

## 1.1 Specifications

### HINCKLEY TOWN CONSTRUCTION STANDARDS

The following standards shall apply to the design and construction of public works improvements for subdivisions and other developments within Hinckley Town Limits.

**A. The 2025 edition of the Manual of Standard Specifications published by the Utah Chapter of the American Public Works Association (APWA) (found at the following URL: <https://utah.apwa.org/education/utah-standard-plans-specifications/>) with the following modifications:**

1. Current amendments published by the Utah Chapter of the APWA.
2. References to OWNER shall mean Hinckley Town and references to ENGINEER shall mean Hinckley Town's engineer.
3. Modify Section 01 35 10 – Acceptance as follows:
  - a. Article 1.3 Acceptance – add paragraph E as follows: Acceptance testing will govern over quality control testing performed by CONTRACTOR. Acceptance testing does not relieve CONTRACTOR of responsibility for providing adequate quality control measures.
4. Modify Section 26 29 13 – Motor Controller as follows:
  - a. Article 1.1 Section Includes, paragraph B – add subparagraph 5 as follows: Variable-frequency drives.
  - b. Part 2 Products – add article 2.7 as follows:

2.7 Variable-Frequency Drives

    - A. Variable-frequency drive (VFD), single-phase or three-phase, to adequately start and run motor.
    - B. Provide main breaker, motor overload protection, over-voltage protection, and surge protection.
    - C. Provide Hand-Off-Auto selector switch on cover with green pilot light for run indicator. VFD shall be programmed for all desired pump controls.
    - D. Provide adequate ventilation for VFD case.
5. Modify Section 32 12 03 – Asphalt Binders as follows:
  - a. Part 2 Products – delete articles 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, and 2.9.
  - b. Part 2 Products – modify article 2.8 as follows: Delete A.1 and A.2 and replace with the following:
    1. Limit RAP to 15-percent of total weight of hot mix asphalt and RAP binder to 15-percent of total binder.
6. Modify Section 32 12 05 – Bituminous Concrete as follows:
  - a. Article 2.1 – Paving Asphalt – delete paragraph A and replace with the following:
    - A. Performance Graded Asphalt Binder (PGAB):
      1. Binder in accordance with Section 32 12 03.
  - b. Article 2.4 – Mix Design, paragraph A, - delete subparagraph 1. and replace with the following:
    - A. Mix Design:
      1. PG 64-34 or PG 58-28: All pavements.

7. Delete Section 33 05 03 – Copper Pipe.
8. Delete Section 33 05 05 – Ductile Iron Pipe.
9. Modify Section 33 05 06 – Polyethylene Pipe as follows:
  - a. Article 2.1 Smooth Wall Pipe Systems – add paragraph E as follows:
    - E. High density polyethylene pipe, in accordance with NSF-14 and AWWA C901.
      1. Iron Pipe Size: ASTM D2239, ¾ and 1-inch services.
      2. Copper Tube Size: ASTM D2737, 1.5 and 2-inch services.
      3. Working Pressure: 200 pounds per square inch.
      4. Color: Blue.
      5. Fittings: Bronze, compression fittings.
10. Modify Section 33 05 07 – Polyvinyl Chloride Pipe as follows:
  - a. Article 2.1 Pressure Pipe Systems, paragraph A – delete and replace with the following: Pipe: Conform to AWWA C900, pressure class 235 psi, DR 18.
11. Modify Section 33 05 20 – Backfilling Trenches as follows:
  - a. Article 2.1 Backfill Materials – add paragraph E as follows: If native material obtained from excavations is unsuitable for bedding or pipe zone materials and if trench bottom is unsuitable to support pipe, import granular borrow.
  - b. Article 3.8 Tolerances, paragraph A – delete paragraph A and replace with the following:
    - A. Compaction: Percentage or greater relative to a standard or modified proctor density according to the following parameters:
      1. Proctor Type:
        - a. A-1 soils: Use Modified Proctor Density.
        - b. Other soils: Use Standard Proctor Density.
      2. Compaction Percentage:
        - a. 96 percent or greater for bedding and pipe zone materials.
        - b. 96 percent for backfill of trenches in traveled areas.
        - c. 90 percent for backfill of trenches in non-traveled areas.
12. Modify Section 33 05 23.35 – Trenchless Utility Installation as follows:
  - a. Add Article 2.4 Casing Spacers with paragraph A as follows:
    - A. Casing Spacers: polyethylene, 8 inches minimum lengths and heights as needed to fit casing.
  - b. Article 3.4 Pipe Support in Casing Tunnel, paragraph A – delete and replace with the following:
    - A. Install casing spacers per manufacturer's recommendations and as follows:
      1. Place casing spacers on each side of pipe joint with distance not to exceed 2 feet.
      2. Place casing spacers at intervals not to exceed 8 feet.
  - c. Article 3.4 Pipe Support in Casing Tunnel, paragraph B – delete and replace with the following:
    - B. Install cover over end of casing to prevent backfill material from entering casing.
13. Modify Section 33 11 00 – Water Distribution and Transmission as follows:
  - a. Article 1.3 Performance Requirements, paragraph A – delete subparagraphs 1 and 2 and replace with the following:
    - A. Depth of Cover:

