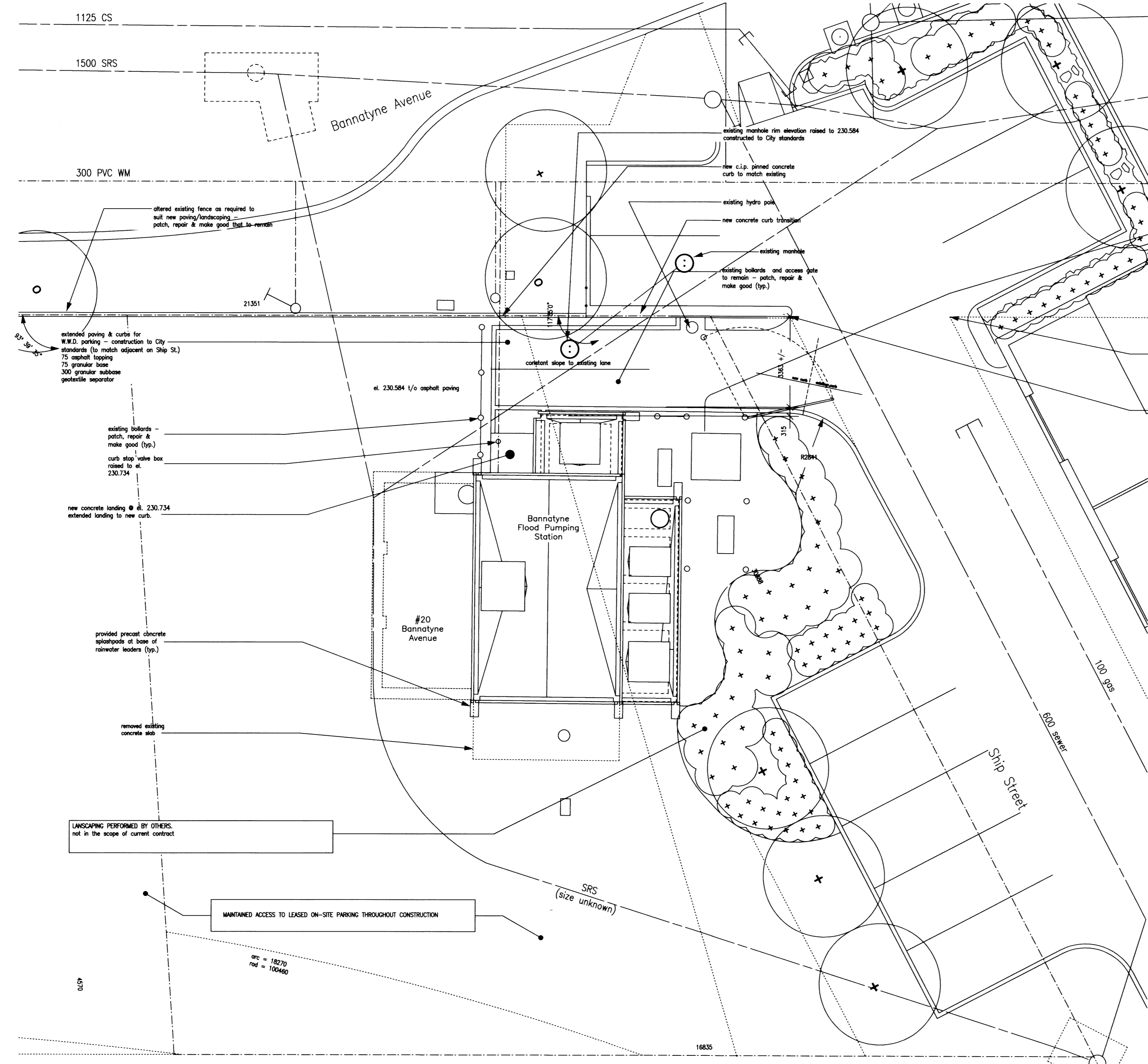
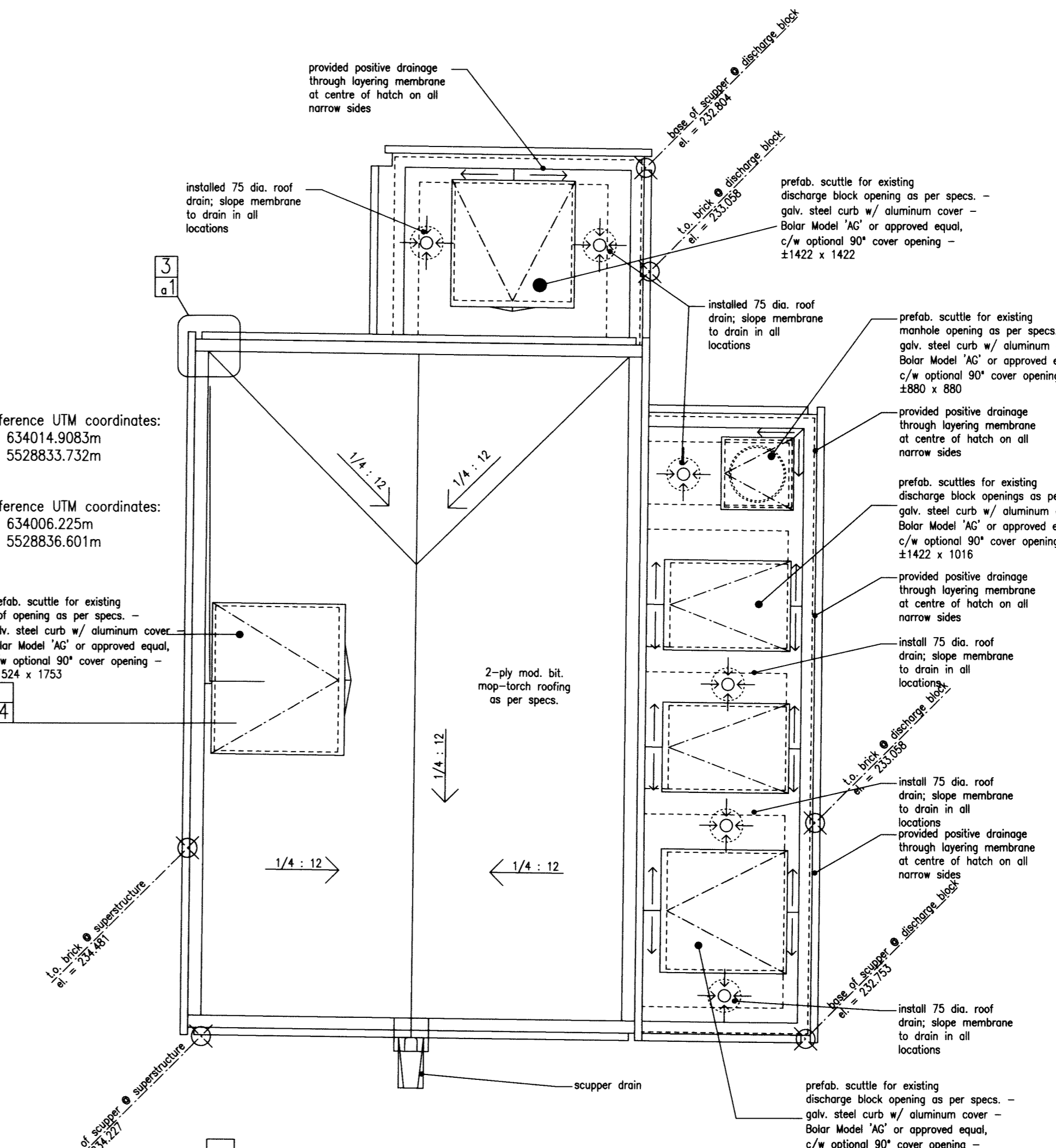


3 Isometric Details @ Scupper (typ.)
1 : 10



1 Site Plan
1 : 100



2 Roof Plan
1 : 50

RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE: 19 SEPTEMBER 09
CONTRACTOR: SBS PROJECTS INC.

B.M.	XX.XXX	ELEV.	XXX.XXX
1	RECORD DRAWING	10/06/11	TBM
0	ISSUED FOR CONSTRUCTION	19/06/08	TBM
NO	REVISIONS	DATE	BY
		17/01/08	

SYVERSON MONTEYNE
ARCHITECTURE INC.
P. 204.947.3155 194 Sherbrook Street, Winnipeg, MB.
F. 204.947.3161 Canada R3C 2B6 www.sm-arc.com

DESIGNED BY	TBM	CHECKED BY	CMS
DRAWN BY	FDN	APPROVED BY	
SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION:	
	100% at A1 Sheet		
	50% at A3 Sheet		
DATE	17/01/08	DATE	

ARCHITECT'S SEAL
MONTEYNE
REGISTERED ARCHITECT
CONSULTANT DRAWING NO. a1.0

THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT
BANNATYNE FLOOD PUMPING STATION
BUILDING UPGRADE
ARCHITECTURAL
SITE PLAN, ROOF PLAN
GENERAL NOTES

SHEET OF 01 04
CAD FILE DRAWING NUMBER
CITY DRAWING NUMBER LD-5047

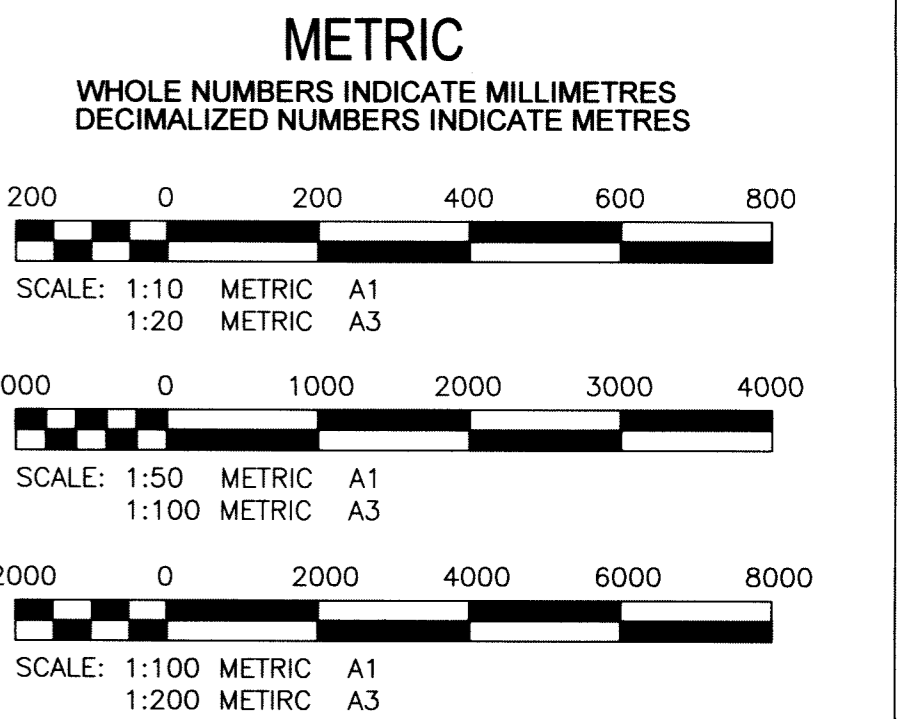
GENERAL NOTES:
do not scale drawings.
contractor to possess and distribute the most recent contract documents. report discrepancies immediately to the contract administrator prior to construction.
all materials and finishes to be maintained in the course of this project are to be protected and, if damaged, are to be patched repaired and made good.
refer to specifications for procedures and regulations regarding construction site safety, security and cleanliness.

DEMOLITION:
removed all exterior finishes (stucco, face brick) & building papers down to bare concrete or plywood sheathing. remove all staples and other fasteners or sharp edges from existing substrate to ensure adhesion and integrity of new air/vapour barrier.
removed all roof hatches and access covers. removed all roofing, roofing papers and roof insulation (if any) down to bare concrete or plywood sheathing. remove existing parapet caps and all associated flashings. remove all staples and other fasteners or sharp edges from existing substrate to ensure adhesion and integrity of new air/vapour barrier.
removed existing door & frame. removed all louvers and frames (existing fans to be maintained or removed as per Mechanical). remove concrete frame around louvre/filled-in windows on west wall of discharge block.
refer to Mechanical & Electrical for demolition pertaining to site services and connections to the building. refer to Landscape (see note on Site Plan, dwg. 1/01) for demolition pertaining to other site elements.

LEGAL DESCRIPTION:
sp lot 4 plan 32971 W10 and lot 25 plan 223 W10 (w div) in RL 6 & 7, parish of St. John
certificates of title: 20783398 & 2078399
site information from legal survey by Pollock & Wright, 28 September 2006 (file no. 0609246)

BUILDING CODE ANALYSIS:
as this is a building of medium hazard industrial (group F2) occupancy, is 1 storey high and has a building area less than 600m² (±47.75 m² or 514 ft²), the portion of the Code (NBC 2005) that applies is Part 9 (NBC 1.3.3.3.1.a, 9.1.1.1.1).
NOTE: this is a utility building, intermittently occupied by service personnel only, as such, it is exempt from sections 3.7, 3.8, part 5 and their corresponding sections in Part 9 of the Code.
the Code must be adhered to for the portions of this building that are being altered and repaired, however (NBC 1.3.5.1.1).
medium hazard industrial (group F2) occupancy, 1 storey high facing 1 street
floor area = 47.75 m² (514 ft²), floor assembly is cast in place concrete providing min. 45 min. F.R.R. supporting structure for this floor is noncombustible. (conforms with NBC 3.2.2.7.1, 9.10.8.11)
exit door = 1220mm wide (conforms to NBC 9.9.6.3.2.a)
area of superstructure room = ±37.2 m² (<150 m²)
greatest travel distance to exit = ±9.6m (<10m)
intermittently occupied by service personnel only
therefore one exit permitted per NBC 9.9.7.4
greatest travel distance to exit = ±9.6m (<30m - conforms to NBC 9.9.8.2)
interconnected floor space between superstructure and pump room below is permitted as it is a stairwell only and conforms to NBC 3.2.8.2.6, 9.10.9.5
maximum % unprotected openings, all exposing building faces = 100% therefore, per NBC table 9.10.14.5, exterior walls are not required to have a fire resistance rating, be of noncombustible construction or have noncombustible cladding.

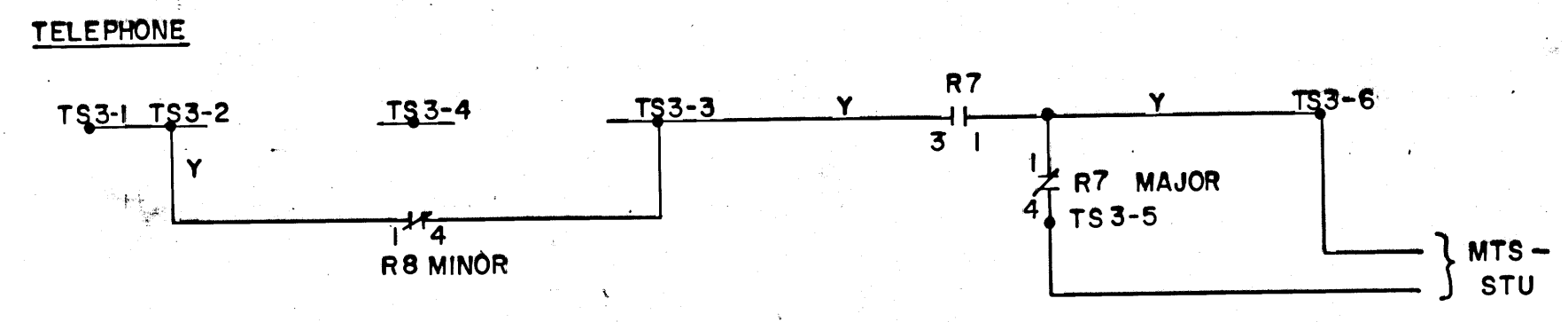
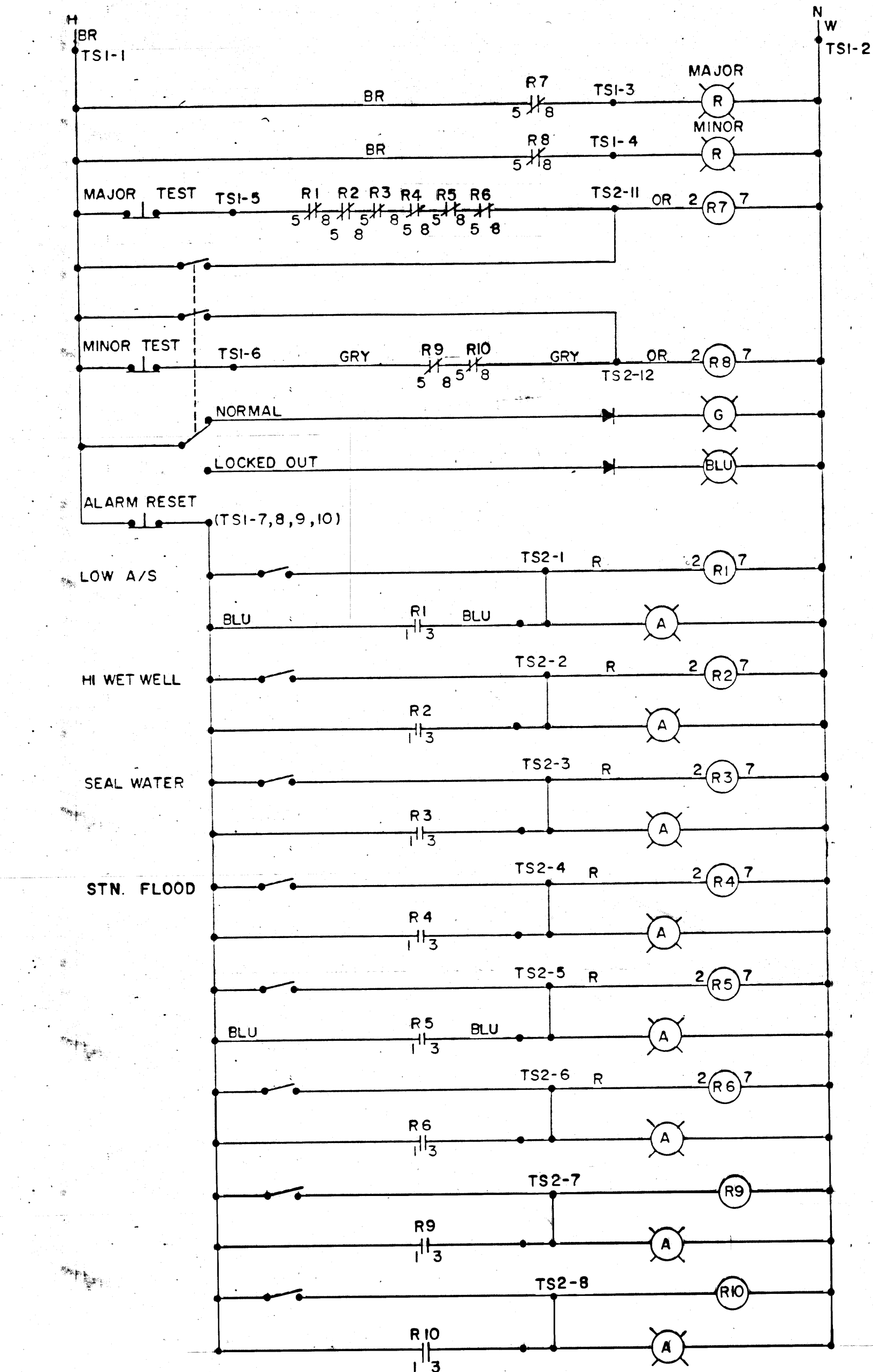
INDEX OF DRAWINGS:
a1.0 site plan, roof plan & notes
a2.0 floor plans and plan details
a3.0 elevations
a4.0 building section



File # FP 10 115

10-FS-Q-1

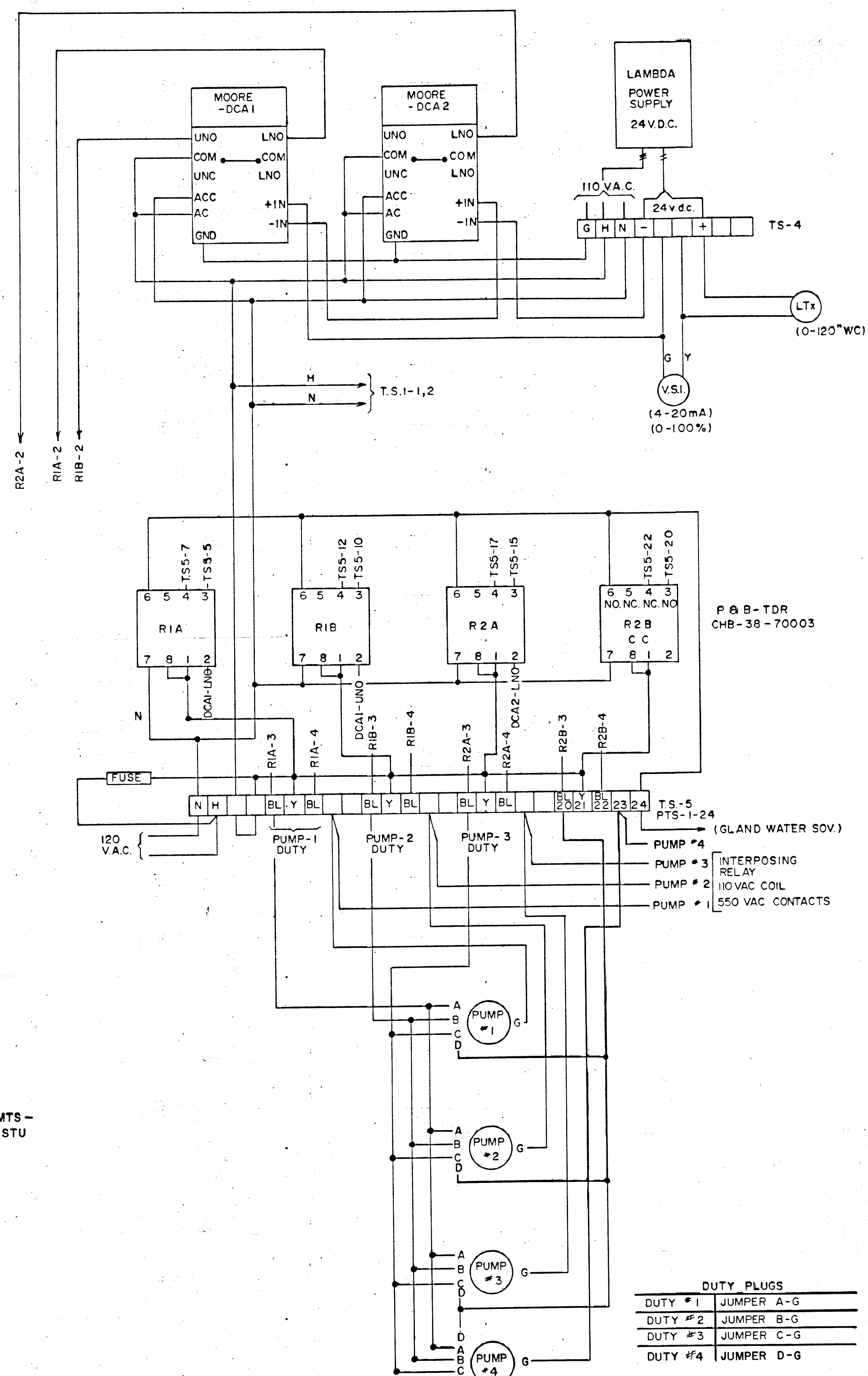
REF. or DRAWING No. DETAILS



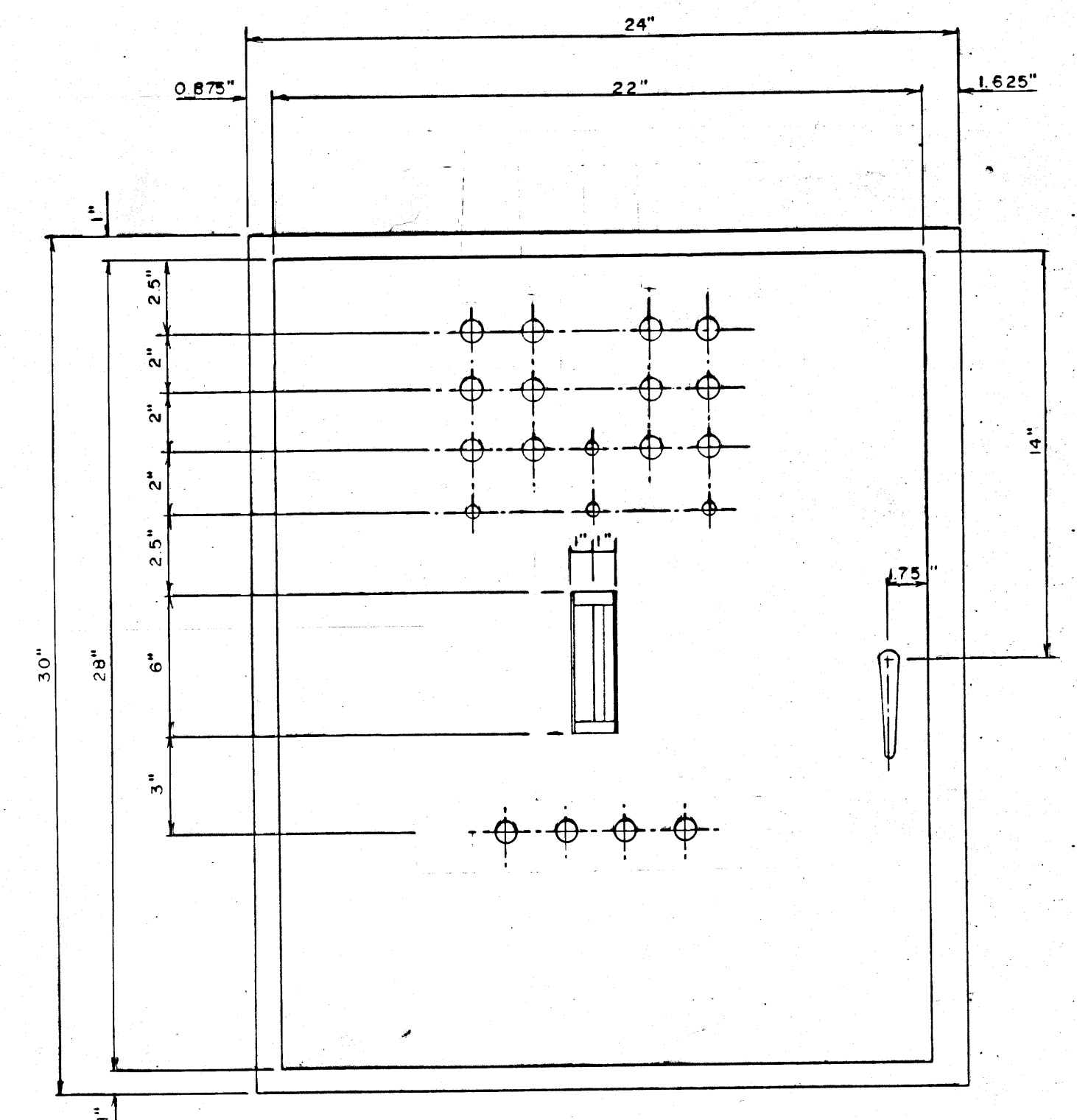
NOTES REFERENCE CITY OF WINNIPEG DYKING BOARD DWG. 5-SD-10

INVERT	ELEV.	736.33
SPILL	ELEV.	738.83
FLOOD ALARM	ELEV.	744.80
Tx SPAN	ELEV.	736.8 - 746.8
BUBBLE PIPE	ELEV.	735.83

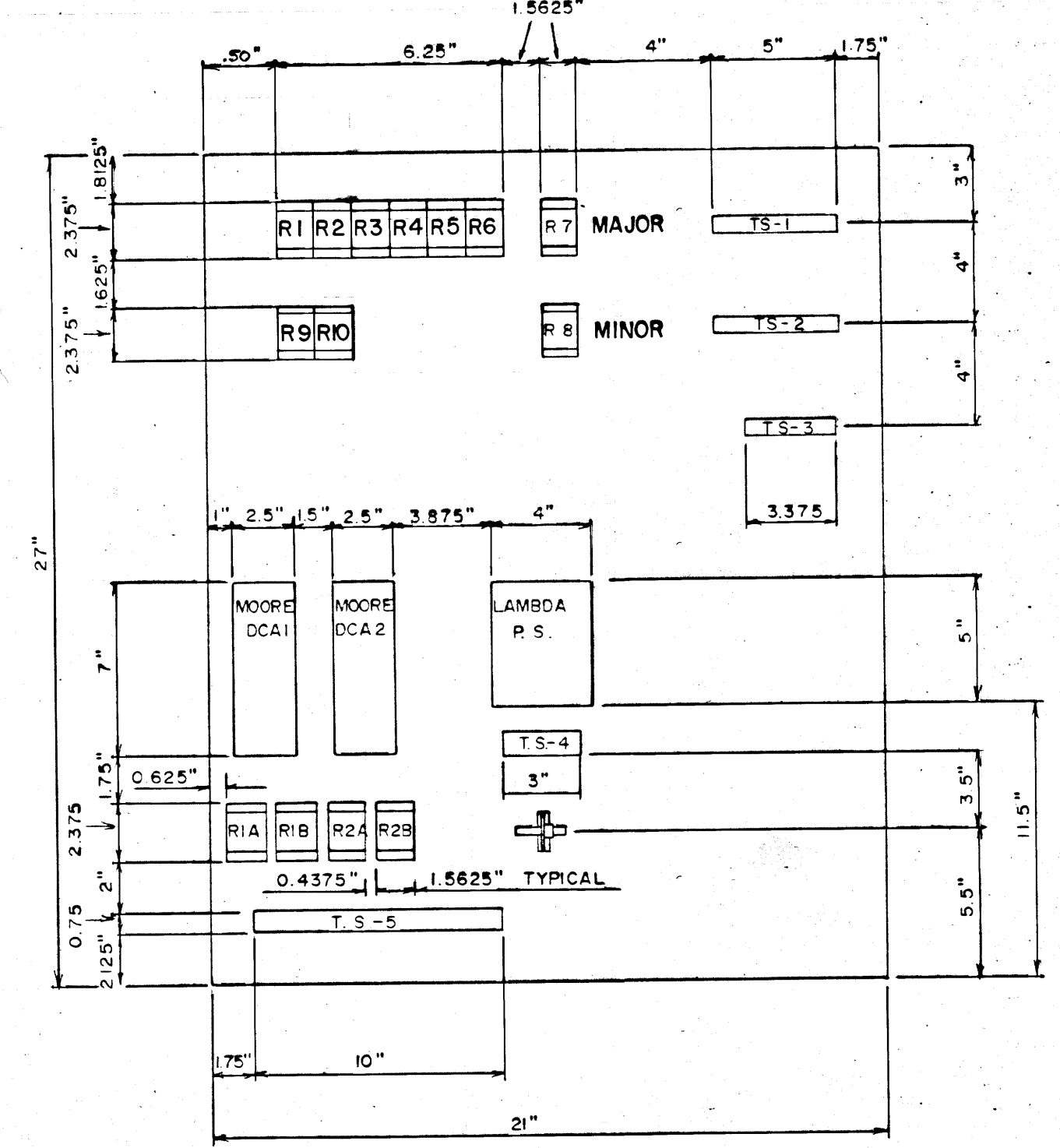
PUMP CONTROL	ON		OFF	
	DUTY	mA	DUTY	mA
DUTY 1	55%	12.8mA	35%	9.6mA
DUTY 2	60%	13.6mA	40%	10.4mA
DUTY 3	65%	14.4mA	45%	11.2mA
DUTY 4	70%	15.2mA	50%	12.0mA



DUTY PLUGS	
DUTY #1	JUMPER A-G
DUTY #2	JUMPER B-G
DUTY #3	JUMPER C-G
DUTY #4	JUMPER D-G



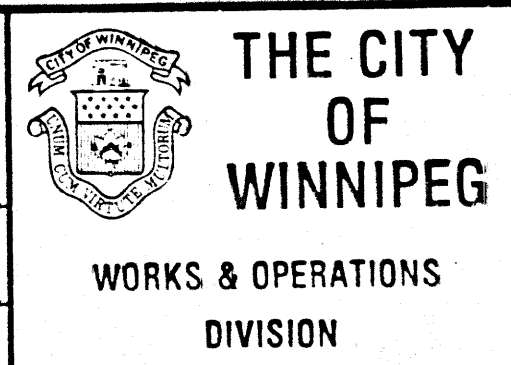
CONTROL PANEL DOOR



REMOVABLE INTERIOR PANEL

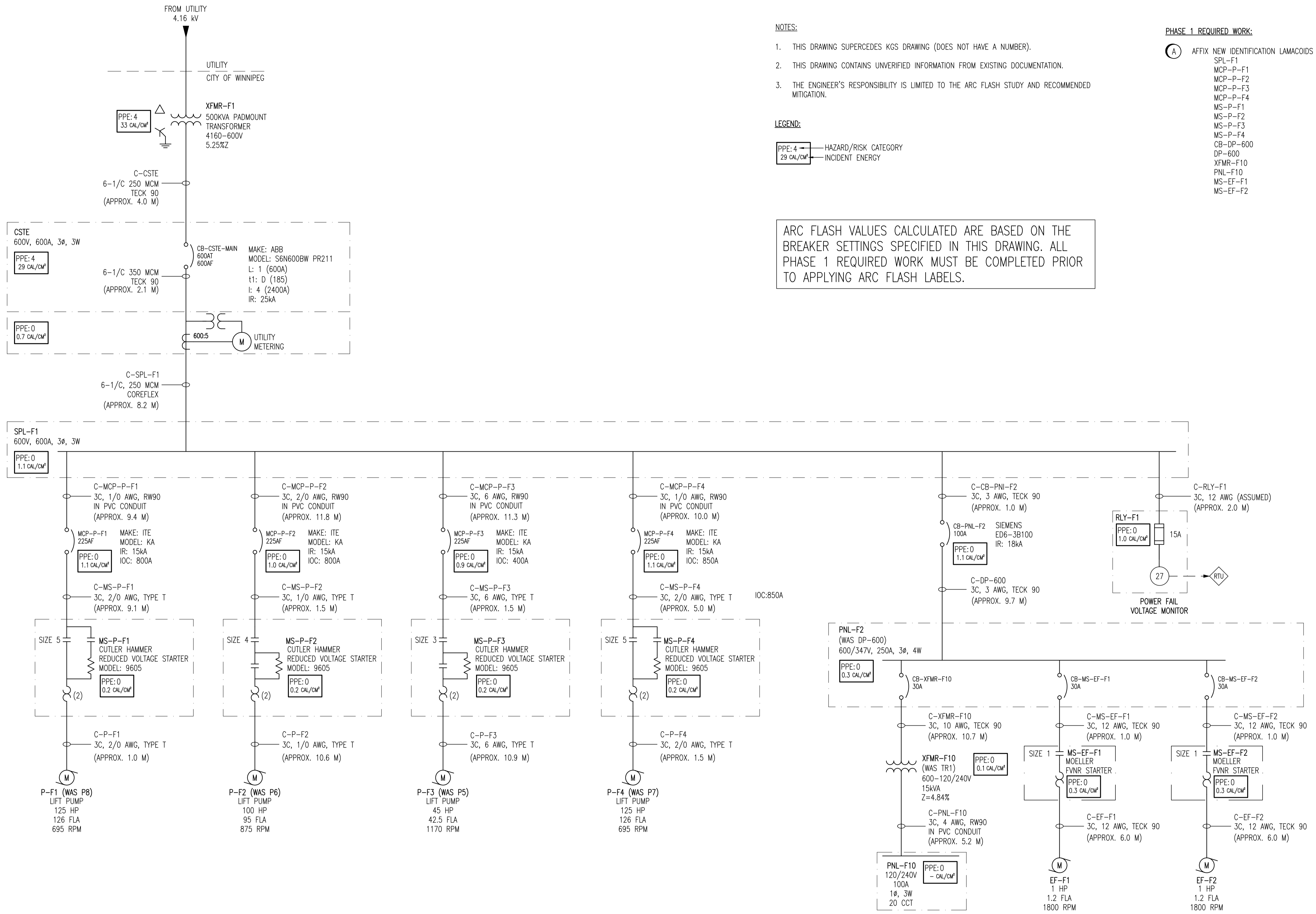
NO.	REVISIONS	DATE	APP.	ENGINEER'S SEAL

DESIGNED BY: B.R.	DRAWN BY: EN
CHECKED BY: BR	DATE: FEB 1987
APPROVED BY:	DATE:



BANNATYNE FLOOD STATION AUTOMATIC LEVEL CONTROL SCHEMATIC DIAGRAM & ALARM PANEL LAYOUT	
RELEASED FOR CONSTRUCTION:	DATE:
SCALE:	DRAWING NO. 10-FS-Q-1

File # FP 10 115



NOTES:

1. THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

LEGEND:

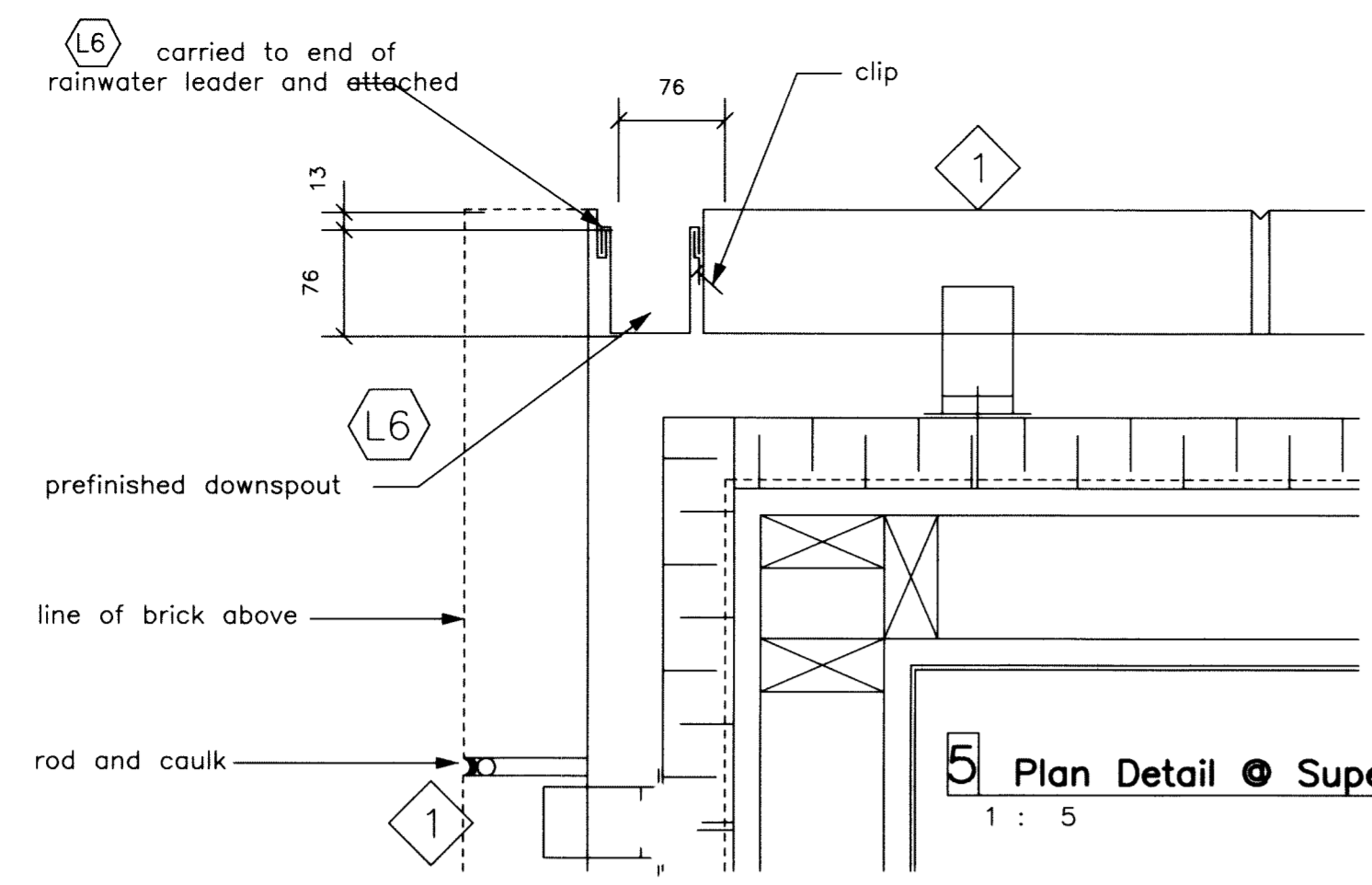
PPE: 4 — HAZARD/RISK CATEGORY
 29 cal/cm² — INCIDENT ENERGY

PHASE 1 REQUIRED WORK:

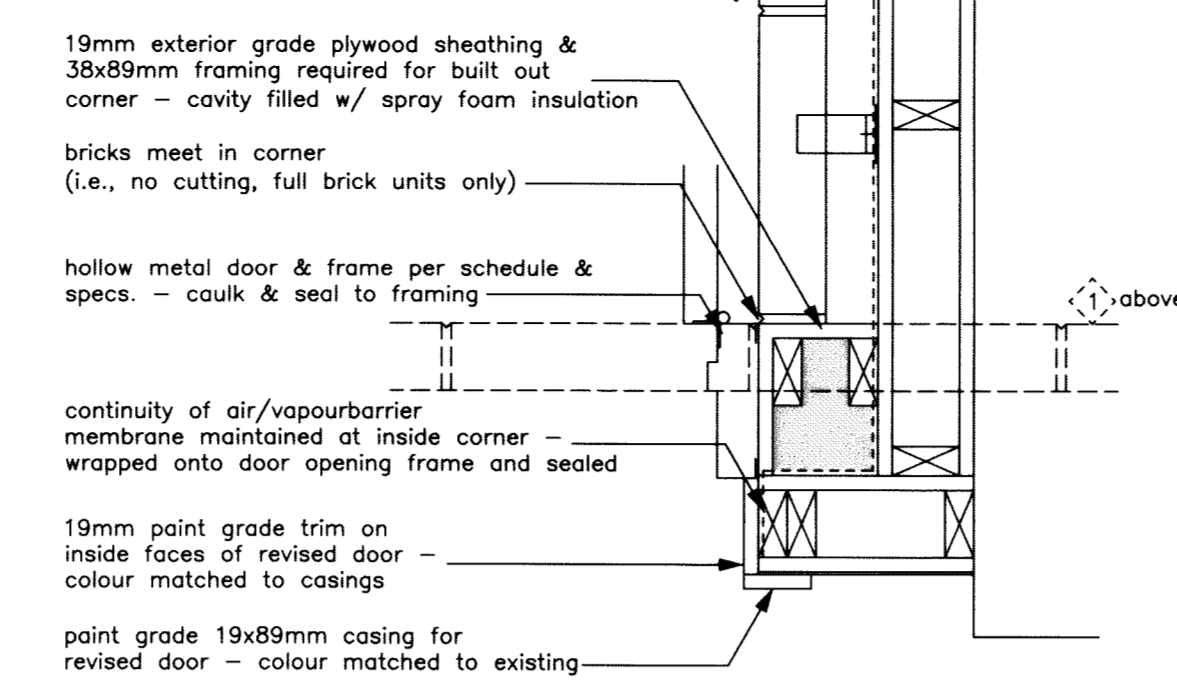
- (A) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
 - SPL-F1
 - MCP-P-F1
 - MCP-P-F2
 - MCP-P-F3
 - MCP-P-F4
 - MS-P-F1
 - MS-P-F2
 - MS-P-F3
 - MS-P-F4
 - CB-DP-600
 - DP-600
 - XFMR-F10
 - PNL-F10
 - MS-EF-F1
 - MS-EF-F2

ARC FLASH VALUES CALCULATED ARE BASED ON THE BREAKER SETTINGS SPECIFIED IN THIS DRAWING. ALL PHASE 1 REQUIRED WORK MUST BE COMPLETED PRIOR TO APPLYING ARC FLASH LABELS.

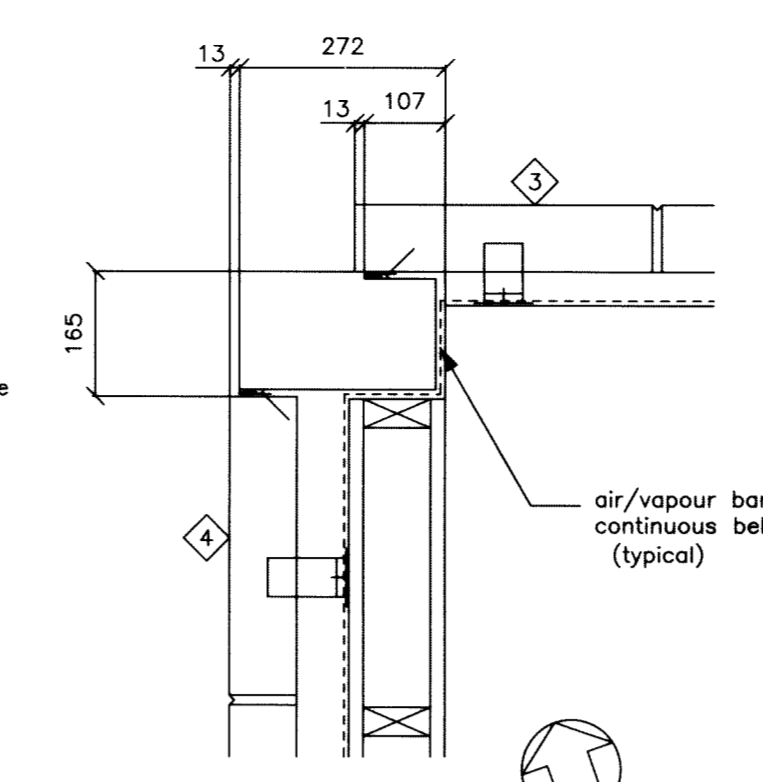
<p>SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080</p>				<p>ENGINEER'S SEAL</p>		
<p>DESIGNED BY: T. CHURCH</p>		<p>CHECKED BY: C. REIMER</p>		<p>ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN INC. MEMBER #21968 2011/12/01 REV. 00</p>		
<p>DRAWN BY: BDK</p>		<p>APPROVED BY: C. REIMER</p>				
<p>SCALE: NTS</p>		<p>RELEASED FOR CONSTRUCTION BY: [Signature]</p>				
<p>DATE: 2009/06/26</p>		<p>DATE: [Blank]</p>				
<p>ISSUED FOR CITY USE</p>		<p>2011/11/23</p>	<p>TC</p>	<p>CJR</p>	<p>CITY DRAWING NUMBER: 1-0118F-E0001</p>	
<p>NO. REVISIONS</p>	<p>DATE</p>	<p>DESIGN</p>	<p>CHECK</p>	<p>CONSULTANT NO.:</p>		<p>SHEET: 001</p>
					<p>REV: 00</p>	<p>SIZE: A1</p>



