



- ## KEY TO NUMBERED PARTS:
- ① SHOP CAST 50mm OR 75mm (SEE SPECS) THICK POLYURETHANE INSULATION WITH BLACK JACK PROTECTIVE COATING.
  - ② WATER CARRIER PIPE, HDPE IPS DR 13.5 WITH 75mm NOMINAL POLYURETHANE INSULATION AND FACTORY APPLIED INSTALLED JACKING - 100 mm Ø DIA OR 150 mm Ø DIA, AS REQUIRED.
  - ③ HEAT SHRINK TO BE MIN. 100mm LAP ON BLACK JACK AFTER SHRINKAGE.
  - ④ HDPE DR11 SUPPLY AND RECIRCULATION PIPE - FIELD INSTALLED CONTINUOUS LENGTH FROM COIL STOCK - 125 mm CTS (BOTH) OR 50 mm IPS WITH 25 mm CTS RETURN.
  - ⑤ BALL VALVES SHALL BE FORD 844-444 (25 mm LINE) OR 866-777 (50 mm LINE) WITH JACK POINT FOR HDPE INCLUDING INSERT STIFFENER AND FOR COPPER PIPE ON END IN BUILDING.
  - ⑥ POLYURETHANE INSULATION FROM PORTABLE FOAM PACK TO FILL VOID.
  - ⑦ No. 8 X 13mm CADMIUM PLATED STEEL METAL SCREWS.
  - ⑧ MAIN STALL SHALL BE FORD F1100 OR EQUAL WITH JACK POINT AND SEAMLESS INSERT STIFFENER FOR HDPE IPS PIPE - 25 mm Ø OR 50 mm Ø AS REQUIRED.
  - ⑨ 2 - ROBAR 2706 TAPPING SADDLES WITH IPS THREAD - DOUBLE STRAP, 25 mm Ø OR 50 mm Ø AS REQUIRED.
  - ⑩ SHOP CAST 75mm (SEE SPECS) THICK POLYURETHANE INSULATION WITH BLACK JACK PROTECTIVE COATING.
  - ⑪ BOTTOM INSULATION FORM OF GALVANIZED STEEL SHEET.
  - ⑫ TWO HEATING CABLES, REMOTE ENDS WRAPPED AROUND SUPPLY RISER, VALVES AND MAIN LATERAL SUPPLY AND RETURN LINES TO BE WRAPPED AT 250 mm INTERVALS.



- ## KEY TO NUMBERED PARTS:
- ① SNUG FITTING PLASTIC CAP.
  - ② STEEL LID MADE FROM 2.7mm THICK SHEET STEEL GALVANIZED AFTER FABRICATION
  - ③ 12MM DIA. SCREW BOLT WITH WELDED NUT, GALVANIZED (FOUR PER LID)
  - ④ 50 DIA. DR 9 HDPE PIPE. VALVE EXTENSION FIELD CUT TO LENGTH AND FILLED WITH ESSO EPIC-102 GREASE.
  - ⑤ VALVE OPERATING ROD CONNECT TO ITEM 45 WITH BRASS COTTER PIN.
  - ⑥ 600mm DIA. 6B X 13 X 1.6mm THICK GALVANIZED STEEL CULVERT.
  - ⑦ STAINLESS STEEL WORM GEAR HOSE CLAMP TO PREVENT MOVEMENT OF HOSE EXTENSION PIPE. CAULK WITH SILICON ALO ARROUND.
  - ⑧ 266mm INSIDE DIA. REMOVABLE GALVANIZED SHEET METAL CAP WITH FIELD CUT HITS.
  - ⑨ HDPE THERMAL BREAK CONNECT TO ITEM 2 WITH BRASS COTTER PIN.
  - ⑩ BALL VALVES SHALL BE FORD B44-444 (25 mm LINE) OR B66-777 (50 mm LINE) WITH PACK JOINT FOR HDPE INCLUDING INSERT STIFFENER AND FOR COPPER PIPE ON END IN BUILDING.
  - ⑪ HDPE IPS OR 13.5. WATER MAIN WITH 75mm POLYURETHANE INSULATION
  - ⑫ POLYURETHANE INSULATION FROM PORTABLE FOAM PASTE TO FILL VOID.
  - ⑬ BOTTOM INSULATION FORM OF GALVANIZED SHEET STEEL.
  - ⑭ MAIN STOP SHALL BE FORD F1100 OR EQUAL WITH PACK JOINT AND SEAMLESS INSERT STIFFENER FOR HDPE IPS PIPE - 25 mm Ø OR 50 mm Ø AS REQUIRED.
  - ⑮ HDPE DR11 SUPPLY AND RECIRCULATION PIPE - FIELD INSTALLED CONTINUOUS LENGTH FROM COIL STOCK. 25 mm CTS (BOTH) OR 50 mm IPS WITH 25 mm CTS RETURN.
  - ⑯ No. 8 X 13mm CADMIUM PLATED SHEET METAL SCREWS.
  - ⑰ HEAT SHRINK TO BE MIN. 100mm LAP ON BLACK JACKET AFTER SHRINKAGE.
  - ⑱ POLYURETHANE OR FIBRE REINFORCED PLASTIC (FRP) FOAM PLUG. (MINIMUM 50mm THICK)
  - ⑲ SHOP CAST 75mm (SEE SPECS) THICK POLYURETHANE INSULATION WITH BLACK JACKETED PROTECTIVE COATING.
  - ⑳ TWO HEATING CABLES. REMOTE ENDS WRAPPED AROUND SERVICE RISER, VALVES AND MAIN LATERAL SUPPLY AND RETURN LINES TO BE WATER MAIN AT 250 mm INTERVALS.



