CITY OF LAKEVILLE
STANDARD SPECIFICATIONS
FOR STREET CONSTRUCTION
FOR PUBLIC USE
TO BE MAINTAINED BY THE CITY

SECTION 4

February, 2024

STREET CONSTRUCTION INDEX

CITY OF LAKEVILLE STANDARD SPECIFICATIONS FOR STREET CONSTRUCTION

1.00 SCOPE: This work shall consist of the construction of streets, roads, bridges and all appurtenant miscellaneous construction. The work includes the relocation or adjustment of existing facilities as may be specified in the contract.

2.00 SPECIFICATION REFERENCE: All references to Mn/DOT specifications shall mean the latest edition of the Minnesota Department of Transportation (Mn/DOT) "Standard Specifications for Construction." The Mn/DOT "Standard Specifications for Construction" shall govern unless modified or altered herein by these specifications.

Method of measurement for payment of work performed shall be in accordance with Mn/DOT Specifications or C.E.A.M. Specifications unless modified by Special Provisions Specifications.

In the above-referenced state specifications, any words referring to the State of Minnesota or the Department of Transportation shall mean the Owner.

3.00 PROSECUTION OF WORK - SPECIAL PROJECT ADA REQUIREMENTS
All pedestrian facilities on this Project must be constructed according to the Public Rights-of-Way Accessibility Guidelines (PROWAG) which can be found at: http://www.dot.state.mn.us/ada/pdf/PROWAG.pdf. The Engineer may provide additional details to those provided in the Plan that meet the PROWAG guidelines as the need arises and field conditions dictate.

3.01 Responsible Person – ADA Compliance Supervisor
The Contractor must designate a responsible person competent in all aspects of PROWAG to assess proposed sidewalk layouts at each site before work begins. Any time work the Contractor is performing concerns pedestrian facilities, the Contractor's responsible person shall be on site. No measurement will be made of the various duties of the ADA Compliance Supervisor, and all such work shall be construed to be incidental to the project.

3.02 Criteria for Pedestrian Facilities
Pedestrian facilities must be constructed to meet the following criteria:
1. Pedestrian Access Routes (PAR) must be constructed to meet the following:
a. Minimum 4 feet width.
b. A maximum cross slope of 2.0%.
c. Vertical discontinuities must be less than 0.25 inches.
d. Must provide positive drainage without allowing any ponding and maintain existing drainage flow patterns unless indicated otherwise in the Plan.
e. All grade breaks shall be constructed perpendicular to the path of travel.
f. Maximum 5% running slope unless adjacent roadway profile exceeds 5%.
2. Landings are part of the PAR and must be constructed to meet the following:
a. 4 feet by 4 feet minimum width and shall match full width of incoming PAR.
b. Maximum slope of 2.0% in all directions.
c. Required at all locations where the PAR changes directions or inverse running slopes are >2%.
d. Must be connected to the PAR.
e. Shall be constructed as a single plane surface having no grade breaks.

3. Ramps are part of the PAR and must be constructed to meet either of the following criteria:
a. Longitudinal slopes less than 5% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).
b. Longitudinal slopes between 5 – 8.3% in the direction of travel require a landing at the top of the ramp.
c. Truncated domes shall be epoxy coated red in color as approved by the Engineer.

3.03 General Requirements

The Contractor and the Engineer shall work together to construct all pedestrian facilities set forth in the plans. If the plan or site conditions do not allow accessibility standards to be met, the Contractor shall consult with the Engineer to determine a resolution. The Engineer shall respond to the Contractor in a timely manner with a solution on how to proceed. The Contractor shall mitigate any potential delays by progressing other available work on the project. If the Contractor constructs any pedestrian facilities that are not per Plan, or do not meet the above requirements, or do not follow the agreed upon resolution with the Engineer, the Contractor will be responsible for correcting the deficient facilities with no compensation paid for the corrective work.

3.04 Removals

The Contractor and the Engineer shall use the appropriate ramp, sidewalk, and driveway details in the Plan, and calculate the removal limits for the sidewalk and curb and gutter. If it is determined that the removal limits will exceed the plan removal limits by more than 10 feet and the plan removal limits are not adequate to meet PROWAG and MnDOT Standards, the Contractor shall consult with the Engineer to determine a solution. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may finish the removals.

