

**NOTES:**

**K-W HYDRO TO:**

- REMOVE THREE 50KVA TRANSFORMERS FROM EXISTING ELECTRICAL ROOM AND REMOVE EXISTING CABLE FROM POLE LOC. 1 TO EXISTING ELECTRICAL ROOM. W.O.#
- SUPPLY ONE LARGE THREE PHASE PADMOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION AND SORBWEB OIL CONTAINMENT SYSTEM. W.O.#
- INSTALL GROUND RODS AND GROUND LOOP FOR NEW TRANSFORMER AS PER DRAWING DB822. CONNECT GROUND CONDUCTORS FROM CONTRACTOR. SUPPLIED AND INSTALLED BOLLARDS TO GROUND LOOP AS PER DWG. D9142. W.O.# 14917
- INSTALL ONE 300KVA, 13860/600Y/347 VOLT, THREE PHASE PADMOUNT TRANSFORMER AT THE LOCATION SHOWN & CONNECT THE CUSTOMER SUPPLIED SECONDARY CABLES TO THE TRANSFORMER. W.O.#
- EXPOSE EXISTING PULLBOX AND INSTALL 2-100mm DUCTS ENCASED IN CONCRETE FROM POLE LOC.1 TO PB. W.O.#
- INSTALL APPROXIMATELY 57m OF 1-3/C, #1 CU., STRAND FILLED, 19KV, TRXLPEI, 100% INSULATED, 100% CN, PVCJ, TRIWOUND PRIMARY CABLES FROM POLE LOC. 1 TO THE NEW PADMOUNT TRANSFORMER. W.O.#

**CONTRACTOR TO:**

- INSTALL ONE K-W HYDRO SUPPLIED LARGE SORBWEB PADMOUNT TRANSFORMER CONTAINMENT SYSTEM AS PER SORBWEB INSTRUCTION MANUAL PROVIDED. CONTRACTOR TO PICK UP SORBWEB CONTAINMENT SYSTEM AT K-W HYDRO INC., 301 VICTORIA ST. S. IN THE WAREHOUSE.
- INSTALL ONE K-W HYDRO SUPPLIED THREE PHASE PADMOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION AT THE LOCATION SHOWN AS PER DWG. C10342.
- BREAK INTO EXISTING DUCTBANK AS SHOWN AND INSTALL 2-100mm TYPE II DUCTS ENCASED IN CONCRETE TO THE NEW TRANSFORMER FOUNDATION AS PER SECTION 'A-A'.
- PROVIDE APPROXIMATELY 6 METERS OF SECONDARY CABLES, PER PHASE, COILED INSIDE THE NEW TRANSFORMER FOUNDATION. IF ALUMINUM CABLES ARE USED, PROVIDE NEMA LONG BARREL, 3/8" STUD SIZE, 2-HOLE CRIMP LUGS AND CRIMPING DIES FOR K-W HYDRO TO TERMINATE THE SECONDARY CABLES & CONNECT TO THE TRANSFORMER. K-W HYDRO TO SUPPLY LUGS FOR COPPER CONDUCTORS ONLY.
- INSTALL 6" STEEL/CONCRETE BOLLARDS AROUND TRANSFORMER AS PER D6011 TYPE A. BOLLARDS SHALL NOT EXCEED 3m OF SEPARATION & SHALL BE CONNECTED TO THE TRANSFORMER GROUND GRID. K-W HYDRO TO CONNECT GROUNDING CONDUCTORS TO TRANSFORMER GROUND LOOP. CONTRACTOR TO CONNECT GROUND WIRES TO BOLLARDS. SEE DRAWING D9142, C10342, & D6011 FOR DETAILS.
- INSTALL METER BASE AS SHOWN IN THE METERING DETAIL.
- REFER TO THE ONTARIO ELECTRICAL SAFETY CODE FOR WIRING METHODS INCLUDING GROUNDING & BONDING.
- ALL INSTALLATIONS MUST BE INSTALLED IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE AND INSPECTED BY THE ELECTRICAL SAFETY AUTHORITY PRIOR TO SERVICE CONNECTION.
- THIS WORK MUST BE SCHEDULED AT LEAST 3 WEEKS PRIOR TO THE NEW SERVICE CONNECTION.

**METERING TO:**

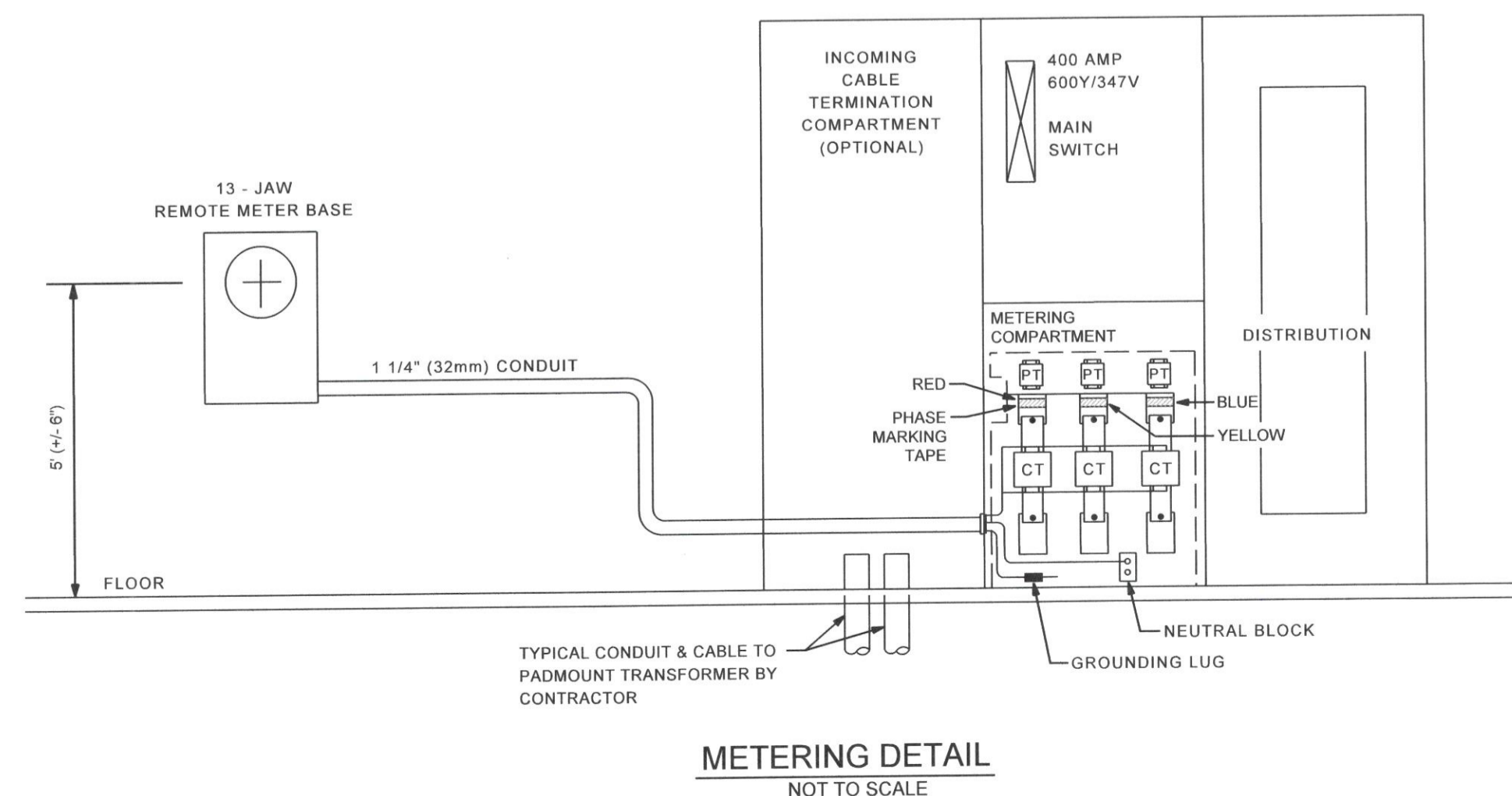
- REMOVE EXISTING 7 JAW METER. W.O.#
- CONTRACTOR TO INSTALL ONE 13-JAW METER BASE AT LOCATION SHOWN (X) AT A HEIGHT OF 5'-4" TO 6". REFER TO METERING DETAIL.
- K-W HYDRO TO PROVIDE C.T.'S TO THE CONTRACTOR FOR INSTALLATION INTO THE NEW METERING CELL.
- K-W HYDRO TO INSTALL P.T.'S INSIDE THE NEW METERING CELL.
- K-W HYDRO TO CONNECT C.T.'S & P.T.'S TO 13-JAW METER BASE AS PER DWG. E9920 & INSTALL ONE 13-JAW REVENUE METER.
- ALL THREE PHASE METERING EQUIPMENT SHALL BE LOCATED INDOORS.
- ALL DISCONNECT SWITCHES UPSTREAM OF METERING EQUIPMENT SHALL BE SEALABLE BY K-W HYDRO.
- CONTRACTOR TO ARRANGE WITH METER SERVICE CO-ORDINATOR TO HAVE NEW METER INSTALLED 48 HOURS PRIOR TO THE INSTALLATION DATE AT 519-745-4771 EXT. 6199.