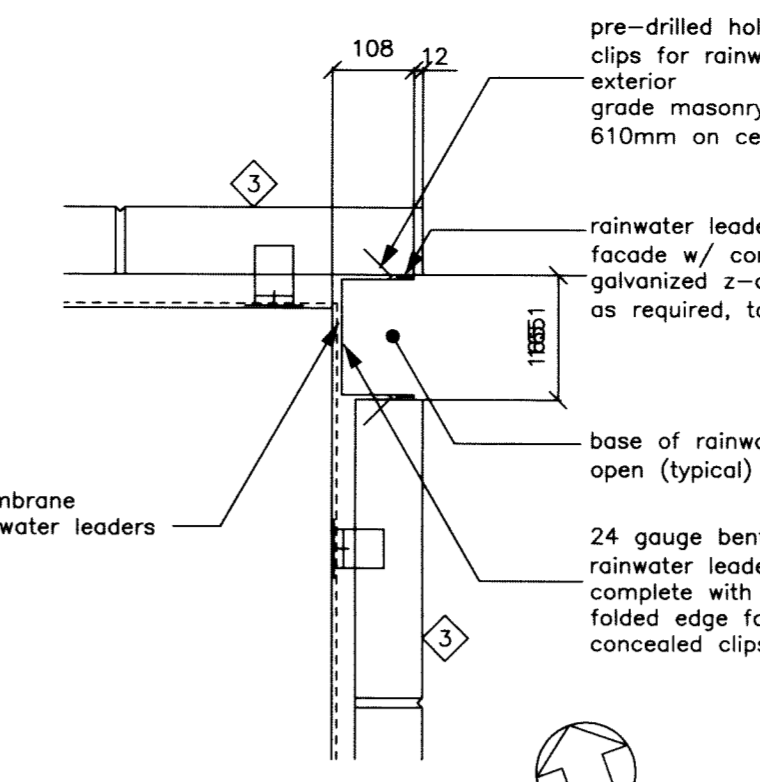
5 Plan Detail • Superstructure
1 : 5



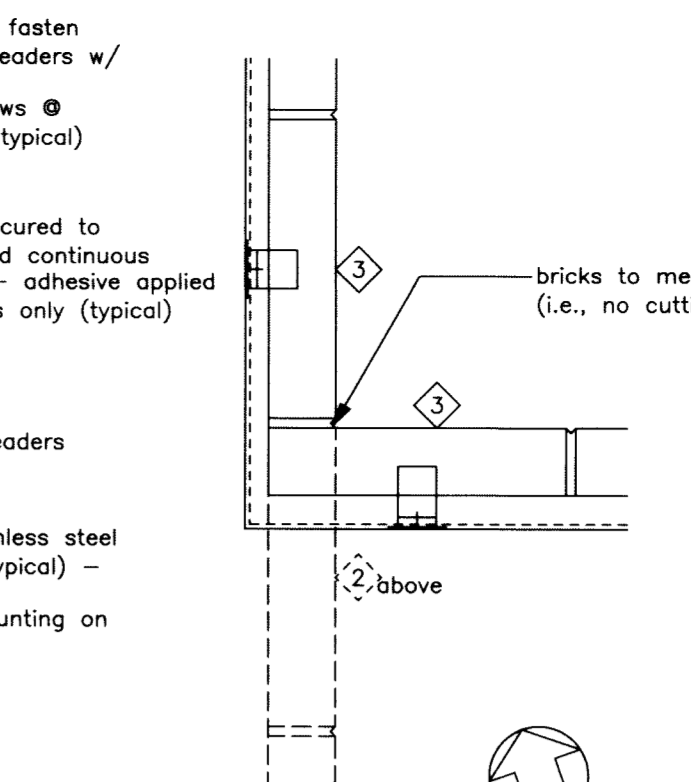
6 Plan Detail • Door
1 : 10



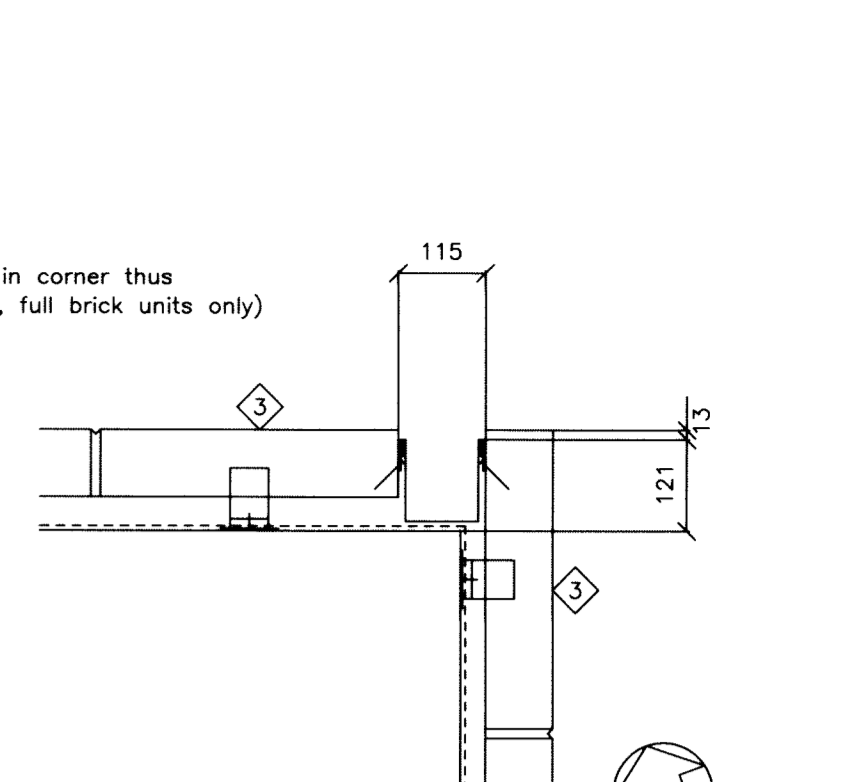
7 Plan Detail • Discharge Block
1 : 10



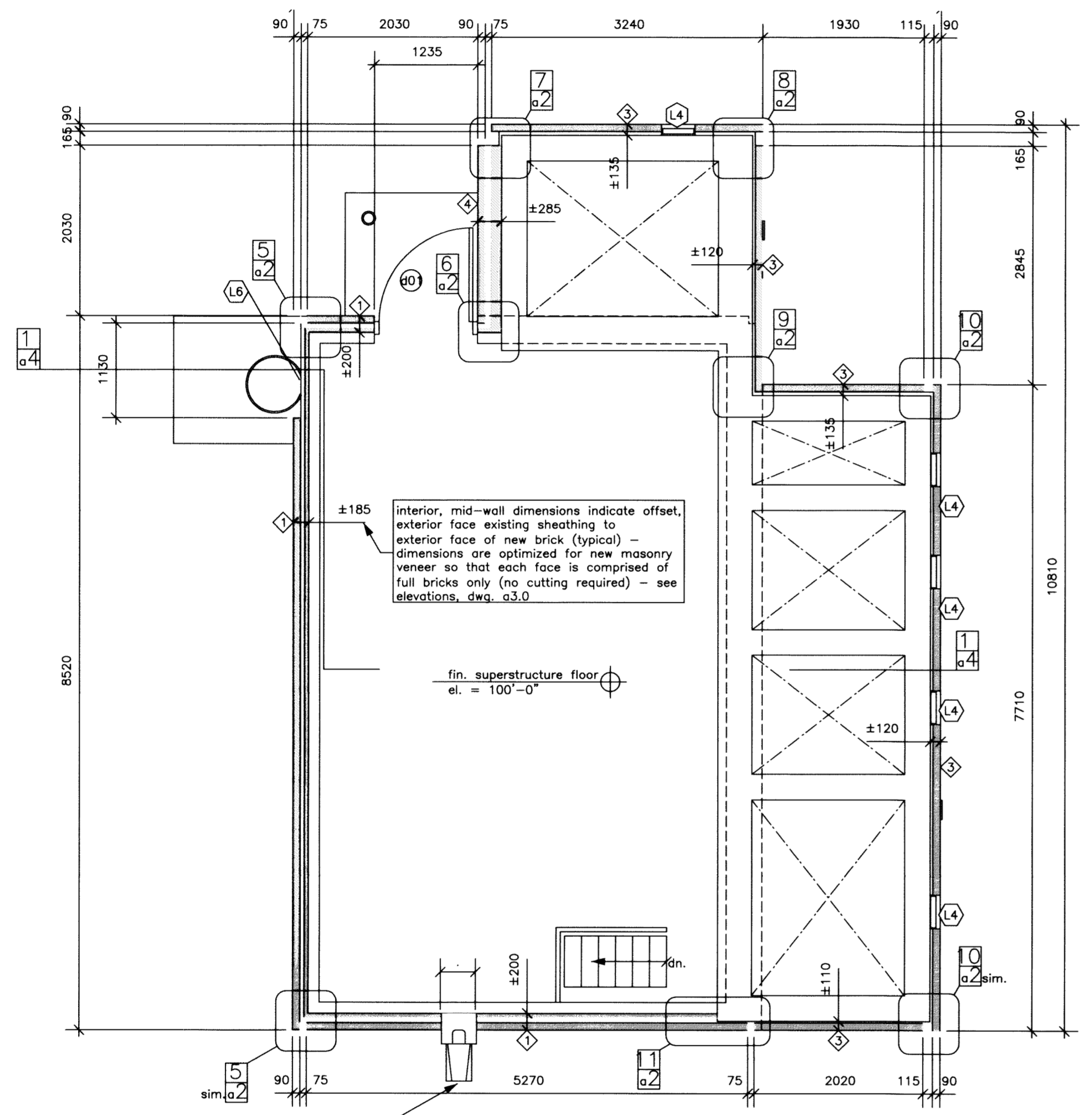
8 Plan Detail • Discharge Block
1 : 10



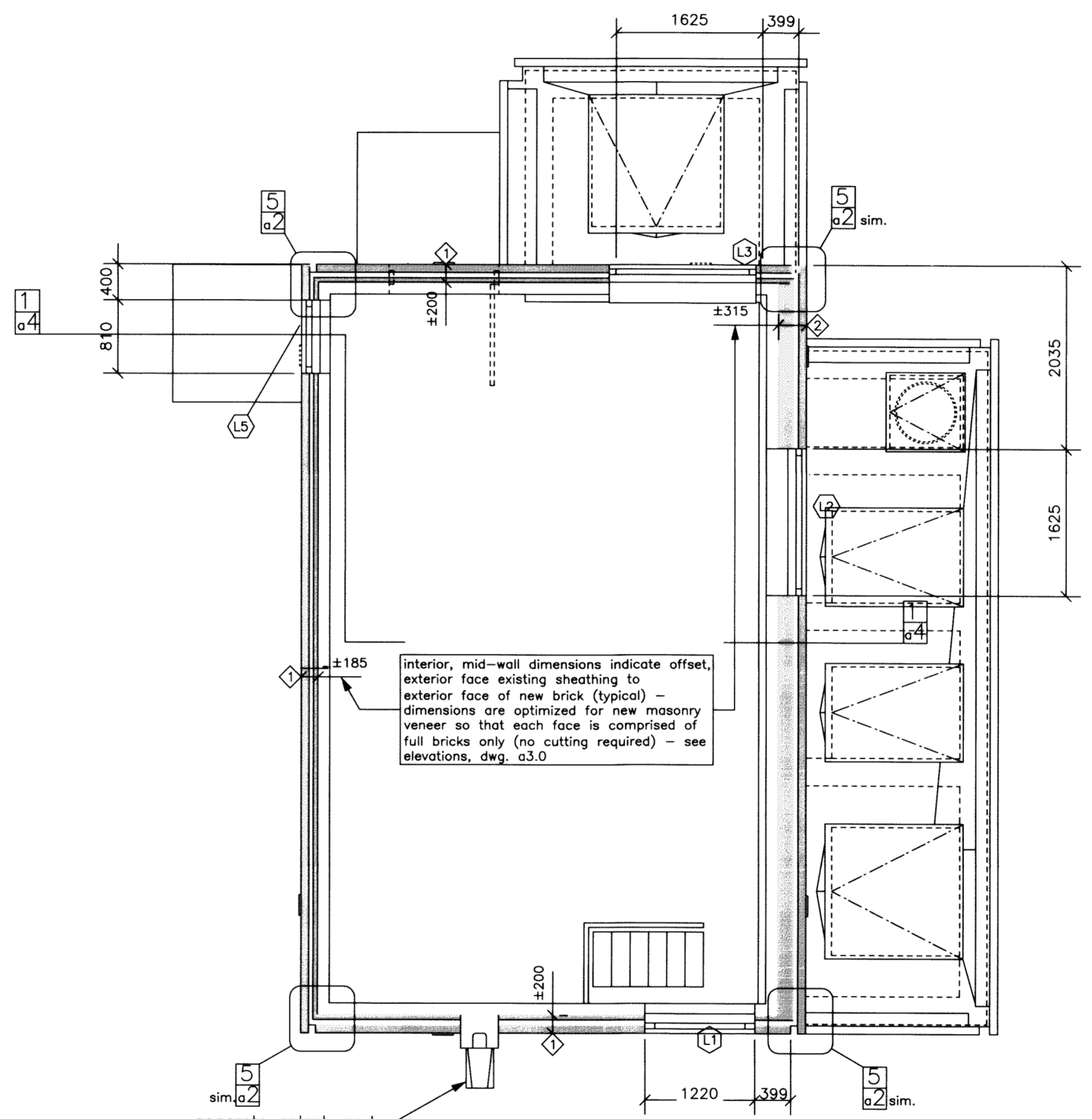
9 Plan Detail - Inside Corner
1 : 10



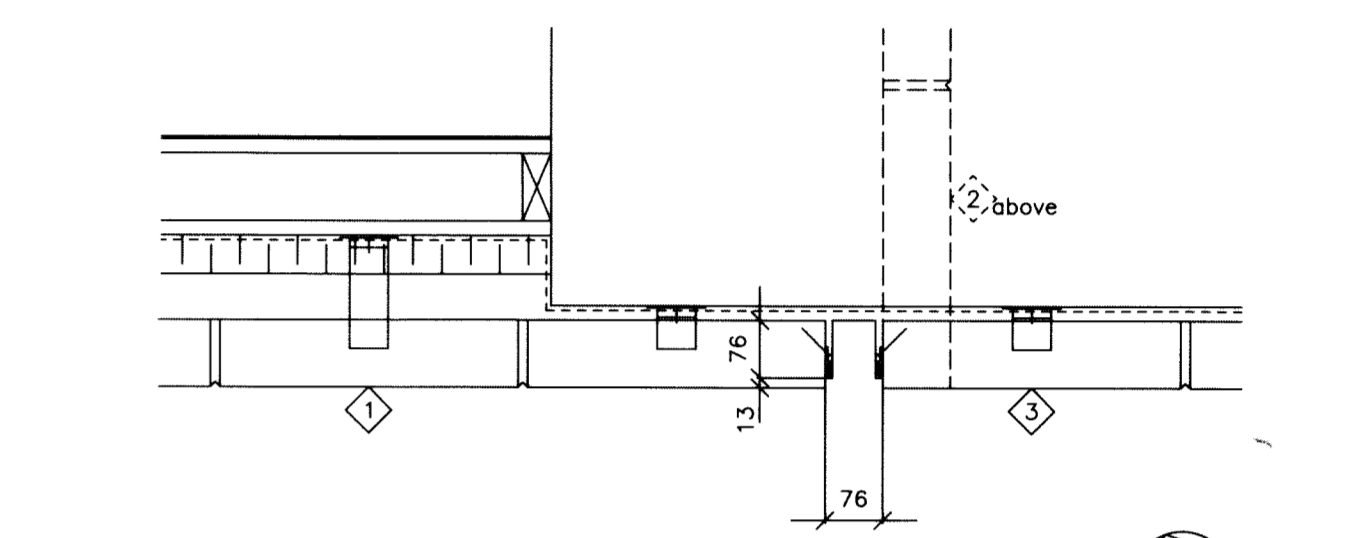
10 Plan Detail • Discharge Block
1 : 10



1 Plan • Discharge Blocks
1 : 50



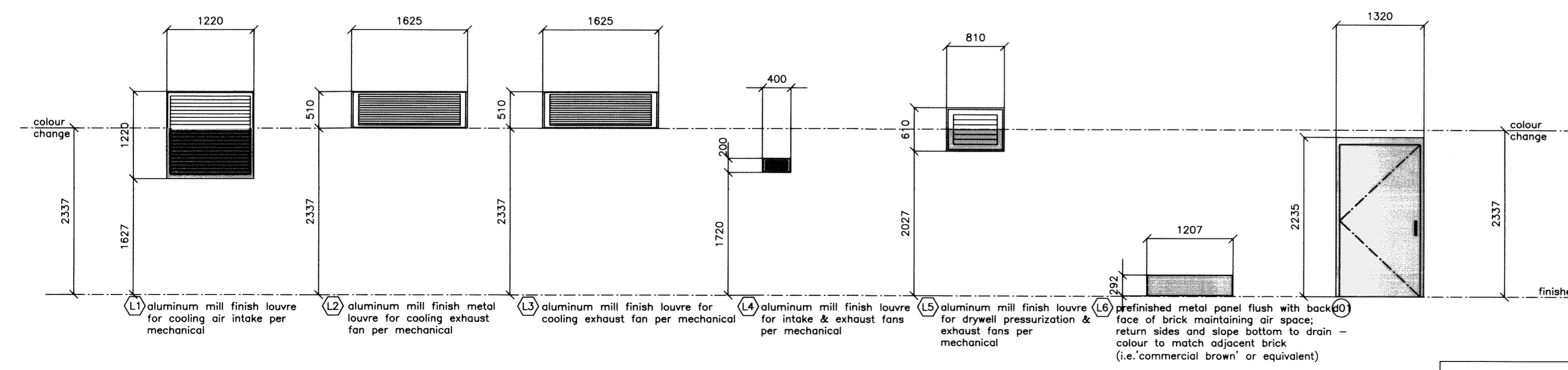
2 Plan above Discharge Blocks
1 : 50



11 Plan Detail - Superstructure • Discharge Block
1 : 10

- 1 existing wood superstructure wall framing and plywood sheathing - modified to accommodate revised openings - patched, repaired & made good
- 2 existing wood superstructure wall framing and plywood sheathing - modified to accommodate revised openings - patched, repaired & made good
- 3 existing concrete wall of discharge block - patched, repaired & made good
- 4 existing concrete wall of discharge block - patched, repaired & made good

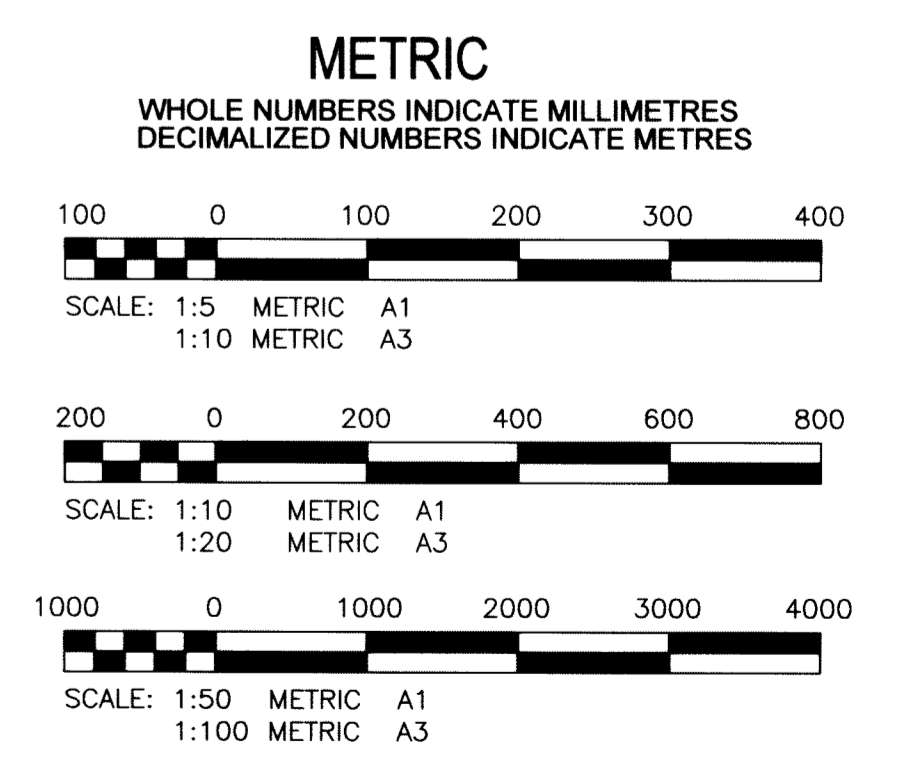
4 Wall Schedule



3 Wall Openings Schedule
1 : 50

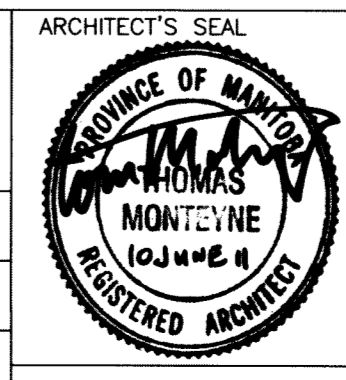
RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE: 19 SEPTEMBER 09
CONTRACTOR: SBS PROJECTS INC.



B.M.	XX-XXX	ELEV.	XXXXXX
DESIGNED BY	TBM	CHECKED BY	CMS
DRAWN BY	FDN	APPROVED BY	
SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
1	RECORD DRAWING	10/06/11	TBM
0	ISSUED FOR CONSTRUCTION	19/06/08	TBM
NO	REVISIONS	DATE	BY
		17/01/11	

SYVERSON MONTEYNE
ARCHITECTURE INC.
P 204 947 3155 194 Sherbrook Street, Winnipeg, MB.
F 204 947 3161 Canada R3C 2B6 www.sm-arc.com



THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION
BUILDING UPGRADE
ARCHITECTURAL
PLANS, PLAN DETAILS
SCHEDULES

SHEET OF 02 04
CAD FILE DRAWING NUMBER
CITY DRAWING NUMBER LD-5048

prefinish metal parapet flashing, colour on superstructure to match brick below - e.g. 'sandalwood' or eq.

top of brick at superstructure el. = 234.481

masonry on superstructure above discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #114 'Chateau Grey', mortar colour to match brick

recessed light above door is Systemalux 'EOS Square', colour #14 'Aluminum Grey' (typical) - refer to electrician for specifications

masonry on superstructure to top of discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

finish floor of superstructure el. = 230.734

top of brick @ discharge blocks el. = 233.058

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick (typical)

masonry on discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

underside brick @ discharge blocks el. = 230.734

1 North Elevation
1 : 50

prefinish metal parapet flashing, colour on superstructure to match brick below - e.g. 'sandalwood' or equivalent -

top of brick at superstructure el. = 234.481

masonry on superstructure above discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #114 'Chateau Grey', mortar colour to match brick

top of brick at discharge blocks el. = 233.058

underside brick at discharge blocks el. = 230.734

prefin. metal parapet flashing, colour on superstructure to match brick below - e.g. 'commercial brown' or eq.

top of brick at discharge blocks el. = 233.058

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick colour (typical)

masonry on discharge blocks & on superstructure to top of said blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

underside brick at discharge blocks el. = 230.734

2 East Elevation
1 : 50

NOTE:
dimensions were optimized for new masonry veneer & scuppers so that each face is comprised of full bricks only (no cutting required)

prefinish metal parapet flashing, colour on superstructure to match brick below - e.g. 'sandalwood' or eq.

top of brick at superstructure el. = 234.481

masonry on superstructure above discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #114 'Chateau Grey', mortar colour to match brick

transition of brick colours on superstructure el. = 230.734

masonry on superstructure to top of discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

finish floor of superstructure el. = 230.734

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick colour (typical)

419x241x365 (approx.) prefinished metal scupper (to fill entire brick course width)

prefinish metal parapet flashing, colour on discharge blocks to match brick below - e.g. 'commercial brown' or eq.

top of brick at discharge blocks el. = 233.058

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick colour (typical)

masonry on discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

underside brick at discharge blocks el. = 230.734

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick colour (typical)

305 concrete splash pad

3 South Elevation
1 : 50

prefinish metal parapet flashing, colour on superstructure to match brick below - e.g. 'commercial brown' or eq.

top of brick at discharge blocks el. = 233.058

open (3-sided) rainwater leaders from scuppers are prefinished metal to match brick colour (typical)

masonry on discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

underside brick at discharge blocks el. = 230.734

recessed light (typical) is Systemalux 'EOS Square', colour #14 'Aluminum Grey' - refer to electrician for specifications

prefinish metal parapet flashing, colour on superstructure to match brick below - e.g. 'sandalwood' or eq.

top of brick at superstructure el. = 234.481

masonry on superstructure above discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #114 'Chateau Grey', mortar colour to match brick

transition of brick colours on superstructure el. = 233.058

masonry on superstructure to top of discharge blocks is IXL dry pressed 'Giant Brick' - 89mm x 89mm x 394mm w/ 12mm mortar joints - brick colour #671 'Chestnut', mortar colour to match brick

finish floor of superstructure el. = 230.734

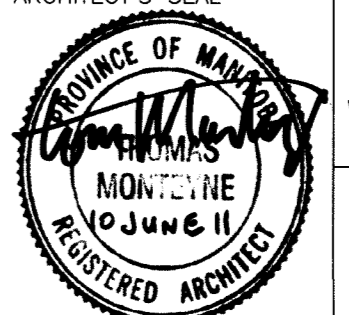
4 West Elevation
1 : 50

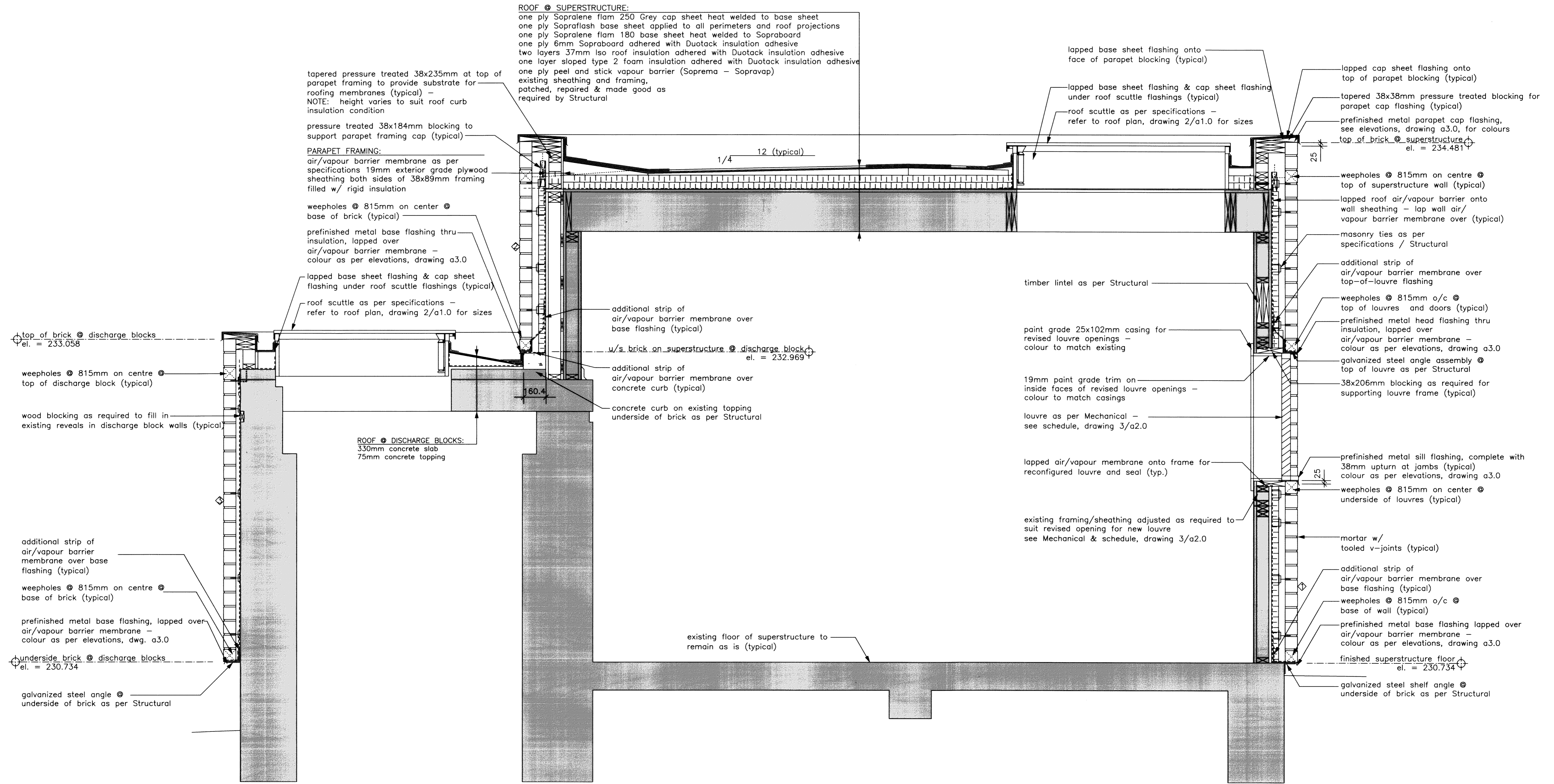
RECORD DRAWING
WATER & WASTE DEPARTMENT
PROJECT COMPLETION DATE: 19 SEPTEMBER 09
CONTRACTOR: SBS PROJECTS INC.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

1000 0 1000 2000 3000 4000

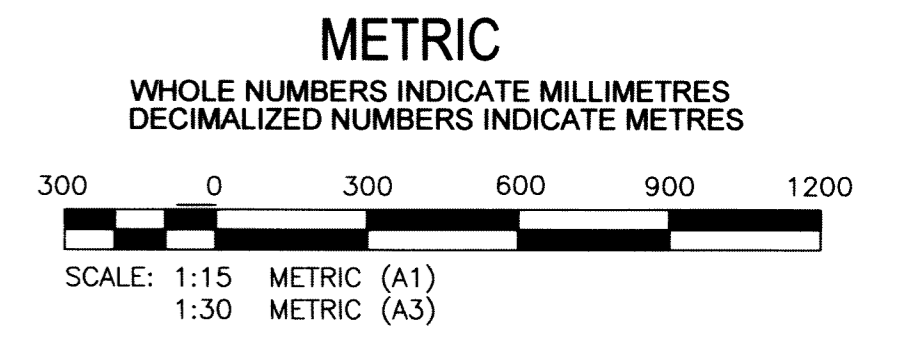
SCALE: 1:50 METRIC A1
1:100 METRIC A3

B.M. ELEV. XX.XXX XXX.XXX	DESIGNED BY TBM	CHECKED BY CMS	ARCHITECT'S SEAL  SYLVERSON MONTEYNE ARCHITECTURE INC. P. 204 947 3155 194 Sherbrook Street, Winnipeg, MB. F. 204 947 3161 Canada R3C 2B6 www.sm-arc.com	THE CITY OF WINNIPEG WATER & WASTE DEPARTMENT BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE ARCHITECTURAL ELEVATIONS	SHEET OF 03 04
1 RECORD DRAWING 10/06/11 TBM	DRAWN BY FDN	APPROVED BY			CONSULTANT DRAWING NO. a3.0
0 ISSUED FOR CONSTRUCTION 19/06/08 TBM	SCALE AS NOTED 100% at A1 Sheet 50% at A3 Sheet	RELEASED FOR CONSTRUCTION			CITY DRAWING NUMBER LD-5049
NO REVISIONS	DATE BY DATE 17/01/08	DATE			

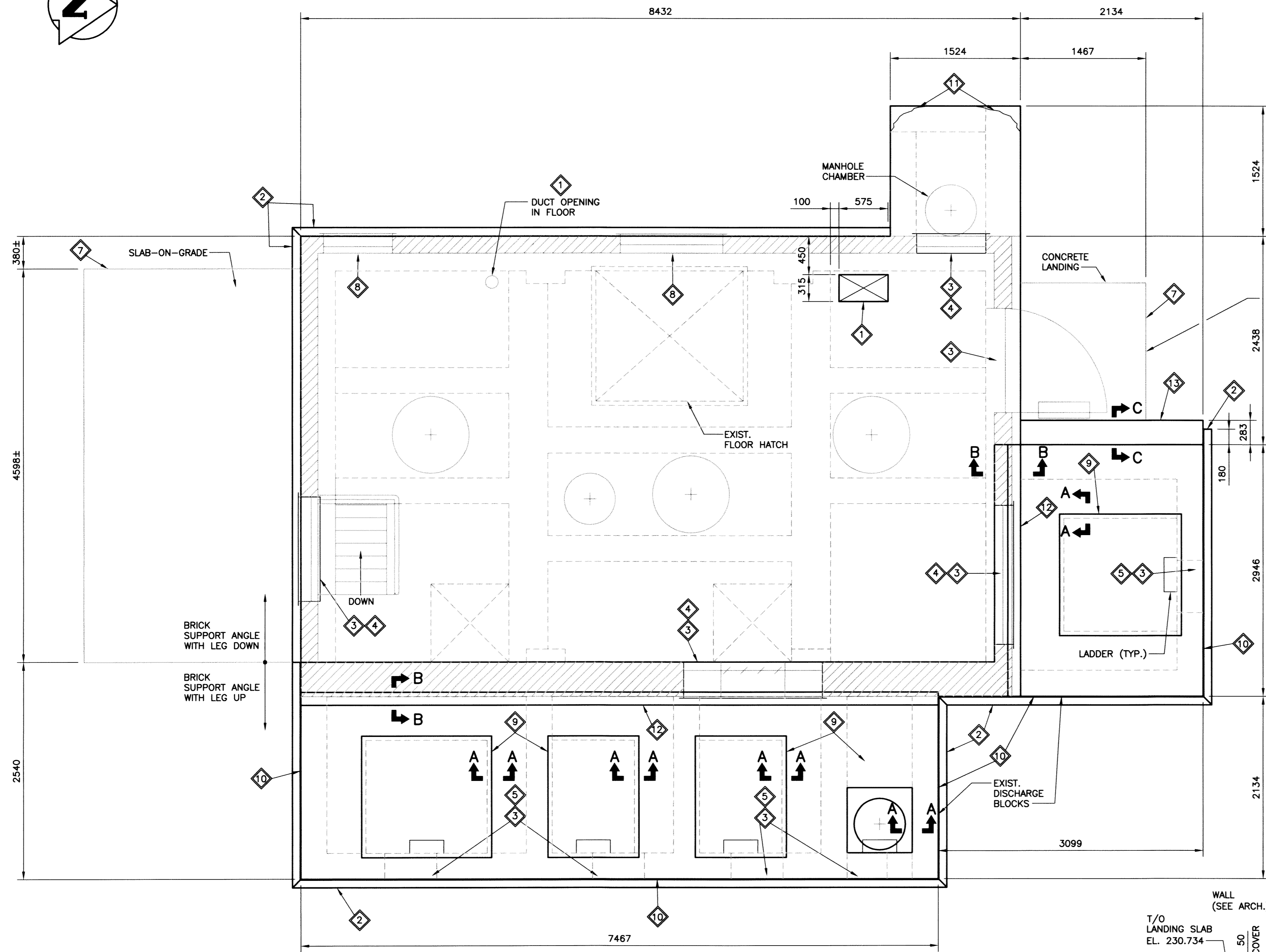
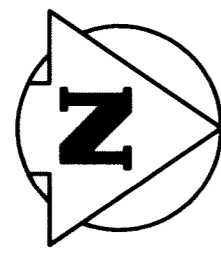


1
 a Cross Section (looking south)
 1 : 15

RECORD DRAWING
 WATER & WASTE DEPARTMENT
 PROJECT COMPLETION DATE: 19 SEPTEMBER 09
 CONTRACTOR: SBS PROJECTS INC.



B.M. XX.XXXX ELEV. XXX.XXXX		SYVERSON MONTEYNE ARCHITECTURE INC. P 204 947 3155 194 Sherbrook Street, Winnipeg, MB. F 204 947 3161 Canada R3C 2B6 www.sm-arc.com		ARCHITECT'S SEAL 		THE CITY OF WINNIPEG WATER & WASTE DEPARTMENT BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE ARCHITECTURAL BUILDING SECTION		SHEET 04 OF 04 CAD FILE DRAWING NUMBER CITY DRAWING NUMBER LD-5050	
DESIGNED BY	TBM	CHECKED BY	CMS	SCALE	AS NOTED	RELEASED FOR CONSTRUCTION			
DRAWN BY	FDN	APPROVED BY		SCALE	100% at A1 Sheet 50% at A3 Sheet	RELEASED FOR CONSTRUCTION			
1	RECORD DRAWING	10/06/11	TBM	NO	REVISIONS	DATE	BY	DATE	17/01/08



CONCRETE CURBS AND SLABS

1. CONCRETE MIX PROPORTIONED TO YIELD THE FOLLOWING STRENGTH AND WORKABILITY REQUIREMENTS:
 - CLASS OF EXPOSURE: C-2
 - MINIMUM SPECIFIED COMPRESSIVE STRENGTH @ 28 DAYS = 32 MPa
 - MINIMUM CEMENTITIOUS CONTENT = 340 kg/m³
 - MAXIMUM WATER/CEMENTITIOUS RATIO = 0.45
 - SLUMP = 70 ± 20mm
 - AGGREGATE SIZE = 20mm NOMINAL
 - AIR CONTENT = 5.0% TO 8.0%
2. CONCRETE CURBS AND SLABS SUPPLIED AND INSTALLED IN ACCORDANCE WITH CW3240 AND CW3310.

REFER TO ARCHITECTURAL SITE PLAN FOR NEW LANDING SLAB FOOTPRINT AND NEW APPROACH DETAILS. NEW SLAB 125 THICK C/W 10M BARS AT 300 O/C EACH WAY ON COMPACTED GRANULAR BASE.

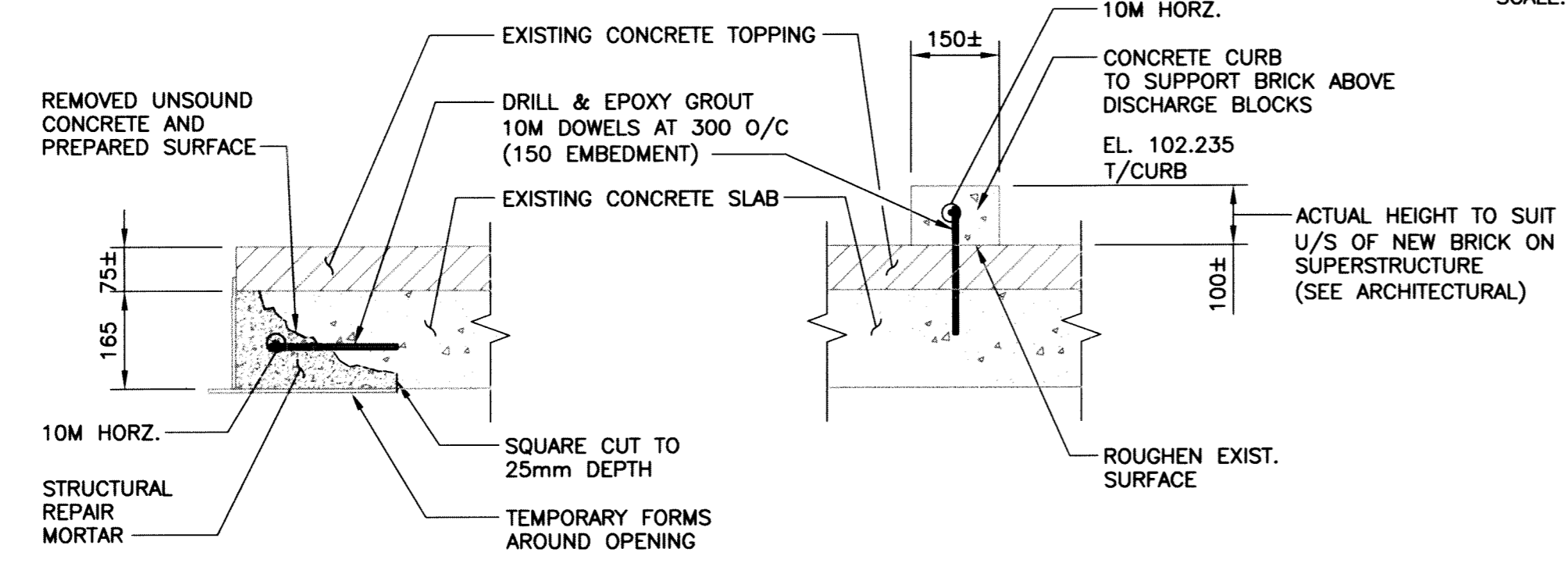
WORK ITEMS:

- 1 SAWCUT 315x575 OPENING IN 200 THK. CONCRETE FLOOR FOR DUCT AND PLUGGED ABANDONED CIRCULAR DUCT OPENING.
- 2 BRICK SUPPORT ANGLE L100x100x8 (GALV.) C/W 19 DIA. S.S. HILT HY-150 ADHESIVE ANCHORS @ 500 O/C (170 EMBED.).
- 3 L100x100x8 (GALV.) BRICK SUPPORT LINTEL ABOVE LOUVRE AND DOOR OPENINGS. EXTEND LINTEL MINIMUM 200 EACH SIDE OF OPENING.
- 4 FRAME NEW LOUVRE OPENINGS WITH 2-38x184 TIMBER LINTEL AND DOUBLE STUDS ON EACH SIDE.
- 5 BRICK LATERAL SUPPORT TIES AT 400 VERTICAL SPACING AND 600 HORIZONTAL SPACING. LENGTH OF TIES TO SUIT WALL CAVITIES SHOWN ON ARCHITECTURAL DRAWINGS.
- 6 REMOVED AND RE-WORK EXISTING BRICK INFILL AT EXISTING DISCHARGE BLOCK WALL OPENINGS AS REQUIRED TO ACCOMMODATE NEW LOUVRE OPENINGS.
- 7 REMOVED EXISTING CONCRETE SLAB-ON-GRADE AT MAIN ENTRANCE AND ON SOUTH SIDE OF BUILDING AND BACKFILLED WITH COMPACTED GRANULAR.
- 8 INFILL ABANDONED LOUVRE OPENINGS WITH TIMBER STUDS AND SHEATHING TO MATCH EXISTING.
- 9 REMOVED EXISTING DISCHARGE BLOCK STEEL HATCH COVERS AND REPAIR CONCRETE AROUND RIM OF OPENINGS.
- 10 REMOVED EXISTING DISCHARGE BLOCK STUCCO AND REPAIR EXTERIOR CONCRETE WALL AS PER DWG. LD-5051A.
- 11 REPAIRED EXPOSED EXTERIOR SURFACE OF EXISTING MANHOLE CHAMBER.
- 12 CONCRETE CURB TO SUPPORT BRICK ABOVE DISCHARGE BLOCKS.
- 13 CONCRETE CURB/CORBEL ALONG DISCHARGE BLOCK AT MAIN ENTRANCE TO SUPPORT NEW WALL.

CONCRETE REPAIR PROCEDURE

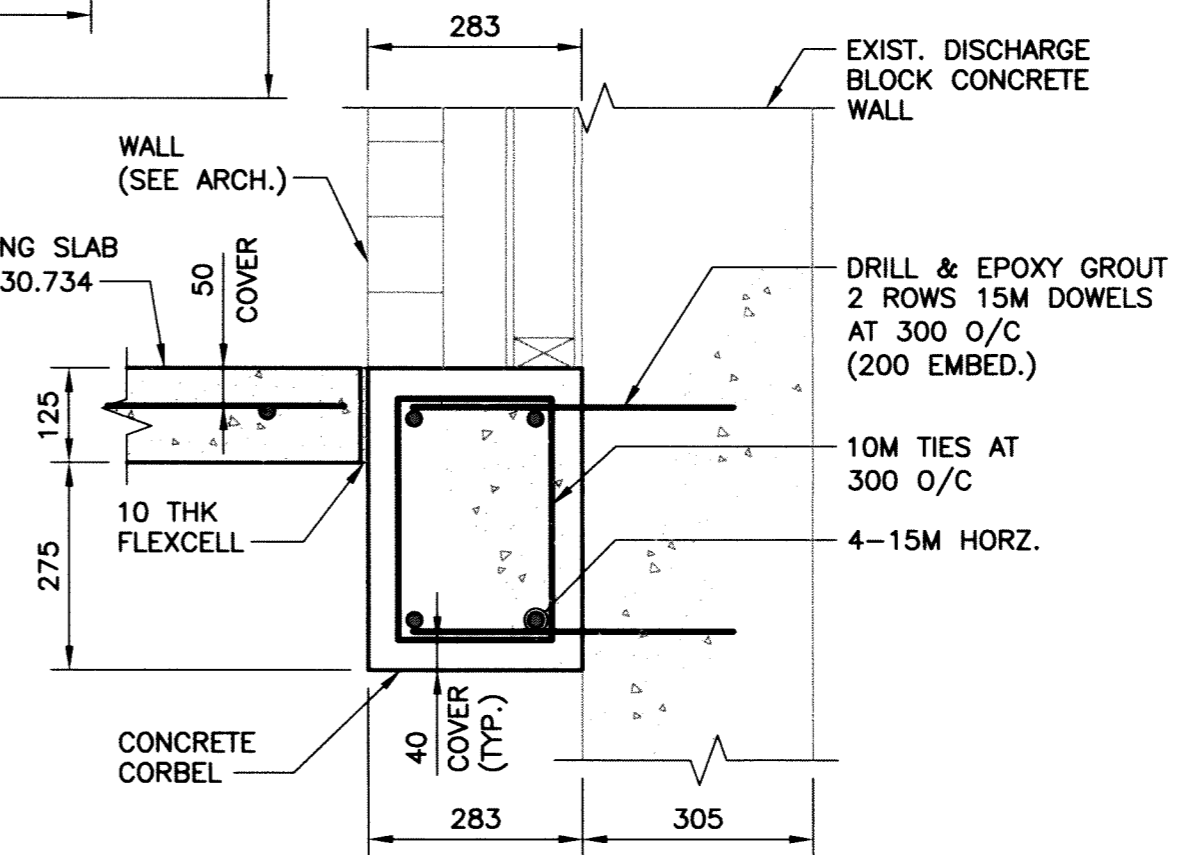
1. REMOVED EXISTING STUCCO FINISH AS REQUIRED BY SCRAPING. HIGH PRESSURE WASH OR APPROVED ALTERNATE METHOD IN ACCORDANCE WITH B6.
2. SQUARE CUT PERIMETER OF LARGE REPAIR AREAS TO A MINIMUM 25mm DEPTH TO AVOID FEATHER EDGES.
3. CHIPPED UNSOUND DETERIORATED CONCRETE TO A MINIMUM 25mm DEPTH.
4. COMPLETELY EXPOSE ANY REINFORCING STEEL IF ENCOUNTERED DURING CONCRETE DEMOLITION TO ENSURE TO ENSURE COMPLETE ENCAPSULATION WITH REPAIR MORTAR.
5. REMOVED CORROSION FROM REINFORCING STEEL USING MECHANICAL ABRASION TECHNIQUES (WIRE BRUSH, BLASTING)
6. LAP OR REPLACE EXISTING REINFORCING THAT HAS EXPERIENCED SIGNIFICANT SECTION LOSS.
7. CLEANED THE ROUGHENED CONCRETE SURFACE OF DIRT, LOOSE CHIPS, DUST, OIL, ETC BY PRESSURE WASH AND COMPRESSED AIR (CONTAIN ALL DEBRIS).
8. FORMED VERTICAL SURFACES AS REQUIRED AND CHAMFER TO MATCH EXISTING.
9. DAMPENED SUBSTRATE WITH WATER AND THEN PRIMED WITH BRUSH COAT OF STRUCTURAL REPAIR MORTAR.
10. CAST REPAIR AREA WITH STRUCTURAL REPAIR MORTAR AS PER MANUFACTURER'S SPECIFICATIONS (SMALL AREAS MAY BE APPLIED BY HAND TROWEL).
11. MOIST CURED REPAIR AREAS EXPOSED TO THE AIR FOR 3 DAYS AT A MINIMUM TEMPERATURE OF 10 DEGREES CELSIUS OR UNTIL MINIMUM OF 40% OF THE COMPRESSIVE STRENGTH OF THE CONCRETE WAS ATTAINED.
12. DID NOT APPLY CURING COMPOUNDS AS THEY MAY INTERFERE WITH ADHESION OF AIR/VAPOUR BARRIER MEMBRANE.
13. APPLIED AIR/VAPOUR BARRIER MEMBRANE AFTER REPAIR MORTAR HAS SUFFICIENTLY CURED TO ENSURE ADHESION (REFER TO MANUFACTURER'S SPECIFICATIONS REGARDING MOISTURE CONTENT AND TESTING METHODS IF REQUIRED).

FLOOR PLAN
SCALE: 1:30



SECTION A-A
SCALE: 1:10

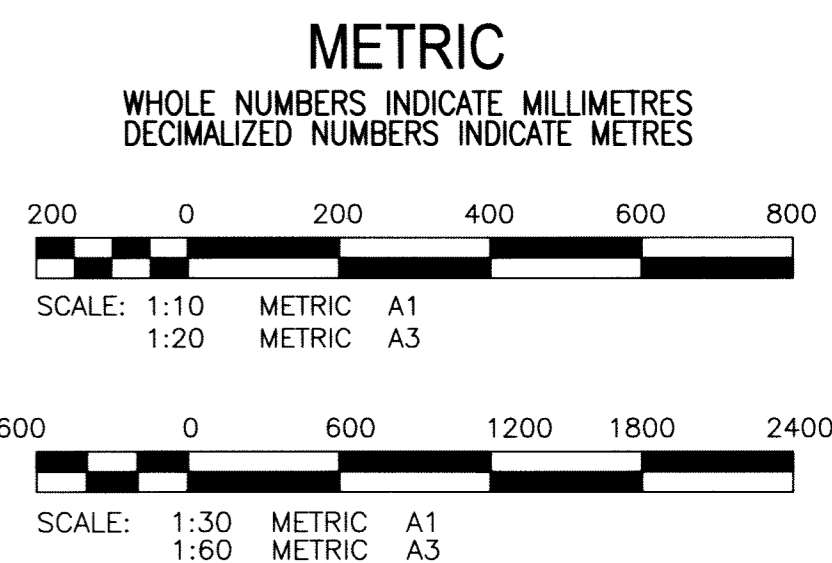
SECTION B-B
SCALE: 1:10



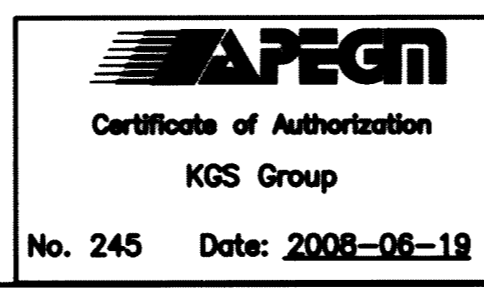
SECTION C-C
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RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
CONTRACTOR : SBS PROJECTS INC.



