June 2020

Oshawa Power

Our city. Our power. Our future.

Subdivision Requirement Information Package


OUR
CITY.
OUR
POWER.
OUR
FUTURE.
OSHAWA POWER

CONTENTS

1.Application for New Subdivision

1.1 Master Plan

- When applying for electrical servicing of a multi-phase development Oshawa Power Utilities Corporation Networks Inc. (OPUCN) will create a Master Plan to determine the optimal way to supply the entire development.

- The Developer shall fill out the Master Plan Design Application form shown in Appendix A and submit it with a $5,000 design deposit. After design is complete, actuals will be charged and the deposit/charges will be applied to the next phase of the subdivision.

1.2 Subdivision Phase

- To apply for service for a new subdivision the Developer must submit a Subdivision Application Information Form found in Appendix B, the drawings and information requested, and the design deposit.

1.3 Important Details Regarding the Submission

- If the land base is updated/changed it is the Developer's responsibility to make sure OPUCN has an electronic AutoCAD copy right away with an email or drawing highlighting the changes, including any changes the City has made in their requirements.

- Both big and small changes can have a large impact on the hydro design (eg. changes in road direction, flipping driveways, adding units, changing the order in which the phases are developed, and right of way (ROW) changes). These can cause additional costs and delays in the designs and offers.

2.Offer to Connect

Offer to Connect is a legal agreement between the Utility and the customer to connect the electrical service:

- The Design Deposit will be deducted from the Capital Contribution on the Offer to Connect.

- Along with signing two (2) copies of the offer the Developer must sign whether the subdivision will be Developer Constructed or Distributor Constructed. The appropriate construction agreement will be sent based on that decision.

- If Developer Constructed, an Approved Equipment List will be provided along with a sign-off sheet stating that only the approved equipment is being used or listing any exceptions. This form can be found in Appendix C. Any exceptions must receive approval from our Asset Management team.

Note: There is no guarantee that alternative equipment will be accepted. Engineer stamped test results and other applicable documentation must be supplied by the Developer or their agent and the approval process may take some time. Please do not order equipment without receiving approvals from OPUCN.

3.General Design Consideration

- Transformers require a 4.0m x 4.0m area adjacent to a road, driveway or parking area that is accessible by a bucket truck and situated so that the operator is facing traffic.
- Switchgears require a 6.0m x 6.0m area and an easement may be required.
- Trees cannot be planted within 3.0m of edge of transformer/switchgear. Shrubbery cannot be planted within 1.5m of the edge of the transformer/switchgear and 3.0m on the operating side.
- As part of Oshawa's Green Initiative where possible the transformers will be offset from property line to allow room for more trees on the boulevards.
- No structures,utility cabinets, street lights,etc. can be within 3.0m of the operating side of the transformer/switchgear or 1.5m (2.4m for metal structures) of the non-operating sides.
- Transformer/switchgear grounding grid requires a minimum 0.5m clearance from all structures.
- Main feeder cables will run in concrete-encased duct at the bottom of the joint trench.
- Underground metering specifications are available in Appendix D.
- Gang metering/meter centres, as shown in Appendix E, may be used in townhouse subdivisions.

4.Condominium Townhouse Development

- A licensing agreement ("blanket easement") in the name of Oshawa PUC Networks Inc. will be required over the entire block.
- Concrete encasement of the primary and secondary duct system is required throughout the development, ownership, and future maintenance of the duct system and transformer bases shall remain the owner's responsibility. This includes concrete-encased ducts on private property up to property line, including those in the ROW of the private property.
- Developer is responsible for all civil work on private property. This includes, but is not limited to; concrete encased duct banks and the supply and installation of OPUCN approved transformer bases.
- The ducts shall be proved out, installed with pull rope and ends capped.

- The secondary ducts shall run from the transformer to 1.0m from meter base.
- Water services, house services and fire services (if units are four stories or more) may be required and information should be included at time of submission.
- If Distributor Constructed, OPUCN shall install the transformers and primary and secondary cables in the developer constructed ducts, which should be coordinated with OPUCN.
- Lamacoid labels clearly stating the Lot # and the Municipal Address of the corresponding unit must be permanently affixed to the meter base. See Appendix F for Lamacoid Label specifications.

5.Temporary Service

- A tail will be made available from each subdivision pad-mount transformer to the property line and left underground, to be used for a temporary service for building purposes.

- In condominium townhouse developments the tail be will not be in concrete and will be taken 2.0m from the side of the transformer.

- When applying for any temporary service use the Service Request Application Form, Appendix G.

- Connection will be made after receipt of payment, account set up and ESA approval.

6.Dig-Ins

- The Builder is responsible for installing approved secondary cable from the tail at the property line to the meter base in builder installed 4" duct.
- The duct shall stop 1.0 m from the meter base and be installed at a depth of 1.2 m.
- This must be inspected by an OPUCN inspector before the trench is backfilled.
- OPUCN will make the connection at the transformer and install the meter.
- Connection will be made to each unit when:
    - It has been inspected and approved by OPUCN;
    - An account has been set up;
    - OPUCN receives Electric Safety Authority (ESA) approval; and
    - The Builder contacts OPUCN Customer Service to request that the unit be energized.
- A fixed $250 charge will be added to the account to pay for the connection.

7.Numbering of Units

- OPUCN uses Lot #'s to match the connection in the transformer to the house/townhouse unit. Once the electrical servicing starts the lot numbers must remain the same. If they are changed all connections may be put on hold until the numbering is corrected. All remedial work will be at the Developer's expense.

8.Utility Coordination Plan (UCP)

It is important that the UCP shows:

- Dimensions from road crossings to transformers if less than 3.0m;
- Orientation of transformers; and
- Dimensions from transformer to property line unless situated on the property line.

9.Pre-Construction Meetings

Before the Pre-Construction Meeting the Developer should have:

- The final signed UCP;
- Signed work order drawings;
- Signed Offer and signed Construction Agreement;

10.Energy Efficiency Incentives

Oshawa PUC Networks proudly offers Save On Energy incentives for buildings that exceed the building code in terms of energy efficiency. We also endorse the programming within the upcoming Durham Community Energy plan. For help applying to the Residential New Construction and High Performance New Construction programs, contact CDM@opuc.on.ca.

11.Suite Metering

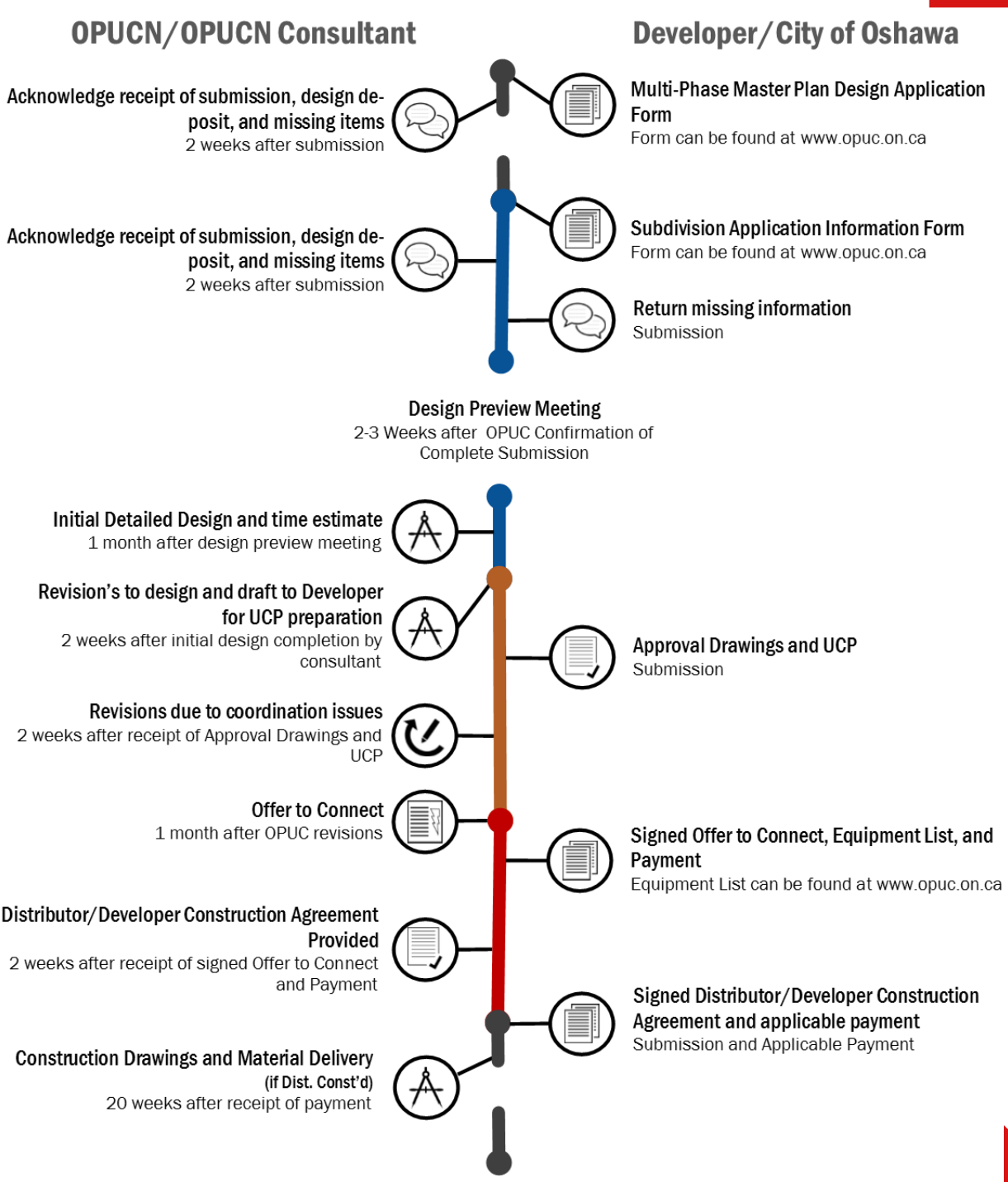
Oshawa PUC Networks will be soon offering Suite Metering services to our customers, for more details, please visit www.opuc.on.ca

12.EV Charging Stations

Oshawa Power also provides consultation with respect to EV charger installation for developers on their property as well as offering support for dedicate stand alone Electric Vehicle charging stations.

Oshawa Power has developed their own dedicated standards for Electrical Vehicle Supply Transformers. These standards facilitate with the smooth installation of such services and also supports Oshawa Power's strategic initiative of creating infrastructure for electric cars in the City of Oshawa.

13. Application Timeline



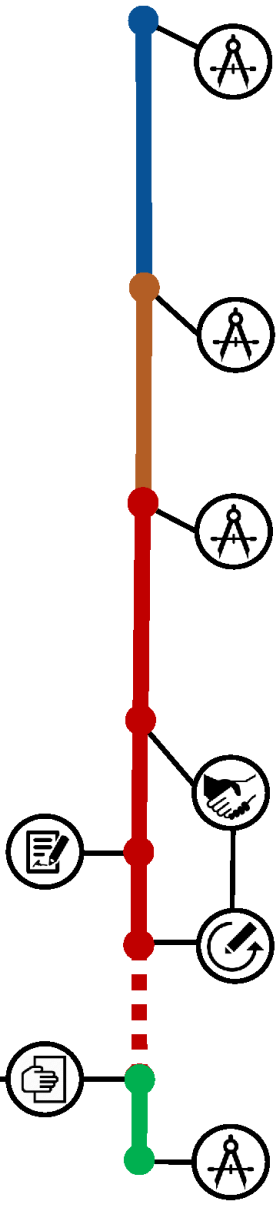
⇒ Dependant on City approvals and response time from Developers

⇒ Approx. Time, not including dotted gray sections of Timeline.

14.Transformer Installation

Oshawa Power

Developer



Stake and Excavate

Developer to safely stake all four corners and excavate the new transformer location.

Refer to Oshawa Power Distribution System Construction Standards UGS-022 & UGS-023 for details.

Transformer Base Installation

Developer to supply and install the Oshawa Power approved transformer base.

Refer to Oshawa Power Distribution System Construction Standards UGS-011 & UGS-018 for details.

Grounding Grid and Bollard Installation

Developer to supply and install the Oshawa Power approved grounding grid and bollards.

Refer to Oshawa Power Distribution System Construction Standards UGS-015 for details.

Developer to Contact Oshawa Power for Inspection

Developer to contact the Oshawa Power Distribution Department (905) 723-4626 ext. 5272 to schedule the inspection of the transformer base.

Oshawa Power Performs Inspection

Oshawa Power to inspect transformer base, grounding grid and bollards installation, and make recommendations if required.

(If Required) Developer to Make Revisions

Developer to review and revise any changes recommended by Oshawa Power.

Oshawa Power Approval

Oshawa Power field inspector issues approval.

Developer to Perform Backfill

Developer to safely perform backfill of the respective area.

⇒ Construction specifications are subject to change

⇒ Please see the latest Oshawa Power Distribution System Construction Standards for details

MULTI-PHASE SUBDIVISION MASTER PLAN DESIGN APPLICATION FORM

appendix A

OFFICE USE ONLY
WO No.:_____ Date Received:_____
Design Deposit Received ($)_____

Multi-Phase Subdivision Master Plan Design Application Form

THIS FORM MUST BE COMPLETED IN FULL. ALL ATTACHMENTS AND THE DESIGN DEPOSIT MUST BE RECEIVED PRIOR TO COMMENCEMENT OF THE MASTER PLAN DESIGN.		
Subdivision Name:		
Subdivision Location:		
Site Plan No.:	Registered Plan No.:	
Developers Legal Name:		
Contact Person:		
Address:		
Postal Code:	Phone:	Cell Phone:
FAX:	Email:	

Engineering Consultant's Name:	
Project Manager (one contact only):	
Address:	
Phone:	Cell:
Fax:	
Email:	

PHASE INFORMATION			
Phase	**Number of Residential Units**	**Proposed In-Service Date**	**Other Services Required (School, Industrial, Commercial)**

FOR COMPLETION OF THE MASTER PLAN DESIGN, THE FOLLOWING ATTACHMENTS MUST BE SUBMITTED WITH THE APPLICATION FOR EACH PHASE EXPRESSED PREVIOUSLY:
1. Legal Description of Lands, draft M-plans and/or R-Plans showing all easements
2. Electronic drawings (on USB) scaled 1:1 in AutoCAD 2016 or earlier containing the following information on unique layers as follows: - lot lines - lot type/land use type - roads

MASTER PLAN DESIGN DEPOSIT:	
Design Deposit:	$5000
NOTE: Actuals will be charged following the completion of the master plan. Remaining deposits/charges will be applied to the design of the subdivision's first phase.	

I certify that the information provided is accurate. It is understood that the electrical distribution system will be designed from this information. Notification of any changes to the above information or engineering plans, necessitating revisions to the design, will be the responsibility of the Developer/Consultant. The Master Plan design is an overview for multi-phase developments and not a detailed design.	*Please send submission to:* *Zeeshan Syed, P.Eng.* *Supervisor, Capital Design* *Oshawa PUC Networks Inc.* *100 Simcoe Street South* *Oshawa, Ontario, L1H 7M7* *Phone: 905-723-4626 extension 5351* *FAX: 905-571-1015* *email: developments@opuc.on.ca*
Signature:	
Print Name:	
Print Title:	
Name of Company:	
Date:	

SUBDIVISION APPLICATION INFORMATION FORM

appendix B

SUBDIVISION APPLICATION INFORMATION FORM

Office Use Only

WO No.: _____ Date Received: _____

Design Deposit Received ($): _____

THIS FORM MUST BE COMPLETED IN FULL. ALL ATTACHMENTS AND DESIGN FEES MUST BE RECEIVED PRIOR TO COMMENCEMENT OF DESIGN. A MASTER PLAN SHALL BE DEVELOPED FOR NEW MULTI-PHASE DEVELOPMENTS PRIOR TO INDIVIDUAL PHASE DESIGN.

Subdivision Name:		
Subdivision Location:		
Site Plan No.:	Registered Plan No.:	
Developer's Legal Name:		
Contact Person:		
Address:		
Postal Code:	Phone:	Cell Phone:
FAX:	Email:	

Engineering Consultant's Name:		
Project Manager (one contact only):		
Address:		
Phone: 44444	Cell:	
Fax:		
Email:		

Number and Type of Units to be Serviced			
Type of Unit	**Total**	**Type of Unit**	**Total**
Detached		School	
Semi- Detached		Park/Walkway	
Townhomes - Freehold		Commercial	
Townhomes - Condominium		Industrial	
Apartments/Condos		Other	
Standard Service Size: 100 A _____ or 200 A _____ or Other (please specify) _____			

Estimated Unit Occupancy During the 5 Year Connection Period				
1st Year	2nd Year	3rd Year	4th Year	5th Year

TO AVOID DELAYS IN THE PROCESS THE FOLLOWING MUST BE SUBMITTED WITH THE APPLICATION:

1. Legal description of the lands, draft M-Plans and/or draft R-Plans showing all easements.

2. Electronic drawings (on USB) scaled 1:1 in AutoCAD 2016 or earlier containing the following information on unique layers as follows:

- lot lines	**- driveways**	**- lot and/or block numbers**
- roads	**- curbs**	**- Municipal address**
- sidewalks	**- buildings**	
- poles	**- street names**	

3. Street Lighting Layout.

4. Proposed Metering Configuration

5. Locations of other services as indicated on the City of Oshawa's Composite Utility Plan to at least the centre line of the roadway.