**DETAIL NOTES:**

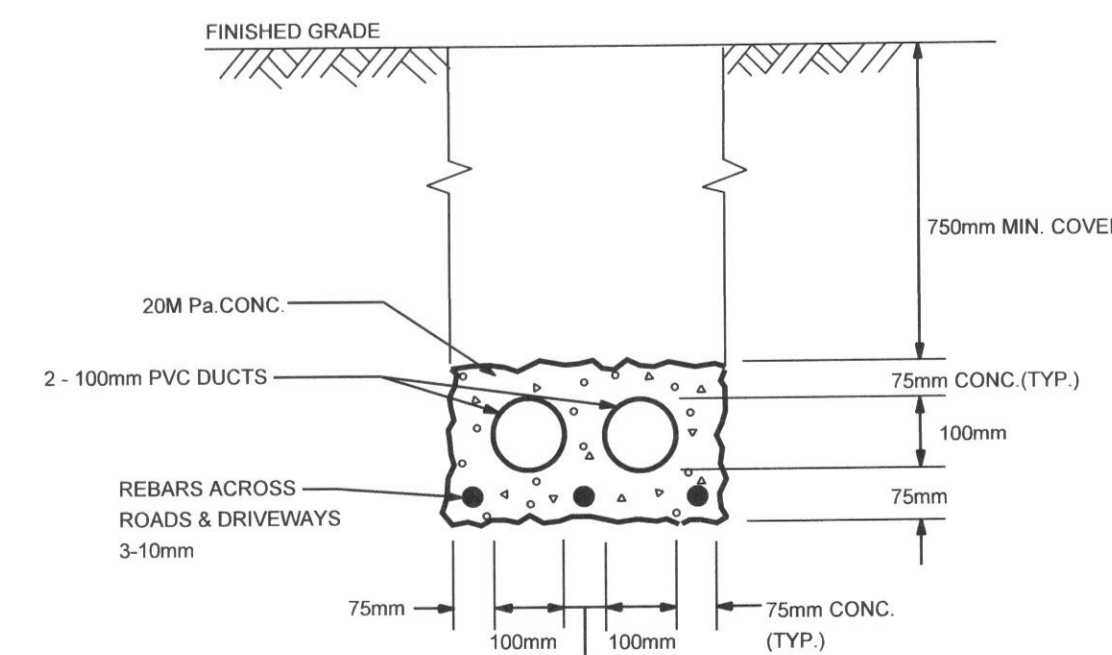
- THE MINIMUM RADIUS SHALL BE 915mm FOR 100mm 90° BENDS.
- LOCATION OF CONDUIT TERMINATION ON POLE TO BE SPECIFIED FOR EACH JOB BY K-W HYDRO.
- ALL DUCT PLACEMENT AND DUCT BANK GRADES MUST BE INSPECTED AND APPROVED BY K-W HYDRO PRIOR TO CONCRETE ENCASEMENT.
- KW HYDRO TO INSTALL 1-100mm x 3050mm RIGID PVC CONDUIT ON THE RISER POLE & CAP THE SPARE CONDUIT 150mm ABOVE FINISHED GRADE.
- DUCTS MUST BE REINFORCED WHEN:
  - A - ENTERING BUILDING: A DISTANCE OF 600mm BEYOND COUPLING.
  - B - PASSING UNDER FOOTINGS: 150mm ON EACH SIDE.
  - C - PASSING THROUGH DISTURBED AREAS
  - D - PASSING UNDER ROADWAYS OR DRIVEWAYS.

**REFERENCE DRAWINGS**

- D6011 - GUARD POST INSTALLATION DETAILS.
- DB821 - THREE PHASE PAD-MOUNT TRANSFORMER CABLE INSTALLATION AND GROUNDING.
- DB822 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION GROUND LOOP INSTALLATION.
- E9926 - METERING INSTALLATION DETAILS TRANSFORMER RATED FOR 3PH SERVICE WITH LV SWITCHGEAR 120/208V OR 347/600V.
- C9981 - LARGE PADMOUNT CONTAINMENT SYSTEM INSTALLATION DETAIL PLUS CONTAINMENT AREA.
- C10341 - THREE PHASE PADMOUNT TRANSFORMER FOUNDATION CW ENTRANCE WAY DESIGN SPECIFICATIONS.
- C10342 - THREE PHASE PADMOUNT TRANSFORMER FOUNDATION CW ENTRANCE WAY INSTALLATION SPECIFICATIONS.
- C10343 - THREE PHASE PADMOUNT TRANSFORMER MOUNTING ON FOUNDATION CW ENTRANCE WAY.