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NO.	REVISIONS	DATE	BY
		DATE	17/01/08

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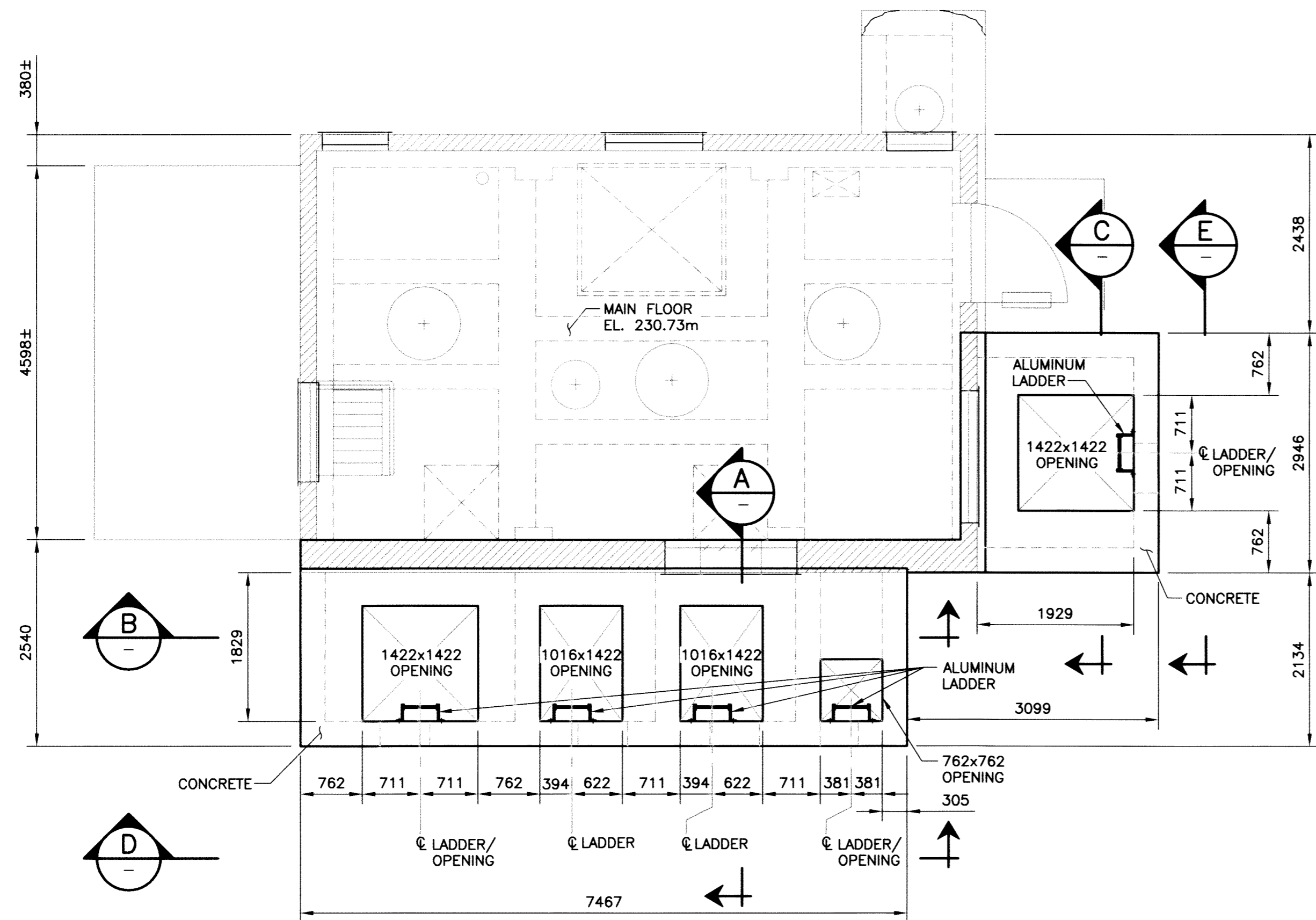
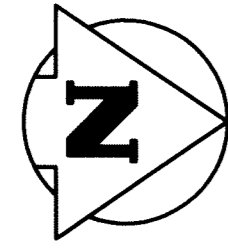
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THE CITY OF WINNIPEG
Winnipeg WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE

STRUCTURAL PLAN AND SECTION

SHEET 01 OF 01
CAD FILE DRAWING NUMBER 06-0107-15-S1
CITY DRAWING NUMBER LD-5051

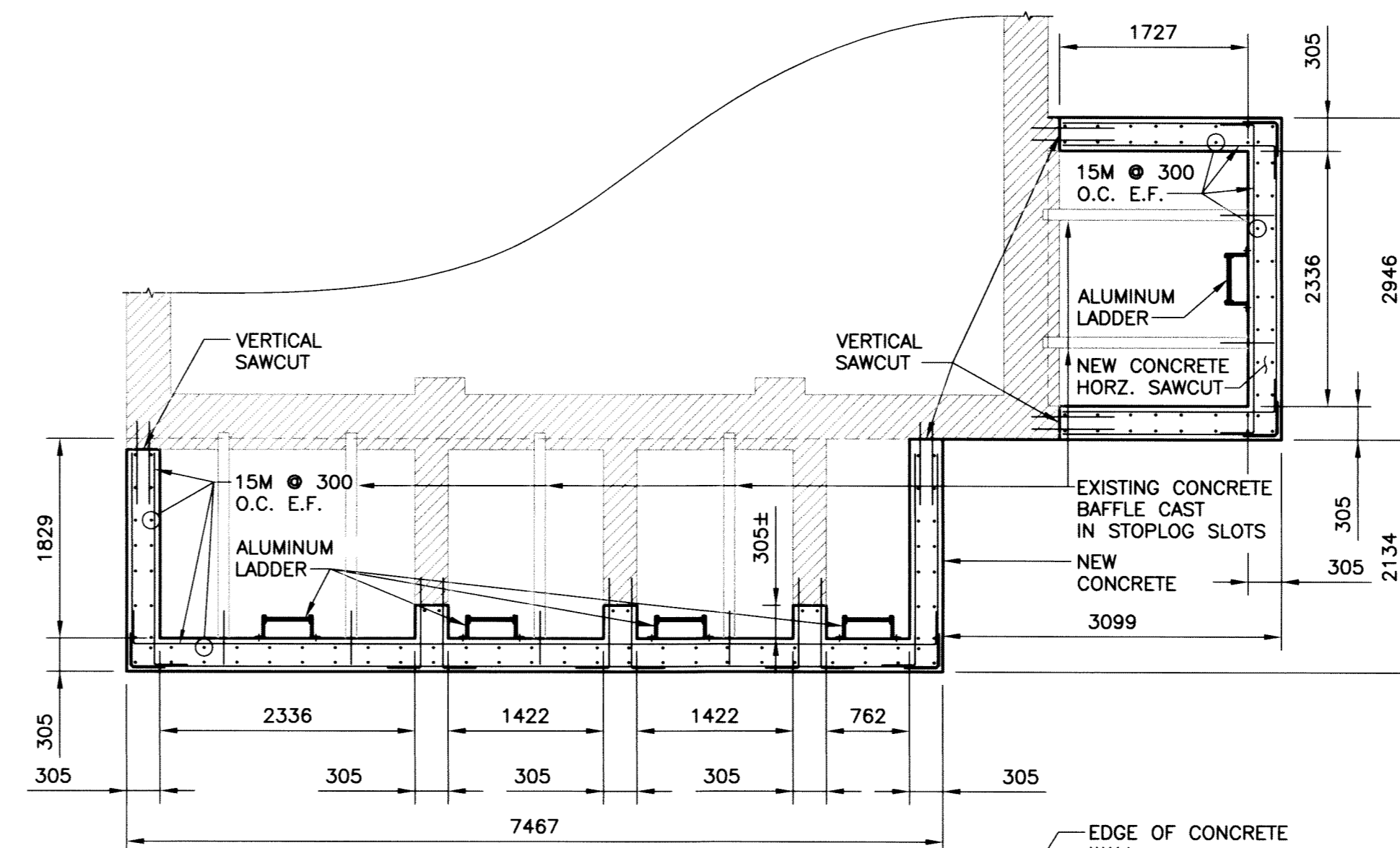


TOP PLAN
SCALE: 1:50

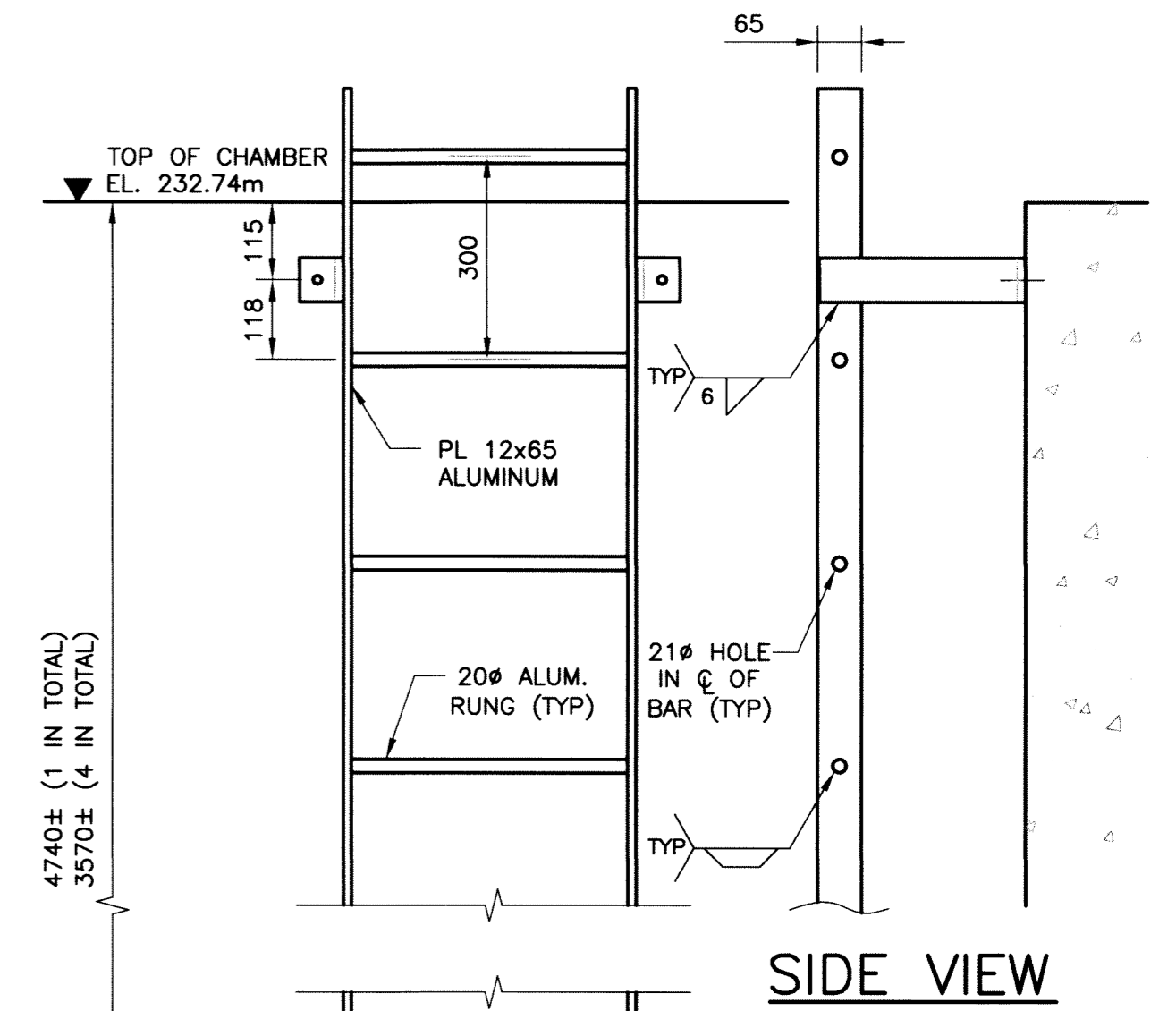
- 1.0 **GENERAL NOTES**
- 1.1 NOTES TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
- 1.2 DO NOT SCALE DRAWINGS.
- 1.3 VERIFY ALL DIMENSIONS, ELEVATIONS AND SCOPE OF WORK PRIOR TO CONSTRUCTION.
- 2.0 **CONCRETE** (SEE ALSO CW2160)
- 2.1 CONCRETE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH CAN/CSA-A23.1-04. SEE BELOW FOR MIX REQUIREMENTS.
- 2.2 CONCRETE MATERIALS, FORMING, PLACING, FORM REMOVAL, ETC. TO ACI RECOMMENDATIONS AND ACCEPTABLE PRACTICE.
- 2.3 MIX WATER SHALL BE POTABLE. CALCIUM CHLORIDE SHALL NOT BE USED.
- 2.4 REINFORCING STEEL TO THE REQUIREMENTS OF CSA G30.12-M92 (R2007). GRADE, 300 MPa FOR 10M BARS, 400 MPa FOR 15M AND LARGER. MINIMUM COVER 32mm.

- 2.5 PROVIDE ADEQUATE PROTECTION FOR CONCRETE DURING CURING PERIOD.
- 2.6 CONCRETE MIX DESIGN PROPORTIONED AS FOLLOWS:
- | | |
|------------------------------------|--------------|
| WALLS & SLAB 28 DAY COMP. STRENGTH | 35 MPa |
| CEMENT (TO CSA/CAN3-A5-M88) | TYPE 10 |
| W/C RATIO | 0.40 |
| AGGREGATE SIZE (MAX.) | 20mm |
| ENTRAINED AIR | 5%-8% |
| SLUMP (MAX.) | 75mm (±25mm) |
- 2.7 CONCRETE SHALL BE HIGH EARLY STRENGTH OF 20 MPa AFTER 24 HOURS. FIVE TEST CYLINDERS CAST FOR EACH CONCRETE POUR TO VERIFY STRENGTH.
- 2.8 ALL EXPOSED CORNERS TO HAVE 25mm CHAMFER FILLET U.N.O
- 2.9 INSTALLED WATERSTOPS AT ALL CONSTRUCTION JOINTS U.N.O.
- 2.10 APPLIED ONE COAT OF XYPEX CONCENTRATE WATERPROOFING TREATMENT TO THE INTERIOR SURFACE OF ALL CONCRETE WALLS AND SLAB (FROM EL. 230.0m TO TOP).

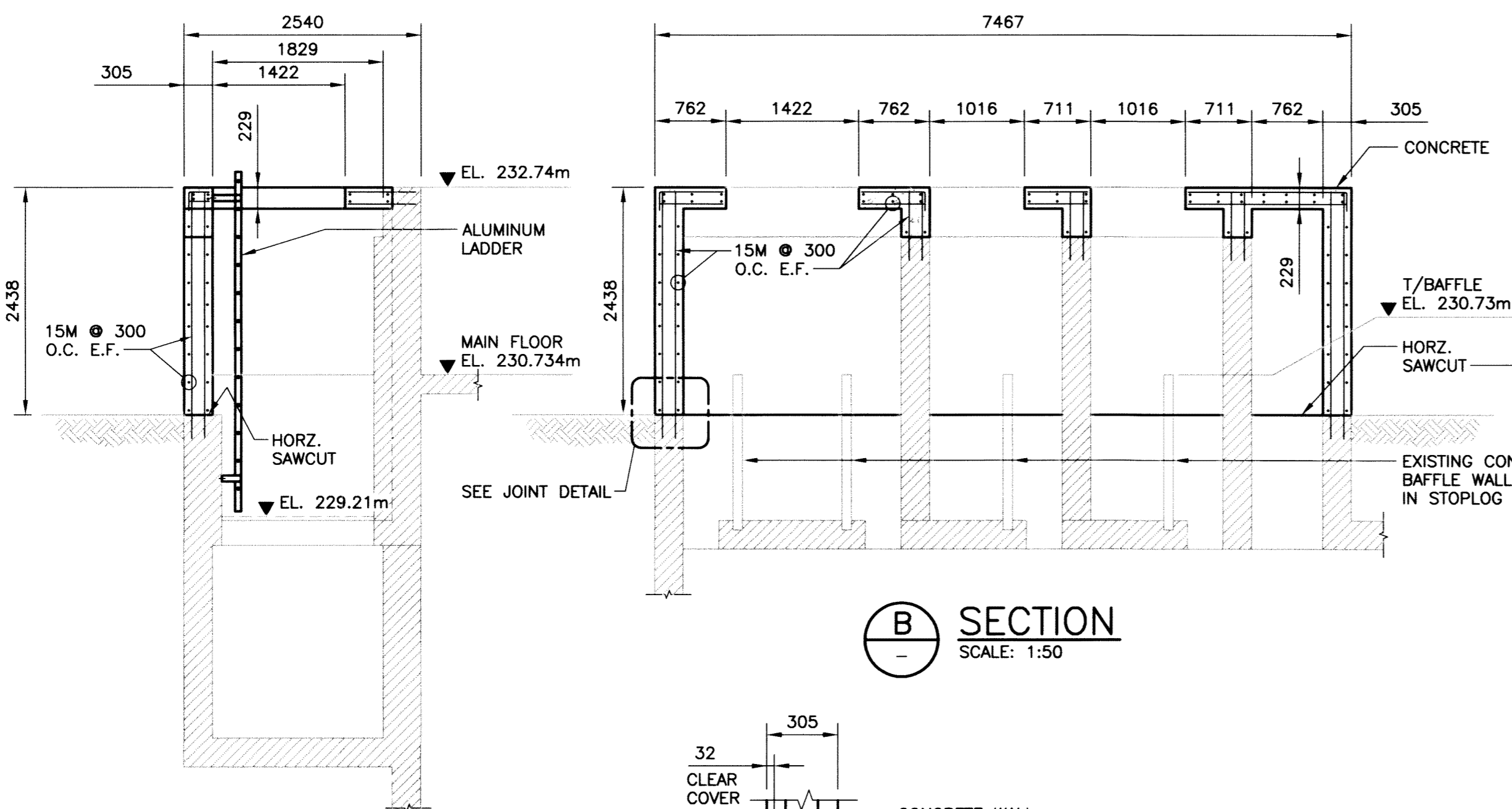
- 3.0 **ALUMINUM**
- 3.1 ALUMINUM: TO CAN/CSA S517 AND THE ALUMINUM ASSOCIATION 'SPECIFICATIONS FOR ALUMINUM STRUCTURES'. ALUMINUM FOR PLATES AND EXTRUDED SHAPES SHALL BE TYPE 6061-T651.
- 3.2 ALUMINUM WELDING SHALL BE IN ACCORDANCE WITH CSA W59.2-03 BY WELDERS CERTIFIED AND QUALIFIED IN ACCORDANCE WITH CSA W47.2-2003. ALL WELDS TO BE 6mm UNLESS NOTED OTHERWISE.
- 3.3 INSTALL NYLITE ELECTROCHEMICAL ISOLATION GASKETS TO ELECTRICALLY ISOLATE DISSIMILAR METALS (SUPPLIED BY SPAENAUR).
- 3.4 ALL ALUMINUM IN CONTACT WITH CONCRETE OR CAST INTO CONCRETE TO HAVE BITUMINOUS ISOLATION COATING.
- 3.5 ALL NUTS, BOLTS AND ANCHORS SHALL CONFORM TO ASTM A276 TYPE 316 STAINLESS STEEL.
- 4.0 **GROUT**
- 4.1 GROUT FOR DOWEL EMBEDMENT SHALL BE AMBEX ANCHORING CAPSULES OR APPROVED EQUAL.



PART PLAN (EL. 230.73m±)
SCALE: 1:50

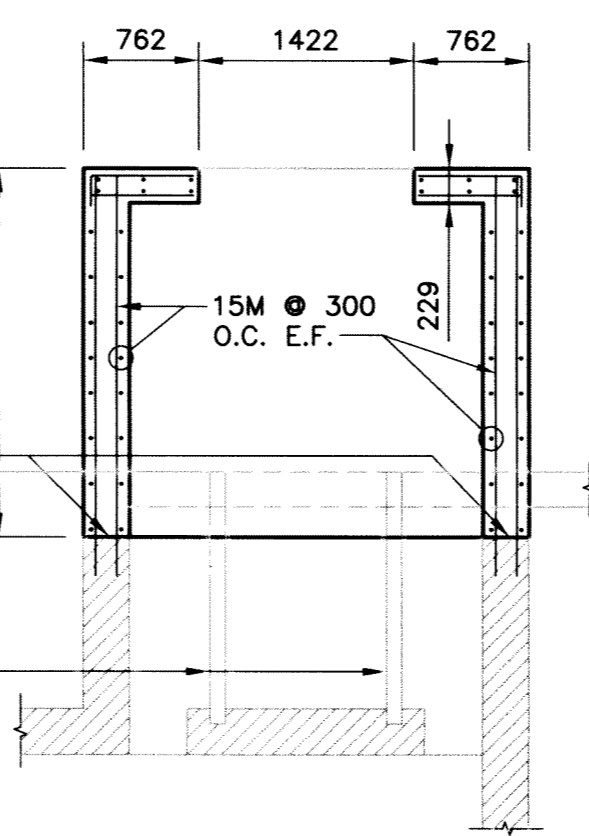


SIDE VIEW

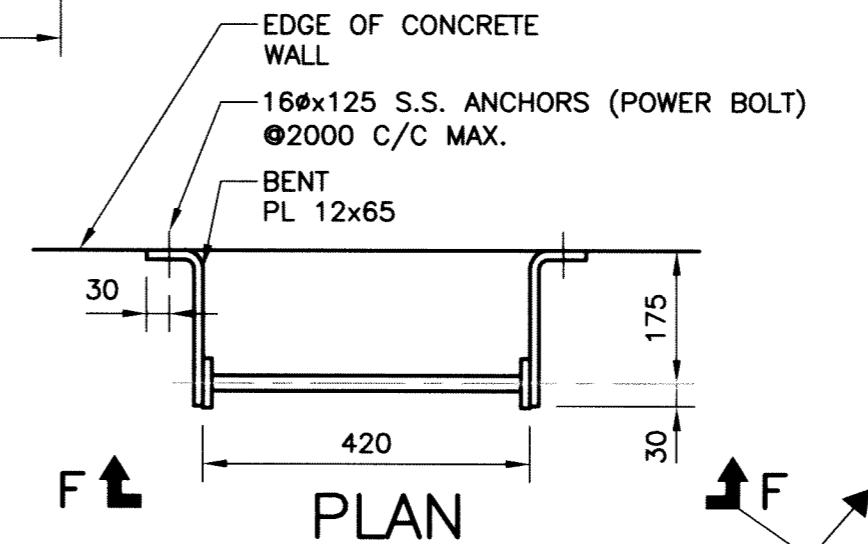


SECTION A
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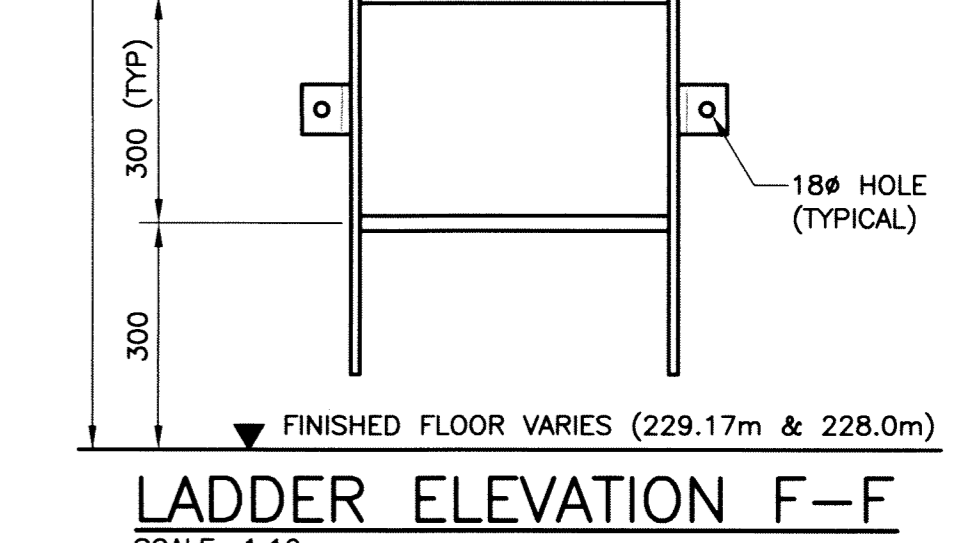
SECTION B
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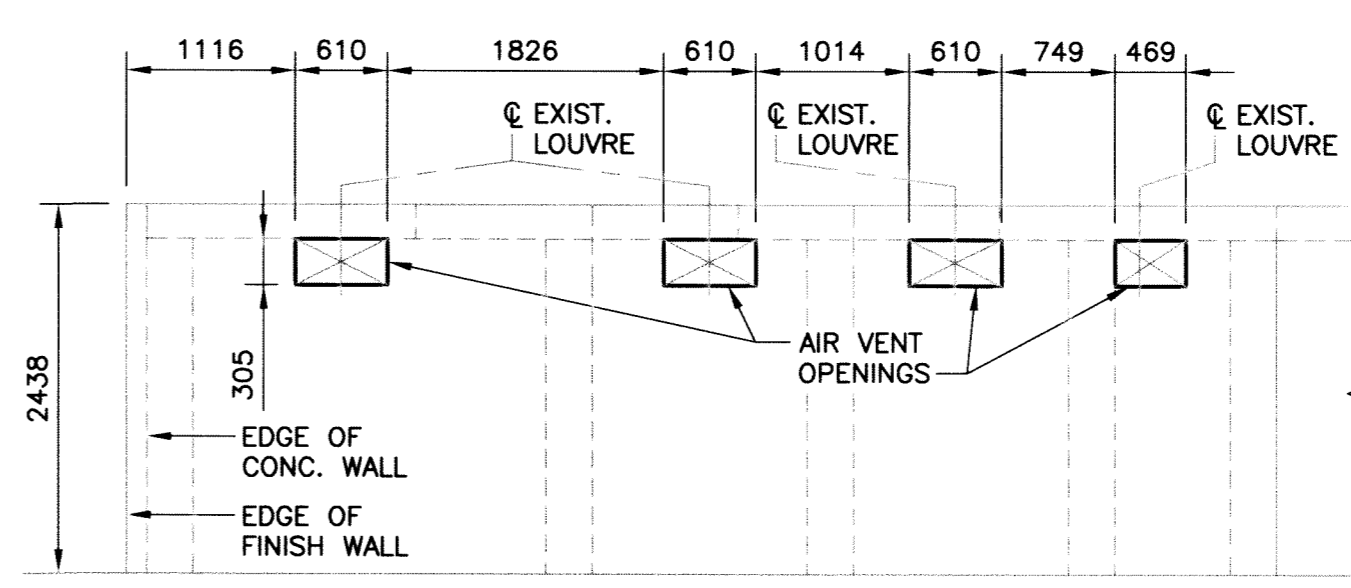
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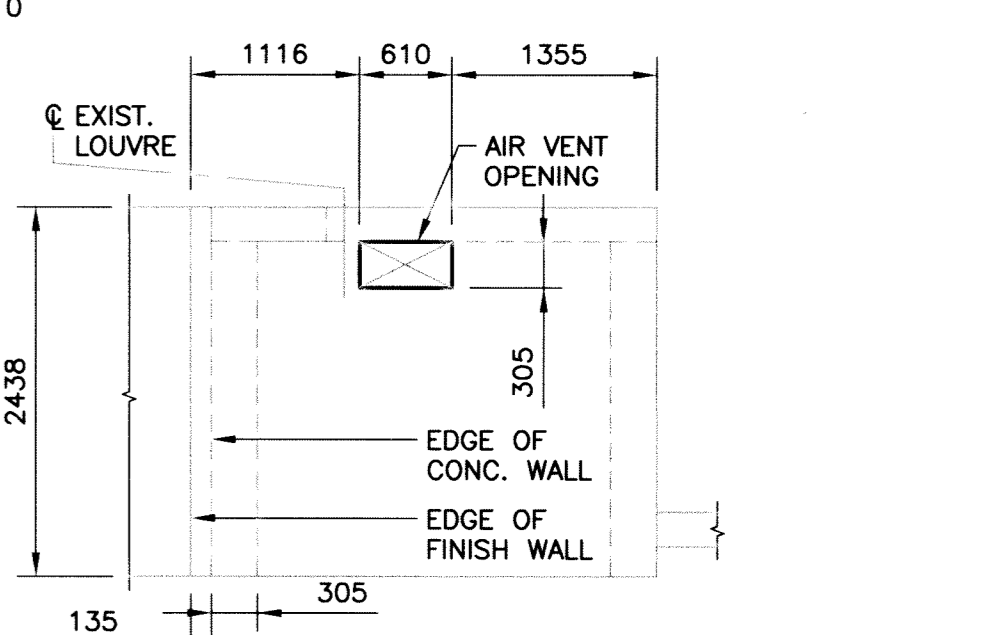
LADDER DETAIL (5 REQ'D)
SCALE: 1:10



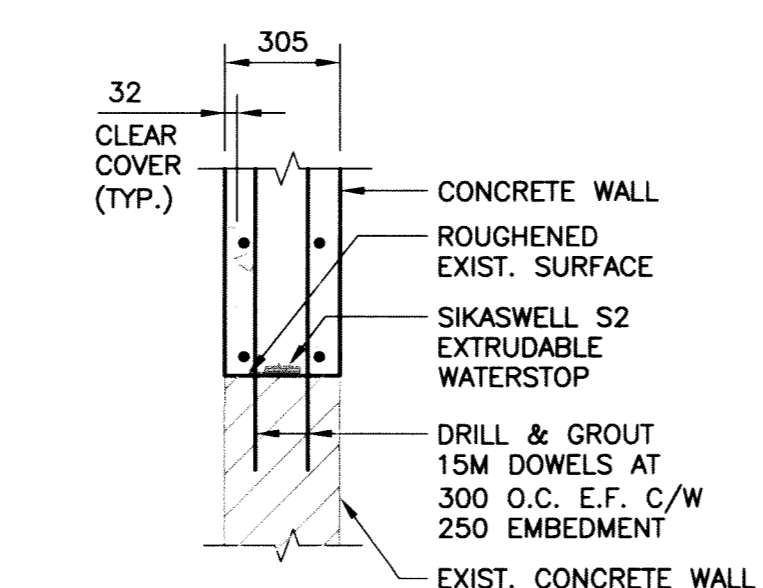
LADDER ELEVATION F-F
SCALE: 1:10



PART ELEVATION D
SCALE: 1:50



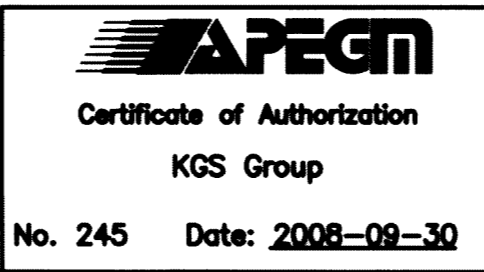
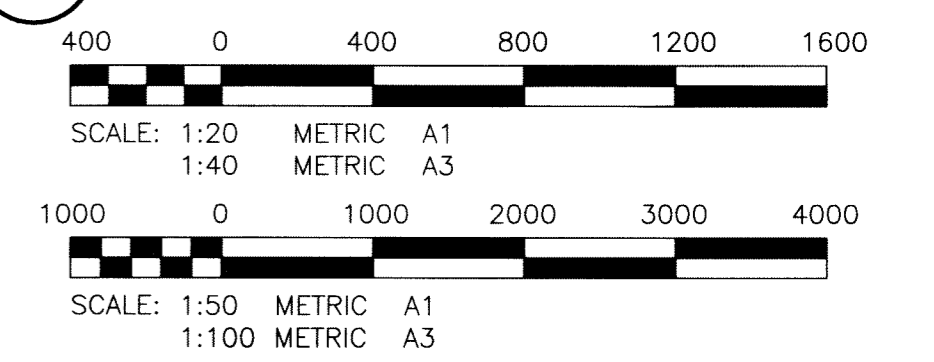
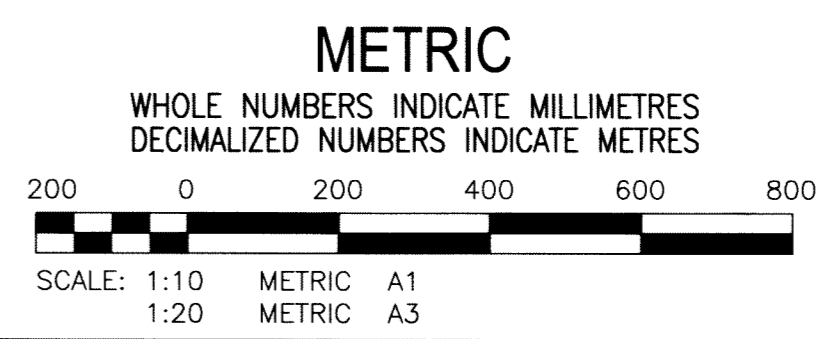
PART ELEVATION E
SCALE: 1:50



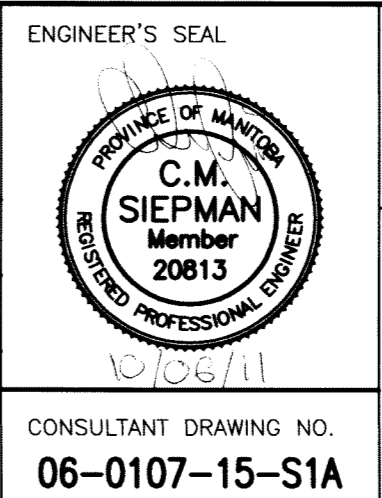
JOINT DETAIL (TYPICAL)
SCALE: 1:20

RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
CONTRACTOR : SBS PROJECTS INC.



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NO. REVISIONS	DATE	BY	DATE
			17/01/08



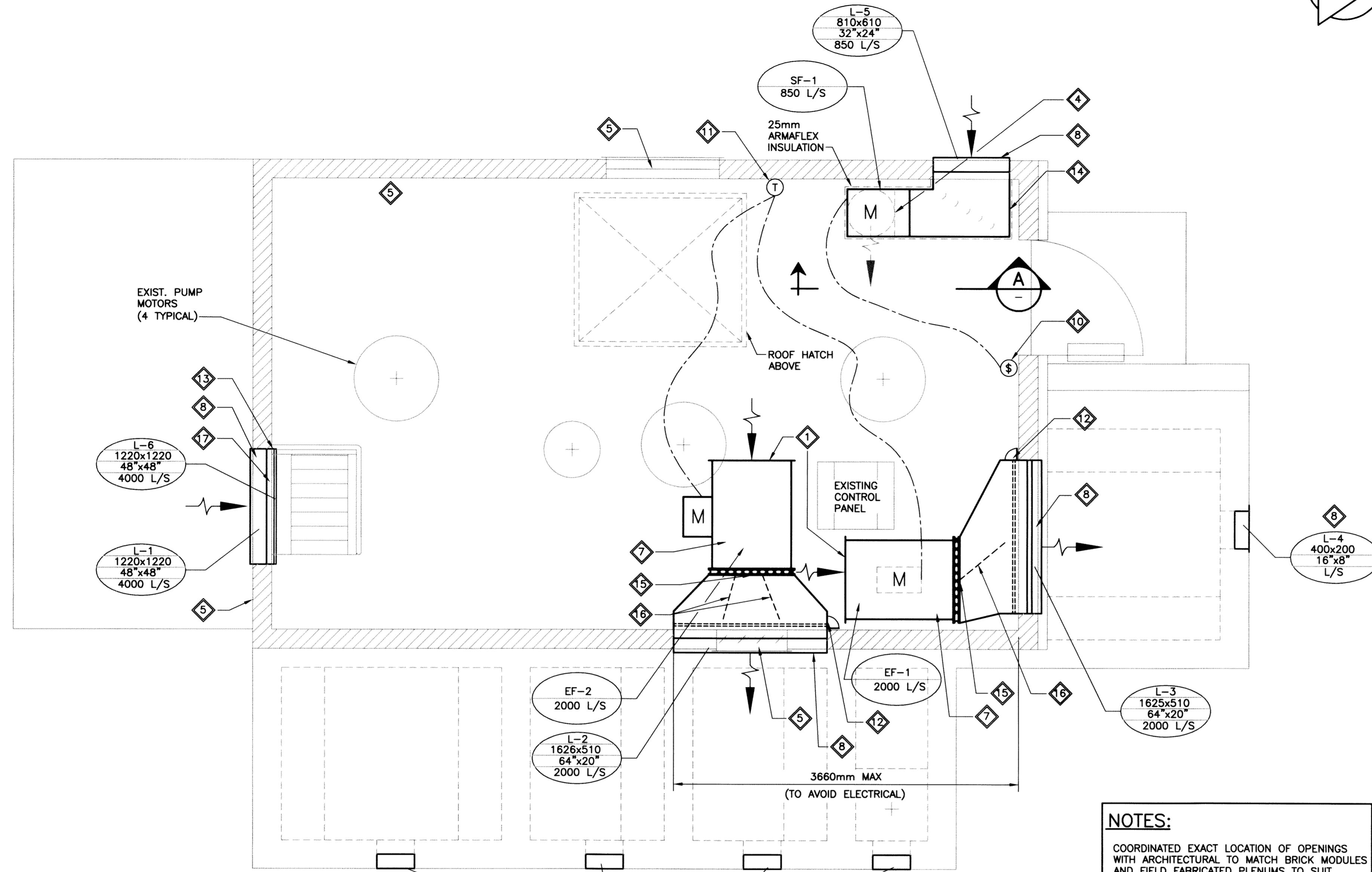
THE CITY OF WINNIPEG
Winnipeg WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE
STRUCTURAL DISCHARGE CHAMBER CONCRETE REHABILITATION

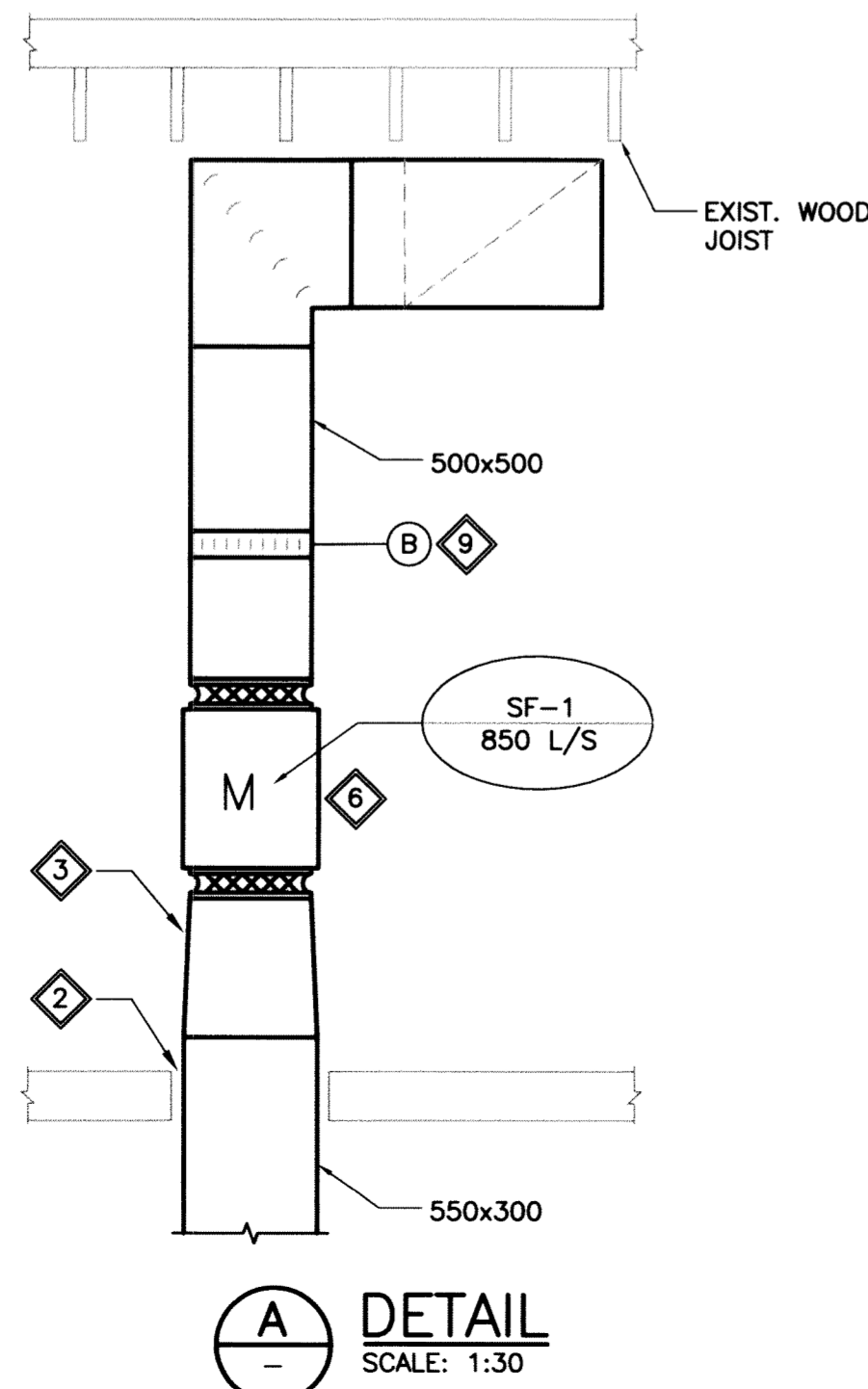
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CAD FILE DRAWING NUMBER 06-0107-15-S1A
CITY DRAWING NUMBER LD-5051A

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MAIN FLOOR PLAN
SCALE: 1:30



NOTES:
COORDINATED EXACT LOCATION OF OPENINGS WITH ARCHITECTURAL TO MATCH BRICK MODULES AND FIELD FABRICATED PLENUMS TO SUIT.

GENERAL NOTES:

1. PROVIDED A NEW DRYWELL VENTILATION SYSTEM WITH L-5, SF-1 AND DUCTWORK AS SHOWN.
2. PROVIDED A NEW MAIN FLOOR FREE COOLING VENTILATION SYSTEM WITH L-1, L-2, L-3, EF-1, EF-2 AND DUCTWORK AS SHOWN.
3. PROVIDED L-4 LOUVRES AS SHOWN.
4. PERFORMED WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
5. REVIEWED DUCT ROUTING AND FINAL EQUIPMENT LOCATIONS WITH CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION.
6. CONFORMED TO SMACNA STANDARDS FOR SUPPLY AND INSTALLATION OF DUCTWORK.
7. SEALED ALL WALL PENETRATIONS WATER TIGHT. COORDINATED WITH ARCHITECTURAL DRAWINGS.
8. ALL CONCRETE FLOOR REPAIR & NEW OPENINGS WERE PROVIDED BY STRUCTURAL.
9. ALL CONCRETE WALL REPAIR AND NEW OPENINGS WERE PROVIDED BY STRUCTURAL AND ARCHITECTURAL.

KEY NOTES:

1. PROVIDED A GALVANIZED STEEL, 6mm ROD, WELDED, 50mm SQUARE GRID PROTECTIVE SCREEN ON AIR INTAKE SIDE OF FAN (DETAIL OF PROTECTIVE SCREEN WAS SHOWN ON SHOP DRAWING AND VERIFIED WITH CONTRACT ADMINISTRATOR).
2. CONCRETE FLOOR HOLE FOR 300mm x 550mm DUCT BY STRUCTURAL. RAN DRYWELL VENTILATION DUCTWORK DOWN THROUGH MAIN FLOOR SLAB INTO DRYWELL BELOW TO 1000mm ABOVE FLOOR.
3. MOUNTED DUCTWORK CLOSE TO WALL WITH WALL BRACKETS.
4. RAN DUCT DOWN APPROXIMATELY 5.2m BELOW THE MAIN FLOOR TO 1m ABOVE DRYWELL BASEMENT LEVEL FLOOR. PROVIDED A 90 DEGREE ELBOW AT OUTLET OF DUCT DIRECTING AIRFLOW TOWARDS EAST SIDE OF DRYWELL.
5. REMOVED 3 EXISTING LOUVRES, 2 FANS AND RELATED DUCTWORK AND DISPOSED OFFSITE.
6. PROVIDED NEW SUPPLY FAN, SF-1, AS SHOWN. FAN IS A "GREENHECK" OR EQUAL IN ACCORDANCE WITH B6, MODEL SQ-120-14, CENTRIFUGAL DIRECT DRIVE, 0.5 HP, 120/1/60, 850 L/S AT 125 Pa, FRONT (EAST) SIDE ACCESS PANEL, CONTINUOUS DUTY TWO-SPEED MOTOR. PROVIDED VIBRATION ISOLATION HANGERS, FLEX CONNECTIONS TO DUCT WORK. SUPPORTED FAN FROM FLOOR.
7. PROVIDED NEW EXHAUST FANS, EF-1 AND EF-2, AS SHOWN. FAN IS A NORTHERN BLOWER OR EQUAL, DESIGN 8091, SIZE 2450, CENTRIFUGAL AIRFOIL, BELT DRIVE MOTOR, 1 HP, 575/3/60, 2000 L/S AT 125 Pa, TEFC, HIGH EFFICIENCY MOTOR. PROVIDED VIBRATION ISOLATION HANGERS, FLEX CONNECTION TO DUCTWORK AND MOUNTED UNIT TIGHT TO CEILING (100mm). ATTACHED PROTECTIVE SCREEN ON AIR INTAKE SIDE OF FAN (DETAIL OF PROTECTIVE SCREEN SHOWN ON SHOP DRAWING). LOCATED MOTORS AS SHOWN. PROVIDED SIDE ACCESS PANELS. SUPPORTED FROM WOOD BEAMS ABOVE AS PER EXISTING FAN. PROVIDED VIBRATION ISOLATORS ON FAN SUPPORTS.
8. PROVIDED INTAKE AND EXHAUST LOUVRES WITH DIMENSIONS AS SHOWN. COORDINATED EXACT LOCATIONS WITH ARCHITECTURAL DRAWINGS.

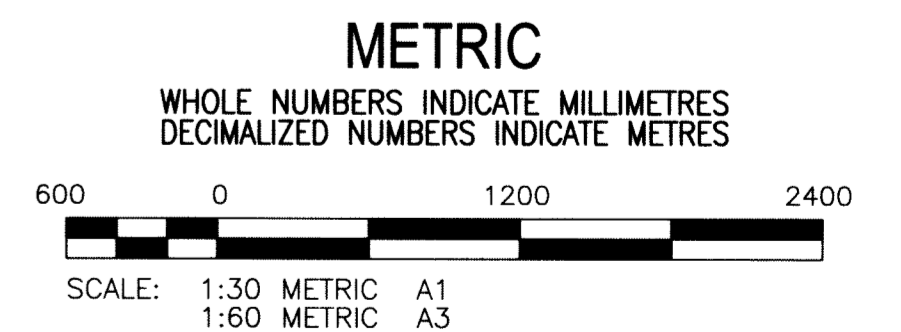
L-1, L-2, L-3, L-4 AND L-5 ARE GREENHECK OR EQUAL, MODEL ESD-635, DRAINABLE, EXTRUDED ALUMINUM LOUVER COMPLETE WITH BIRDSCREEN AND MILL FINISH. L-6 IS GREENHECK MODEL ESJ-401. PROVIDED DUCTWORK TO CONNECT LOUVRES TO FAN AS SHOWN WITH AIR TIGHT SEAL. INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. REFER TO STRUCTURAL/ARCHITECTURAL DRAWINGS FOR WALL DETAIL.

INSTALLED L-2, L-3 AND L-5 TIGHT TO CEILING JOISTS/TIMBER LINTEL BEAM. INSTALLED L-6 IN REVERSE TO BLOCK LINE OF SIGHT INTO BUILDING.

9. PROVIDED MANUAL BALANCE DAMPER ON VERTICAL SECTION OF DUCT ON MAIN FLOOR, 1500mm ABOVE FLOOR LEVEL.
10. ON/OFF SWITCH AND CONTROL OF FAN, SF-1, BY ELECTRICAL.
11. THERMOSTAT AND CONTROL OF FANS, EF-1 AND EF-2, BY ELECTRICAL.
12. PROVIDED A 25mm THICK INSULATED GALVANIZED STEEL COVERED WINTER CLOSURE PANEL. PROVIDED HINGED ACCESS DOOR AND GUIDES TO PERMIT INSERTION OF PANEL. PANEL IS IN 2 OR 3 PARTS WITH DEVICES TO FACILITATE INSTALLATION AND REMOVAL THROUGH THE ACCESS DOOR. PROVIDED HANDLE FOR PANEL REMOVAL. PROVIDED PANEL SHOP DRAWING FOR REVIEW BEFORE FABRICATION. FIELD LOCATED/FABRICATED ACCESS DOOR AND GUIDES TO ENSURE EF-2 PANEL CLEARANCE BETWEEN EF-1 AND THE EAST WALL.
13. PROVIDED A 25mm THICK INSULATED GALVANIZED STEEL COVERED WINTER CLOSURE PANEL WITH GASKETING ON FACE TO SEAL PANEL AGAINST LOUVER FRAME. PROVIDED FASTENING SYSTEM TO SECURE PANEL AGAINST FACE OF LOUVER. PROVIDED HANDLES FOR PANEL REMOVAL. PROVIDED PANEL SHOP DRAWING FOR REVIEW BEFORE FABRICATION.
14. SLOPED PLENUM AT 1% TO DRAIN MOISTURE TO OUTSIDE.
15. PROVIDED A 10mm DRAIN HOLE AT BOTTOM OF PLENUM NEAR FLEX CONNECTION. CONSTRUCTED PLENUM TO SLOPE TO DRAIN HOLE.
16. PROVIDED PLENUM VEINS TO REDIRECT AND DISTRIBUTE THE AIRFLOW AS SHOWN. VEINS ARE RIGID SHEET METAL CONSTRUCTION SECURELY FASTENED AND BRACED INSIDE THE PLENUM TO PREVENT NOISE. KEPT 50mm CLEARANCE BETWEEN VEINS AND CLOSURE PANEL GUIDES.
17. INSTALLED A SECURITY BAR SCREEN BETWEEN LOUVER L-1 AND L-6. 1/2" DIA. HORIZONTAL STEEL RODS AT 6" SPACING AND ONE VERTICAL ROD DOWN THE CENTRE. OVERALL DIMENSIONS ARE 3'-0"x3'-0"x6" DEEP. SECURITY BAR SCREEN ANCHORED DIRECTLY INTO WALL FRAMING.

LEGEND:

- (T) THERMOSTAT
- (S) ON/OFF ELECTRICAL SWITCH
- (B) MULTI-BLADE, GASKETED BALANCE DAMPER



RECORD DRAWING
WATER & WASTE DEPARTMENT
PROJECT COMPLETION DATE : 19 SEPTEMBER 09
CONTRACTOR : SBS PROJECTS INC.

APEGN
Certificate of Authorization
KGS Group
No. 245 Date: 2008-08-18

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DATE 17/01/08	DATE

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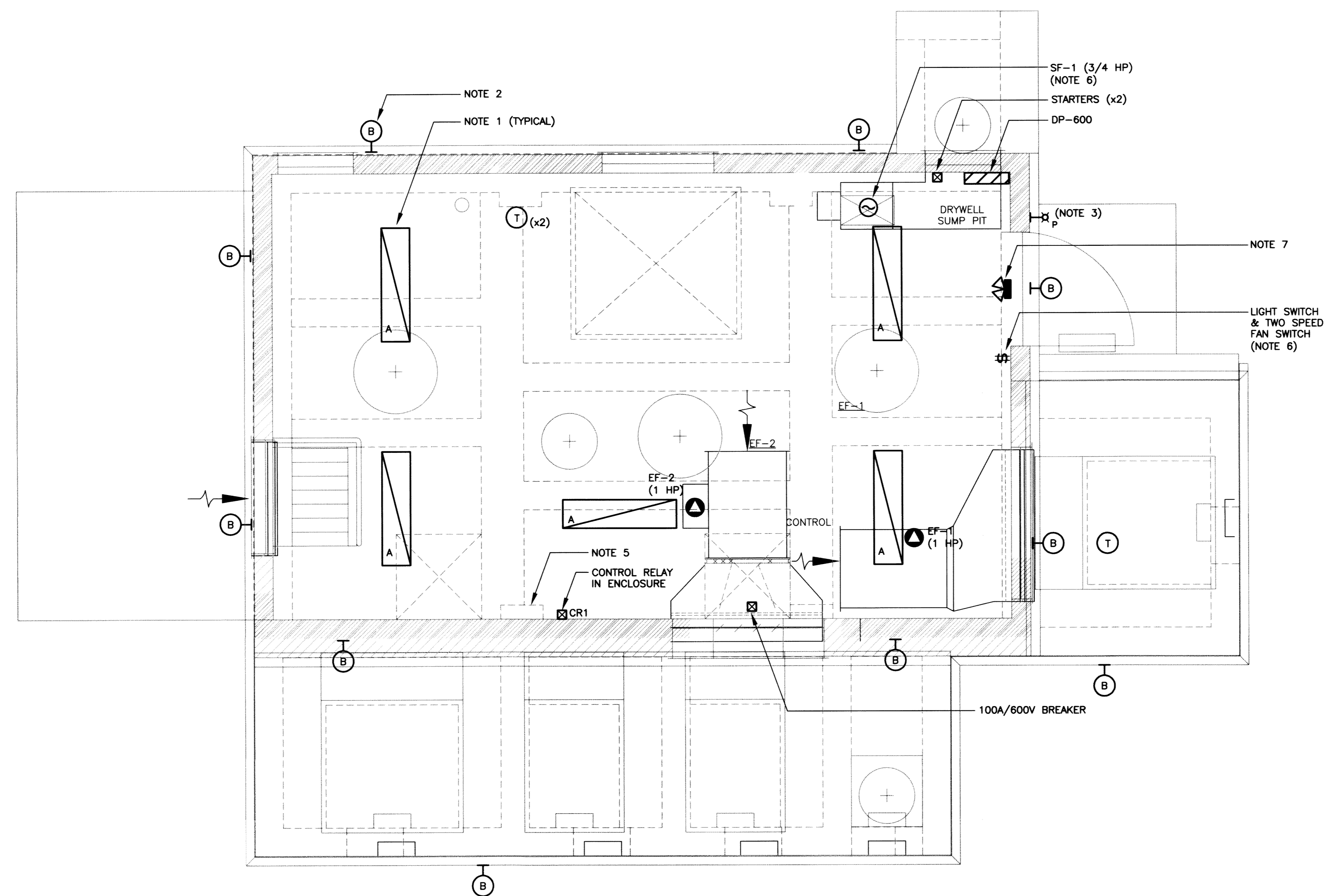
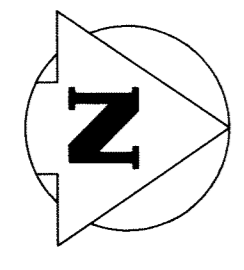
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THE CITY OF WINNIPEG
Winnipeg WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE
MECHANICAL VENTILATION PLAN

SHEET 01 OF 01
CAD FILE DRAWING NUMBER 06-0107-15-M1
CITY DRAWING NUMBER LD-5052

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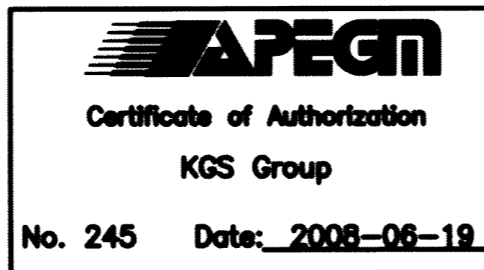
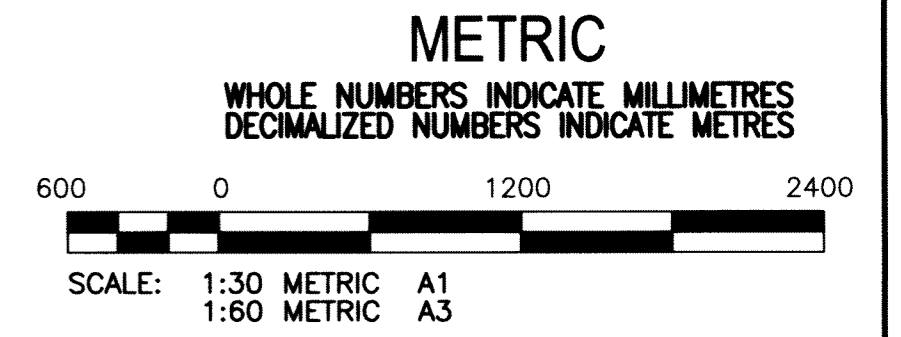
MAIN FLOOR PLAN
SCALE: 1:30

- NOTES:**
- INTERIOR LIGHTS SHOWN PRIMARILY FOR QUANTITY. FIXTURES SHALL BE MOUNTED TO PROVIDE MAXIMUM CLEARANCE AND LIGHT DISTRIBUTION.
 - FOR DETAILED LIGHTING LOCATIONS, SEE ARCHITECTURAL ELEVATIONS A3.0
 - PROVIDED PHOTOCELL AND CONTACTOR TO CONTROL EXTERIOR LIGHTS.
 - EXISTING DISTRIBUTION PANEL FOR ADJACENT PARKING LOT REMOVED, REPLACED AND RE-FED. COORDINATE WITH MANITOBA HYDRO FOR A NEW UNDERGROUND 200A SERVICE. PROVIDE A VANDAL RESISTANT METER ENCLOSURE AND A WATERPROOF VANDAL RESISTANT PADLOCKABLE 24cct 1 ϕ DISTRIBUTION PANEL. REPAIRED UNDERGROUND FEEDERS. MATCHED EXISTING BREAKERS.
 - COORDINATED WITH CITY TO HAVE A PUMP RUN CONTACT FOR INTERLOCKING THE EXHAUST FANS.
 - SF-1 CONTROLLED FROM A MANUAL TWO SPEED STARTER SWITCH AT THE DOORWAY.
 - LUMACELL 100W EMERGENCY BATTERY PACK C/W 2-20W MR16 HEADS ABOVE ENTRANCE DOOR. POWER HARD WIRED TO BATTERY PACK.

