

ORDINANCE NO. O- 31 -2021

**AN ORDINANCE OF EAGLE MOUNTAIN CITY, UTAH,
AMENDING THE EAGLE MOUNTAIN MUNICIPAL CODE,
CHAPTER 15.60 STREET IMPROVEMENTS**

PREAMBLE

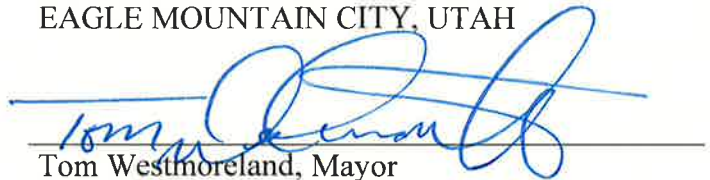
WHEREAS, the City Council of Eagle Mountain City finds that it is in the public interest to amend the Eagle Mountain Municipal Code, Chapter 15.60 Street Improvements, as described in Exhibit A.

BE IT ORDAINED by the City Council of Eagle Mountain City, Utah:

1. The City Council finds that all required notices, public hearings, and other requirements have been completed for the City Council to consider an amendment to the Eagle Mountain Municipal Code Chapter 15.60 Street Improvements.
2. The amendment described in Exhibit A is hereby approved.
3. This Ordinance shall take effect upon its first posting or publication.

ADOPTED by the City Council of Eagle Mountain City this 3rd day of August, 2021.

EAGLE MOUNTAIN CITY, UTAH


Tom Westmoreland, Mayor

ATTEST:


Fionnuala B. Kofoed, MMC
Director of Administrative Service/City Recorder



CERTIFICATION

The above Ordinance was adopted by the City Council of Eagle Mountain City, Utah on this 3rd day of August, 2021.

Those voting aye:

☒ Donna Burnham

☒ Melissa Clark

☒ Colby Curtis

☒ Jared Gray

☒ Carolyn Love

Those voting nay:

☐ Donna Burnham

☐ Melissa Clark

☐ Colby Curtis

☐ Jared Gray

☐ Carolyn Love

Those excused:

☐ Donna Burnham

☐ Melissa Clark

☐ Colby Curtis

☐ Jared Gray

☐ Carolyn Love



Fionnuala B. Kofoed, MMC

Director of Administrative Services/City Recorder

Posted on

8/6/2021

by

UP

Exhibit A

Chapter 15.60

STREET IMPROVEMENTS

Sections:

- 15.60.010 General.
- 15.60.020 Pavement design.
- 15.60.025 Bituminous concrete mix design.
- 15.60.030 Quality assurance and materials acceptance.
- 15.60.035 Quality control.
- 15.60.040 Asphalt seam location.
- 15.60.050 Warranty repairs.
- 15.60.060 Manholes and valve boxes.
- 15.60.070 Street signs.
- 15.60.080 Seal coat.

15.60.010 General.

All street surfacing shall comply with the APWA Standard Specifications, unless noted otherwise in this chapter.

Prior to placing asphalt surfaces, temperatures shall be a minimum of 50 degrees Fahrenheit and rising, and be expected to maintain a temperature of greater than 50 degrees for a length sufficient to complete a reasonable quantity of paving. In no instance will asphalt be allowed to be placed in temperatures less than 47 degrees. No asphalt may be placed on frozen ground, or when overnight temperatures of less than 42 degrees are expected.

A soils investigation shall be performed for all new roads and those roads for which work will be performed. The results of this investigation and a design of the road cross-section shall be submitted to and accepted by the city engineer or his/her designee. This chapter covers the preparation of subgrade, the placing of base gravel, and the placing of asphalt surface on any city street.

15.60.020 Pavement design.

Unless approved otherwise by the city engineer or his/her designee, the public works director, or as directed by the city council pavement sections will be constructed, at minimum, in accordance with the table below. The contractor shall submit a pavement design for each roadway to be constructed based on AASHTO 1993 or AASHTO ME practices. The pavement design should accommodate project specific traffic projections and geotechnical conditions, including expected construction traffic. If soils exhibit pumping or other instability, additional preparations (such as soil treatment, geotextile placement or over-excavation and placement of additional subbase layers) may also be required. Remediation requirements to be detailed by geotechnical report. Methods or remediation must be approved by the City Engineer or their designee. All asphalt will be placed in a maximum three-inch lifts and base with a maximum of 5-inch lifts and subbase in 9-inch lifts maximum.