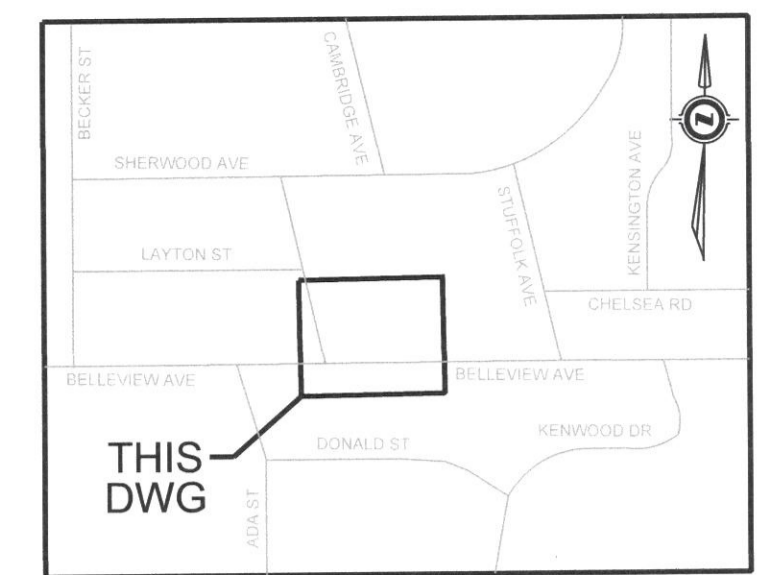
**METERING DETAIL**  
NOT TO SCALE



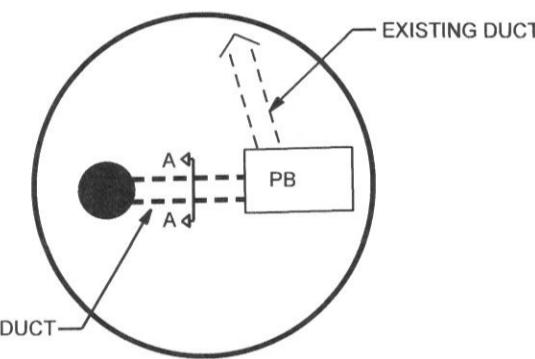
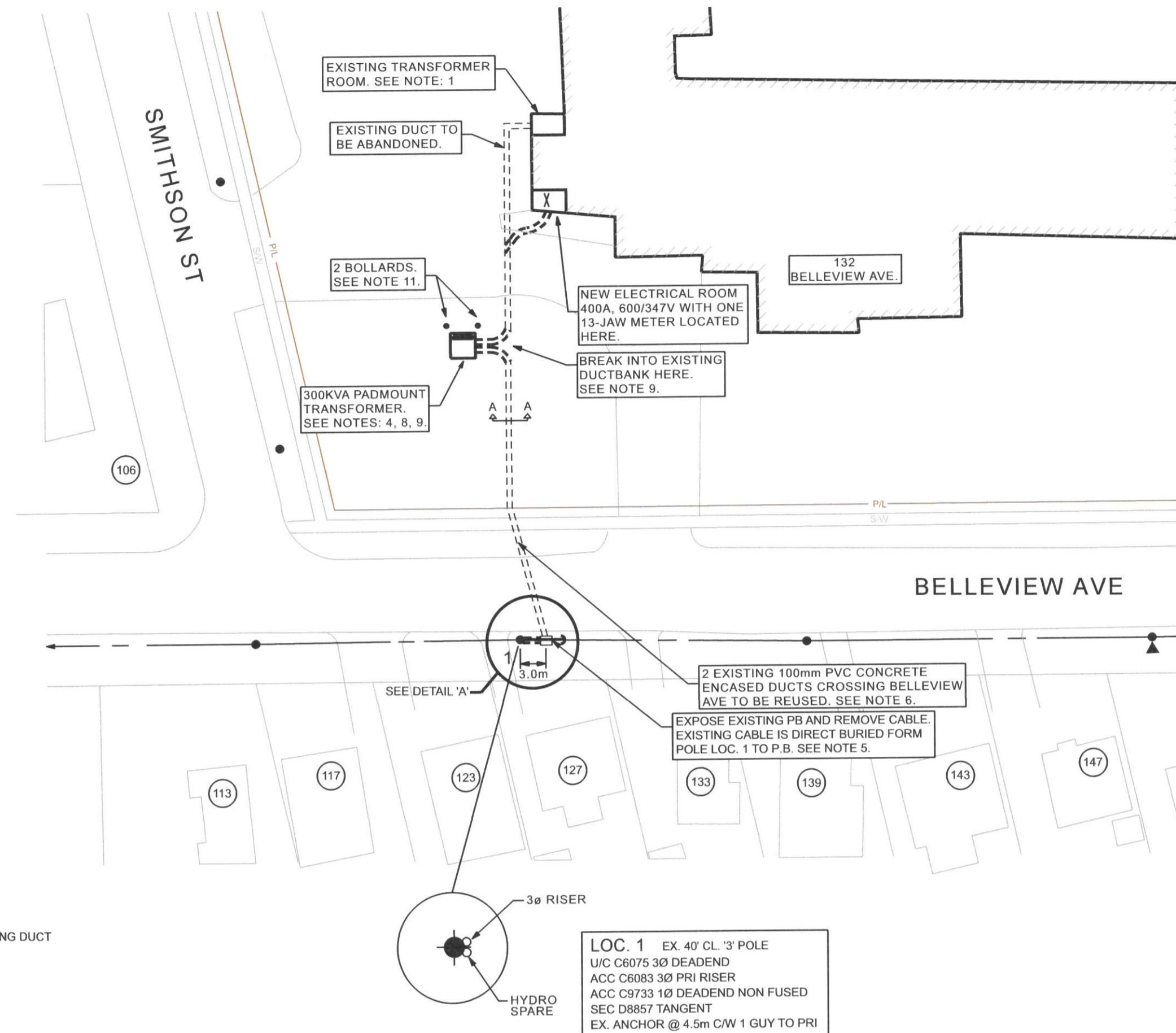
**SECTION 'A - A'**  
NOT TO SCALE

**LEGEND:**

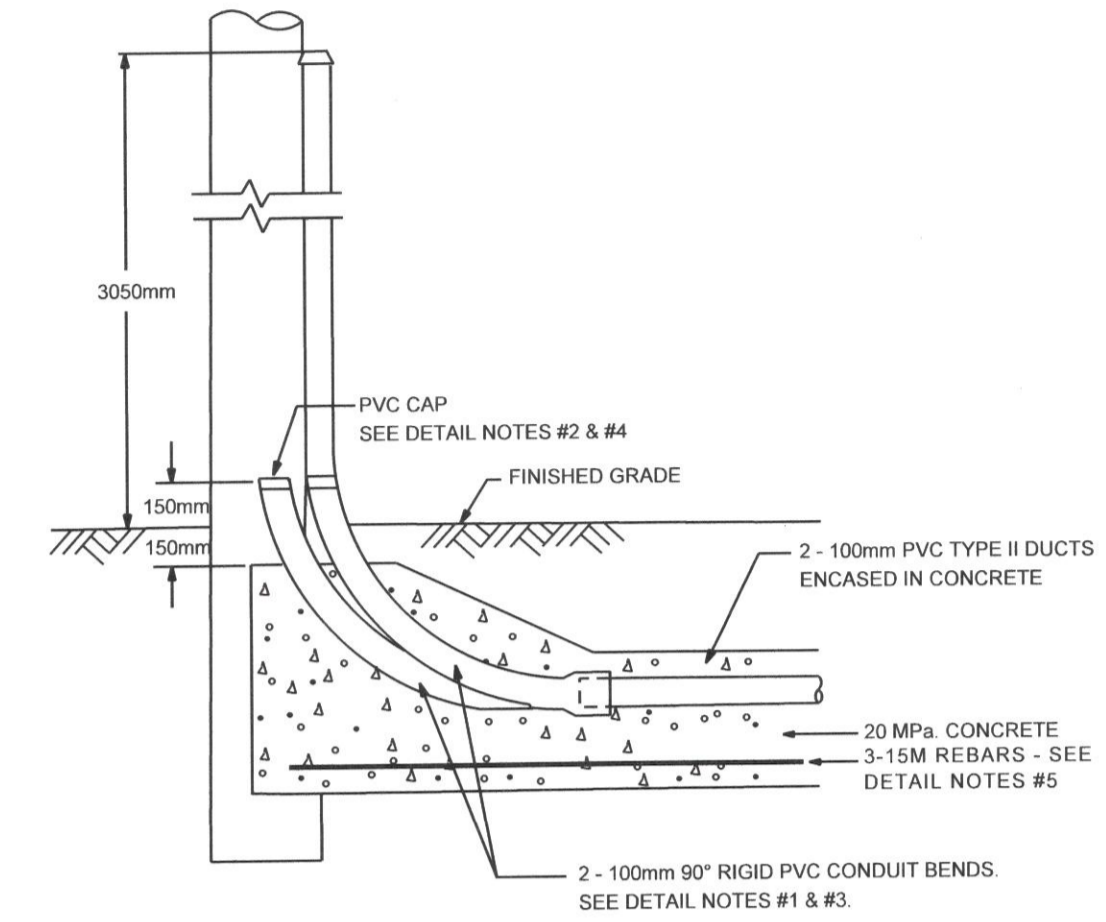
- EXISTING POLE
- PROPOSED POLE
- EXISTING O/H CIRCUIT
- - - PROPOSED O/H CIRCUIT
- ▲ EXISTING TRANSFORMER
- △ PROPOSED TRANSFORMER
- - - - EXISTING DUCTBANK
- - - - - PROPOSED DUCTBANK
- - - - - PROPOSED CUSTOMER OWNED SECONDARY CABLES
- PROPOSED PADMOUNTED TRANSFORMER