- LEGEND:**
- PANEL DESIGNATION
 - CIRCUIT NUMBER
 - FLUORESCENT LUMINAIRE (1x4)
 - FIXTURE TYPE
 - HID OR INCANDESCENT LUMINAIRE (WALL MOUNTED)
 - SINGLE POLE SWITCH
 - 2 SWITCHES IN GANG
 - 1 ϕ MOTOR LOAD
 - 3/4 ϕ MOTOR LOAD
 - ELECTRICAL PANELBOARD
 - NEW THERMOSTATS

RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
CONTRACTOR : SBS PROJECTS INC.



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DATE: 17/01/08	DATE:

ENGINEER'S SEAL

CONSULTANT DRAWING NO. 06-0107-15-E1

THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE

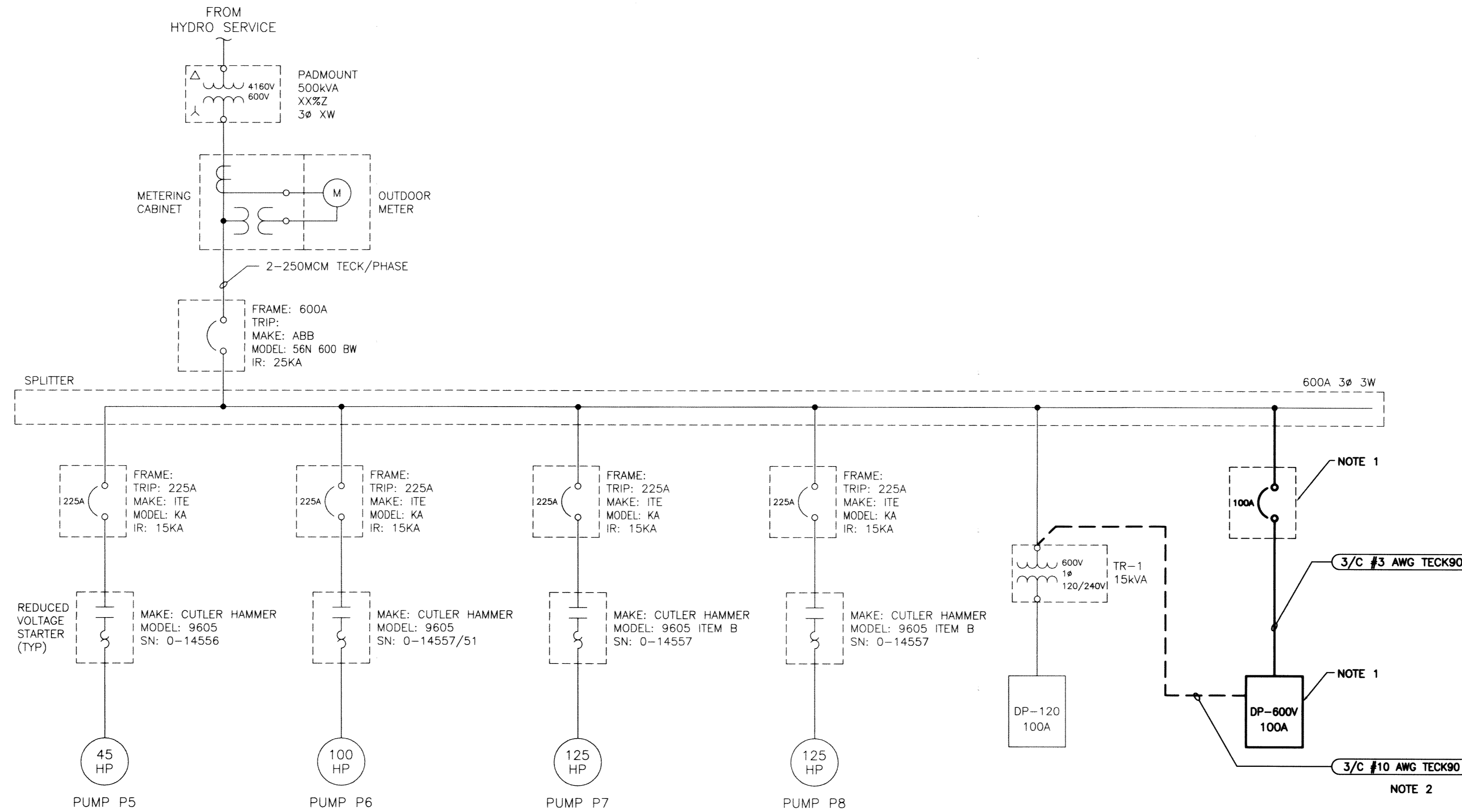
ELECTRICAL PLAN

SHEET 01 OF 04
CAD FILE DRAWING NUMBER 06-0107-15-E1
CITY DRAWING NUMBER LD-5053

File Name: P:\Projects\2006\06-0107-15\Elect\Draws\20110610 Stamped\06-0107-15_E2-Rev 1.dwg - Tab: E2 Plotted By: DDeroche 06/10/2011 [Fri 10:03am]

NOTES:

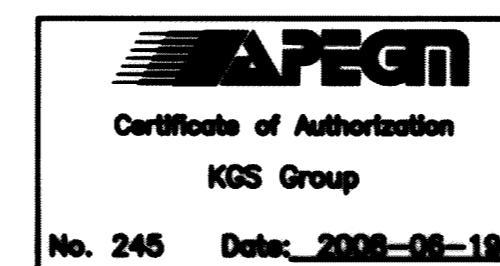
1. 100A BREAKER CONNECTED TO THE EXISTING SPLITTER. 24 CIRCUIT PANEL 'DP-600' FOR 600V, 3Ø 3W FEEDS.
2. FEED EXISTING TRANSFORMER FROM PANEL 'DP-600' (30A-2P BREAKER).



RECORD DRAWING
WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
CONTRACTOR : SBS PROJECTS INC.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



B.M.	XX-XXX				
ELEV.	XXX.XXX				
NO.	REVISIONS	DATE	BY	DATE	
1	RECORD DRAWING	10/06/11	AP		
0	ISSUED FOR CONSTRUCTION	19/06/08	AP		
				17/01/08	

KGS GROUP CONSULTING ENGINEERS	
DESIGNED BY: AP	CHECKED BY: [Signature]
DRAWN BY: GCN	APPROVED BY: [Signature]
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION: [Signature]
	DATE

ENGINEER'S SEAL

 CONSULTANT DRAWING NO.
06-0107-15-E2

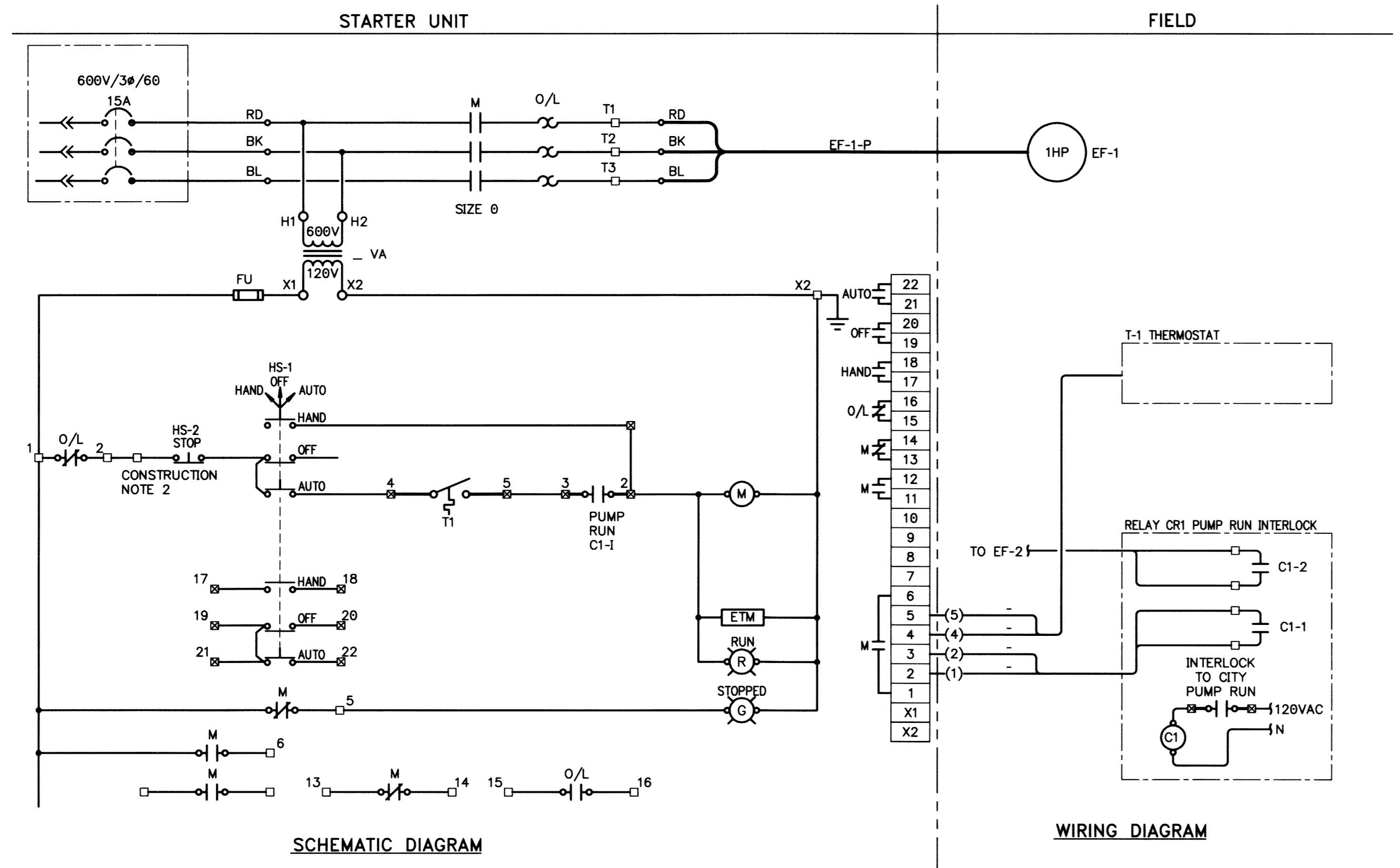
THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION BUILDING UPGRADE

ELECTRICAL SINGLE LINE DIAGRAM

SHEET	OF
02	04
CAD FILE DRAWING NUMBER	
06-0107-15-E2	
CITY DRAWING NUMBER	
LD-5059	

FileName: P:\Projects\2006\06-0107-15\Elect\Dwgs\20110610 Stamped\06-0107-15_E3-Rev 1.dwg - Tab: E3 Plotted By: DDeroche 06/10/2011 [Fri 10:02am]



- CONSTRUCTION NOTES:**
1. REVISED EXISTING LOCAL CONTROL PANEL WIRING TO MATCH SCHEMATIC.
 2. REMOVED LOCK FROM STOP PUSHBUTTON LOCAL TO MOTOR.

- LEGEND**
- () CONDUCTOR IDENTIFICATION
 - STARTER TERMINALS
 - CONTROL PANEL TERMINALS
 - FIELD WIRING
 - PANEL WIRING
 - WIRE CONNECTION
 - PILOT LIGHT
 - ETM ELAPSED TIME METER

RECORD DRAWING
 WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
 CONTRACTOR : SBS PROJECTS INC.

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

APEGN
 Certificate of Authorization
 KGS Group
 No. 245 Date: 2008-06-19

B.M.	XX-XXX			
ELEV.	XXX.XXX			
1	RECORD DRAWING	10/06/11	AP	
0	ISSUED FOR CONSTRUCTION	19/06/08	AP	
NO.	REVISIONS	DATE	BY	DATE
				17/01/08

KGS GROUP
 CONSULTING ENGINEERS

DESIGNED BY: AP	CHECKED BY:
DRAWN BY: GCN	APPROVED BY:
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION:
	DATE:

ENGINEER'S SEAL

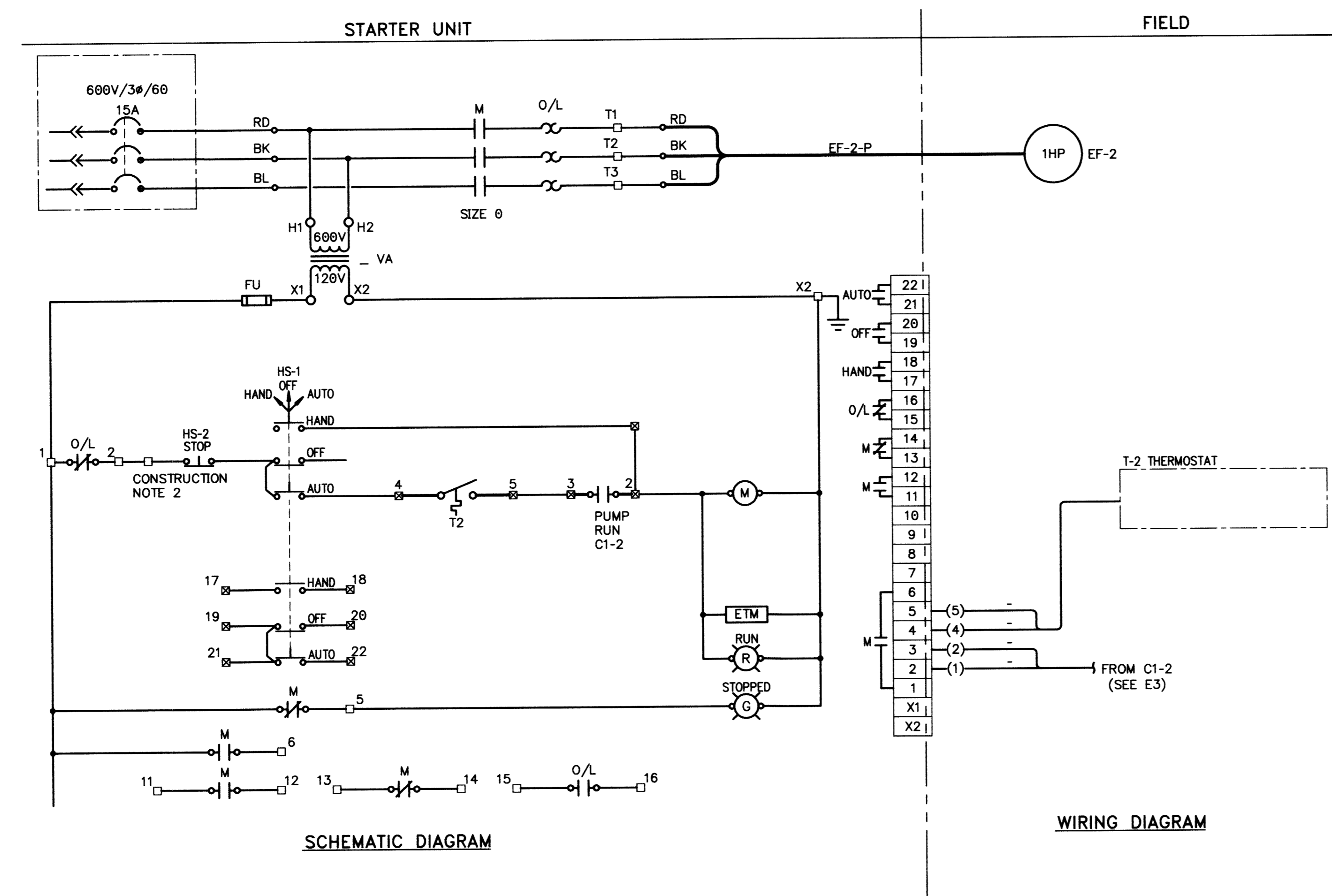
CONSULTANT DRAWING NO.
06-0107-15-E3

THE CITY OF WINNIPEG
 WATER & WASTE DEPARTMENT

BANNATYNE FLOOD PUMPING STATION
 BUILDING UPGRADE
ELECTRICAL
EF-1 SCHEMATIC
AND WIRING DIAGRAM

SHEET OF
03 04
 CAD FILE DRAWING NUMBER
06-0107-15-E3
 CITY DRAWING NUMBER
LD-5060

File Name: P:\Projects\2006\06-0107-15\Elect\Draws\20110610 Stamped\06-0107-15_E4-Rev 1.dwg - Tab: E4 Plotted By: DDeroche 06/10/2011 [Fri 10:02am]



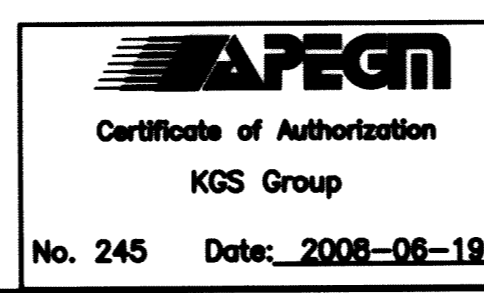
- CONSTRUCTION NOTES:**
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 2. REMOVED LOCK FROM STOP PUSHBUTTON LOCAL TO MOTOR.

- LEGEND**
- () CONDUCTOR IDENTIFICATION
 - STARTER TERMINALS
 - ⊠ CONTROL PANEL TERMINALS
 - FIELD WIRING
 - PANEL WIRING
 - WIRE CONNECTION
 - ⊙ PILOT LIGHT
 - ETM ELAPSED TIME METER

RECORD DRAWING
 WATER & WASTE DEPARTMENT

PROJECT COMPLETION DATE : 19 SEPTEMBER 09
 CONTRACTOR : SBS PROJECTS INC.

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



B.M.	XX-XXX
ELEV.	XXX.XXX
NO.	REVISIONS
DATE	BY
DATE	DATE

KGS GROUP CONSULTING ENGINEERS	
DESIGNED BY: AP	CHECKED BY:
DRAWN BY: GCN	APPROVED BY:
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION:
DATE: 17/01/08	DATE:

ENGINEER'S SEAL

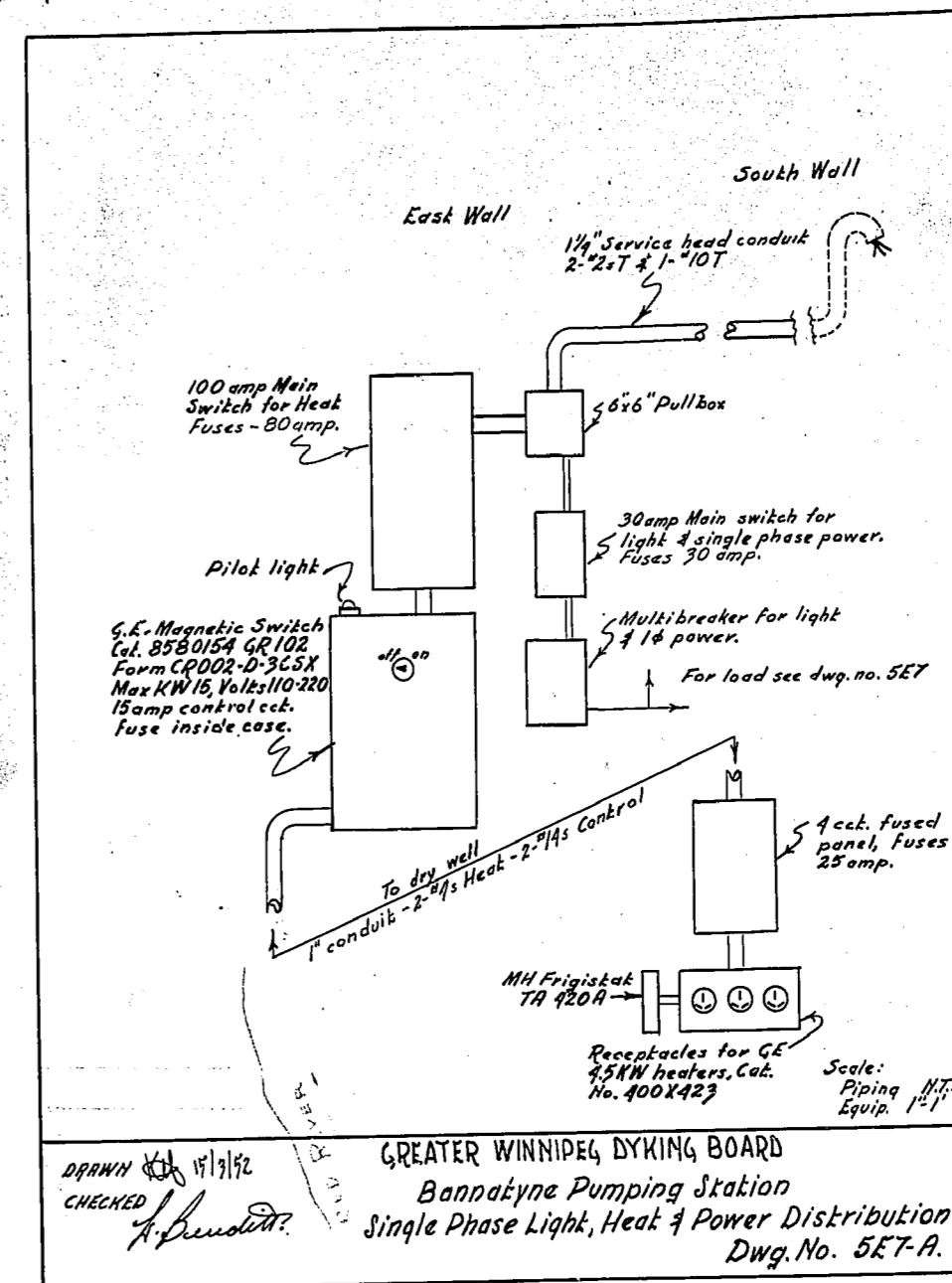
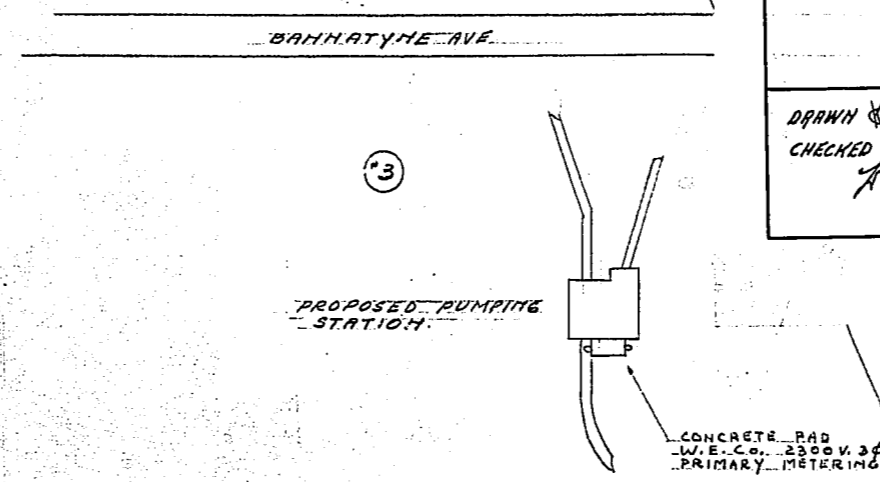
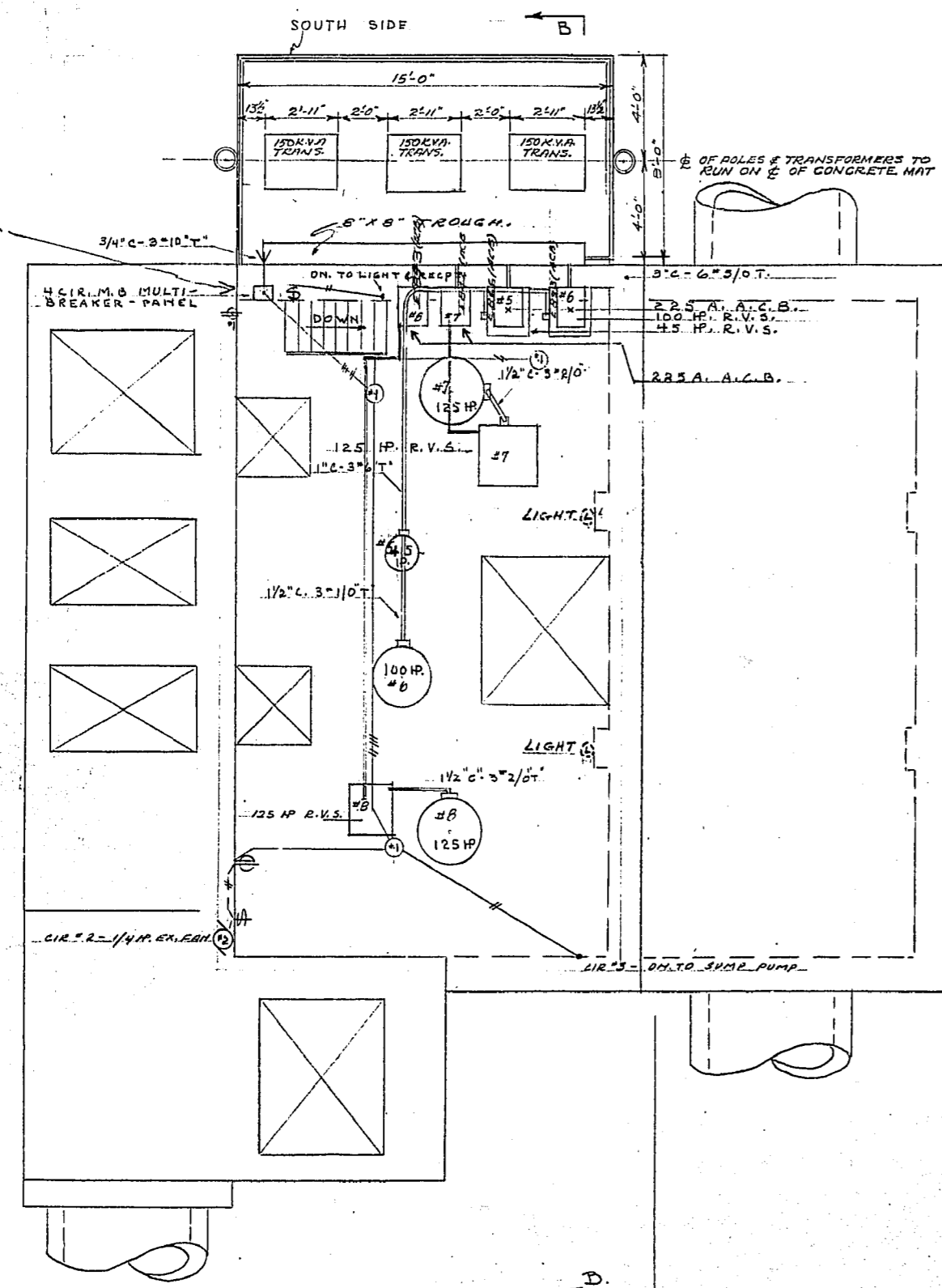
CONSULTANT DRAWING NO. 06-0107-15-E4

THE CITY OF WINNIPEG
 WATER & WASTE DEPARTMENT
 Winnipeg

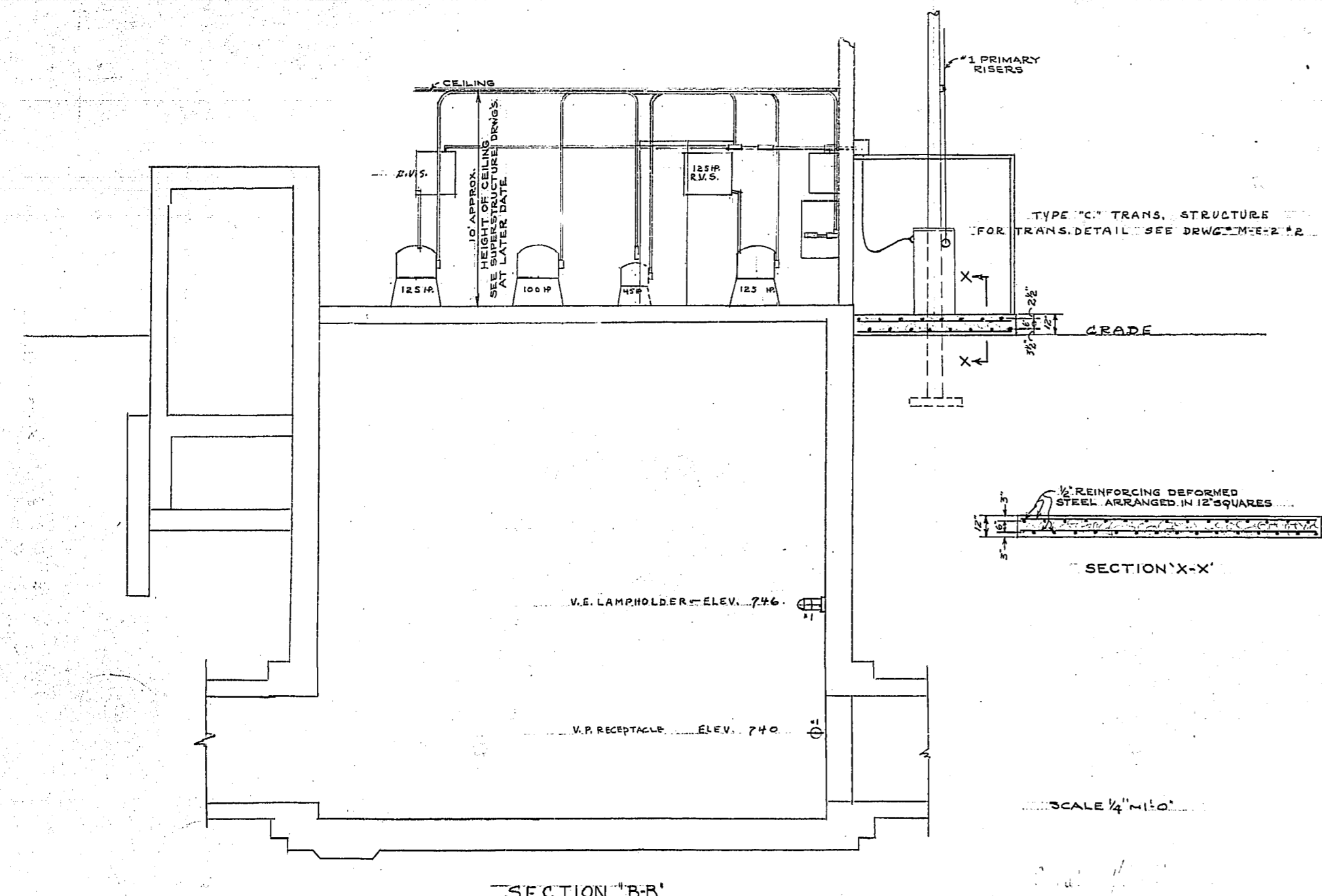
BANNATYNE FLOOD PUMPING STATION
 BUILDING UPGRADE
ELECTRICAL
EF-2 SCHEMATIC
AND WIRING DIAGRAM

SHEET	OF
04	04
CAD FILE DRAWING NUMBER	
06-0107-15-E4	
CITY DRAWING NUMBER	
LD-5061	

See drg. no. 5E7A for new hp service.



GREATER WINNIPEG DYKING BOARD
 Bannatyne Pumping Station
 Single Phase Light, Heat & Power Distribution
 Dwg. No. 5E7-A.



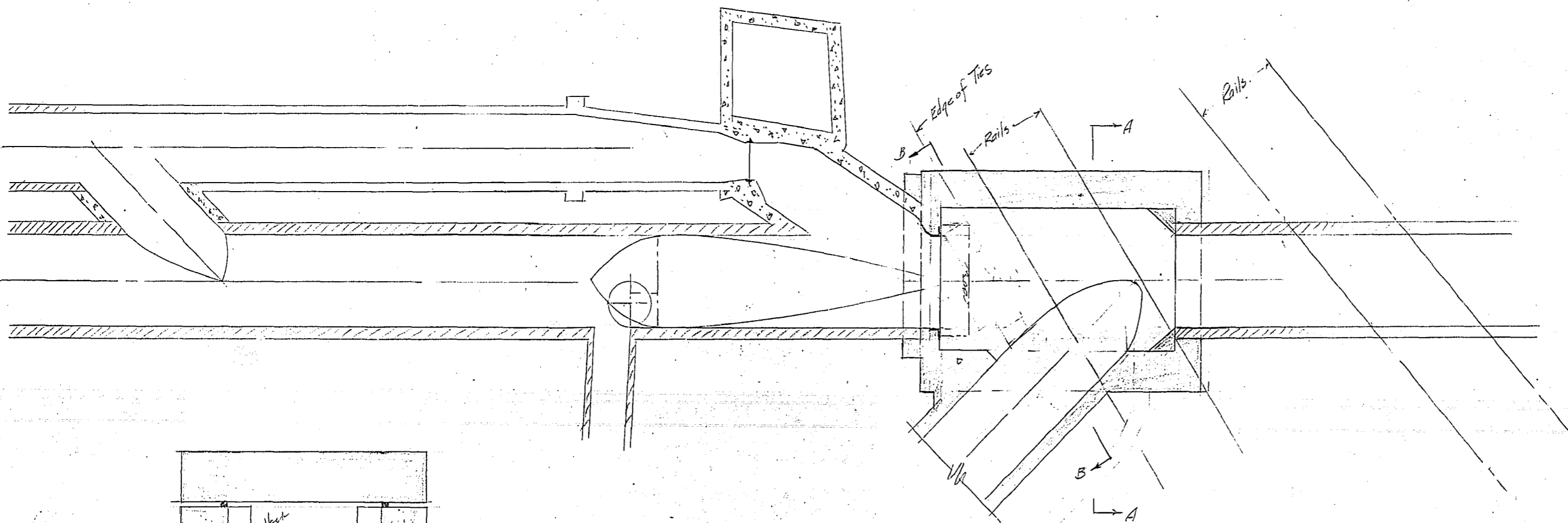
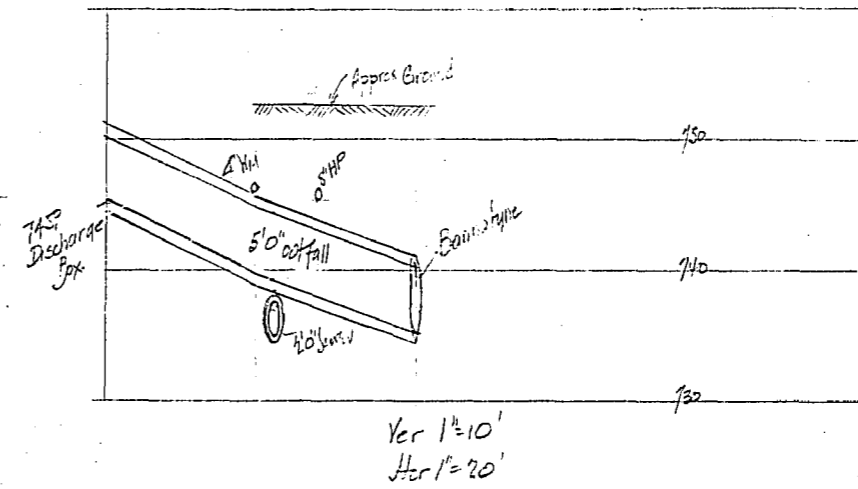
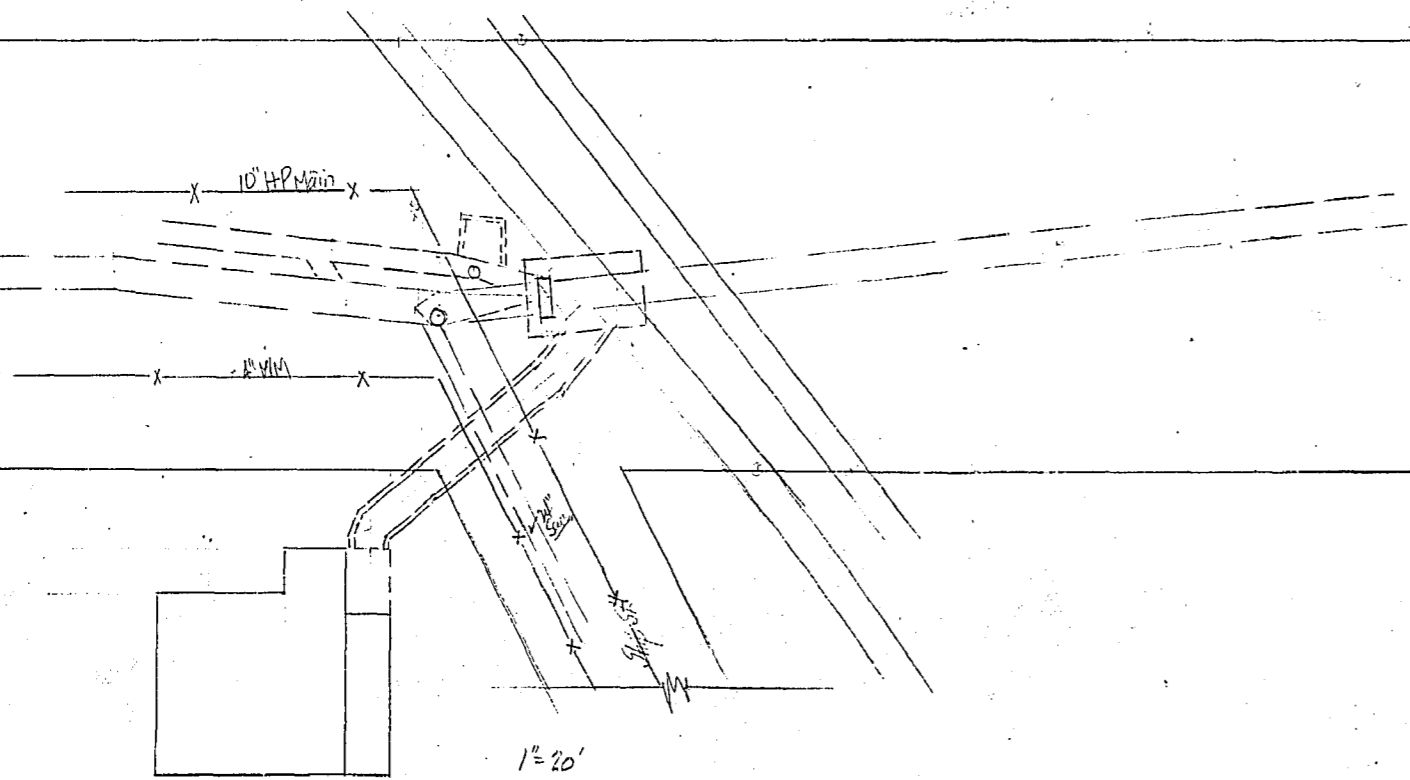
NOTE
 LOCATE LIGHT SWITCH BY ENTRANCE DOOR TO CONTROL MOTOR FLOOR LIGHTS.

REVISION	DATE	DESCRIPTION	CHKD.
1	2/2/51	SCALE ADDED	
2	22/5/51	TRANS. STRUCTURE CHANGED TO CONFORM WITH TYPICAL TRANS. STRUCTURE TYPE 'C'	RY.
3	30/1/51	REVISIONS AS TO COMPLETED	
4	3/1/52	note new hp service	

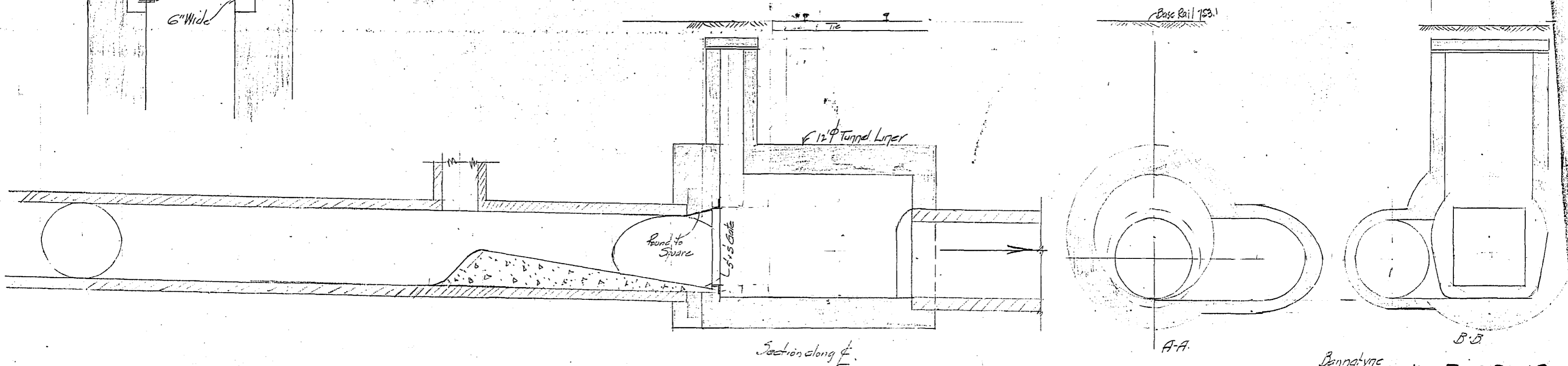
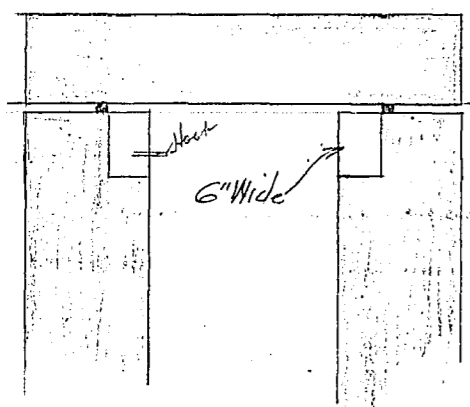
GREATER WINNIPEG DYKING BOARD
 221 OS. ONE ST. N. WINNIPEG, MANITOBA

