

**APPROVED MATERIALS LIST
PARKS & OPEN SPACE
OCTOBER 2016**

The following approved materials list applies to all City of Longmont Natural Resource Division related improvements per Section 600 of the City of Longmont Design Standards and Construction Specifications.

Proposed substitutes to the following specific brands and / or models shall be submitted to the City of Longmont Engineering Services Division in writing with all necessary technical information needed for analysis. A written approval from Engineering Services of substitute is REQUIRED for all products.

601.00 CONCRETE BIKEPATHS, BRIDGES AND UNDERPASSES

1. **Control joints:** Zip strip or saw cut.
2. **Expansion joints:** pre-formed compressible bituminous fiber Type M-213, ½” thick with removable ‘void cap’ to create ½” reveal for sealant. Sealant to be Tremco “Tremflex 834, Pecora “unicrylic +60, or Sonolastic “Sonolac”.
3. **Bridge decking:** concrete or 2”x8” IPE Ironwood. Decks must be designed with ability to easily replace individual deck boards.
4. **Underpass Lighting:**
 - a. LED type Cooper Lighting Model FCC-S-2-3750-7-40-120-82/87-ED-SF3-VRSD
5. **Root Barrier:** Deep Root 24” barrier.
6. **Underpass Pavement Markings:** Yellow paint – 4” wide solid line at blind corners and through underpasses as approved by City staff.

602.00 GRADING AND FINE GRADING

1. **Soil Amendment:** Premium 3 by A-1 Organics composted aspen humus or other amendments certified as Class I or Class II by Rocky Mountain Organics Council.

603.00 IRRIGATION

Note: For common open space irrigation systems, equipment equal to these must be used (i.e. commercial-grade and heavy-duty).

1. **Flow Meter:** Data Industrial. For 1” – 4” use drop-in style model # IR228PV. For 6” taps, use threaded style model # IR220BR.
2. **Backflow Enclosure:** Strong Box SBBC-30ALI by V.I.T. Products, Inc.
3. **Mainline:**
 - a. For pipe sizes larger than 3” - J.M. Ringtite Class 200 PVC pipe.
 - b. For Pipe sizes 3” and smaller – Schedule 40 PVC
4. **Joint Restraints:** For all mainline sized 4” and larger - Leemco ductile iron gasketed fittings and Leemco pipe restraints shall be used.
5. **Drip line:** Irritrol blue stripe drip pipe, 80 PSI rated. Centennial drip tubing or Rainbird XT-700 only.
6. **Valves:**

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- a. Remote Control Zone Valves: Rainbird PEB Series; Rainbird PES-B Series; Hunter ICV series (or Hunter ICV with Sentry filter for raw water applications).
 - 1. Pressure regulating function to be used as needed per Section 603.2.5.
 - b. Remote Control Master Valves: Rainbird GB Series (brass). For ¾" taps, use 1" Master Valve with reducing bushings. For 3" taps, use Rainbird 300 BPES valve for master valve.
 - c. Drip Remote Control Valves:
 - 1. Same as remote control zone valves, including pressure regulator and y-strainer. RBY upstream filter.
 - 2. Rainbird X CZ-PRB-100-COM.
 - d. Ball Valves: Spears plastic ball valves with tee handle – slip joint (no female threads).
 - e. Isolation Gate Valves: MATCO Gate Valve with resilient seat.
 - f. Manual Drain Valve: AY McDonald Model # 76101010 1" curb stop.
 - g. Quick Coupling Valves: Rainbird 44RC units with rubber cover. Keys Rainbird 44K brass key. 1" on all QC valves.
7. **Valve Boxes:** Highline (formerly Pentek) or Carson. Jumbo – sized only.
8. **Control System:**
- a. Control System Enclosure: Hoffman Floor Stand (A-FK1212), Latch Kit (A-L2BR), Back Panel (C-P2424) and Enclosure (A-242412LP).
 - b. Controller (*for systems not to be maintained by the City of Longmont*):
 - 1. Hunter I-Core series controller.
 - 2. Surge Protection: (*as appropriate*).
 - c. Satellite Control Field Unit (*for systems to be maintained by the City of Longmont*):
 - 1. Satellite control system (one per water tap), size per design plus two spare zones. To include the following specific brand and models in addition to miscellaneous requirements per detail in section 603.00:
 - aa. Toro Sentinel control field unit - Toro model #SSAKxxPSI6NS4
 - bb. Toro Sentinel Remote Modem Transceiver Assembly with Antenna (Model #SR TA)
 - cc. Toro Sentinel Hand-held Radio (Model #SHHR) or Kenwood (#370) Hand-held Radio. **Note:** Radios are to be programmed to frequencies 453.1125, 465.5125 and 453.8875, per the direction of City staff.
9. **Sprinkler heads:**
- a. Gear driven Rotor heads: Rainbird 8005 with stainless steel riser preferred. Rainbird 5000, Hunter I-25, Hunter I-20, Rainbird Falcon 6504 Series, all with stainless steel riser, may be used with City approval.
 - b. Pop-Up Spray heads: Rainbird 1806 series (6" pop-up riser). NOTE: Hunter MP1000 rotating spray sprinklers may be considered for specific areas provided they are in low quantity and being used for a specific reason. If approved, they must be housed in a Rainbird 1806-SAM-P45 spray body.
10. **Drip system:**
- a. Emitters: Rainbird XB series with spiral barb emitters.