3.05 Curb and Gutter

a. Curb and Gutter at Quadrants: Prior to pouring the curb and gutter at curb ramps the Contractor and the Engineer must verify that the curb and gutter will work with any vertical constraints (doorways, steps, bus stops, outwalks and landing areas). Prior to pouring curb and gutter at quadrants the Contractor must verify the zero height curb, and curb transitions will be located as shown in the Plans and will provide an adequate detectable edge as shown on Standard Plan 5-297.250 (Sheet 4 of 6). Verify curb tapers are constructed at correct heights so that positive boulevard slopes and drainage is maintained away from landings and sidewalks, to the newly constructed curb and gutter sections. The Contractor shall verify that the proposed gutter flow lines will provide positive drainage as well as maintain existing drainage patterns including existing gutter inflows/outflows. The curb and gutter shall be constructed as detailed in the Plan with a defined flow line and with no vertical discontinuities over 1/4 inch. For required flow line corrections including curb line raises and curb ramp cross slope “tabling”, see Standard Plan 5-297.250 (Sheet 6 of 6). Curb shall be poured at 3% inflow around the radius or at a minimum distance of 10 feet from any zero height curb section when machine placed. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

3.06 Curb and Gutter at Roadway Sections

Prior to pouring curb and gutter at roadway sections the Contractor must verify proposed curb and gutter heights will work with existing roadway and shoulder slopes. The Contractor shall verify prior to placing the pedestrian facilities that positive drainage is maintained within public

Right-Of-Way(R/W), as well as maintaining existing off R/W drainage. The Contractor shall check to ensure all top back of curb elevations will allow for adequate boulevard slopes, PAR slopes, and widths as shown on Standard Plan 5-297.254 (Sheet 4 of 4) while maintaining all vertically constrained match points (doorways, steps, bus stops, outwalks and landing areas). The Contractor shall check all driveway locations and widths and follow driveway details and plans for all driveway layouts including curb heights and curb tapers. Driveway curbs sections and aprons shall be constructed to minimize changes in the sidewalk width, alignment, and profile. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

3.07 Forming and Finishing

After the curb and gutter has been correctly poured, and the Contractor has set the sidewalk forms, the Contractor shall verify prior to placing the curb ramps and sidewalks that positive drainage is maintained within public R/W, as well as maintaining existing off R/W drainage, and that all the requirements in 3.02 will be achieved.

a. Ramps: In addition, the longitudinal slopes shown in the Construction Plans and the Standard Plan shall be utilized unless these conditions cannot be met. The starting point for setting the forms on the controlling ramp legs, landings, and sidewalk slopes should be the following:

Steep (S) 7%
Flat (F) 4%
Landing 1%
Sidewalk Cross Slope 1.5%

If any of these requirements cannot be met the Contractor shall meet with the Engineer to determine the best solution. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed with the curb ramp and sidewalk pour.

b. Landings: An initial landing is the first required landing of a pedestrian ramp. All initial landings required at the top of a ramped sloped surface (>2% longitudinal slope), shall be formed and placed separately in an independent concrete pour. This does not include initial landings placed at roadway grade such as depressed corners, parallel ramps, rural flat landings, or flat cut- throughs. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour. Wet casting or drill and grouting of reinforcement bars will be required in accordance with the details shown in Standard Plan 5-297.250 (Sheet 6 of 6). Wet casting of reinforcement bars shall be installed through holes or slots in the forms, with a form height at least equal to the walk thickness of the formed concrete shown in the plans. These bars shall be deformed and installed with 2 inch minimum concrete cover. All necessary subgrade preparation and aggregate base placement for the entire ramp construction limit shall be done before the initial landing is constructed at each location.

3.08 Laying Out the Work

It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to lay out all proposed work at each intersection in accordance with the Plan and requirements listed in this Special Provision. The Contractor may confer with the Engineer for guidance in laying out the proposed work, but it will be the Contractor's responsibility to ensure the proposed work meets all the requirements of this Special Provision. This layout includes, but is not limited to

placement of grade breaks, curb transitions, gutter flow lines, truncated dome placement, crosswalk marking placement, flares, landing limits, removal limits, driveway tie in limits, and ramp limits. It is important that the Contractor lay out this work properly to achieve the construction of a compliant pedestrian facility. The owner's surveyor will only stake points and elevations provided in the Plan. For custom designs, other than specific dimensions provided in the Plan, the Contractor shall be expected to scale dimensions from the Plan as needed to construct the facility. If scaled dimensions do not allow for a facility to be constructed to meet the requirements of 3.02, the Contractor shall follow the process listed in 3.03. This layout work shall be incidental.

