

LIGHT BASES AND CONDUIT

1 General

1.1 RELATED WORK

.1 Coordinate the requirements of this section with all other sections, including but not limited to:

- .1 Section 01560 Environmental Protection
- .2 Section 02065 Existing Plant Material
- .3 Section 02210 Rough Grading
- .4 Section 02810 Irrigation
- .5 Section 02950 Plant Material

1.2 QUALITY CONTROL

- .1 **City of Saskatoon, Parks Branch** to approve light bases and conduit specified.
- .2 **Saskatoon Light and Power** to supply precast concrete bases for use and approve Work related to installation of precast concrete bases and conduit.

1.3 INSPECTION

- .1 Notify **Consultant** for inspection of:
 - .1 Layout and installation of light bases and line of conduit.
- .2 Notify **Saskatoon Light and Power** for inspection of:
 - .1 Layout of precast concrete bases.
 - .2 Installation of conduit c/w pull string, before backfilling.
 - .3 Ball test.

1.4 TESTING

- .1 Ball Test is required after backfilling the conduit trench, and before installation of light fixtures by **Saskatoon Light and Power**.
 - .1 Contractor to ensure the conduit system is free of kinks or blockage by pulling a 37mm diameter ball through conduit. Repair any areas blocked and repeat test until ball pulls freely from one concrete light base to another.

2 Products

2.1 PRECAST CONCRETE BASE

- .1 Precast concrete light bases: New or used, supplied by **Saskatoon Light and Power**. Obtain and make arrangements for light base pick-up from:

- .1 **Saskatoon Light and Power**,
322 Brand Road
Saskatoon, Saskatchewan

2.2 ELECTRICAL CONDUIT

- .1 Electrical conduit includes polyethylene pipe c/w pull string.
- .1 Polyethylene pipe (supplied by Saskatoon Light & Power): 50mm ID, 75 psi, slip feature.
- .2 Pull string: A-D Technologies Bull-Line, BL WP 18 or approved equivalent (supplied by the Contractor).
- .3 Tracer wire: CSA approved TWU 40 #12 wire.

2.3 LIGHT BASE INSTALLATION POLE

- .1 Light base installation pole: 10 foot, 4" diameter pole fitting the concrete bases is required for installation and should be purchased from **Saskatoon Light and Power**.

Obtain and make arrangements for light base installation pole purchase and pick-up from:

- .1 **Saskatoon Light and Power**,
322 Brand Road – Clarence Avenue, south of Circle Drive
Saskatoon, Saskatchewan

2.4 GROUND ROD SET

- .1 Ground Rod set includes rod, clamp and wire. Each supplied by Saskatoon Light & Power.
- .1 Copper Ground Rod: 8' x 5/8".
- .2 Clamp: 5/8".
- .3 Wire: soft, bare, Copper #4 wire.

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3 Execution

3.1 LAYOUT

- .1 Establish and maintain line and grade controls using appropriate survey personnel and equipment.
 - .1 Contractor is responsible for layout accuracy.
 - .2 Provide ample clearance on all sides for proper execution of work.
- .2 Establish layout of light bases and conduit accurately per drawings (including setbacks).
 - .1 Stake or spray paint locations of light bases, line of conduit and obtain approval before start of work.

3.2 EXCAVATIONS AND TRENCHING

- .1 Excavations and trenching includes all materials encountered except materials which cannot be excavated by normal mechanical excavation means.
 - .1 Notify Consultant of materials which cannot be excavated by normal mechanical excavation means.
- .2 Over excavated trenches are the responsibility of the Contractor:
 - .1 Backfill and tamp trenches to specified depth to provide compacted bearing for the conduit.
 - .2 Backfill material to be free from rocks, stones and other unsuitable substances which could damage the conduit or create unusual settling problems.
 - .3 Backfill in 150mm layers, tamping after each layer is put in to prevent excessive settling.
 - .4 Tamp trenches with mechanical tamper.
- .3 Trenches through existing turf (if applicable):
 - .1 Do not leave excavated material on turf adjacent to trench for more than 72 hours.
 - .2 Backfill trench and compact soil to match existing soil grade.
 - .3 Re-establish turf to surrounding turf type and quality.
- .4 Trenches across existing asphalt pathways (if applicable):
 - .1 Do not leave excavated material on turf adjacent to trench for more than 72 hours.

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- .2 Backfill trench with soil to existing sub grade and compact.
- .3 Backfill gravel to match existing and compact.
- .4 Repair of asphalt is by others when lighting is the prime component of the Contract
- .5 For new park construction or park upgrade projects, the Contractor is responsible for asphalt restoration.

3.3 LIGHT BASES

- .1 Install light bases before irrigation to prevent damage to irrigation lines.
- .2 Excavate light base holes to depths ensuring the final elevation of light base is 75 - 125 mm above finish grade.
- .3 Manually remove all loose debris from the excavation before installing precast concrete light bases. Backfill with granular material and compact to 95% proctor density to prevent settling.
- .4 Compact the fill around sides of light base as it is being backfilled to prevent lateral movement.
- .5 Install light bases plumb, true, and level on compacted sub grade per drawings and details.
 - .1 Ensure ports and anchor bolts are in direction required for proposed light fixtures.
 - .2 Cover exposed holes in light bases to prevent damage.

