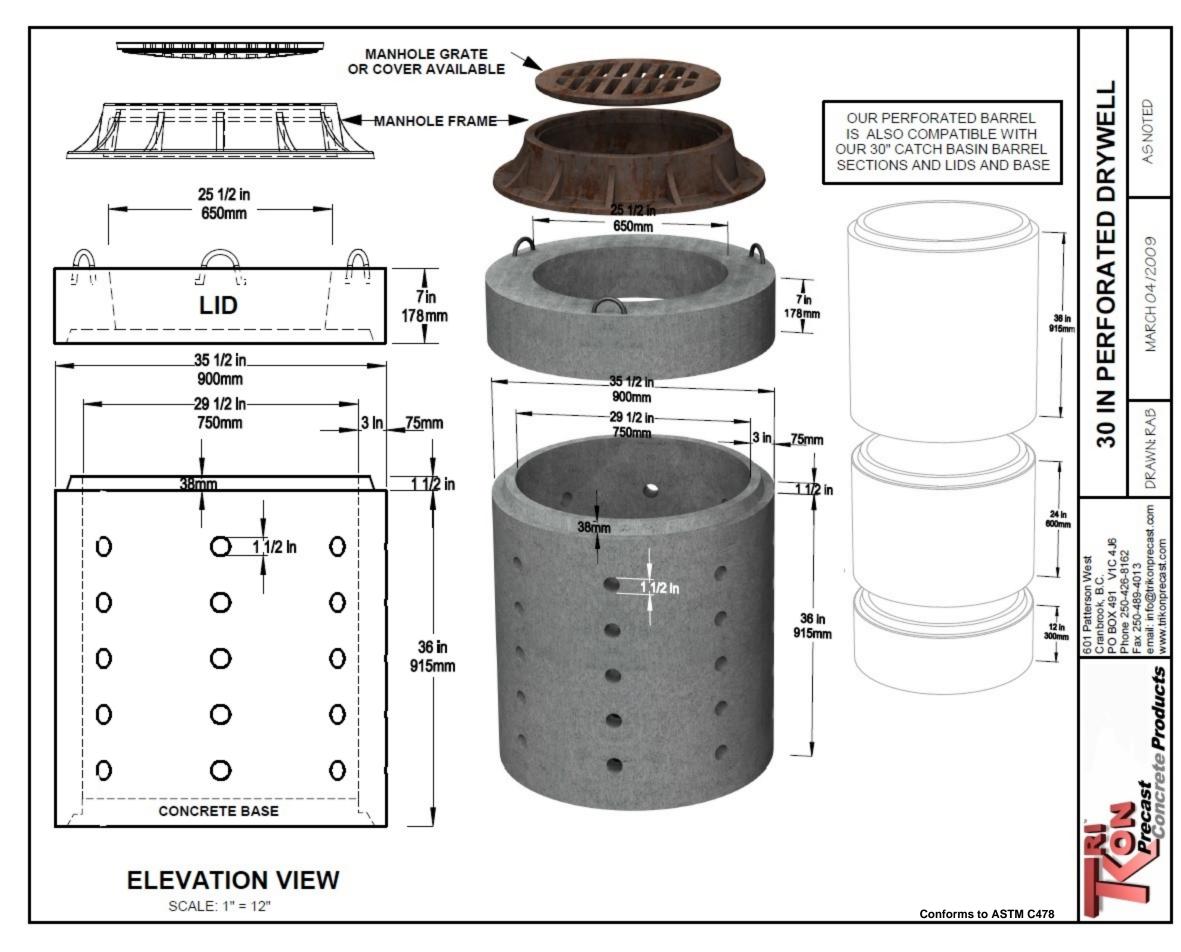


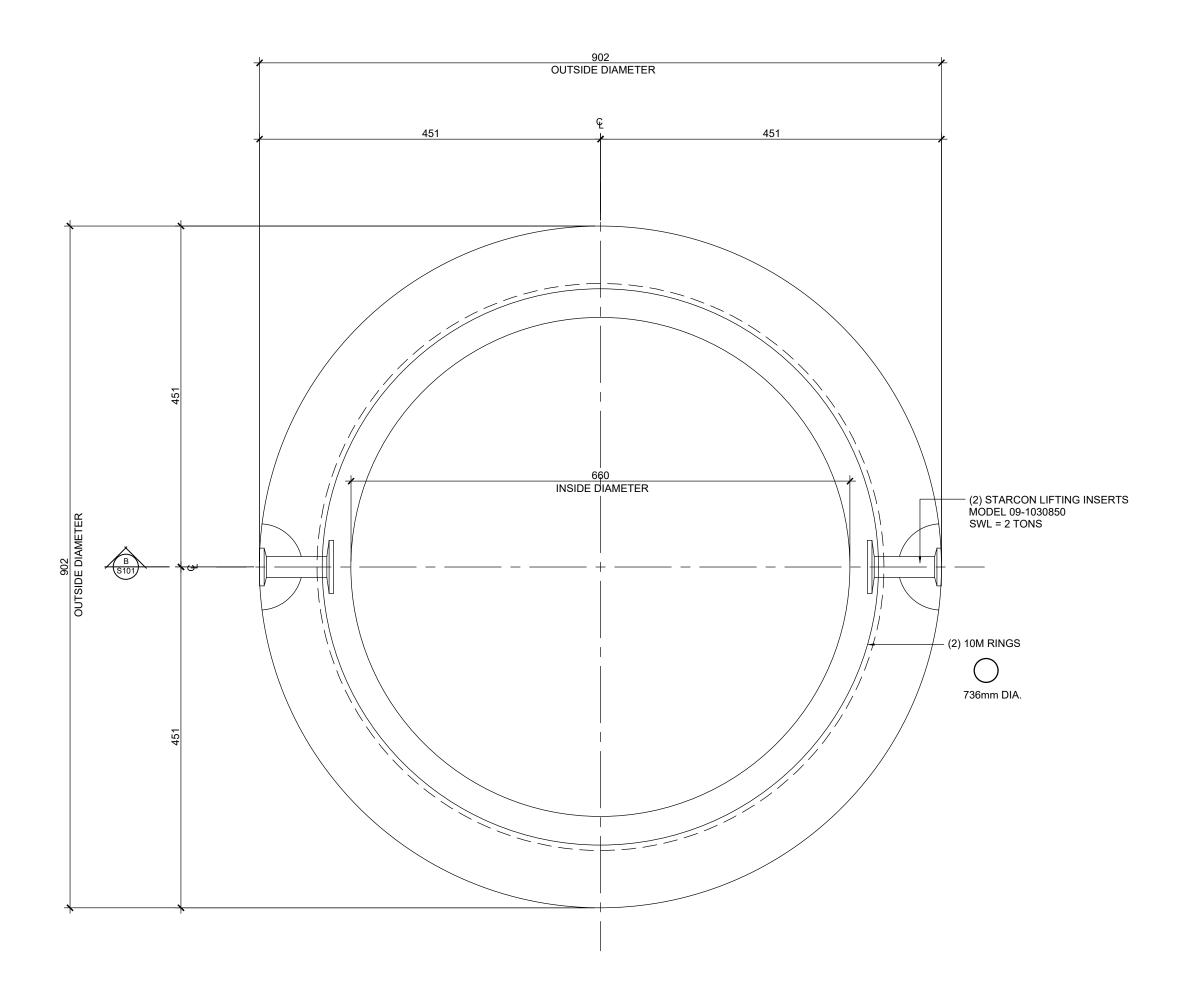
SIN CATCH BA

DRAWN: RAB

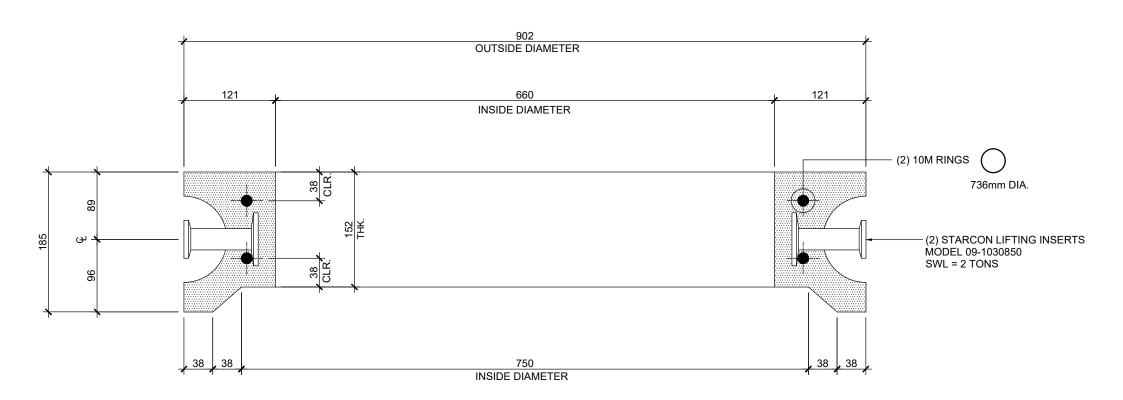
MARCH 04/2009

ASNOTED





750mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10



750mmØ PRECAST REINFORCED CONCRETE LID - SECTION \$101 SCALE: 1:10

STRUCTURAL SPECIFICATIONS

GENERAL

- 1. ALL CONSTRUCTION SHALL CONFORM TO ASTM C1433M STANDARDS AND SUBSEQUENT
- 2. ALL REFERENCES TO STANDARDS SHALL REFER TO THE LATEST REVISED ISSUE.
- 3. THESE DRAWING PREPARED BY McELHANNEY CONSULTING SERVICES LTD. (McELHANNEY) ARE INTENDED FOR STRUCTURAL REQUIREMENTS OF THIS PROJECT ONLY. ALL OTHER ASPECTS ASSOCIATED WITH THIS PROJECT WHICH INCLUDE, BUT ARE NOT LIMITED TO CIVIL, GEOTECHNICAL, MECHANICAL, ELECTRICAL, ARE TO BE DESIGNED, SPECIFIED AND APPROVED BY OTHERS AND ARE CONSIDERED BEYOND McELHANNEY SCOPE OF WORK
