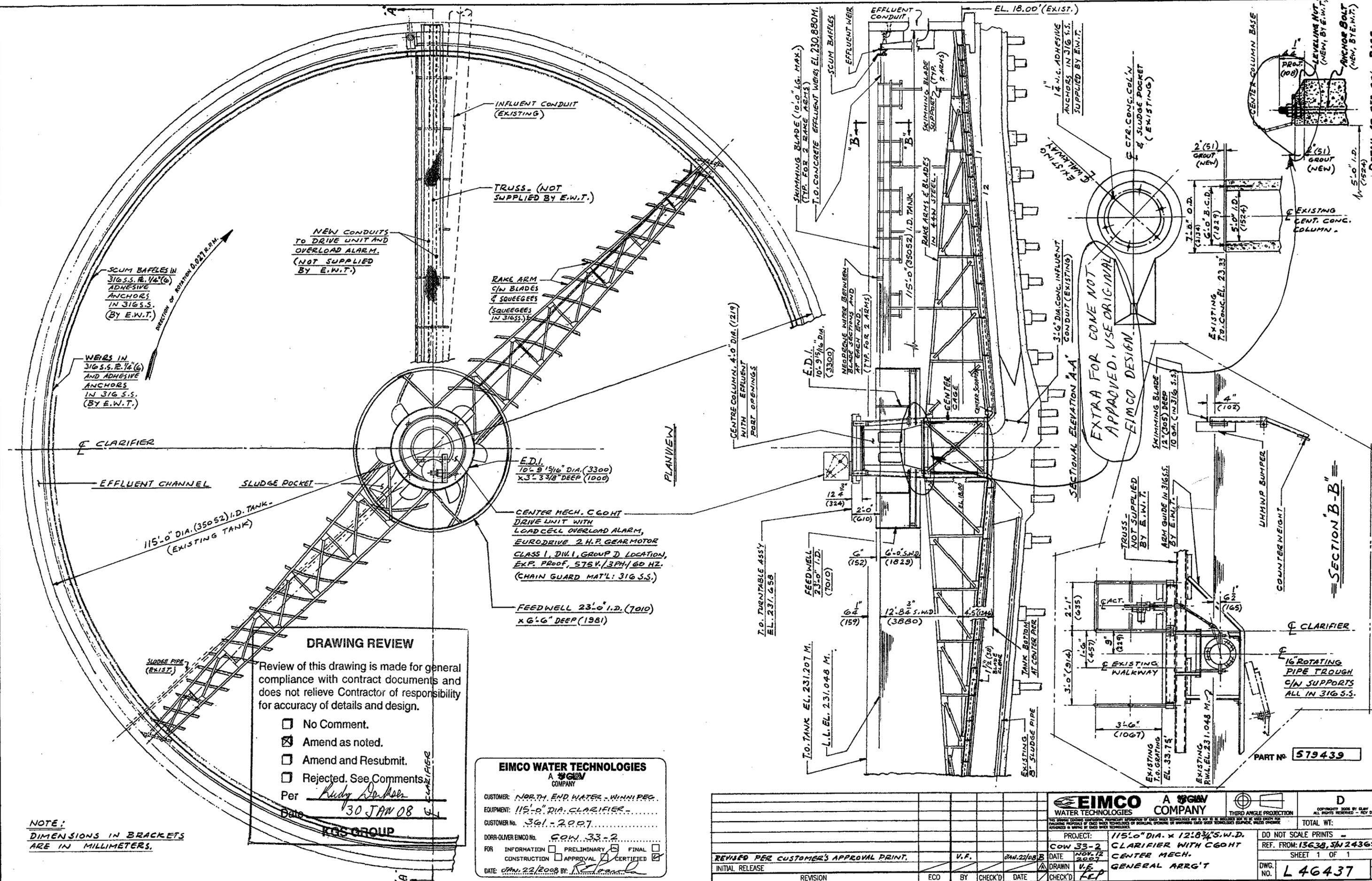


APPENDIX A

EIMCO CLARIFIER EQUIPMENT INFORMATION



NEW CONDUITS TO DRIVE UNIT AND OVERLOAD ALARM. (NOT SUPPLIED BY E.W.T.)

DRAWING REVIEW
 Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design.

- No Comment.
 - Amend as noted.
 - Amend and Resubmit.
 - Rejected. See Comments.
- Per Rudy Jackson
 Date 30 JAN 08

EIMCO WATER TECHNOLOGIES
 A WEG COMPANY

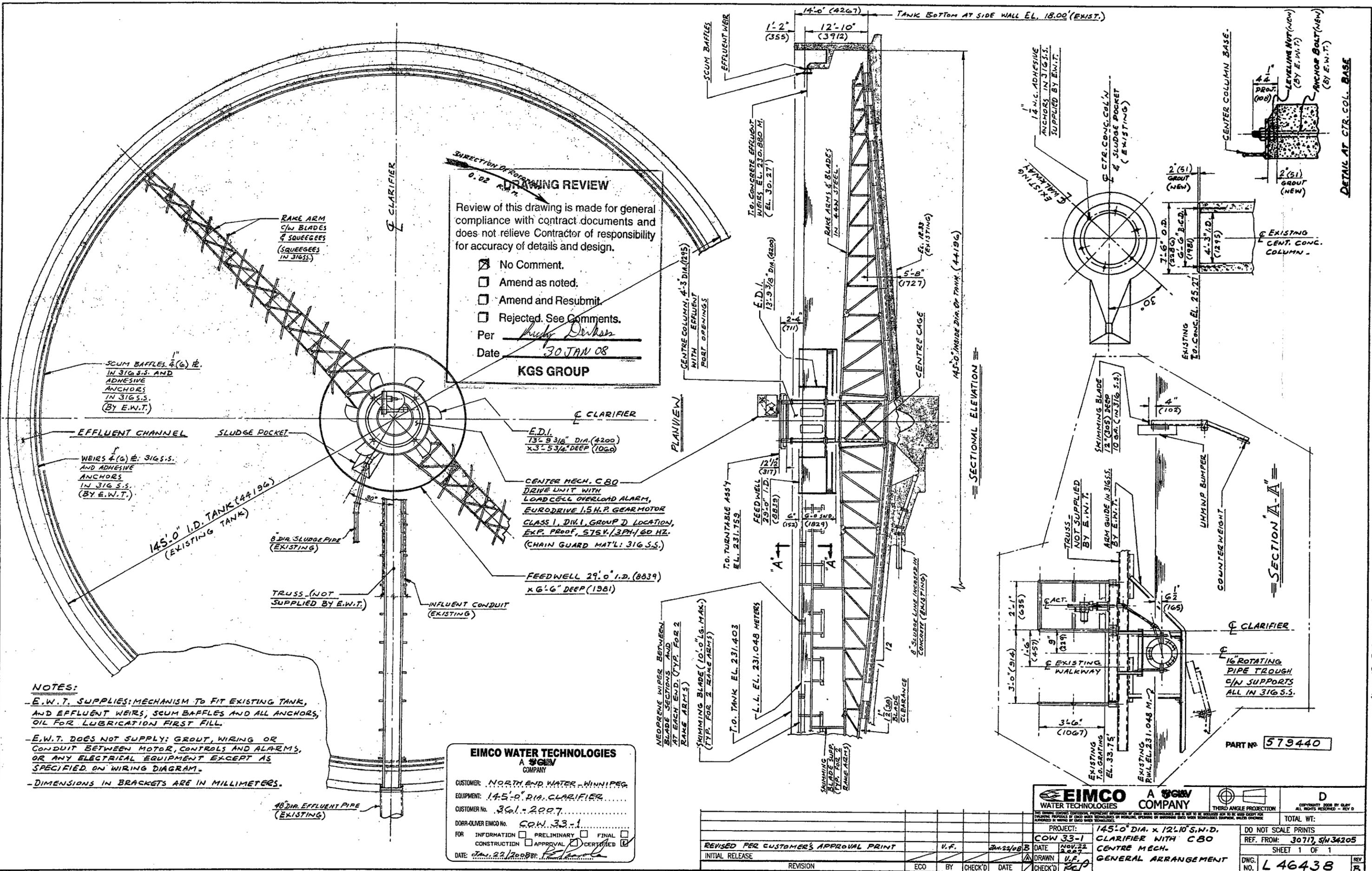
CUSTOMER: NORTH END WATER - WINNIPEG
 EQUIPMENT: 115'-0" DIA. CLARIFIER
 CUSTOMER No. 361-2007
 DORA-OLIVER EIMCO No. CON 33-2
 FOR INFORMATION PRELIMINARY FINAL
 CONSTRUCTION APPROVAL CERTIFIED
 DATE: JAN. 22, 2008 BY: R. Jackson

NOTE:
 DIMENSIONS IN BRACKETS ARE IN MILLIMETERS.