6. Proposed in-service date.

DESIGN FEES FOR STANDARD SUBDIVISIONS

LOT QUANTITY RANGE	BASE PRICE (FIXED)	ADDITIONAL PRICE PER LOT
1 - 50 lots	$10,200 + HST	N/A
51 - 100 lots	$10,200 + HST	plus $150/lot for each lot over 50 + HST
101 - 250 lots	$17,700 + HST	plus $80/lot for each lot over 100 + HST
Over 250 lots	$29,700 + HST	plus $60/lot for each lot over 250 + HST

Note: The design fee for in-fills and non-standard developments will be calculated by OPUCN once the submission has been reviewed.

I certify that the information provided is accurate. It is understood that the electrical distribution system will be designed from this information. Notification of any changes to the above information or engineering plans, necessitating revisions to the design, will be the responsibility of the Developer/Consultant.

Signature:

Print Name:

Print Title:

Name of Company:

Date:

Please send submission to:

Zeeshan Syed, P.Eng.
Supervisor, Capital Design
Oshawa PUC Networks Inc.
100 Simcoe Street South
Oshawa, Ontario, L1H 7M7

Phone: 905-723-4626 extension 5351
FAX: 905-571-1015
email: developments@opuc.on.ca

DEVELOPER CONSTRUCTED APPROVED EQUIPMENT

appendix C

Developer Constructed Approved Equipment List and Sign-Off

Please return all completed forms with required signatures to engineering@opuc.on.ca

NOTES:

- Please review the attached *OPUCN Approved Equipment List*.

CONTACT INFORMATION		
Subdivision Name:		
Subdivision Location:		
Site Plan No.:	Registered Plan No.:	
Developers Legal Name:		
Contact Person:		
Address:		
Postal Code:	Phone:	Cell Phone:
Email:		

COMPLIANCE TO OPUCN APPROVED EQUIPMENT LIST SIGN-OFF	
I certify that the equipment specified in the OPUCN Approved Equipment List will be the sole equipment used in the construction of all electrical infrastructure. Any deviations from the OPUCN Approved Equipment List will require a resubmission of this form by the developer without guarantee that the equipment will be approved.	
Developer Contact Signature (from above):	*Date:*
Print Name:	
Note: Do not complete if additional equipment needs to be approved.	

ONLY COMPLETE SECTION 2 OF FORM IF ADDITIONAL EQUIPMENT NEEDS TO BE APPROVED

Section 2: Equipment Approval Application

FOR EQUIPMENT APPROVAL PROCESS, PLEASE PROVIDE THE FOLLOWING ATTACHMENTS, BUT NOT LIMITED TO, FOR EACH EQUIPMENT:
1. Technical specification sheets and engineer stamped drawings
2. Engineer stamped test reports and/or CSA certification
3. Other documentations as required by OPUCN
Note: Equipment shall comply with Ontario Regulation 22/04 and are not guaranteed to be approved by Oshawa PUC Networks Inc. ("OPUCN"). Applicants are cautioned not to incur any major expenses until all necessary approvals from OPUCN have been received.

OFFICE USE ONLY
Date Received:_____ Approved: ☐ Declined: ☐
If declined, reason:
_____

Revision Date: June 19, 2018

List of OPUCN Approved Equipment for Subdivision Projects

Item Description	*OPUCN Item No.*	*Manufacturer*	*Part No. / Drawing No.*	*Manufacturer*	*Part No. / Drawing No.*	*Manufacturer*	*Part No. / Drawing No.*
Transformer							
50kVA Pad 1-Phase (Loop) 8000-120/240V	**TRAN403**	Cam Tran	NBCA340, OBCA340	ABB	J801B97Q		
75kVA Pad 1-Phase (Loop) 8000-120/240V	**TRAN025**	Cam Tran	NBCA851, OBCA851	ABB	TBD		
100kVA Pad 1-Phase (Loop) 8000-120/240V	**TRAN408**	Cam Tran	NBCA712-GE, OBCA712-GE	ABB	J801CGSF		
150kVA Pad 3-Phase (Loop, c/w Taps) 13860-347/600V	**TRAN703**	Cam Tran	NBCA236, OBCA236				
167kVA Pad 1-Phase (Loop, c/w Taps) 13860-120/240V	**TRAN750**	Cam Tran	NBC339, OBCA339				
167kVA Pole 1-Phase (c/w Taps) 13860-120/240V	**TRAN235**	Cam Tran	NKCD281, OKCD281				
300kVA Pad 3-Phase (Loop, c/w Taps) 13860-347/600V	**TRAN508**	Cam Tran	NBCA111, OBCA111				
Foundation							
Precast Foundation for Padmount Transformer (40" x 58" x 48")	**BASE916**	Brooklin	BCP110PO				
Precast Concrete Pulling Chamber (72" x 48" x 36") with Lid (72" x 48" x 4")	**BASE500**	Utilicon	UA4771PP0	Armtec	BCP 112PC		
Foundation Base for Switchgear (72" x 72" 48") with Top and Bottom	**BASE905**	Utilicon	UA7272W3	Armtec	BCP114P, BCP114T6, BCP114B		
Foundation Base for Switchgear (85" x 78" x 48") with Top and Bottom	**BASE910**	Utilicon	UA78850SH3	Armtec	BCP330	ICS	ICS191
Switchgear							
Dead-Front Pad-mounted Gear 600A/200A, 14.4kV	**SWIT910**	S&C	65152R1-DIM				
Cables and Wires							
1/0 AWG 15kV Compact Strand AL Conductor TRXLPE, Full Neutral	**CABL705**	Prysmian	20128010	Nexans	601767	General Cable	523071
3/0 AWG 600V Compact Strand AL Triplex Conductor	**CABL904**	Prysmian	20127016	Nexans	663620	General Cable	TBA
250MCM 600V Compact Strand AL Triplex Conductor	**CABL101**	Prysmian	203977C	Nexans	277939		
Bare Copper Grounding Cable (2/0 AWG)	**CABL402**	Belden	C7994	Nexans	WBC2019-150		
Connectors, Fault Indicators and Secondary Bars							
15kV 200A Loadbreak Feed-Thru Insert	**INSE000**	Elastimold	1602A3R	Cooper	500-13		
15kV 200A Loadbreak Insulated Cap	**CAPD904**	Elastimold	160DRG	Cooper	500-21	Richards	21LBIC
Loadbreak Elbow Connector - 1/0 Aluminum 15kV 200A Loadbreak Elbow	**ELBO600**	Elastimold	166LR-B5230A				
15kV 200A Loadbreak Bushing Insert	**INSE801**	Elastimold	1601A4	Cooper	500-12		
15kV 200A Insulated Parking Bushing	**BUSH401**	Elastimold	161SOP	Cooper	500-22		
Small Transformer Secondary Pad Connector	**CONN007**	Ilsco	D8813				
Underground Fault Line Plus (Fibre Fault Indicator)	**FAUL500**	Horstmann	29-6028-000 & 49-6007-206				
Miscellaneous Material							
Galvanized Steel Ground Rod (3/4" x 10')	**RODG901**	Slacan	9340S	Kabar-Almat	K61-5	Hydel	HYD3410G
Amp Connectors (2/0 - 2/0)	**CONN604**	AMP	1 - 275187 - 5				
Amp Connectors (2/0 - 350)	**CONN213**	AMP	4 - 276337 - 8				
1/2" Studded Split Bolt Connector for 2/0 Bare Copper	**CONN206**	Burndy	K2C26B1				
15kV 200A Loadbreak Portable Feed-Thru	**INSE201**	Elastimold	164FT	Cooper	500-14		
Copper Crimp Connector 2/0 - 2/0	**CONN011**	Burndy	YC26C26				
Primary Phasing Tag	**N/A**	U.G. Products	1100W/1100R/1100B				
Secondary ID Tag	**N/A**	PANDUIT	PSCC-5Y				
Bollards	**BOLL100**	Al Hoskin & Sons Welding	Bollards				
Bollard Covers	**BOLC100**	Guillevin	Bollard Covers				
Marker Balls (Locating Underground Cable) - Red	**BALL400**	3M	EMS 1402-XR				

Notes:

1-Only OPUCN Approved Equipment shall be used during design and construction in compliance with Ontario Regulation 22/04.

2-Please contact OPUCN Engineering team for equipment approvals and provide technical specifications, P.Eng. stamped test reports, engineering drawings, etc. for further review.

3-The equipment approval process may take time and there are no guarantees for approval.

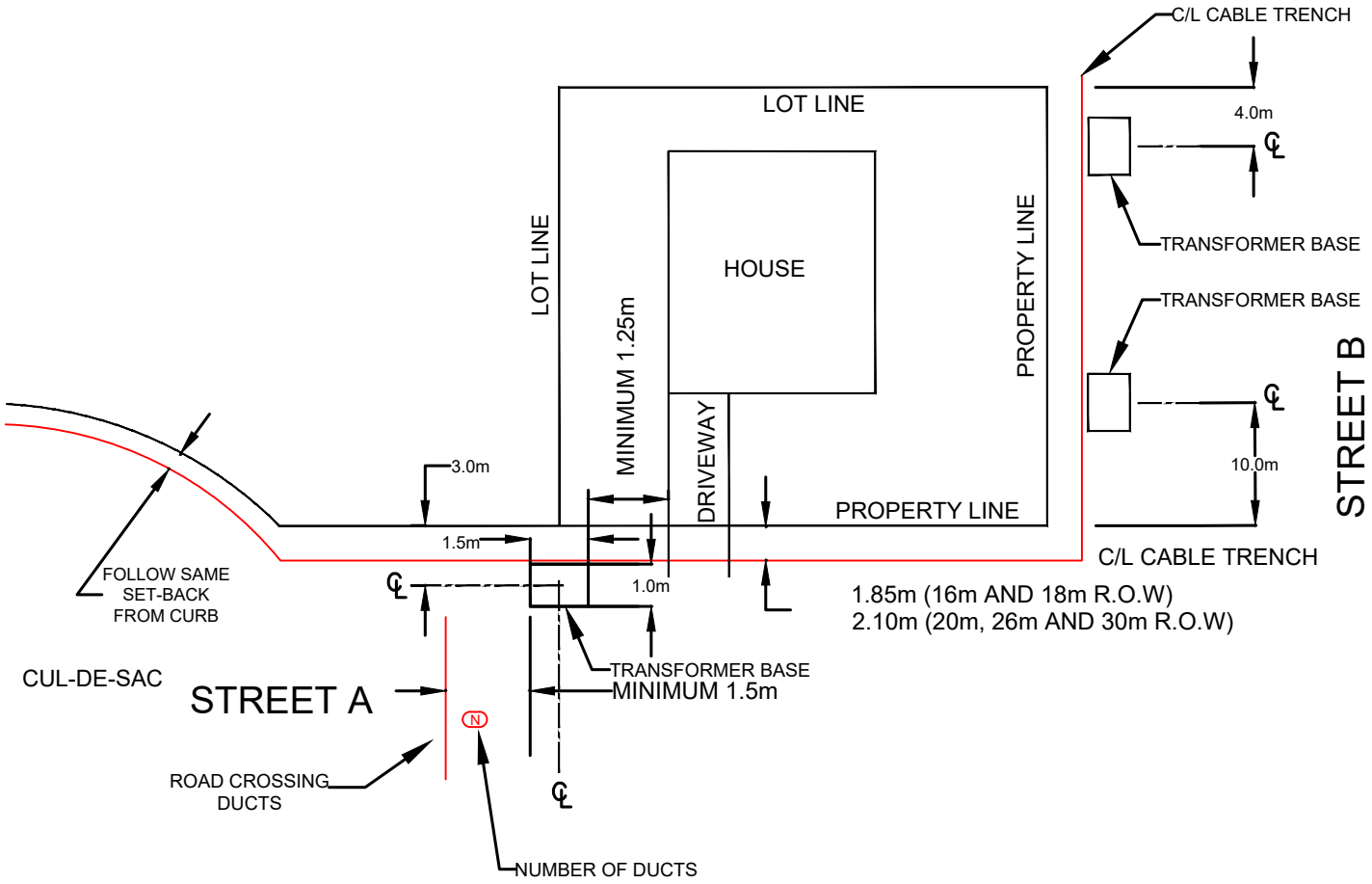
4-Do not order equipment or material without approvals in place.

CONSTRUCTION STANDARDS

appendix D

NOTES:

1. ROAD CROSSING DUCTS CAN BE PLACED ON EITHER SIDE OF THE TRANSFORMER TO AVOID CONFLICTS WITH BURIED SERVICES.
2. MINIMUM DISTANCES BETWEEN EDGE OF TRANSFORMERS:
   - 2.1. EDGE OF DRIVEWAY 1.25m
   - 2.2. ANY ABOVE GROUND EQUIPMENT 3.0
   - 2.3. STREETLIGHT POLE 3.0m
   - 2.4. FIRE HYDRANT 3.0m
   - 2.5. STREET TREE AND SHRUBBERY 3.0m ON OPERATING SIDE
   - 2.6. STREET TREE 3.0m ON ALL OTHER SIDES
   - 2.7. SHRUBBERY 1.5m ON ALL OTHER SIDES
3. OPERATING SIDE OF TRANSFORMER SHALL BE ORIENTED OPPOSITE TO THE DIRECTION OF TRAFFIC FLOW



REV	DESCRIPTION	APP
3	CHG CLEARANCES OF STREET TREE/ SHRUBBERY	Z.SYED JUN-20
2	ORIENTATION OF TX, CLEARANCES AND NOTES EDITED/ADDED	J.SHAH MAR-15
1	ISSUE CERT. OF APPROVAL	W.KHELLA MAR-00
0	INITIAL RELEASE	