BANNATYNE AVENUE
PUMPING STATION
ELECTRICAL LAYOUT

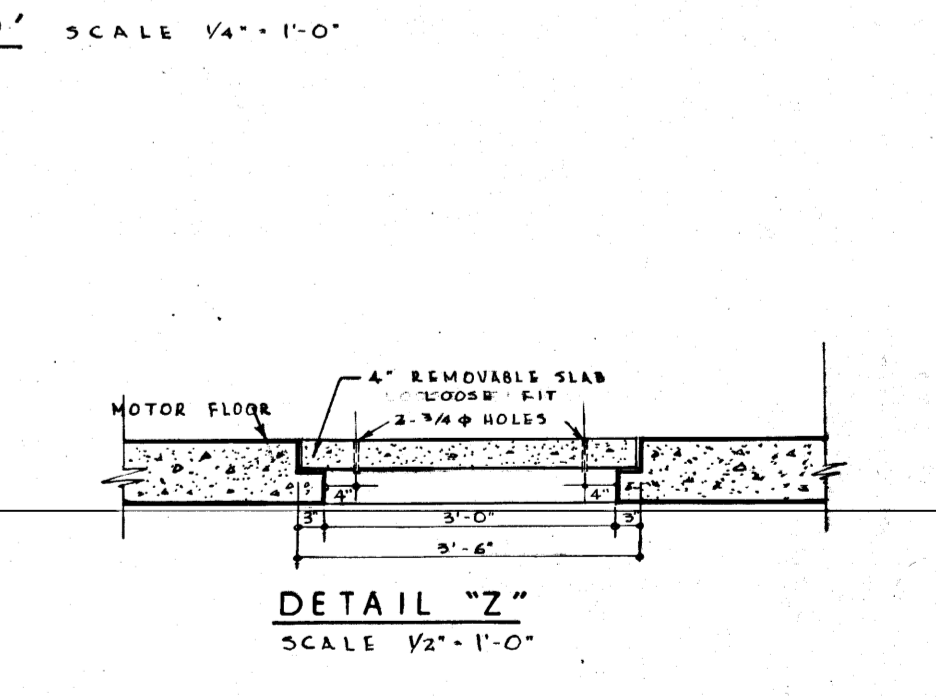
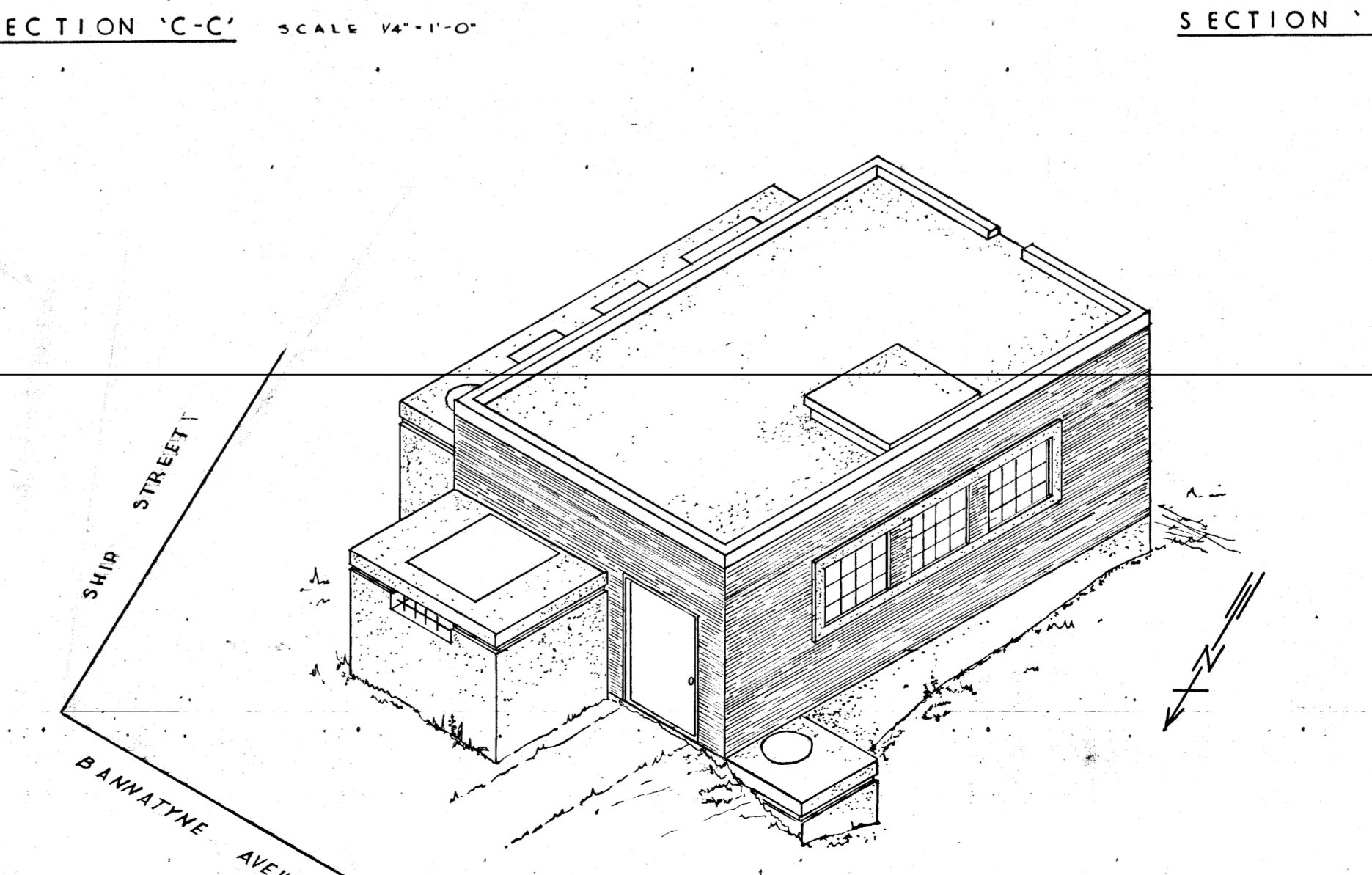
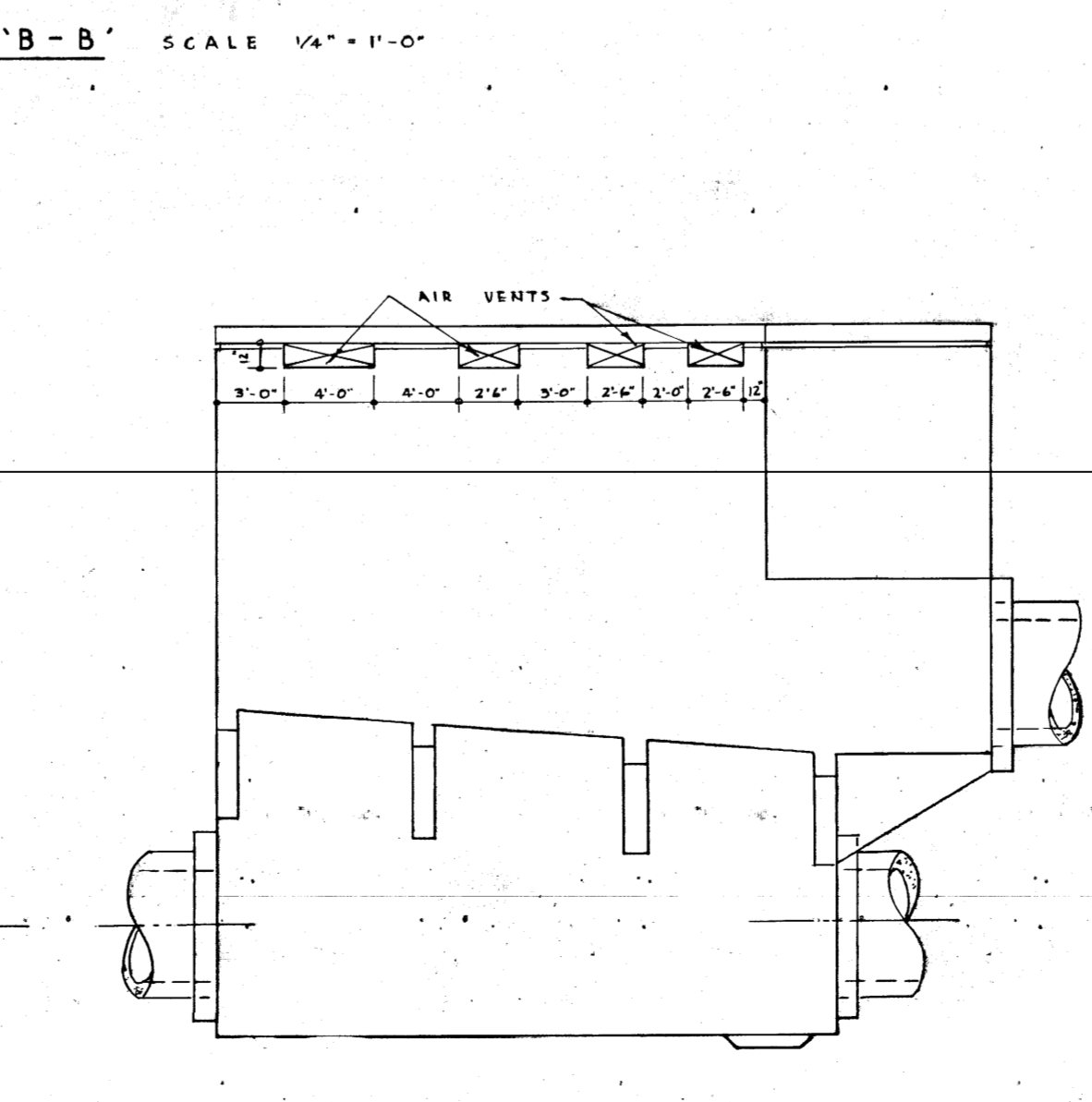
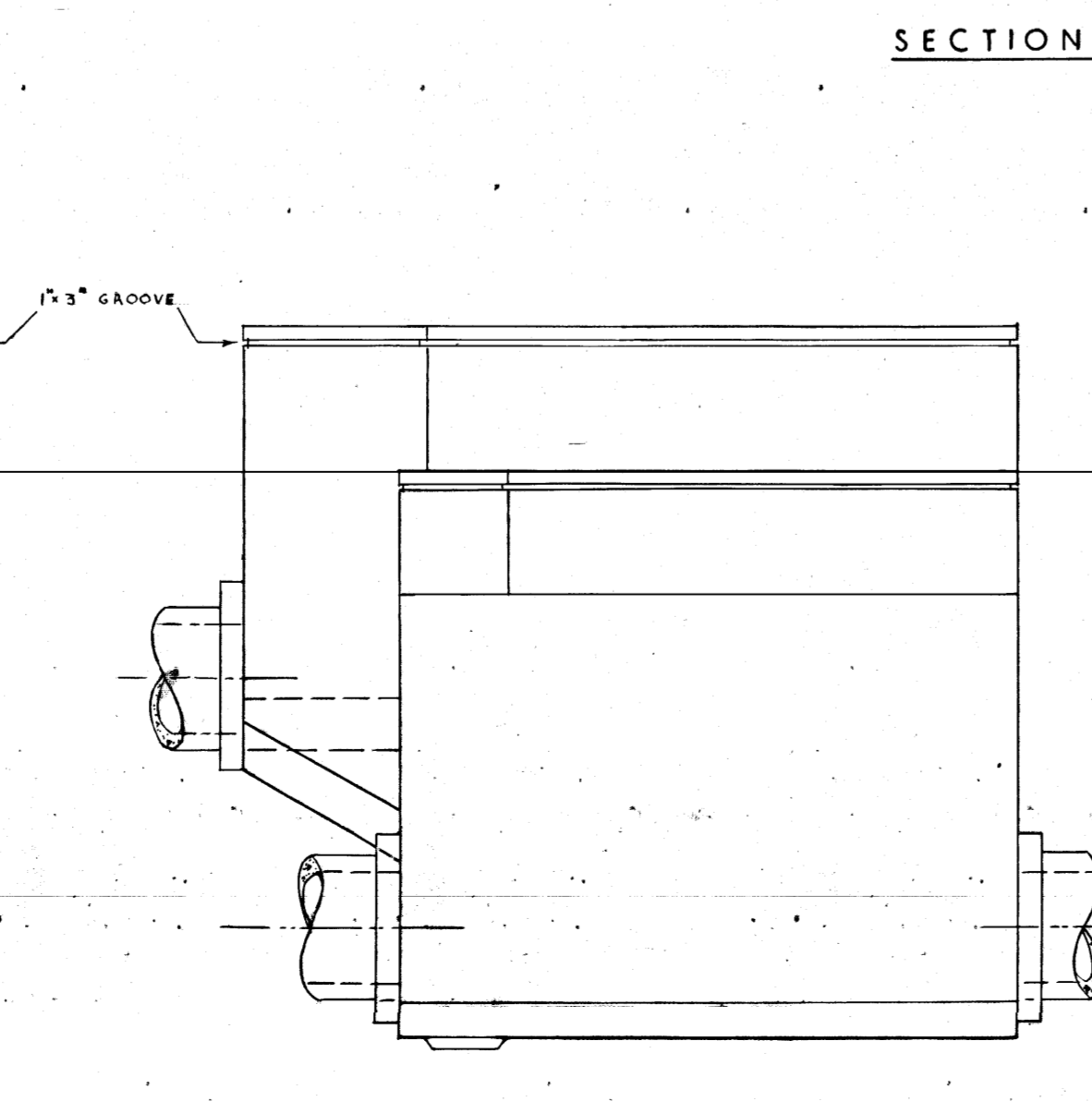
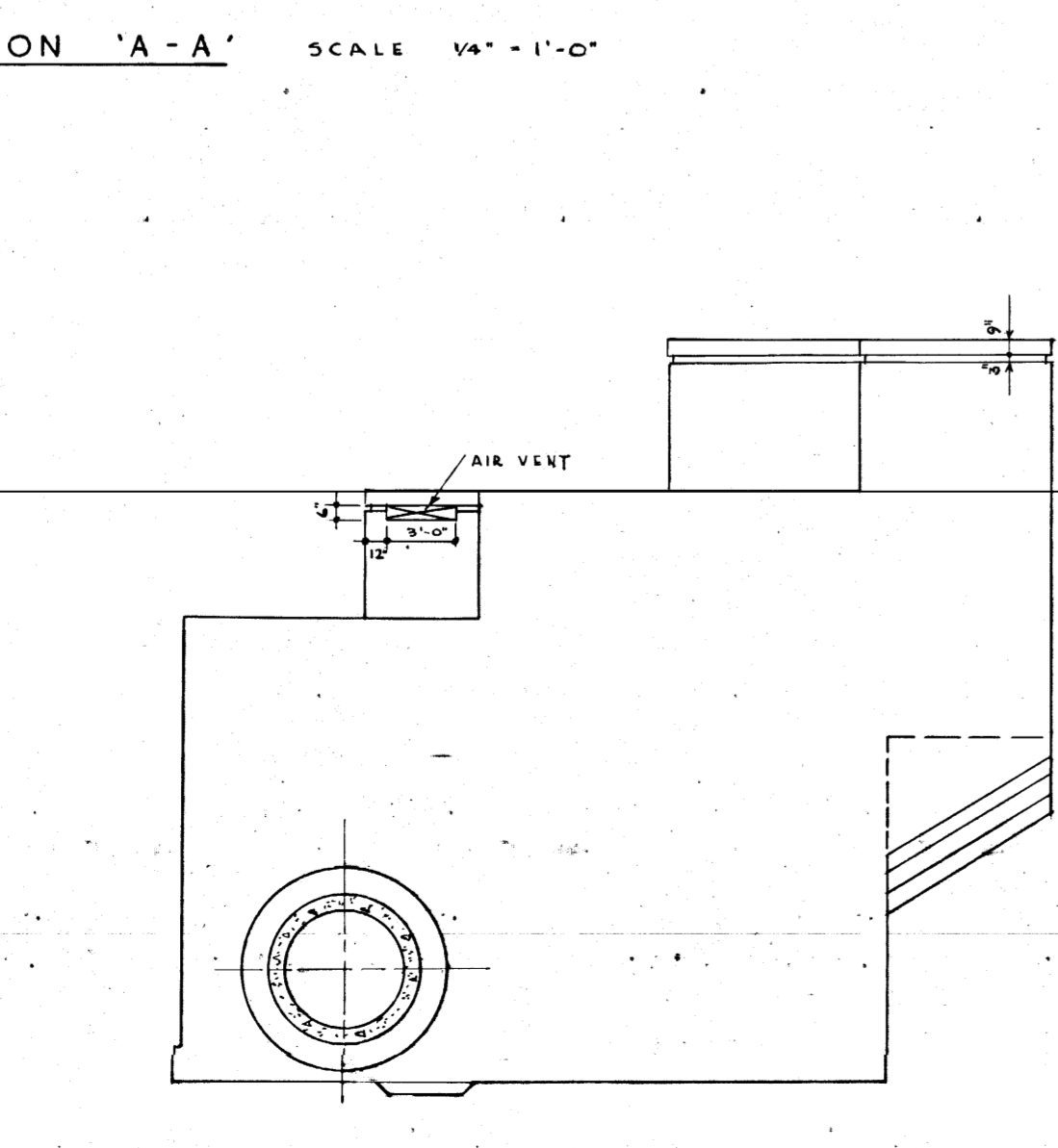
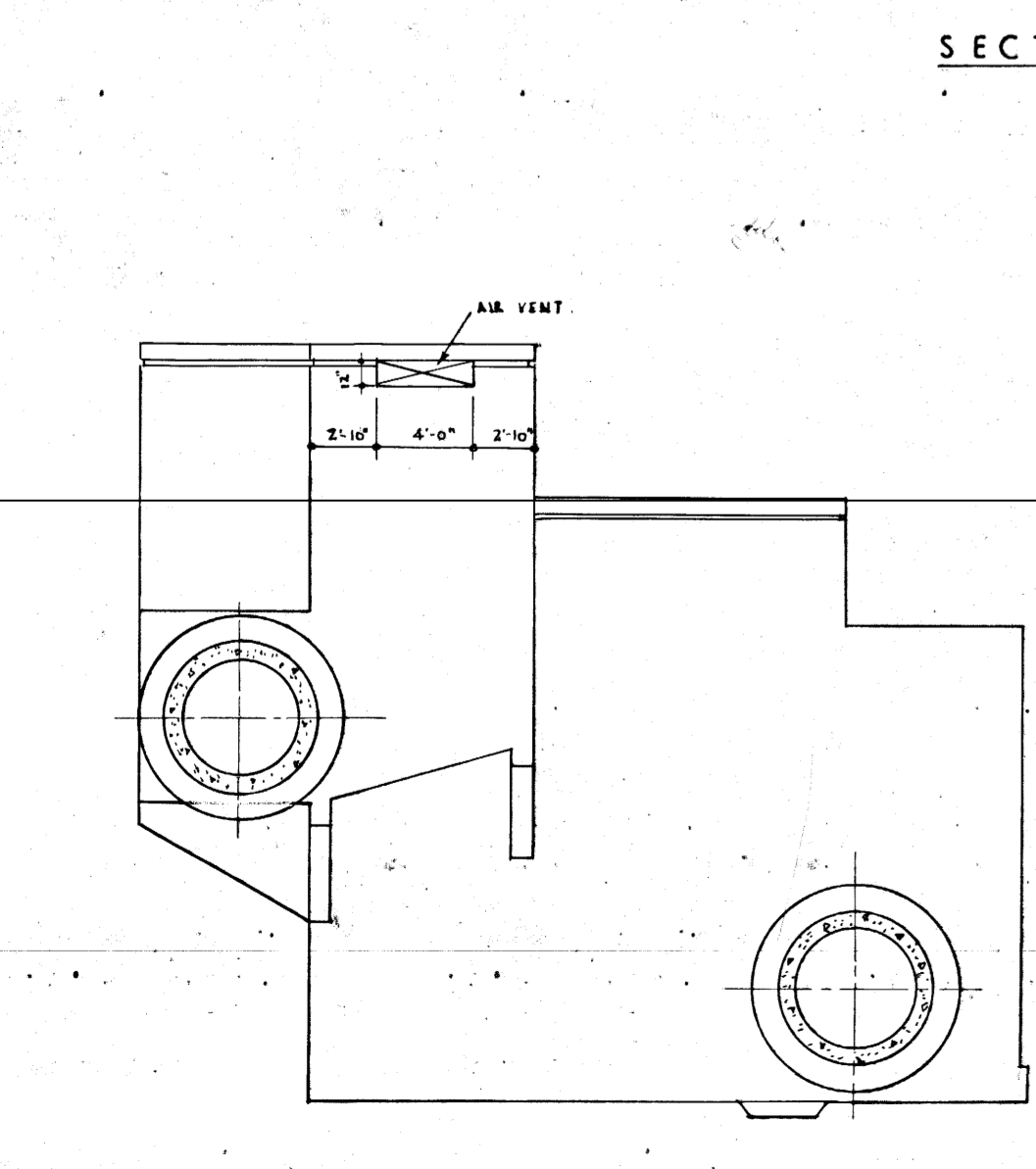
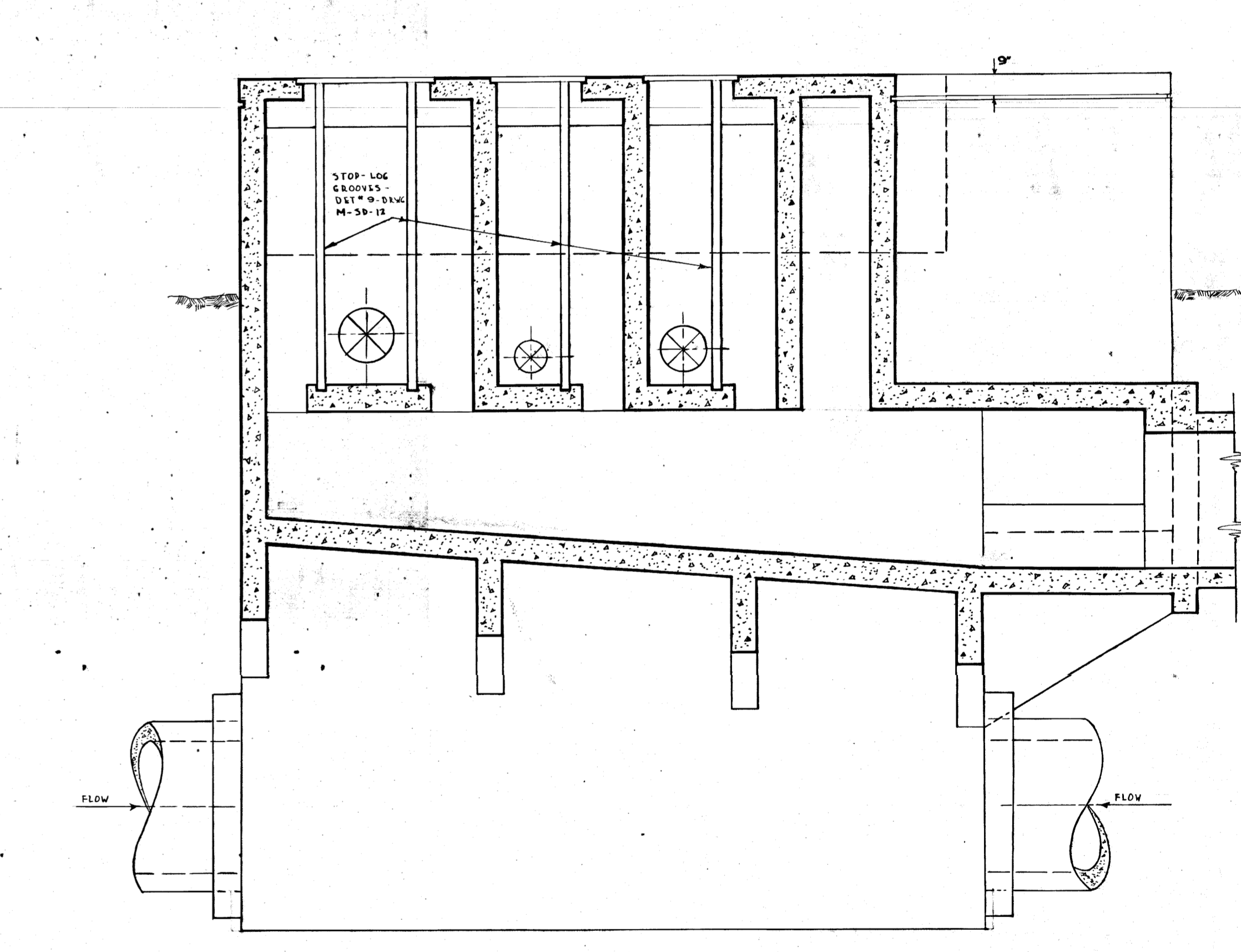
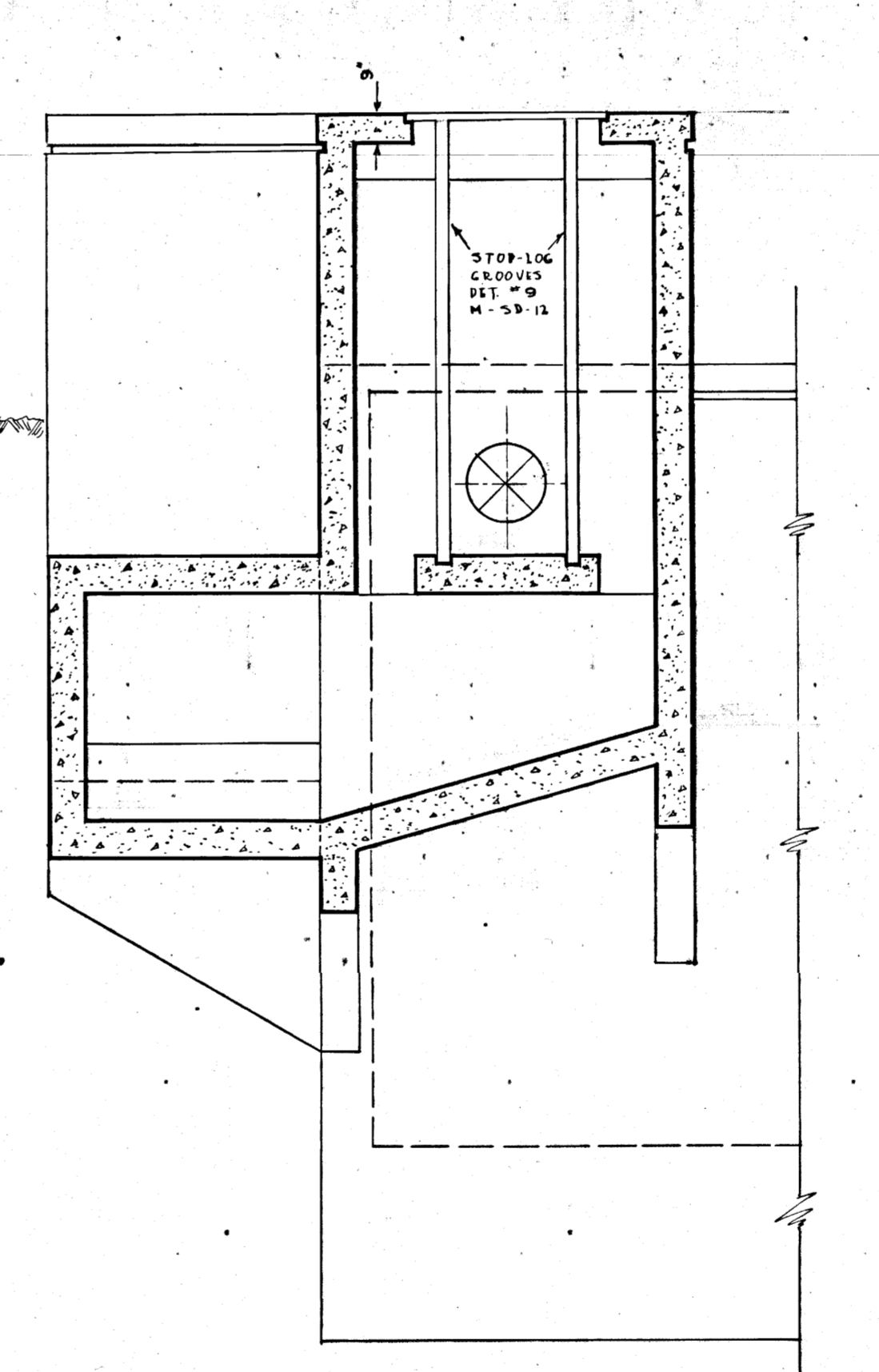
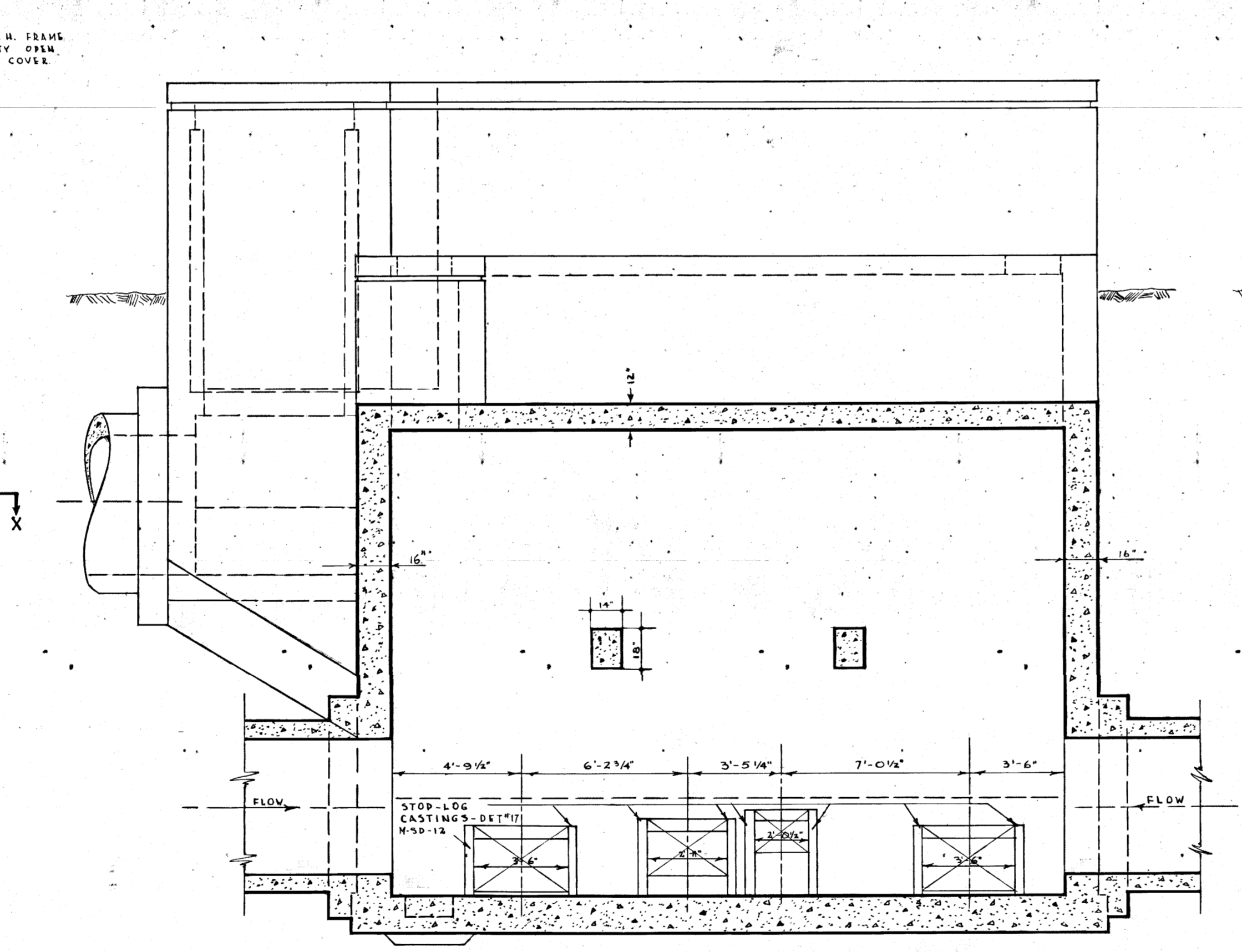
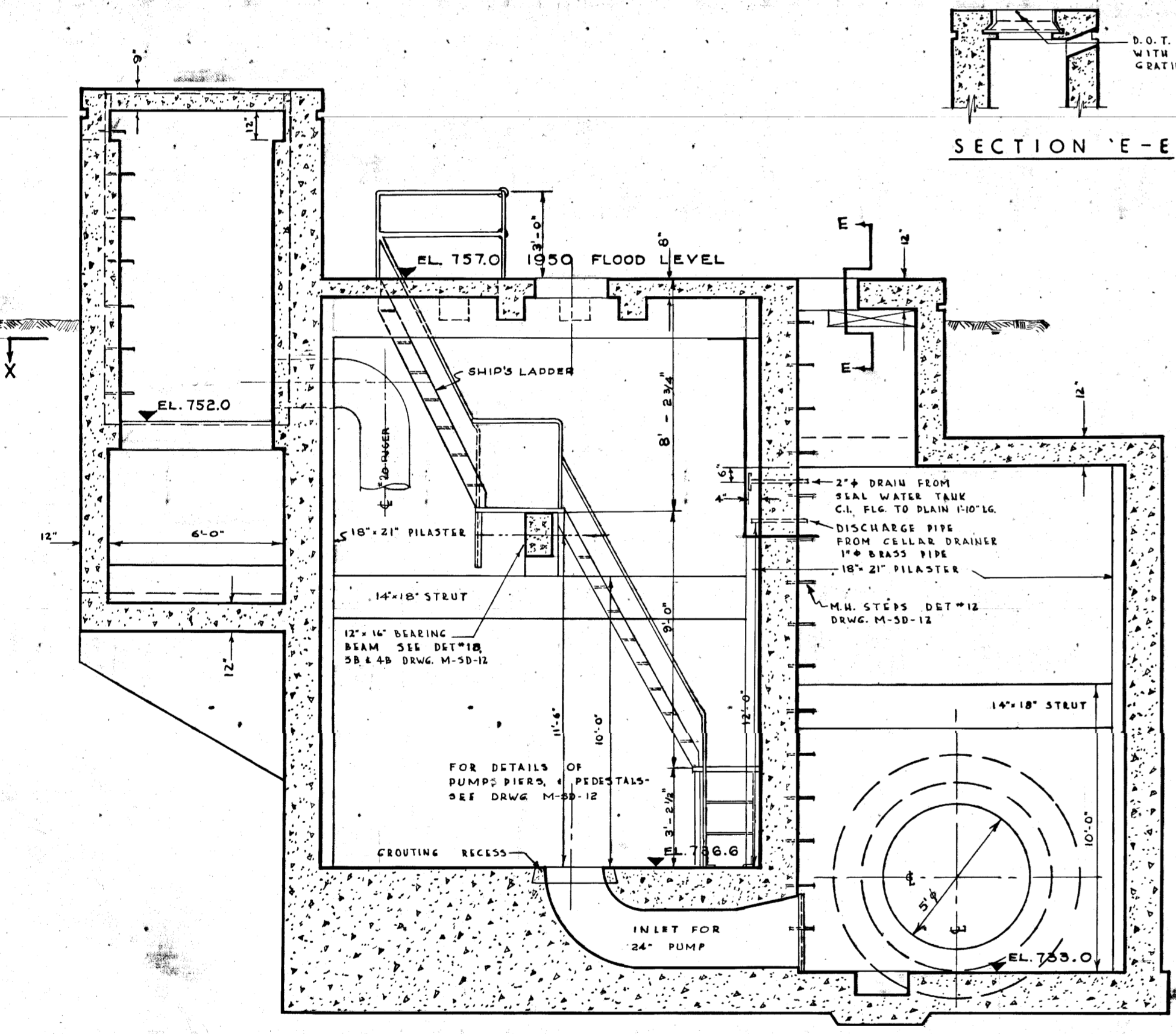
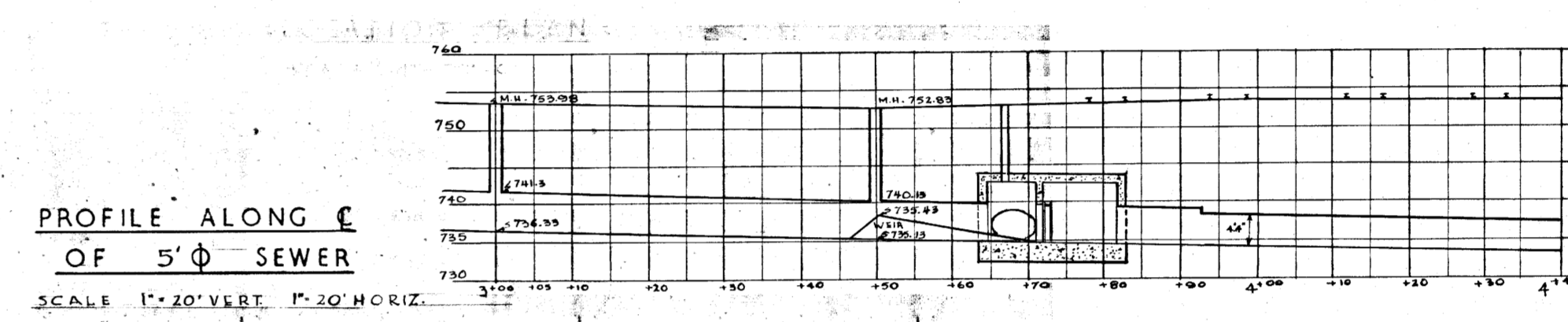
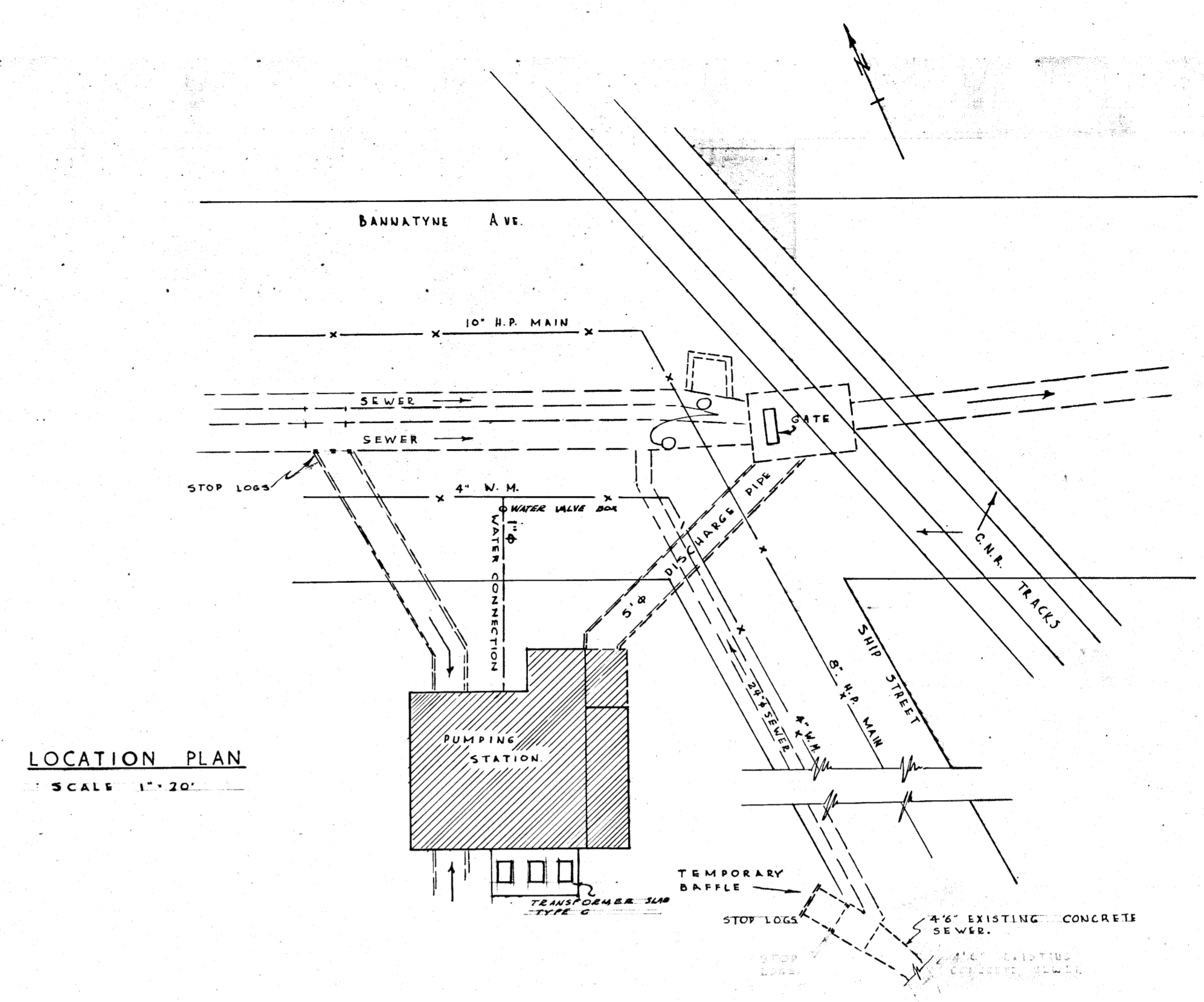
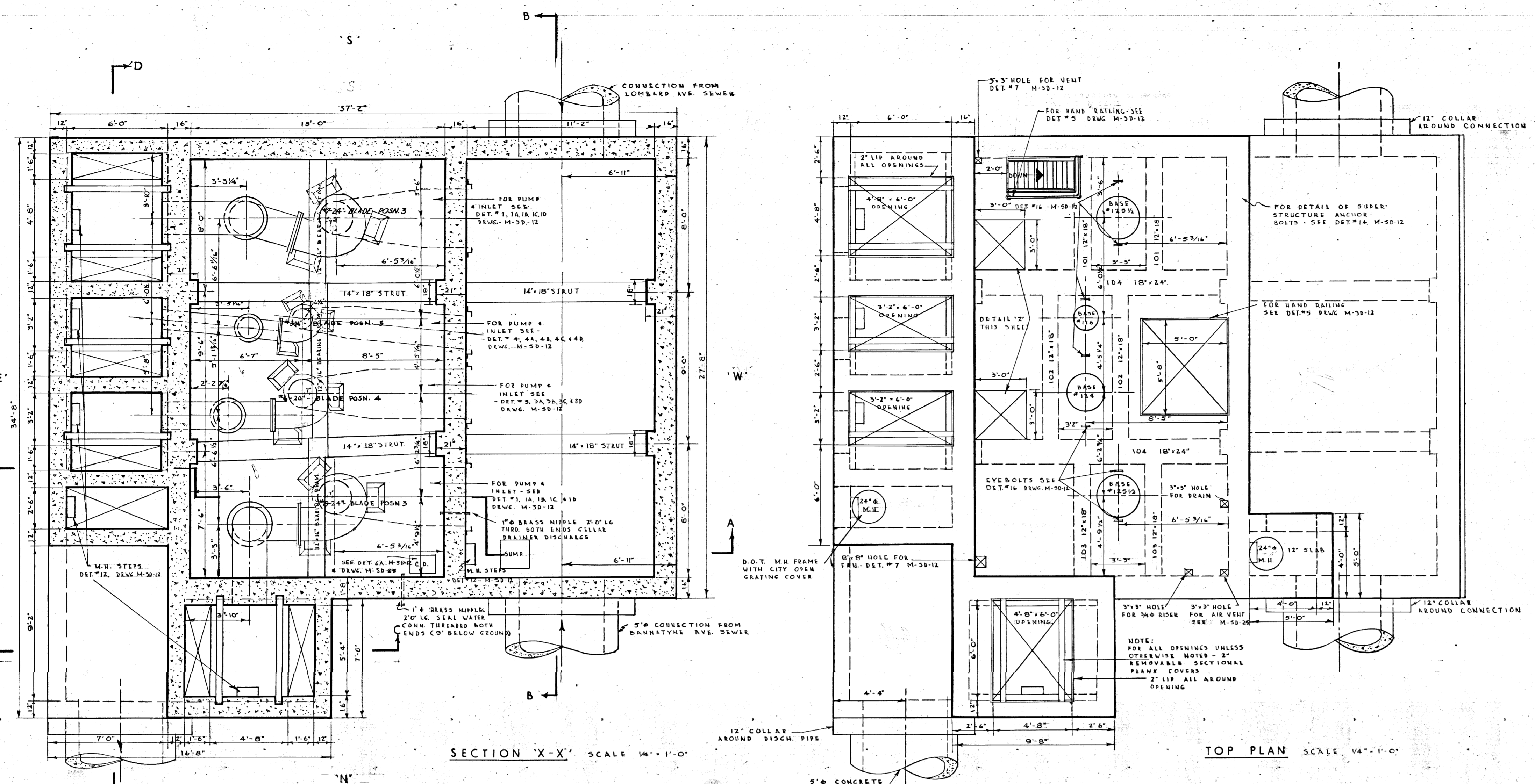
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 DRG. No. 5-E-7



9.4.10
L.G. 1
10.1.10



Bennatype # 5-SD-10

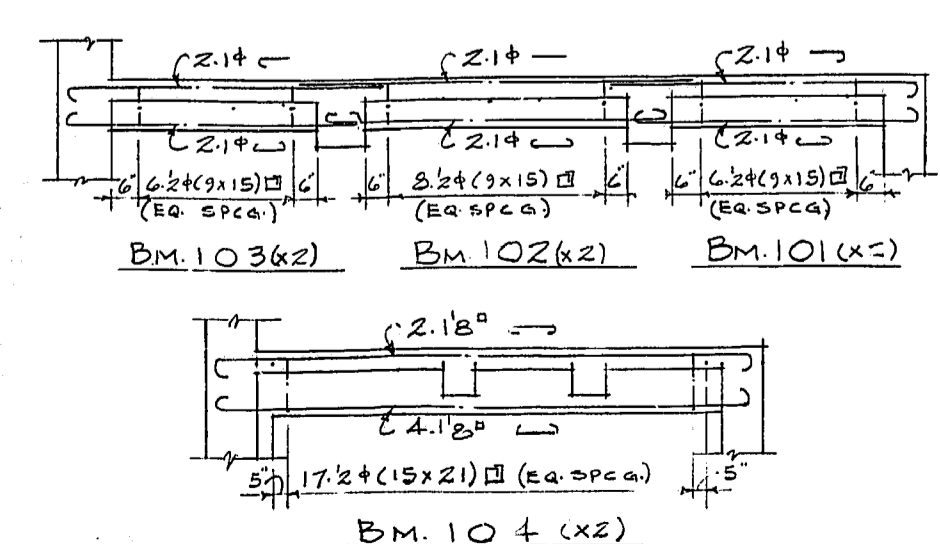
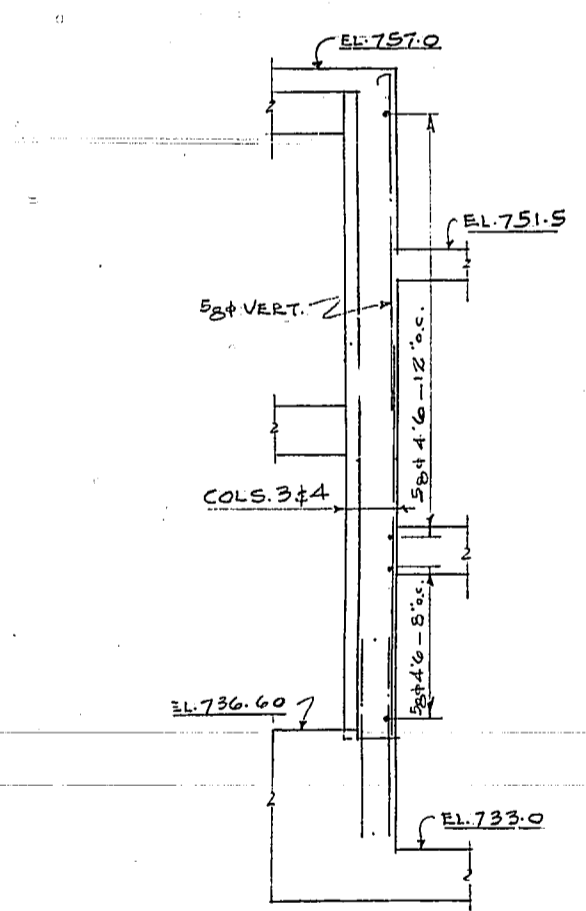
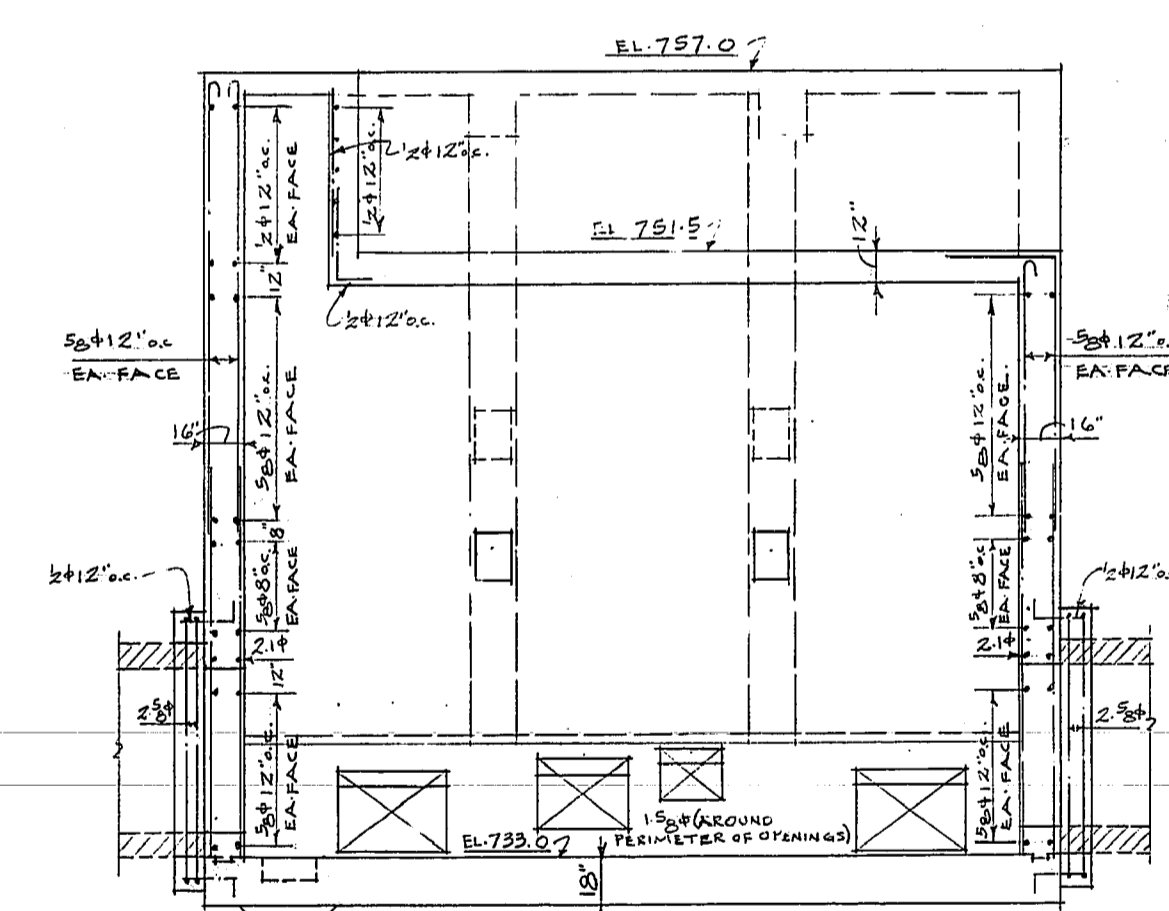
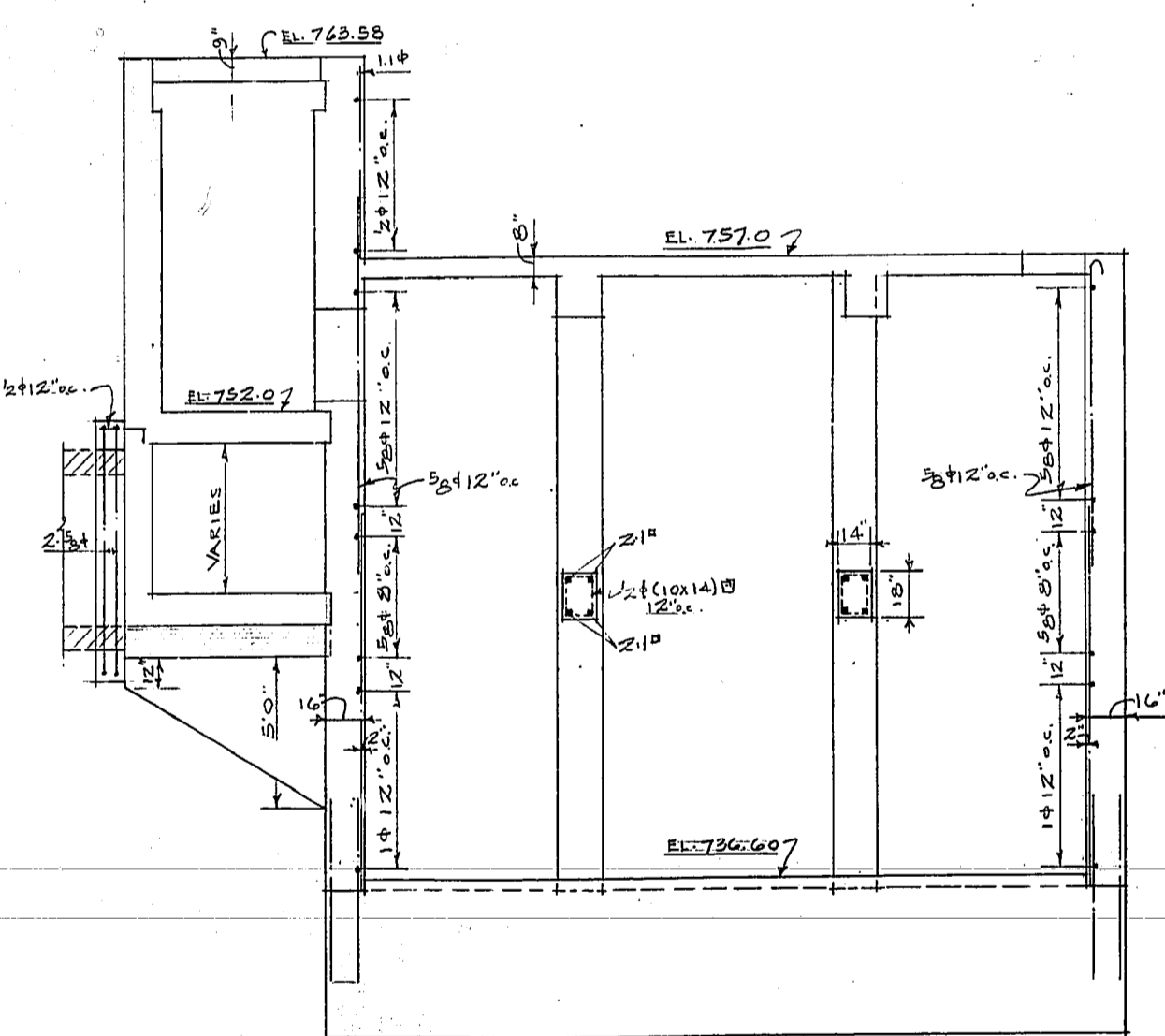
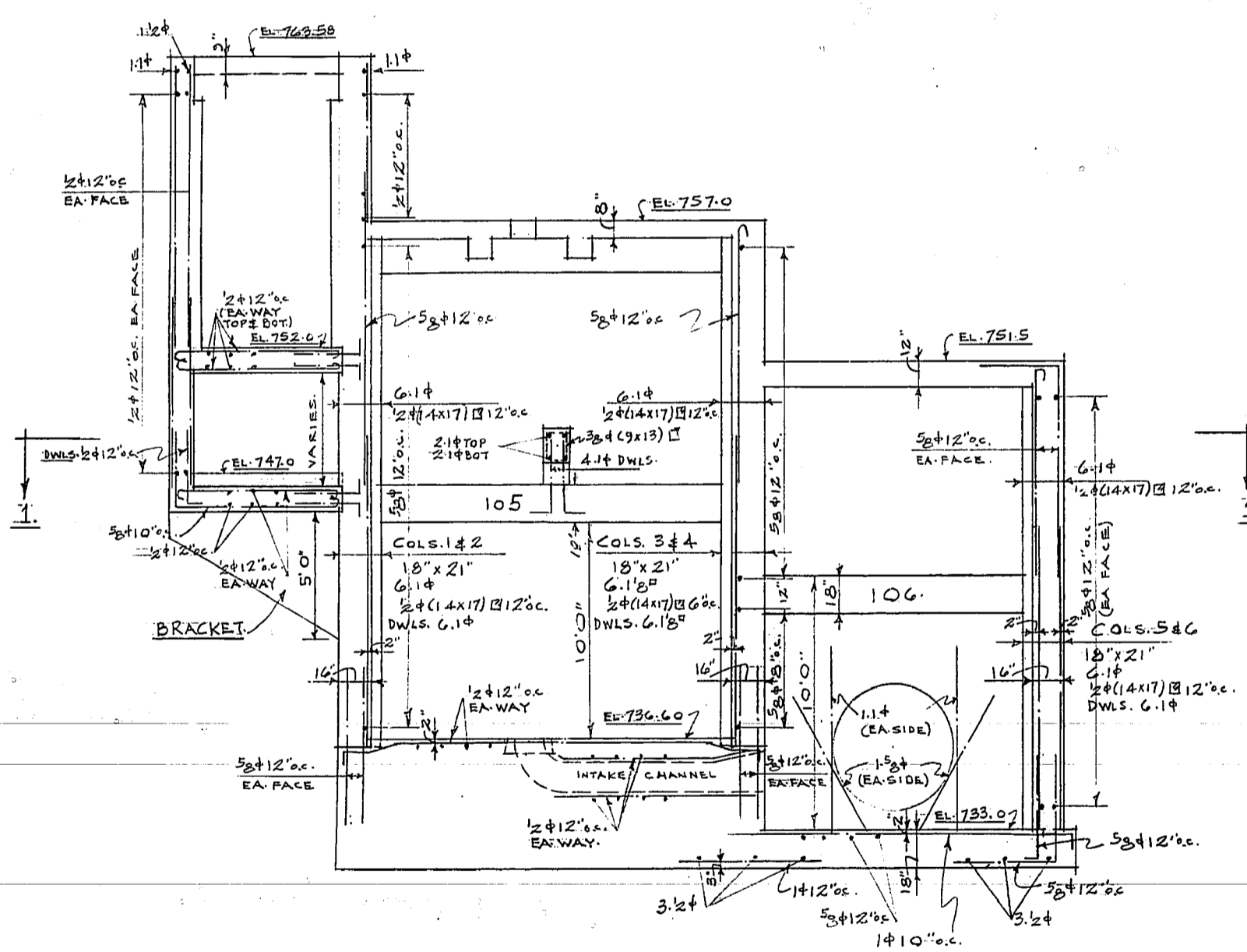
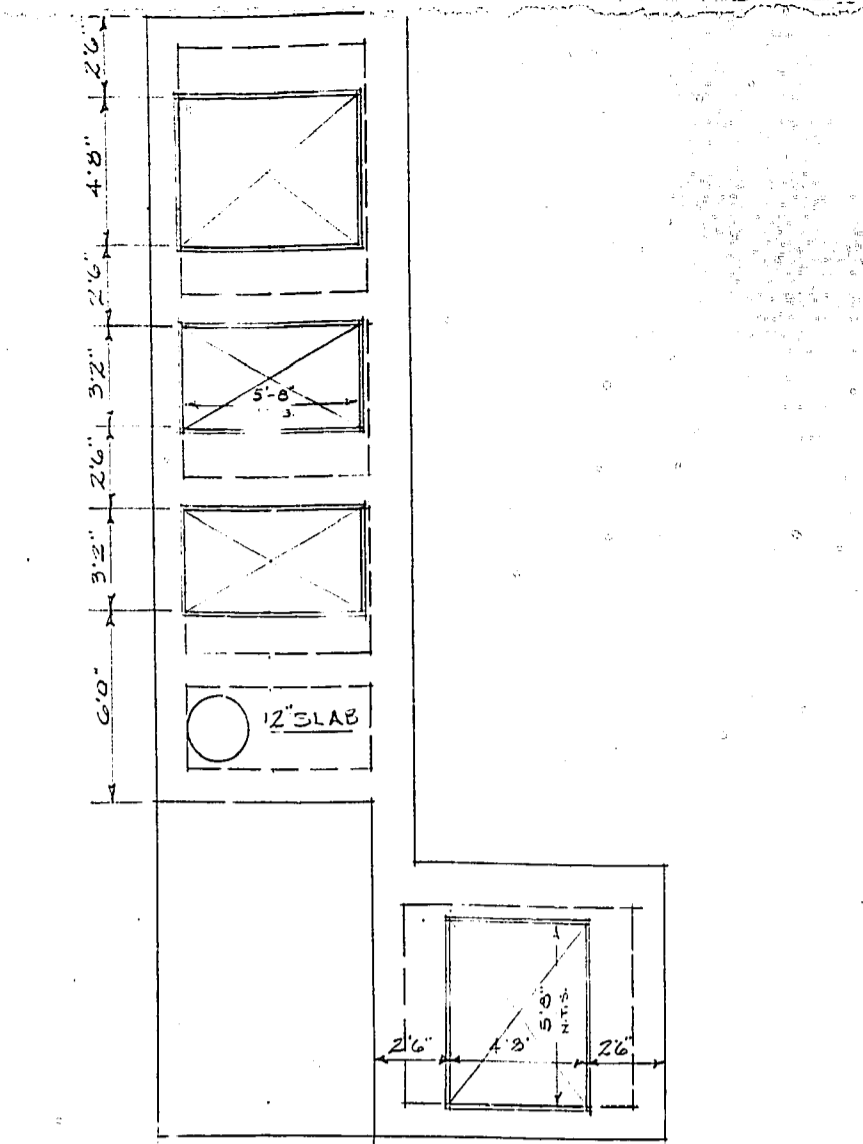
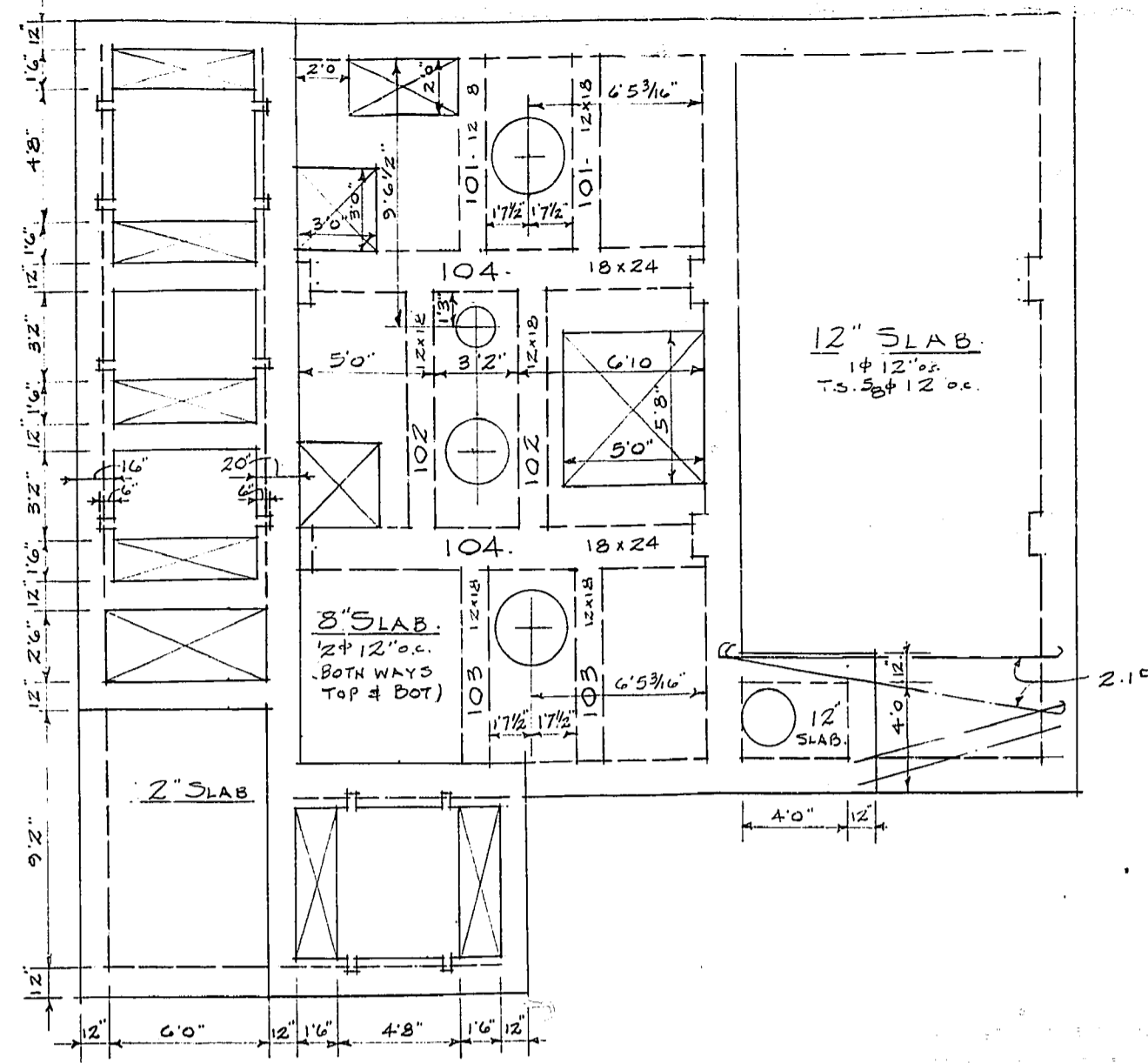
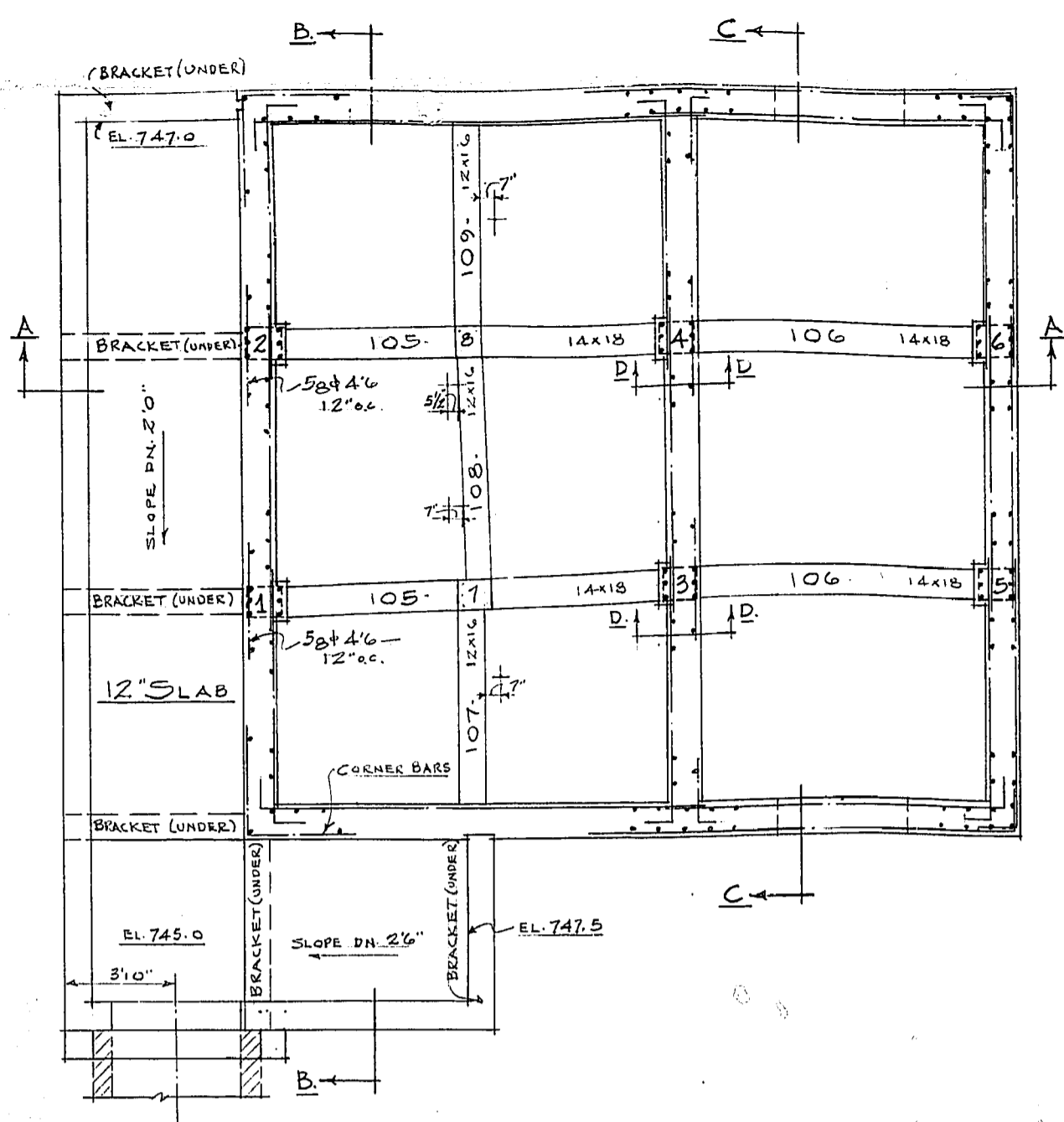
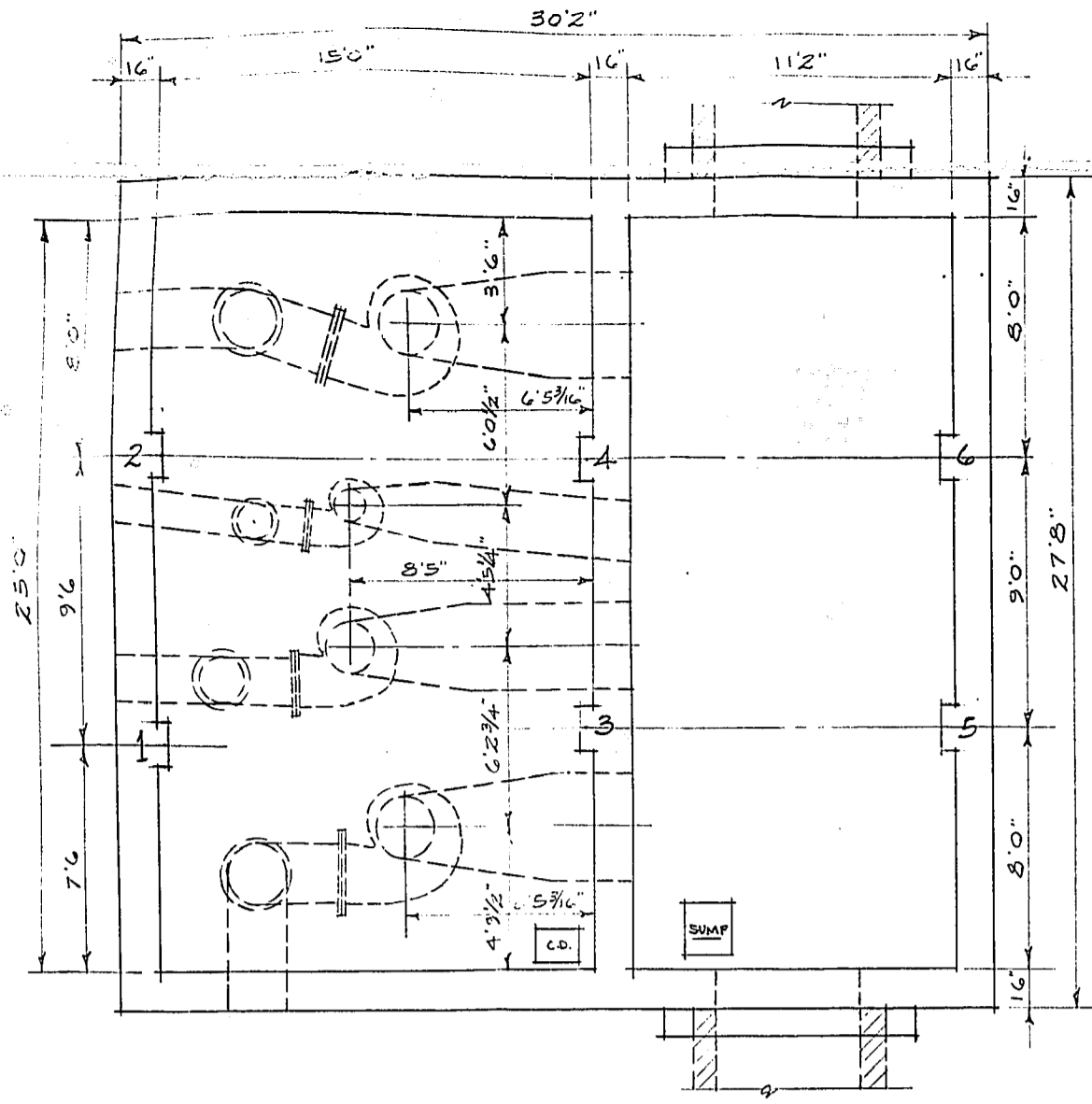