EXTRA FOR CONE NOT APPROVED, USE ORIGINAL EIMCO DESIGN.

SKIMMER REF. M769.3

EIMCO WATER TECHNOLOGIES		A WEG COMPANY		THIRD ANGLE PROJECTION		D	
PROJECT: 115'-0" DIA. x 12'-8 3/4" S.W.D. CLARIFIER WITH C60HT CENTER MECH.		DATE: NOV. 12 2007		DRAWN: V.F.		TOTAL WT:	
REVISED PER CUSTOMER'S APPROVAL PRINT.		DATE: JAN. 22/08		DRAWN: V.F.		DO NOT SCALE PRINTS - REF. FROM: 13638, 5/N 24365	
INITIAL RELEASE		BY: ECO		CHECK'D: V.F.		SHEET 1 OF 1	
REVISION		BY: ECO		CHECK'D: V.F.		DWG. NO. L46437	



DRAWING REVIEW

Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design.

No Comment.
 Amend as noted.
 Amend and Resubmit.
 Rejected. See Comments.

Per Andy Dinkas
 Date 30 JAN 08

KGS GROUP

NOTES:

- E.W.T. SUPPLIES: MECHANISM TO FIT EXISTING TANK, AND EFFLUENT WEIRS, SCUM BAFFLES AND ALL ANCHORS, OIL FOR LUBRICATION FIRST FILL

- E.W.T. DOES NOT SUPPLY: GROUT, WIRING OR CONDUIT BETWEEN MOTOR, CONTROLS AND ALARMS, OR ANY ELECTRICAL EQUIPMENT EXCEPT AS SPECIFIED ON WIRING DIAGRAM.

- DIMENSIONS IN BRACKETS ARE IN MILLIMETERS.

EIMCO WATER TECHNOLOGIES
 A **WAT** COMPANY

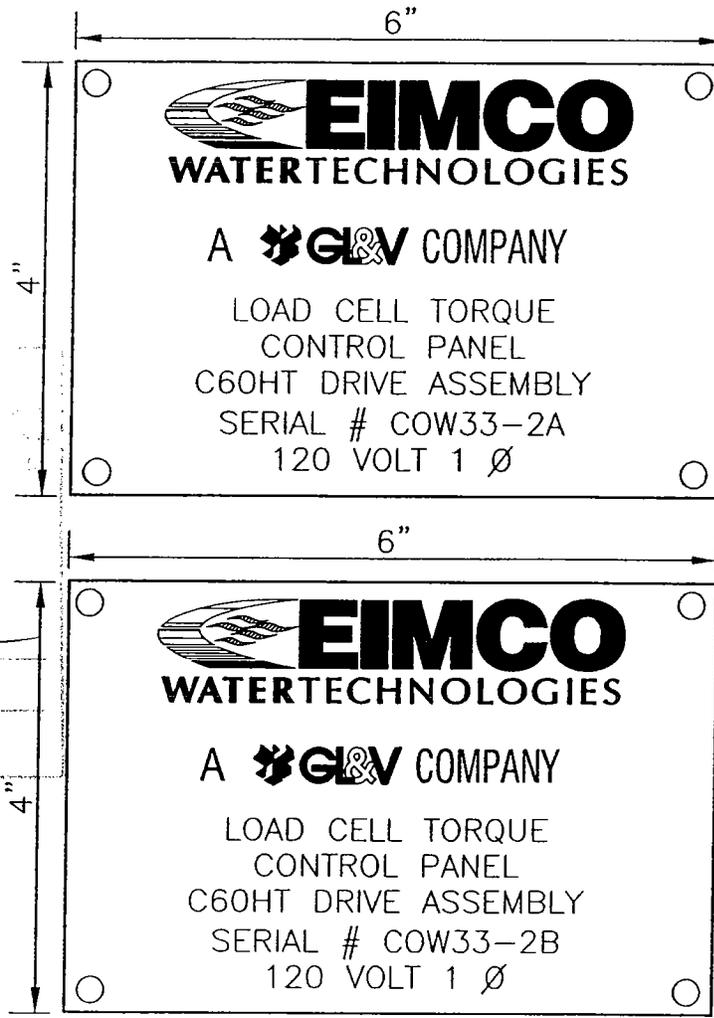
CUSTOMER: NORTH END WATER - WINNIPEG
 EQUIPMENT: 145'-0" DIA. CLARIFIER
 CUSTOMER No. 361-2007
 DORR-OLIVER EIMCO No. COW 33-1

FOR INFORMATION PRELIMINARY FINAL
 CONSTRUCTION APPROVAL CERTIFIED

DATE: JAN. 22, 2008 BY: [Signature]

PROJECT: COW 33-1		DATE: NOV. 22, 2007		DO NOT SCALE PRINTS	
REVISED PER CUSTOMER'S APPROVAL PRINT		U.F.		REF. FROM: 30717, S/N 34205	
INITIAL RELEASE		BY: ECO		SHEET 1 OF 1	
REVISION		BY: CHECK'D		DWG. NO. L 46438	
ECO		DATE: 2/22/08		REV B	
BY: CHECK'D		DATE: 2/22/08		GENERAL ARRANGEMENT	
BY: CHECK'D		DATE: 2/22/08		PART NO. 579440	

SKINNER REF. M769-3



Review of this drawing shall be the responsibility of the drafter and the checker. The drafter shall be responsible for the accuracy of the drawing and the checker shall be responsible for the accuracy of the drawing and the checker shall be responsible for the accuracy of the drawing.

✓
 Dec. 4, 2007
 KGS GROUP

NOTES:

- 1) MATERIAL - LAMICOID, WHITE, REVERSE ENGRAVED
- 2) LOGO - BENJAMIN MOORE INDUSTRIAL URETHANE ALKYD GLOSS ENAMEL BLUE #20BB
- 3) LETTERING - BLACK
- 4) PERMANENT - PEEL & STICK ADHESIVE
- 5) STAINLESS STEEL SCREW FASTENERS (4/LABEL)

PART No. 580018A

INITIAL RELEASE					/	/	/	/	/	/		
REVISION					ECO	BY	CHECK'D	DATE	A			
EIMCO WATER TECHNOLOGIES					A GLV COMPANY					THIRD ANGLE PROJECTION		A <small>COPYRIGHT © 2006 BY GL&V ALL RIGHTS RESERVED - REV D</small>
THIS DRAWING CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION OF EIMCO WATER TECHNOLOGIES AND IS NOT TO BE DISCLOSED NOR TO BE USED EXCEPT FOR EVALUATING PROPOSALS OF EIMCO WATER TECHNOLOGIES OR INSTALLING, OPERATING OR MAINTAINING EIMCO WATER TECHNOLOGIES EQUIPMENT. UNLESS OTHERWISE AUTHORIZED IN WRITING BY EIMCO WATER TECHNOLOGIES.										TOTAL WT: -		
PROJECT:			CONTROL PANEL LOGO NAMEPLATE			DO NOT SCALE PRINTS						
COW33-2						REF. FROM: -						
DATE	23/11/07					SHEET 1 OF 1						
DRAWN	A.E.					DWG. NO.		A580018			REV	A
CHECK'D	REP											