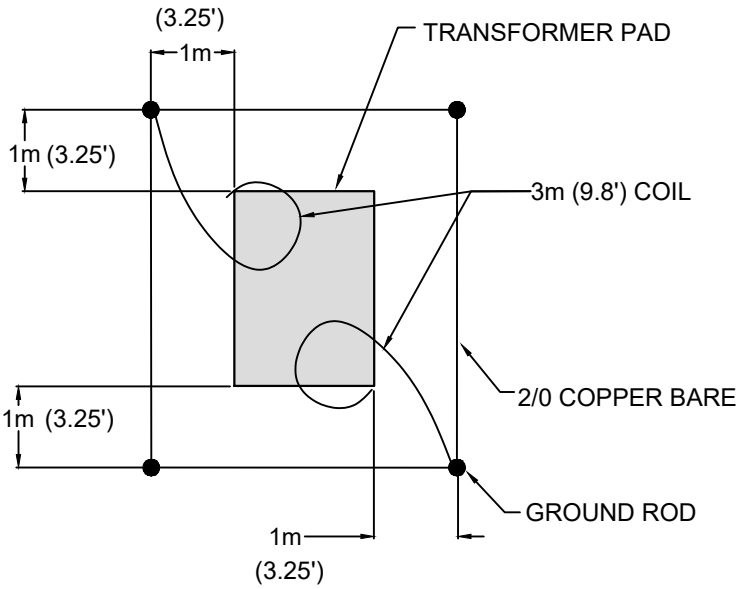
REVISION HISTORY

Oshawa Power

TITLE: RELATIVE EQUIPMENT LOCATION DETAILS

DRAWN:	CHECKED:	APPROVED:
RP:lc	ZS	MN

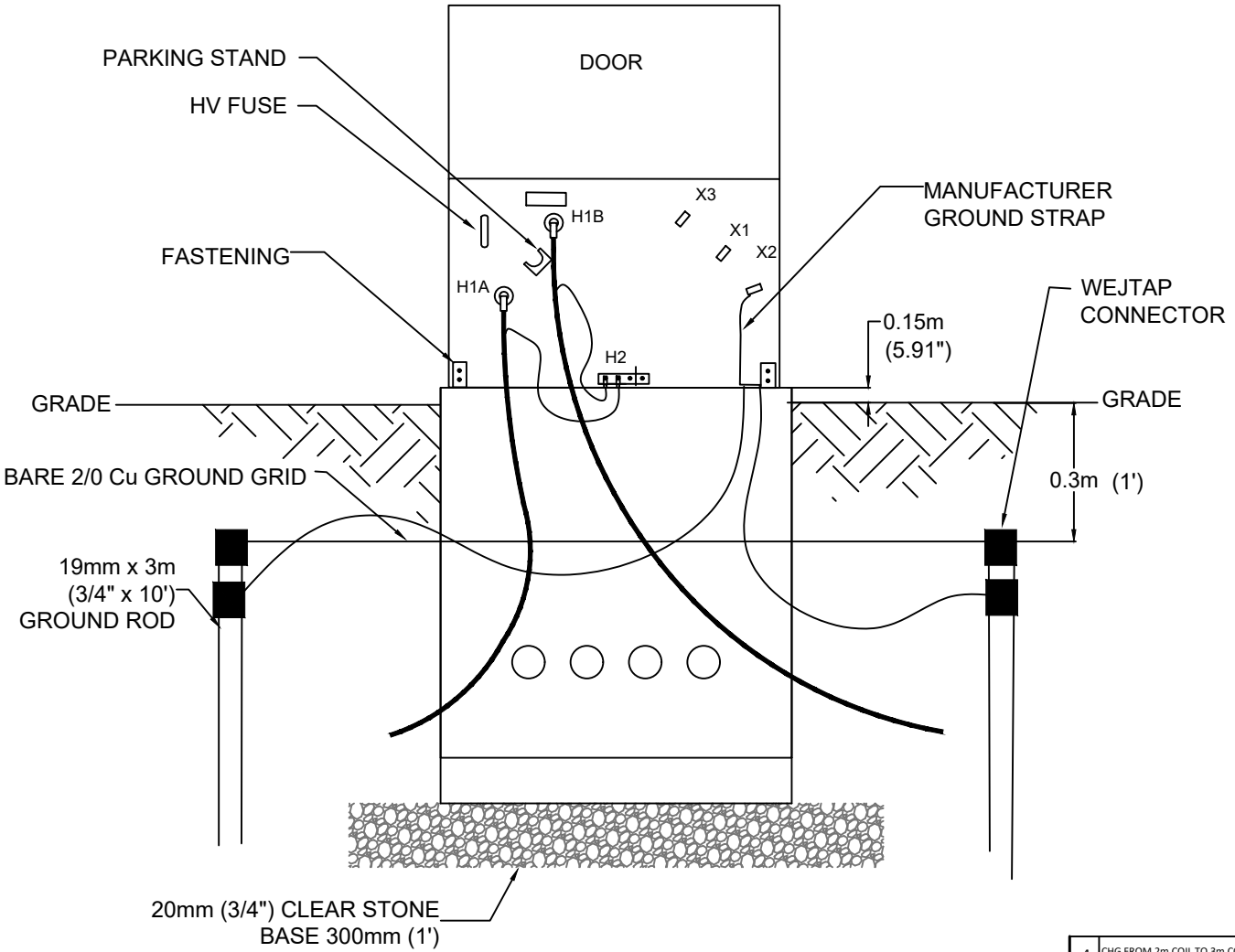
SCALE:	DATE:	REV:
NTS	JUN 3, 2020	3



PLAN VIEW

NOTES:

1. TRANSFORMER RATING AS SPECIFIED.
2. CONCENTRIC NEUTRAL ON PRIMARY CABLES SHALL BE INDIVIDUALLY CONNECTED TO THE GROUND BUS USING COPPER COMPRESSION SINGLE HOLE LUGS.
3. TRAIN ALL SECONDARY CABLES SO AS NOT TO INTERFERE WITH THE PRIMARY CABLES. FIX SECONDARY CABLES IN PLACE ABOVE BASE OPENING.
4. OSHAWA POWER APPROVED GROUND RODS AND GROUND WIRE MUST BE LEFT COILED IN THE BASE.
5. PERIMETER GROUND LOOP SHALL BE CONNECTED TO THE GROUND BUS ON THE TANK USING 2/0 AWG COPPER LEADS AS SHOWN. USE WEDGE CONNECTORS ON THE LOOP AND COPPER COMPRESSION SINGLE HOLE LUGS ON THE GROUND BUS.
6. BOTH HIGH AND LOW VOLTAGE CABLES MUST HAVE A COMPLETE LOOP AT THE BOTTOM OF THE CONCRETE BASE.



REV	DESCRIPTION	APP
4	CHG FROM 2m COIL TO 3m COIL ADDED LINE 4	Z.SYED FEB-20
3	CHG FROM GROUND ROD CONNECTOR TO WEJTAP CONNECTOR	J.SHAH OCT-18
2	CHG FROM CRUSHED TO CLEAR STONE BASE, UPDATE TO NEW BASE, CHG CLEARANCE OF TOP BASE/GRADE FROM 0.1 TO 0.15M	J.SHAH OCT-13
1	CHG FROM 2 TO 4 GRND RODS	F.SHAH MAY-10
0	INITIAL RELEASE	W.KHELLA JAN-06

REVISION HISTORY

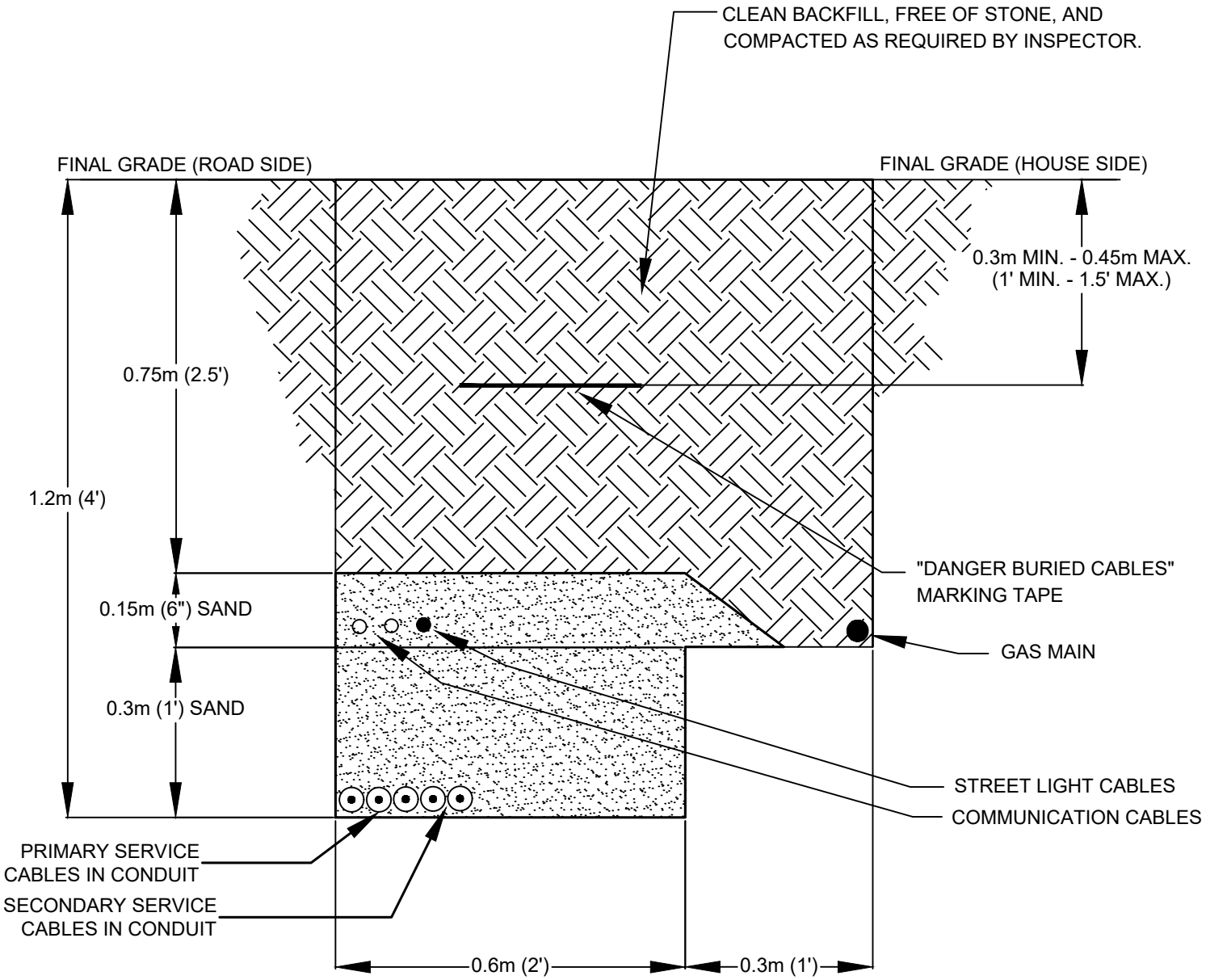
Oshawa Power

TITLE: SINGLE PHASE PAD-MOUNTED TRANSFORMER INSTALLATION DETAILS

DRAWN:	MT:lc	CHECKED:	ZS	APPROVED:	MN
SCALE:	NTS	DATE:	FEB 2, 2020	REV:	4

NOTE:

1. MINIMUM HORIZONTAL SEPARATION SHALL BE 0.3m BETWEEN GAS PIPELINE AND SUPPLY OR COMMUNICATION CABLE



REV	DESCRIPTION	APP
4		
3		
2		
1	CHG FROM DIRECT BURIED HYDRO TO IN DUCT	Z.SYED APR-20
0	INITIAL RELEASE	W.KHELLA MAR-02

REVISION HISTORY

Oshawa Power

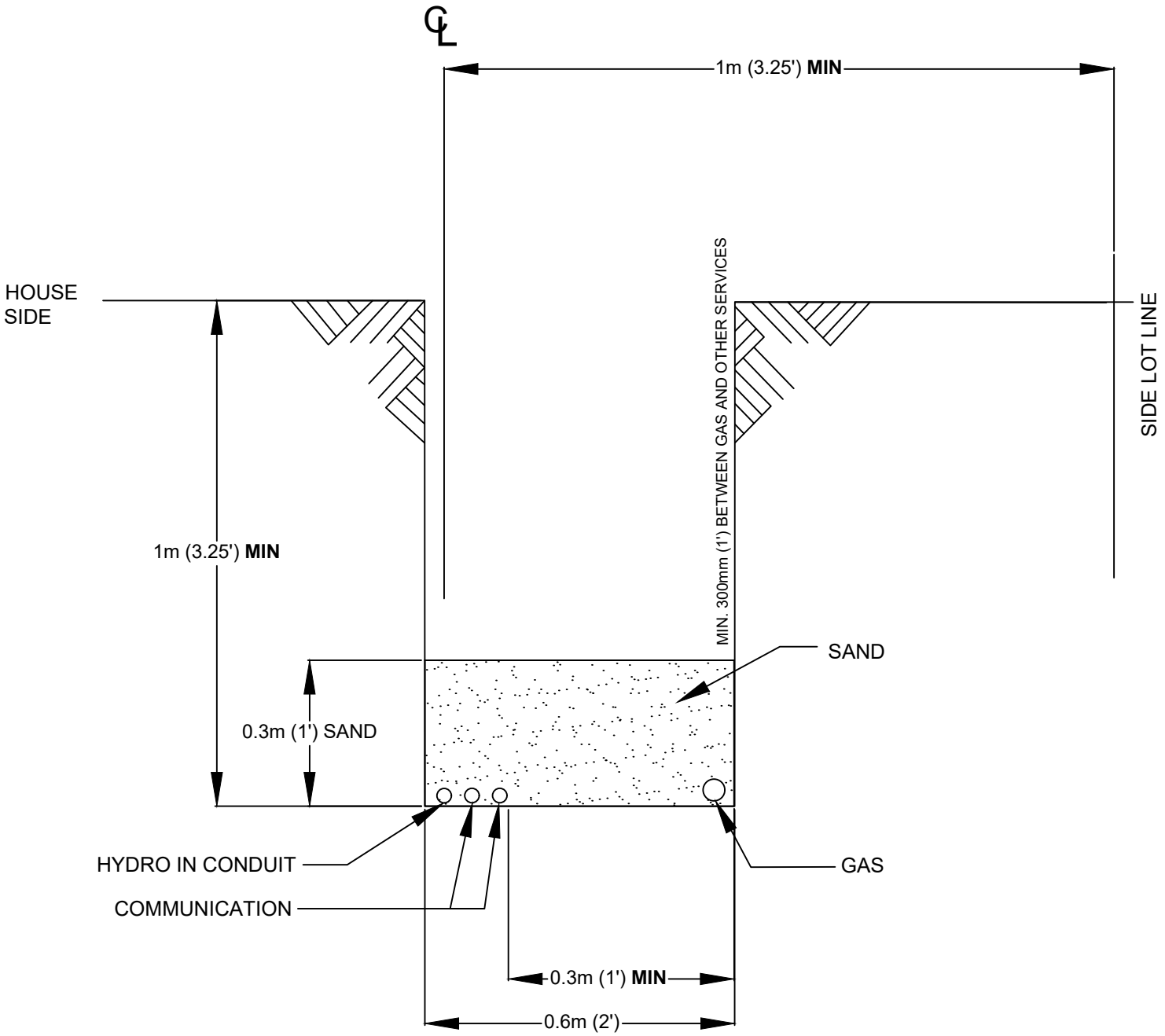
TITLE: TYPICAL MAIN TRENCH CROSS SECTION, PRIMARY,SECONDARY,STREETLIGHT,COMMUNICATION CABLES & GAS SERVICE

DRAWN:	CHECKED:	APPROVED:
MH:lc	ZS	MN

SCALE:	DATE:	REV:
NTS	APR 17, 2020	1

NOTE:

1. MINIMUM HORIZONTAL SEPARATION SHALL BE 0.3m BETWEEN GAS PIPELINE AND SUPPLY OR COMMUNICATION CABLE



REV	DESCRIPTION	APP
4		
3		
2		
1	CHG FROM DIRECT BURIED HYDRO TO IN DUCT	Z.SYED APR-20
0	INITIAL RELEASE	W.KHELLA MAR-02

REVISION HISTORY

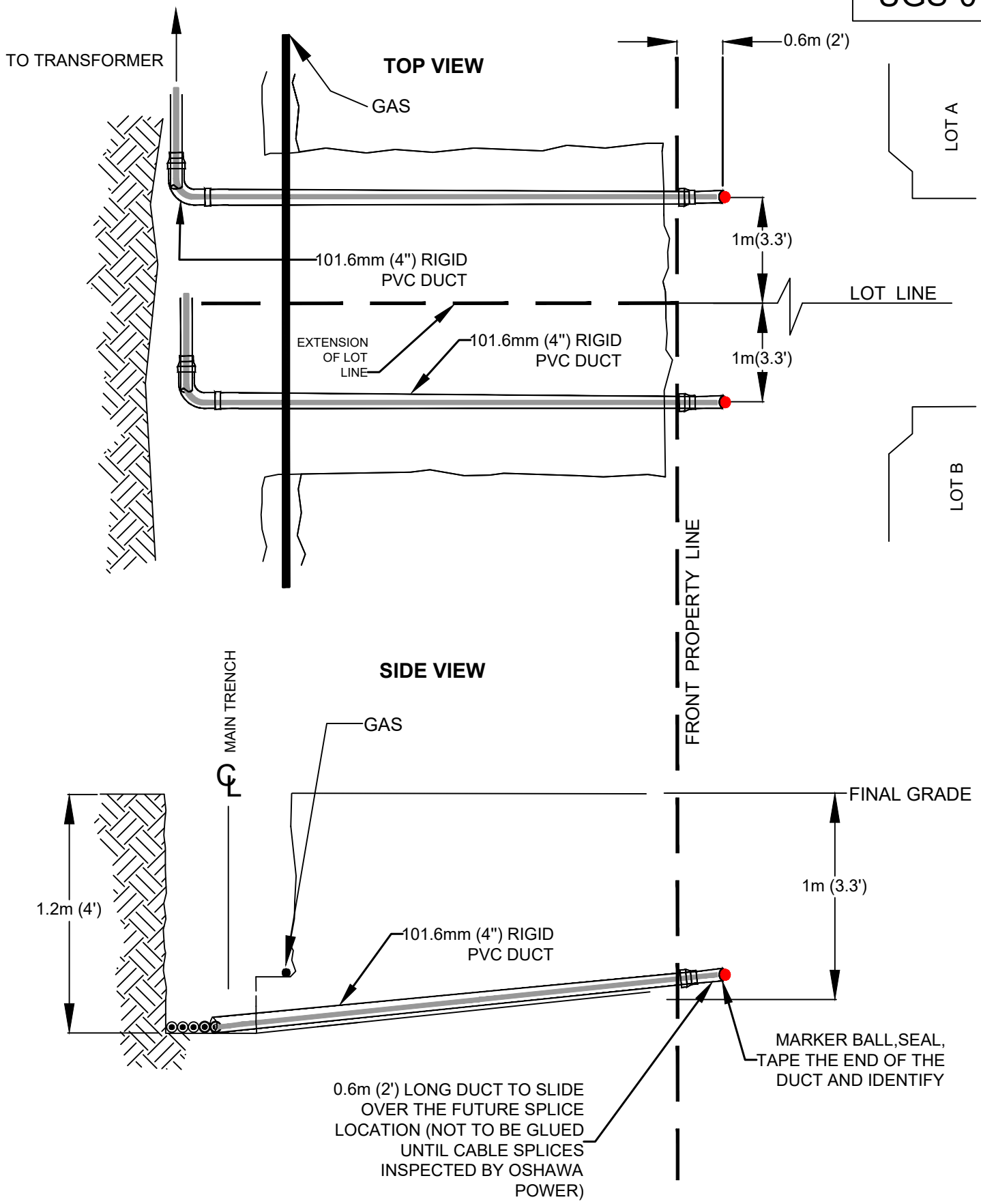
Oshawa Power

TITLE: SERVICE INSTALLATION TRENCH FOR SECONDARY, COMMUNICATION CABLE, & GAS SERVICE

DRAWN:	CHECKED:	APPROVED:
MH:lc	ZS	MN

SCALE:	DATE:	REV:
NTS	APR 17, 2020	1

UGS-014



REV	DESCRIPTION	APP
4		
3		
2	CHG FROM DIRECT BURIED HYDRO TO IN DUCT	Z.SYED APR-20
1	CHG SEC COIL TO BELOW GRADE	J.SHAH NOV-13
0	INITIAL RELEASE	W.KHELLA JAN-06

