



City of Maple Grove

2021 STANDARD SPECIFICATIONS FOR UTILITY AND STREET CONSTRUCTION

CITY OF MAPLE GROVE, MINNESOTA

LIST OF NOTABLE CHANGES FOR 2021

2021 MAPLE GROVE STANDARD SPECIFICATION

CONDITIONS OF THE CONTRACT

- No Changes

GENERAL SPECIFICATION

18. Quality Service Locates (GPS Utility Data Collection)

- Added Conduit Crossings (CONDUIT) to the list of Electrical and Other for required GPS collection

WATER MAIN AND APPURTENANCES

5. Materials

- American Flow Control Valves and Hydrants with Alpha Ends added as an approved alternative to other approved products requiring Megalugs
- 1", 1½", and 2" water services shall be PE 4710 (blue with clear core) SIDR 7 PE pipe with compression fittings
- Polycam flared nut fittings have been REMOVED from the spec and are no longer acceptable
- Mueller corporation and curb stops shall be SIDR 7 PE pack joint
- Tracer wire tensile strength changed from 1150 to 452 pound average for standard installations
- Installation of junction boxes for tracer wire terminations have been added for all hydrants

8. Jointing of Pipe and Fittings

- Joint restraints required in all pipes inside a casing. Restraints shall be

installed so as to resist both tension and compression forces

SANITARY SEWER, STORM SEWER, AND APPUTENANCES

6. Manholes and Catch Basins

- External joint seal required on all manhole joints

9. Sanitary Sewer Service House Connection, Wyes

- C-900 sewer main shall have 401 line epoxy coated ductile iron tee installed in lieu of a wye with a C-900 riser ending with a C-900 to Sch 40 transition

PLANT MIXED BITUMINOUS CONSTRUCTION

- No Changes

GRADING, LANDSCAPING & TRAFFIC CONTROL

- No Changes

CONCRETE CURB AND FLAT WORK

- **Removed the Minnesota Concrete Flatwork Spec, and replaced it with a Maple Grove spec with MnDOT references**

EROSION AND SEDIMENT CONTROL

- No Changes

ROADWAY LIGHTING

- No Changes

2021 MAPLE GROVE STANDARD PLATES

SANITARY SEWER

- SS-4 Addition of manhole external joint seal requirements
- SS-7 Replacing casting R-1755-F2 with R-1916-F, and external joint sealing requirements
- SS-9 Addition of manhole external joint seal requirements
- SS-10 Addition of manhole external joint seal requirements
- SS-16 Addition of manhole external joint seal requirements

STORM SEWER

- STS-7 Last 3 pipe joints shall be bolted with rip rap installed on both inlets and outlets
- STS-9 Cleanout stand pipes shall transition from 6" to 4"
- STS-10 Drain tile install with exiting curb shall be with fine filter and perforated PVC
- STS-10a Clarifications for sump drain install and draintile

STREETS

- STR-3 Radius of cul-de-sac shall be 50 feet (2020)
- STR-4 Radius of cul-de-sac shall be 50 feet (2020)

WATERMAIN

- WM-1 All stubs shall be rodded or secured for the last 60' or back to the tee whichever is achieved first.
- WM-4 Hydrant shall be Waterous Pacer Model WB67-250 or approved equivalent, tracer wire shall be enclosed in junction box housing
- WM-5 Fittings shall be SIDR-7 PE compression fittings
- WM- 7 Saddles shall be Smith Blair 372 stainless steel saddle with 1" corporation or approved equivalent, fittings shall be SIDR-7 PE compression fittings
- WM- 8 Fittings shall be SIDR-7 PE compression fittings

Previous Changes in 2019

Standard Specifications

CONDITIONS OF THE CONTRACT

- No changes

GENERAL SPECIFICATION

6. Contractor's Responsibility for Materials

- MnDOT Reference Specification for Trench Backfill Density and Select Granular Borrow changed from MnDOT 2105.3 to **MnDOT 2106.3**

18. Quality Service Locates (GPS Utility Data Collection)

- GPS mapping for watermain bends to include change in directions for water services (WMBND).