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- b. Flush caps: Agrifim model #CETC-34.
- 11. **Irrigation Pump Station**
 - a. SyncroFlo Eagle Model 820-32L-100-850 prefabricated vertical turbine pump station designed to meet 850 GPM at a discharge pressure of 100 psi. Pump station to include: pumps shafts, bowls, filter screen, motors and associated piping and fittings all mounted on a metal skid. The system shall be factory tested and UL listed.
- 12. **Miscellaneous Irrigation Equipment:**
 - a. Waterproof connections:
 - 1.) 3M DBR direct bury splice kits only on common wires
 - 2.) Blazing Snaploc wire connector BVS-2 on 14 gauge (hot) wires
 - b. Elbows: Rainbird SBE-050 - to match pipe brand.
 - c. Risers: Funny pipe for pop-up heads; nipples for rotors.
 - d. Fabricate each swing joints – no prefabricated swing joints permitted
 - e. Pipe Glue: WELD-ON 711 grey glue with P70 purple primer
 - f. Upon the discretion of the City for large scale projects, a two-wire control system may be utilized. If approved, the two-wire control path wire shall be Page Model P7072D-12 AWG and alterations to the approved controller specification will need to be made to function with this alternate system.

604.00 SEEDING

- 1. **Pre-approved Dryland Mixes** (for temporary or permanent unmowed and/or non-permanent areas):
 - a. **Native Areas of Primary Greenways (typically below the greenway trail or on the side without the trail):**
 - Canada wildrye 2.84 PLS pounds per acre
 - Thickspike wheatgrass (Critana variety) 0.71 PLS lbs. per acre
 - Slender wheatgrass (San Luis or Pryor variety) 2.05 PLS lbs. per acre
 - Western wheatgrass (Arriba variety) 1.98 PLS lbs. per acre
 - Little bluestem (Cimarron or Pastura variety) 0.84 PLS lbs. per acre
 - Switchgrass (Trailblazer, Nebraska 28, or Blackwell variety) 0.28 PLS lbs. per acre
 - Alkali sacaton (Salado variety) 0.06 PLS lbs. per acre
 - Sand dropseed 0.02 PLS lbs. per acre
 - Side oats grama (Vaughn variety) 1.14 PLS lbs. per acre
 - Blue grama (Alma, Bad River, or Hachita variety) 0.26 PLS lbs. per acre
 - Buffalograss 3.89 PLS lbs. per acre
 - b. **Native Areas of Primary Greenways between trail and residential area:**
 - Blue grama (Alma, Bad River, or Hachita variety) 0.40 PLS lbs. per acre
 - Buffalograss 5.83 PLS lbs. per acre
 - Inland saltgrass 0.42 PLS lbs. per acre
 - Slender wheatgrass 1.37 PLS lbs. per acre

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Sandberg bluegrass 0.82 PLS lbs. per acre
Alkaligrass 0.27 PLS lbs. per acre

c. **Rights of way in areas of future road expansion:**

Inland saltgrass 1.26 PLS lbs. per acre
Blue Grama (Alma, Bad River, or Hachita variety) 0.40 PLS lbs. per acre
Alkaligrass 0.64 PLS lbs. per acre
Sandberg bluegrass 0.47 PLS lbs. per acre

For **all other** dryland and/or non-irrigated seeding on City-owned property, contact the City's Natural Resources Specialist (303-651-8451) for a seed specification. The designer shall provide the site's location, seeding schedule, a soil analysis for each specific soil type on the project site, and the existing weed condition (species and coverage) for the project site when requesting the seed mix specification. Additional soil nutrient test(s) may also be required.