NEMA/EEMAC 4X, WALL MOUNTING CONTROL PANEL, APPROX. 14" WIDE X 16" HIGH X 8" DEEP, COMPLETE AS SHOWN ON DRAWINGS 580015, 580016, 580017 COMPLETELY PRE WIRED WITH TYPE TEW WIRE, WITH WIRES FOR EXTERNAL CONNECTIONS BROUGHT TO PERMANENTLY IDENTIFIED TERMINALS . ALL WIRES TO BE PERMANENTLY IDENTIFIED AT BOTH ENDS WITH WIRE NO'S SHOWN ON DRAWINGS, USING BRADY (PART# PTL11-427) THERMAL TRANSFERRED SELF-LAMINATING VINYL WHITE LABEL TYPE WIRE MARKERS, OR EQUAL. ALL COMPONENTS INSIDE PANEL TO BE PERMANENTLY IDENTIFIED WITH ITEM NUMBERS SHOWN ON DRAWINGS USING SELF ADHESIVE LABEL OR EQUAL, OR BY APPLYING ITEM NUMBER WITH INDELIBLE MARKER TO COMPONENTS HAVING INTEGRAL MARKING AREA. ALL TERMINAL BLOCK NUMBERING SHALL BE DONE USING MANUFACTURER LABELS MARKING WITH PEN WILL NOT BE ACCEPTED. ALL DOOR WIRING TO BE NEATLY LOOMED, PVC WIRING TRAYS ON THE DOOR WILL NOT BE ACCEPTED. WIRING ON THE DOOR MUST INCLUDE A MINIMUM OF 20% SPARES CAPABLE OF REACHING ANY DEVICE MOUNTED ON THE DOOR. ALL PANELS TO BE C.S.A. CERTIFIED, WITH C.S.A. MARK APPLIED TO EACH PANEL BY PANEL FABRICATOR.

8 COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL COMPONENTS ASSOCIATED WITH THIS CONTROL PANEL

THE LOAD CELL DIGITAL CONTROLLER IN THIS CONTROL PANEL SHALL BE FULLY PROGRAMMED TO CUSTOMER SPECIFICATIONS AS SUPPLIED BY EIMCO WATER TECHNOLOGIES. THE PARAMETERS SHALL BE DOCUMENTED AND RETURNED WITH ALL OTHER MATERIAL SPECS. THE CONTROLLERS PARAMETERS SHALL BE LOCKED AS PER INSTRUCTIONS AND THE CONTROLLER ENCLOSURES SEALED TO INDICATE TAMPERING.

NOTE:

THE ABOVE CONTROL PANEL(S) WILL BE INSPECTED AND TESTED AT THE PANEL FABRICATOR'S SHOP BY EIMCO WATER TECHNOLOGIES PERSONNEL, AND ON OCCASION, BY THE USER'S REPRESENTATIVE. THE PANEL FABRICATOR WILL BE EXPECTED TO PROVIDE BASIC TEST FACILITIES AND COOPERATE WITH INSPECTOR(S) TO FACILITATE THE ACCEPTANCE OF THE CONTROL PANEL(S). A HI POT TEST PERT C.S.A. STANDARDS IS TO BE PERFORMED ON THE PANEL(S) BY THE PANEL FABRICATOR PRIOR TO THE EIMCO WATER TECHNOLOGIES EQUIPMENT INSPECTION. PANEL FABRICATOR TO NOTIFY EIMCO WATER TECHNOLOGIES AT LEAST ONE WEEK PRIOR TO THE PANEL(S) BEING READY FOR INSPECTION.

SPECIAL NOTE

WE ARE ASKING THAT THE PANEL SUPPLIER PROOF READ ALL ELECTRICAL DRAWINGS ASSOCIATED WITH THIS PANEL TO ENSURE THE COMPONENTS LISTED ARE OF SUFFICIENT QUANTITY AND FUNCTIONS TO MEET THE REQUIREMENTS OF THE OPERATION INTENDED BY THE SCHEMATIC DRAWING. ANY CHANGES REQUIRED SHALL BE REPORTED TO EIMCO WATER TECHNOLOGIES PRIOR TO QUOTING OR MANUFACTURING.

DRAWING REVIEW
 Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design

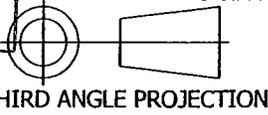
No Comment
 Amend as noted
 Amend and Resubmit
 Rejected, See Comments

PART No. **580020A**

INITIAL RELEASE	Per <i>[Signature]</i>	ECO	BY	CHECK'D	DATE	A
	Date Dec 4, 2007					



K G S GROUP
A GLV COMPANY



A
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TOTAL WT: -

PROJECT:	CONTROL PANEL	DO NOT SCALE PRINTS	
COW33-2		REF. FROM: -	
DATE: 23/11/07		SHEET 1 OF 1	
DRAWN: A.E.		DWG. NO. A580020	REV A
CHECK'D: REP			

NEMA/EEMAC 4X, WALL MOUNTING CONTROL PANEL, APPROX. 14" WIDE X 16" HIGH X 8" DEEP, COMPLETE AS SHOWN ON DRAWINGS 580015, 580016, 580017 COMPLETELY PRE WIRED WITH TYPE TEW WIRE, WITH WIRES FOR EXTERNAL CONNECTIONS BROUGHT TO PERMANENTLY IDENTIFIED TERMINALS . ALL WIRES TO BE PERMANENTLY IDENTIFIED AT BOTH ENDS WITH WIRE NO'S SHOWN ON DRAWINGS, USING BRADY (PART# PTL11-427) THERMAL TRANSFERRED SELF-LAMINATING VINYL WHITE LABEL TYPE WIRE MARKERS, OR EQUAL. ALL COMPONENTS INSIDE PANEL TO BE PERMANENTLY IDENTIFIED WITH ITEM NUMBERS SHOWN ON DRAWINGS USING SELF ADHESIVE LABEL OR EQUAL, OR BY APPLYING ITEM NUMBER WITH INDELIBLE MARKER TO COMPONENTS HAVING INTEGRAL MARKING AREA. ALL TERMINAL BLOCK NUMBERING SHALL BE DONE USING MANUFACTURER LABELS MARKING WITH PEN WILL NOT BE ACCEPTED. ALL DOOR WIRING TO BE NEATLY LOOMED, PVC WIRING TRAYS ON THE DOOR WILL NOT BE ACCEPTED. WIRING ON THE DOOR MUST INCLUDE A MINIMUM OF 20% SPARES CAPABLE OF REACHING ANY DEVICE MOUNTED ON THE DOOR. ALL PANELS TO BE C.S.A. CERTIFIED, WITH C.S.A. MARK APPLIED TO EACH PANEL BY PANEL FABRICATOR.

8 COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL COMPONENTS ASSOCIATED WITH THIS CONTROL PANEL

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NOTE:

THE ABOVE CONTROL PANEL(S) WILL BE INSPECTED AND TESTED AT THE PANEL FABRICATOR'S SHOP BY EIMCO WATER TECHNOLOGIES PERSONNEL, AND ON OCCASION, BY THE USER'S REPRESENTATIVE. THE PANEL FABRICATOR WILL BE EXPECTED TO PROVIDE BASIC TEST FACILITIES AND COOPERATE WITH INSPECTOR(S) TO FACILITATE THE ACCEPTANCE OF THE CONTROL PANEL(S). A HI POT TEST PERT C.S.A. STANDARDS IS TO BE PERFORMED ON THE PANEL(S) BY THE PANEL FABRICATOR PRIOR TO THE EIMCO WATER TECHNOLOGIES EQUIPMENT INSPECTION. PANEL FABRICATOR TO NOTIFY EIMCO WATER TECHNOLOGIES AT LEAST ONE WEEK PRIOR TO THE PANEL(S) BEING READY FOR INSPECTION.

SPECIAL NOTE

WE ARE ASKING THAT THE PANEL SUPPLIER PROOF READ ALL ELECTRICAL DRAWINGS ASSOCIATED WITH THIS PANEL TO ENSURE THE COMPONENTS LISTED ARE OF SUFFICIENT QUANTITY AND FUNCTIONS TO MEET THE REQUIREMENTS OF THE OPERATION INTENDED BY THE SCHEMATIC DRAWING. ANY CHANGES REQUIRED SHALL BE REPORTED TO EIMCO WATER TECHNOLOGIES PRIOR TO QUOTING OR MANUFACTURING.