3.09 Existing Buildings

The Contractor shall utilize measures and methods when working near existing buildings that will avoid damaging the building's face or structure. The contractor will be responsible for any damage to the building's face or structure, both below and above ground. Any damage resulting from Contractor's operations will be repaired at the Contractor's expense to the satisfaction of the Engineer.

3.10 Joints and Edges

The Contractor will round all joints and edges with a 1/4 inch radius grooving or edging tool within the PAR. This requirement includes all curb and gutter joints at zero inch height curb sections at curb ramps. Contraction joints shall extend to at least 30 percent of walk thickness. The Contractor shall also have the option of providing saw cuts to construct the sidewalk joints. If saw cutting, provide 1/8 inch wide contraction joints within the PAR, including all curb and gutter joints at zero inch height curb sections. When greater than 50 feet of continuous sidewalk runs are constructed the contractor shall saw cut all joints. This work shall be incidental. The top grade break of walkable flares needs a visual joint to indicate a change in grade. To eliminate the use of excessive contraction joints in the quadrant the visual joint shall meet MnDOT 2521.3C, except the depth requirement is reduced to 1/4 inch. In sections where concrete-boulevard is placed between the back of curb and the sidewalk, the 1/2 inch preformed joint filler material shall be placed at the back of curb and between the outside edge of sidewalk at existing building or structures. The 1/2 inch wide preformed joint filler shall not be placed in the longitudinal joint between the sidewalk and boulevard, unless it is necessary to provide expansion at fixed structures. At locations where sidewalk is adjacent to existing buildings, extend walk up to the edge of building and place 1/2 inch preformed joint filler 1/2 inch lower than top of walk whenever possible. Furnish and install Backer Rod of appropriate diameter when joints are 1/4 inch wide or greater, clean surfaces and apply approved silicon joint filler to flush with top of walk. If the transverse sidewalk and boulevard joint layouts cannot be aligned, use approved preformed joint filler with a maximum 1/8 inch width and place between the sidewalk and boulevard to prevent contraction joints from migrating into the adjacent concrete panels.

3.11 Minimum Requirements

The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4.0 feet. All new or reconstructed sidewalk widths shall match or exceed in place sidewalk and in no case shall it be less than 5.0 feet in width except at locations where obstructions cannot be moved or at driveways where slopes exceed the maximum allowable grades. The cross slope of the sidewalk or shared use path shall not exceed 2%, and shall be measured perpendicular to the path of travel across the entire surface width of the sidewalk or shared use path. Curb ramps should match proposed sidewalk PAR width and shall match full shared use path widths. Whenever possible, the entire landings should be placed in a single concrete placement. If this is not

possible due to construction staging, follow requirements for reinforcement bar placement and tie adjacent landings together. In areas where the sidewalk is to be constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost. Architectural elements such as brick pavers, concrete stamping, and multiple colored concrete placements shall be kept outside the curb ramps and landing areas. Any architectural elements that do not maintain a consistent flat smooth surface shall not be used within the PAR.

4.00 SUBGRADE PREPARATION (MN/DOT 2112): The Contractor shall have a suitable scarifier and a suitable water truck on the job at all times during subgrade preparation and base, binder and wearing course placement. Water needed for compaction shall be considered incidental to the project. Subgrade preparation shall be considered incidental to other items of work, and no direct compensation will be made unless a separate bid item is provided for in the proposal.

5.00 SELECT GRANULAR BORROW – MODIFIED: Mn/DOT Specification 3149.2 B2 shall be modified so that the ratio of the portion passing the #200 sieve divided by the portion passing the 1-inch sieve may not exceed 8% maximum percent by mass.

6.00 AGGREGATE BASE (MN/DOT 2211): Material for Class 5 base course shall meet the gradation requirements of Mn/DOT 3138 for Class 5 aggregate. If recycled concrete material is used, the recycled concrete content may not exceed 40% by volume.