REVISION HISTORY

Oshawa Power

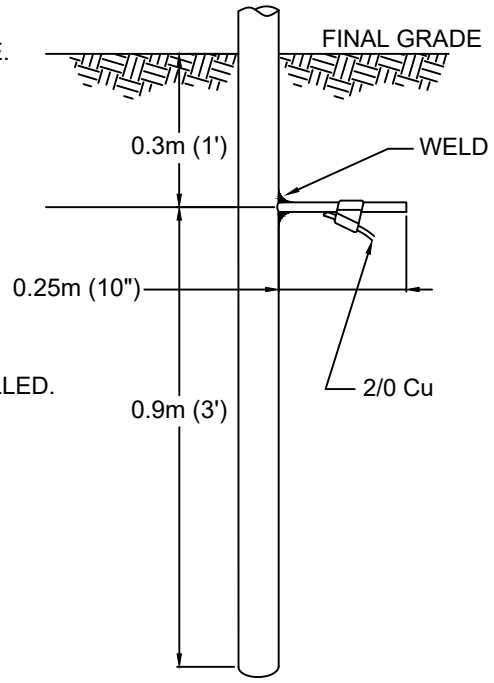
TITLE: SERVICE LATERAL TRENCH DETAILS

DRAWN:	CHECKED:	APPROVED:
MH:lc	ZS	MN

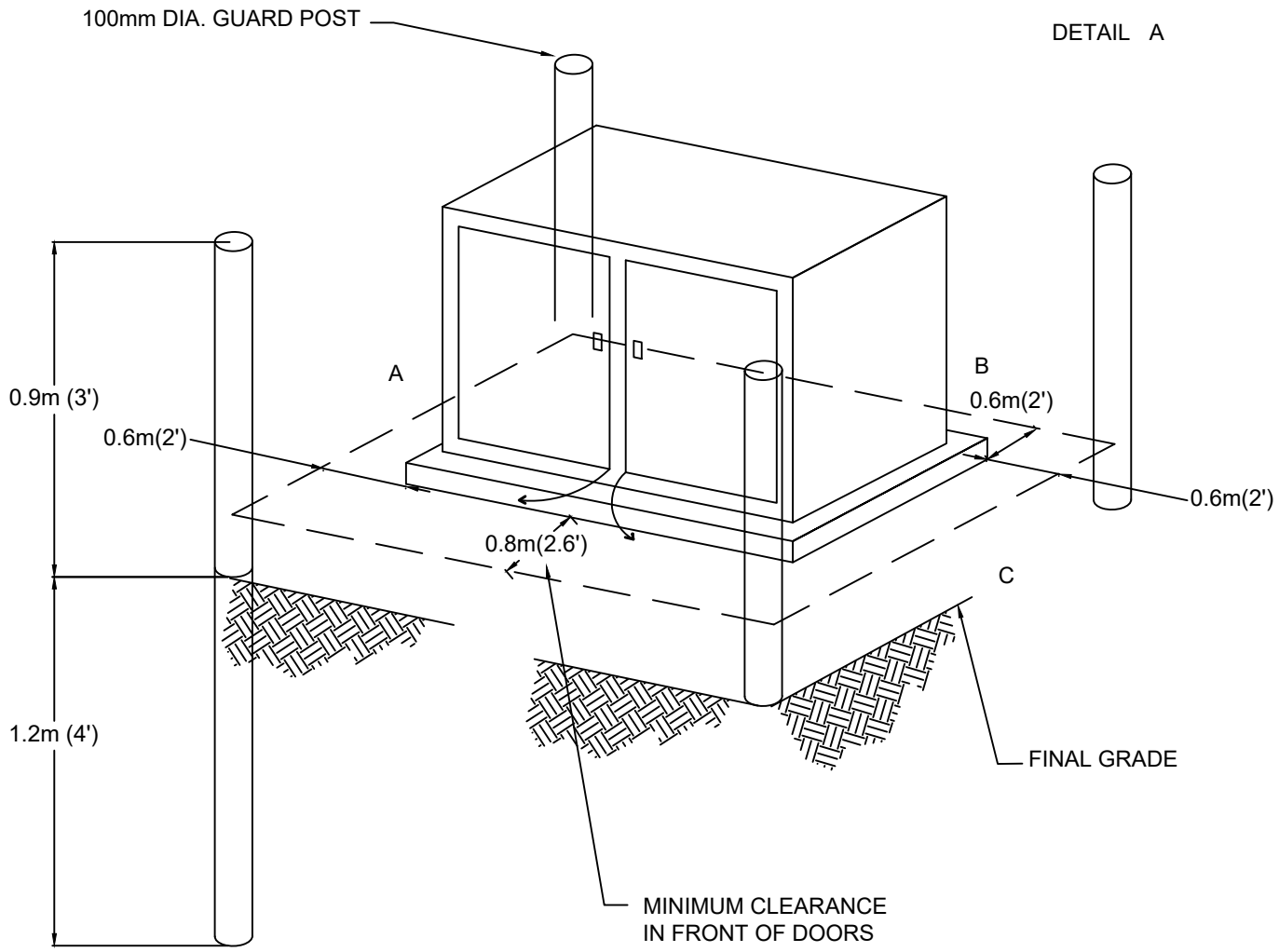
SCALE:	DATE:	REV:
NTS	APR 17, 2020	2

NOTES:

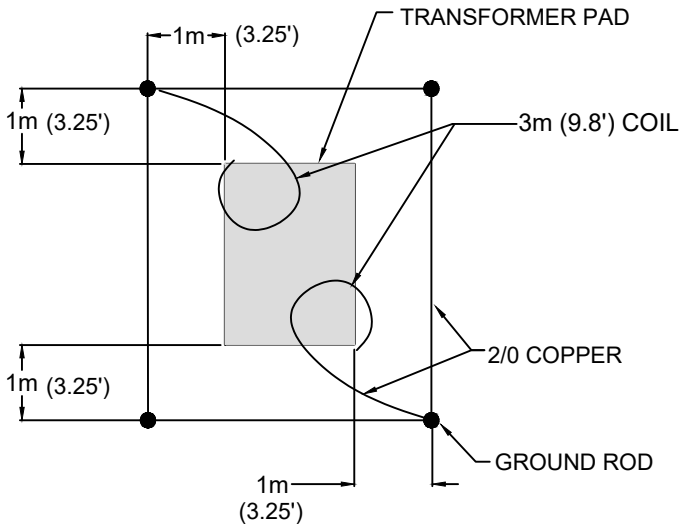
1. GUARD POSTS SHALL BE 100mm DIAMETER x 2100mm LONG, STEEL PIPE. INSTALL 1200mm BELOW GRADE, FILLED WITH CRUSHED LIMESTONE.
2. GUARD POSTS SHALL BE COVERED WITH SLIP OVER ONE PIECE PLASTIC COVER.
3. DIMENSIONS & QUANTITY SHOWN ARE TYPICAL, ACTUAL DIMENSIONS & QUANTITY SHALL BE DETERMINED BY EQUIPMENT TO BE INSTALLED AND OSHAWA POWER INSPECTOR BASED ON SITE CONDITIONS.
4. EQUIPMENT INSTALLED IN HIGH RISK TRAFFIC AREA MAY REQUIRE ADDITIONAL GUARD POSTS AT LOCATIONS A, B & C. USAGE, NUMBER AND LOCATIONS OF GUARD POSTS TO BE DETERMINED BY OSHAWA POWER INSPECTOR.
5. GUARD POSTS SHALL BE BONDED TO THE GROUND GRID USING 2/0 BARE Cu AND AMPACT Cu WEDGE CONNECTOR, SEE "DETAIL A"
6. OSHAWA POWER APPROVED BOLLARDS AND BOLLARD COVERS MUST BE INSTALLED.



DETAIL A



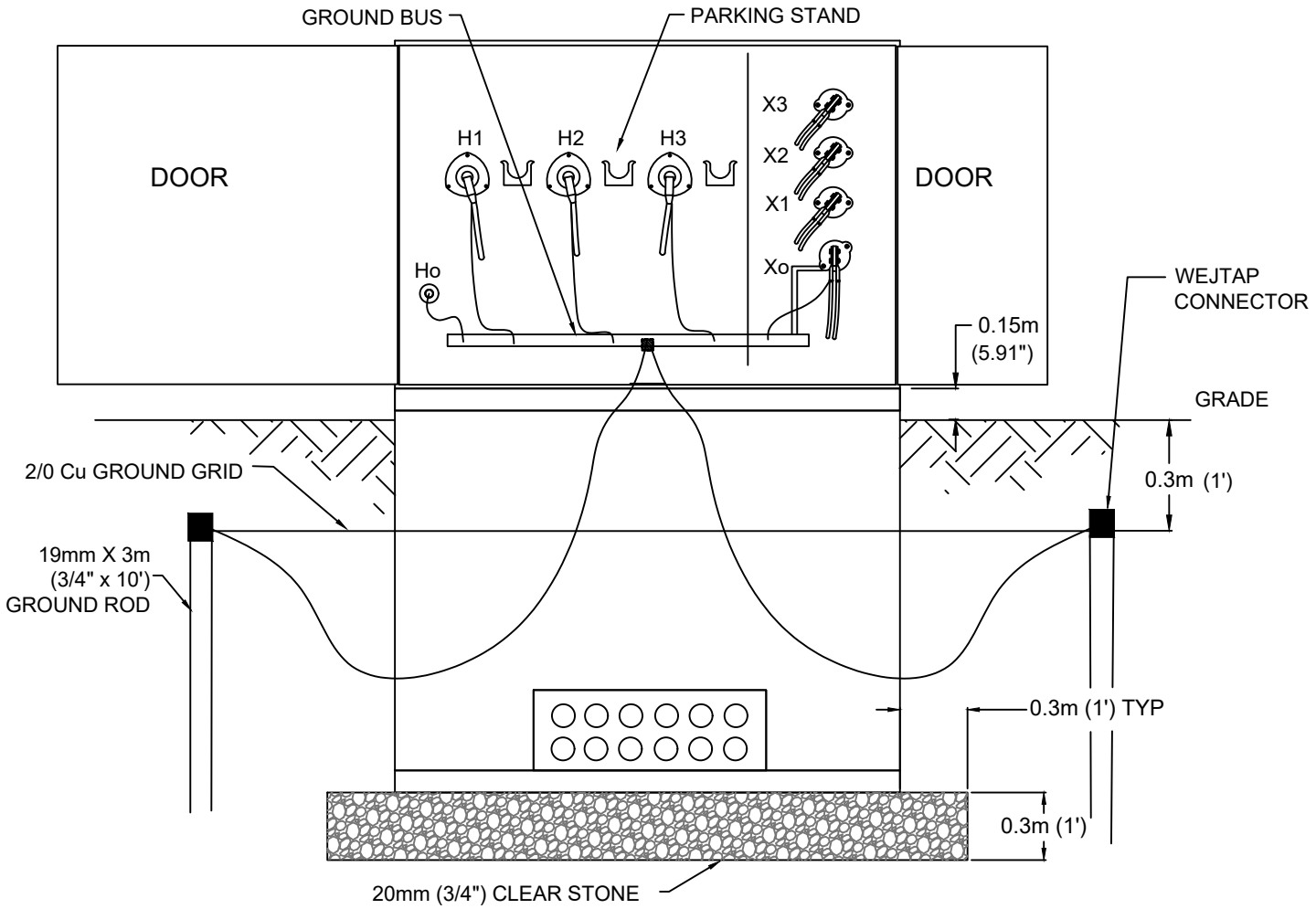
Oshawa Power	TITLE: MECHANICAL PROTECTION OF PADMOUNT EQUIPMENT			2	
				1	CHG WORDING Z.SYED FEB-20
	DRAWN: MH:lc	CHECKED: ZS	APPROVED: MN	0	INITIAL RELEASE J.SHAH JUN-13
	SCALE: NTS	DATE: FEB 14, 2020	REV: 1	REV	DESCRIPTION APP
				REVISION HISTORY	



PLAN VIEW

NOTES:

1. TRANSFORMER RATING AS SPECIFIED.
2. CONCENTRIC NEUTRAL ON PRIMARY CABLES SHALL BE INDIVIDUALLY CONNECTED TO THE GROUND BUS USING COPPER COMPRESSION SINGLE HOLE LUGS.
3. TRAIN ALL SECONDARY CABLES SO AS NOT TO INTERFERE WITH THE PRIMARY CABLES. FIX SECONDARY CABLES IN PLACE ABOVE BASE OPENING.
4. OSHAWA POWER APPROVED GROUND RODS AND GROUND WIRE MUST BE LEFT COILED IN THE BASE.
5. PERIMETER GROUND LOOP SHALL BE CONNECTED TO THE GROUND BUS ON THE TANK USING 2/0 AWG COPPER LEADS AS SHOWN. USE WEDGE CONNECTORS ON THE LOOP AND COPPER COMPRESSION SINGLE HOLE LUGS ON THE GROUND BUS.
6. BOTH HIGH AND LOW VOLTAGE CABLES MUST HAVE A COMPLETE LOOP AT THE BOTTOM OF THE CONCRETE BASE.



Oshawa Power

TITLE: THREE PHASE PAD-MOUNTED TRANSFORMER INSTALLATION DETAILS

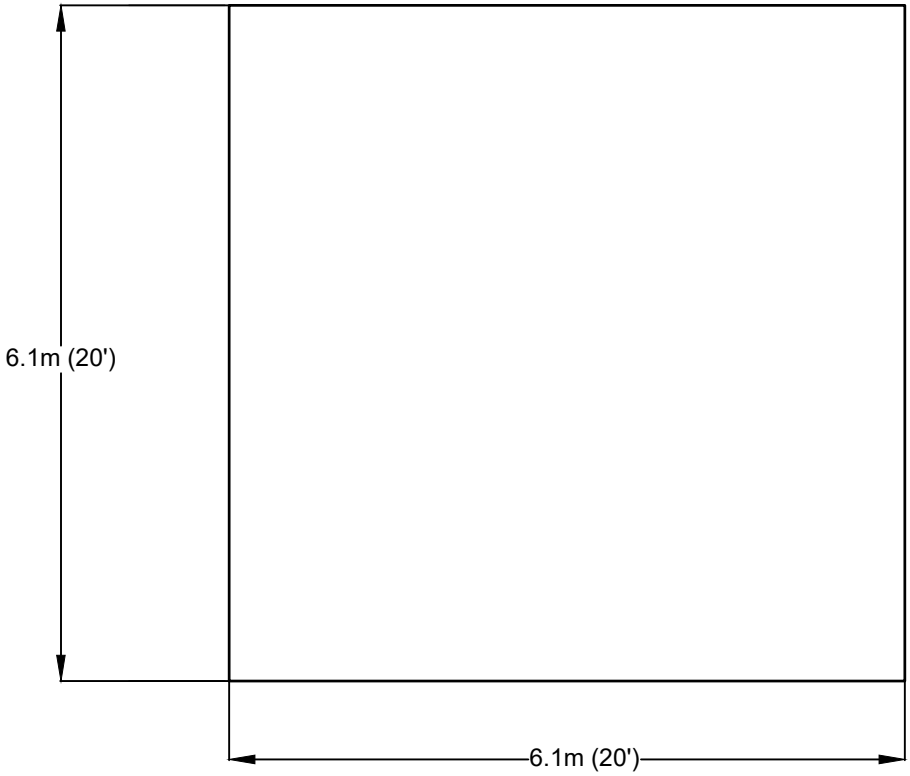
DRAWN:	CHECKED:	APPROVED:
MH:lc	ZS	MN

SCALE:	DATE:	REV:
NTS	FEB 14, 2020	3

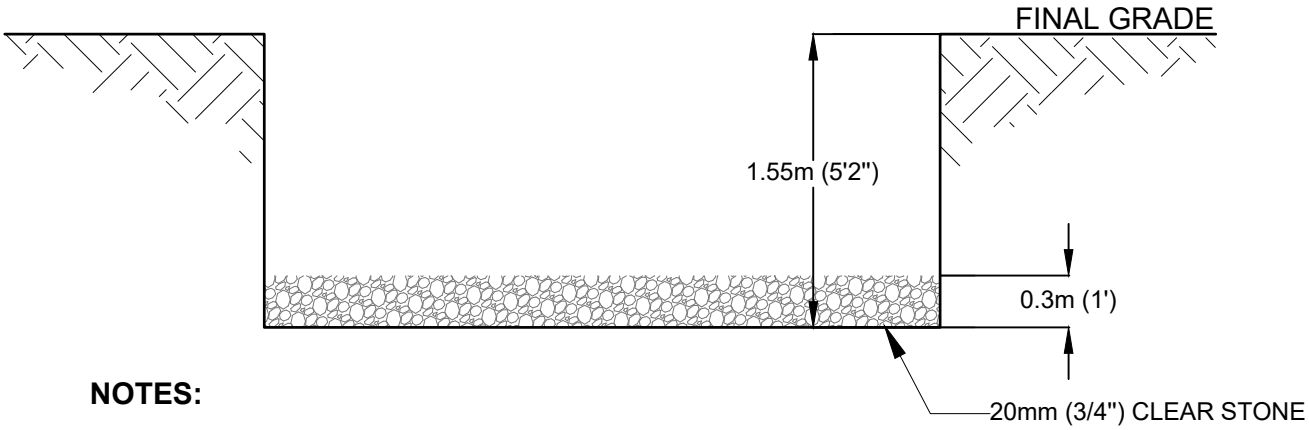
REV	DESCRIPTION	APP
3	CHG WORDING, ADDED LENGTH OF 2/0 COPPER COIL TO 3m	Z.SYED FEB-20
2	CHG CLEARANCE OF TOP BASE-GRADE FROM 0.1 TO 0.15M	J.SHAH OCT-13
1	ADDED CLR STONE AT BOTTOM OF BASE, CHG SIZE OF CU LEAD FROM #2 TO 2/0	J.SHAH JUN-13
0	INITIAL RELEASE	W.KHELLA JAN-06