1. Main Lines: 48 inches minimum.
2. Service lines: All service lines shall be placed with 48 inches minimum cover at connection with main line. Depth of 48 inches minimum shall be maintained under travelled way. Service line may be shallower outside of travel way as it approaches water meter.
3. Water meters shall be placed at a depth of 30 inches.
- b. Article 2.8 Accessories, paragraph A – add the following: Use stainless steel bolts and nuts and wrap in plastic.
- c. Article 2.8 Accessories – add paragraph I as follows:
  - I. Tracer Wire: 14 AWG solid, Type UF, copper conductor with PVC insulation, suitable for direct burial and rated for 600 volts. Blue colored insulation to meet color code standard for identification of buried utilities. For splices, use direct bury, waterproof wire connector.
- d. Article 3.4 Installation – Pipe and Fitting – add paragraph I as follows:
  - I. Tracer Wire: Install 16 gauge tracer wire continuously below spring line of pipe. Install tracer wire with PVC main lines, PVC fire hydrant lines and polyethylene service lines. Wrap tracer wire around fire hydrant above ground, extend loop to top of valve boxes, and wrap around meter setter. Where there is existing tracer wire, connect new tracer wire to existing tracer wire. If splices are required, make watertight connections.
- e. Article 3.8 Installation – Taps – add paragraph G as follows:
  - G. Use stainless steel bolts and nuts and wrap in plastic.
14. Modify Section 33 12 16 – Water Valves as follows:
  - a. Article 2.1 Valves – General – add paragraph I as follows:
    - I. Provide stainless steel bolts for bolts and wrap in plastic on valves exposed to soil.
15. Modify Section 33 12 19 – Hydrants as follows:
  - a. Article 2.1 Dry-Barrel Fire Hydrant, paragraph B – add subparagraph 11 as follows:
    1. Provide stainless steel bolts and nuts and wrap in plastic for bolts on hydrants exposed to soil.
  - b. Article 2.2 Pipe and Fittings, paragraph A – add subparagraph 1 as follows:
    1. Use stainless steel bolts and nuts and wrap in plastic.
  - c. Article 3.2 Installation – delete paragraph C and replace with the following:
    - C. Install so bottom of hydrant base flange is 4 to 6 inches above finish grade.
  - d. Article 3.2 Installation – delete paragraph F.
16. Modify Section 33 12 33 – Water Meter as follows:
  - a. Article 2.3 Service Line, Valves, and Fittings, paragraph C – add the following: Provide 15-inch height with ball valve inlet and dual check valve outlet.
  - b. Article 2.3 Service Line, Valves, and Fittings – delete paragraph E and replace with the following: Provide bypass for 1.5 and 2-inch meters.
17. Modify Section 33 13 00 – Disinfection as follows:
  - a. Article 3.2 Disinfection of Water Lines, paragraph D – add the following: Take sample from every 1,200 feet of pipeline and from every branch.
18. Modify Section 33 31 00 – Sanitary Sewerage Systems as follows:
  - a. Article 2.3 Manholes – delete paragraph B and replace with the following:

- B. Steps: Fiberglass or steel encased by copolymer polypropylene, placed at 12 inches on center vertically, set into manhole wall.
  - b. Article 2.3 Manholes – delete paragraph C and replace with the following:
    - C. Top: Eccentric cone. Eccentric flat slab concrete deck allowed only with ENGINEER's permission.
  - c. Article 3.3 Installation – Pipe and Fittings, add paragraph G as follows:
    - G. Magnetic locator tape to be placed above all mainline sewer and service lines.
  - d. Article 3.5 Installation – Manholes, paragraph D – replace “1/2 inch” with ¼” inch.
  - e. Article 3.11 Cleaning, add paragraph C as follows:
    - C. Upon completion of cleaning CONTRACTOR shall use camera or mandrel to verify that all debris, concrete, sand, gravel, and other extraneous material has been removed from all sewer piping and structures. Cleaning shall not be approved unless OWNER or ENGINEER is present during visual inspection and verifies compliance.
19. Modify Section 33 41 00 – Storm Drainage Systems as follows:
- a. Article 2.5 Manholes – delete paragraph B and replace with the following:
    - B. Steps: Fiberglass or steel encased by copolymer polypropylene, placed at 12 inches on center vertically, set into manhole wall.
  - b. Article 2.5 Manholes – delete paragraph C and replace with the following:
    - C. Top: Eccentric cone. Eccentric flat slab concrete deck allowed only with ENGINEER's permission.
  - c. Article 2.6 Inlets and Catch Basins, paragraph B – add subparagraph 3 as follows: Provide bicycle safe grate.