GREATER WINNIPEG DYKING BOARD
221 OSBORNE ST. N. WINNIPEG, MANITOBA

**BANNATYNE AVE
PUMPING STATION**

SCALE: AS SHOWN SHEET NO. 1 OF 3 SHEETS
DESIGNED BY J.T. DATE MAR/51 APPROVED BY [Signature] CHIEF ENGINEER
DRAWN BY E.M. & J.T. DATE MAR/51
TRACED BY W.C.L. DATE APR/51
CHECKED BY [Signature] DATE NOV/51
Dwg. No. 5-SD-10-1

266 #SP 10563



REVISION	DATE	DESCRIPTION	BY
1	MAR 1951	CORRECTED TO AGREE WITH EXISTING 115' (SHEET 1) PL. NO. 5-D-10	

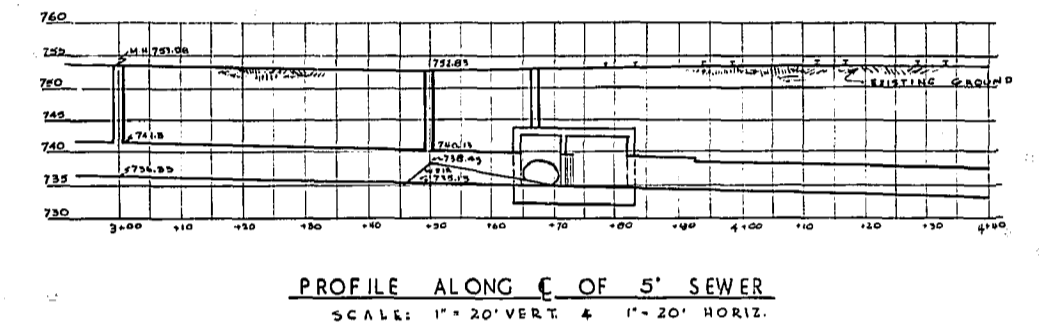
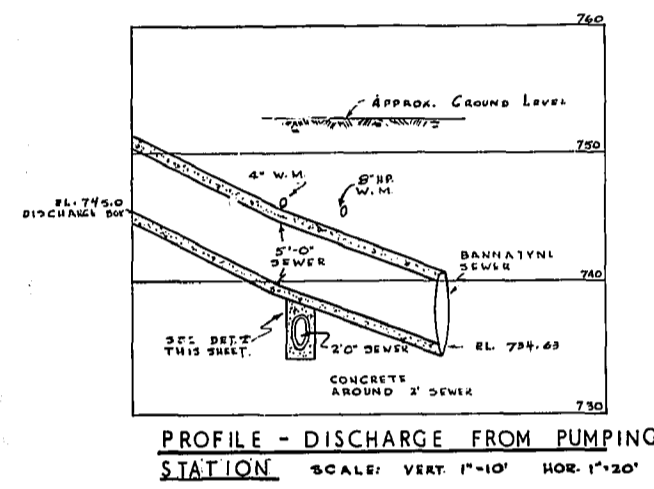
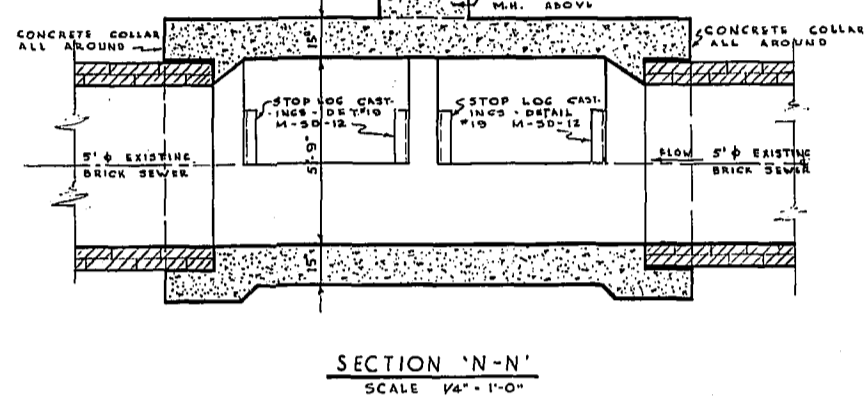
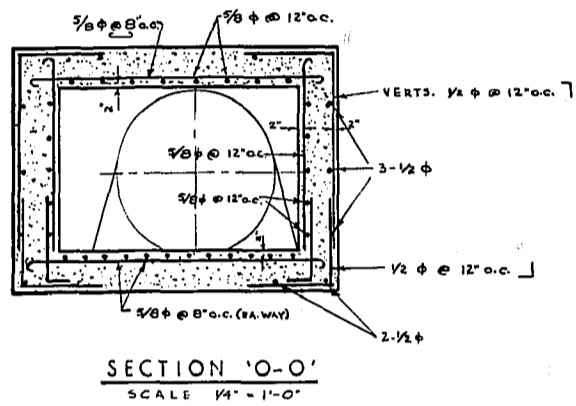
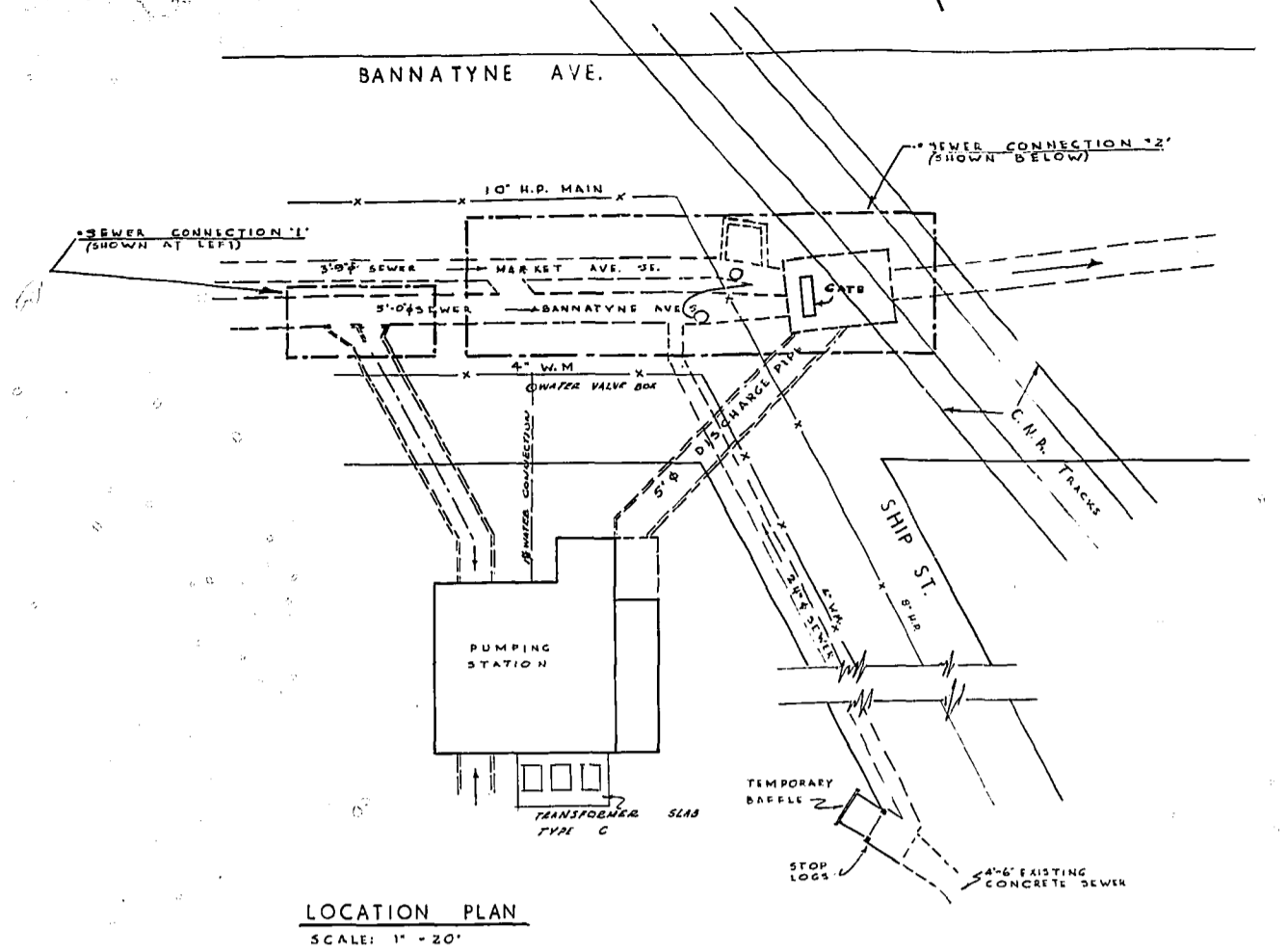
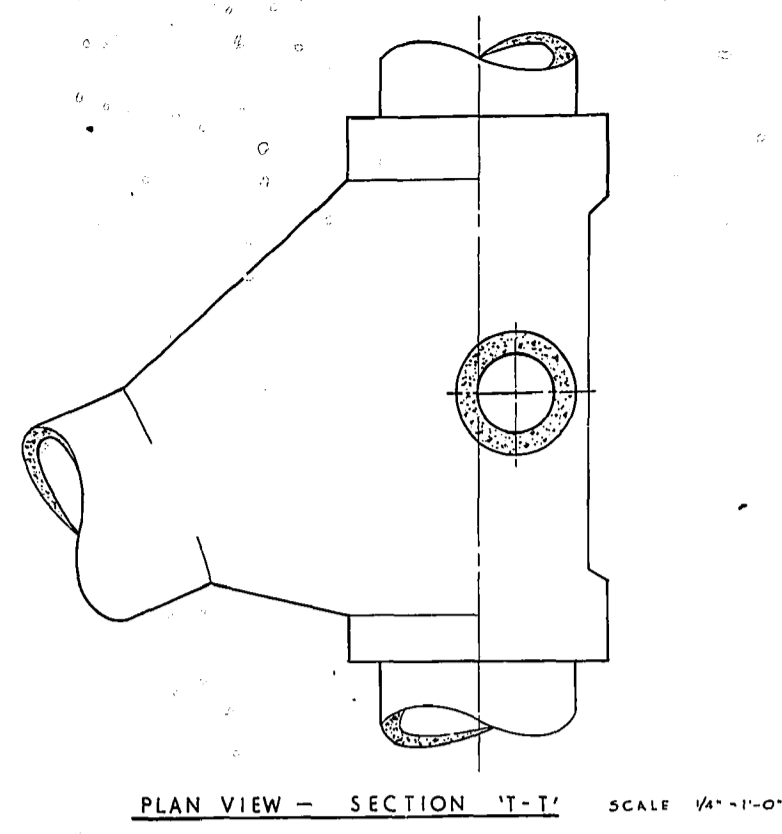
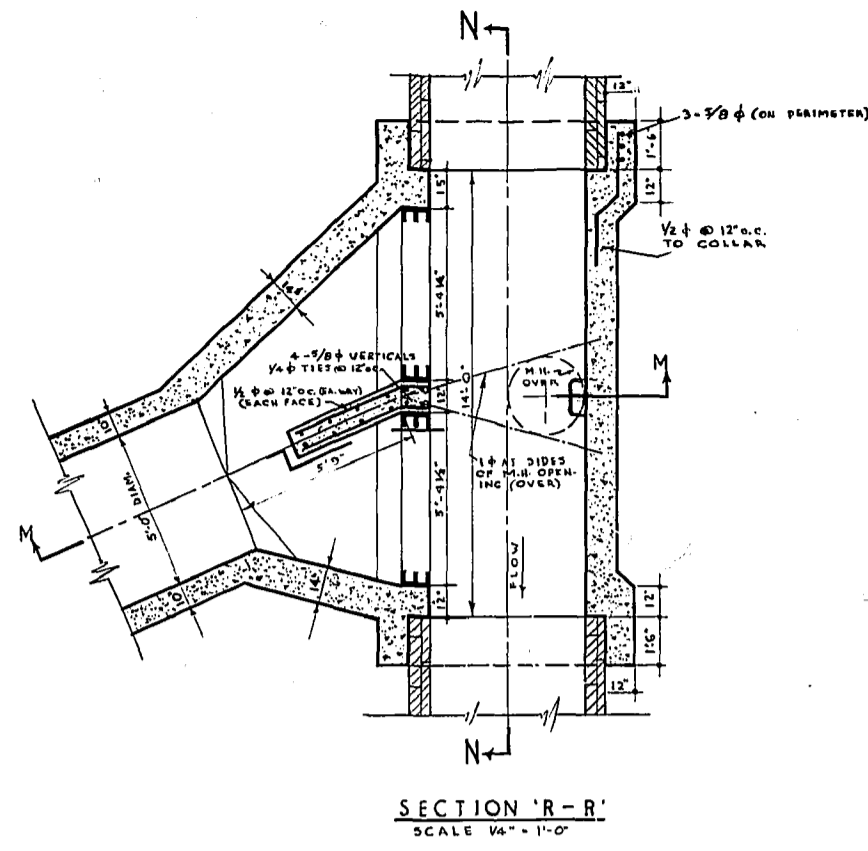
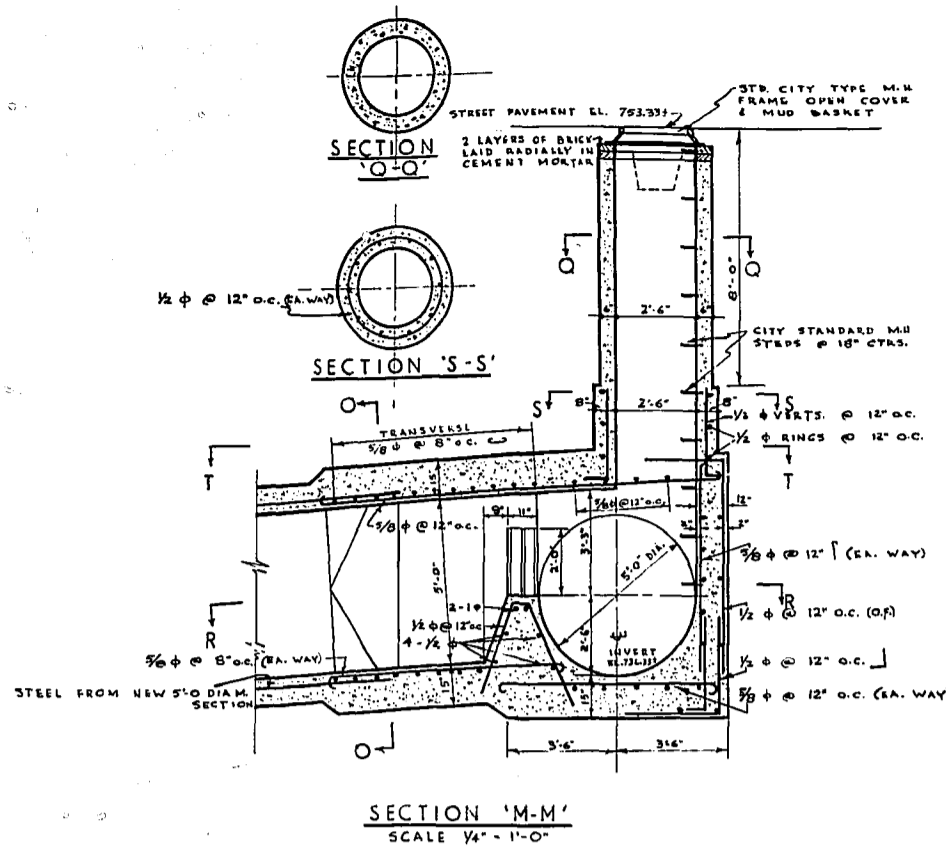
GREATER WINNIPEG DYKING BOARD
221 COLLEGE ST. N. WINNIPEG, MANITOBA

**BANNATYNE AVE.
PUMPING STATION**

COWI & CO. LTD.
REINFORCED CONCRETE ENGINEERS
WINNIPEG, MAN.

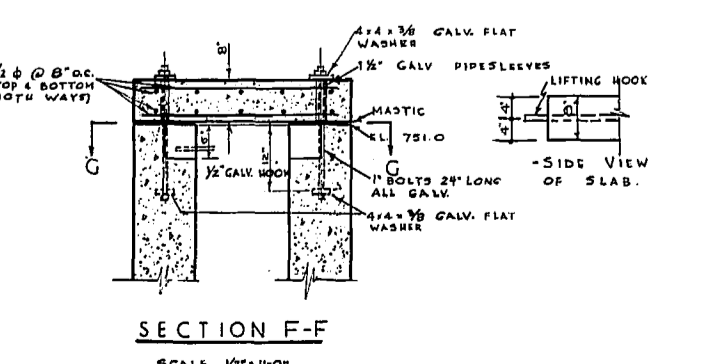
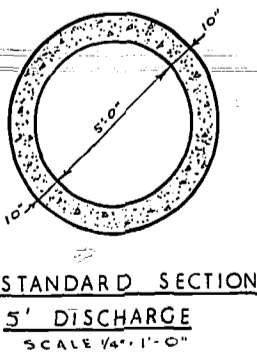
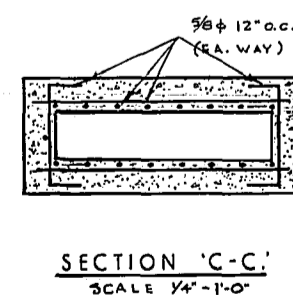
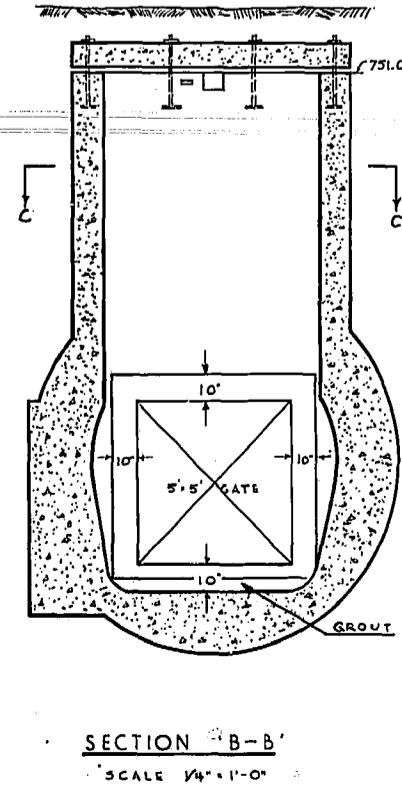
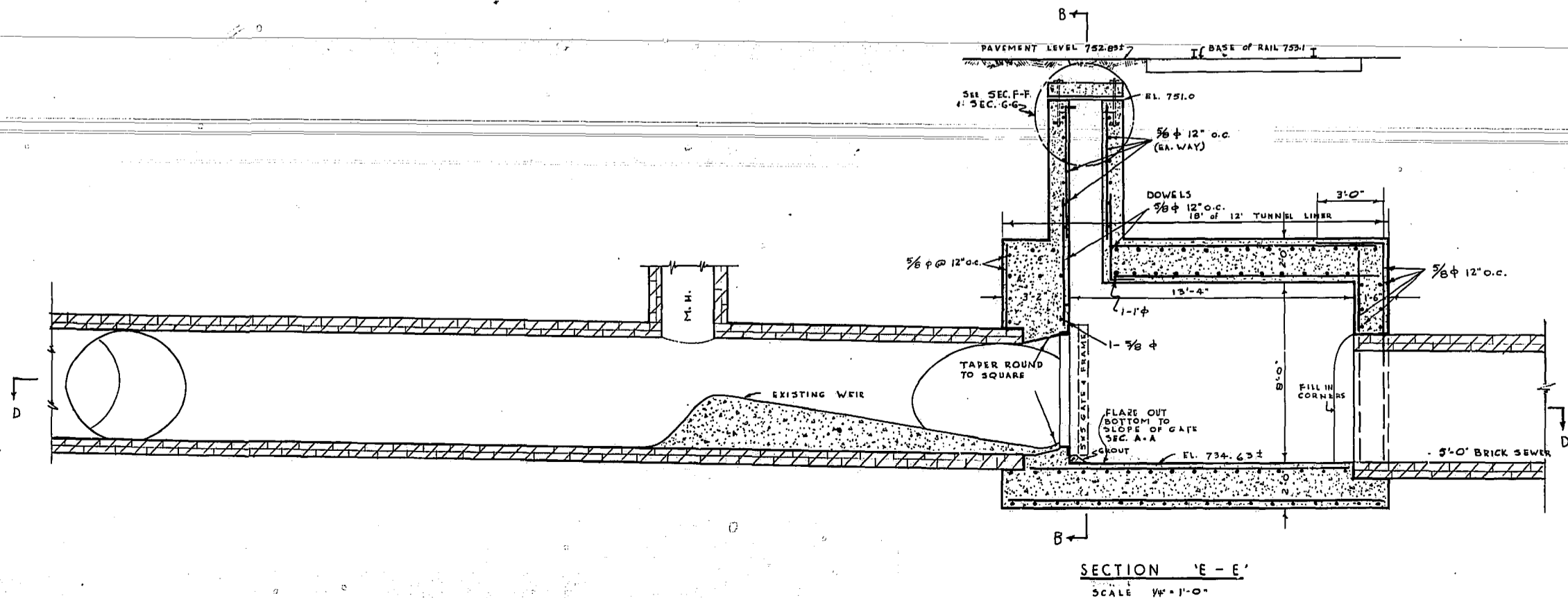
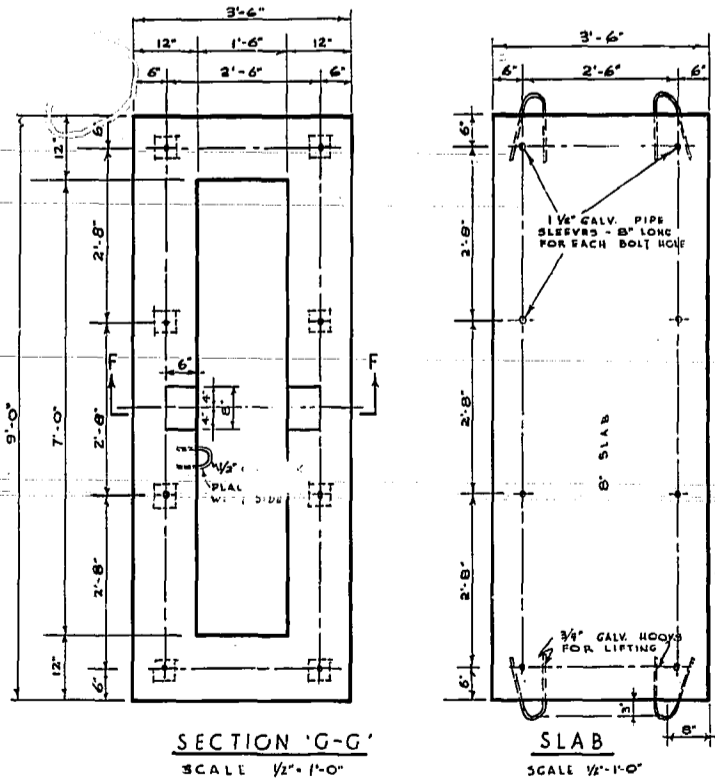
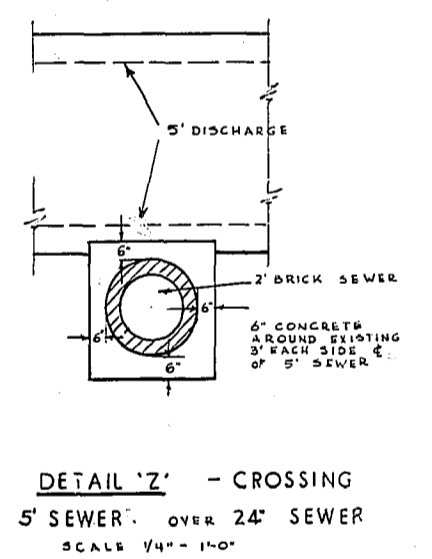
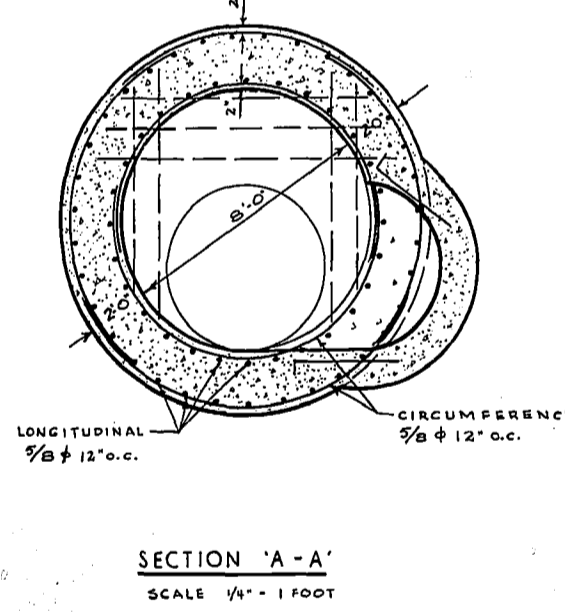
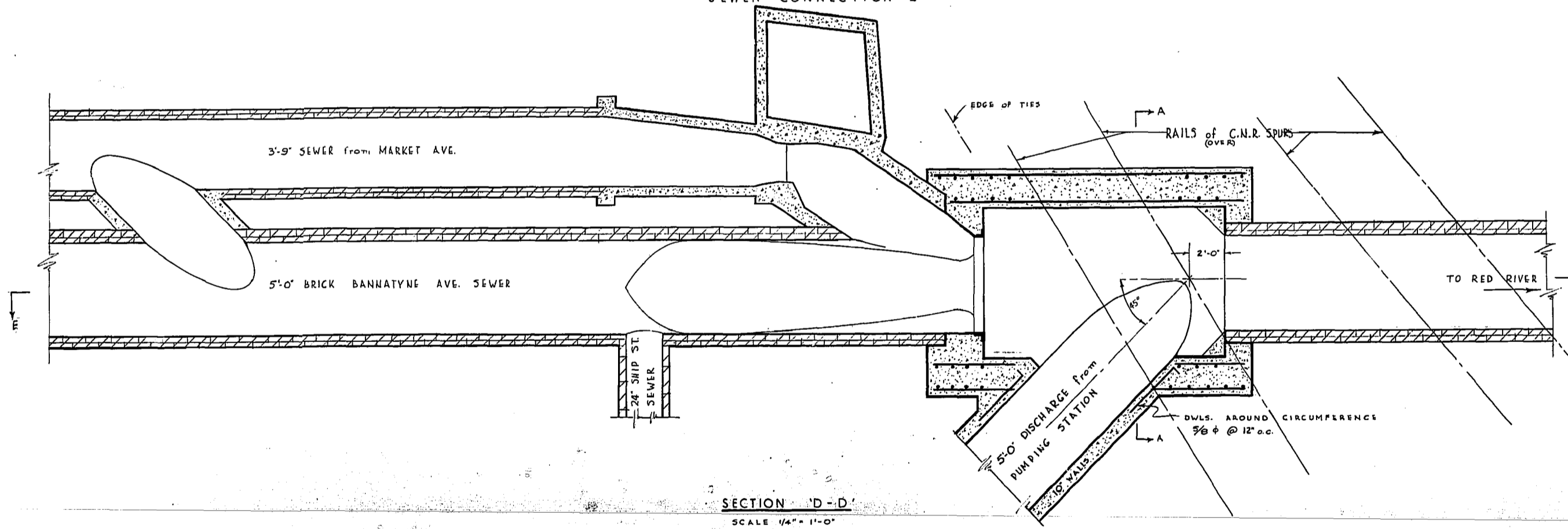
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DRAWN BY: D.A.H.
CHECKED BY: D.A.H.
DATE: 1951

SHOY NO. 2 OF 3 SHEETS
APPROVED: [Signature]
DRG. No. 5-D-10

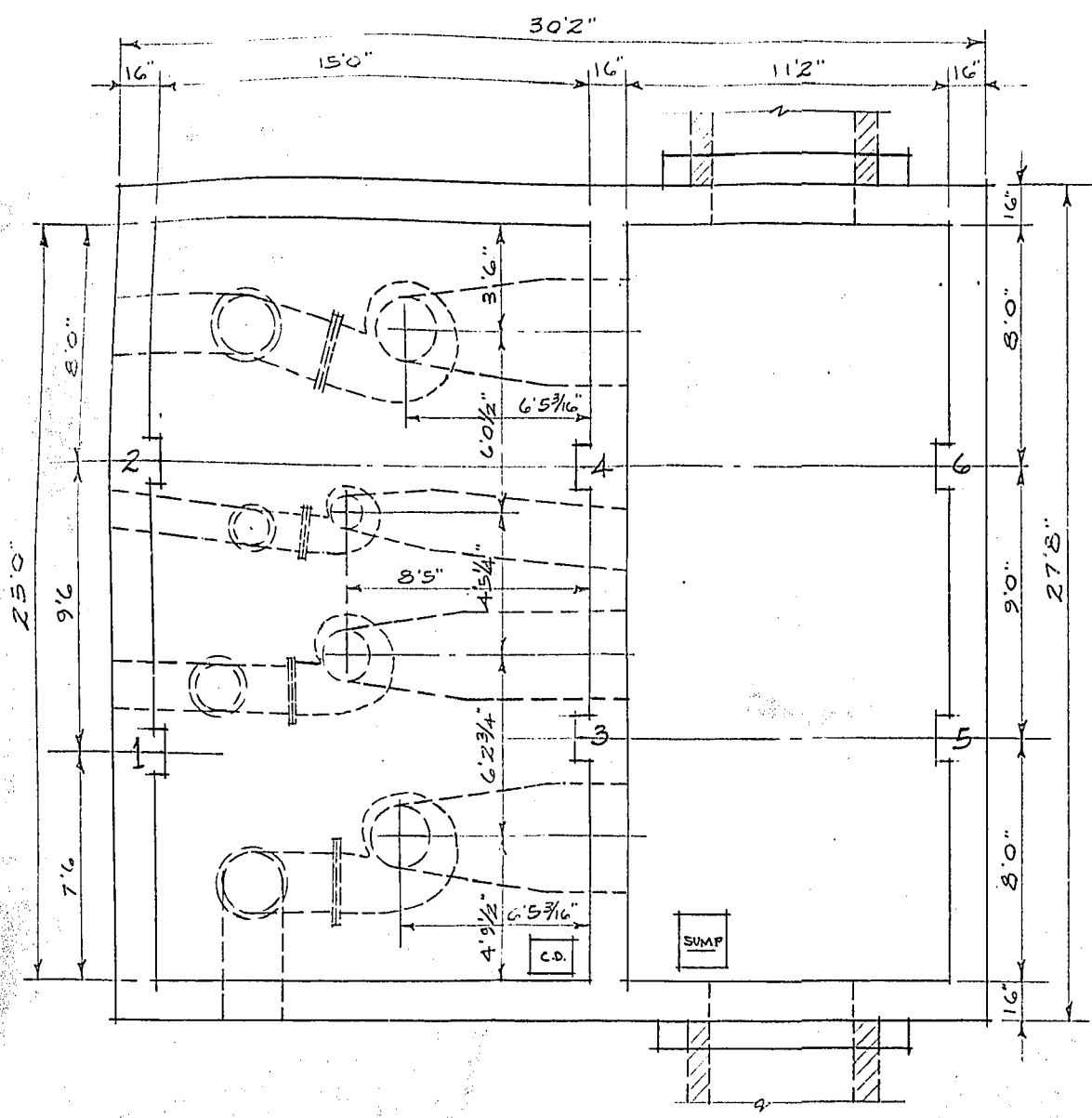


SEWER CONNECTION '1'

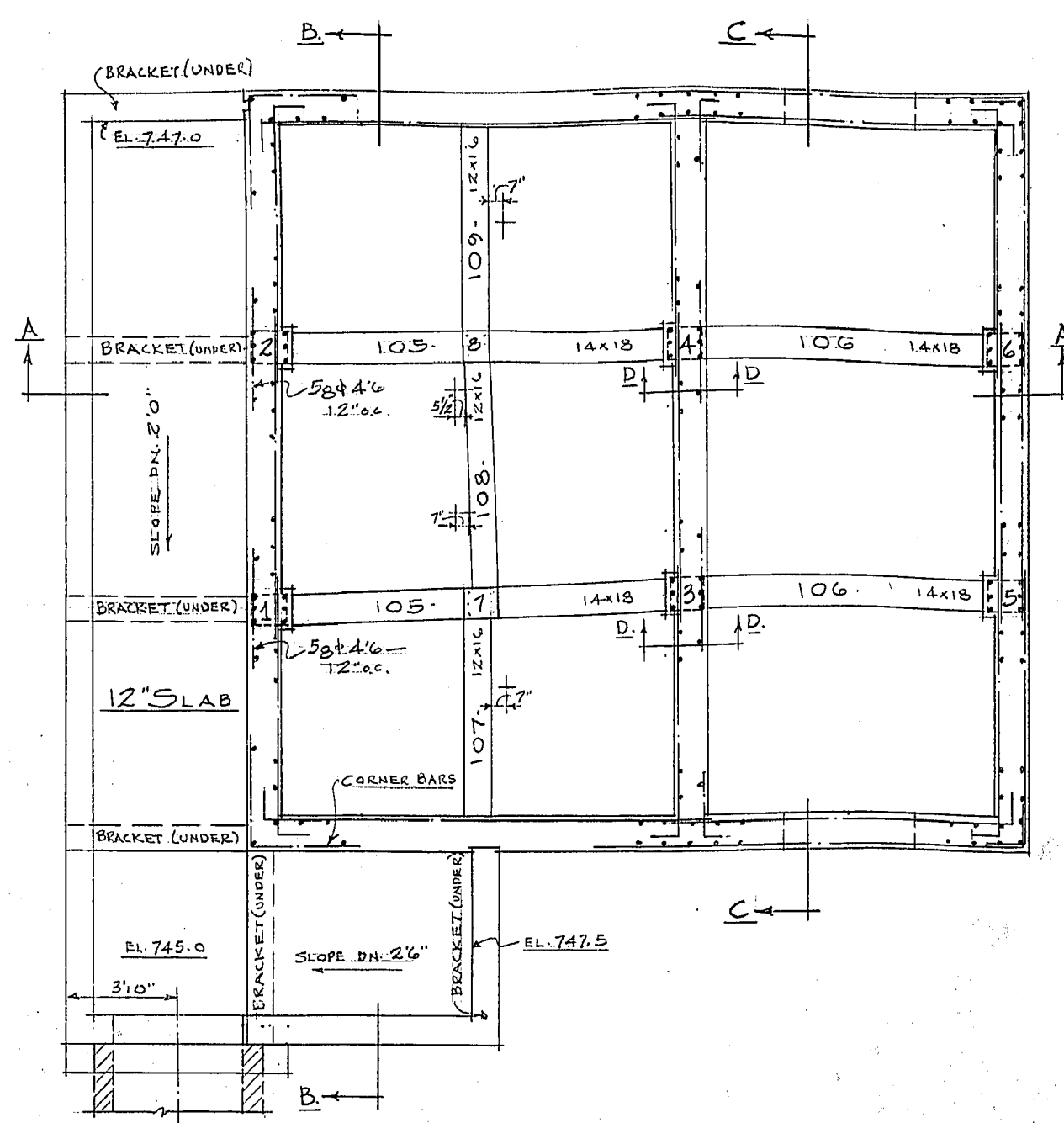
SEWER CONNECTION '2'



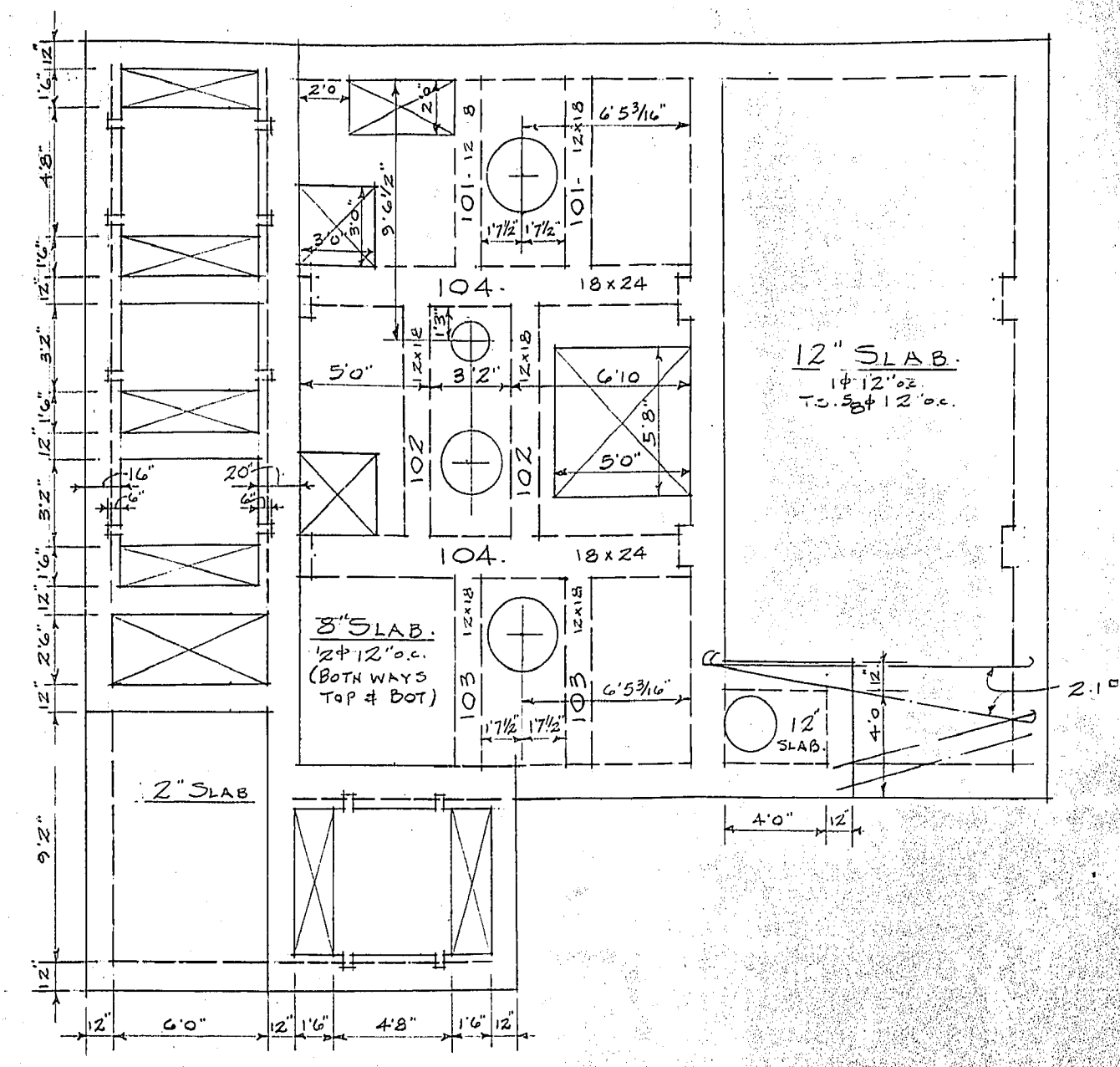
GREATER WINNIPEG DYKING BOARD 221 OSBORNE ST. N. WINNIPEG, MANITOBA			
SEWER CONNECTIONS			
BANNATYNE AVENUE			
PUMPING STATION			
SCALE, AS SHOWN	SHEET NO. 3 OF 3 SHEETS	DESIGNED BY J.T. DATE FEB-51	APPROVED BY <i>[Signature]</i>
DRAWN BY J.T. DATE APR-51	CHECKED BY M.S.L. DATE SEPT-51	DATE SEPT-51	CHIEF ENGINEER
DRG. No. 5-SD-10			