- 4. STRUCTURAL ELEMENTS PRESENTED ON THESE DRAWINGS ARE FOR PERMANENT STRUCTURE AND FOUNDATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND CONSTRUCTION BRACING AND SUPPORT INCLUDING GEOTECHNICAL REQUIREMENTS UNTIL THE PROJECT IS COMPLETED.
- 5. REFER TO CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DIMENSIONS, GRADES, SLEEVES, EQUIPMENT, SHAFTS, INSERTS, NAILERS, CHAMFERS, ETC.. GRADES, ELEVATIONS AND SLOPES SHOWN ON STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND MUST BE CONFIRMED PRIOR TO CONSTRUCTION.

FIELD REVIEWS BY McELHANNEY CONSULTING SERVICES LTD.

- 1. McELHANNEY ASSUMES NO RESPONSIBILITY FOR FIELD REVIEWS OF THE CONSTRUCTION OR VERIFICATION OF THE CONSTRUCTION UNLESS EXPRESSLY RETAINED TO DO SO.
- 2. McELHANNEY CONSULTING SERVICES LTD. (McELHANNEY) PROVIDE FIELD REVIEWS ONLY FOR THE WORK SHOWN ON THESE DRAWINGS. FIELD REVIEWS BY Mcelhanney are periodic AND AT THE SOLE DISCRETION OF McELHANNEY IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE DESIGN DRAWINGS AND SUPPORTING DOCUMENTS.
- 3. FIELD REVIEWS BY McELHANNEY ARE NOT FOR THE CONTRACTORS BENEFIT NOR DOES IT MAKE McELHANNEY GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT
- 4. McELHANNEY WILL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT
- 5. IF McELHANNEY IS RETAINED FOR FIELD REVIEWS THEN THE CONTRACTOR IS TO PROVIDE 24 HOUR NOTICE PRIOR TO CONCRETE POURS.

CONCRETE

- 1. PREPARATION, PLACING, FINISHING AND TESTING OF CONCRETE IS TO CONFORM TO CSA A23.1. AND CSA A23.2
- 2. BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL CHECK ALL APPLICABLE DRAWINGS FOR ANCHOR BOLTS, INSERTS, EMBEDS, RECESSES AND BLOCKOUTS. THEIR LOCATIONS SHALL BE CONFIRMED BY THE VARIOUS SUBTRADES.
- 3. CONCRETE COVER OVER REINFORCING IS TO BE AS SHOWN ON DRAWINGS.
- 4. CONCRETE PROPERTIES:

