

# Standards and Specifications Changes & Updates 2022 Edition

The following updates/changes to the Town of Erie’s Standards and Specifications for Design and Construction of Public Improvements have been PROPOSED:

## UNIVERSAL-

- No changes

## COVER SHEET-

- No changes

## TABLE OF CONTENTS-

- No changes

## SECTIONS-

### **SECTION 100- Title, Scope and General Requirements**

- **122.00** Variations

Whenever there are practical difficulties involved in carrying out the provisions of these Standards and Specifications, the Town may grant variances for individual cases, provided the Town shall first determine that a specific reason exists making these procedures impractical, that the variance is in the best interest of the Town, that the variance is in conformance with the intent and purpose of these Standards and Specifications, and providing that such variance does not lessen any design requirement or any degree of integrity or safety, service, or quality equal to or greater than that intended by the application of the Standards and Specifications minimum requirements. The details of any action granting modifications shall be recorded and entered in the files of the Town. The Responsible Party shall provide a written request for variance and the justification for the request, and if approved by the Town, a variance will be issued in writing by the Town Engineer stating what the variance is and why it is being granted.

*Reason: Updating language and adding requirement for documentation of variances.*

- **161.02.07** **Easement Widths**

All Town Utilities shall be located in exclusive easements granted to the Town when it is not practical to install said utilities in Town Right-of-Way. Additionally, all easements for Town utilities in residential areas shall be in a tract. Town utilities shall not cross through residential lots. Under no circumstances shall any structures be constructed within these easements or right-of-way without prior approval from the Town. The minimum width requirements are as follows: twenty-five feet (25’) minimum or twice the depth of the invert of the utility whichever is greater for an easement with one utility, thirty feet (30’) minimum for an easement with two utilities that share the easement, forty feet (40’) minimum for an easement with three utilities that share the easement, etc.

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Deleted: Town Engineer shall make the interpretation and the interpretation shall be binding and controlling in its application.

Utility locations within easements shall be a minimum 10 feet (10') from the edge of the easement to the center of pipe and 10' from center of pipe to center of pipe for more than one utility. For easements with one utility, the utility location within the easement shall be 10' from the edge of the easement on either side for the standard minimum 25' easement and not centered, or the utility shall be placed so as to provide for safe excavation sloping as defined by the current (Occupational Safety and Health Administration) OSHA requirements for excavations and be off center to one side of the easement for single utility easement widths needing to meet the twice the depth of invert width requirement. For easements containing multiple Town utilities and with buried utility lines greater than 10', the Engineer shall submit a proposed easement width for approval be the Town Engineer.

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*Reason: Language revised to make intent of the language more clear.*

▪ **161.03 Final Construction Plan Requirements**

Final Construction Plans shall accompany all Final Plat submittals.

The following items will be shown on all plan sheets:

- A. Title Block (lower right-hand corner preferred)
- B. Scale (both horizontal and vertical for plans and profiles)
- C. Both original date and revision date
- D. Name of professional engineer or firm
- E. Professional engineer's seal
- F. Drawing number(s)
- G. Key map

The following items will be shown on the cover sheet only as applicable:

- A. Vicinity Map  
An up to date vicinity map at a scale of 1"=2000'.

B. Drawing Acceptance

1. Civil Plan Sets

All work shall be constructed in conformance with current Town of Erie Standards and Specifications, as amended. This drawing has been reviewed and found to be in general compliance with these Standards and Specifications and other Town requirements. This acceptance shall not be constructed to relieve any requirement to the Standards and Specifications not specifically addressed in these plans. IN ADDITION, **THE ENGINEERING DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE APPEAR HEREON.**

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Accepted by: \_\_\_\_\_  
Town Engineer

\_\_\_\_\_ Date

2. Landscape/Irrigation Plan Sets

All work shall be constructed in conformance with current Town of Erie Standards and Specifications, as amended. This drawing has been reviewed and found to be in general compliance with these Standards and Specifications and other Town requirements. This acceptance shall not be constructed to relieve any requirement to the Standards and Specifications not specifically addressed in these plans. IN ADDITION, THE LANDSCAPE AND IRRIGATION DESIGN AND CONCEPT, AS APPLICABLE, REMAINS THE RESPONSIBILITY OF THE LANDSCAPE ARCHITECT/IRRIGATION DESIGNER WHOSE STAMP/S AND SIGNATURE/S APPEAR HEREON.