DRAWING REVIEW

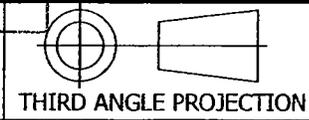
Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design

No Comment
 Amend as noted
 Amend and Resubmit
 Rejected See Comments

Per: *[Signature]*

PART No. 580026A

INITIAL RELEASE	Date: DEC. 4, 2007	ECO	BY	CHECK'D	DATE	A
REVISION						

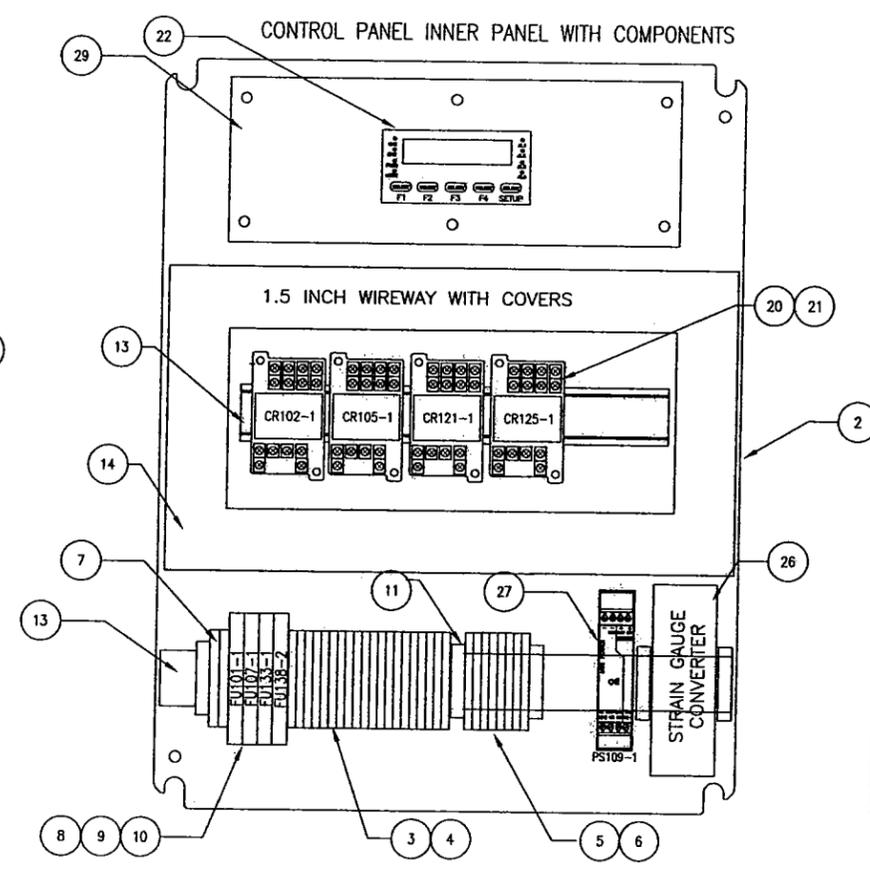
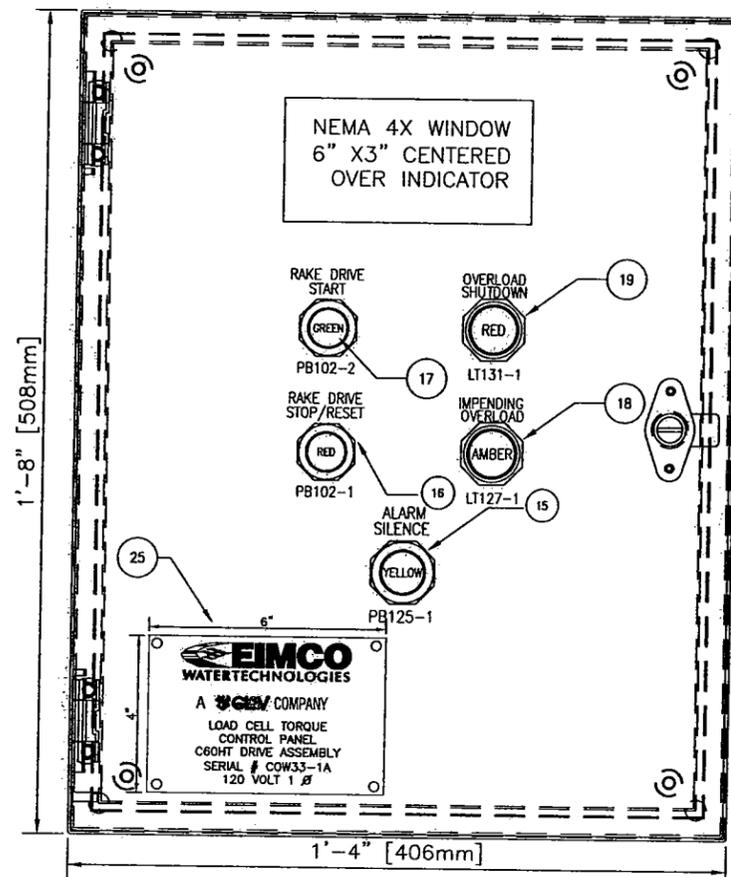


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TOTAL WT: -

PROJECT: COW33-1	CONTROL PANEL	DO NOT SCALE PRINTS	
DATE: 11/28/07		REF. FROM: -	
DRAWN: A.E.		SHEET 1 OF 1	
CHECK'D: REP		DWG. NO. A580026	REV A



PLEASE APPROVE THIS DRAWING AND RETURN TO DORR-OLIVER EIMCO. RECEIPT OF THIS DRAWING IS REQUIRED BY:
DEC. 12, 2007
DELAY IN RETURN OF THIS DRAWING CAN HAVE A DIRECT EFFECT ON SHIPMENT OF THIS ORDER. MANUFACTURING MAY NOT COMMENCE ON SOME OR ALL COMPONENTS OF THIS EQUIPMENT UNTIL APPROVAL DRAWINGS ARE RETURNED. THE RETURN OF THIS APPROVAL DRAWING WILL BE CONSIDERED FINAL AND ANY ALTERATIONS, ADDITIONS OR OMISSIONS AFTER APPROVAL OF THIS ISSUE WILL BE CONSIDERED EXTRAS WHICH MAY AFFECT THE SHIPMENT DATE.

EIMCO WATER TECHNOLOGIES
A GLV COMPANY

CUSTOMER: North End Water Pollution Control Center
EQUIPMENT: 115' Dia. C3 C60HT Primary Clarifier
CUSTOMER No. 361-2007
DORR-OLIVER EIMCO No. COW33-2

FOR INFORMATION PRELIMINARY FINAL
CONSTRUCTION APPROVAL CERTIFIED

DATE: NOV. 28, 07 BY: BOB PAAVOLA

- NOTES**
- 1) ALL PANEL WIRING TO BE MIN. #16 RED TEW WIRE
 - 2) NEUTRAL WIRES TO BE MIN. #16 WHITE TEW WIRE
 - 3) ALL ANALOG SIGNAL WIRING TO BE 100% SHIELDED CABLES AND RUN IN PANEL DUCT SEPARATE FROM CONTROL AND POWER WIRING.
 - 4) ALL WIRING FROM LOAD CELLS TO CONTROL PANEL TO BE 4 CONDUCTOR 100% SHIELDED LOW IMPEDANCE WIRE RUN IN SEPERATE CONDUITS AWAY FROM POWER CONDUCTORS.
 - 5) THE CONTROL PANEL SHOULD BE MOUNTED NO MORE THAN 50 FT. FROM THE LOAD CELL JUNCTION BOX.
 - 6) WIRING FROM DIGITAL CONTROLLER, TO PANEL TERMINAL BLOCK IS TO BE THE SAME COLOR AS THE WIRING ON THE LOAD CELL AS SHOWN ON SCHEMATIC DRAWING. WIRING FROM LOAD CELL JUNCTION BOX TO CONTROL PANEL MUST ALSO MATCH THE WIRE COLORS OF THE LOAD CELL.
 - 7) THE LOAD CELL CONTROLLER IS PROGRAMMED FOR FAIL SAFE OPERATION. THE ALARM RELAYS ARE ENERGIZED WHEN THERE ARE NO ALARMS PRESENT.
 - 8) SEE DRAWING C580016 FOR ELECTRICAL CONTROL SCHEMATIC
 - 9) SEE DRAWING B580017 FOR CONTROL PANEL BILL OF MATERIAL

LOAD CELL SETTINGS NOTES

1) SEE DRIVE HEAD MECHANICAL GA DWG. TO FOLLOW FOR LOCATION OF ITEMS 23 & 28

WORM GEAR THRUST IS 12,270 LBS AT 142.5% MACHINE TORQUE
WORM GEAR THRUST IS 10,274 LBS AT 120% MACHINE TORQUE

CONTROLLER SETTINGS

142.5% MACHINE HIGH CUTOUT SET AT 12,270 LBS. WORM GEAR THRUST
140% MACHINE CUTOUT SET AT 11,987 LBS. WORM GEAR THRUST
120% MACHINE ALARM SET AT 10,274 LBS. OF WORM GEAR THRUST

ADD LAMICOID TO OUTSIDE OF PANEL TO READ:

CIRCULAR PRIMARY CLARIFIER No. 1
P104-1PM1

CIRCULAR PRIMARY CLARIFIER No. 2
P204-2PM2

ADD HAND-OFF-AUTO SWITCH AND TERMINALS FOR A REMOTE START/STOP AS PER DRAWING C580016.