L ITEM	28 DAY STRENGTH	EXPOSURE	W/C	AIR (%)	CEMENT TYPE	AGG. SIZE (mm)
PRECAST CONCRETE	30 MPa	F1	.40	4 - 7	HS	20

REINFORCING STEEL

- 1. REINFORCING STEEL IS TO CONFORM TO CSA G30.12M GRADE 400 MPa.
- 2. REINFORCING STEEL BENDS AND OTHER DETAILS OF REINFORCEMENT PLACEMENT SHALL BE IN ACCORDANCE WITH CAN/CSA A.23.1. AND ALSO THE REINFORCING STEEL INSTITUTE OF CANADA "MANUAL OF STANDARD PRACTICE".
- 3. REINFORCING STEEL IS TO BE PLACED AS DETAILED TO 10mm TOLERANCE AND IS TO BE SUPPORTED BY METAL OR PLASTIC SUPPORTS AND/OR HANGERS IN ACCORDANCE WITH
- 4. LAP ALL REINFORCING BAR SPLICES 32 BAR DIAMETERS MINIMUM UNLESS INDICATED
- OTHERWISE ON THESE DRAWINGS. 5. REINFORCING STEEL IS TO BE CLEAN, FREE OF CORROSION AND UNDAMAGED.
- 6. DO NOT WELD BARS OR USE HEAT TO BEND REINFORCING STEEL.
- 7. UNLESS NOTED OTHERWISE MINIMUM CONCRETE COVER IS TO BE 38mm CLEAR

PRECAST COMPONENT LIFTING AND RIGGING

- 1. THE PRECAST CONTRACTOR IS RESPONSIBLE FOR ALL RIGGING AND LIFTING PROCEDURES REQUIRED TO ENSURE SAFE LIFTING AND PLACEMENT OF PRECAST CONCRETE COMPONENTS IN ACCORDANCE WITH INDUSTRY STANDARDS AND WORKSAFE BC REQUIREMENTS.
- 2. THE CONTRACTOR IS TO ENSURE THAT THE HOISTING DEVICES INCLUDING ALL ASSOCIATED ACCESSORIES (SHACKLES, SLINGS, PINS ETC.) ARE RATED TO THE APPLICABLE LOAD AND ARE IN GOOD WORKING CONDITION.
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						McELHANNEY WILL NOT BE HELD RESPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN.
						THIS DRAWING AND DESIGN HAS BEEN PREPARED FOR THE CLIENT IDENTIFIED, TO MEET THE STANDARDS AND REQUIREMENTS OF THE APPLICABLE PUBLIC AGENCIES AT THE TIME OF
						PREPARATION.
1	FEB 1, 2021	CONCRETE STRENGTH REVISED	bpr	brn	brn	McELHANNEY, ITS EMPLOYEES, SUBCONSULTANTS AND AGENTS WILL NOT BE LIABLE FOR ANY LOSSES OR OTHER CONSEQUENCES RESULTING FROM THE USE OR RELIANCE UPON, OR ANY CHANGES MADE TO, THIS DRAWING, BY ANY THIRD PARTY, INCLUDING CONTRACTORS,
0	FEB 26, 2018	ISSUED FOR "CONSTRUCTION"	bpr	brn	brn	SUPPLIERS, CONSULTANTS AND STAKEHOLDERS, OR THEIR EMPLOYEES OR AGENTS.

/ITHOUT McELHANNEY'S PRIOR WRITTEN CONSENT.

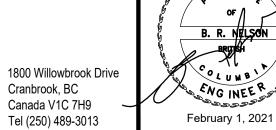
THIS DRAWING IS PART OF A COMPLETE SET OF DRAWINGS AND IS TO BE READ IN CONJUNCTION WITH ALL SHEETS WITHIN THE DRAWING SET. REFER TO ALL SHEETS INCLUDING STRUCTURAL NOTES PROVIDED ON

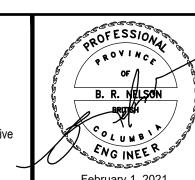
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ORIGINAL DWG SIZE: ARCH D (24" x 36") - DO NOT SCALE THIS DRAWING