6.01 Aggregate Base – Class 5 Modified (Mn/DOT 2211): When specified, the aggregate base shall conform to the following gradation and to Mn/DOT 2211. The material shall be 100% crushed limestone.

SIEVE SIZE	PERCENT PASSING
2”	100%
1 ½”	100%
1”	65-95%
¾”	45-85%
3/8”	35-70%
#4	15-45%
#10	10-30%
#40	5-25%
#200	0-10%

Plasticity Index (PI) – 0-3
Liquid Limit (LL) – Maximum 25

6.02 Compaction: Compaction shall be by the Penetration Index Method per Mn/DOT 2211.3D.2.c for recycle aggregate. Specified Density Method shall be used on virgin aggregate only.

6.03 Test Rolling: Prior to and following placement of the select granular borrow and aggregate base, the Engineer will require the completion of a test roll on the street. The Contractor shall provide a fully loaded tandem axle truck. The Contractor shall provide a weight ticket for the test roll vehicle to the Engineer prior to the test roll.

A representative from the Engineer, Contractor and Soils Engineer company shall be present during the operation.

The test rolling shall be at the direction of the Engineer, and shall be completed in areas as directed by the Engineer. The Engineer shall determine what sections of the roadway are unstable. Normally, a .05' maximum deflection will be acceptable.

6.04 Street Design: The design of the aggregate base and bituminous surface may vary depending on residential, minor, major or arterial street designation. See standard plate number LV-ST-8 and the R value requirements below.

The R value shall be determined for the public streets in accordance to the HVEEM Stabilometer Method. Local residential street designs must meet the following minimum requirements:

A) Local residential streets to be constructed on soils having an R value greater than 70 may use the pavement section indicated.

B) Local residential streets to be constructed on soils having an R value between 31 and 70 will require a flexible pavement design to be submitted to the City Engineer for review.

C) Local residential streets to be constructed on soils having an R value between 16 and 31 must include a minimum of a 2 foot sand subcut below proposed street subgrade. The sand subcut must be backfilled with select granular borrow, as modified by the City of Lakeville Standard Specifications, and properly drained using draintile and draintile crossings conforming to the City of Lakeville Standard Specifications. The street design is subject to review by the City Engineer. The City Engineer may approve an alternate flexible pavement design for the street.

D) Local residential streets to be constructed on soils having an R value less than 16 must include a minimum of a 3 foot sand subcut below proposed street subgrade. The sand subcut must be backfilled with select granular borrow, as modified by the City of Lakeville Standard Specifications, and properly drained using draintile and draintile crossings conforming to the City of Lakeville Standard Specifications. The street design is subject to review by the City Engineer. The City Engineer may approve an alternate flexible pavement design for the street.

The flexible pavement design of minor collectors and above will vary depending on both soil conditions and the anticipated traffic volumes.

7.00 PLANT MIXED BITUMINOUS PAVEMENT(MnDOT 2360): The bituminous mixture for: local street construction shall be MnDOT TYPE SP 12.5 SPNWB330C for base and binder courses along local residential streets and TYPE SP 12.5 SPNWB330C for base and binder courses along collector roadways. MnDOT TYPE SP 9.5 SPWEA340C shall be used for wear courses along local residential streets, and MnDOT type TYPE SP 12.5 SPWEB340C shall be used for collector roadway wear courses. MnDOT TYPE SP 9.5 SPWEA230B for trails.

At least 5 days prior to the beginning of any base course mixture production operations, the Contractor shall submit to the Engineer a job-mix formula prepared by an approved testing laboratory for each type of mix. The job-mix formula shall establish a single percentage of aggregate passing each required sieve size and a single percentage of bituminous material to be incorporated in the mixture.

The bituminous material for mixture shall be Binder Grade PG58-34.

7.01 Bituminous Curb: Where specified, a bituminous curb shall be left on both sides of the travelway. This bituminous berm shall be formed by a shoe attached to the paver and constructed integrally with the pavement.

7.02 Compaction: Compaction shall be by the Specified Density Method for base and binder courses and by the Ordinary Compaction Method for wear courses. Bituminous core testing restoration shall be made by placing HMA (hot mix asphalt) and compact by means of a Marshall Hammer and restore surface within 24 hours of coring. Cold patch asphalt will not be allowed.