REVISION HISTORY

TOPOGRAPHIC DETAIL



SIDE PROFILE DETAIL



NOTES:

1. FINAL GRADE TO BE CLEARLY MARKED.
2. DEVELOPER TO PIN ALL FOUR CORNERS.
3. DEVELOPER TO SUPPLY AND INSTALL CLEAR STONES.
4. DEVELOPER TO SUPPLY AND INSTALL THE OSHAWA POWER APPROVED TRANSFORMER BASE.
5. DEVELOPER TO CONTACT THE DISTRIBUTION DEPARTMENT TO SCHEDULE THE INSPECTION OF THE TRANSFORMER BASE.

Oshawa Power

TITLE: EXCAVATING DETAIL FOR THE INSTALLATION OF A THREE PHASE TRANSFORMER BASE

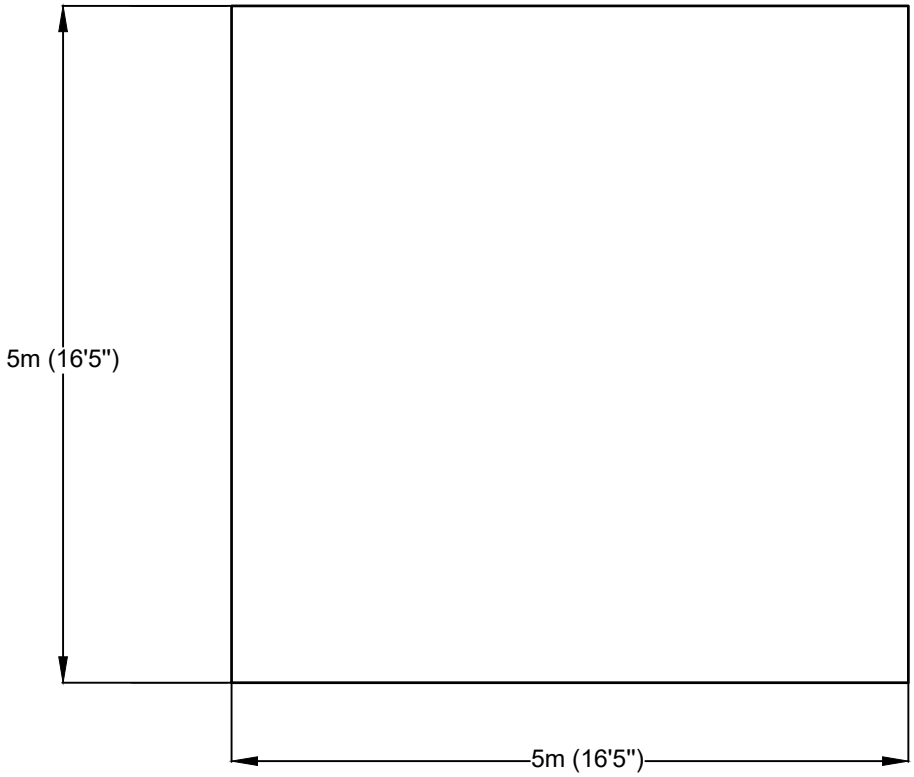
DRAWN:	CHECKED:	APPROVED:
MJH:lc	ZS	MN

SCALE:	DATE:	REV:
NTS	FEB 18, 2020	3

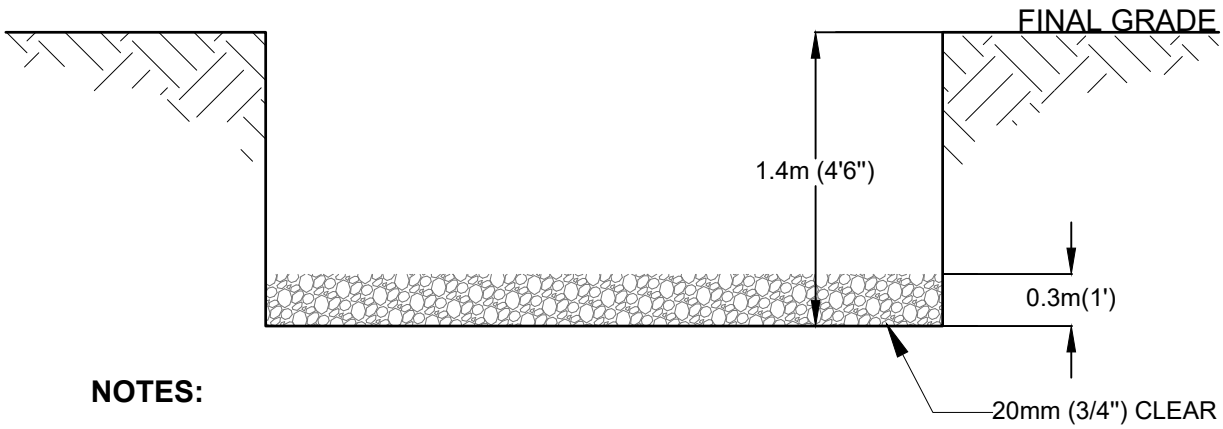
REV	DESCRIPTION	APP
3	MODIFIED INSTALLATION	Z.SYED
2	MODIFIED DEPTH OF HOLE	Z.SYED
1	ADDED CRUSHED STONE	Z.SYED
0	INITIAL RELEASE	Z.SYED

REVISION HISTORY

TOPOGRAPHIC DETAIL



SIDE PROFILE DETAIL



NOTES:

1. FINAL GRADE TO BE CLEARLY MARKED.
2. DEVELOPER TO PIN ALL FOUR CORNERS.
3. DEVELOPER TO SUPPLY AND INSTALL CLEAR STONES.
4. DEVELOPER TO SUPPLY AND INSTALL THE OSHAWA POWER APPROVED TRANSFORMER BASE.
5. DEVELOPER TO CONTACT THE DISTRIBUTION DEPARTMENT TO SCHEDULE THE INSPECTION OF THE TRANSFORMER BASE.

Oshawa Power	TITLE: EXCAVATING DETAIL FOR THE INSTALLATION OF A SINGLE PHASE TRANSFORMER BASE IN A SUBDIVISION, SMALL RESIDENTIAL AND COMMERCIAL		
	DRAWN: AY:lc	CHECKED: ZS	APPROVED: MN
	SCALE: NTS	DATE: FEB 18, 2020	REV: 0

REV	DESCRIPTION	APP
0	INITIAL RELEASE	Z.SYED FEB-20

REVISION HISTORY

UNDERGROUND METERING SPECIFICATIONS

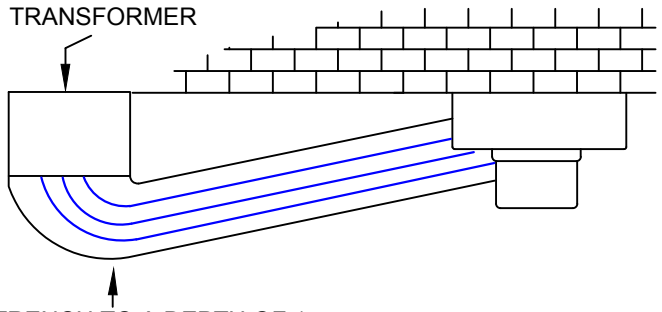
appendix E

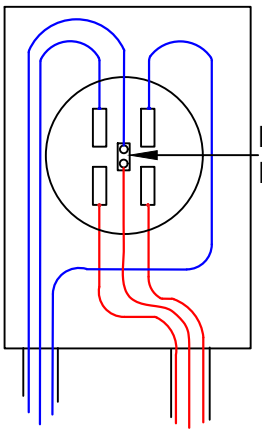
OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

RESIDENTIAL UNDERGROUND ELECTRICAL SERVICE & METER SOCKET
SINGLE-PHASE, 3 WIRE, 240V

12-001

OPUCN APPROVED METER SOCKET TYPES			
	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	*SLC400RW /E400RO	*LU2
*COMPLETE WITH MECHANICAL LUGS			





NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. THE METER SOCKET MUST BE MOUNTED ON AN OUTSIDE WALL AT A LOCATION APPROVED BY OPUCN METER DEPARTMENT
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. REFER TO "OPUCN APPROVED METER SOCKET TYPES" FOR SOCKET REQUIREMENTS.
5. THE CUSTOMER SHALL EXPOSE, TO A DEPTH OF 1m THE AREA BETWEEN THE METER BASE LOCATE AND THE END OF THE DUCT TO ALLOW FOR PULLING OF SECONDARY CABLE AND INSTALLATION OF FROST LOOP. THE CUSTOMER WILL PLACE 1 FOOT OF SAND OVER THE FIRST LOOP AFTER WORK IS DONE.
6. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.

CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
50mm	0'-2"
0.3m	1'-0"
1m	3'-3"
1.75m	5'-8"
3m	10'-0"

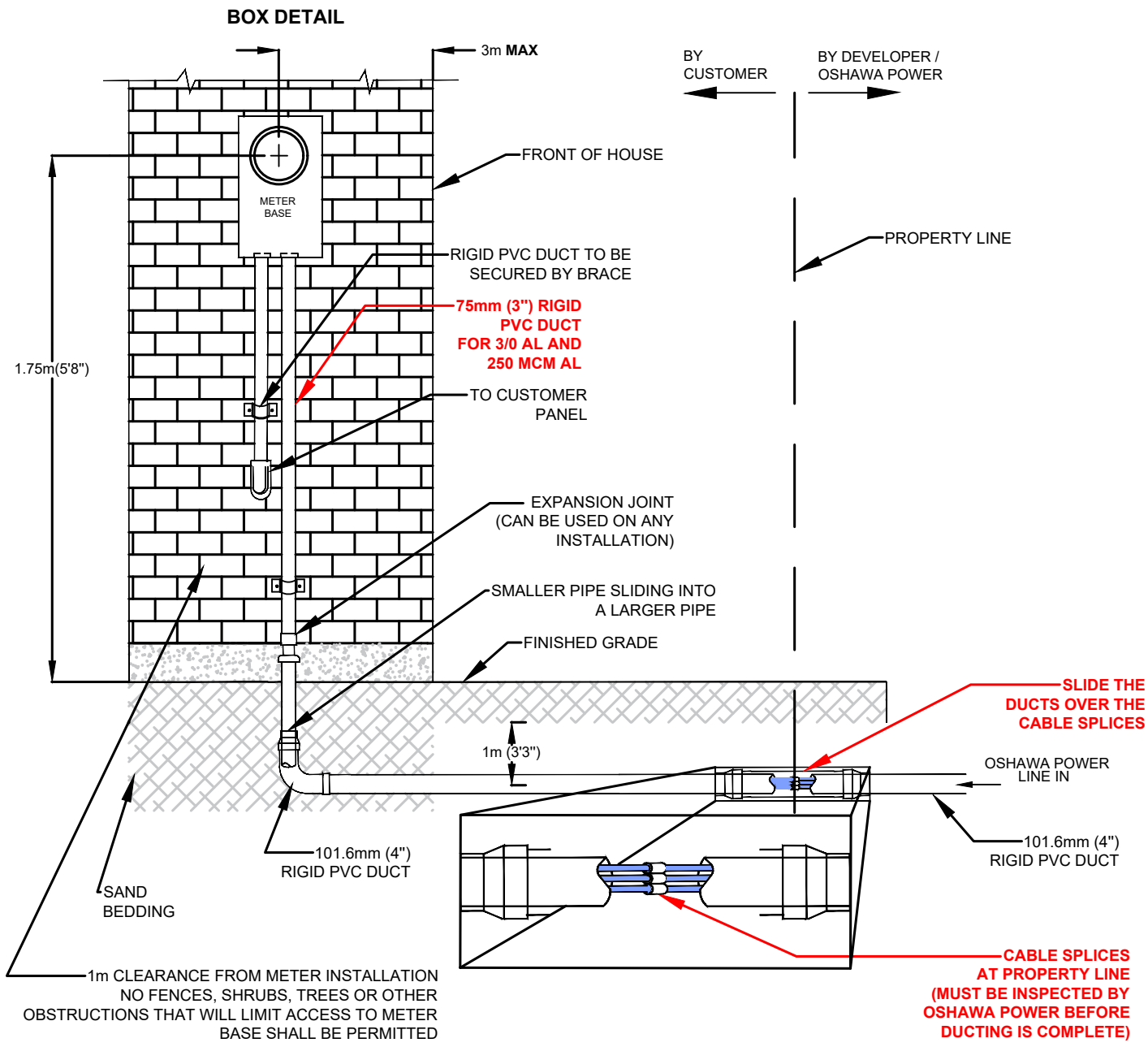
Oshawa PUC Networks Inc.

DRAWN:	CKD:	APP:	
KAB			
DATE: MAY 8, 2017	SCALE: NTS		REV: 1

OUTDOOR METER WITH FULLY DUCTED SYSTEM

12-100

RESIDENTIAL UNDERGROUND ELECTRICAL SERVICE & METER SOCKET
SINGLE PHASE, 3-WIRE, 120/240V



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. THE METER SOCKET MUST BE MOUNTED ON AN OUTSIDE WALL AT A LOCATION APPROVED BY THE OPUCN METER DEPARTMENT.
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.
5. CABLE SPLICES AT THE PROPERTY LINE MUST BE INSPECTED BY OSHAWA POWER BEFORE DUCTING IS COMPLETE.