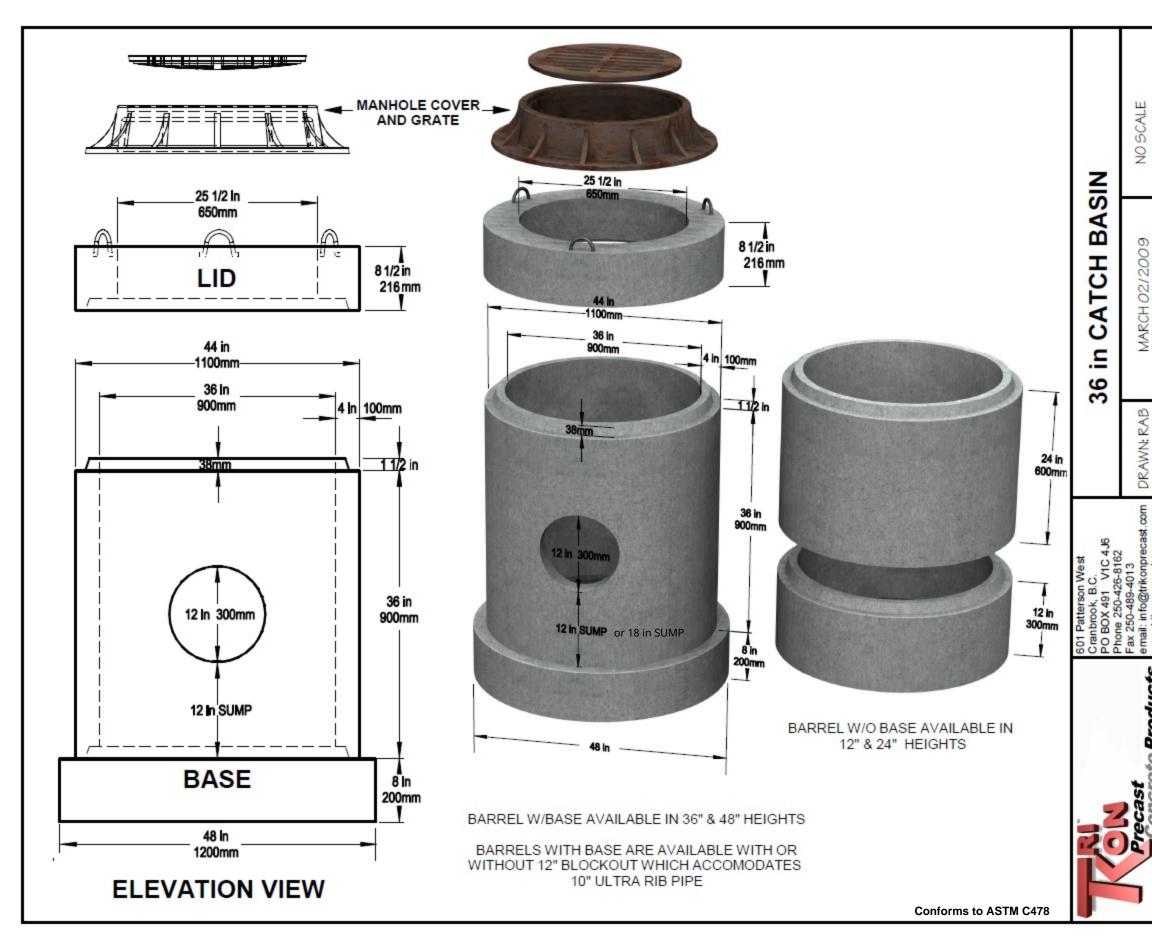


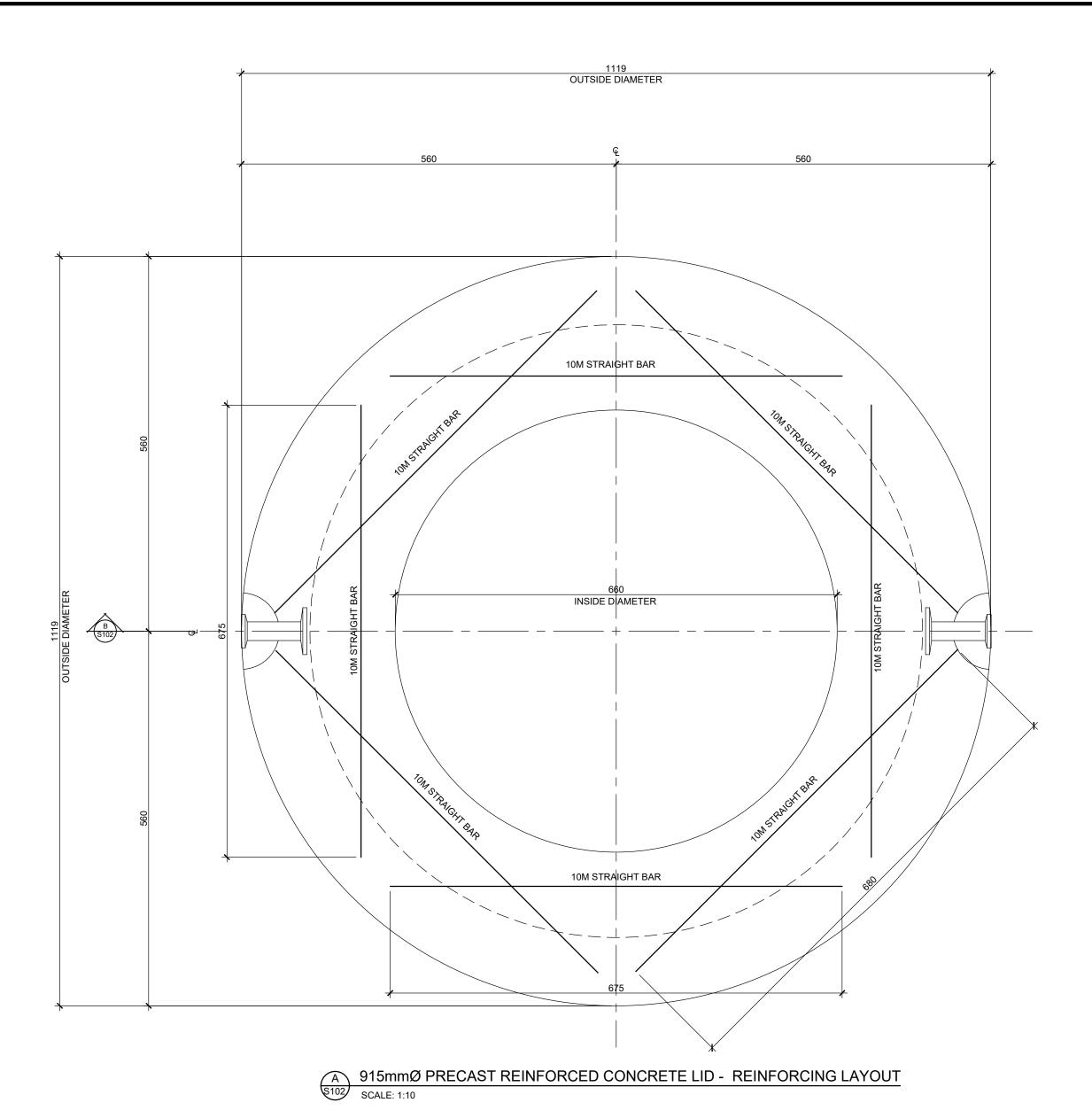
TRI-KON PRECAST