7.03 Method of Rolling: When using ordinary compaction method to evaluate density, use a control strip to establish a rolling pattern following the requirements of MNDOT 2360.3.D.2a.The rolling of the base, binder and wear courses shall follow the accepted procedure of a steel wheel roller with the drive wheel forward directly behind the paver, rolling form the gutter edge of the mat towards the center seam. Following as close behind the steel wheel as is practical shall be pneumatic-tired roller operating in the same pattern as the steel wheel roller, followed by steel wheel roller providing a static finish to eliminate any wheel tracks left by the pneumatic tired roller. The same procedure shall be followed for additional passes.

8.00 Job Mix Formula: At least 5 days prior to the beginning of any base course or wearing course mixture production operations, the Contractor shall submit to the Engineer a job-mix formula prepared by an approved testing laboratory for each type of mix. The job-mix formula shall establish a single percentage of aggregate passing each required sieve size, a single percentage of additional bituminous material and a single percentage of total bituminous materials to be incorporated into the mixture.

The new bituminous material for mixture shall be asphalt Binder Grade PG58-34.

8.02 Recycled Concrete Aggregate: The Contractor, at his option, may incorporate recycled concrete aggregate as an ingredient or blend with salvaged bituminous surfacing or virgin aggregates in accordance with these specifications. Acceptable blends shall be determined by laboratory testing of trial mixtures. These results shall be submitted to the Engineer for approval in accordance with the job-mix formula requirements above.

8.03 Aggregates: Regardless of the source of the aggregate materials, the aggregate materials shall meet the requirements of Mn/DOT 3139 for the type aggregate specified.

8.04 Percentage Recycled Materials: The maximum allowable percentage of recycled material incorporated into the mix shall not exceed 50 percent by weight of recycled material to final production mix material used on the job.

9.00 BITUMINOUS TACK COAT (MN/DOT 2357): Bituminous tack coat shall be used between all courses of bituminous pavement constructed by the Contractor. Tack coat material shall be CSS-1H or CSS-1, or equal emulsified asphalt and spread at the rate of 0.05 to 0.07 gallons per square yard.

10.00 STRUCTURAL CONCRETE (MN/DOT 2461): Prior to placing any concrete, the Contractor shall submit to the Engineer a job-mix formula from an approved testing laboratory for each mix number. The job-mix formula shall establish the proportion of the aggregates, cement-void ratio, minimum cement factor, water, cement and any admixtures.

10.01 WALKS (Mn/DOT 2521): Concrete mix shall be 3F52 where forms are placed and 3F52 where slip form machine placement is used. The application rate of the membrane curing for concrete walks shall be one gallon of compound to 125 square feet of surface. All concrete sidewalks shall be constructed atop 4-inches of select granular material.

10.02 Concrete Curbing (Mn/DOT 2531): Concrete mix shall be 3F52 where forms are placed and 3F32 where slip form machine placement is used. The application rate of the membrane curing for concrete curbs and gutters shall be one gallon of compound to 125 square feet of surface.

Where the longitudinal grade of the curb and gutter is 0.07% or less, the concrete edges and surfaces designed to straight lines or grades will be checked with a 10 foot straight edge, and any deviation there-from in excess of 3/16 inch will be considered to be unacceptable work.

10.03 Concrete Curb Crack Repair: Saw concrete crack 1 to 1 ½ inches in depth and caulk with Dow Silicone-888 sealant or approved equal. The City will decide whether or not the defective curb will be repaired or replaced on a case to case basis.

Contraction joints for curb and gutter will not require joint sealing.

11.00 DRIVEWAYS: Driveways and aprons shall be constructed in accordance with the Standard Plates.

11.01 Bituminous Driveways: Bituminous surfacing used in driveway construction shall meet the applicable provisions of Mn/DOT 2360. The aggregate gradation shall provide for 100 percent passing the 5/8 inch sieve.

The Contractor shall submit a job-mix formula.

11.02 Concrete Driveways: Concrete driveways shall be constructed in accordance with the applicable provisions of Mn/DOT 2301 and 2531.

The Contractor shall submit a job-mix formula.