WATER MAIN AND APPURTENANCES

5. Materials

- Slip joints at watermain stubs and plugs shall be slip rodded.

SANITARY SEWER, STORM SEWER, AND APPURTENANCES

4. Materials

- Green locate ribbon shall be installed for use of C900 pipe in Sanitary Sewer Main applications

7. Excavation and Trench Preparation

- Excess Materials shall be handled as per MnDOT 2106.3

12. Setting Manholes and Catch Basins

- Install Strike Products I&I Barrier or Ess Brothers Alignment Barrier on all Sanitary manholes if using concrete rings. Seal barrier as per

manufacturer's recommendations.

13. Manhole Drop Sections

- Risers for drop manholes shall be either P401 lined DIP or C900 only.

14. Testing

- For manholes in a project where wear course pavement will not be installed until the following spring, an interim adjustment will be required.

PLANT MIXED BITUMINOUS CONSTRUCTION

- No changes

GRADING, LANDSCAPING & TRAFFIC CONTROL

3. Samples Testing and Acceptance

- MnDOT Reference Specification for Trench Backfill Density and Select Granular Borrow changed to MnDOT 2106.3

MINNESOTA CONCRETE FLATWORK SPECIFICATION

- No changes.

EROSION AND SEDIMENT CONTROL

11. Inspections and Maintenance

- Suspension/resumption of inspections clarified to match MPCA permit.

ROADWAY LIGHTING

- No Changes.

Standard Plates

CONCRETE DESIGN

- CONC-9 Maximum driveway width shall be 24' unless approved by the Engineer.

EROSION CONTROL

- No Changes.

SANITARY SEWER

- SS-4 Clarification on the use of the Alignment/I&I Barrier
- SS-10 Clarification on the use of the Alignment/I&I Barrier.
- SS-16 Clarification on the use of the Alignment/I&I Barrier.
- SS-16 Clarification on the use of the Alignment/I&I Barrier.
- SS-17 Detail Sheet for Alignment/I&I Barrier.

STORM SEWER

- STS-9 Pipe material for all sump drains shall be Schedule 40 PVC.

- STS-10 Perforated PE pipe shall be Schedule 40.
- STS-10a Perforated PE pipe shall be Schedule 40.

STREET

- STR-9 Ductile Iron Adjustment Rings are no longer allowed. Two Adjustments are required on projects if wear course not put down until following year.

STREET SIGNS

- SGN-4 Added detail for Sign Post Break-away Assembly.

WATERMAIN

- WM-4 Waterous Pacer WB67-250 listed as only approved hydrant.

Previous changes in 2018

Standard Specifications

CONDITIONS OF THE CONTRACT

- Mn/DOT Standard Specifications for Construction changed from 2016 Edition dated June 2, 2015 to 2018 Edition dated June 9, 2017.

GENERAL SPECIFICATION

18. Quality Service Locates (GPS Utility Data Collection)

- GPS shots shall be collected using the Hennepin County Coordinate System.
- A timeframe requirement for submitting the Quality Service Locate data has been added.

23. Methods of Measurement and Payment

- Improved pipe foundation starts 6" below the bottom of pipe. The first 6" below the pipe is considered standard pipe bedding and is incidental to pipe installation.

WATER MAIN AND APPURTENANCES

5. Materials

- Stainless steel bolts shall be hand tightened only. All bolts shall be torqued as per manufacturers specifications.
- 1" water services shall be PE-4710 (Blue with clear core) SIDR 7 PE pipe with compression fittings. Part numbers for corps, and curb stops have been updated.

22. Methods of Measurement and Payment

- Fitting restraints and bolts for water main fittings are considered incidental.

SANITARY SEWER, STORM SEWER, AND APPUTENANCES

4. Materials

- Ductile iron pipe shall be p401 lined pipe. All fittings are to be epoxy coated.
- Sanitary pipe (8"-15") shall be SDR26 in cuts less than 20 feet deep
- Sanitary pipe (8"-15") shall be C900 in cuts greater than 20 feet deep.
- Fittings for C900 sanitary sewer shall be epoxy coated ductile iron.
- A spec for polypropylene pipe has been added for use as an approved material storm sewer construction (Includes associated fittings).

