been installed, place a cover of filter fabric such as 12 oz. Minimum Mirafi 140N on top of the Class II bedding, before placing any other fill."

Change: Page E-9, Change the third read: "In streets, the upper trench shall include 12" of Class 2 and 6" of Class 6 road base each compacted to 95% modified proctor at plus or minus 2% optimum moisture.

Delete: Page E-9, Delete the fourth paragraph this page.

Change: Page WM-1, Plastic Pipe. Change "Marking" to read: "Place 10 gauge insulated tracing wire directly on all pipe and place 4" wide marking tape 12" above pipe."

Change: Page WM-3, Hydrants: Change the required encasement found "concrete" to "PVC pipe or other means approved by Town Engineer".

Change: Page WM-3, Service Connection: Change the saddle material to brass.

Change: Page WM-4, Proximity Statement: - Change the first paragraph to read: "Potable water lines shall not be laid closer horizontally than 10 feet from sewer and other non-potable lines and the water lines shall be at a higher elevation than the non-potable. When water and non-potable lines cross each other, the water line shall be at least 18" above the non-potable. If this condition is not met, then the non-potable line shall be encased with a 20' PVC casing pipe centered around the water line crossing. Should the non potable line be above the water line, then the casing pipe shall be sealed to the carrier pipe with no-hub reducing couplings, Link-Seal or other approved method to provide a water tight seal. Installation shall be in accordance with the requirements of the Town Minimum Standards for Water and CDPHE and Uniform Plumbing Code requirements."

Change: Page W-2, Change the Plastic Pipe "Marking" requirements to read: "Place 10 gauge insulated tracing wire directly on all pipe and place 4" wide marking tape 12" above pipe."

Add: Page W-5 – Add the following sentence at the end of the first paragraph. "Pipes and appurtenances shall be installed within 0.5' horizontal and 0.1' vertical of design alignment and grades."

Change Page W-7, first paragraph, second sentence to read: "All nuts and bolts utilized in underground connections shall be stainless steel or Kor-Blue (or equal) unless due to extremely aggressive soils conditions, an alternate material is approved by the Town Engineer."

Add: Page W-7 at end of Laying of Pipe sub section, add a new paragraph is reads: Electrically continuous tracer wire shall be securely taped to the top of all water lines and shall be looped up to the ground surface at each valve and hydrant. Placement of the wire shall be field directed.

Delete: Page W-9, Concrete Encasement. Delete this paragraph.

Change: Page WS-1, Meter - Change meter can from CMP to Uponor round, insulated, traffic rated, molded plastic.

Change: Page WS-1,2 Service Pipe – Change this section to read": "Pipe for water service shall be type "K" copper tubing conforming to ASTM B-88-62 and NSF standards for potable water service unless other types of tubing are specified on the Town approved drawings.

Change: Page WS-2, Meter: Change the last sentence of the first paragraph to read: "Meters shall be Sensus with radio read".

Add: Page WS-2, above "Execution" – Add the following subsection.

"Fire Protection Service Line - Valves on newly constructed fire lines shall be

located on the tee at the main line unless otherwise approved by the Town. The property owner shall maintain all private fire lines beginning at and including this valve. All fire sprinkler taps shall be installed with an approved backflow prevention device as defined by the Town. A property requiring a domestic service line and a fire protection service line will have separate taps for each.

Change: Page WS-2, first sentence of second paragraph in Meter sub-section – Change paragraph to read: ' Pressure regulators with strainers shall be installed on the customer side of the meter when the pressure on the service line will exceed 80 psi. If line pressure exceeds 110 psi, Town may require the pressure regulator to be located upstream of the meter. In either case maintenance of the regulator is the responsibility of the property owner.'

Delete: Page WM-3, Delete the 3rd Sentence which starts "Stainless steel tapping saddles ...".

Add: Page S-6 above "Laying Sewer Pipe" subsection, Add new Subsection to read:

"Tolerances

Sewer lines and manholes shall be laid to within 0.1' horizontal and 0.02' vertical of design alignment and grade. Where design sewer grades are greater than 1.0%, vertical tolerance will be increased to 0.03'.

Add Page S-9, "Service Installation" Sub-section – Add at the end of the 3rd paragraph "or with a glued cap".

Add Page S-19, Manhole Testing: Add the following paragraph at the end of this section: "Vacuum Testing in accordance with ASTM 1244 shall be allowed as in alternative to the above exfiltration test. Minimum vacuum for the test shall be 10 psi. During the test period, the vacuum shall not drop more than 1 psi. Test periods shall be as follows:

Minimum Test Times for Manhole Vacuum Test

Manhole Depth	Manhole Diameter		
	4'	5'	6'
	Time in Seconds		
8' or less	20	26	33
10'	25	33	41
12'	30	39	49
14'	35	46	57
16'	40	52	65

Change Page S-19, 3rd Paragraph: Change 3rd paragraph to read as follows:
"After the completion of segments of sewer lines, the lines shall be jetted with water. After water ceases to flow, video each segment to demonstrate cleanliness, proper jointing, proper tap installation, conformance to alignment and grade, and proper roundness. Town may require that video work shall be done in coordination with ovalation testing so the video records the testing results of the "Go - No Go" gauge. In addition a small steady flow of water shall be present during the video so that any variability in grade of line installation can be identified. Any locations shown to have a sag of 1/4" or more shall be corrected."