OSHAWA POWER APPROVED METER SOCKET TYPES

	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	E400RO	*LU2

*COMPLETE WITH MECHANICAL LUGS

CONVERSION TABLE

METRIC	IMPERIAL (APPROX.)	METRIC	IMPERIAL (APPROX.)
3m	10'-0"	101.6mm	4"
1.75m	5'-8"	75mm	3"
1m	3'-3"		

Oshawa Power

TITLE: SINGLE PHASE RESIDENTIAL UNDERGROUND - EXTERIOR WALL WITH UNDERGROUND CONDUIT CONNECTION

DRAWN: LC | CHECKED: ZS | APPROVED: MN:RE

SCALE: NTS | DATE: APR 16, 2020 | REV: 0

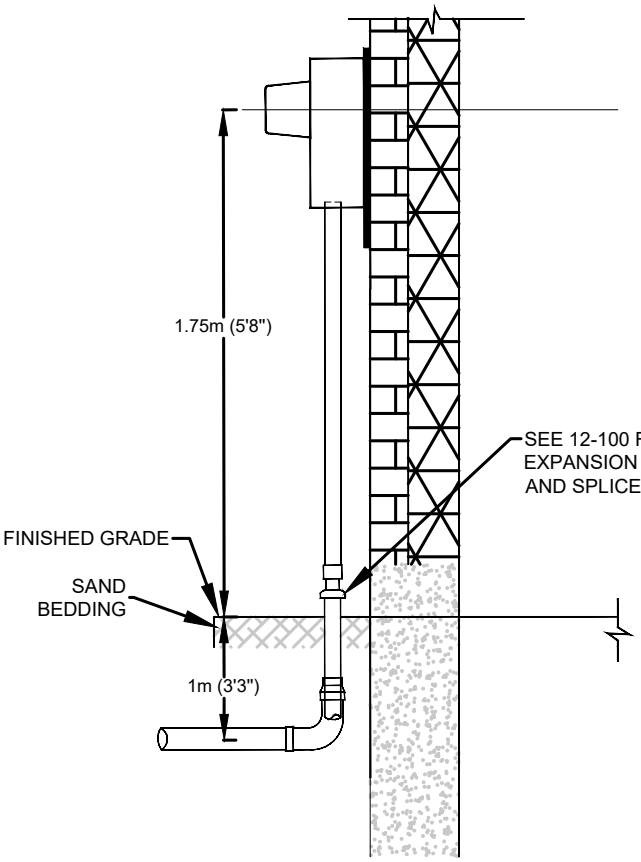
REV	DESCRIPTION	APP
2		
1		
0	INITIAL RELEASE	Z.SYED/R.ERSIL APR-20

REVISION HISTORY

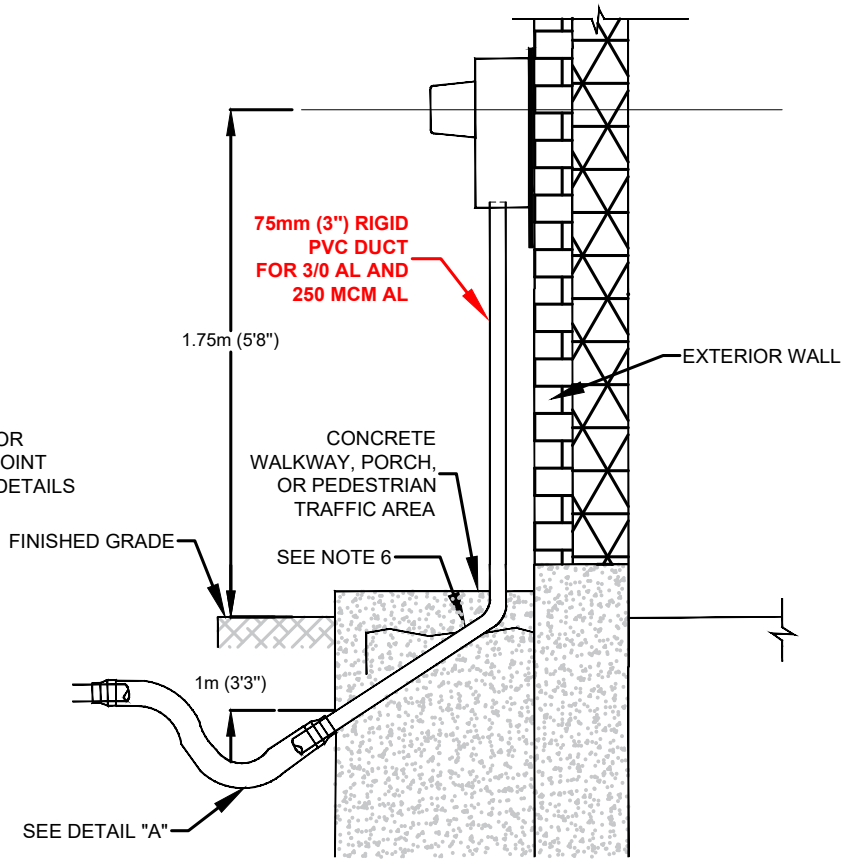
OUTDOOR METER ENCLOSURE WITH FULLY DUCTED SYSTEM SIDE VIEW DETAILS

12-101

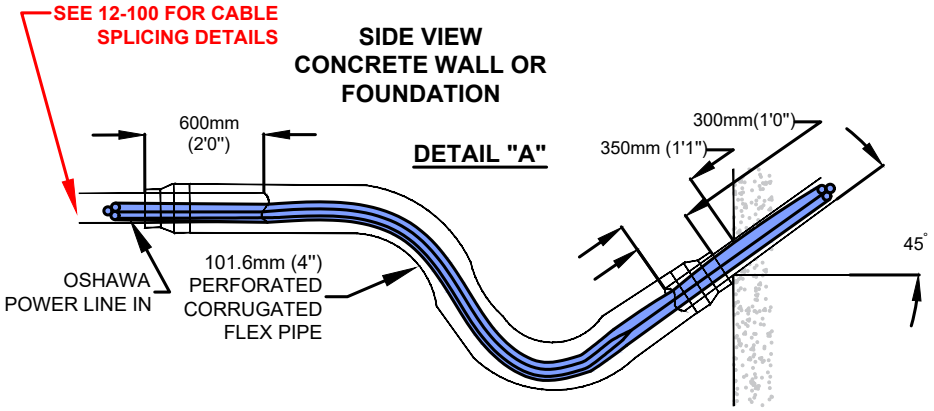
RESIDENTIAL UNDERGROUND ELECTRICAL SERVICE & METER SOCKET
SINGLE PHASE, 3-WIRE, 120/240V



SIDE VIEW CONCRETE WALL OR FOUNDATION



SIDE VIEW CONCRETE WALKWAY, PORCH, OR PEDESTRIAN TRAFFIC AREA



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. METER SOCKET MUST BE MOUNTED ON AN OUTSIDE ALL AT A LOCATION APPROVED BY OSHAWA POWER.
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.
5. CABLE SPLICES AT THE PROPERTY LINE MUST BE INSPECTED BY OSHAWA POWER BEFORE DUCTING IS COMPLETE.
6. IF REQUIRED, MAXIMUM OF TWO 90 DEGREE BENDS AT A MINIMUM 12" DISTANCE ARE ALLOWED FROM METER BASE TO CORRUGATED FLEX PIPE

OSHAWA POWER APPROVED METER SOCKET TYPES

	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	E400RO	*LU2

*COMPLETE WITH MECHANICAL LUGS

CONVERSION TABLE

METRIC	IMPERIAL (APPROX.)	METRIC	IMPERIAL (APPROX.)
1.75m	5'-8"	300mm	1'-0"
1m	3'-3"	101.6mm	4"
600mm	2'-0"	75mm	3"
350mm	1'-1"		

Oshawa Power

TITLE: SINGLE PHASE RESIDENTIAL UNDERGROUND - EXTERIOR WALL WITH UNDERGROUND CONDUIT CONNECTION SIDE VIEW DETAILS

DRAWN: LC | CHECKED: ZS | APPROVED: MN:RE

SCALE: NTS | DATE: APR 16, 2020 | REV: 0

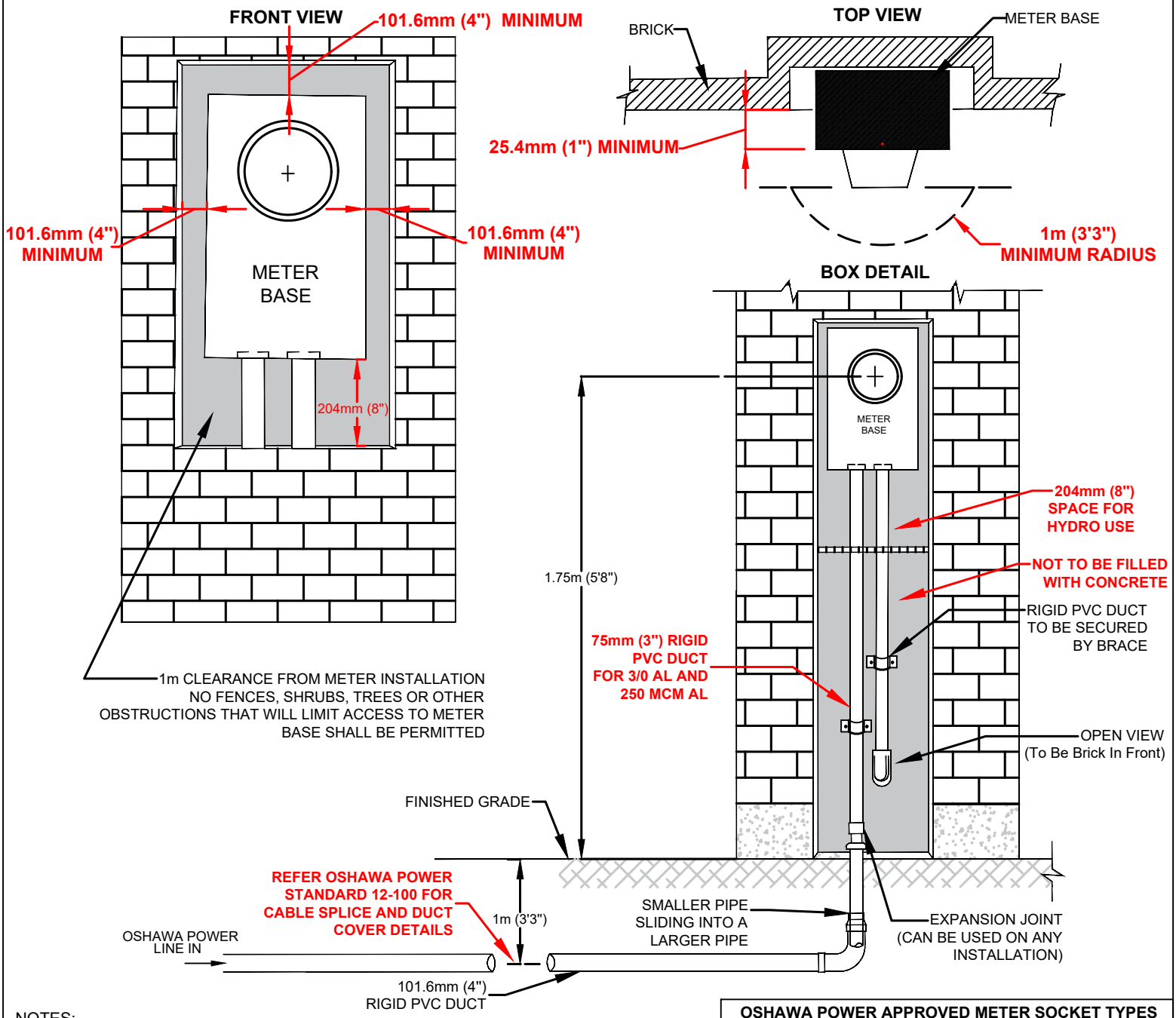
REV	DESCRIPTION	APP
2		
1		
0	INITIAL RELEASE	Z.SYED/R.ERSIL APR-20

REVISION HISTORY

RECESSED OUTDOOR METER ENCLOSURE WITH FULLY DUCTED SYSTEM

12-102

RESIDENTIAL UNDERGROUND ELECTRICAL SERVICE & METER SOCKET
SINGLE PHASE, 3-WIRE, 240/120V



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. METER SOCKET MUST BE SECURED TO THE INSIDE OF THE WALL OPENING.
3. MINIMUM 204mm CLEARANCE FOR HYDRO USE AND INCREASE SPACE REQUIRED FOR INSTALLATION OF OTHER UTILITY BOXES.
4. METER BASE FACE MUST BE **MINIMUM** 25.4mm (1") OUTSIDE THE BRICK WALL.
5. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
6. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.
7. CABLE SPLICES AT THE PROPERTY LINE MUST BE INSPECTED BY OSHAWA POWER BEFORE DUCTING IS COMPLETE.

OSHAWA POWER APPROVED METER SOCKET TYPES

	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	E400RO	*LU2

*COMPLETE WITH MECHANICAL LUGS

CONVERSION TABLE

METRIC	IMPERIAL (APPROX.)	METRIC	IMPERIAL (APPROX.)
1.75m	5'-8"	75mm	3"
1m	3'-3"	25.4mm	1"
204mm	8"		
101.6mm	4"		

Oshawa Power

TITLE: SINGLE PHASE RESIDENTIAL UNDERGROUND - RECESSED WALL ENCLOSURE WITH UNDERGROUND CONDUIT CONNECTION

DRAWN: LC | CHECKED: ZS | APPROVED: MN:RE

SCALE: NTS | DATE: APR 16, 2020 | REV: 0

REV	DESCRIPTION	APP
2		
1		
0	INITIAL RELEASE	Z.SYED/R.ERSIL APR-20

REVISION HISTORY

TEMPORARY SERVICES

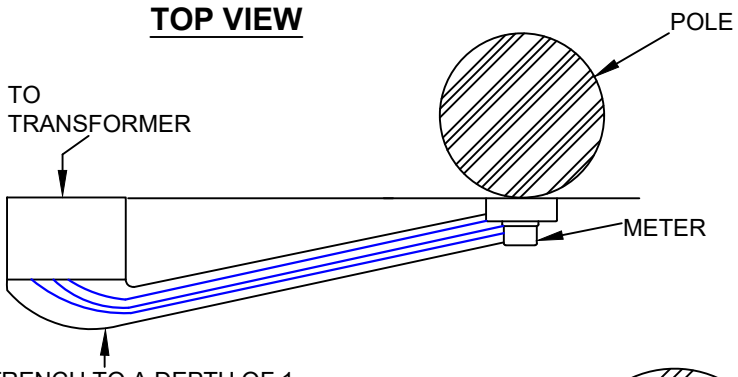
appendix F

OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

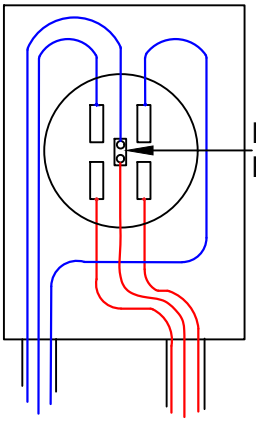
TEMPORARY UNDERGROUND ELECTRICAL SERVICE & METER SOCKET
SINGLE-PHASE, 3 WIRE, 120/240V

12-001A

TOP VIEW

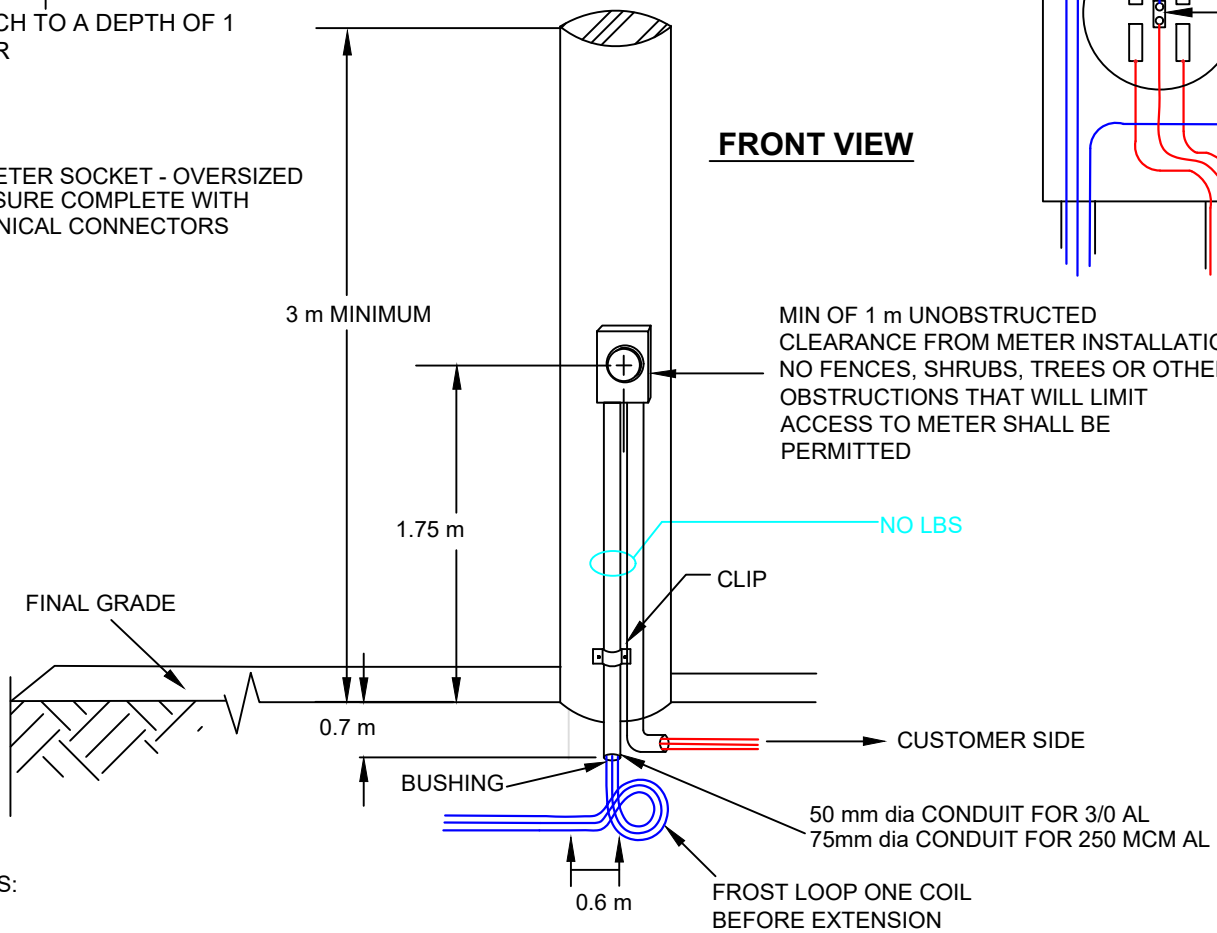


OPUCN APPROVED METER SOCKET TYPES			
	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	*SLC400RW /E400RO	*LU2
*COMPLETE WITH MECHANICAL LUGS			



FRONT VIEW

200A METER SOCKET - OVERSIZED ENCLOSURE COMPLETE WITH MECHANICAL CONNECTORS



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. THE METER SOCKET MUST BE MOUNTED ON A 6 INCH X 6 INCH AND MINIMUM 3 METER HIGH POLE/POST AT A LOCATION APPROVED BY OPUCN METER DEPARTMENT TO COORDINATE WITH DISTRIBUTION ON THE STREET
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. REFER TO "OPUCN APPROVED METER SOCKET TYPES" FOR SOCKET REQUIREMENTS.
5. THE CUSTOMER SHALL EXPOSE, TO A DEPTH OF 1m THE AREA BETWEEN THE METER BASE LOCATE AND THE END OF THE DUCT TO ALLOW FOR PULLING OF SECONDARY CABLE AND INSTALLATION OF FROST LOOP. THE CUSTOMER WILL PLACE 1 FOOT OF SAND OVER THE FIRST LOOP AFTER WORK IS DONE.
6. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.

CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
50mm	0'-2"
0.3m	1'-0"
0.6m	1'-9"
1m	3'-3"
1.75m	5'-8"
3m	9'-8"

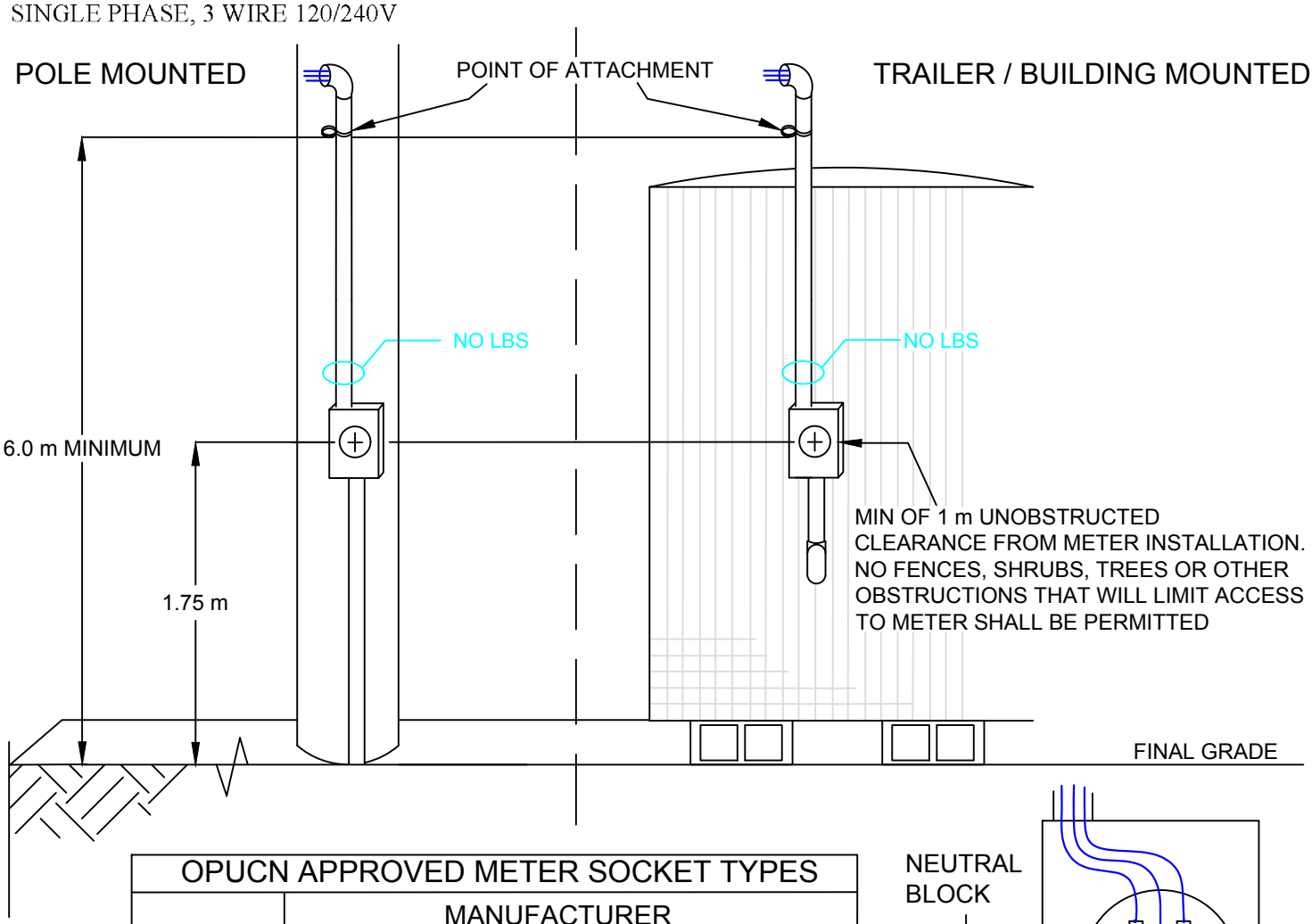
Oshawa PUC Networks Inc.

DRAWN:	CKD:	APP:
KAB:mzk	ZS	MN:RE
DATE: MAY 13, 2020	SCALE: NTS	REV: 0

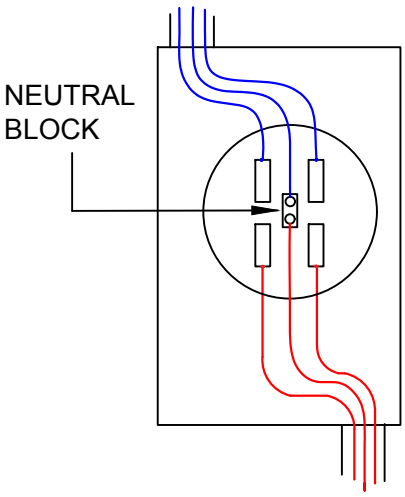
OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

TEMPORARY OVERHEAD ELECTRICAL SERVICE & METER SOCKET
SINGLE PHASE, 3 WIRE 120/240V

12-003A



OPUCN APPROVED METER SOCKET TYPES			
	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
APPROVED METER SOCKETS	* BS2-TV	*SLC400RW /E400RO	*LU2
*COMPLETE WITH MECHANICAL LUGS			



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. THE METER SOCKET MUST BE MOUNTED ON AN OUTSIDE WALL OR POLE AT A LOCATION APPROVED BY OPUCN METER DEPARTMENT TO CO-ORDINATE WITH DISTRIBUTION ON THE STREET.
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. REFER TO "OPUCN APPROVED METER SOCKET TYPES" FOR SOCKET REQUIREMENTS.
5. NO LB, LL OR LR FITTINGS ON THE LINE SIDE (AHEAD OF) THE METER BASE.
6. MINIMUM 1M CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.

CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
1m	3'-3"
1.75m	5'-8"
3m	10'-0"
4.5m	15'-0"
6.0m	19'-8"

Oshawa PUC Networks Inc.

DRAWN:	CKD:	APP:	
KAB:AY	Roger Ersil		
DATE: MAY 30, 2019	SCALE: NTS		REV: 1

GANG METER BASES/METER CENTRES

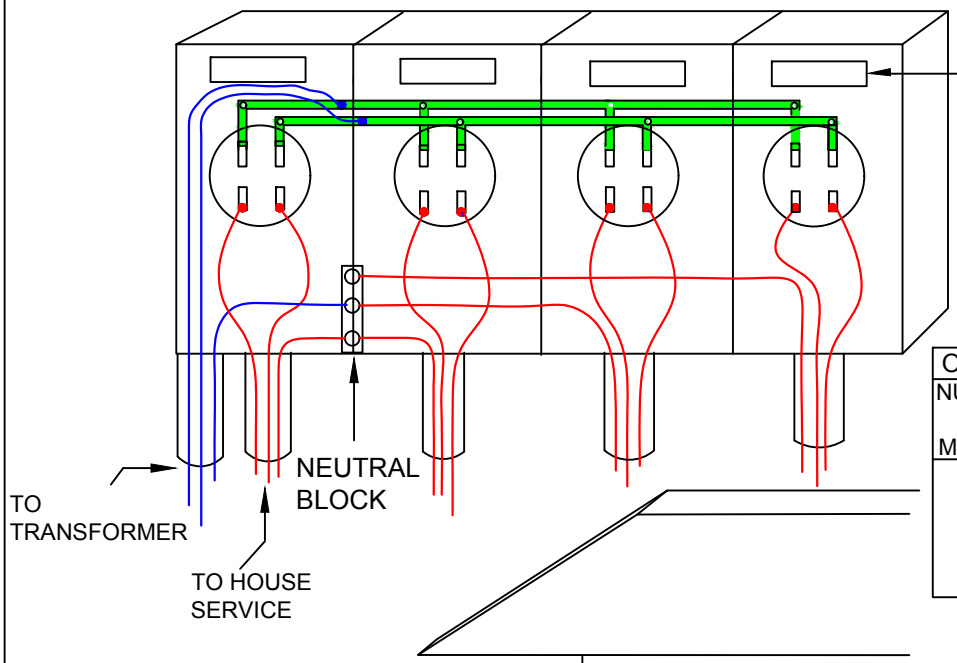
appendix G

OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

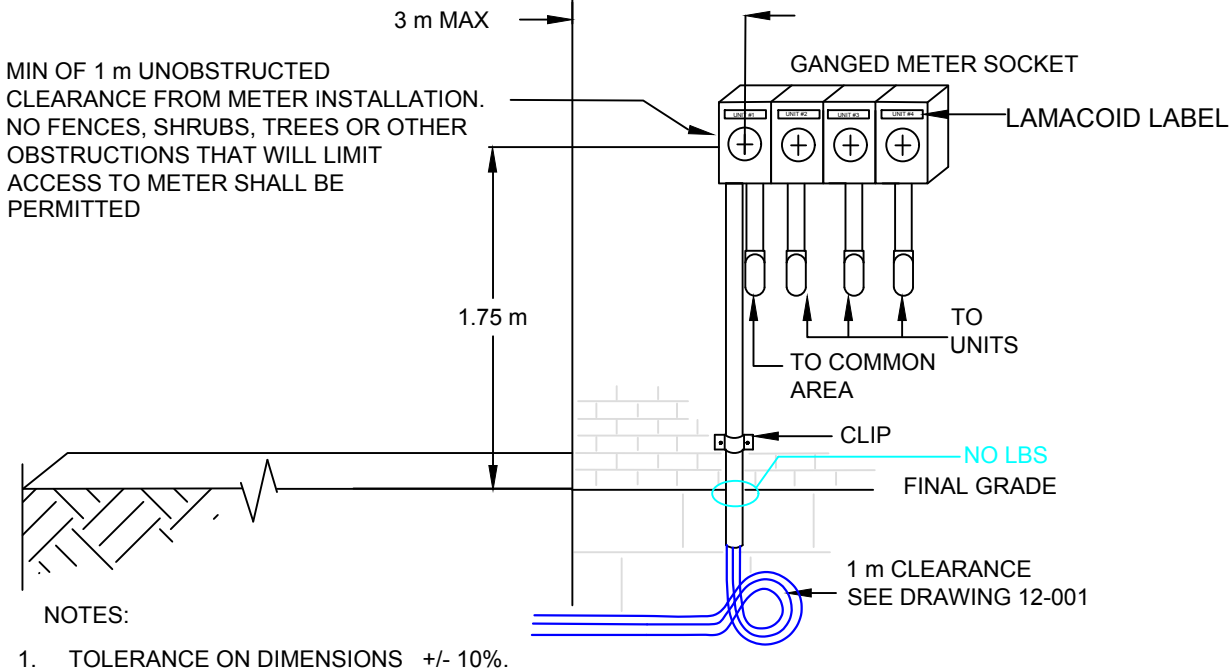
RESIDENTIAL UNDERGROUND MULTIPLE ELECTRICAL SERVICES & METER SOCKETS
SINGLE PHASE, 3 WIRE 120/240V

12-005

4 GANG METER BASE



OPUCN APPROVED METER SOCKET TYPES			
NUMBER OF METERS	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
2	BD2-V/BD2-VH	H22R	2K2
3	BD3-V/BD3-VH	H23R	3K2
4	BD4-V/BD4-VH	H24R	4K2



NOTES:

1. TOLERANCE ON DIMENSIONS +/- 10%.
2. THE METER SOCKET MUST BE MOUNTED ON AN OUTSIDE WALL AT AN UNOBSTRUCTED LOCATION APPROVED BY OPUCN METER DEPARTMENT TO CO-ORDINATE WITH DISTRIBUTION ON THE STREET.
3. ELECTRICAL SERVICE SHALL MEET ALL ESA INSPECTION STANDARDS AND SHALL BE INSPECTED BY ESA BEFORE CONNECTION TO THE DISTRIBUTION SYSTEM.
4. MAXIMUM NUMBER OF SERVICES TO BE 3 PLUS 1 HOUSE SERVICE
5. REFER TO "OPUCN APPROVED METER SOCKET TYPES" FOR SOCKET REQUIREMENTS.
6. MINIMUM 1m CLEARANCE IS REQUIRED BETWEEN THE GAS METER/RELIEF VENT AND THE ELECTRIC METER SOCKET.
7. EACH METER SOCKET POSITION REQUIRES PERMANENT AND LEGIBLE LAMACOID LABEL UNIT IDENTIFICATION.

CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
1m	3'-3"
1.75m	5'-8"
3m	10'-0"

Oshawa PUC Networks Inc.

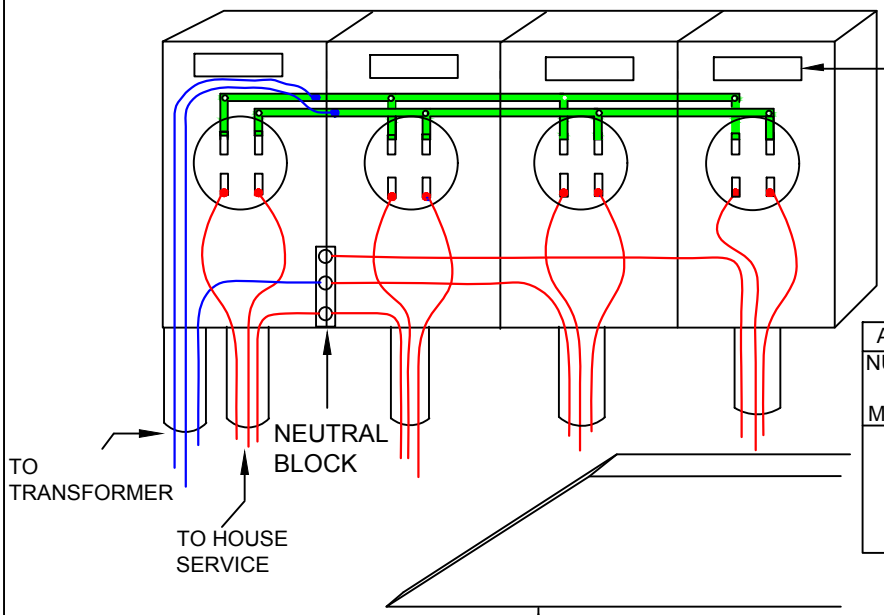
DRAWN:	CKD:	APP:	
KAB			
DATE: MAY 10,2017	SCALE: NTS		REV: 1

OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

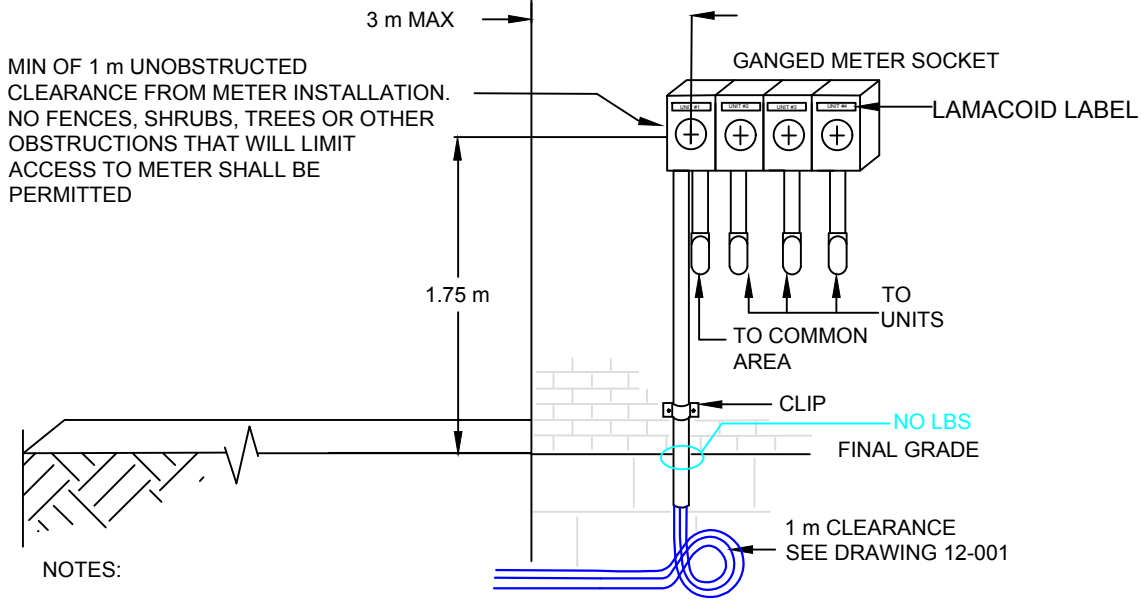
RESIDENTIAL UNDERGROUND MULTIPLE ELECTRICAL SERVICES &
METER SOCKETS
SINGLE PHASE, 3 WIRE 120/240V

12-005A

4 GANG METER BASE



APPROVED METER SOCKET TYPES (200A MAIN)			
NUMBER OF METERS	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
2	BD2-V/BD2-VH	H22R	2K2
3	BD3-V/BD3-VH	H23R	3K2
4	BD4-V/BD4-VH	H24R	4K2



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CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
1m	3'-3"
1.75m	5'-8"
3m	10'-0"

Oshawa PUC Networks Inc.