2. **Pre-approved Irrigated Turf Seed Mixes:**

- a. 60% Eldorado, Silverado and Monarch Turf type Tall Fescue
30% Manchar Smooth Brome
10% Bluegrass mix (drought tolerant blends)
- b. 40% Barrington Tall Fescue
40% Labarinth RTF Tall Fescue
20% Barrister Kentucky Bluegrass
- c. 35% Creeping Red Fescue
25% SR3200 Blue Fescue
12.5% SR3100 Hard Fescue
15% Reubens Canadian Blue
12.5% SR5100 Chewings Fescue
- d. 30% Matador Tall Fescue
30% Tomahawk RT Tall Fescue
30% Pure Gold Tall Fescue
10% North Star Kentucky Bluegrass

- 3. **Mulch:** For slopes steeper than 3:1 and inaccessible areas only: Weyerhaeuser "Silva-Fiber" mulch. For native areas, certified weed free hay.
- 4. **Tackifier:** Teratack III (Mandatory for hydromulch).
- 5. **Netting:** For slopes steeper than 3:1, Soil Saver jute netting.
- 6. **Road Delineators:** Durapost or SafeHit. White with reflectors.

605.00 SODDING

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1. Pre-approved Sod Mixes:

- a. 60% Eldorado, Silverado and Monarch Turf type Tall Fescue
30% Manchar Smooth Brome
10% Bluegrass Mix (drought tolerant blends)
- b. 40% Barrington Tall Fescue
40% Labarinth RTF Tall Fescue
20% Barrister Kentucky Bluegrass
- c. 35% Creeping Red Fescue
25% SR3200 Blue Fescue
12.5% SR3100 Hard Fescue
15% Reubens Canadian Blue
12.5% SR5100 Chewings Fescue
- d. 30% Matador Tall Fescue
30% Tomahawk RT Tall Fescue
30% Pure Gold Tall Fescue
10% North Star Kentucky Bluegrass
- e. VorTEX Texas Bluegrass from Korby Sod LLC

606.00 TREES, PLANTS AND GROUNDCOVER

- 1. **Backfill mix:** Premium-3 composted aspen humus, by A-1 Organics.
- 2. **Tree wrap:** 4" wide Kraft tree wrap.
- 3. **Weed barrier fabric:** Mirafi geo-textile fabric 140N.
- 4. **Steel edging:** 3/16" x 4" x 16' Ryerson steel edging.
- 5. **Mulch:** Aspen bark mulch, pole peelings (linear strips only), recycled rubber (with staff-approved cut sheet), 3"-6" cobble or shredded cedar. Cobble is not to be used in Greenway areas unless otherwise approved by staff.
- 6. **Tree Stakes:** Two inch (2") x six feet (6') round wooden posts or six foot (6') long, heavy-duty t-bar steel posts with white tops.
- 7. **Tree Guys:** ½" STRAP-X (flat synthetic webbing material) or ½" Central Bag polyester strapping with 17 gauge galvanized steel wire.
- 8. **Tree Grates:** Cast Iron only. Minimum 40 square feet (4' x 10' (comes in two pieces) or 9' x 5' (comes in 4 pieces))
- 9. **Misc. Tree Equipment:** White tee post caps; Canvas strap; White plastic flagging tape or 1/2" white PVC pipe; four inch (4") wide tree wrap.
- 10. **Beaver protection:** Galvanized four foot (4') high (2" x 4" openings) fencing.

MISCELLANEOUS

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1. **Benches:** Webcoat expanded metal six foot bench – surface mount on appropriately sized concrete pad (B6WBRCSM), black color.
2. **Trash Receptacles:** Webcoat – 32 gallon (TR32 – TSRM) – surface or in-ground mount as appropriate – black color with DOME32 gray top. Also include 30 gallon galvanized trash can (no lid) inside receptacle.
3. **Recycling Receptacles:** Recycle Away Landscape 34 Gallon Dome (RC-34R DM CANS RBL). Blue color with dome lid.
4. **Picnic Tables:** Webcoat T6RC and T8RCHDCP tables – surface mount – black color, including Play World #1409 PVC-coated clamps to bolt tables to appropriately sized concrete pad.
5. **Bike racks:** Madrax inverted U-style #U238-SF, surface mount – black color on appropriately sized concrete pad.