DRAWING REVIEW

Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design

No Comment
 Amend as noted
 Amend and Resubmit
 Rejected. See Comments

Per: [Signature]
Date: Dec. 4, 2007
KGS GROUP

PART No. 580015A

EIMCO WATER TECHNOLOGIES A GLV COMPANY

THIRD ANGLE PROJECTION

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TOTAL WT: -

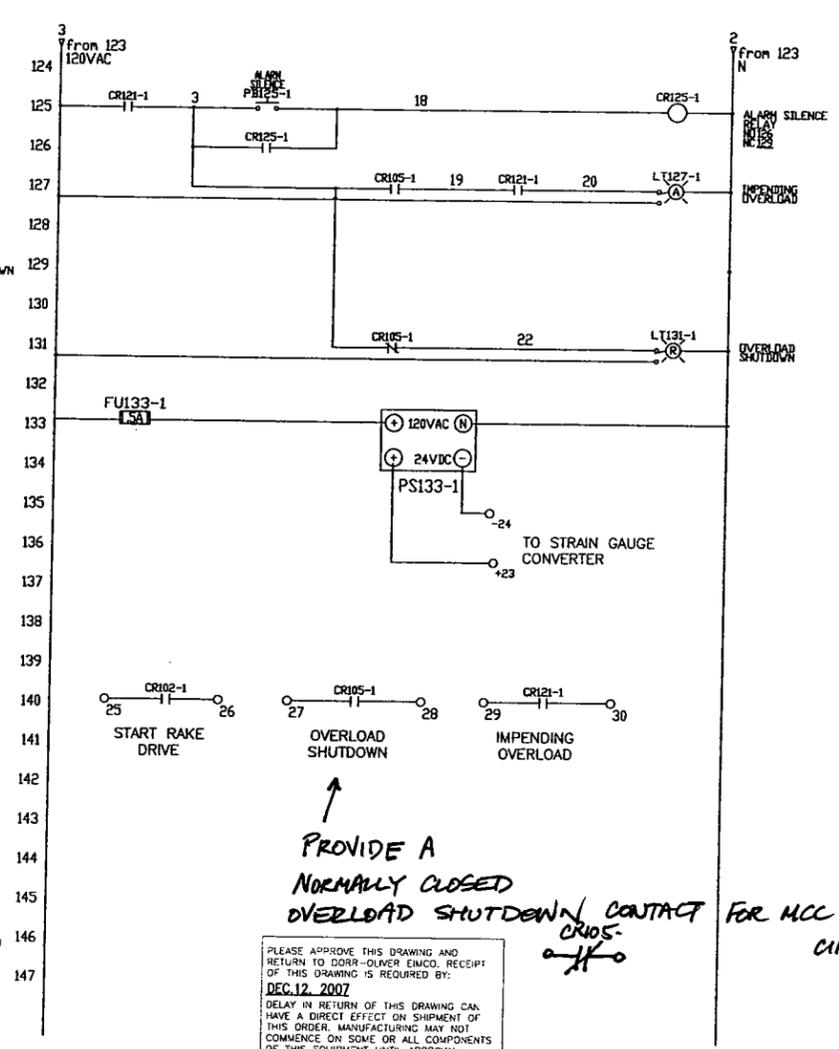
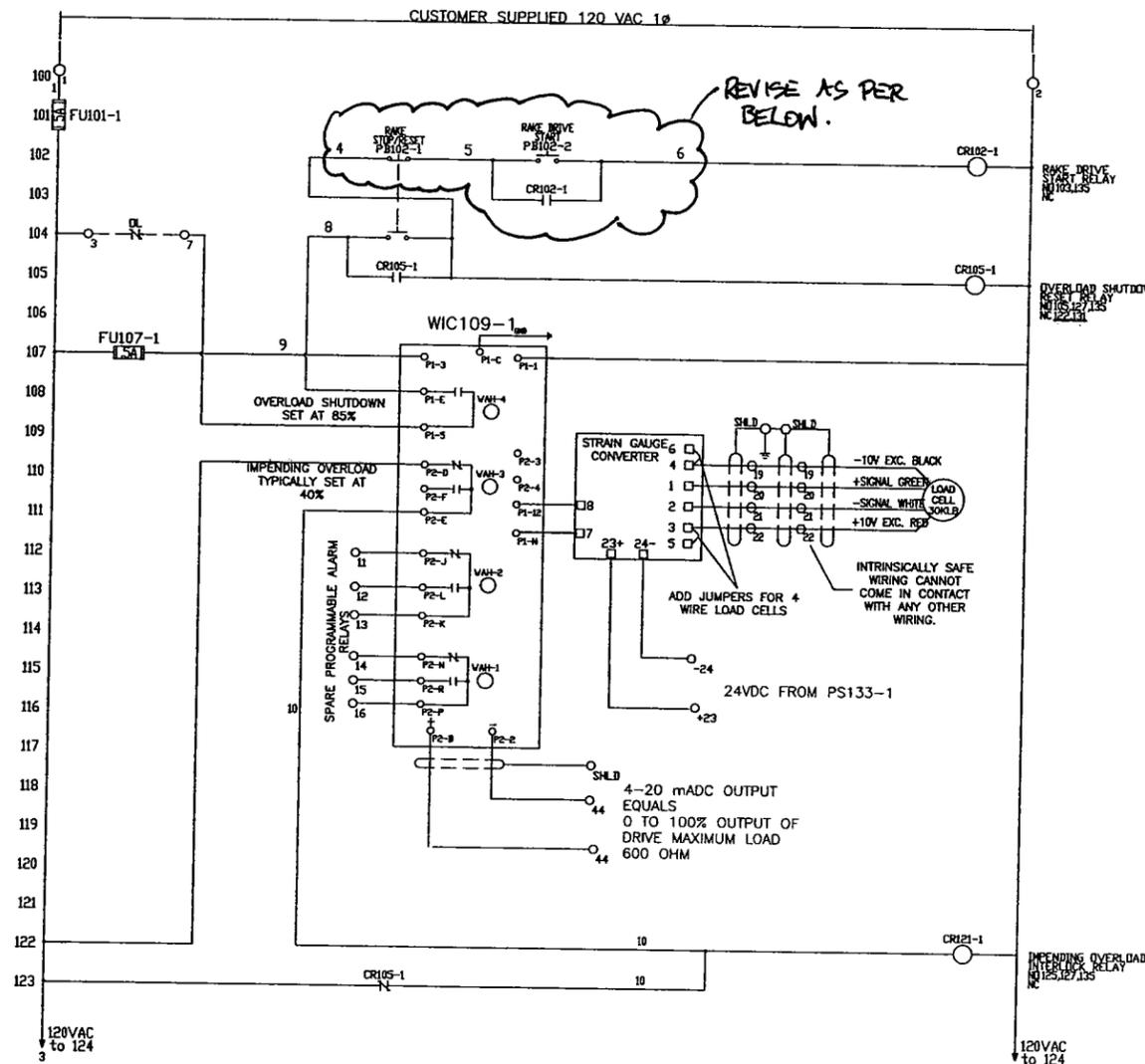
PROJECT: COW33-2
DATE: NOV. 26, 07
DRAWN: A.E.
CHECK'D: REP

LOAD CELL CONTROL PANEL COMPONET LAYOUT

DO NOT SCALE PRINTS
REF. FROM: -
SHEET 1 OF 1

DWG. NO. C580015
REV A

INITIAL RELEASE	REVISION	ECO	BY	CHECK'D	DATE



↑
**PROVIDE A
 NORMALLY CLOSED
 OVERLOAD SHUTDOWN CONTACT FOR MCC STARTER
 CIRCUIT.**

PLEASE APPROVE THIS DRAWING AND RETURN TO DORR-OLIVER EIMCO. RECEIPT OF THIS DRAWING IS REQUIRED BY:
DEC. 12, 2007
 DELAY IN RETURN OF THIS DRAWING CAN HAVE A DIRECT EFFECT ON SHIPMENT OF THIS ORDER. MANUFACTURING MAY NOT COMMENCE ON SOME OR ALL COMPONENTS OF THIS EQUIPMENT UNTIL APPROVAL OF THIS APPROVAL DRAWING WILL BE CONSIDERED FINAL AND ANY ALTERATIONS, ADDITIONS OR OMISSIONS AFTER APPROVAL OF THIS ISSUE WILL BE CONSIDERED EXTRAS WHICH MAY AFFECT THE SHIPMENT DATE.