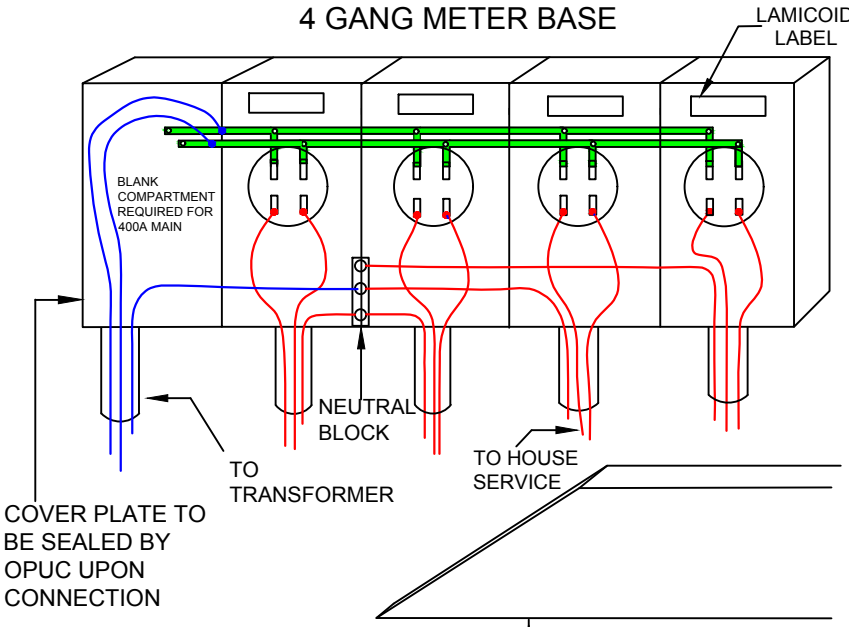
DRAWN:	CKD:	APP:	
KAB			
DATE: MAY 10,2017	SCALE: NTS		REV: 1

OSHAWA PUC NETWORKS INC. DISTRIBUTION STANDARDS

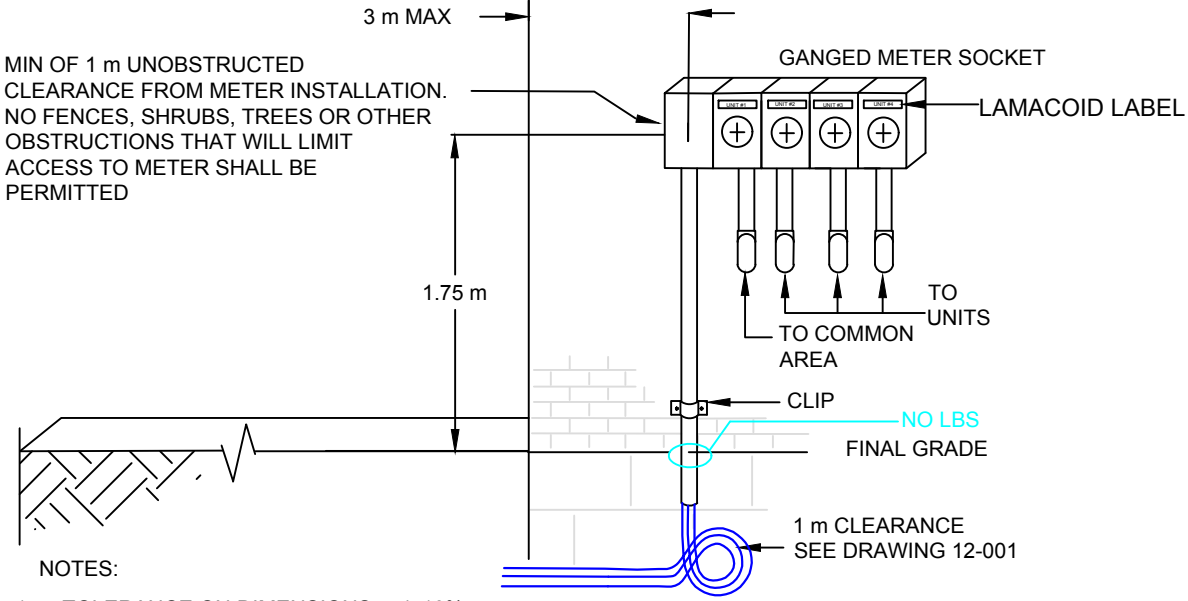
RESIDENTIAL UNDERGROUND MULTIPLE ELECTRICAL SERVICES & METER SOCKETS
SINGLE PHASE, 3 WIRE 120/240V

12-005B

4 GANG METER BASE



APPROVED METER SOCKET TYPES (400A MAIN)			
NUMBER OF METERS	MANUFACTURER		
	MICROLECTRIC	HYDEL	CUTLER-HAMMER
2	BS42-V/BS42-VH	HC42R	2K4
3	BS43-V/BS43-VH	HC43R	3K4
4	BS44-V/BS44-VH	HC44R	4K4



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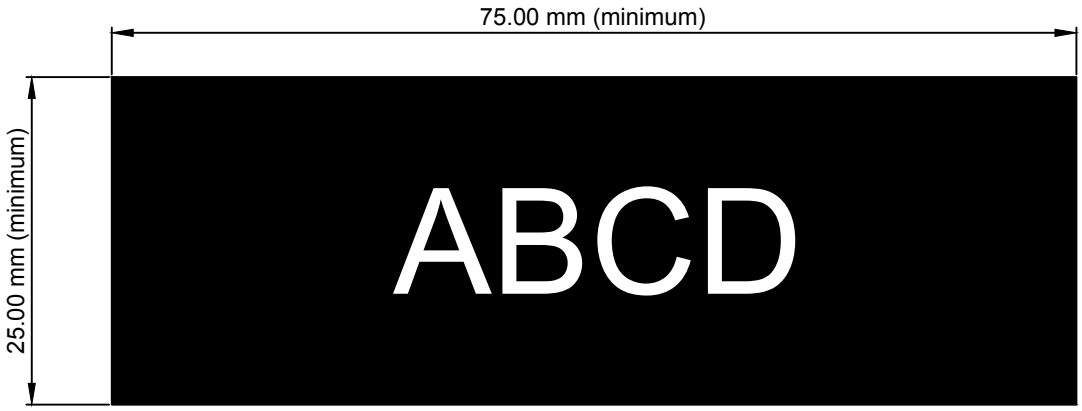
CONVERSION TABLE	
METRIC	IMPERIAL (APPROX.)
1m	3'-3"
1.75m	5'-8"
3m	10'-0"

Oshawa PUC Networks Inc.

DRAWN:	CKD:	APP:	
KAB:EJA			
DATE: OCTOBER 1, 2018	SCALE: NTS	REV: 1	

LAMACOID LABEL SPECIFICATIONS

appendix H



Use Arial Font 32 for Numeric / Alphanumeric

ABCD = MAIN / BASEMENT / UPPER

NOTES:

1. MUST BE PERMANENTLY FIXED OUTDOOR / OR INDOOR METER BASE.
2. LAMACOID LABELS MUST BE ON THE METER BASE PRIOR TO ENERGIZATION.

FOR RESIDENTIAL - LAMACOID LABEL WILL IDENTIFY THE POSITION OF THE UNIT IN THE BUILDING. **Eg: MAIN / BASEMENT / UPPER**

IF THE BUILDING HAS MULTIPLE UNITS ON A LEVEL, THEN A UNIT NUMBER MUST BE ADDED. **Eg: MAIN Unit X / BASEMENT Unit X / UPPER Unit X**

FOR COMMERCIAL - LAMACOID LABEL WILL IDENTIFY THE **UNIT NUMBER ONLY**.

Oshawa Power

TITLE: LAMACOID LABEL MINIMUM REQUIREMENT SAMPLE LABEL

DRAWN:	CHECKED:	APPROVED:
PAC:lc	ZS	RE

SCALE:	DATE:	REV:
NTS	MAR 2, 2020	2

REV	DESCRIPTION	APP
2	CHG WORDING	R.ERSIL/Z.SYED MAR-20
1	CHG WORDING	R.ERSIL JUN-18
0	INITIAL RELEASE	R.ERSIL JUN-18

REVISION HISTORY

SERVICE REQUEST APPLICATION FORMS

appendix I

100 Simcoe Street South
Oshawa, Ontario
L1H 7M7
Tel. (905) 723-4623
Fax (905) 571-1015
contactus@opuc.on.ca
www.opuc.on.ca

Service Request Application Form

Please return **all completed forms with required signature(s)** by email at Connections@opuc.on.ca

NOTES:

1. Additional information may be required to proceed with the service request.
2. Applicants are cautioned not to incur any major expenses until all necessary connection approvals from Oshawa PUC Networks Inc. ("OPUCN") have been received.
3. Please contact us by email at Connections@opuc.on.ca if you have not received a reply from OPUCN acknowledging receipt of your submission within 5 working business days of submitting.
4. Please ensure that the address on the ESA Connection Authorization matches the service address provided (including unit number if applicable). Connection will only be provided to application with ESA address and description that matches the Confirmation or Offer-to-Connect.
5. The customer must contact OPUCN Customer Connections Department at (905) 723-4623 to schedule disconnect or reconnect upon payment if required and receipt of all connection approvals. A **minimum** 48 hours' notice is required.
6. *Your personal information is collected on this form by Oshawa Power under the authority of the Ontario Energy Board Act, S.O. 1998, c. 15, Schedule B and the Electricity Act, 1998. Personal information will be used only for the purposes set out in Oshawa Power's Privacy Policy Statement. If you have any questions about this collection please contact: Privacy Officer, Oshawa Power by telephone at 905-723-4623, or by e-mail at: privacy@opuc.on.ca.*

Contact Information *(Please print or type)*

	Customer Legal Name (OPUCN Customer Name)	**Consultant / Contractor** (Electrical)
Contact Name:		
Mailing Address:		
Phone:		
Mobile Phone:		
Fax:		
Email:		

Service Information

Service Address: _____ **Unit #:** _____

Service Type: ☐ Upgrade ☐ Temporary ☐ New Permanent ☐ Other

Customer Class: ☐ Residential ☐ Commercial ☐ Industrial ☐ Municipal

Proposed Load: ___ kW

Proposed Main Switch: _____ A **Existing Main Switch:** _____ A

Voltage: ☐ 240/120V ☐ 208/120V ☐ 600/347V

Phase: ☐ Single-Phase ☐ Three-Phase

Power Supply: ☐ Overhead (OH) ☐ Underground (UG) ☐ OH to UG ☐ UG to OH

Meter Base Location: ☐ Existing Outside ☐ Inside Moving Out ☐ Relocate ☐ Ganged ___ Position

Comments/Reason for Upgrade: _____

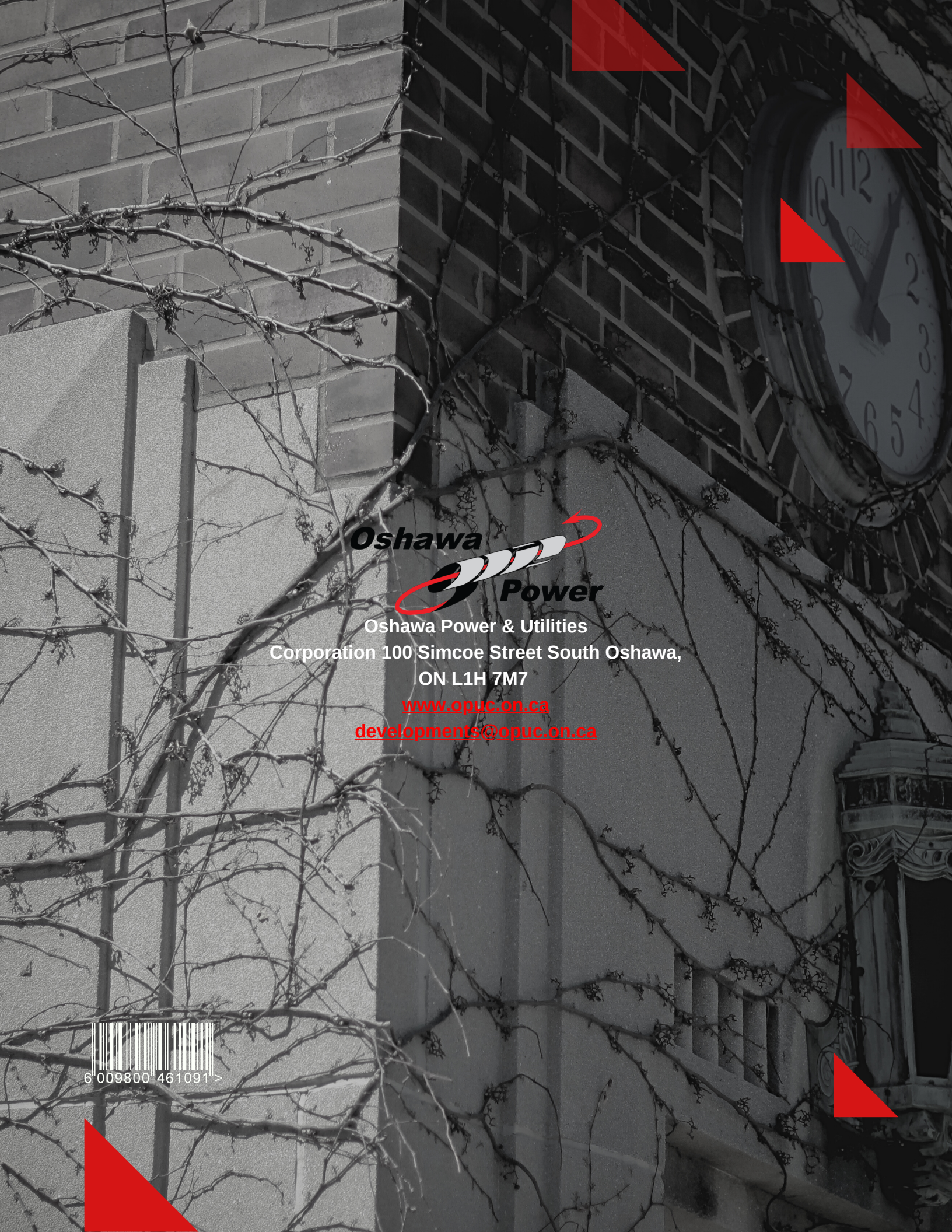
_____

_____

I confirm that the information I have given in this form is true to the best of my knowledge. I acknowledge and accept that if we schedule the connection to be done after hours (3:30PM) a charge of $415 + HST will be added to my electricity bill for the month.

Owner Signature *(required)*: _____ **Date** (dd/mm/yyyy): _____

Contractor Signature: _____ **Date** (dd/mm/yyyy): _____



Oshawa Power & Utilities
Corporation 100 Simcoe Street South Oshawa,
ON L1H 7M7
www.opuc.on.ca
developments@opuc.on.ca

6 009800 461091 >