3.4 ELECTRICAL CONDUIT

- .1 Install electrical conduit before irrigation to prevent damage to irrigation lines.
- .2 Trench depth to allow for 750mm cover below finish grade.
 - .1 Remove debris from trenches before installing conduit by equipping chain trenchers with a "crumber", or clean all trenches manually.
- .3 Install continuous electrical conduit trenches between light bases.
 - .1 Install electrical conduit c/w pull string with no splices, ensure string extends 300mm past end of conduit. Protect pull string.
 - .2 All bends and turns are to be gradual with a minimum radius of 0.5m to prevent kinking and blockage.
 - .3 Ensure conduit is free of water.

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- .4 Ensure conduit is at specified depth below finished grade elevations.
- .4 Install tracer wire instead of polyethylene twine when conduit is installed for future construction. Ends of tracer wire are to be accessible for locaters to clamp onto.
- .5 Compact trenches with electrical conduit during backfilling to prevent future settling.
- .6 Cover and protect exposed conduit to prevent damage.

3.5 GROUND ROD

- .1 Install 8' ground rod vertically beside light base as specified on lighting plan.
- .2 Clamp #4 copper wire to ground rod and bring #4 wire into base through empty port.

3.6 BALL TEST

- .1 Notify **Saskatoon Light and Power** when installation of light bases and electrical conduit is finished so ball test may be completed.

3.7 WORK BY CITY OF SASKATOON

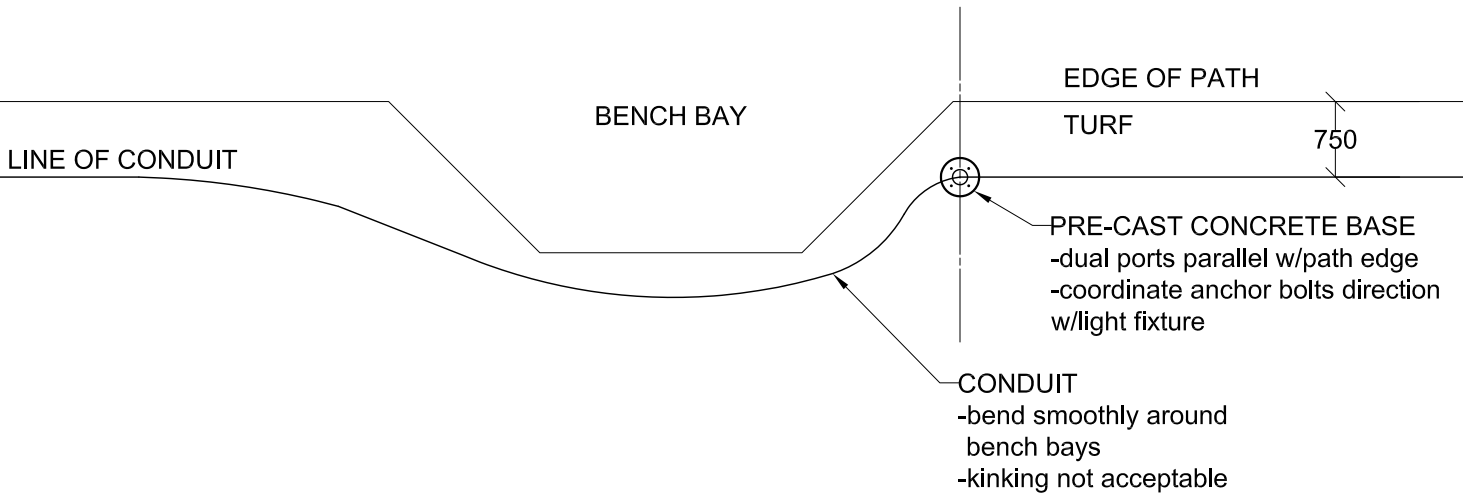
- .1 Notify **Saskatoon Light and Power** when the conduit and bases are ready for installation of electrical conductors, poles and fixtures.
 - .1 Schedule work and allow site access to avoid damage to other items of Work.
- .2 Repair any blockage, encountered by **Saskatoon Light and Power** during installation of electrical conductors.
 - .1 Repair blockages within two working days, or;
 - .2 City of Saskatoon will repair blockages to the conduit and Consultant will deduct cost of repair from payment to the Contractor.

3.8 CLEAN-UP

- .1 Clean adjacent walks and road surfaces at the end of each working day.

END OF SECTION

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**City of
Saskatoon**
Parks Branch

Drawing Title

Light Base and Conduit
Installation

Drawn: HMK

Checked: AO

Date Y/M/D 09/11/23

Scale: 1:75

Drawing No.

02811-01

2012 Standard Detail