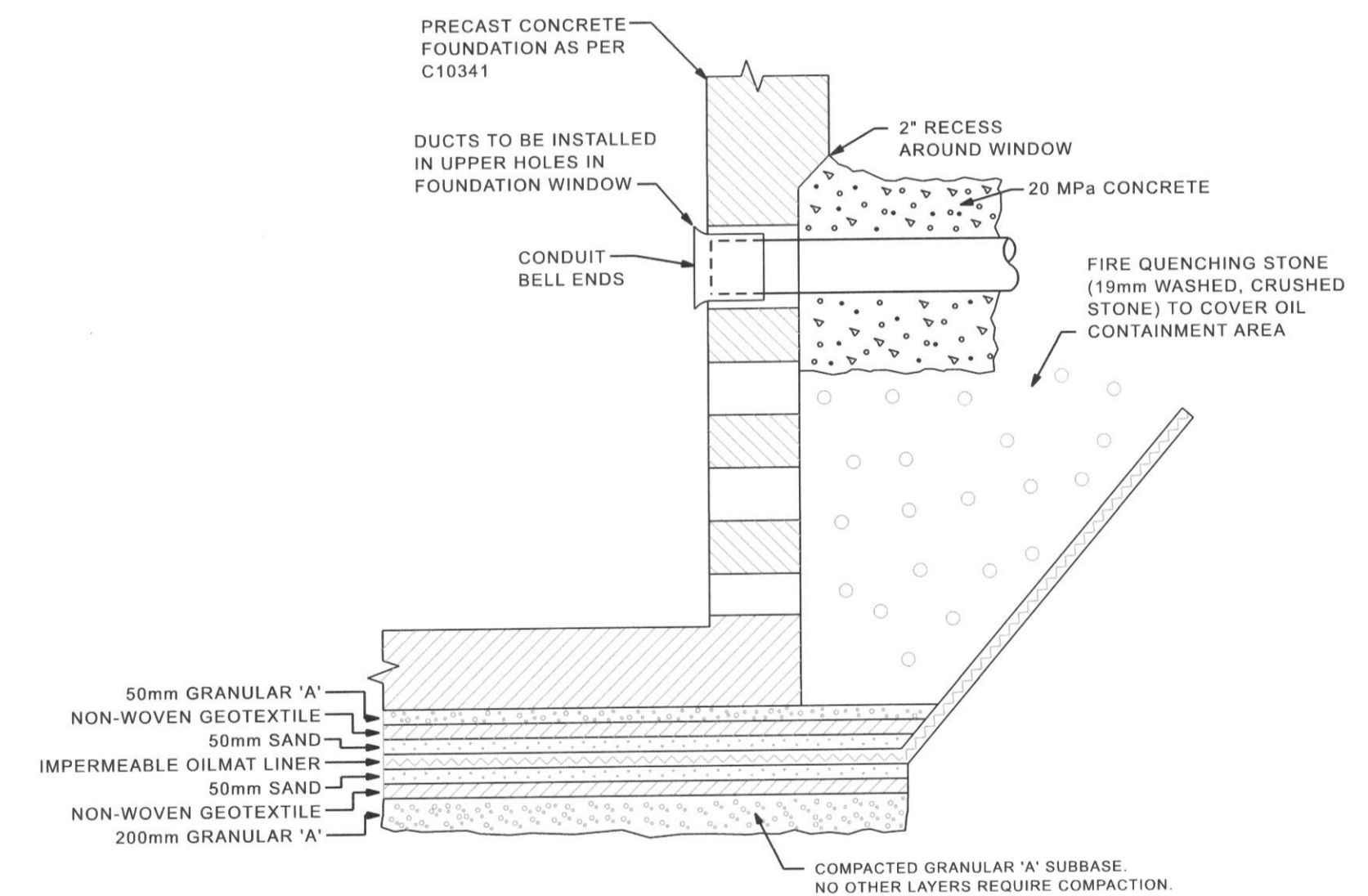
**KEY MAP**  
NOT TO SCALE



**DETAIL 'A'**  
NOT TO SCALE



**DETAIL OF PRIMARY DUCT TERMINATION AT HYDRO POLE BY K-W HYDRO**  
NOT TO SCALE



**DETAIL OF DUCT BANK TERMINATION THROUGH THREE PHASE PAD MOUNTED TRANSFORMER PRECAST CONCRETE FOUNDATION**  
NOT TO SCALE

△	REDRAWN IN CAD, SERVICE UPGRADE.	MAR. 31/21 M.M. E.W.
△	ADDRESS ADDED	APR. 3/09 B.K. B.McK
△	TRANSFORMERS ADDED	APR. 6/77 A.W. D.L.L.
△	PULLBOX DETAIL ADDED	JAN. 4/77 A.W. D.L.L.
REV No.	DESCRIPTION	DATE & INITIALS

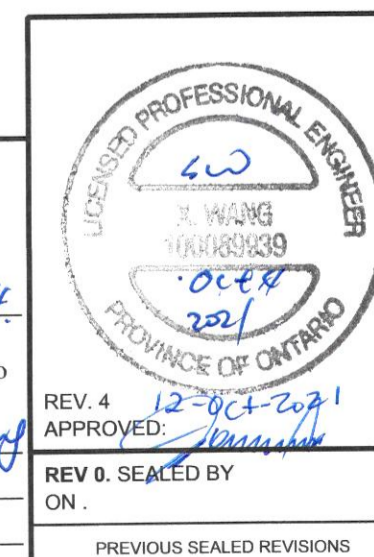


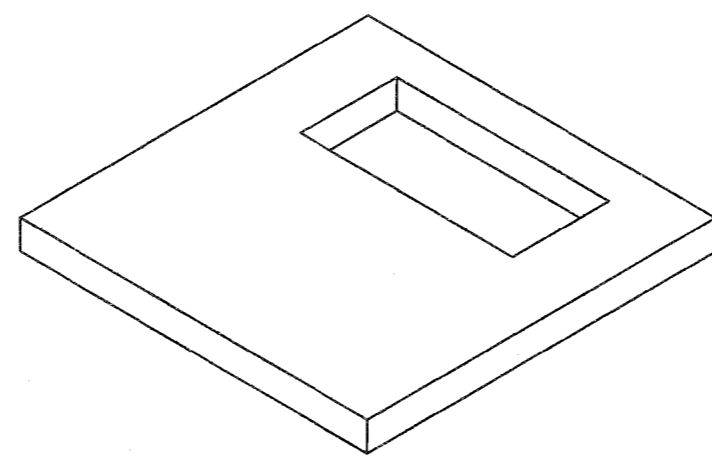
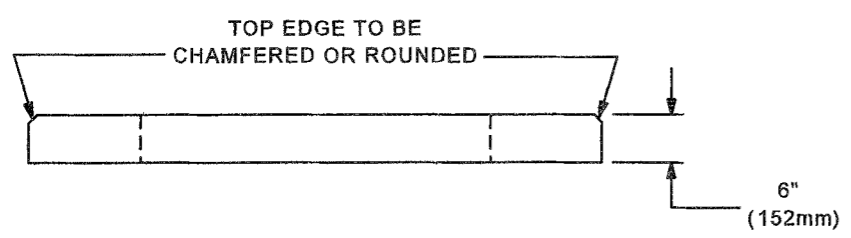
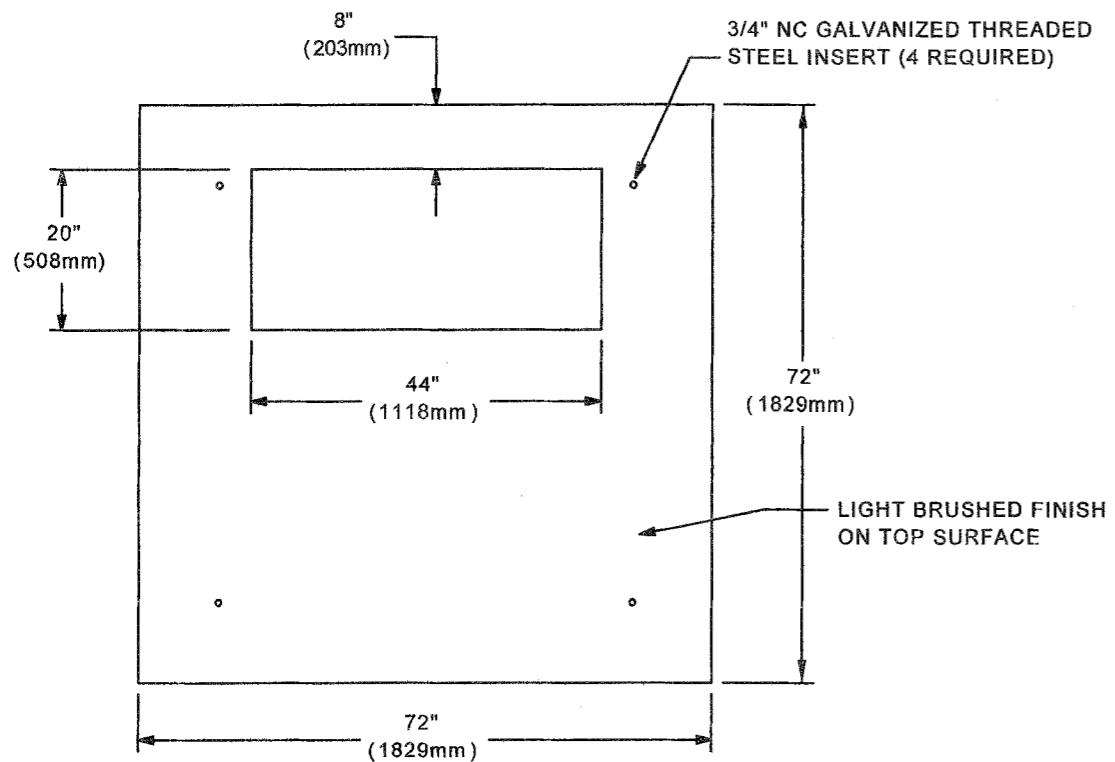
**UNDERGROUND SERVICE**  
SMITHSON PUBLIC SCHOOL  
132 BELLEVUE AVE

DRAWN	B. KAUFMAN	NOV. 8/76	SCALE 1:500
DESIGNED			
CHECKED	T.I. A.W.		
APPROVED	D.L. LOVEYS		
FILE No.	7500-00-B103		

**B3164**

Kitchener-Wilmet Hydro Inc.  
Certificate of Approval  
The installation work covered by  
*K-W Hydro work Rev 4*  
of this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.  
Name of P.Eng.: *Shawn Wong*  
Signature: *[Signature]*  
Date: *Oct 4, 2017*