PRODUCTS LTD.

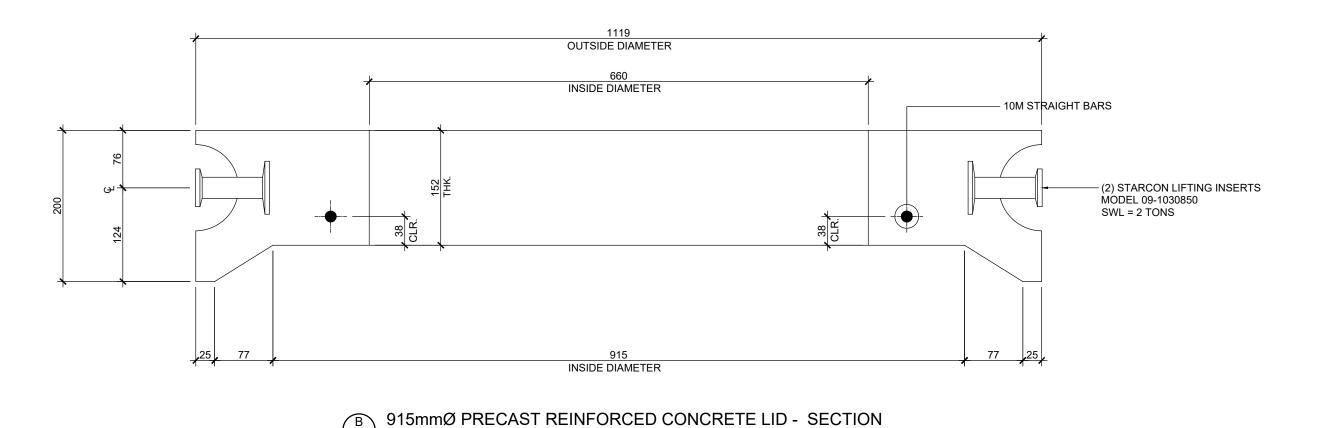
601 PATTERSON STREET WEST, CRANBROOK, BC