Accepted by: \_\_\_\_\_  
Date

1. Landscape/Irrigation Plan Sets

All work shall be constructed in conformance with current Town of Erie Standards and Specifications, as amended. This drawing has been reviewed and found to be in general compliance with these Standards and Specifications and other Town requirements. This acceptance shall not be constructed to relieve any requirement to the Standards and Specifications not specifically addressed in these plans. IN ADDITION, THE LANDSCAPE AND IRRIGATION DESIGN AND CONCEPT, AS APPLICABLE, REMAINS THE RESPONSIBILITY OF THE LANDSCAPE ARCHITECT/IRRIGATION DESIGNER WHOSE STAMP/S AND SIGNATURE/S APPEAR HEREON.

Accepted by: \_\_\_\_\_  
Date

*Reason: To maintain consistency with Section 100 plan requirements.*

▪ **161.03.10 Easement Widths**

All Town Utilities shall be located in exclusive easements granted to the Town when it is not practical to install said utilities in Town Right-of-Way. Additionally, all easements for Town utilities in residential areas shall be in a tract. Town utilities shall not cross through residential lots. Under no circumstances shall any structures be constructed within these easements or right-of-way without prior approval from the Town. The minimum width requirements are as follows: twenty-five feet (25') minimum or twice the depth of the invert of the utility whichever is greater for an easement with one utility, thirty feet (30') minimum for an easement with two utilities that share the easement, forty feet (40') minimum for an easement with three utilities that share the easement, etc.

Utility locations within easements shall be a minimum 10 feet (10') from the edge of the easement to the center of pipe and 10' from center of pipe to center of pipe for more than one utility. For easements with one utility, the utility location within the easement shall be 10' from the edge of the easement on either side for the standard minimum 25' easement and not centered, or the utility shall be placed so as to provide for safe excavation sloping as defined by the current (Occupational Safety and Health Administration) OSHA requirements for excavations and be off center to one side of the easement for single utility easement widths needing to meet the twice the depth of invert width requirement. For

easements containing multiple Town utilities and with buried utility lines greater than 10', the Engineer shall submit a proposed easement width for approval be the Town Engineer.

*Reason: Language revised to make intent of the language more clear.*

#### **SECTION 200 – Acceptance Procedures**

- No changes

#### **SECTION 300 – Site Work and Earthwork**

- No changes

#### **SECTION 400 – Concrete Work**

- No changes

#### **SECTION 500 – Town Street Construction**

- **514.00 Final Overlay**

Final Overlay shall not be scheduled until 2 years have expired since the initial construction surface was installed or at 100% built out, or as approved by the Town Engineer. Final Overlay shall not be performed until all utility repairs and/or utility abandonments have taken place as identified as part of the Final Acceptance inspection unless approved otherwise by the Town Engineer.

The placement of overlays shall be scheduled so that no planed or recycled surface is left without resurfacing for more than ten calendar days. The Contractor shall immediately place a temporary hot mix asphalt layer on any surface that has been planed or recycled and cannot be resurfaced in accordance with the Town's temperature requirements within ten calendar days after being planed or recycled. The minimum thickness of the temporary hot mix asphalt layer shall be 2 inches. The Contractor shall perform the process control required to assure adequate quality of the hot mix asphalt used in the temporary layer. All applicable pavement markings shall be applied to the temporary layer surface. The Contractor shall maintain the temporary layer for the entire period that it is open to traffic. Distress that affects the ride, safety, or serviceability of the temporary layer shall be immediately corrected to the satisfaction of the Town Engineer. The temporary hot mix asphalt layer shall be removed when work resumes.

*Reason: Language added to apply industry standard. This is to ensure that milled surfaces are not exposed for prolonged periods compromising the integrity of the base layer of asphalt and to ensure that the exposure is minimized to reduce the likelihood of damage to vehicles resulting from uneven road surfaces.*

- **521.01 Alleys**

All alleys, when permitted by the Town Engineer, shall be paved to a full width and shall provide paved access to a paved street at both ends. Minimum access easement widths are 20' without utilities and 30' with utilities. Pavement minimum width is 18' when emergency access is not necessary. Dead end alleys shall be 150' maximum length and alleys greater than 600' in length shall have a secondary access to a residential street.