NTS


**NOTES:**

- DESIGN LOAD**  
 1. WEIGHT OF PAD-MOUNT TRANSFORMER = 6,000 KG (13,200 LBS)
- STANDARDS:**  
 1. CSA A23.1/A23.2, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.  
 2. CSA A23.4/A251, MATERIALS AND CONSTRUCTION, QUALIFICATION CODE FOR ARCHITECTURAL AND STRUCTURAL PRECAST CONCRETE.
- WEIGHT OF PRECAST CONCRETE:**  
 1. APPROXIMATELY 1,000 KG (2,200 LBS)
- DESIGN:**  
 1. PRECAST CONCRETE FOUNDATION TO BE DESIGNED BY PRECAST CONCRETE MANUFACTURER.  
 2. SUBMIT SHOP DRAWINGS TO K-W HYDRO FOR REVIEW PRIOR TO COMMENCEMENT OF MANUFACTURE OF PRECAST CONCRETE. SHOP DRAWINGS TO BE SEALED BY AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.  
 3. PRECAST CONCRETE FOUNDATION TO BE DESIGNED TO CARRY HANDLING STRESSES.  
 4. SHOP DRAWINGS TO INDICATE FINISHED WEIGHTS OF PRECAST ELEMENTS.
- TOLERANCES:**  
 1. LENGTH OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN LENGTH BY MORE THAN PLUS OR MINUS 5mm.  
 2. CROSS SECTIONAL DIMENSIONS OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN DIMENSIONS BY MORE THAN PLUS OR MINUS 3mm.  
 3. DEVIATIONS FROM STRAIGHT LINES NOT TO EXCEED 3mm IN 3m.  
 4. PRECAST ELEMENTS NOT TO VARY BY MORE THAN PLUS OR MINUS 5mm FROM TRUE OVERALL CROSS SECTIONAL SHAPE AS MEASURED BY DIFFERENCE IN DIAGONAL DIMENSIONS.
- QUALITY CONTROL:**  
 1. PRECAST CONCRETE REQUIREMENTS:  
 • MINIMUM COMPRESSIVE STRENGTH OF 35 MPA AT 28 DAYS  
 • CLASS C1 EXPOSURE  
 • 5-8% AIR ENTRAINMENT  
 2. PRECAST ELEMENTS ARE TO BE FINISHED TO STANDARD GRADE TO CSA A23.4, SECTION 24. ELEMENTS SHALL NOT SHOW VISIBLE SPALLING, CRACKING OR EVIDENCE OF CORROSION OF EMBEDDED STEEL.

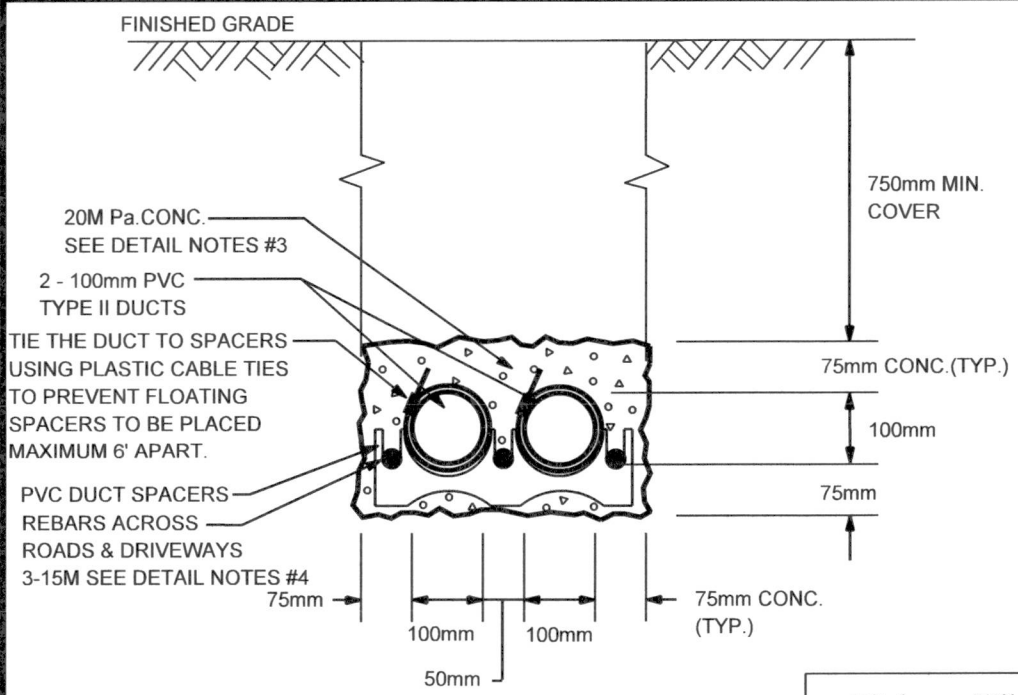
**REFERENCE DRAWINGS:**

- D8816 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - RISER
- D8817 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - BASE SLAB
- D8819 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - 150mm COLLAR EXTENSION
- D8820 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION INSTALLATION SPECIFICATIONS
- D8821 - THREE PHASE PAD-MOUNT TRANSFORMER CABLE INSTALLATION AND GROUNDING
- D8822 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION GROUND LOOP INSTALLATION
- D8823 - THREE PHASE PAD-MOUNT TRANSFORMER MOUNTING

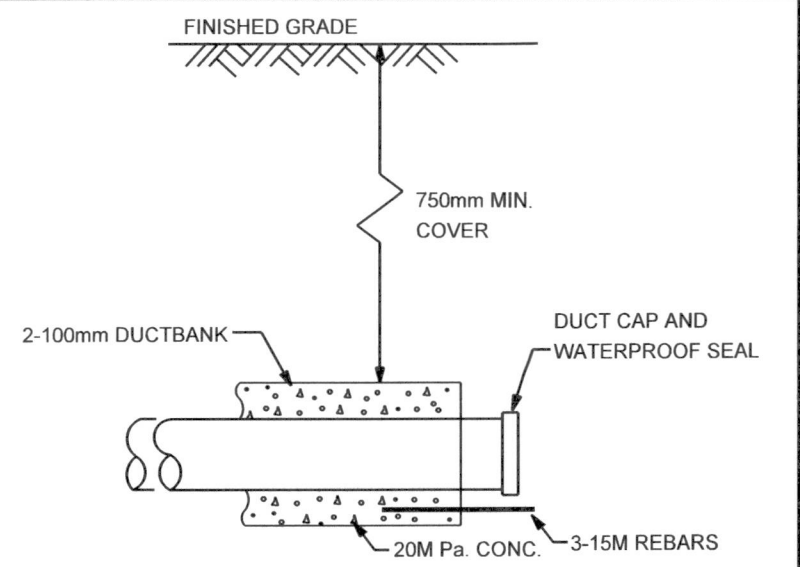
**Kitchener-Wilmot Hydro Inc.**  
**Certificate of Approval**  
 The installation work covered by this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.  
 Name of P.Eng.: Lloyd J. Frank  
 Signature: [Signature]  
 Date: April 12, 2007

REV. No.	DESCRIPTION	DATE & INITIALS
		
<b>THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - TOP SLAB</b>		
DRAWN	B. BIN	NOV. 17/06
DESIGNED	LLOYD FRANK	
CHECKED	[Signature]	Apr. 12/07
APPROVED	[Signature]	Apr. 13/07
FILE No.	6062-06-5	

D8818



**1 DUCT CROSS SECTION**  
NOT TO SCALE



**DETAIL OF DUCT TERMINATION IN GROUND**  
NOT TO SCALE

Kitchener-Wilmot Hydro Inc.  
Certificate of Approval

The installation work covered by this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.