EIMCO WATER TECHNOLOGIES
 A GLV COMPANY

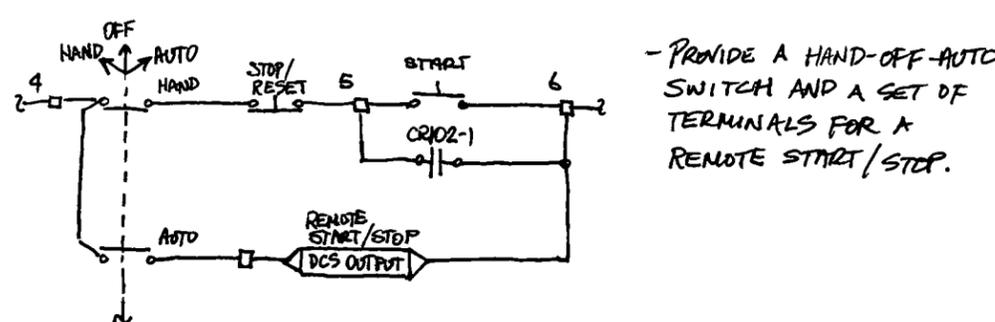
CUSTOMER: North End Water Pollution Control Center
 EQUIPMENT: 115' Dia. C3 C60HT Primary Clarifier
 CUSTOMER No. 361-2007
 DORR-OLIVER EIMCO No. COW33-2
 FOR INFORMATION PRELIMINARY FINAL
 CONSTRUCTION APPROVAL CERTIFIED
 DATE: NOV. 28, 07 BY: BOB PAAVOLA

- NOTES**
- 1) ----- DENOTES WIRING BY OTHERS.
 - 2) ○₃ DENOTES TERMINAL IN LOAD CELL CONTROL PANEL
 - 3) ○ DENOTES TERMINAL IN LOAD CELL JUNCTION BOX
 - 4) THE CONTROLLERS ARE PROGRAMMED FOR FAIL SAFE OPERATION, THE ALARM RELAYS ARE ENERGIZED WHEN NO ALARMS ARE PRESENT. ANY POWER OR RELAY FAILURE WILL CAUSE THE ALARMS TO ACTIVATE.
 - 5) SEE DRAWING C580015 FOR CONTROL PANEL COMPONENT LAYOUT
 - 6) SEE DRAWING B580017 FOR CONTROL PANEL BILL OF MATERIAL

DRAWING REVIEW
 Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design

No Comment
 Amend as noted
 Amend and Resubmit
 Rejected, See Comments

Per: *[Signature]*
 Date: Dec. 4, 2007
K G S GROUP



INITIAL RELEASE	ECO	BY	CHECK'D	DATE
REVISION				

PART No. **580016A**

EIMCO WATER TECHNOLOGIES A GLV COMPANY

THIRD ANGLE PROJECTION

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PROJECT: COW33-2
 DATE: NOV. 26, 07
 DRAWN: A.E.
 CHECK'D: REP

WIRING DIAGRAM FOR SINGLE LOAD CELL WITH ISOLATOR

DO NOT SCALE PRINTS
 REF. FROM: -
 SHEET 1 OF 1

DWG. NO. C580016
 REV A

TOTAL WT: -

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NOTES

- 1) SEE DRAWING C580016 FOR ELECTRICAL CONTROL SCHEMATIC
- 2) SEE DRAWING C580015 FOR CONTROL PANEL COMPONENT LAYOUT
- 3) ITEMS 23 & 28 ARE MOUNTED ON DRIVE HEAD

PLEASE APPROVE THIS DRAWING AND RETURN TO DORR-OLIVER EIMCO. RECEIPT OF THIS DRAWING IS REQUIRED BY:
DEC. 12, 2007
 DELAY IN RETURN OF THIS DRAWING CAN HAVE A DIRECT EFFECT ON SHIPMENT OF THIS ORDER. MANUFACTURING MAY NOT COMMENCE ON SOME OR ALL COMPONENTS OF THIS EQUIPMENT UNTIL APPROVAL DRAWINGS ARE RETURNED. THE RETURN OF THIS APPROVAL DRAWING WILL BE CONSIDERED FINAL AND ANY ALTERATIONS, ADDITIONS OR OMISSIONS AFTER APPROVAL OF THIS ISSUE WILL BE CONSIDERED EXTRAS WHICH MAY EFFECT THE SHIPMENT DATE.

DRAWING REVIEW
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No Comment
 Amend as noted
 Amend and Resubmit
 Rejected. See Comments

Per: *[Signature]*
 Date: Dec. 4, 2007
K G S GROUP

EIMCO WATER TECHNOLOGIES
 A GLV COMPANY

CUSTOMER: North End Water Pollution Control Center
 EQUIPMENT: 115' Dia. C3 C60HT Primary Clarifier
 CUSTOMER No. 361-2007
 DORR-OLIVER EIMCO No. COW33-2

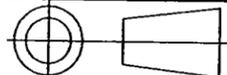
FOR INFORMATION PRELIMINARY FINAL
 CONSTRUCTION APPROVAL CERTIFIED

DATE: NOV. 28, 07 BY: BOB PAAVOLA

ITEM	QTY	DESCRIPTION	MANUFACTURER	MFR. PART NO.	DRAWING NO.
1	1	NEMA 4X 316 STAINLESS STEEL ENCLOSRE	HOFFMAN	CSD20168SS6	
2	1	ENCLOSURE INNER PANEL	HOFFMAN	CP2016	
3	16	TYPE UT 2.5 TERMINAL BLOCKS RED	PHOENIX CONTACT	3045062	
4	1	TYPE D UT 2.5/10 TERMINAL BLOCK END PLATE	PHOENIX CONTACT	3047028	
5	10	TYPE UT 2.5 TERMINAL BLOCKS BLUE	PHOENIX CONTACT	3044089	
6	1	TYPE D UT 2.5/10 TERMINAL BLOCK END PLATE	PHOENIX CONTACT	3047028	
7	2	TYPE UT2.5 PE EARTH TERMINAL BLOCKS	PHOENIX CONTACT	3044092	
8	4	UT 6-HESI TERMINAL BLOCK FUSE BLOCKS	PHOENIX CONTACT	3046401	
9	2	5 AMP CONTROL FUSE	LITTLEFUSE	312 5	
10	2	1 AMP CONTROLLER FUSE	LITTLEFUSE	312 1	
11	4	CLIPFIX 35-5 TERMINAL BLOCK END BRACKETS	PHOENIX CONTACT	3022276	
12	2	BG/SH TERMINAL BLOCK MOUNTING ANGLE BRACKETS	PHOENIX CONTACT	1201099	
13	2	TYPE NS 35/7,5 GELOCHT MOUNTING RAIL	PHOENIX CONTACT	0801733	
14		1.5" PVC WIRE WAY C/W COVERS	PANDUCT		
15	1	SINGLE POLE MOMENTARY YELLOW PUSH-BUTTON	ALLEN BRADLEY	800H-R9D1	
16	1	DOUBLE POLE MOMENTARY PUSH-BUTTON RED	ALLEN BRADLEY	800H-R6A	
17	1	SINGLE POLE MOMENTARY PUSH-BUTTON GREEN	ALLEN BRADLEY	800H-R1D1	
18	1	TRANSF. TYPE PUSH TO TEST PILOT LIGHT AMBER	ALLEN BRADLEY	800H-PRTH26A	
19	1	TRANSF. TYPE PUSH TO TEST PILOT LIGHT RED	ALLEN BRADLEY	800H-PRTH26R	
20	4	4 POLE CONTROL RELAYS	ALLEN BRADLEY	700-HF34A2	
21	4	4 POLE RELAY MOUNTING BLOCKS	ALLEN BRADLEY	700-HN139	
22	1	4-20MA INPUT TORQUE INDICATOR AND CONTROLLER	DIGITEC	145208	C580016
23	REF	30,000 LB LOAD CELL (LOCATED ON DRIVE HEAD)	FUTEK		
24	LOT	LAMACOID NAMEPLATES BLACK LETTERS WHITE BACKGROUND	PANEL SUPPLIER		
25	1	CONTROL PANEL LOGO NAMEPLATE	PANEL SUPPLIER	580018	A580018
26	1	STRAIN GAUGE CONVERTER	PEPPERL+FUCHS	KFD2-WAC2-EX1.D	C580015
27	1	MINI-PS-100-120/24VDC/1 POWER SUPPLY	PHOENIX CONTACT		
28	1	LOAD CELL JUNCTION BOX (LOCATED ON DRIVE HEAD)	RALSTON	580019	D580019
29	1	TORQUE CONTROLER MOUNTING PLATE	PANEL SUPPLIER		