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*Reason: Changed to accommodate two-way travel.*

▪ **521.03.09 Auxiliary Lanes**

Auxiliary lanes provide for the safe acceleration or deceleration of turning traffic on and off roadways and help reduce the accident potential of turning vehicles. All auxiliary lane requirements are based on the Town’s Street Design Criteria found in Table 500-3 at the end of Section 500.

Right-turn Deceleration Lane

	Minimum Right-Turns to Require Deceleration Lane (vph)	Storage and Taper Length (ft)	Taper Rate
<b>Principal Arterial</b>	25	Storage (Min 150') + Taper	12:1
<b>Minor Arterial</b>	50	Storage (Min 100') + Taper	12:1
<b>Collector</b>	50	Storage (Min 50') + Taper	10:1

Left-turn Deceleration Lane

	Minimum Left-Turns to Require Deceleration Lane (vph)	Storage and Taper Length (ft)	Taper Rate
<b>Principal Arterial</b>	25	Storage (Min 150') + Taper	12:1
<b>Minor Arterial</b>	25	Storage (Min 100') + Taper	12:1
<b>Collector</b>	50	Storage (Min 50') + Taper	10:1

Deleted: (Min 150')

Deleted: (Min 100')

Deleted: (Min 50')

*Reason: Clarification to align with the transportation master plan.*

▪ **544.02 Weather Limitations**

Bituminous plant mix shall be placed only on properly constructed and accepted layers that are free from water, snow, or ice. The bituminous mixtures shall be placed only when weather conditions permit the pavement to be properly placed and finished as determined by the Town Engineer. The bituminous mixtures shall be placed in accordance with Table 401-3, Placement Temperature Limitations, of the Colorado Department of Transportation Standards and Specifications for Road and Bridge Construction.

Air temperature is taken in the shade. Surface is defined as the existing base on which the new pavement is to be placed.

A minimum paving window of four hours per day at the required temperatures shall be required for all paving operations to ensure quality control.

*Reason: Language aimed to prevent cold joints in pavement at too close of spacing resulting in quicker deterioration of the roadway.*

▪ **563.05 Curb Ramps**

ADA accessible curb ramps will be installed where applicable. Curb ramps will be constructed as shown in the Standard Drawings.

*Reason: Currently accepted ADA language*

Deleted: C

Deleted: for the handicapped

Deleted: at locations designated by the Town Engineer.

**SECTION 600 – Water Supply Facilities**

▪ **632.05 Gate Valves**

Design: The disc casting shall be open on one side so as to form no cavities for the accumulation of solids and permit the application of the protective coating. The sealing mechanism shall consist of a replaceable, contoured natural rubber disc seat ring internally reinforced by a steel ring and molded separately from the disc. The seat ring shall be secured to the disc with self-locking stainless-steel screws and shaped so that it cannot be installed improperly. The seat ring shall seal against an accurately formed machined surface in the valve body. Valves shall be provided with three (3) O-ring stem seals with two (2) placed above and one (1) below the thrust collar. The two (2) upper O-rings shall be replaceable with the valve fully open and under pressure. The area between the O-rings shall be filled with a lubricant to reduce friction and to lubricate the O-ring each time the valve is operated. An anti-friction washer shall be placed above the thrust collar to further minimize operating torque. Structural design of the valve shall be such that if excessive torque is applied to the stem, failure of the pressure retaining parts will not occur. Stem failure under such conditions shall occur externally at such a point as to enable the stem to be safely turned by use of a pipe wrench or other such readily available tool after exposure of the valve. The stem shall then be replaceable through removal of the two-bolt stuffing box.

Deleted: The disc shall have an integrally cast ASTM B-62 ductile iron stem nut to prevent twisting or angling of the stem.

*Reason: This product is no longer obtainable.*

▪ **642.03 Service Saddles**

Service saddles shall be used for wet tapping of all PVC mains for service taps. Service saddles shall be ROMAC 202 B or approved equal. The service saddle shall be protected from corrosion in accordance with the Standard Drawings.