Name of P.Eng.: *Shaun Wang*

Signature: *[Signature]*

Date: *July 29, 2020*



**DETAIL NOTES:**

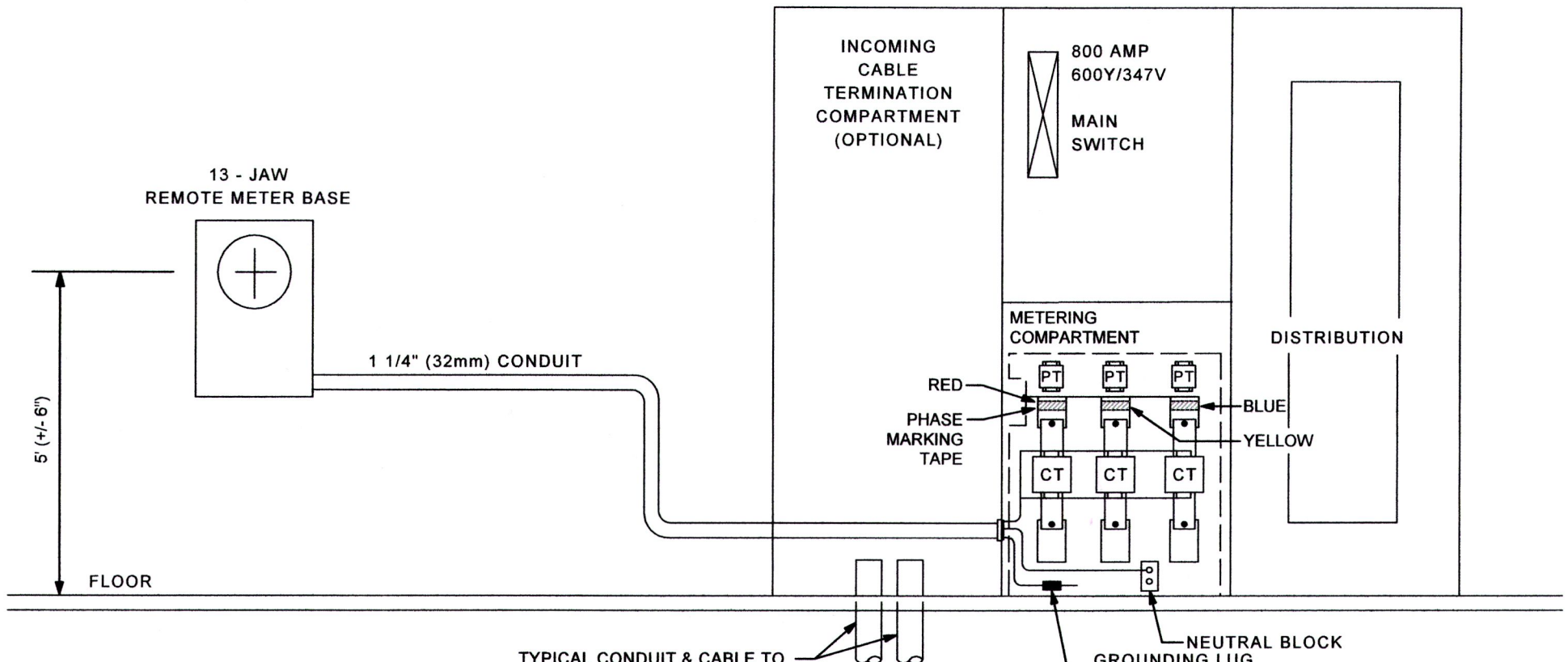
1. THE MINIMUM RADIUS SHALL BE 915mm FOR 100mm 90° TYPE II PVC BENDS & 610mm FOR 100mm RIGID PVC BENDS.
2. LOCATION OF CONDUIT TERMINATION ON POLE TO BE SPECIFIED FOR EACH JOB BY K-W HYDRO.
3. ALL DUCT PLACEMENT AND DUCT BANK GRADES MUST BE INSPECTED AND APPROVED BY K-W HYDRO PRIOR TO CONCRETE ENCASMENT.
4. DUCTS MUST BE REINFORCED WHEN:
  - A - ENTERING BUILDING: A DISTANCE OF 600mm BEYOND COUPLING.
  - B - PASSING UNDER FOOTINGS: 1500mm ON EACH SIDE.
  - C - PASSING THROUGH DISTURBED AREAS
  - D - PASSING UNDER ROADWAYS.

<b>1</b>	UPDATED NOTE FROM 6 INCHES TO 6 FEET. <i>sw</i>	JULY 29/20 M.S. <i>[Signature]</i>
REV No.	DESCRIPTION	DATE & INITIALS



**GENERAL UNDERGROUND SERVICE DUCT FORMATIONS**

DRAWN	M. MARTIN	OCT. 26/09	SCALE NOT TO SCALE
DESIGNED	D. SEKERAK	JUNE 4/18	<b>E 9436</b>
CHECKED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>	5-Aug-2020	
FILE			



TYPICAL CONDUIT & CABLE TO PADMOUNT TRANSFORMER BY CONTRACTOR

## REFERENCE DRAWINGS

- E9919 - METER WIRING DIAGRAM 3Ø TRANSFORMER RATED 120/208V
- E9920 - METER WIRING DIAGRAM 3Ø TRANSFORMER RATED 347/600V
- E10473 - METERING INSTALLATION DETAILS - MULTI UNIT METERING WITH METER CENTRE. 1

## NOTES:

1. THE MINIMUM CLEARANCE BETWEEN THE LIVE PARTS OF THE C.T.'S SHOULD BE NO LESS THAN 1".
2. THE INSTALLATION OF THE P.T.'S IS FOR 3 PH. 347/600V ONLY.
3. ALL C.T.'S OR P.T.'S MUST BE SECURELY FASTENED ON THE BACK PLATE INSIDE THE SWITCHGEAR.
4. ALL CUSTOMER-OWNED EQUIPMENT AND INSTALLATION MUST BE APPROVED BY THE ELECTRICAL SAFETY AUTHORITY.
5. REFER TO ONTARIO ELECTRICAL SAFETY CODE FOR WIRING METHODS INCLUDING GROUNDING AND BONDING REQUIREMENTS.

PLOT 5

**Kitchener-Wilmot Hydro Inc.**  
Certificate of Approval

The installation work covered by this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.

Name of P.Eng.: Shawn Wang  
 Signature: [Signature]  
 Date: July 17, 2017

<span style="border: 1px solid black; padding: 2px;">2</span>	1" - 90° CONDUIT FOR COMMUNICATION REMOVED	JUL. 13/17 B.U. <u>S.C.</u>
<span style="border: 1px solid black; padding: 2px;">1</span>	REFERENCE DRAWING ADDED.	MAR.11/16 B.B. J.P.T.
REV No.	DESCRIPTION	DATE & INITIALS