Minimum pavement sections are as follows:

Street	Arterial	Collector	Local Street*/Parking Lot
Asphalt	5"	4"	3"
Untreated Base	9"	9"	6"
Subbase**	18"	12"	9"***
Total	32"	25"	18"

**Spline (Main Access) roads for new subdivisions or local streets within industrial or commercial zones must meet Collector minimum section.*

***Subbase to consist of engineered fill, meeting type A1 or A2 classifications as set forth by AASHTO, placed over scarified and compacted native earth material unless modified by the geotechnical report.*

****May be waived for placements over subgrade with a CBR of 10% or greater, tested at 95% compaction of AASHTO T-99 and with a 10lb surcharge.*

15.60.025 Bituminous concrete mix design.

Unless approved otherwise by the City Engineer or their designee, the Public Works Director, or as directed by the City Council, the following bituminous mixes will be used, as per APWA 32 12 05 Bituminous Concrete and as modified below:

Street	Bituminous Mix
Arterial	PG 64-28, SP-1/2, 75 Nd
Collector	PG 58-28, DM-3/4, 50 Blow or SP-1/2, 75 Nd
Local/Parking Lot	PG 58-28, DM-1/2, 50 Blow or SP-3/8, 75 Nd

All mixes must meet the following additional requirements:

A. Maximum recycled pavement allowed is 15% by weight of RAP or 15% of RAP Binder, whichever is lesser.

B. PG Binders that exceed minimum requirements are acceptable.

15.60.030 Quality assurance and materials acceptance.

A. Asphalt Pavement Material Tests. Material tests will be conducted by the City when the City Engineer or his/her designee considers it necessary.

B. Compaction Tests. The City will test all bituminous pavement for compaction and asphalt cement content. Test locations shall be determined by the City but will generally be taken 3 per 200 lineal foot of street or 1 per 2,000 square feet of paved area. Use core density to determine compaction acceptance. Use the following actions for compaction acceptance or correction:

Density, in Percent*		Action
Average	Lowest Test	
93.0 to 97.0	90.0 or greater	Placement Accepted
93.0 to 97.0	Less than 90.0	Evaluate and remediate low tests**
Less than 93.0	90.0 or greater	Evaluate and remediate full pavement***
Less than 93.0	Less than 90.0	Placement rejected

**Carry all calculations to minimum 1 decimal point.*

***Evaluate to determine extent of low-density areas. Remediation to include localized removal and replacement with acceptable placement.*

****Provide evaluation by Pavement Engineer addressing structural performance and remediation recommendations for approval by City Engineer.*

C. Grading Inspection. The subgrade, sub-base, and road base shall all be graded to an engineered red-head and accepted by Eagle Mountain City. Red-heads shall be placed every 50 feet at the crown of the road. If the distance between redheads and edge of pavement exceeds 25 feet additional redheads shall be installed halfway between the crown and edge of pavement. Red-heads shall also be placed every 50 feet at the edge of pavement where there is no curb and gutter.

D. Thickness Test. Material depth tests will be conducted by the City when the City Engineer or his/her designee considers it necessary. Depth analysis shall be made on at least four test holes for each section, excavated and filled by the contractor. Base thickness shall be accepted if 75% of the test holes are less than 1/4" below the specified thickness and no individual hole shall be more than 3/4" below the specified thickness. Work with sub-standard thickness may be accepted at reduced price if the appropriate pay factor for the lowest tested thickness is applied to all of the substandard work.

E. Bituminous Concrete Surface. Unless otherwise directed, the Contractor will be responsible for determining the depth of the bituminous surfacing in accordance with APWA 32 12 13.16, using cores, with the following modifications.

1. At the discretion of the City, the City may verify surfacing thickness through use of Ground Penetrating Radar (GPR). Thickness determined by GPR will be based on the depth on the trace where 95% of the trace meets or exceeds. The City may allow thickness determined by GPR to supersede coring results.

2. The following table outlines the pay factors for sub-standard asphalt pavement thickness:

Thickness Deficiency, in Inches*		Action
Average	Lowest Sublot	
0.00 to 0.25	0.00 to 0.375	Placement Accepted
0.00 to 0.25	Greater than 0.375	Evaluate and remediate sublot**
Greater than 0.25	N/A	Remediate full pavement***

**Carry all calculations to minimum 2 decimal points.*

***Evaluate to determine extent of low-density areas. Remediation to include localized removal and replacement with acceptable placement or mill/overlay with sufficient additional thickness to meet design requirements. Minimum overlay thickness must meet specification minimums based on aggregate gradation.*

****Remediate Entire Lot. Remediation to include localized removal and replacement with acceptable placement or mill/overlay with sufficient additional thickness to meet design requirements. Minimum overlay thickness must meet specification minimums based on aggregate gradation.*

F. Profile Tolerance Inspection. Profile tolerance inspections may be required by the City any time within a year of paving. Collector and arterial streets shall meet the requirements of APWA 32 12 16 (Plant-Mix Asphalt Paving). For local streets profiling, the maximum vertical distance from the pavement surface to a straight edge is:

1. 1/4-inch in 10 feet parallel to centerline.
2. 3/8-inch in 10 feet perpendicular to centerline except at cross section grade breaks.

G. Longitudinal Joints. Construct all longitudinal and transverse joints such that the upslope edge of the joint is level or slightly above downslope edge and within 10 foot straight-edge requirements. Remediate all joints that do not conform to this requirement.

H. Asphalt Concrete Temperature Test. This test shall be conducted on the first three loads of asphalt concrete installed, and on one in four of all future loads as required by the City. Testing shall be conducted according to the requirements and specifications of APWA 32 12 16 (Plant-Mix Asphalt Concrete Paving). Temperature gauge shall be allowed to stabilize for 1 minute before taking reading if using probe type. If using infrared "gun" type, reading shall consist of an average of a minimum of 3 readings, where reading is taken immediately after displacing a minimum of 2 inches of material from the surface being tested and the "gun" is within 18" of the surface being tested.