The application rate of the membrane curing shall be one gallon of compound to 125 square feet of surface.

12.00 UTILITIES: The contractor shall adjust all castings located within the street section. Adjustments shall be as follows:

Non-Inlet Castings	5/8” below finished grade
Inlet Castings	1.5” below gutterline grade
Valve Boxes	5/8” below finished grade

Castings and valve boxes located in the bituminous section shall be coated with a material which allows removal of bituminous material applied to the casting lid. Castings and valve boxes shall

have a wooden cutout or other approved material placed over the structure during the paving operation. The cutout shall allow pavement to be placed around the structure, causing a uniform lip after rolling conforming to the information given above. The top of the castings shall be adjusted to the appropriate elevation just prior to paving both non-wear and wear course.

Ductile Iron Adjusting Rings: Ductile iron manhole adjustment rings as manufactured by Ess Brothers & Sons, Inc., Neenah Foundry Company, or approved equal, shall be used on all sanitary and storm sewer manholes prior to final wear course placement. The height of the cast iron adjustment ring shall be determined so as to set the top of casting five-eighths (5/8) inches below finish wear grade at each manhole and still maintain the required wear course thickness. A one-quarter (1/4) inch bead of EBS Super Glue adhesive, or approval equal, shall be placed around the entire rim of the existing casting prior to placement of the adjustment ring. The existing casting shall be cleaned according to the adhesive manufacturer's recommendations.

The rims shall be set to final grade by utilizing a manhole riser ring installation. The manhole riser ring installation shall be as per manufacturer's recommendations.

13.00 TRAFFIC SIGNS AND DEVICES (MN/DOT 2564): Sign posts shall be installed in accordance with the Minnesota Manual on Uniform Traffic Control Devices for Streets and Highways.

Street Identification Signs shall be 9-inch aluminum with 6-inch letters for street names and 6-inch letter for street suffixes (Ex. Ave., Ct., Blvd). The font shall be Clearview One (1) VC35. The first letter of the street name or suffix shall be capitalized and all other letter shall be lowercase. Public street identification signs shall be green with white lettering and private street signs shall be brown with white lettering. The back of the street identification signs will be secured together using a cherry mate and PVC spacer.

All signs shall be a 0.08" aluminum, have Diamond Grade DG# sheeting and be pre-punched longitudinal midpoint of sign with holes 7/16-inch in diameter to fit the standard Telspar quick-punch post. Two (2) 5/16-inch holes shall be punched at the vertical midpoint of the sign spaced ½-inch on center from the edge of the blank.

All signs will be attached with drive rivets and nylon washers between the rivet and the sign facing.

All anchors/anchor stabilizers will be flush with each other and erected straight to a point 2- inches above the ground. The post shall be placed 6-inches inside of the anchor and be connected with a corner bolt and nut.

Regulatory signs shall have an anchor, stabilizer sleeve, a 10-foot post and a pyramid rain cap.

Stop signs shall have an anchor, an omni-directional sleeve, a 12-foot post and a pyramid rain cap.

Street identification signs will have an anchor, an omni-directional sleeve, 10-foot post and a pyramid rain cap.

Stop and street sign identification signs shall have an anchor, an omni-directional sleeve, a 12-foot post with the stop sign mounted 3-inches under the street identification sign and a pyramid rain cap.

All other signage shall meet the minimum requirements contained within the Minnesota Manual on Uniform Traffic Control Devices for Streets and Highways

13.01 Existing Sign Replacement: Existing signs shall be replaced in accordance with the "Minnesota Manual on Uniform Traffic Control Devices for Streets and Highways."

13.02 Pavement Marking and Striping: The Contractor shall paint traffic control stripes in accordance with Mn/DOT specifications. Application equipment shall be approved by the Engineer prior to commencing striping operations.

13.03 Future Street Extensions: Four (4) nine-button delineators shall be installed at the terminus of all future street extensions. The nine-button delineators shall be red on black in accordance with the Minnesota Manual on Uniform Traffic Control Devices for Streets and Highways.

14.00 TRAILS: Trail subgrade shall be compacted to 100% density as specified by the Ordinary Compaction Method. The subgrade shall be proof rolled in the presence of a City Representative and unstable areas shall be corrected as directed by the City Engineer.