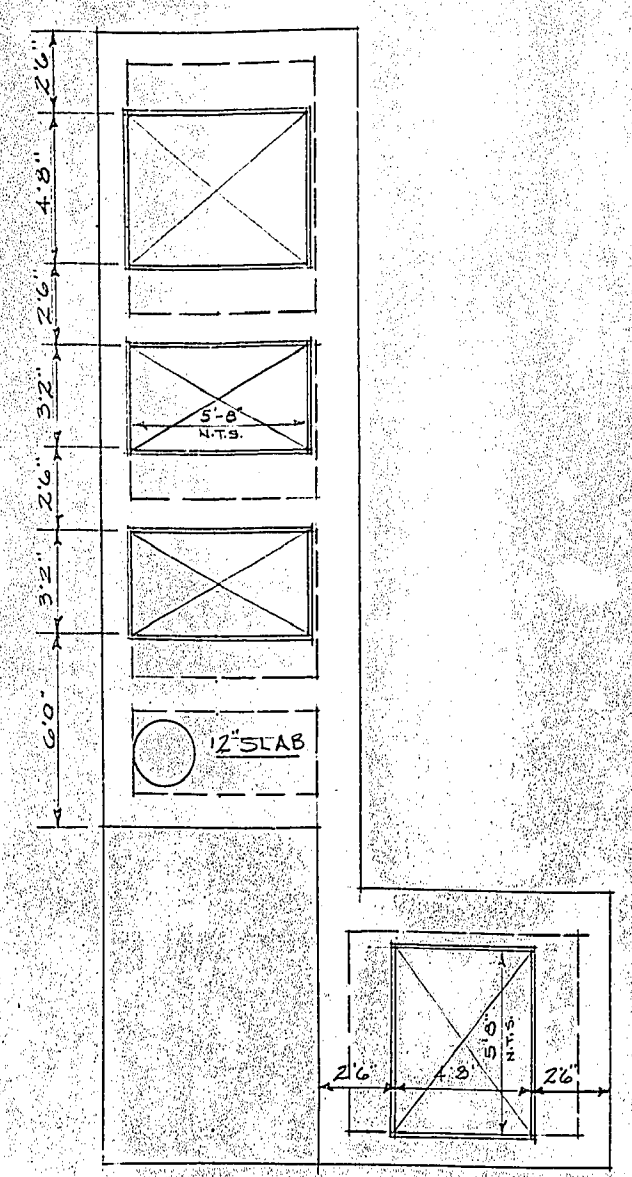
PLAN OF BOTTOM SLAB
1/4" SCALE



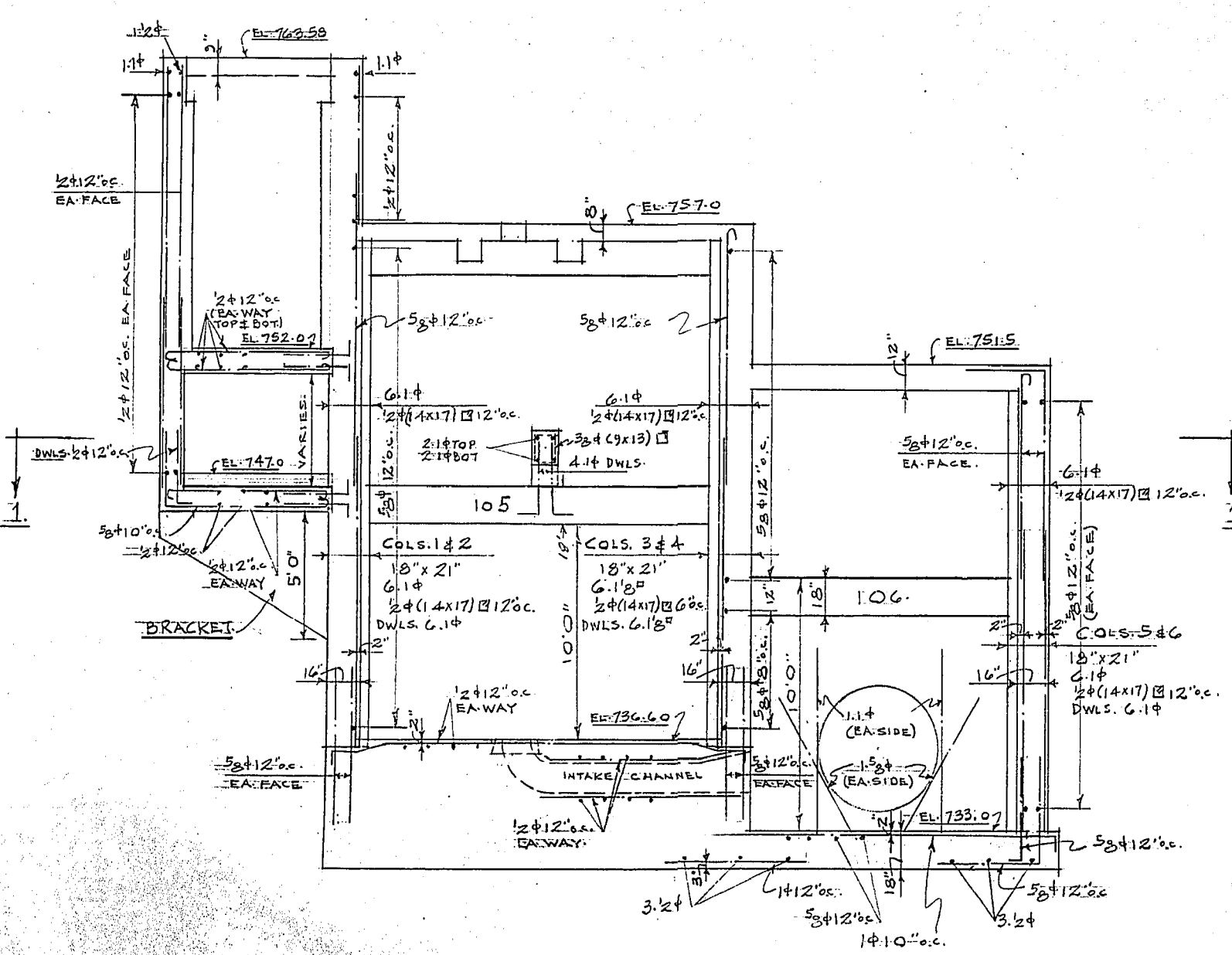
PLAN AT SECTION 1-1
1/4" SCALE



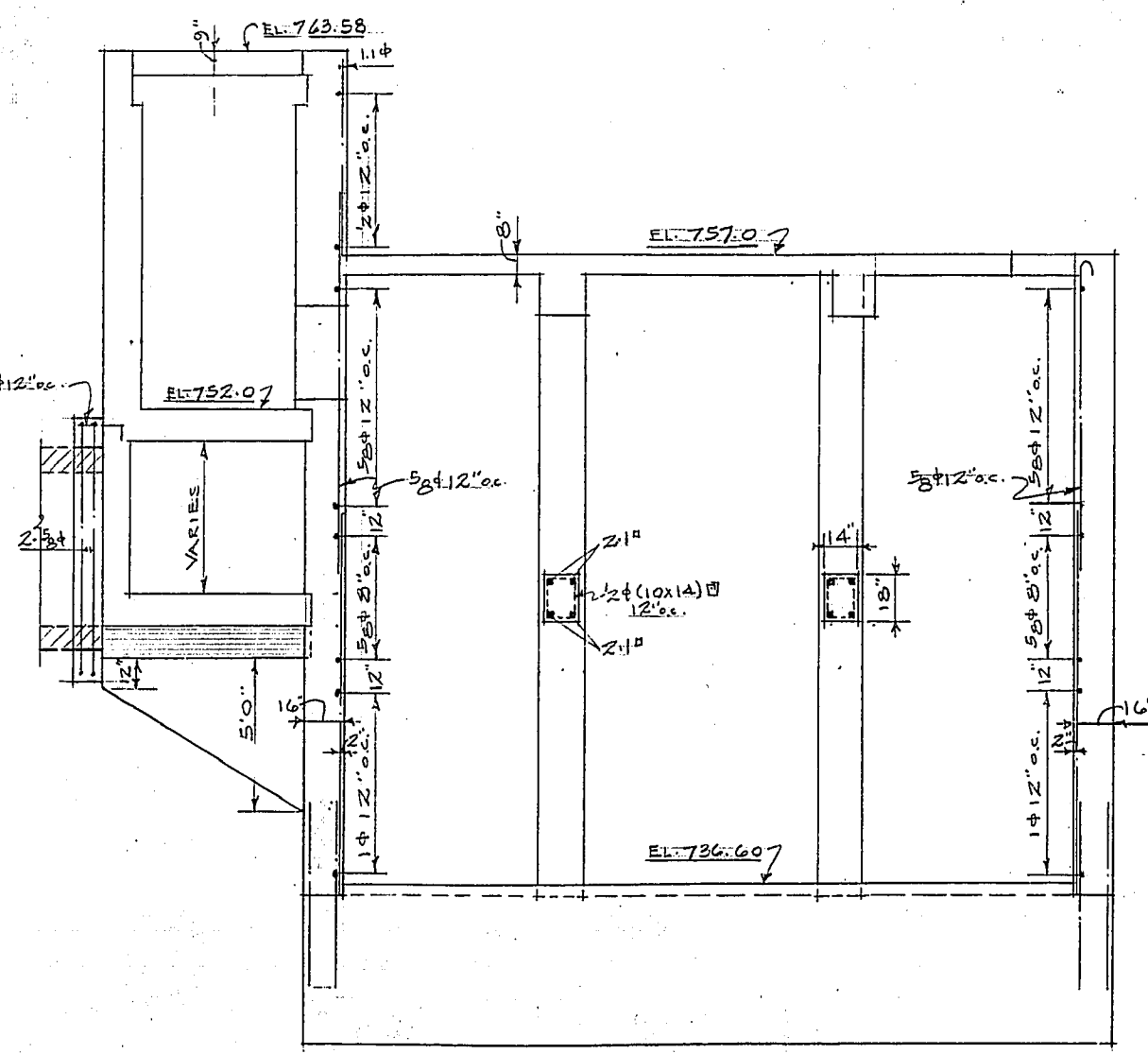
PLAN OF MOTOR FLOOR SLAB
1/4" SCALE



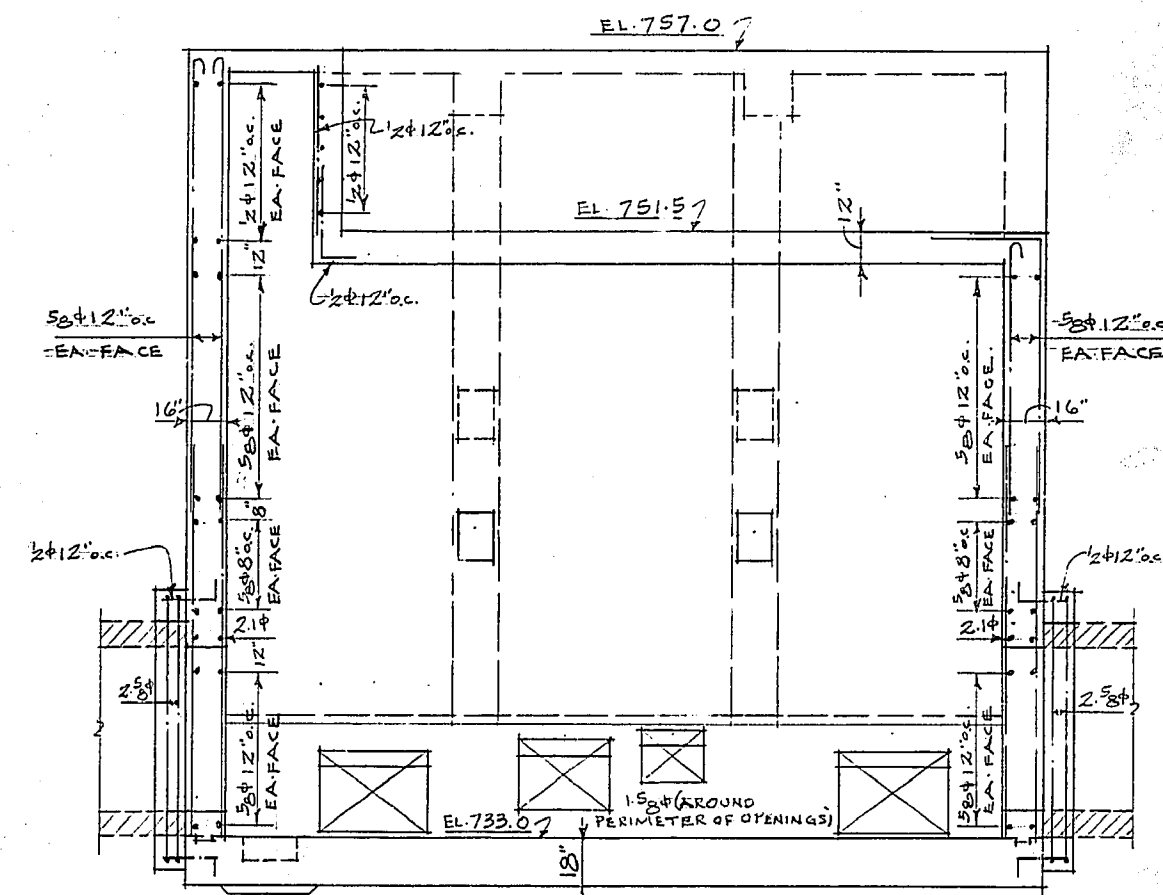
PLAN AT TOP OF DISCHARGE CHAMBER
1/4" SCALE



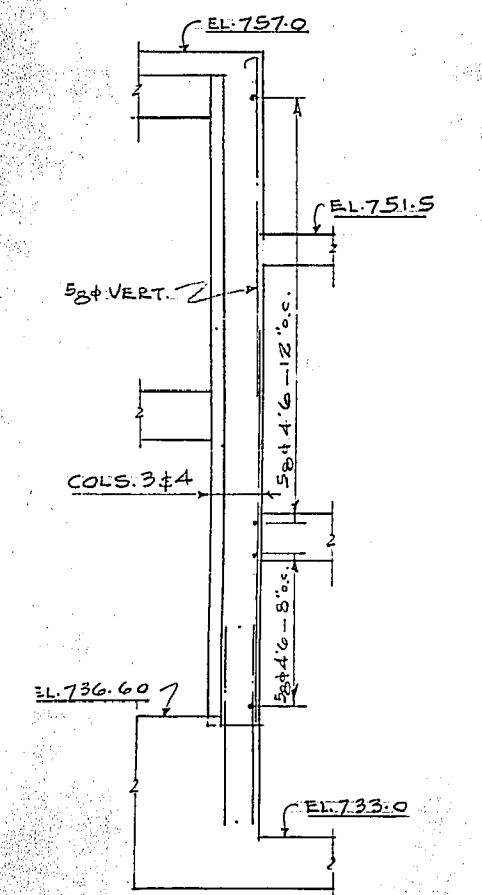
SECTION A-A
1/4" SCALE



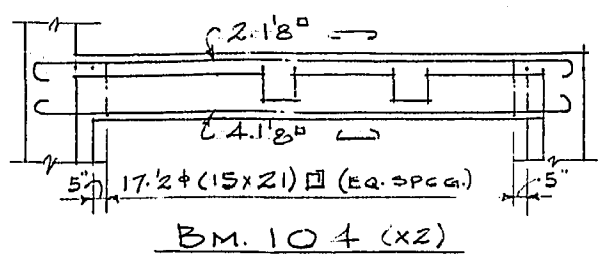
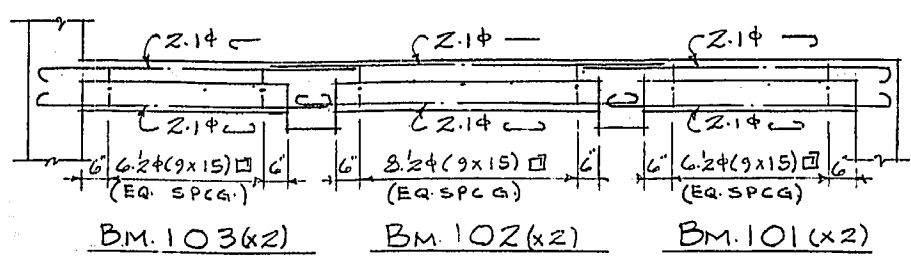
SECTION B-B
1/4" SCALE



SECTION C-C
1/4" SCALE



DETAIL OF NEGATIVE REINF.
AT COLS. 3 & 4
SECT. D-D
1/4" SCALE



BEAM ELEVATIONS
1/4" SCALE

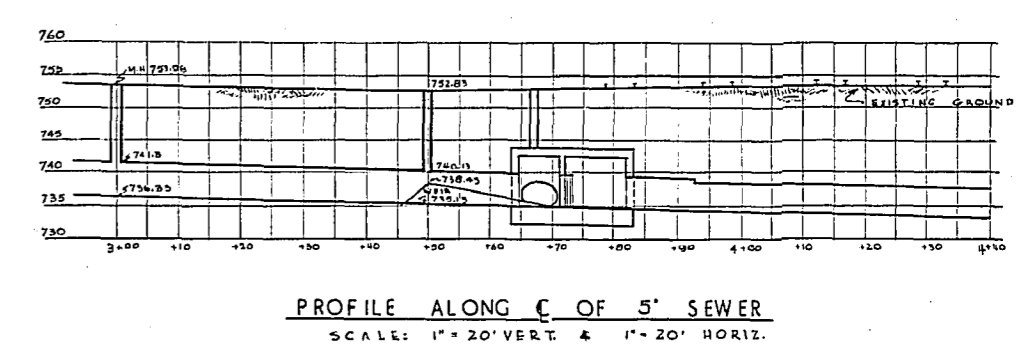
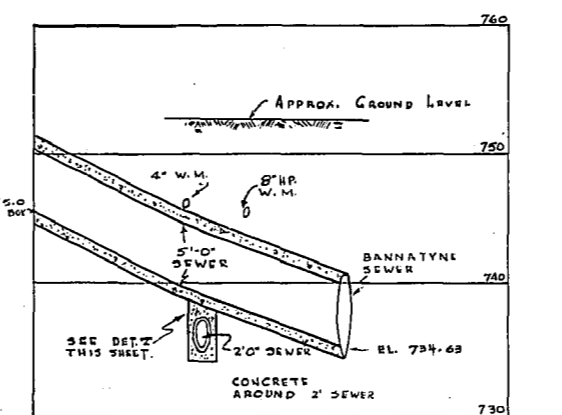
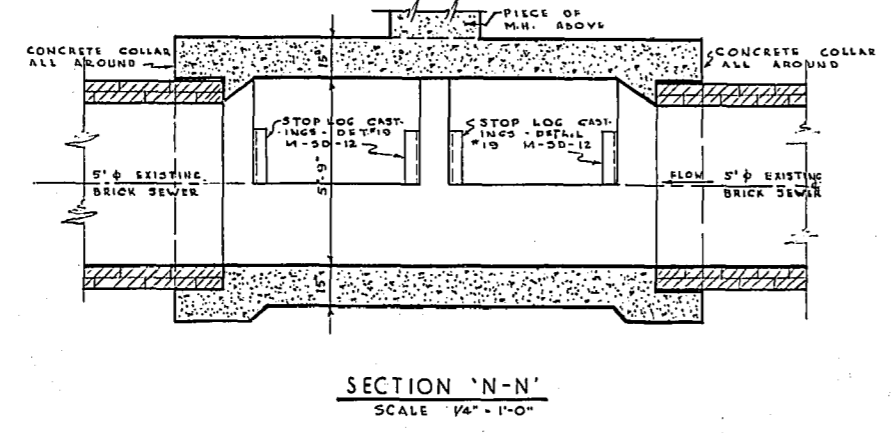
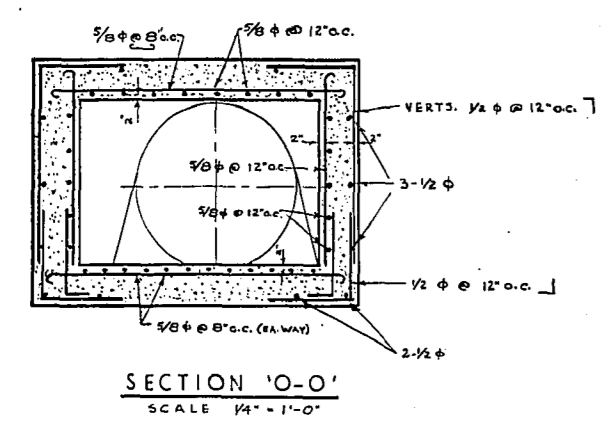
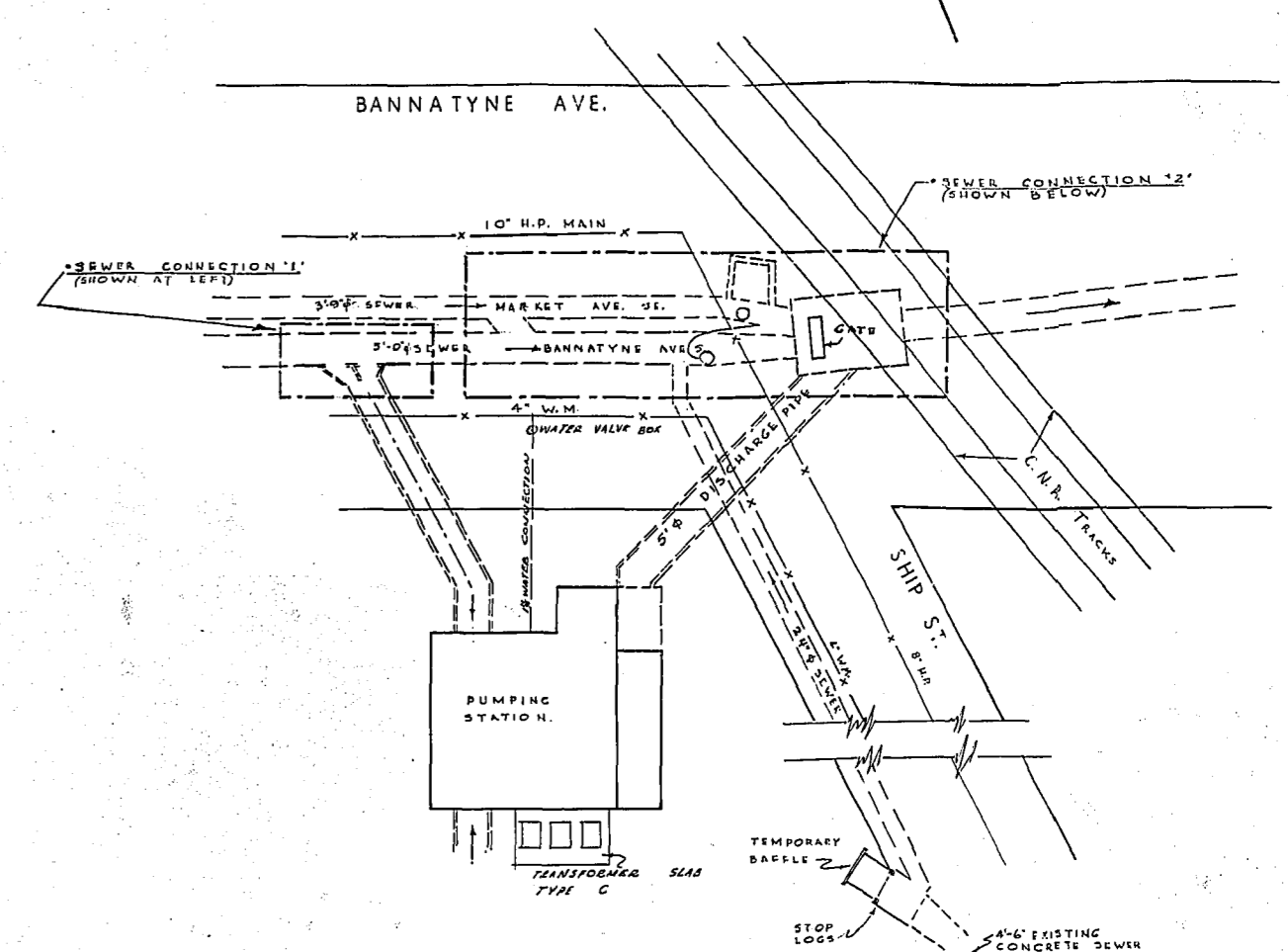
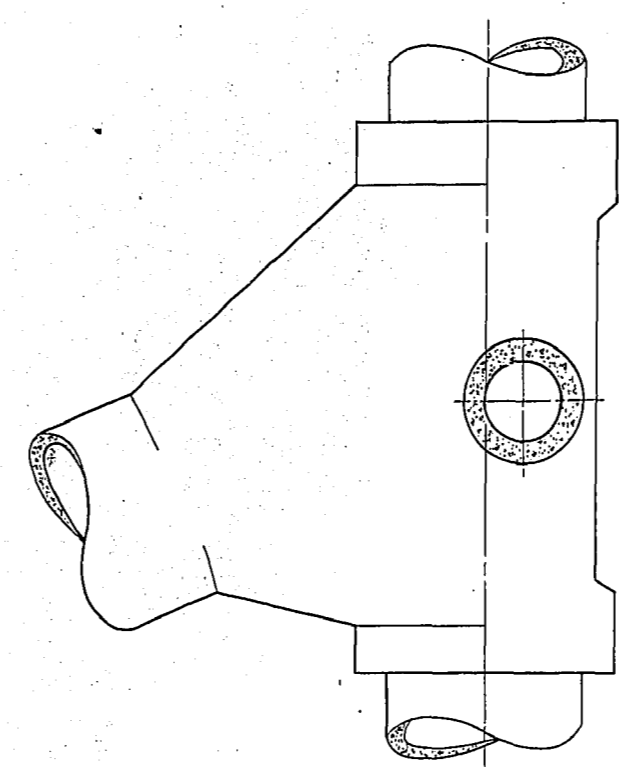
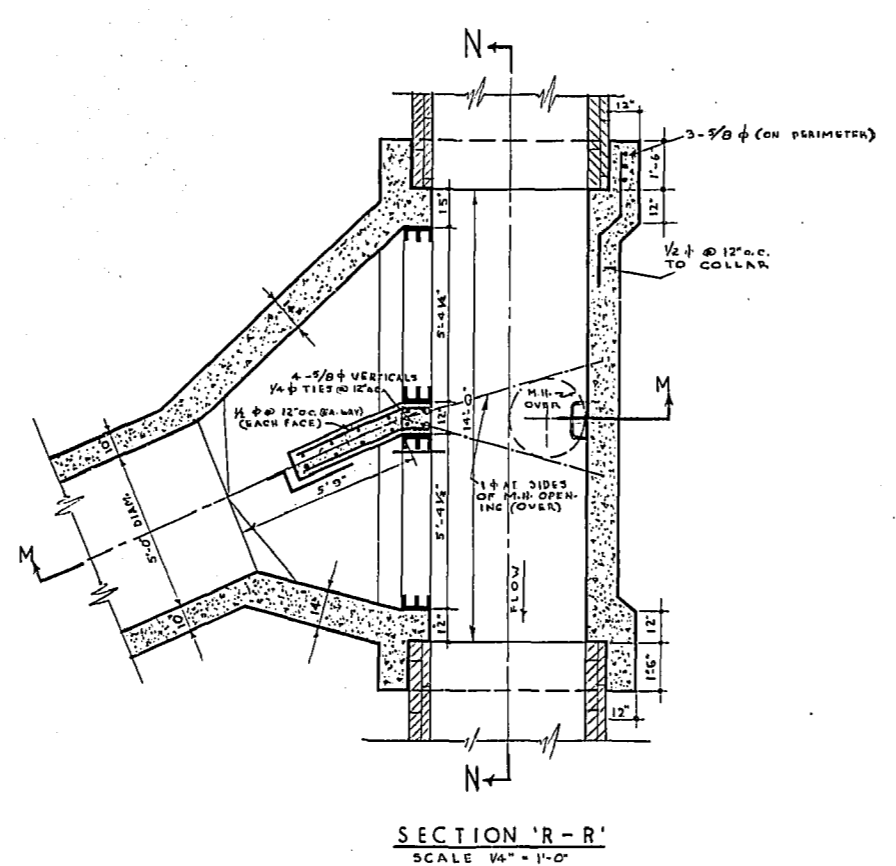
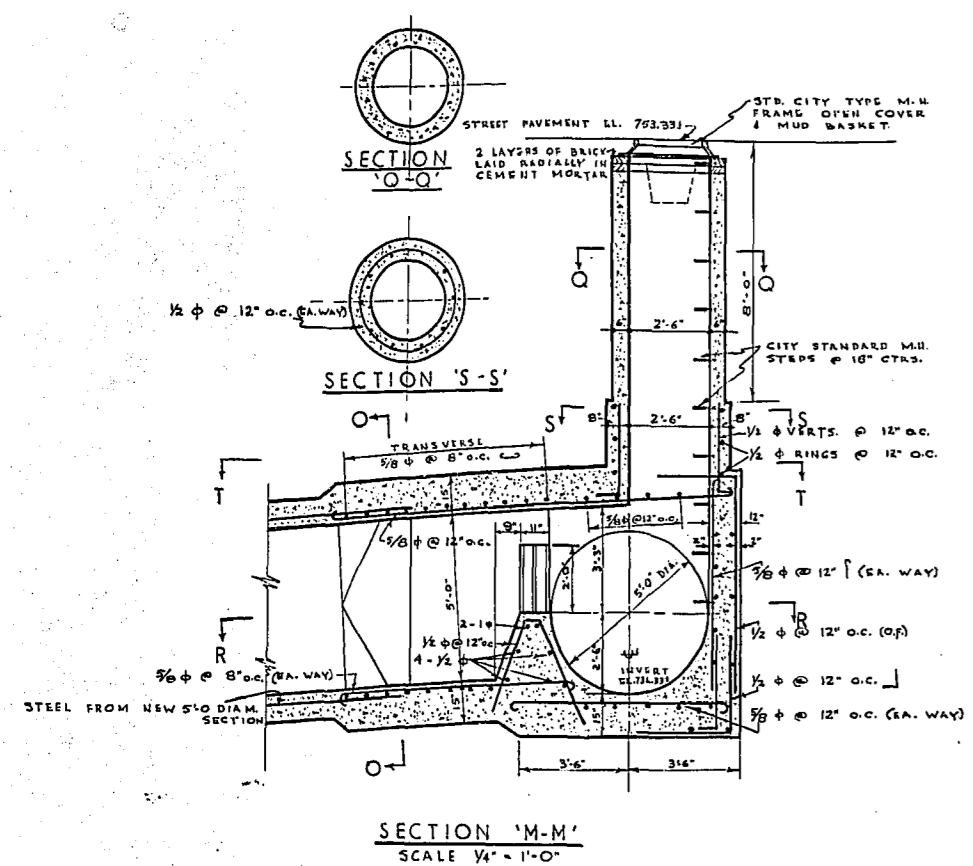
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1	5/15/51	SUBMITTED TO AGER WITH REVISIONS 1, 2 & 3 (SECT. 11) PL. No. 5-5-D-10	

GREATER WINNIPEG DYKING BOARD
221 CO. LINE ST. N. WINNIPEG, MANITOBA

**BANNATYNE AVE.
PUMPING STATION**

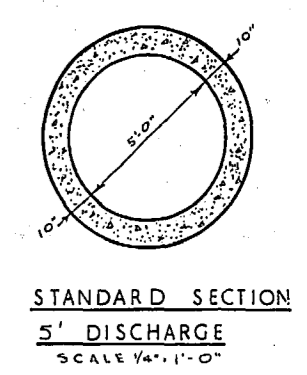
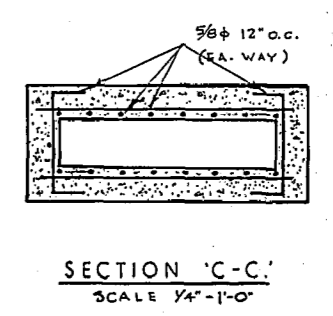
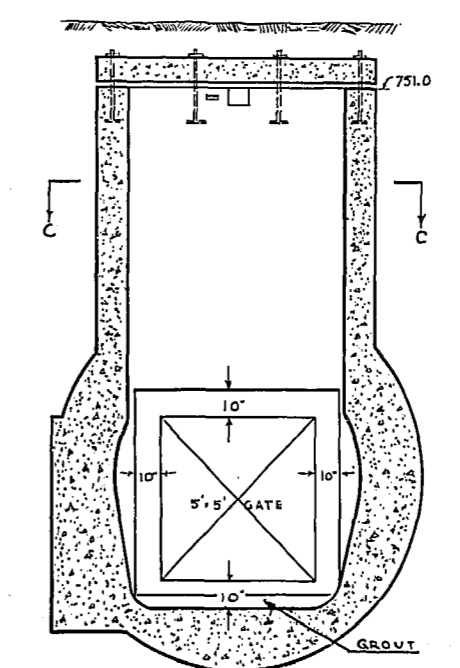
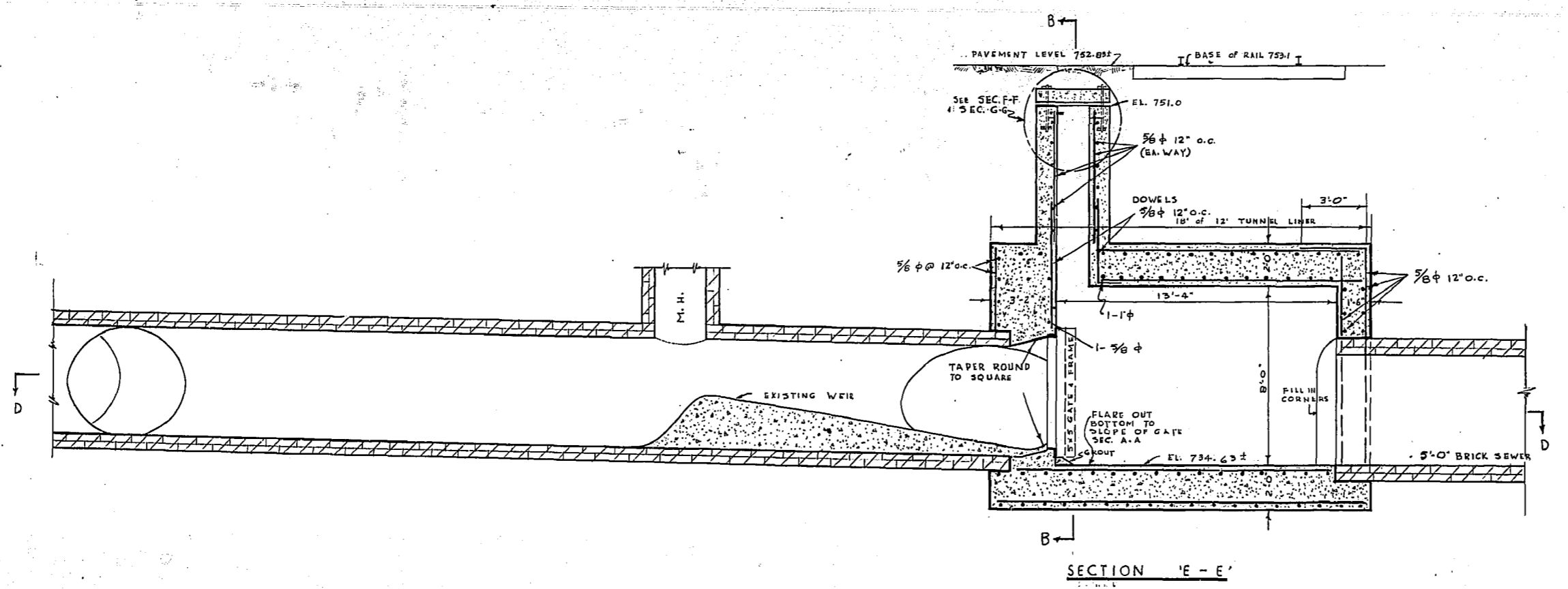
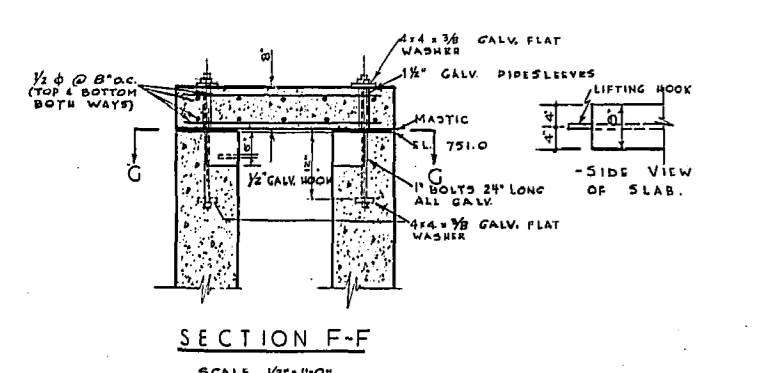
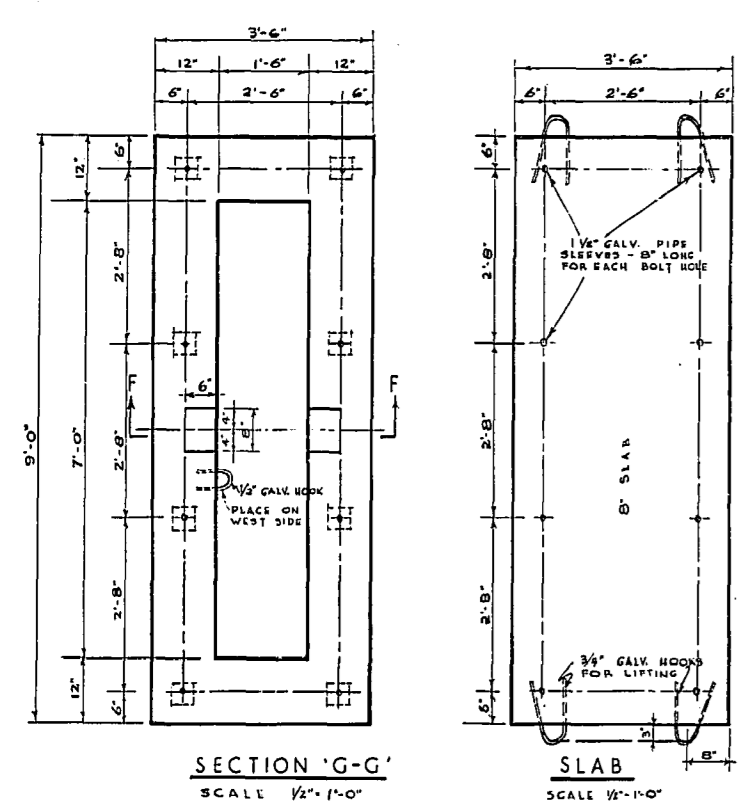
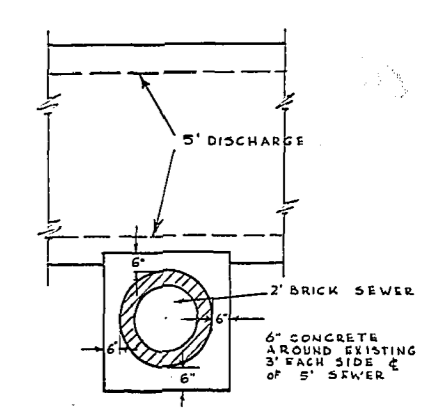
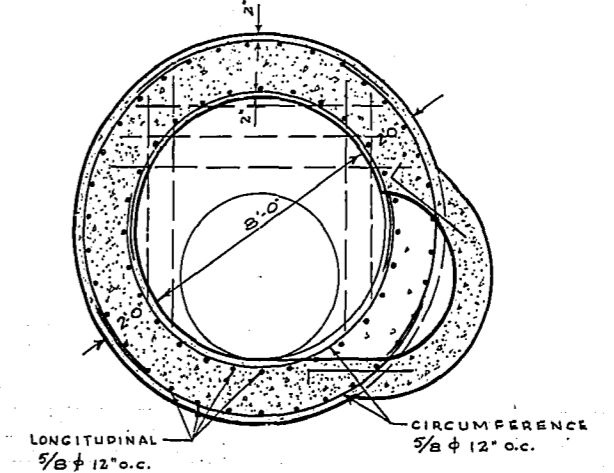
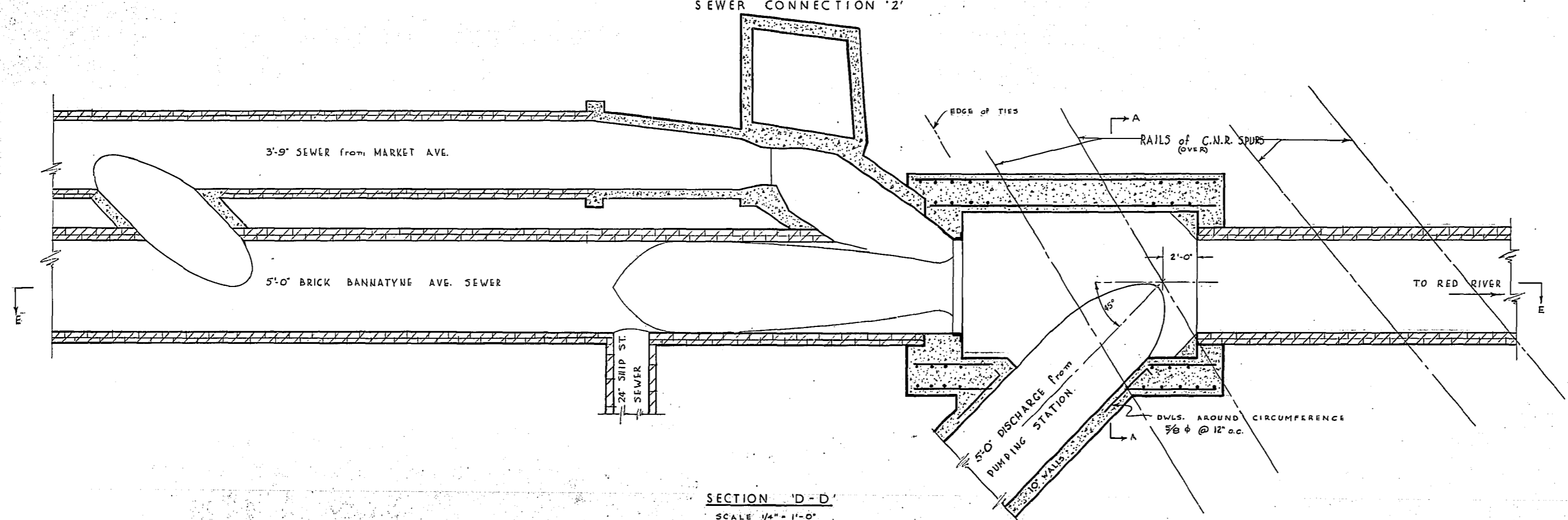
SCALE: 1/4" = 1'-0" SHOT NO. 2 OF 3 SHEETS
 DESIGNED BY: DATE: APPROVED: DATE: [Signature]
 DRAWN BY: DATE: TRACED BY: DATE: [Signature]
 CHECKED BY: DATE: DRG. No. 5-5-D-10

COWIN & CO. LTD.
REINFORCED CONCRETE ENGINEERS
WINNIPEG, MAN.

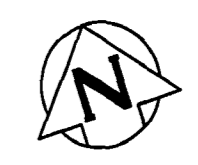
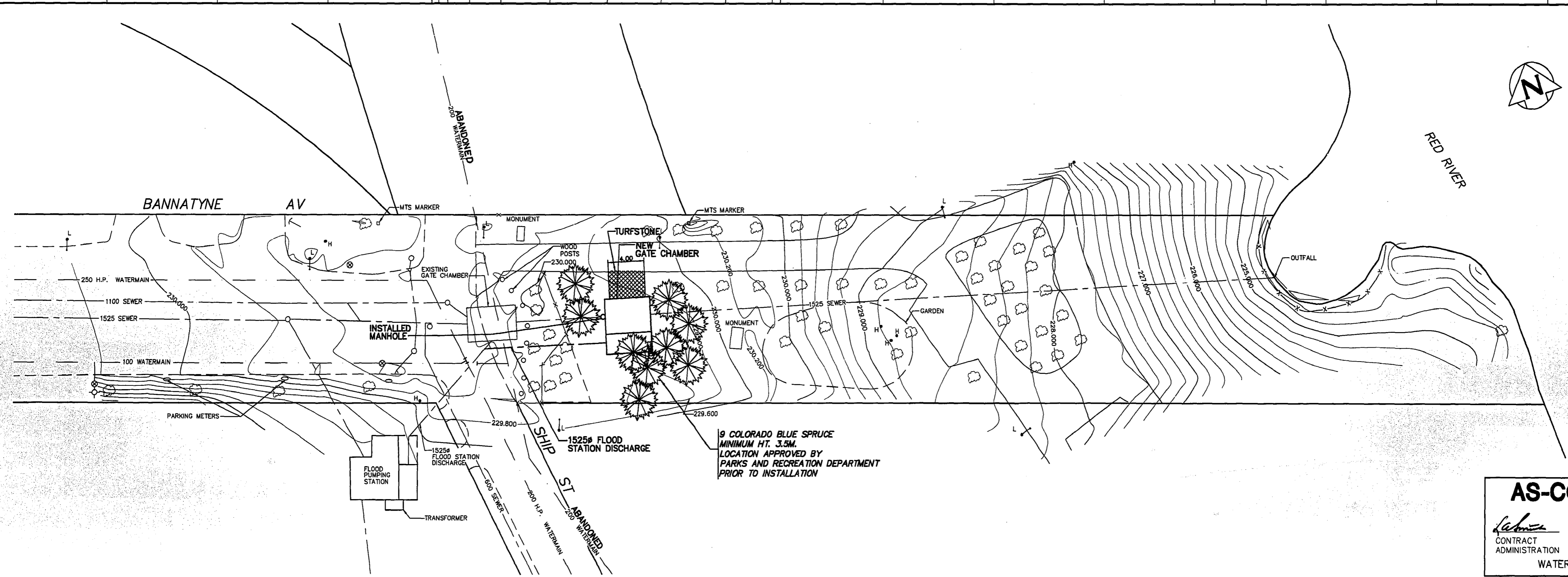
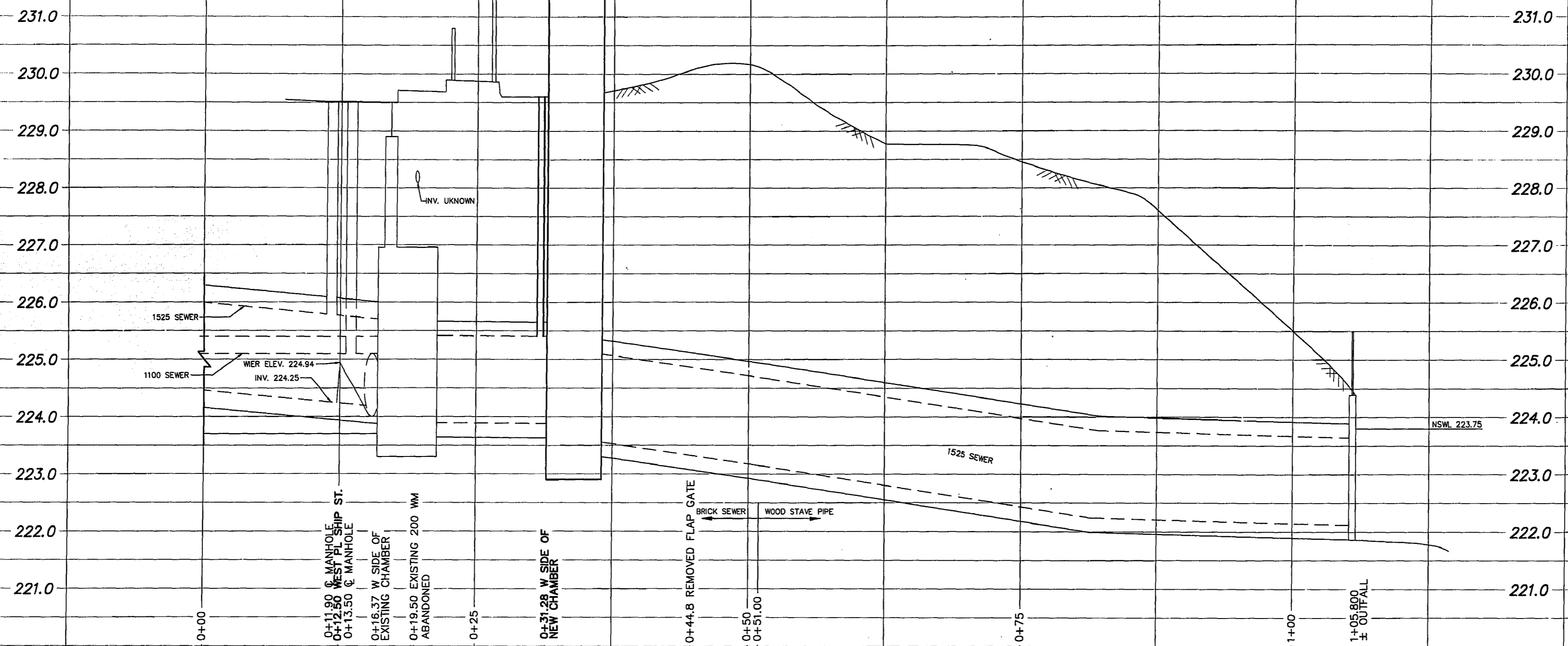


SEWER CONNECTION '1'

SEWER CONNECTION '2'



GREATER WINNIPEG DYKING BOARD 221 OSBORNE ST. N. WINNIPEG, MANITOBA		
SEWER CONNECTIONS		
BANNATYNE AVENUE PUMPING STATION		
SCALE: AS SHOWN	DATE: FEB-51	SHEET NO. 3 OF 3
DESIGNED BY: J.T.	DATE: APR-51	APPROVED: <i>[Signature]</i> CHIEF ENGINEER
DRAWN BY: M.E.L.	DATE: SEPT-51	DRG. No. 5-SD-10
TRACED BY: M.E.L.	DATE: SEPT-51	
CHECKED BY: M.E.L.	DATE: SEPT-51	

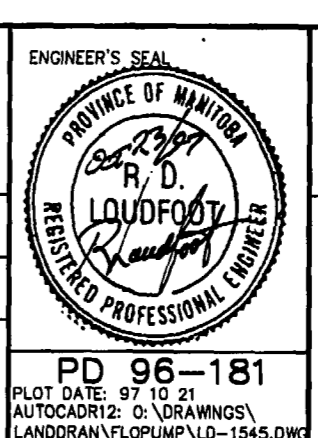


AS-CONSTRUCTED
Kelvin K. Nelson 97.10.23
 CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES DATE
 WATER AND WASTE DEPARTMENT

200 WM	WATERMAIN	200 WM	SL, HYDRO	150 WM	WATERMAIN	150 WM
⊕	HYDRANT	⊕	MTS	+	HYDRANT	+
⊙	VALVE	⊙	CONCRETE	—	VALVE	—
525 LDS	LAND DRAINAGE SEWER	525 LDS	PROPERTY LINE	300 LDS	LAND DRAINAGE SEWER	300 LDS
375 WWS	WASTEWATER SEWER	375 WWS	SURVEY BAR	250 WWS	WASTEWATER SEWER	250 WWS
○	MANHOLE	●	FENCE	—	⊙ PROFILE	—
□	CATCH BASIN	■	POLE - HYDRO, MTS	—		
▽	CURB INLET	▽	RAILWAY SIGN	—		
—	JUNCTIONS	—	GUY ANCHOR	—		
—	CULVERT	—	LIGHT STANDARD	—		
50 GAS	GAS	50 GAS	TREE	—		
EXISTING	LEGEND-PLAN	PROPOSED	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE

LOCATION APPROVED UNDERGROUND STRUCTURES
 SUPV. U/G STRUCTURES COMMITTEE DATE
 NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

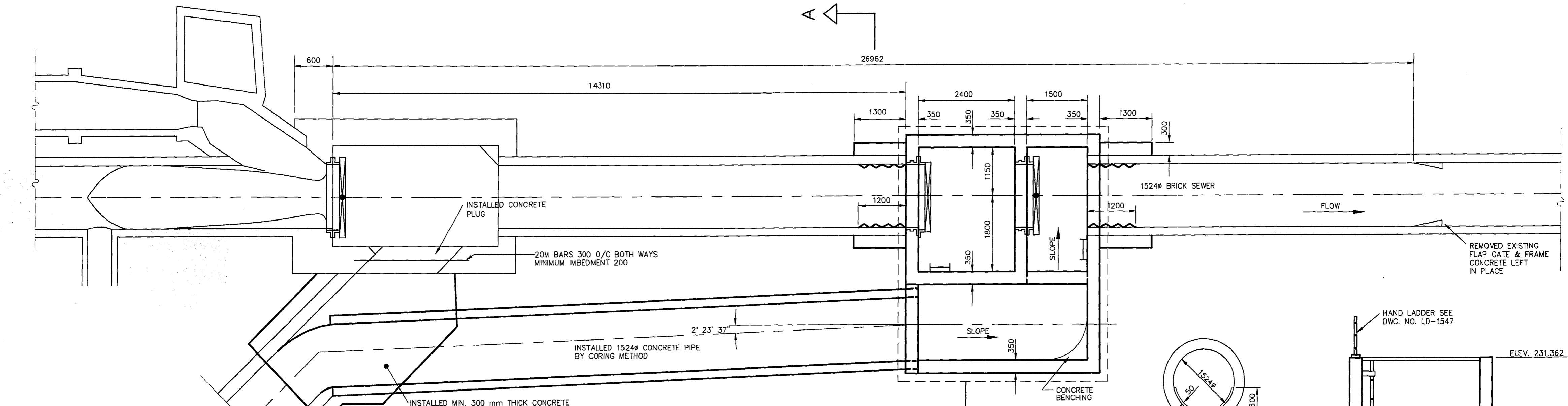
DESIGNED BY	JE	CHECKED BY	JE
DRAWN BY	WKT	APPROVED BY	
HOR. SCALE	1:250	RELEASED FOR CONSTRUCTION	
VERTICAL	1:50	DATE	1 Oct 21/06
NO. REVISIONS	DATE	BY	



THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 WATER AND WASTE DEPARTMENT

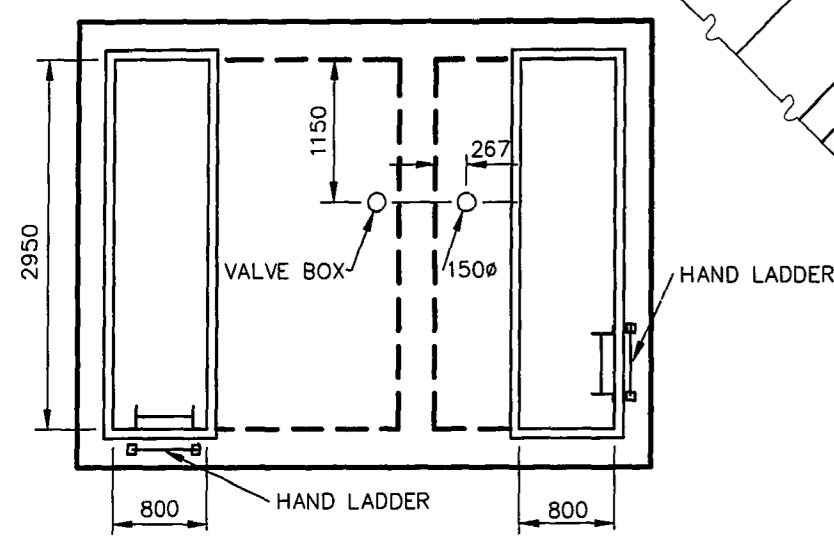
BANNATYNE FLOOD PUMPING STATION
 GATE CHAMBER SITE PLAN

SHEET 1 OF 5
 CITY DRAWING NUMBER LD-1545
 FILE # CG10107

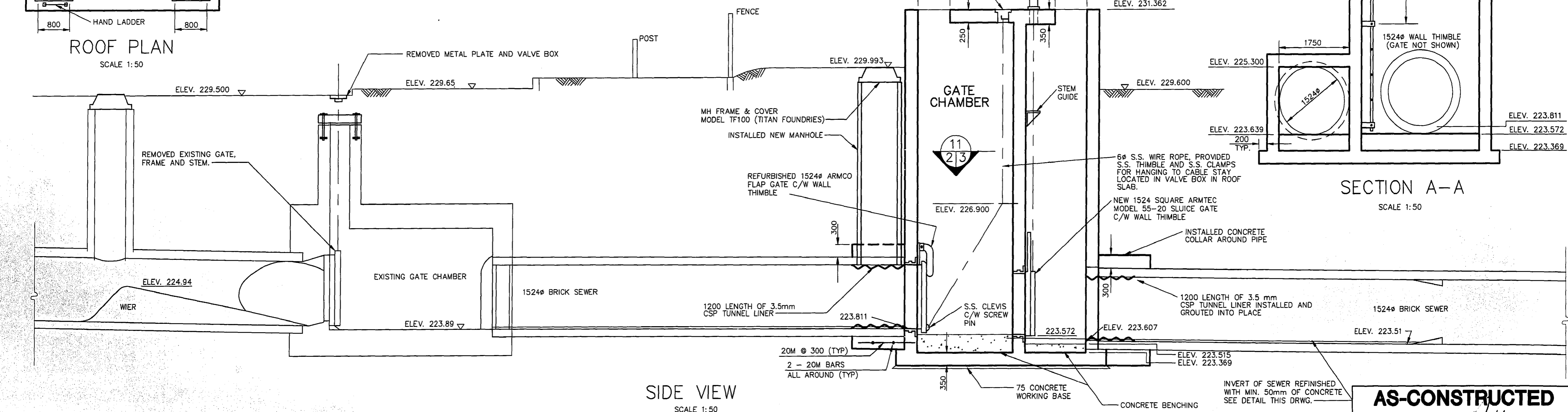


PLAN VIEW
SCALE 1:50

INVERT DETAIL
SCALE 1:50



ROOF PLAN
SCALE 1:50



SIDE VIEW
SCALE 1:50

SECTION A-A
SCALE 1:50

GENERAL NOTES

1. CONCRETE MATERIALS, METHODS OF CONSTRUCTION AND METHODS OF TESTING CONCRETE CONFORM TO CAN. 3-A23.1 AND CAN. 3-A23.2.
2. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 30 MPa AT 28 DAYS AND CEMENT SHALL BE TYPE 50 SULPHATE RESISTANT.
3. REINFORCEMENT SHALL BE NEW DEFORMED BILLET STEEL BAR CONFORMING TO CSA G30.12M GRADE 400 MPa
4. UNLESS NOTED OTHERWISE CLEAR CONCRETE REINFORCING STEEL SHALL BE:
 - CONCRETE CAST AGAINST EARTH 75 mm
 - ALL OTHER CONCRETE 50 mm
5. ALL STEEL ANCHORS, NUTS AND BOLTS CONFORM TO ASTM A276 TYPE #316 STAINLESS STEEL.
6. ALL ALUMINUM IN CONTRACT WITH CONCRETE PAINTED WITH BITUMINOUS ISOLATION COATING AT THE ALUMINUM / CONCRETE INTERFACE.
7. DO NOT CUT EXISTING REBAR AT CONNECTION OF NEW CONCRETE. BEND/ RUN EXISTING REBAR INTO NEW CONCRETE.
8. SHOP DRAWINGS FOR REINFORCING STEEL AND LIFTING MECHANISM INCLUDING RELATED HARDWARE SUBMITTED AT LEAST 14 DAYS BEFORE FABRICATION.
9. PROCEDURE FOR DOWELING INTO EXISTING CONCRETE:
 - DRILL HOLE IN EXISTING CONCRETE TO DEPTH AND DIA. SHOWN ON DWGS.
 - CLEAN OUT HOLE TO REMOVE ALL DRILLING DEBRIS.
 - FILL HOLE WITH NON-SHRINK GROUT AND INSERT DOWEL. ROTATE TO ENSURE GOOD COVERAGE OF GROUT.