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Plant Materials List

*The following lists are trees specifically **PROHIBITED** from City of Longmont regulated areas (and discouraged from use elsewhere)*

Tree name	Any area	Streetscapes	Primary Greenways
Russian Olive	●	●	●
Lombardy Poplar	●	●	●
Siberian Elm	●	●	●
Boxelder Maple	●	●	●
Cotton-bearing Cottonwood	●	●	●
Ash – any species	●	●	●
Fruit-bearing trees*		●	
Thorn-bearing trees*		●	
Willow (all varieties)		●	
Tree of Heaven		●	
Cottonwood (all varieties)		●	
Silver Maple		●	

* Trees that drop fruit or bear thorns will be allowed in streetscape areas only if the mature size of the tree does not come within 5' of bikepaths, walks or other pedestrian areas.

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RECOMMENDED TREES for City of Longmont regulated areas

Growth rate: S = Slow, M = Medium, F = Fast

Adaptability: H = Hardy, A = Average, M = Marginal)

(Adaptability rating includes cold, soils, moisture tolerance & disease resistance)

Use: S-6 = Street tree in areas 6' maximum tree lawn width

S-8 = Street tree in areas 8' minimum tree lawn width

G = Greenway

Ornamental Trees

Tree Common name	Botanical name	Growth rate	Adaptability	Use
Alder, Thinleaf	Alnus tenuifolia	F	H	S-6, G
Birch, Native River	Betula fontinalis	M	A	G
Birch, Whitespire	Betula platyphylla japonica	M	A-M	G
Cherry, Bird (Mayday)	Prunus padus	S	H-A	S-6, G
Cherry, Canada Red	Prunus virginiana 'Schubert'.	M	H	G
Cherry, Montmorency	Prunus cerasus	M	A	G
Cherry, Sargent	Prunus sargentii	M	H	G
Crabapple, Adams	Malus 'Adams'	M	H-A	G
Crabapple, Adirondak	Malus 'Adirondak'	M	H-A	G
Crabapple, Brandywine	Malus 'Brandywine'	M	H-A	G
Crabapple, Centurion	Malus 'Centurion'	M	H-A	G
Crabapple, Coralburst	Malus 'Coralburst'	M	H-A	G
Crabapple, David	Malus 'David'	M	H-A	G
Crabapple, Indian Magic	Malus 'Indian Magic'	M	H-A	G
Crabapple, Prairifire	Malus 'Prairifire'	M	H-A	G
Crabapple, Profusion	Malus 'Profusion'	M	H-A	G
Crabapple, Radiant	Malus 'Radiant'	M	H-A	G
Crabapple, Red Barron	Malus 'Redbarron'	M	H-A	G
Crabapple, Royalty	Malus 'Royalty'	M	H-A	G
Crabapple, Spring Snow	Malus 'Spring Snow'	M	H-A	S-6, G
Crabapple, Thunderchild	Malus 'Thunderchild'	M	H-A	G