I. Asphalt Paving Limitations. Pave according to Section 02741 Part 3.8 of the current Standard Specifications for Road and Bridge Construction published by the Utah Department of Transportation (UDOT) unless otherwise approved by the City Engineer or his/her designee. Place HMA between April 15 and October 15, and when the air temperature in the shade and the roadway surface temperature are above 50 degrees Fahrenheit. Do not place HMA on frozen base or during adverse climatic conditions such as precipitation or when roadway surface is icy or wet. Use a release agent that does not dissolve asphalt and is acceptable to the City Engineer or his/her designee for all equipment and hand tools used to mix, haul, and place the HMA.

The City Engineer may, at his/her discretion, waive this date restriction requirement if outside temperatures are at least 60°F and the base material condition is approved.

15.60.035 Contractor quality control.

The contractor will provide the following for all paving operations:

A. HMA Mixing Plant: Use a UDOT 514 QMP certified Asphalt Mix Plant.

1. Submit plant certification documentation with mix design.

B. Perform Quality Control efforts sufficient to demonstrate material produced meets requirements of this specification. For each asphalt production day, the contractor will provide the following:

1. Testing Report: Submit Quality Control data to the Engineer within 3 working days after completion of each day of paving or prior to the start of the next paving day, whichever is sooner.

2. Plant Production Report: Submit daily plant production records to the Engineer within 3 working days after completion of each day of paving or prior to the start of the next paving day, whichever is sooner.

15.60.040 Asphalt seam location.

The contact point of two adjacent asphalt placements shall be located such that the seam is at a minimum five feet from the projected edge of the lip of gutter on the higher volume roadway. Cross gutters may be required for all roadways intersecting off a roadway classified as a collector road as directed by the city engineer or his/her designee.

15.60.050 Warranty repairs.

The city engineer or his/her designee shall determine at the time of the walkthrough the minimum type of surface maintenance that will be required for the subdivision or portions thereof. Crack sealing of seams will be required at a minimum for seams with horizontal gaps greater than one-fourth inch, or in instances which exhibit vertical separation. Slurry seals may be required in instances when asphalt patching occurs on more than 40 percent of any portion of the roadway. All slurry seals will be a Type II slurry.

All streets shall be swept clean prior to placement of slurry seal. All manholes and valves, including concrete collars, shall be protected from slurry seal. Any slurry seal in gutters or on other concrete shall be removed. A leveling course shall be applied where needed before the final slurry seal is laid.

15.60.060 Manholes and valve boxes.

All manhole covers and valve boxes shall be raised to the proper grade after the placement of pavement. The cover shall be removed and raised to the proper elevation with concrete setting the frame one-quarter inch below the pavement grade. The following types of rings can be used:

A. Four thousand psi concrete can be used with epoxy coated rebar with two rings maximum each collar.

B. Six thousand psi concrete can be used with fiber mesh one and one-half pounds per yard three-fourths-inch monofilament.

All adjustments in the elevation from the manhole cone/lid to be made with Whirlygig, manhole riser collar system or equivalent. All adjustments in elevation to water valve boxes are to be made in the top “sliding” riser. If grade cannot be reached with existing top another base section cut to grade must be used.

15.60.070 Street signs.

All signs, post, and hardware shall be installed in accordance to the MUTCD Standards.

Sign post shall be two-and-three-eighths-inch round post, galvanized inside and out, powder coated with 8017 brown, 16 gauge with no holes, crash tested and NCHRP 350 approved.

All posts shall have a galvanized dome rain cap and powder coated with 8017 brown.

Signage shall be installed to post with a sign clamp assembly, center bolt and U-bolt to be one-half-inch diameter.

Post shall be anchored to a V-loc 23VRN anchor for two-and-three-eighths-inch round post with a 24-inch leg, with stabilizer bolt, and wedge.

All anchors shall be driven into soil, no digging and burying shall be allowed.

All signage shall be marked in the bottom corner (one-fourth inch tall, one inch wide) with date and year sign was made.

15.60.080 Seal coat.

A seal coat fee shall be required for all new roads for the purpose of installing a seal coat on all new asphalt pavement approximately one year after final acceptance of development and/or minimum of 80 percent construction completion, to be determined by the city. The seal coat fee shall be a cash payment at the time of plat recording. The seal coat fee shall be paid by developer based on the total cost for seal coat at the current contract rates for the city for the anticipated date of the installation of the seal coat. The installation of seal coat shall be the responsibility of the city unless, at the time of payment of the seal coat fee, developer requests that the city allow developer to install the seal coat. If developer requests that city allow developer to install the seal coat, the city shall notify the developer at the time the city requires installation of the seal coat and provide developer 90 days to complete installation of the seal coat. The seal coat must meet all standards, specifications and warranties of the seal coat that would be installed by the city. Upon completion of the seal coat by the developer, the city shall refund the seal coat fee to the developer.