PRECAST REINFORCED CONCRETE MANHOLE LIDS 750mmØ LID REINFORCING LAYOUT AND SECTION

oject Number 2441-00705-00







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- 5. IF Mcelhanney is retained for field reviews then the contractor is to provide 24 HOUR NOTICE PRIOR TO CONCRETE POURS.

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4.	CONCRETE PROPERTIES:	28 DAY				CEMENT	AGG.
	ITEM		EXPOSURE	W/C	AIR (%)	TYPE	SIZE (mm)
	PRECAST CONCRETE	30 MPa	F1	.40	4 - 7	HS	20

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1	FEB 1, 2021	CONCRETE STRENGTH REVISED	bpr	brn	brn	ANY LOSSES OR OTHER CONSEQUENCES RESULTING FROM THE USE OR RELIANCE UPON, OR ANY CHANGES MADE TO, THIS DRAWING, BY ANY THIRD PARTY, INCLUDING CONTRACTORS,
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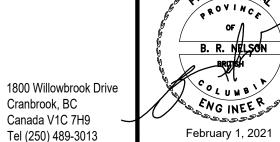
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\$102 SCALE: 1:10

ELECTRICAL AND GEOTECHNICAL PROFESSIONS. THE PROFESSIONAL SEAL APPLIED TO THESE DRAWINGS APPLIES ONLY TO THE STRUCTURAL ASPECT OF THIS PROJECT. OTHER ELEMENTS SHOWN ON THIS DRAWING IS FOR REFERENCE ONLY AND IS SPECIFIED BY OTHERS AND IS NOT WITHIN THE SCOPE OF WORK OF BY McELHANNEY.





TRI-KON PRECAST PRODUCTS LTD. 601 PATTERSON STREET WEST, CRANBROOK, BC

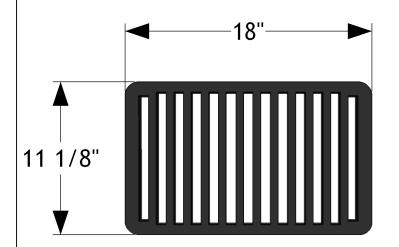
PRECAST REINFORCED CONCRETE MANHOLE LIDS 915mmØ LID

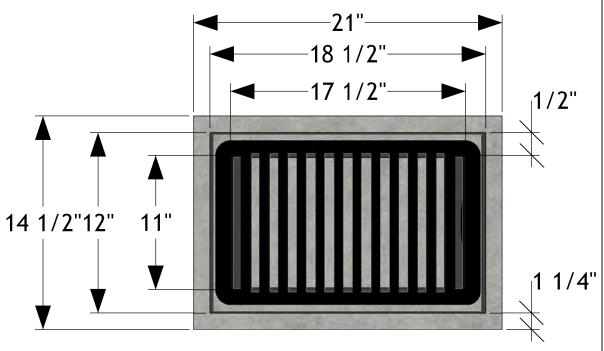
oject Number 2441-00705-00

ORIGINAL DWG SIZE: ARCH D (24" x 36") - DO NOT SCALE THIS DRAWING

Cranbrook, BC Canada V1C 7H9 Tel (250) 489-3013 REINFORCING LAYOUT AND SECTION







NOTES:

Floor Drain:

I.D: 17 1/2" x 11" x 14"

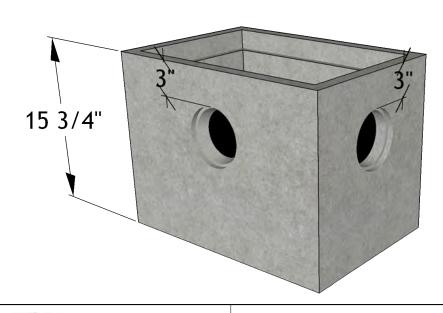
O.D: 21" x 14 1/2" x 15 3/4"

200 lbs.

Grate:

11 1/8" x 18"

27 lbs.





Floor Drain & Grate