- ① 290mm INSIDE DIA. REMOVABLE GALVANIZED SHEET METAL CAP WITH FIELD CUT HOLES.
- ② STAINLESS STEEL BAND-IT CLIPS #M211.
- ③ 294mm OUTSIDE DIA. x 500mm LONG.
- ④ 200 mm LONG, 230 mm INSIDE DIA. FOR 100 # DIA CARRIER PIPE, 280 mm INSIDE DIA FOR 150 mm # DIA CARRIER PIPE.
- ⑤ HOLES TO BE DRILLED IN FIELD TO SUIT.
- ⑥ 390mm INSIDE DIA. x 560mm LONG FOR 200mm DIA. MAIN
- ⑦ BOTTOM INSULATION FORM OF GALVANIZED SHEET STEEL.

3 STEEL WATER SERVICE FORM



- ① WATER CARRIER PIPE, HDPE IPS DR 13.5 WITH 75mm NOMINAL POLYURETHANE INSULATION AND FACTORY INSTALLED JACKET - 100 mm Ø DIA OR 150 mm Ø DIA, AS REQUIRED.
- ② TWO HEATING CABLES, REMOTE ENDS WRAPPED AROUND SERVICE RISER, VALVES AND MAIN LATERAL SUPPLY AND RETURN LINES TO BE WRAPPED AT 250 mm INTERVALS.
- ③ TWO FULL TURNS OF CEMEXEL GT-66 GLASS CLOTH TAPE. APPLY EVERY 500mm MIN.
- ④ SHOP CAST 75mm (SEE SPECS) THICK POLYURETHANE INSULATION WITH BLACK JACKET PROTECTIVE COATING.
- ⑤ HDPE DR11 SUPPLY AND RECIRCULATION PIPE - FIELD, INSTALLED CONTINUOUS LENGTH FROM COIL STOCK - 25 mm CTS (BOTH) OR 50 mm IPS (ONE) OR 25 mm CTS RETURN.

#### 4 TYPICAL SECTION THROUGH WATER SERVICE

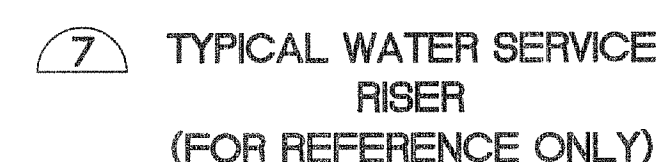


- ① WATER CARRIER PIPE, HDPE IPS DR 13.5 WITH 75 mm NOMINAL POLYURETHANE INSULATION AND FACTORY INSTALLED JACKET - 100 mm Ø DIA OR 150 mm Ø DIA, AS REQUIRED.
- ② FIELD COAT ALL POLYURETHANE WITH MASTIC.
- ③ BUTT FUSION JOINT TO BE MADE BY A QUALIFIED AND LICENSED TECHNICIAN.
- ④ HEAT SHRINK TO BE MIN. 100mm LAP ON BLACK JACKET AFTER SHRINKAGE.
- ⑤ SHOP CAST 75mm (SEE SPEC'S) THICK POLYURETHANE INSULATION WITH BLACK JACKET PROTECTIVE COATING.
- ⑥ POLYURETHANE HALF SHELL CUT TO LENGTH AND COATED WITH ASPHALT MASTIC.