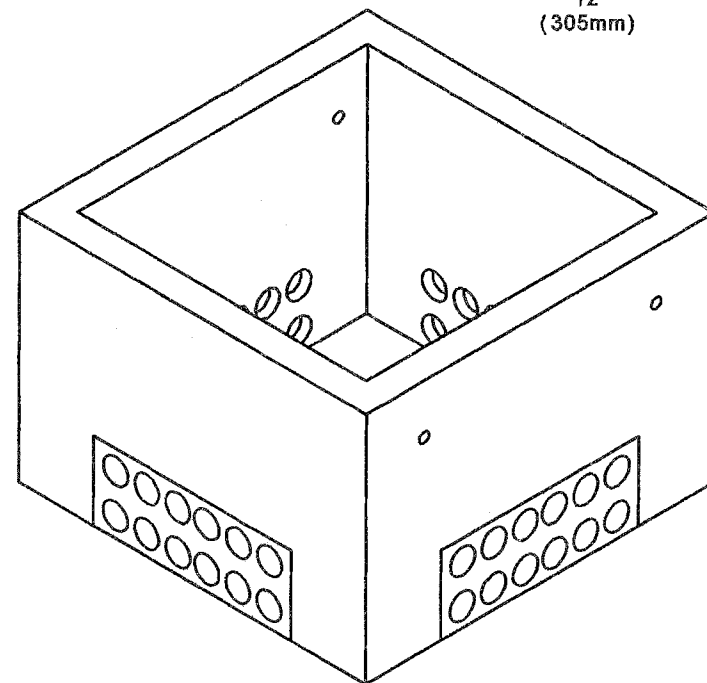
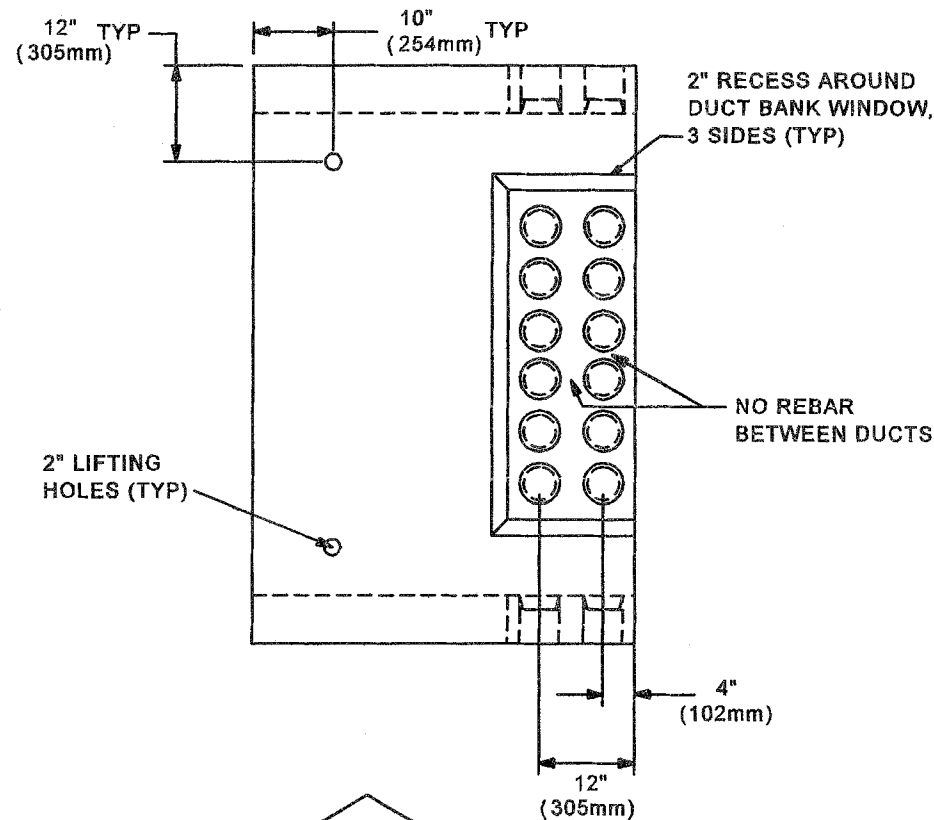
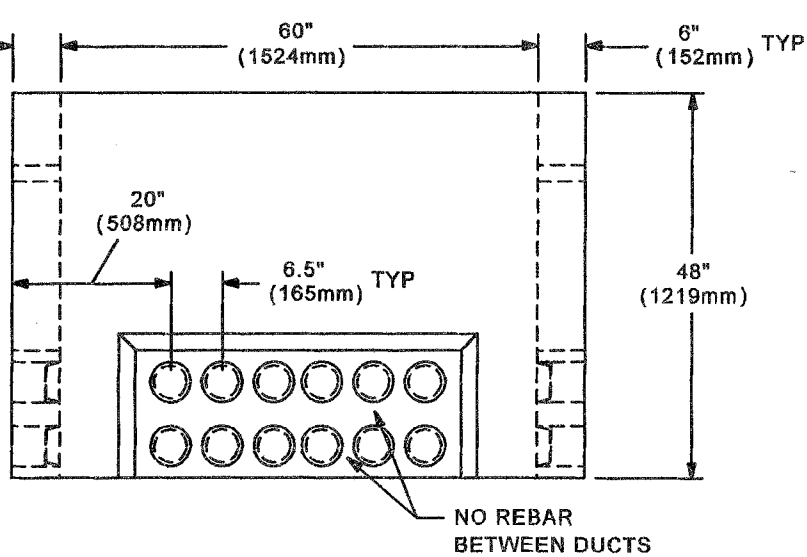
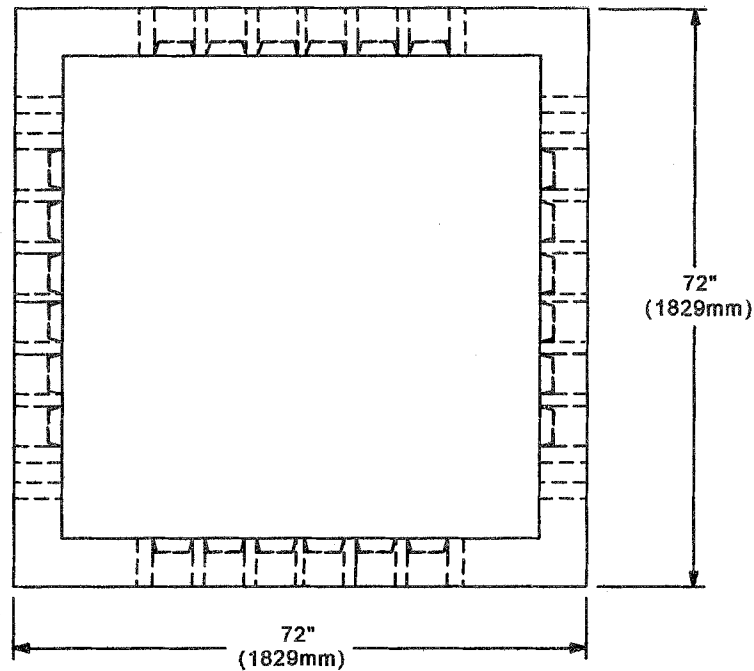


**METERING INSTALLATION DETAILS - TRANSFORMER RATED FOR 3Ø SERVICE WITH LV SWITCHGEAR, 120/208V OR 347/600V**

DRAWN	B. BIN	JULY 26/12
DESIGNED	S. WANG	
CHECKED	S.W.	
APPROVED	G.A. CAMERON	1-OCT-2012
FILE		

**E**  
**9926**





**REFERENCE DRAWINGS:**

- D8817 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - BASE SLAB
- D8818 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - TOP SLAB
- D8819 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - 150mm COLLAR EXTENSION
- D8820 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION INSTALLATION SPECIFICATIONS

- D8821 - THREE PHASE PAD-MOUNT TRANSFORMER CABLE INSTALLATION AND GROUNDING
- D8822 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION GROUND LOOP INSTALLATION
- D8823 - THREE PHASE PAD-MOUNT TRANSFORMER MOUNTING

**NOTES:**

**DESIGN LOAD**

- 1. WEIGHT OF PAD-MOUNT TRANSFORMER = 6,000 KG (13,200 LBS)

**STANDARDS:**

- 1. CSA A23.1/A23.2, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
- 2. CSA A23.4/A251, MATERIALS AND CONSTRUCTION, QUALIFICATION CODE FOR ARCHITECTURAL AND STRUCTURAL PRECAST CONCRETE.

**WEIGHT OF PRECAST CONCRETE:**

- 1. APPROXIMATELY 2,725 KG (6,000 LBS)

**DESIGN:**

- 1. PRECAST CONCRETE FOUNDATION TO BE DESIGNED BY PRECAST CONCRETE MANUFACTURER.
- 2. SUBMIT SHOP DRAWINGS TO K-W HYDRO FOR REVIEW PRIOR TO COMMENCEMENT OF MANUFACTURE OF PRECAST CONCRETE. SHOP DRAWINGS TO BE SEALED BY AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- 3. PRECAST CONCRETE FOUNDATION TO BE DESIGNED TO CARRY HANDLING STRESSES.
- 4. SHOP DRAWINGS TO INDICATE FINISHED WEIGHTS OF PRECAST ELEMENTS.

**TOLERANCES:**

- 1. LENGTH OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN LENGTH BY MORE THAN PLUS OR MINUS 5mm.
- 2. CROSS SECTIONAL DIMENSIONS OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN DIMENSIONS BY MORE THAN PLUS OR MINUS 3mm.
- 3. DEVIATIONS FROM STRAIGHT LINES NOT TO EXCEED 3mm IN 3m.
- 4. PRECAST ELEMENTS NOT TO VARY BY MORE THAN PLUS OR MINUS 5mm FROM TRUE OVERALL CROSS SECTIONAL SHAPE AS MEASURED BY DIFFERENCE IN DIAGONAL DIMENSIONS.
- 5. IF TAPERED FORMS ARE USED, SHOP DRAWINGS SHALL SHOW AMOUNT OF TAPER, AND THE BOTTOM OF THE WALLS SHALL BE THICKER THAN THE TOP.

**QUALITY CONTROL:**

- 1. PRECAST CONCRETE REQUIREMENTS:
  - MINIMUM COMPRESSIVE STRENGTH OF 35 MPA AT 28 DAYS
  - CLASS C1 EXPOSURE
  - 5-8% AIR ENTRAINMENT
- 2. PRECAST ELEMENTS ARE TO BE FINISHED TO STANDARD GRADE TO CSA A23.4, SECTION 24. ELEMENTS SHALL NOT SHOW VISIBLE SPALLING, CRACKING OR EVIDENCE OF CORROSION OF EMBEDDED STEEL.