Replace: Replace the following typical details with the attached details dated 6.06:

- Standard Bedding Detail
- Hydrant Detail (in paved streets)
- Hydrant Detail (in gravel streets)
- Typical Existing Service Reconnection Detail
- Large Water Service
- 3/4" – 1" Meter Detail
- Air Vacuum Valve (type 1)
- Manhole Detail
- Handicap Ramp Details
- Typical road section with pan
- Typical road width requirements
- Cul de sac (alt)

The Town standards are getting a little dated (1992), but staff has not had time to do the major rewrite requested a while back. To keep the standards somewhat in line with current practice we have prepared an addendum of the standards. The following is a brief explanation of the changes proposed by addendum to the Town Standards:

Page 1-19 changes clarify how to document line and meter locations for the record drawings.

Page E-6 changes add a requirement that if one is laying pipe in fill that the fill needs to be placed and the trench excavated rather than the pipe being laid in with the fill. Although this circumstance does not occur often, installation in this manner is necessary to protect the pipe long term. PVC pipe relies on trench sidewalls for some of its strength. We have been requiring this, but its not covered in the current standards.

The change on Page E-8 requires placing a filter fabric on the top of washed rock before placing materials on top. Without the fabric, the fines in the native materials will over time flow into the gravel and reduce its permeability and potentially cause settlement of the trench. For the last two years, we have been adding this requirement during plan review, but it should be added to the standards.

The changes on Page E-9 are also clarifications to make the standards reflect current practice.

All the changes proposed on the WM pages are also to reflect current practice as is the change on Page W-2.

During the construction of the school sewer line, the issue of what tolerances were applicable to what types of work arose. The Town standards did not have explicit tolerances for water or sewer. The changes on pages W-5 and S-6 would add tolerances.

The changes proposed on pages W-5, W-7, and W-9 are to reflect current practice.

Change from CMP to thermoplastic molded meter cans (page WS-1). The CMP cans are not readily available and subject to corrosion. The plastic cans have improved to the point they are just as traffic resistant and provide better frost protection and corrosion protection.

Change brand of water meet from Neptune to Sensus. Town standardized on Sensus years ago, we just never changed the standards. We need to have just one brand so that the electronic reading devices work. This change is to WS-2

A "Fire Protection Service" subsection is added on page WS-2. We had not previously covered this topic in the standards and we have had several questions on the subject. The proposed language is not very prescriptive but is consistent with current practice and my read of the Town Code.

Change the requirements for pressure regulators to reflect current practice. On page WS-2, Pressure regulators are to be installed on the private side of the meter unless static pressures exceed 110 psi.

The deletion on Page WS-3 resolve a conflict in the specs regarding service saddle materials to require brass which is what we've been requiring.

On Page S-9 we have added an option to use a glue cap rather than just a compression cap on sewer service stubs. We have been allowing glue caps for years.

Page S-19 under manhole testing adds vacuum testing as in option. Add the option to use a vacuum test for manholes rather than just a water test. We have had requests to use the vacuum test and have been allowing it. Its likely a more stringent test and is clearly more accurate and quicker.

Also on S-19, we are proposing to change from requiring a video inspection of sewer lines when we think its necessary to a general requirement. This has a cost of about \$1 per foot. The video inspection provides us with better information about the condition of the line than other methods and provides us with a record of tap locations. It is becoming common practice to require lines be video'd in our neighboring communities although some provide the service rather than requiring the developer to do the work.

The following changes have been made to the typical drawings:

Standard Bedding Detail: Modified to reflect the filter fabric, tracer tape, and requirements of 12" of class 2 in roadways.

Hydrant: Added details for placement of tracer wire. We have been requiring tracer wire but have not had details on the placement.

Large Water Meter: Change from gate valves to ball valves for isolation valves on large services. Ball valves in that size are more reliable and take up less space than gate valves. Require bypass lines on all water services over 1". This allows for servicing the meter without putting the building out of water. The Town should padlock the bypass lines. Modify the large water service typical to show a meter setter rather than straight piping. This also facilitates servicing the meter. Moved backflow preventor to a downstream location outside the meter vault.

Existing Service Reconnection: Change meter can from CMP to plastic, added curb stop, deleted ball valve. Changed from ball valve to curb stop because we are seeing failures with the ball valves. The curb stops are more durable. The plastic meter cans provide better insulation, are stronger and a little more worker friendly. We have been using the plastic cans for over a year now.

3/4" and 1" Services: Changed meter can from CMP to plastic, added curb stop, deleted ball valve. Changes for the same reasons noted above for reconnection.

Air Vacuum Valve (type 1): Moved location of the valve from directly over the water line to off the to the side. This takes the weight of the valve off the main and allows the valve to be placed away from traffic.

Manhole Detail: Added a requirement for a concrete collar around the lid in paved streets.

Handicap Ramp Details: Modified to conform with my understanding of current ADA requirements.

Road section details: Increase width of valley pans on local streets from 2' to 3'. This increases the capacity of the pans significantly. Originally the pans were intended to allow water into the green space behind the pan, but they are not being used that way and water is spilling onto the pavement as well as the green space in a good rain (or irrigation leak). This adds 0.5 cubic feet of concrete per lineal foot of pan (only 0.25 cf compared to curb and gutter), but also provides a modest increase in protection for the asphalt.

Cul de sac (alt): Added this tear drop design to our standard circular design.