REVISE TO REFLECT CHANGES ON DRAWING C580016

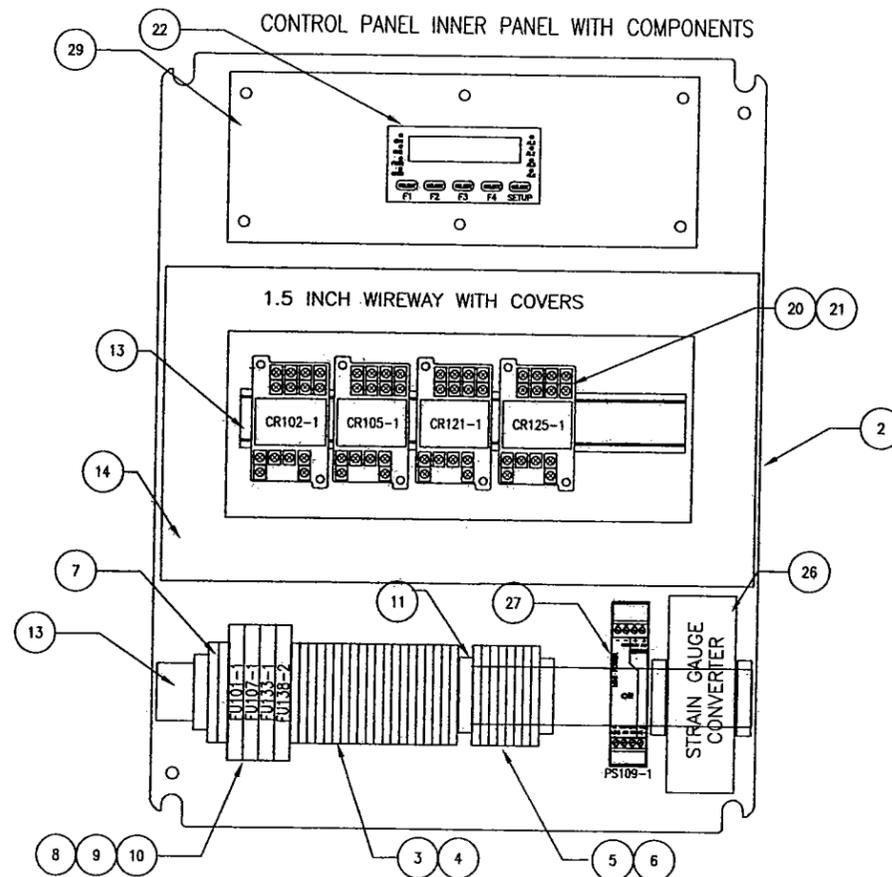
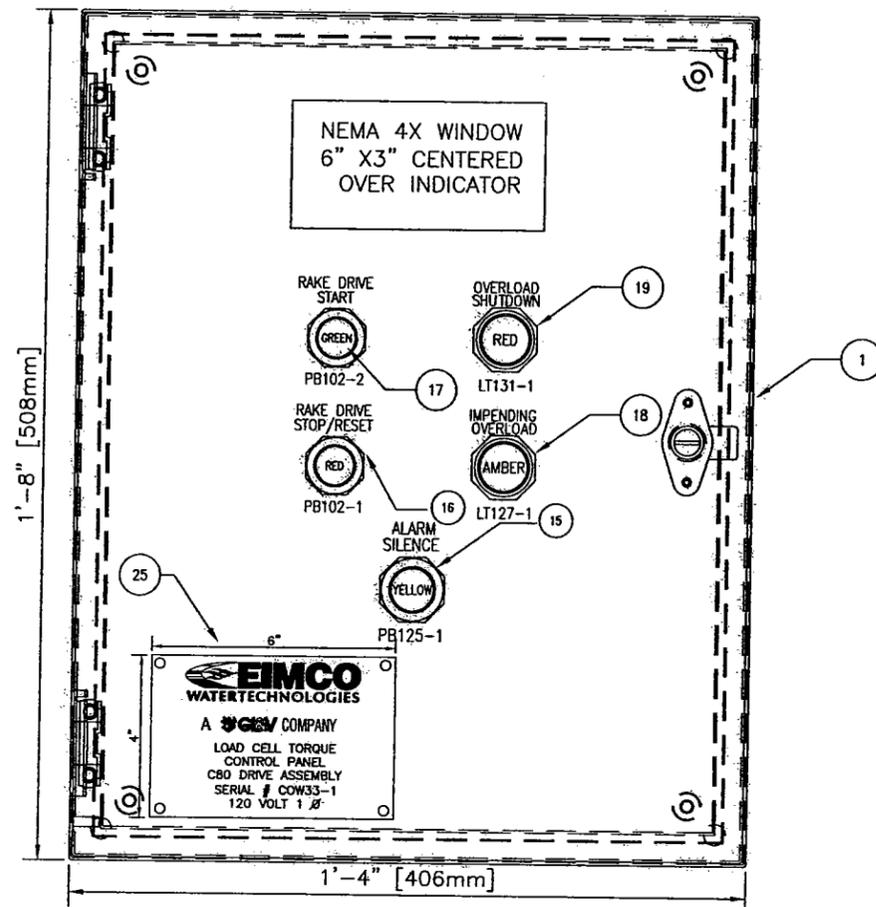
PART No. **580017BM**

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PROJECT: COW33-2		LOCAL TORQUE CONTROL PANEL BILL OF MATERIAL		REF. FROM: -		SHEET 1 OF 1	
DATE: NOV. 18, 07	DRAWN: A.E.			DWG. NO. B580017		REV A	
CHECK'D:	REP:						

INITIAL RELEASE						
REVISION	ECO	BY	CHECK'D	DATE		

ADD LAMICOID TO OUTSIDE OF PANEL TO READ:

CIRCULAR PRIMARY CLARIFIER No. 3
P304-1PM3



PLEASE APPROVE THIS DRAWING AND RETURN TO DORR-OLIVER EIMCO. RECEIPT OF THIS DRAWING IS REQUIRED BY:
DEC. 12, 2007
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EIMCO WATER TECHNOLOGIES
A GLV COMPANY

CUSTOMER: North End Water Pollution Control Center
EQUIPMENT: 145' Dia. C80 Primary Clarifier
CUSTOMER No. 361-2007
DORR-OLIVER EIMCO No. COW33-1

FOR INFORMATION PRELIMINARY FINAL
CONSTRUCTION APPROVAL CERTIFIED

DATE: NOV. 28, 07 BY: BOB PAAVOLA

DRAWING REVIEW

Review of this drawing is made for general compliance with contract documents and does not relieve Contractor of responsibility for accuracy of details and design