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Ornamental Trees - continued				
Tree Common name	Botanical name	Growth rate	Adaptability	Use
Crabapple, White Cascade	Malus 'White Cascade'	M	H-A	G
Goldenrain Tree	Koelreuteria paniculata	S	M	S-8
Hawthorn, Crusader	Crataegus ambigua	S	H	G
Hawthorn, Russian	Crataegus ambigua	S	H	G
Hawthorn, Thornless Cockspur	Crataegus crus-galli inermis	S	H	G
Hawthorn, Washington	Crataegus phaenopyrum	S	H	G
Hornbeam, Pyramidal European	Carpinus betulus	M	H	S-6
Lilac, Japanese Tree	Syringa reticulata	M	A	S-6
Maple, Ginnala	Acer ginnala	S	H	S-6, G
Maple, Tatarian	Acer tataricum	S	H	S-6, G
Mountain Ash, European	Sorbus aucuparia	M	A	G
Oak, Gambel	Quercus gambelii	S	H-A	S-6, G
Pear, Aristocrat	Pyrus calleryana 'Aristocrat'	M	A	S-6
Pear, Autumn Blaze	Pyrus calleryana 'Autumn Blaze'	M	A	S-6
Pear, Chanticleer	Pyrus calleryana 'Chanticleer'	M	A	S-6
Pear, Redspire	Pyrus calleryana 'Redspire'	M	A	S-6
Pear, Stonehill	Pyrus calleryana 'Stonehill'	M	A	S-6
Plum, American	Prunus americana	S	H	G
Plum, Newport	Prunus cerasifera	S	A	S-6
Redbud, Eastern	Cercis canadensis	S	M	S-6
Serviceberry, Autumn Brilliance	Amelanchier grandiflora 'Autumn Brilliance'	S	H	S-6, G
Serviceberry, Robin Hill	Amelanchier grandiflora 'Robin Hill'	S	H	S-6, G
Serviceberry, Saskatoon	Amelanchier alnifolia	S	H	S-6, G
Serviceberry, Shadblow	Amelanchier canadensis	S	H	S-6, G

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Shade (Canopy) Trees - continued				
Tree Common name	Botanical name	Growth rate	Adaptability	Use
Maple, Green Mountain Sugar	Acer saccharum 'Green Mountain'	S	A-M	S-8
Maple, Legacy	Acer saccharum 'Legacy'	S	A-M	S-8
Maple, Northwood	Acer rubrum 'Northwood'	M	M	S-8
Maple, Red Sunset	Acer rubrum 'Red Sunset'	M	M	S-8
Maple, Pacific Sunset	Acer truncatum 'Pacific Sunset'	S	A-M	S-8
Linden, American	Tilia americana	M	H	S-8
Linden, Redmond	Tilia americana 'Redmond'	M	H	S-8
Linden, Glenleven	Tilia cordata 'Glenleven'	M	H	S-8
Linden, Greenspire	Tilia cordata 'Greenspire'	M	H	S-8
Oak, Bur	Quercus macrocarpa	S	H	S-8, G
Oak, Chinkapin	Quercus muehlenbergii	M	H	S-8, G
Oak, English	Quercus robur	M	H	S-8, G
Oak, Northern Red	Quercus rubra	M	A-M	S-8, G
Oak, Shingle	Quercus imbricaria	M	A	S-8, G
Oak, Shumard	Quercus shumardii	M	A	S-8, G
Oak, Swamp White	Quercus bicolor	M	H-A	S-8, G
Elm, American	Ulmus americana	F	H	S-8, G
Elm, Accolade	Ulmus japonica x wilsonii 'Accolade'	F	H	S-8, G
Elm, Frontier	Ulmus carpinifolia x parvifolia 'Frontier'	F	H	S-8, G
Willow, Niobe Weeping	Salix alba 'Tristis'	F	H	G
Willow, Peach Leaf	Salix amygdaloides	F	H	G
Willow, Prairie Cascade	Salix pentandra	F	H	G
Willow, Russian Golden	Salix alba vitellina	F	H	G

Conifer (Evergreen) Trees				
Tree Common name	Botanical name	Growth rate	Adaptability	Use
Fir, Concolor	Abies concolor	M	A	G
Fir, Douglas	Pseudotsuga menziesii	M	A	G
Juniper, Rocky Mtn.	Juniperus scopulorum var.	S	H	G

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Conifer (Evergreen) Trees - continued				
Pine, Austrian	Pinus nigra	M	H	G
Pine, Bosnian	Pinus heldreichii leucodermis	M	H	G
Pine, Bristlecone	Pinus aristata	S	A	S-8,G
Pine, Mugo	Pinus mugo	M	H	G
Pine, Pinon	Pinus edulis	M	H	S-8,G
Pine, Ponderosa	Pinus ponderosa	M	H	S-8,G
Pine, Scotch	Pinus sylvestris	M	H	G
Pine, Southwestern White	Pinus strobiformis	S	A	G
Pine, Swiss Stone	Pinus cembra	M	A	G
Pine, Vanderwolf	Pinus flexilis	M	A	G
Spruce, Bacheri	Picea pungens 'bacheri'	M	H	G
Spruce, Black Hills	Picea glauca densata.	M	H	G
Spruce, Colorado Blue	Picea pungens	M	H	G
Spruce, Serbian	Picea omorika	M	H	G