REV. No.	DESCRIPTION	DATE & INITIALS



**THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - RISER**

DRAWN	B. BIN	NOV. 17/06	SCALE 1/2" = 1'-0"
DESIGNED	LLOYD FRANK		<b>D8816</b>
CHECKED	<i>[Signature]</i>	Apr. 12/07	
APPROVED	<i>[Signature]</i>	Apr. 13/07	
FILE No.	8062-06-5		

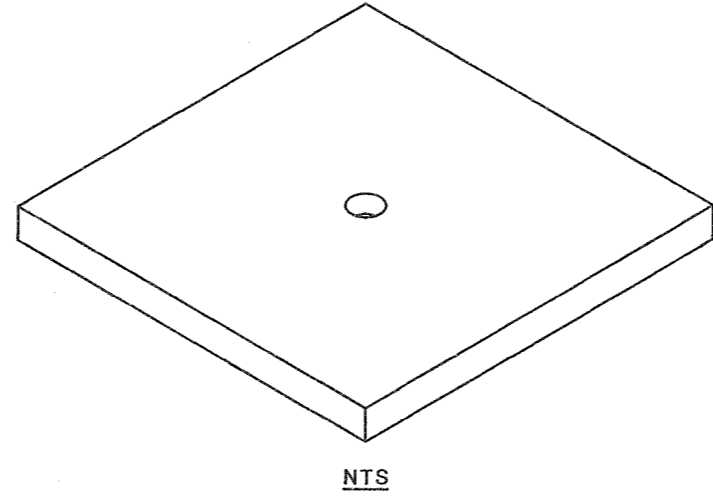
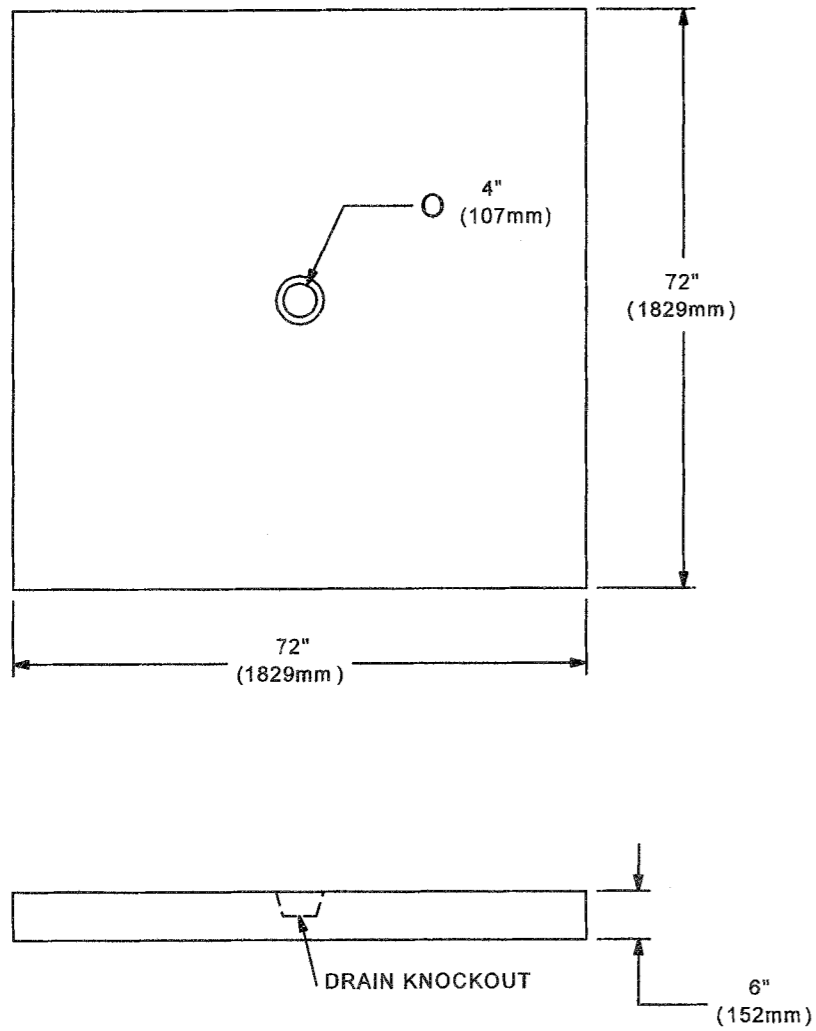
**Kitchener-Wilmot Hydro Inc. Certificate of Approval**

The installation work covered by this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.

Name of P.Eng.: Lloyd J. Frank

Signature: *[Signature]*

Date: April 12, 2007



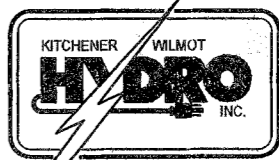
**NOTES:**

- DESIGN LOAD**  
 1. WEIGHT OF PAD-MOUNT TRANSFORMER = 6,000 KG (13,200 LBS)
- STANDARDS:**  
 1. CSA A23.1/A23.2, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.  
 2. CSA A23.4/A251, MATERIALS AND CONSTRUCTION, QUALIFICATION CODE FOR ARCHITECTURAL AND STRUCTURAL PRECAST CONCRETE.
- WEIGHT OF PRECAST CONCRETE:**  
 1. APPROXIMATELY 1,135 KG (2,500 LBS)
- DESIGN:**  
 1. PRECAST CONCRETE FOUNDATION TO BE DESIGNED BY PRECAST CONCRETE MANUFACTURER.  
 2. SUBMIT SHOP DRAWINGS TO K-W HYDRO FOR REVIEW PRIOR TO COMMENCEMENT OF MANUFACTURE OF PRECAST CONCRETE. SHOP DRAWINGS TO BE SEALED BY AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.  
 3. PRECAST CONCRETE FOUNDATION TO BE DESIGNED TO CARRY HANDLING STRESSES.  
 4. SHOP DRAWINGS TO INDICATE FINISHED WEIGHTS OF PRECAST ELEMENTS.
- TOLERANCES:**  
 1. LENGTH OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN LENGTH BY MORE THAN PLUS OR MINUS 5mm.  
 2. CROSS SECTIONAL DIMENSIONS OF PRECAST ELEMENTS NOT TO VARY FROM DESIGN DIMENSIONS BY MORE THAN PLUS OR MINUS 3mm.  
 3. DEVIATIONS FROM STRAIGHT LINES NOT TO EXCEED 3mm IN 3m.  
 4. PRECAST ELEMENTS NOT TO VARY BY MORE THAN PLUS OR MINUS 5mm FROM TRUE OVERALL CROSS SECTIONAL SHAPE AS MEASURED BY DIFFERENCE IN DIAGONAL DIMENSIONS.
- QUALITY CONTROL:**  
 1. PRECAST CONCRETE REQUIREMENTS:  
 • MINIMUM COMPRESSIVE STRENGTH OF 35 MPA AT 28 DAYS  
 • CLASS C1 EXPOSURE  
 • 5-8% AIR ENTRAINMENT  
 2. PRECAST ELEMENTS ARE TO BE FINISHED TO STANDARD GRADE TO CSA A23.4, SECTION 24. ELEMENTS SHALL NOT SHOW VISIBLE SPALLING, CRACKING OR EVIDENCE OF CORROSION OF EMBEDDED STEEL.

**REFERENCE DRAWINGS:**

- |   |  |
|---|--|
| D8816 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - RISER                  | D8821 - THREE PHASE PAD-MOUNT TRANSFORMER CABLE INSTALLATION AND GROUNDING                     |
| D8818 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - TOP SLAB               | D8822 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION GROUND LOOP INSTALLATION |
| D8819 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - 150mm COLLAR EXTENSION | D8823 - THREE PHASE PAD-MOUNT TRANSFORMER MOUNTING   |
| D8820 - THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION INSTALLATION SPECIFICATIONS                   |  |

**Kitchener-Wilmot Hydro Inc.**  
**Certificate of Approval**  
 The installation work covered by this document meets the safety requirements of Section 4 of Ontario Regulation 22/04.  
 Name of P.Eng.: Lloyd J. Frank  
 Signature: [Signature]  
 Date: April 12, 2007

REV. No.	DESCRIPTION	DATE & INITIALS
		
<b>THREE PHASE PAD-MOUNT TRANSFORMER PRECAST CONCRETE FOUNDATION DESIGN SPECIFICATION - BASE SLAB</b>		
DRAWN	B. BIN	NOV. 17/06
DESIGNED	LLOYD FRANK	
CHECKED	[Signature]	Apr. 12/07
APPROVED	[Signature]	Apr. 13/07
FILE No.	6062-06-5	

**D8817**