No Comment
 Amend as noted
 Amend and Resubmit
 Rejected. See Comments

Per: *[Signature]*
Date: DEC. 4, 2007

KGS GROUP

NOTES

- 1) ALL PANEL WIRING TO BE MIN. #16 RED TEW WIRE
- 2) NEUTRAL WIRES TO BE MIN. #16 WHITE TEW WIRE
- 3) ALL ANALOG SIGNAL WIRING TO BE 100% SHIELDED CABLES AND RUN IN PANEL DUCT SEPARATE FROM CONTROL AND POWER WIRING.
- 4) ALL WIRING FROM LOAD CELLS TO CONTROL PANEL TO BE 4 CONDUCTOR 100% SHIELDED LOW IMPEDANCE WIRE RUN IN SEPERATE CONDUITS AWAY FROM POWER CONDUCTORS.
- 5) THE CONTROL PANEL SHOULD BE MOUNTED NO MORE THAN 50 FT. FROM THE LOAD CELL JUNCTION BOX.
- 6) WIRING FROM DIGITAL CONTROLLER, TO PANEL TERMINAL BLOCK IS TO BE THE SAME COLOR AS THE WIRING ON THE LOAD CELL AS SHOWN ON SCHEMATIC DRAWING. WIRING FROM LOAD CELL JUNCTION BOX TO CONTROL PANEL MUST ALSO MATCH THE WIRE COLORS OF THE LOAD CELL.
- 7) THE LOAD CELL CONTROLLER IS PROGRAMMED FOR FAIL SAFE OPERATION. THE ALARM RELAYS ARE ENERGIZED WHEN THERE ARE NO ALARMS PRESENT.
- 8) SEE DRAWING C580022 FOR ELECTRICAL CONTROL SCHEMATIC
- 9) SEE DRAWING B580023 FOR CONTROL PANEL BILL OF MATERIAL

TERMINAL BLOCK NUMBERING

1	2	3	7	11	12	13	14	15	16	25	26	27	28	29	30	SP	SP	19	20	21	22	SHLD	44	45	SHLD	SP	SP
---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	------	----	----	------	----	----

LOAD CELL SETTINGS NOTES

1) SEE DRIVE HEAD MECHANICAL GA DWG. TO FOLLOW FOR LOCATION OF ITEMS 23 & 28

WORM GEAR THRUST IS 15,708 LBS AT 142.5% MACHINE TORQUE
WORM GEAR THRUST IS 13,264 LBS AT 120% MACHINE TORQUE

CONTROLLER SETTINGS

142.5% MACHINE HIGH CUTOUT SET AT 15,708 LBS. WORM GEAR THRUST
140% MACHINE CUTOUT SET AT 15,475 LBS. WORM GEAR THRUST
120% MACHINE ALARM SET AT 13,264 LBS. OF WORM GEAR THRUST

ADD HAND-OFF-AUTO SWITCH AND TERMINALS FOR A REMOTE START/STOP AS PER DRAWING C580022

PART No. **580021A**

INITIAL RELEASE						
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PROJECT: COW33-1				TOTAL WT: -			
DATE: NOV. 28, 07				DO NOT SCALE PRINTS			
DRAWN: A.E.				REF. FROM: -			
CHECK'D: REP				SHEET 1 OF 1			
				DWG. NO. C580021		REV. A	

NOTES

- 1) SEE DRAWING C580022 FOR ELECTRICAL CONTROL SCHEMATIC
- 2) SEE DRAWING C580021 FOR CONTROL PANEL COMPONENT LAYOUT
- 3) ITEMS 23 & 28 ARE MOUNTED ON DRIVE HEAD

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DRAWING REVIEW
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No Comment
 Amend as noted
 Amend and Resubmit
 Rejected. See Comments

Per: *[Signature]*
 Date: Dec. 4, 2007
K G S GROUP

EIMCO WATER TECHNOLOGIES
 A **GLV** COMPANY

CUSTOMER: North End Water Pollution Control Center
 EQUIPMENT: 145' Dia. C80 Primary Clarifier
 CUSTOMER No. 361-2007
 DORR-OLIVER EIMCO No. COW33-1

FOR INFORMATION PRELIMINARY FINAL
 CONSTRUCTION APPROVAL CERTIFIED

DATE: NOV. 28, 07 BY: BOB PAAVOLA

ITEM	QTY	DESCRIPTION	MANUFACTURER	MFR. PART NO.	DRAWING NO.
1	1	NEMA 4X 316 STAINLESS STEEL ENCLOSRE	HOFFMAN	CSD20168SS6	
2	1	ENCLOSURE INNER PANEL	HOFFMAN	CP2016	
3	16	TYPE UT 2.5 TERMINAL BLOCKS RED	PHOENIX CONTACT	3045062	
4	1	TYPE D UT 2.5/10 TERMINAL BLOCK END PLATE	PHOENIX CONTACT	3047028	
5	10	TYPE UT 2.5 TERMINAL BLOCKS BLUE	PHOENIX CONTACT	3044089	
6	1	TYPE D UT 2.5/10 TERMINAL BLOCK END PLATE	PHOENIX CONTACT	3047028	
7	2	TYPE UT2.5 PE EARTH TERMINAL BLOCKS	PHOENIX CONTACT	3044092	
8	4	UT 6-HESI TERMINAL BLOCK FUSE BLOCKS	PHOENIX CONTACT	3046401	
9	2	5 AMP CONTROL FUSE	LITTLEFUSE	312 5	
10	2	1 AMP CONTROLLER FUSE	LITTLEFUSE	312 1	
11	4	CLIPFIX 35-5 TERMINAL BLOCK END BRACKETS	PHOENIX CONTACT	3022276	
12	2	BG/SH TERMINAL BLOCK MOUNTING ANGLE BRACKETS	PHOENIX CONTACT	1201099	
13	2	TYPE NS 35/7,5 GELOCHT MOUNTING RAIL	PHOENIX CONTACT	0801733	
14		1.5" PVC WIRE WAY C/W COVERS	PANDUCT		
15	1	SINGLE POLE MOMENTARY YELLOW PUSH-BUTTON	ALLEN BRADLEY	800H-R9D1	
16	1	DOUBLE POLE MOMENTARY PUSH-BUTTON RED	ALLEN BRADLEY	800H-R6A	
17	1	SINGLE POLE MOMENTARY PUSH-BUTTON GREEN	ALLEN BRADLEY	800H-R1D1	
18	1	TRANSF. TYPE PUSH TO TEST PILOT LIGHT AMBER	ALLEN BRADLEY	800H-PRTH26A	
19	1	TRANSF. TYPE PUSH TO TEST PILOT LIGHT RED	ALLEN BRADLEY	800H-PRTH26R	
20	4	4 POLE CONTROL RELAYS	ALLEN BRADLEY	700-HF3A2	
21	4	4 POLE RELAY MOUNTING BLOCKS	ALLEN BRADLEY	700-HN139	
22	1	4-20MA INPUT TORQUE INDICATOR AND CONTROLLER	DIGITEC	145208	C580016
23	REF	30,000 LB LOAD CELL (LOCATED ON DRIVE HEAD)	FUTEK		
24	LOT	LAMACOID NAMEPLATES BLACK LETTERS WHITE BACKGROUND	PANEL SUPPLIER		
25	1	CONTROL PANEL LOGO NAMEPLATE	PANEL SUPPLIER	580018	A580018
26	1	STRAIN GAUGE CONVERTER	PEPPERL+FUCHS	KFD2-WAC2-EX1.D	C580015
27	1	MINI-PS-100-120/24VDC/1 POWER SUPPLY	PHOENIX CONTACT		
28	1	LOAD CELL JUNCTION BOX (LOCATED ON DRIVE HEAD)	RALSTON	580019	D580019
29	1	TORQUE CONTROLER MOUNTING PLATE	PANEL SUPPLIER		

REVISED TO REFLECT CHANGES ON DRAWING C580022.

PART No. **580023BM**

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PROJECT: COW33-1		LOCAL TORQUE CONTROL PANEL BILL OF MATERIAL				DO NOT SCALE PRINTS	
DATE: NOV. 28, 07						REF. FROM: -	
DRAWN: A.E.						SHEET 1 OF 1	
CHECK'D: REP						DWG. NO. B580023	
INITIAL RELEASE		REVISION		ECO BY CHECK'D DATE		REV A	