*Reason: Added to conform to Standard Drawings.*

**SECTION 700 – Sanitary Sewer Facilities**

- No changes

**SECTION 800 – Storm Drainage Facilities**

▪ **815.03 Storm Sewers and Storm Inlets**

Except as subsequently modified, the design of storm sewers and inlets shall conform to the criteria set forth in the Urban Storm Drainage Criteria Manual. Both the initial and major storm events shall be considered to size the storm sewer system. Storm sewers and inlets shall be of sufficient capacity to adequately carry the expected

runoff from the initial design storm, minimum. There are conditions when the storm sewer system needs to be sized to convey flows greater than the initial design storm (and as much as the major storm event). The storm sewer system and subsequent storm inlets will commence at all locations where the allowable street capacity is exceeded or wherever ponding of water is likely to occur. No bubblers will be allowed. The minimum allowable pipe size to be used in storm sewers and laterals will be as listed in Table 800-10:

**TABLE 800-10  
MINIMUM ALLOWABLE PIPE SIZE**

Type of Conduit	Min. Inside Pipe Dia.
Main Trunk Sewer	18"
Short Laterals	15"

Storm sewer grade shall be such that a minimum cover is maintained to withstand AASHTO HS-20 loading on the pipe. The minimum cover depends upon the pipe size, type and class, and soil bedding condition, but shall not be less the 18 inches for reinforced concrete pipe (RCP) and 24 inches for high density polyethylene (HDPE), when allowed by the Town Engineer, at any point along the pipe.

*Reason: Added to address minimum cover and loading over storm pipe.*

**SECTION 900 – Traffic Control Devices**

- No changes

**SECTION 1000 – Parks**

- Entire section updated – Best Management Practices.

**SECTION 1100 – Traffic Signals**

- No changes

**STANDARD DETAILS:**

*Curb/Gutter and Sidewalk Details*

- No changes

*Streets Details*

- ST5 – Made numerous changes throughout the detail. Primarily, changes were made to the middle and bottom sections of the detail. Updated title to “Visibility / Sight Distance”. -DP
- ST16, ST17A, ST17B, ST18 – Replaced the word ‘underdrain’ with ‘curb drain’ in title. -JM

*Sanitary Sewer Details*

- SS3A – Updated Note #8 to state: “A Minimum of 0.2’ and a maximum of 18” fall required from inlet to outlet”. -DP

#### ***Storm Sewer Details***

- No changes

#### ***Water Details***

- W13 – Added note J to notes section. Flipped the drawing at bottom right of detail. -DP
- W39A – Added a note and note section to detail. Made minor changes to the figure. -DP
- W39B – Added 2 notes and a note section to detail. -DP
- Added W40 to list of details, drawn by Wendi. -JL
- Updated Water Index page to show the newly added detail

#### ***Parks Details***

- P02 – Deleted last 3 words from note #2. -MM
- P13 – Changed the top detail pointing to the sprinkler head to “Rainbird R-Van – 1800 Series-PRS-rotary nozzles”. -MM
- P14 – Made numerous changes to all figures in the detail. Removed all ‘Bedding and Cover Material’ with ‘Excavated Material’ for all 3 figures. - MM
- P18 – Changed the controller type and added a second note to the detail. -MM
- P20B - Added new detail per Patrick Plummer, titled ‘Tree On Slope Detail’ and assigned it the detail number of P20B. -MM
- P20C – Reassigned what was originally P20B to P20C since the above mentioned detail was created.
- P23 – Added a note to note section, made minor changes to top figure of detail. -DP
- P25 – Made numerous changes to top half of detail. -MM
- P27B – Created new detail from scratch showing Spline Trail Intersection. -MM

#### ***Traffic Signal Details***

- No changes

### **GENERAL NOTES:**

#### ***Construction***

- No changes

#### ***Grading***

- No Changes

#### ***Parks***

- **Entire section updated – Best Management Practices.**

#### ***Roadway***

- No changes

#### ***Sewer***

- No changes

***Storm Drain***

- No changes

***Water***

- No changes

***Non-Potable Water***

- No changes