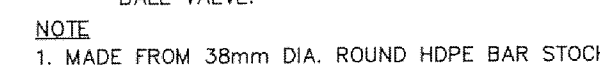


- ① FUSE TO EXISTING HDPE CARRIER PIPE.

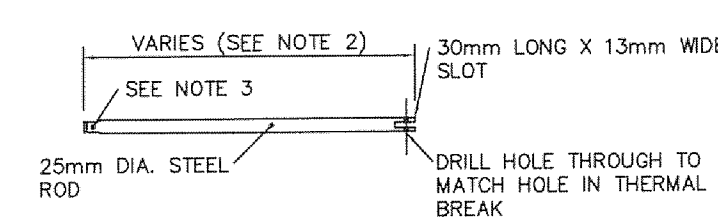
6 TYPICAL WATER SERVICE CONNECTION TO 1m FROM EXISTING BUILDING



- ## KEY TO NUMBERED PARTS:
- ① BALL VALVES SHALL BE FORD B44-444 (25 mm LINE) OR B66-777 (50 mm LINE) WITH PACK JOINT FOR HDPE INCLUDING INSERT STIFFENER AND FOR COPPER PIPE ON END IN BUILDING.
  - ② HDPE DR11 SUPPLY AND RECIRCULATION PIPE INSTALLED CONTINUOUS LENGTH FROM COIL CTS (BOTH) OR 50 mm IPS WITH 25 mm CTS RETURN.
  - ③ 30mm THICK PLYWOOD END CAP
  - ④ STAINLESS STEEL TRIDENT HAS 152 GEAR CLAMPS.
  - ⑤ 20mm HDPE - GLUED AND SCREWED TO JOIST/STUDS AND HEADERS.
  - ⑥ CAULK WITH SILICON ALL AROUND.
  - ⑦ RESTORE FLOOR TO EXISTING CONDITION.
  - ⑧ POLYURETHANE INSULATION FROM PORTABLE FOAM PACK TO FILL VOID.
  - ⑨ FLOOR JOIST - EXISTING.
  - ⑩ RESTORE SOFFIT TO EXISTING CONDITION.
  - ⑪ WATER CARRIER PIPE, HDPE IPS DR 13.5 WITH 75 mm NOMINAL POLYURETHANE INSULATION AND FACTORY INSTALLED JACKET - 100 mm Ø DIA OR 150 mm Ø DIA, AS REQUIRED.
  - ⑫ HEAT SHRINK.
  - ⑬ POLYURETHANE HALF SHELL CUT TO LENGTH AND COATED WITH ASPHALT MASTIC.
  - ⑭ LONG RADIUS 90° ELBOW WITH FACTORY APPLIED POLYURETHANE INSULATION WITH REINFORCED JACKET.
  - ⑮ BUTT FLUSION JOINT TO BE MADE BY A QUALIFIED AND LICENSED TECHNICIAN.



HDPE THERMAL BREAK



- NOTES**
1. ROD SHALL BE FIELD FABRICATED. ZINC RICH PAINT COATED AFTER FABRICATION.
  2. ROD SHALL BE OF SUFFICIENT LENGTH TO EXTEND FROM THERMAL BREAK TO TOP OF HDPE PIPE (ITEM 18) BUT SHALL NOT EXTEND ABOVE EXISTING GROUND SURFACE
  3. TOP SECTION OF ROD TO BE 32mm LONG X 19mm WIDE X 6mm THICK WITH 5mm LONG TOP BEVEL (SIMILAR TO TOP OF CRANE MCALVAY W-6221 ROD).

8 VALVE OPERATING ROD



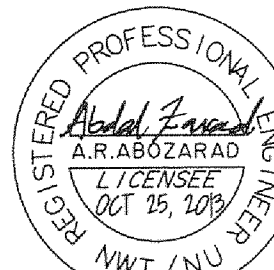
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## WATER SERVICE DETAILS

Project No. OTT-00206333-A0

Dwg. No.	<b>C-330</b>	Rev. No.	02
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Scale

NOT TO SCALE