**B. Current (2025) edition of the Manual of Standard Plans published by the Utah Chapter of the American Public Works Association (APWA) with the following modifications:**

1. Current amendments published by the Utah Chapter of the APWA.
2. Delete Plans No. 205.1, 205.2, and 205.3. Refer to supplemental drawing ST-121.
3. Delete Plans No. 211 and 213. Refer to supplemental drawing ST-123.
4. Delete Plans No. 215, 216, 221.1, 221.2, 222, 225, 229.1, and 229.2. Refer to supplemental drawing ST-132 and ST-133.
5. Delete Plan No. 255. Refer to supplemental drawing ST-162.
6. Delete Plan No. 261.1. Refer to supplemental drawing ST-151.
7. Delete Plan No. 341.1, 341.2, and 345. Refer to supplemental drawing SD-103.
8. Delete Plan No. 411. Refer to supplemental drawing SW-101.
9. Delete Plan No. 431. Refer to supplemental drawing SW-103.
10. Delete Plan No. 433. Refer to supplemental drawing SW-102.
11. Delete Plan No. 511. Refer to supplemental drawing CW-101.
12. Delete Plan No. 521. Refer to supplemental drawing CW-104.
13. Delete Plan No. 522. Refer to supplemental drawing CW-105.
14. Delete Plans No. 523, 525, and 527. Refer to supplemental drawing CW-106
15. Delete Plans No. 551 and 552. Refer to supplemental drawing CW-107.

16. Delete Plans No. 561 and 562. Refer to supplemental drawings CW-111, CW-112, CW-113, and CW-114.
17. Plan No. 710 through 742; – these plans are superseded by and supplemental to Rocky Mountain Power requirements.

**C. Hinckley Town Standard Drawings:**

1. In case of contradiction between APWA and Hinckley Town Standard Drawings, adhere to the Hinckley Town Standard Drawings.

**D. Guidance for Selection of Construction Materials – The following is a list of typical construction materials for public works projects. This list is not comprehensive. Projects may vary in scope, and engineering judgment should be used to select materials for construction. Consult with Hinckley Town’s staff and engineer during project design.**

1. Plant-Mix Asphalt Paving:
  - a. Asphalt: Use PG64-34 or PG 58-28 grade asphalt.
  - b. Aggregate: Maximum gradation shall be  $DM \frac{1}{2}$  or  $DM \frac{3}{8}$ .
  - c. Mix Design: Superpave Method.
2. Chip Seal:
  - a. Chips: Type II Chip Seal
  - b. Oil: LMCRS-2 or PMRE
  - c. Flush Coat: CSS-1
3. Sewer:
  - a. Main Lines and Service Lines: PVC (SDR-35)
  - b. Inserta-Tee: Fernco brand
  - c. Service Lines: PVC Cleanout Assembly
  - d. Manholes: Precast Concrete
    - i. Maximum 350 feet spacing between manholes
    - ii. Eccentric Cone
4. Culinary Water:
  - a. Culinary water lines must be blue pipe
  - b. Main Lines: AWWA C900 PVC (DR 18; use DR 14 when operating pressures are above 200 PSI)
    - i. 8" Minimum Pipe Diameter
    - ii. Blue Pipe
  - c. Service Lines: High density polyethylene (HDPE).
    - i.  $\frac{3}{4}$ " IPS Minimum Pipe Diameter
    - ii. Blue Pipe
  - d. Fire Hydrants: Kennedy or Waterous flanged inlet with 6" AWWA C900 PVC Connection (DR 18)
  - e. Water Meter Lids: See standard detail for sizing.
  - f. Water Meter Rings: See standard detail for sizing.
  - g. Water Valves:
    - i. Gate Valve: Waterous brand

- ii. Place valve as close to mainline tee as possible.
- 5. Storm Drain:
  - a. Storm Drain Pipe: Black HDPE
  - b. Inlet and Junction Structures: Cast-in-place or precast concrete
  - c. Manholes: Precast concrete
    - i. Eccentric Cone