7. Excavation and Trench Preparation

- Rock shall be used at the direction of the Engineer for no additional compensation unless additional required for improved pipe foundation.

12. Setting Manholes and Catch Basins

- Install an alignment or I/I barrier with the appropriate caulking or sealant when using concrete adjusting rings.

13. Manhole Drop Sections

- Manhole walls shall be lined with either Zebron Coating or SpectraShield Line System.
- Risers for drop manholes shall be DIP only.

14. Testing

- Holiday Testing was relocated to the appropriate section of the Spec.

19. Method of Payment

- Pay items have been added for the following: Salvage and Install Casting, Remove and New Casting, & Grout Catch Basin or Manhole.

PLANT MIXED BITUMINOUS CONSTRUCTION

8. Plant Mixed Asphalt Construction

- Wear course for driveways and paths has been updated to SPWEA230B as per Mn/DOT Tech memo 17-SA-01.

GRADING, LANDSCAPING & TRAFFIC CONTROL

2. Materials

- Geotextile Fabric shall be Type V non-woven.

14. Turf Establishment

- Fertilizer analysis 22-5-10 shall be applied to sod areas at 200 lbs/acre.
- Fertilizer analysis 22-5-10 shall be applied to seed areas at 350 /bs/acre.
- Topsoil for linear/rural projects shall meet Mn/DOT 3877.2.A unless otherwise noted in plans or special provisions.
- Topsoil for street reconstruction shall meet Mn/DOT 3877.2.B unless otherwise noted in plans or special provisions.

- Seed mixture 25-151 applied at 120 lbs/acre.

22. Method of Payment

- A method of payment section was added.

MINNESOTA CONCRETE FLATWORK SPECIFICATION

3.6 Curb and Gutter Construction

- Joint construction on curb and gutter shall be every 8 feet.

EROSION AND SEDIMENT CONTROL

3. Inlet Protection

- A spec for Flotation Silt Curtain was added.

15. Measurement and Payment

- Clarification was added to the street sweeping portion.

ROADWAY LIGHTING

- No Changes.

Standard Plates

CONCRETE DESIGN

- CONC-9 Clarification on driveway patches. Bit mix shall be SPWEA230B.

EROSION CONTROL

- No Changes.

SANITARY SEWER

- SS-4 Updated cone section requirements to accommodate proper step spacing.
- SS-7 Changed watertight casting to Neenah casting r-1755-F2.
- SS-9 Alignment or I/I barrier required when using concrete adjusting rings.
- SS-10 Alignment or I/I barrier required when using concrete adjusting rings. Updated cone section requirements to accommodate proper step spacing.
- SS-15 Pipe bedding clarification.
- SS-16 Updated major portions of outside drop sections.

STORM SEWER

- STS-1 Keyed top slab.
- STS-3 Updated cone section requirement to accommodate proper step spacing.
- STS-5 Keyed top slab.
- STS-7 Updated the rip rap requirements for flared end sections.
- STS-9 Pipe material for 6" sump drain service shall be Schedule 40 PVC.

- STS-10 Updated installation of PVC sub-drain for street rehab.
- STS-10a Added sump drain installation detail for new construction.
- STS-12 Keyed top slab.

STREET

- STR-6 Updated bituminous trail mix design (SPWEA230B).
- STR-7 Updated bituminous trail mix design (SPWEA230B).

STREET SIGNS

- No Changes

WATERMAIN

- WM-6 Require 4" Tee on Existing main greater than 12".
- WM-7 Water service pipe material shall be PE-4710 (Blue with clear core) SIDR-7 PE pipe with compression fittings, and stiffeners at all flexible plastic connections.
- WM-8 Water service pipe material shall be PE-4710 (Blue with clear core) SIDR-7 PE pipe with compression fittings, and stiffeners at all flexible plastic connections.
- WM-9 Updated con section requirements to accommodate proper step spacing.