AS-CONSTRUCTED
 [Signature] K. Walker 9/10/23
 CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES DATE
 WATER AND WASTE DEPARTMENT

B.M. 35-024 ELEV. 230.714			
1.) REVISED TO AS-BUILT	97.10.21	WKT	
NO. REVISIONS	DATE	BY	

DESIGNED BY JE	CHECKED BY JE
DRAWN BY MBD	APPROVED BY
HOR. SCALE 1:50	RELEASED FOR CONSTRUCTION
VERTICAL	DATE 08/24/06

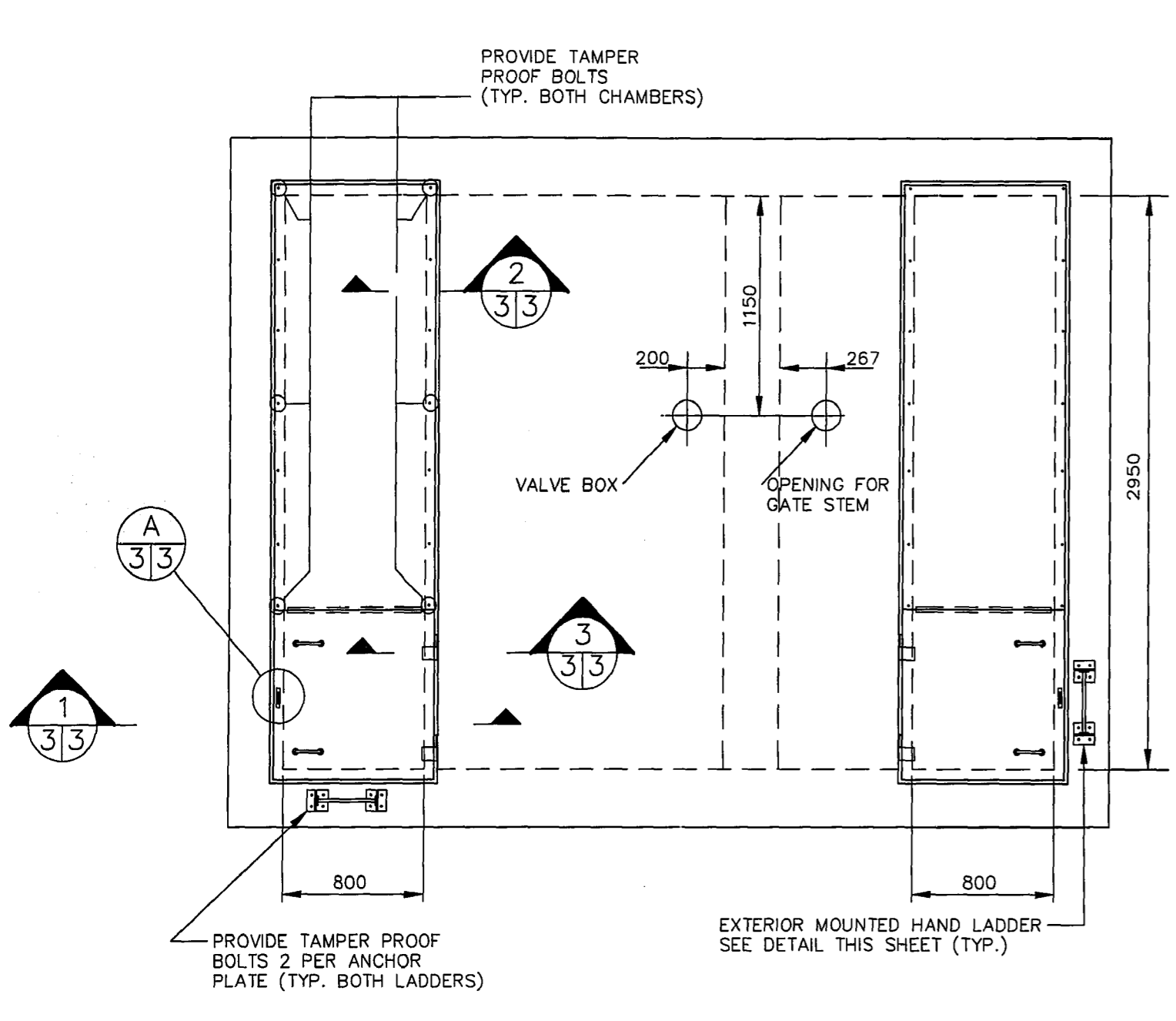
ENGINEER'S SEAL
 PROVINCE OF MANITOBA
 R.D. LOUDFOOT
 REGISTERED PROFESSIONAL ENGINEER
 PD 96-181
 PLOT DATE: 97 10 21
 AUTOCAD12: 0: DRAWINGS\LANDRAN\FLOPUMP\LD-1546.DWG

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 WATERWORKS WASTE AND DISPOSAL DEPARTMENT

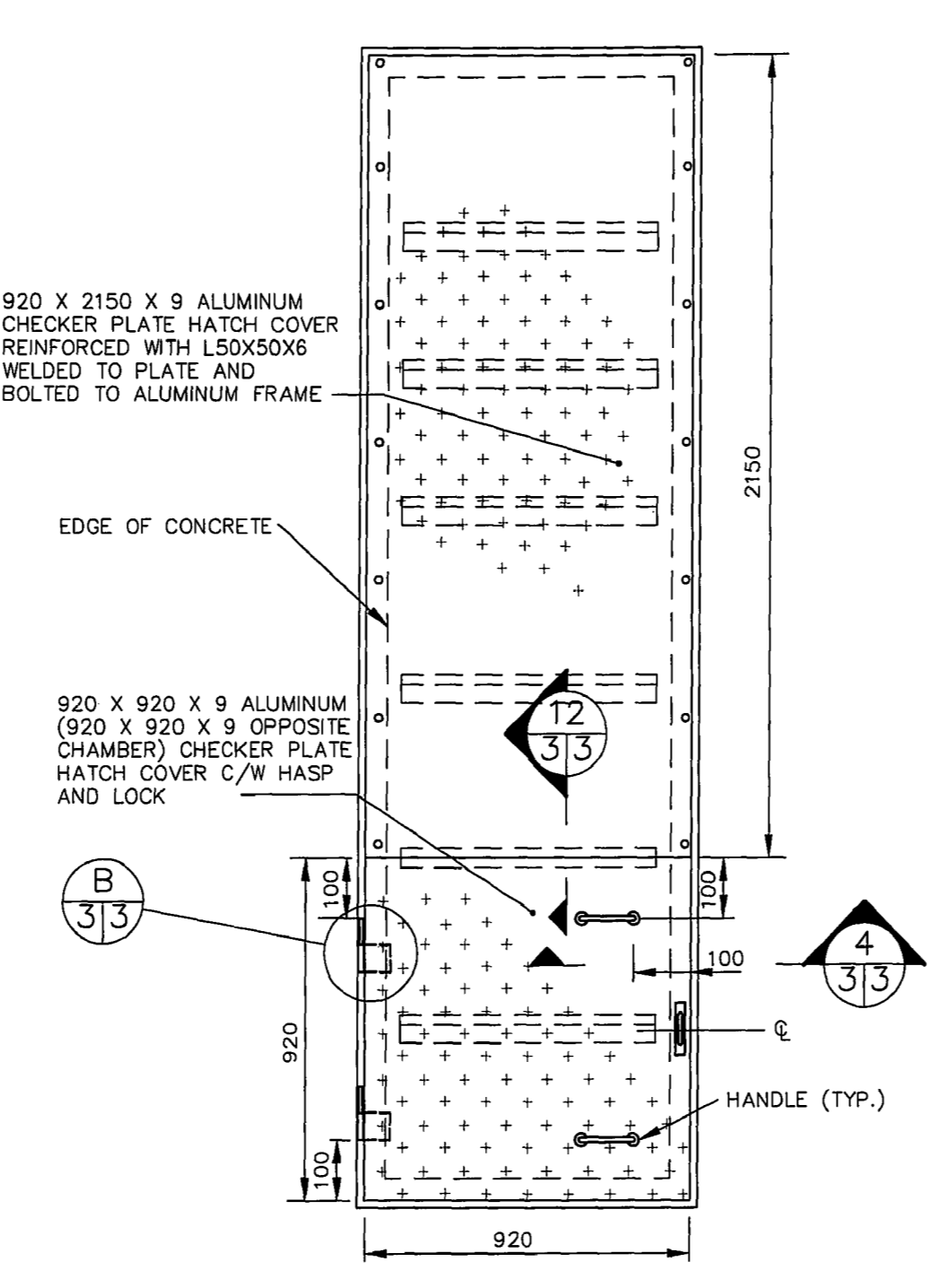
BANNATYNE FLOOD PUMPING STATION

GATE CHAMBER

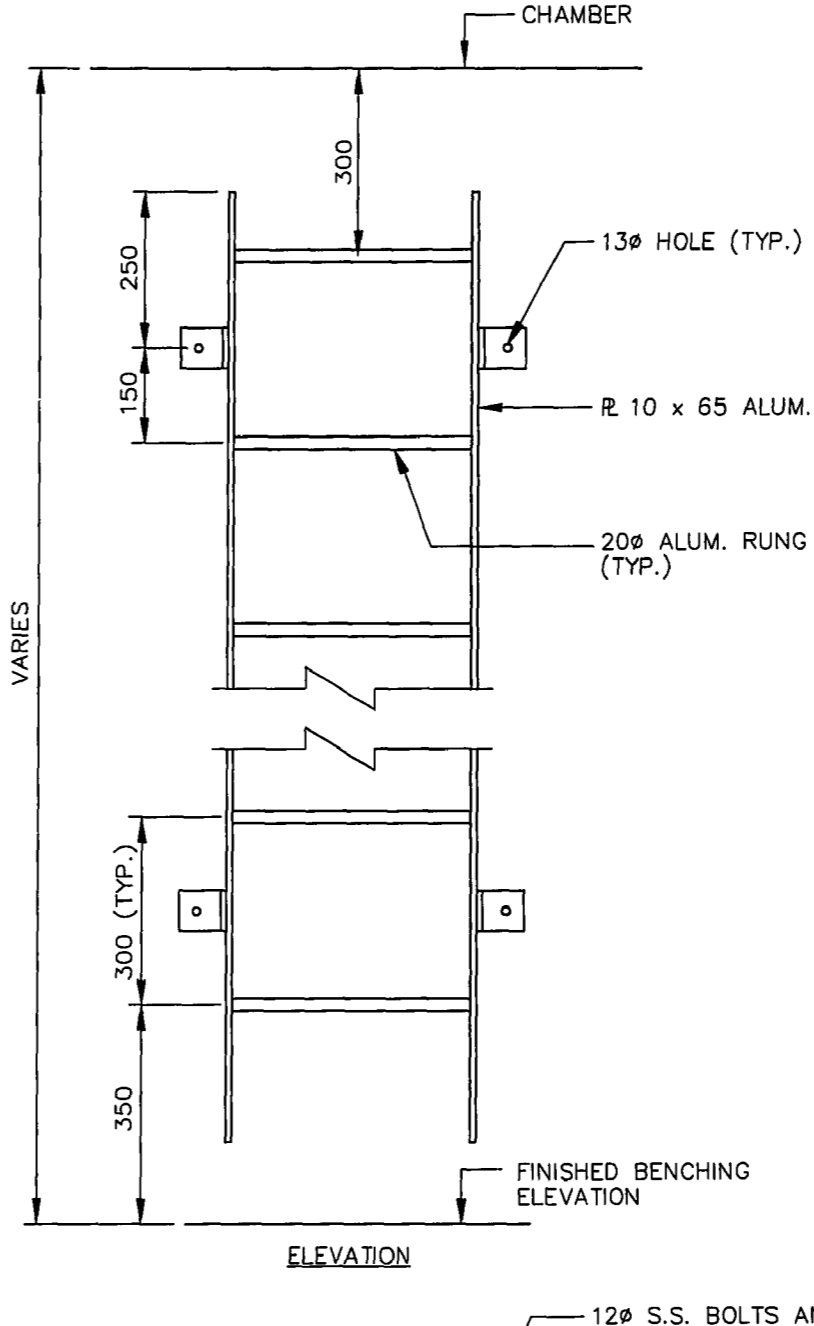
SHEET 2 OF 5
 LD-1546
 FILE # GC10109



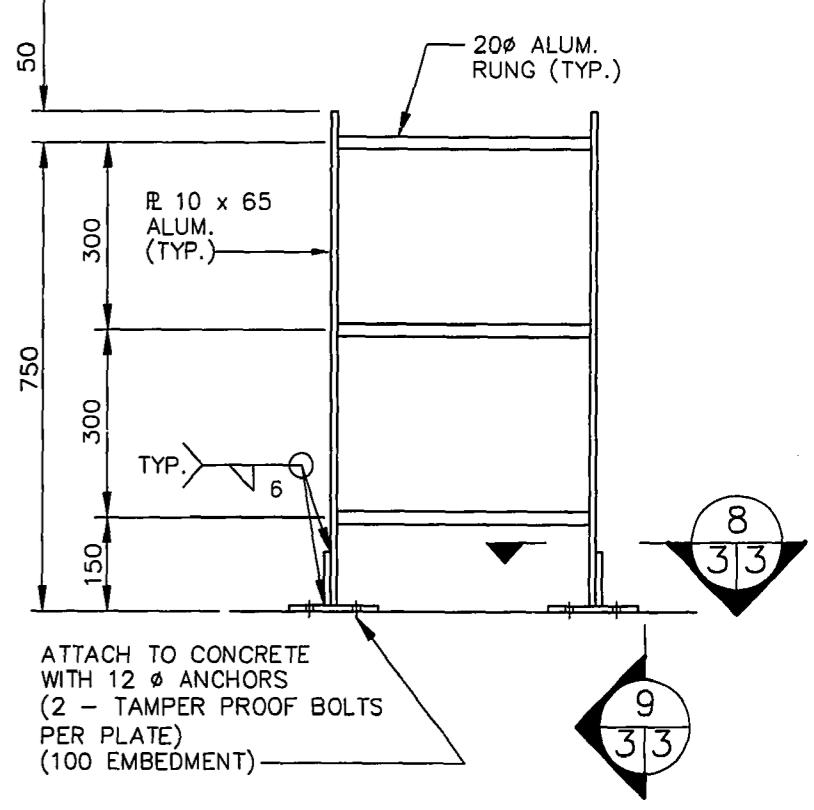
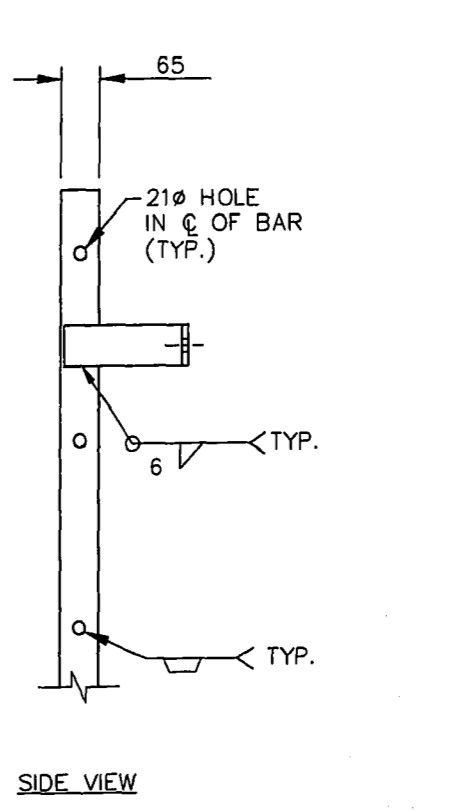
ROOF ACCESS PLAN
SCALE 1:25



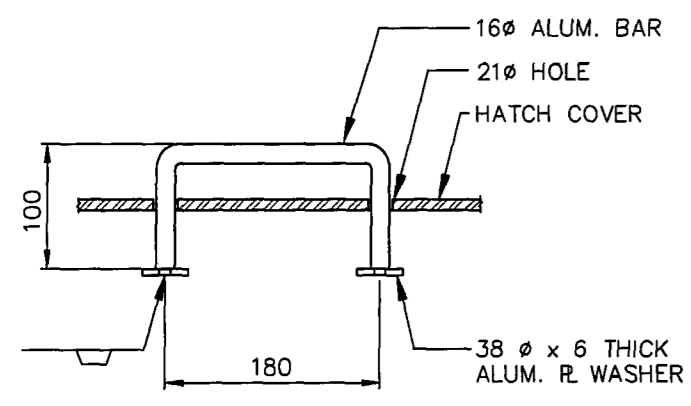
ACCESS HATCH DETAIL
SCALE 1:15



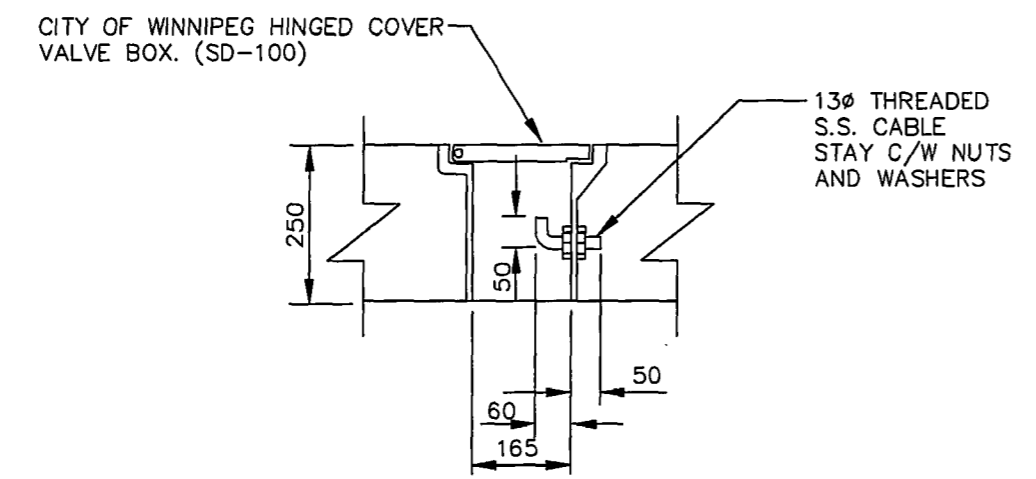
ELEVATION



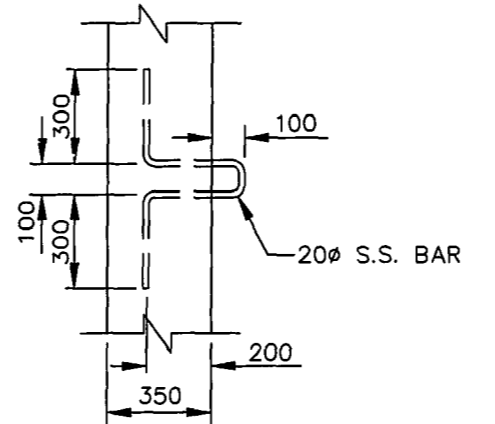
EXTERIOR MOUNTED HAND LADDER DETAIL
SCALE 1:10



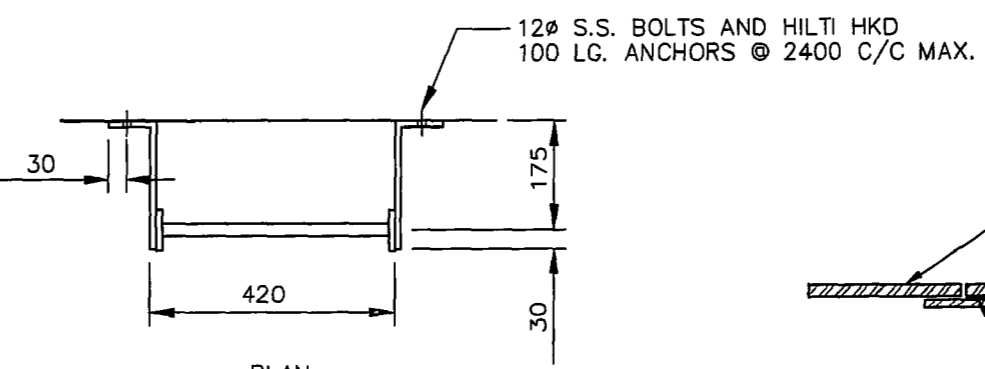
SECTION 4
SCALE 1:5



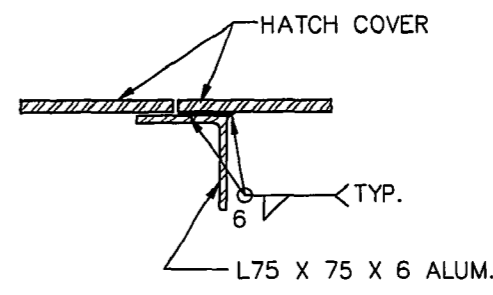
DETAIL 10
SCALE 1:10



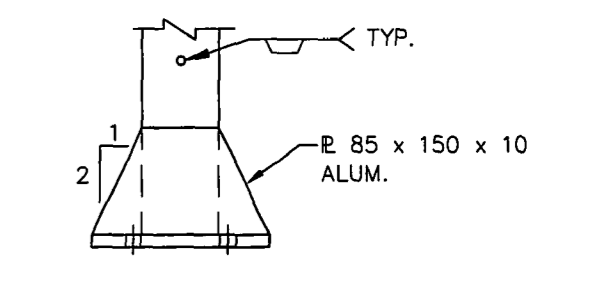
SECTION 11
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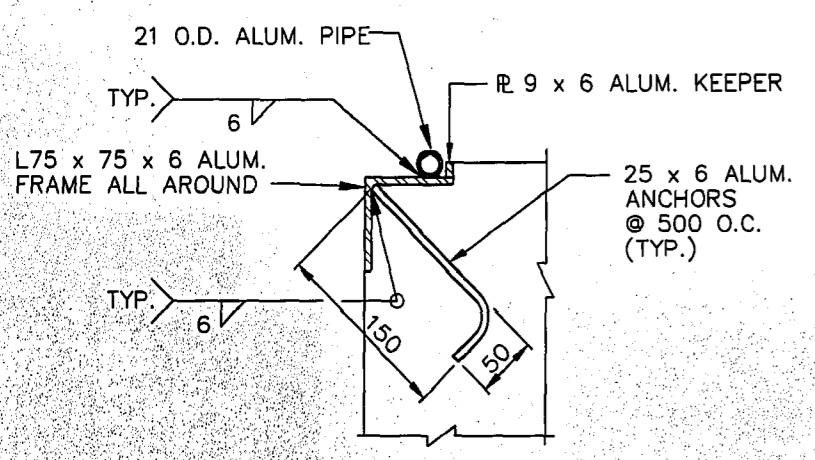
PLAN LADDER DETAIL
SCALE 1:10



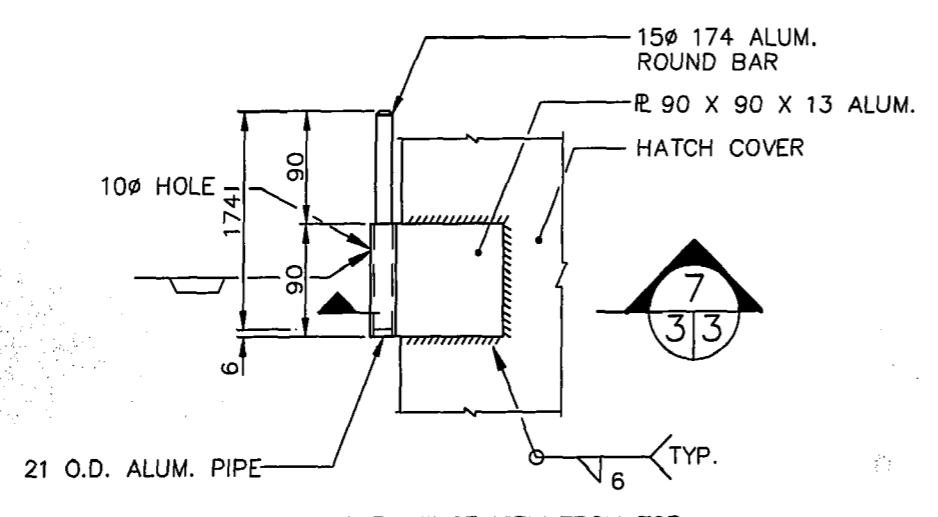
SECTION 12
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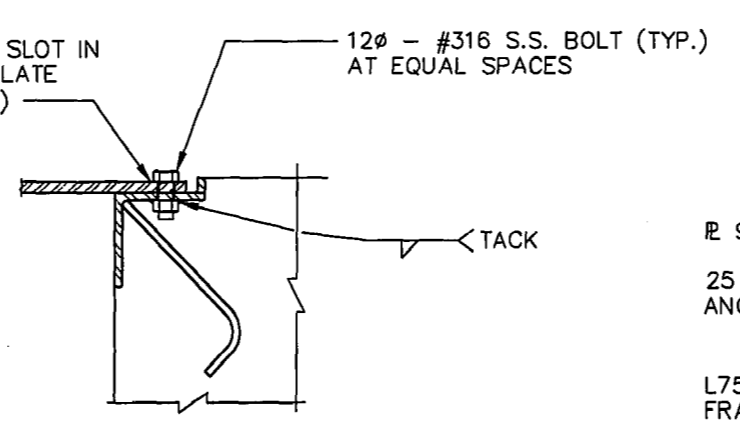
SECTION 9
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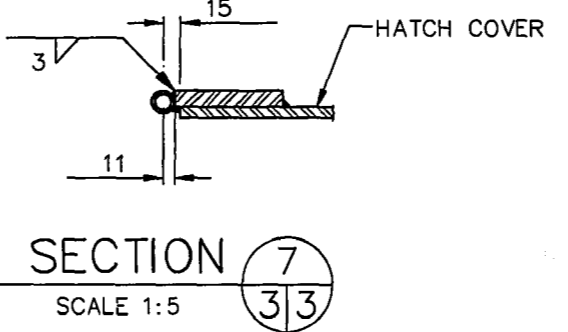
SECTION 3
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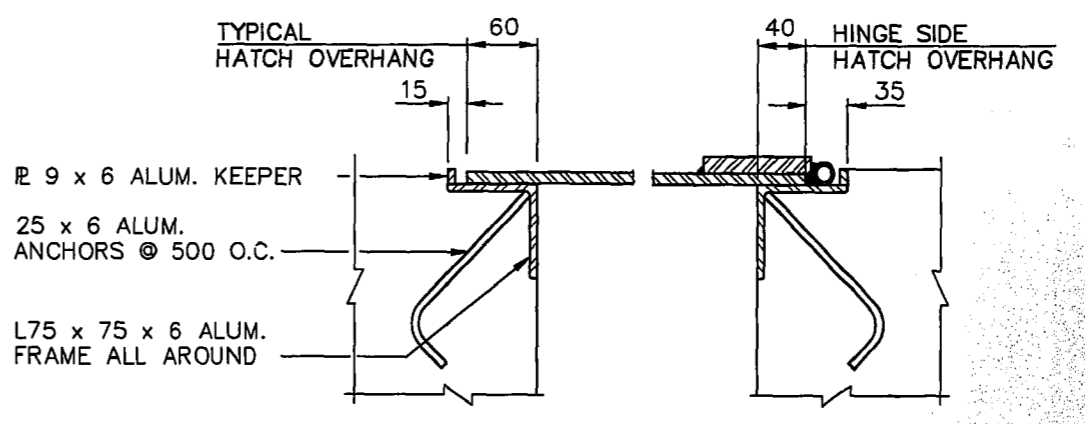
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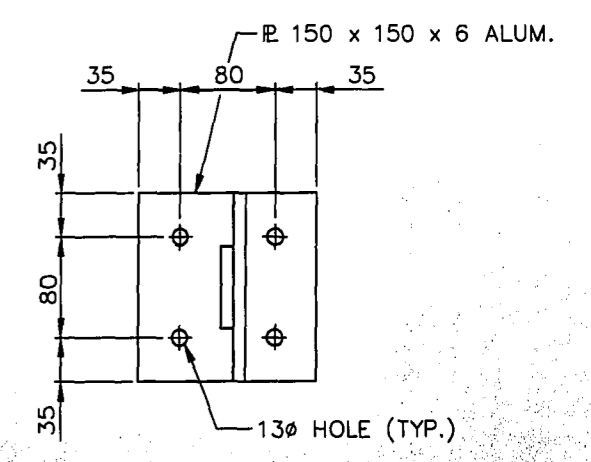
SECTION 2
SCALE 1:5



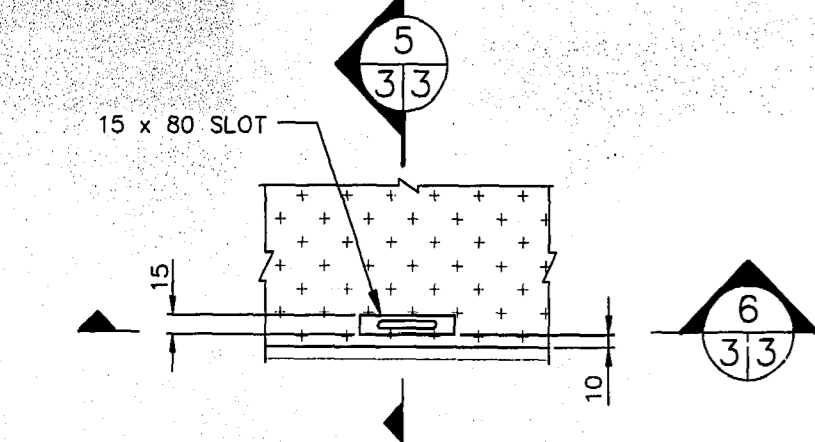
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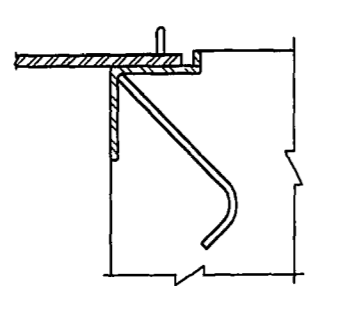
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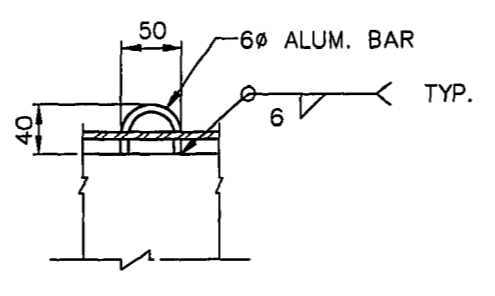
SECTION 8
SCALE 1:5



DETAIL A
SCALE 1:5



SECTION 5
SCALE 1:5



SECTION 6
SCALE 1:5

NOTES:

- ALL ALUMINUM CONFORMS TO THE ALUMINUM ASSOCIATION "SPECIFICATIONS FOR ALUMINUM STRUCTURES" - LATEST ADDITION. ALUMINUM FOR PLATES TYPE 5086-T651
- ALL ALUMINUM IN CONTACT WITH CONCRETE OR CAST INTO CONCRETE TO HAVE BITUMINOUS ISOLATION COATING.
- ALL NUTS, BOLTS AND ANCHORS CONFORM TO ASTM A276 TYPE # 316 STAINLESS STEEL.
- SHOP DRAWINGS FOR ACCESS HATCH AND RELATED ITEMS SUBMITTED AT LEAST 14 DAYS BEFORE FABRICATION.

AS-CONSTRUCTED

Kubina *R. Walter* 7.10.23

CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES WATER AND WASTE DEPARTMENT

NO.	REVISIONS	DATE	BY
1.)	REVISED TO AS-BUILT	97.10.21	WKT

DESIGNED BY	JE
CHECKED BY	JE
DRAWN BY	MBD
APPROVED BY	
HOR. SCALE	AS NOTED
VERTICAL	AS NOTED
DATE	96 10 23

ENGINEER'S SEAL

PROVINCE OF MANITOBA

R.D. LOUDFORT

REGISTERED PROFESSIONAL ENGINEER

PD 96-181

PLOT DATE: 97 10 21

AUTOCAD R12: G:\DRAWINGS\LANDORAN\VLDPUMP\LD-1547.DWG

THE CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION

WATER AND WASTE DEPARTMENT

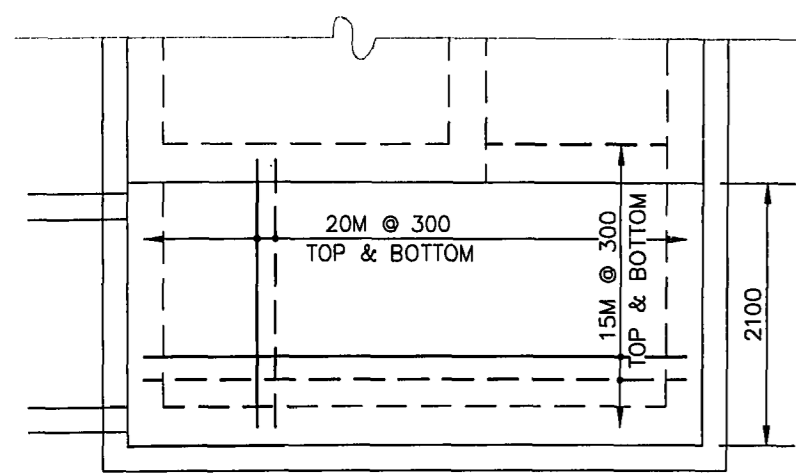
BANNATYNE FLOOD PUMPING STATION

ACCESS HATCH AND LADDER DETAILS

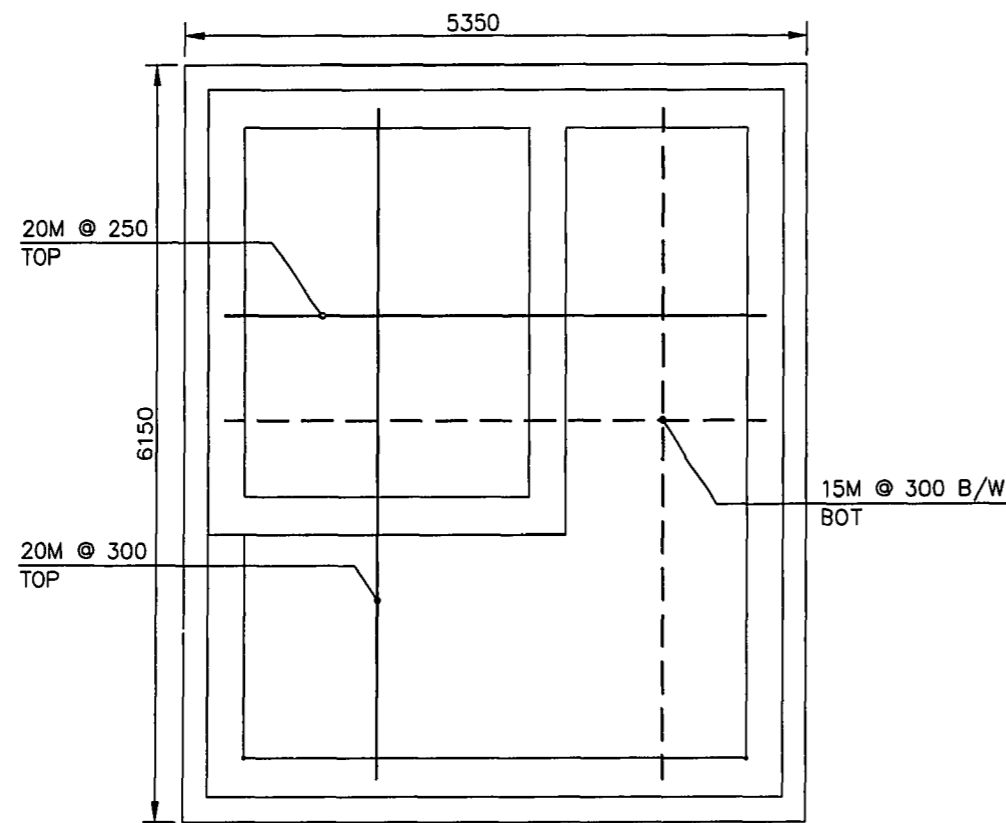
SHEET 3 OF 5

LD-1547

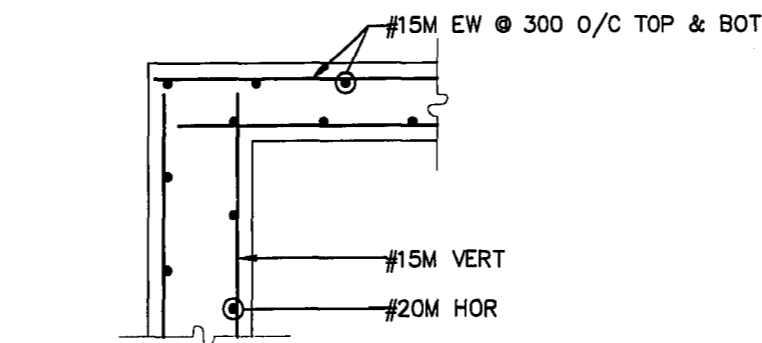
FILE # MS12762



LOWER SECTION ROOF

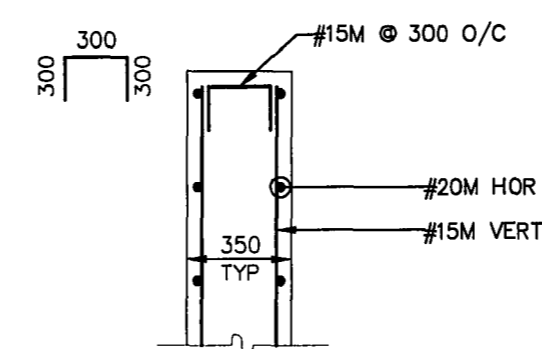


FLOOR SLAB



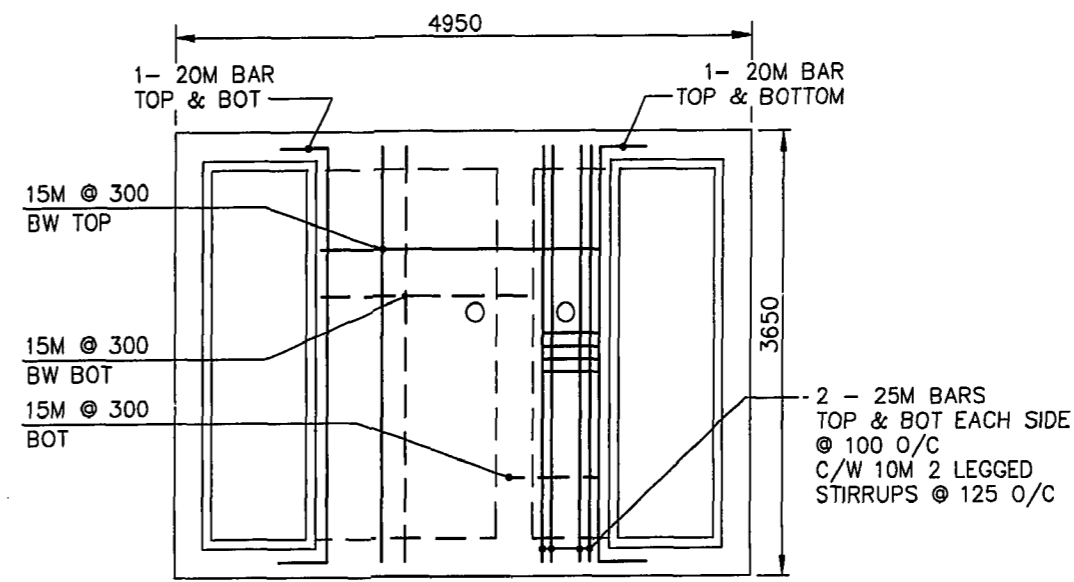
CORNER DETAIL BETWEEN WALL & ROOF

SCALE 1:20

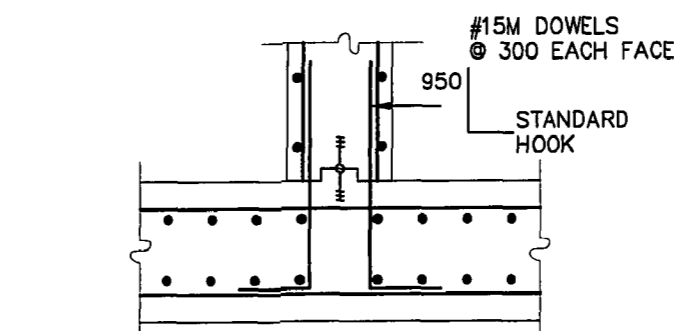


TOP OF WALL WITH NO ROOF SLAB

SCALE 1:20

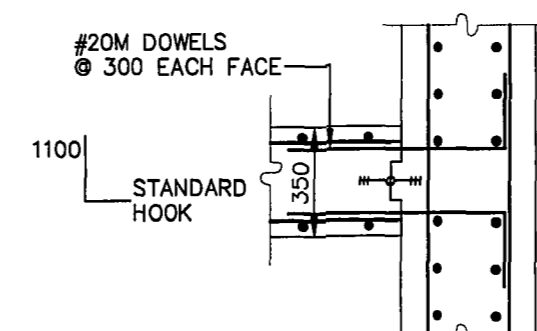


ROOF SLAB



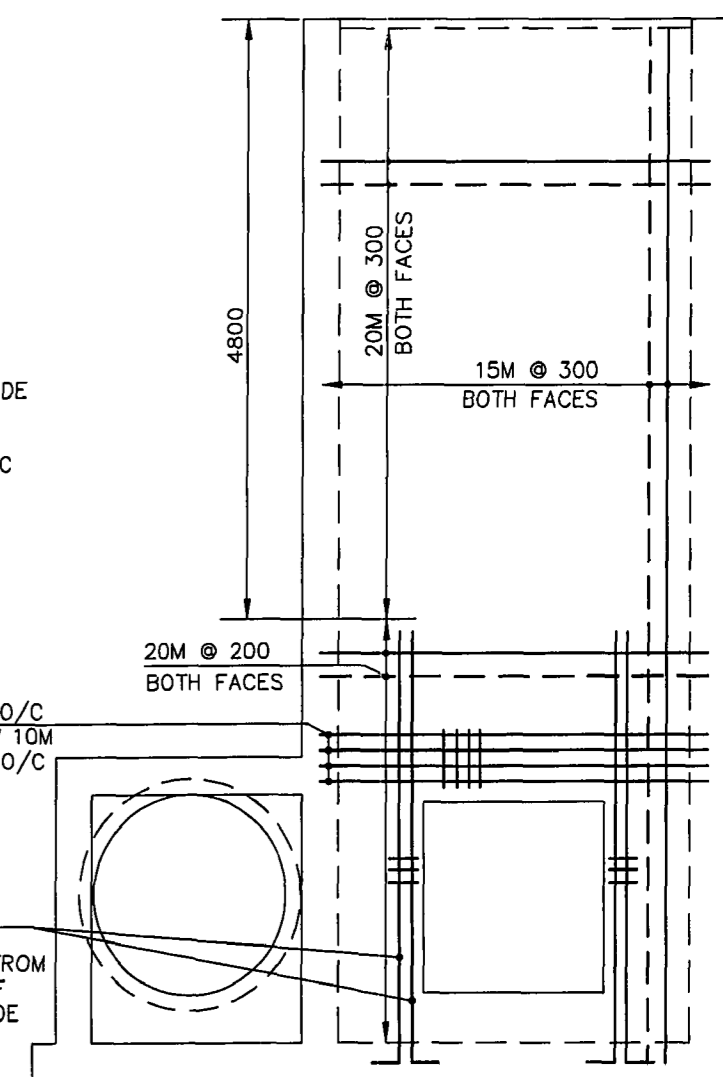
JOINT BETWEEN FLOOR & INSIDE WALLS

SCALE 1:20

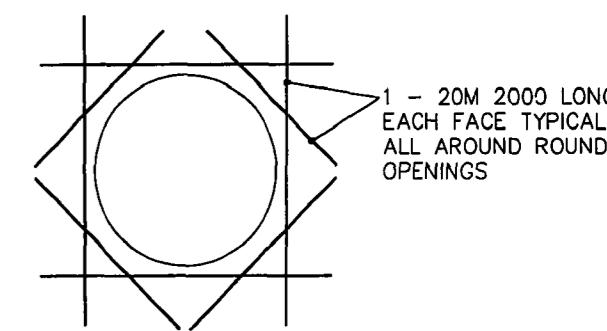


JOINT BETWEEN LOWER ROOF & SOUTH WALL

SCALE 1:20

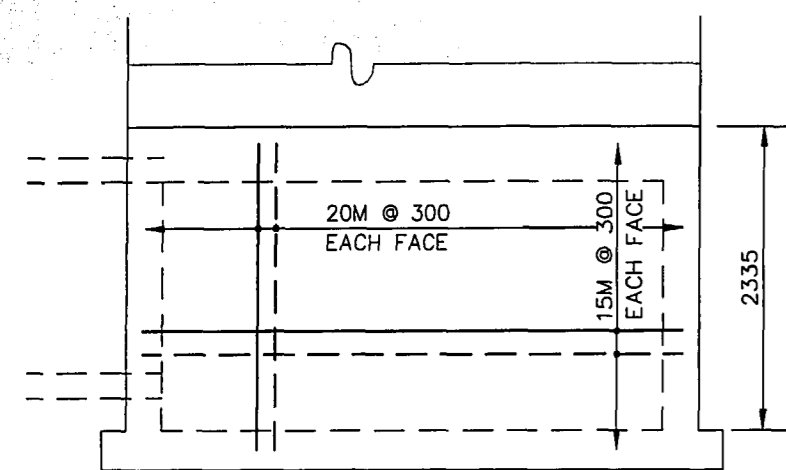


CENTRE WALL

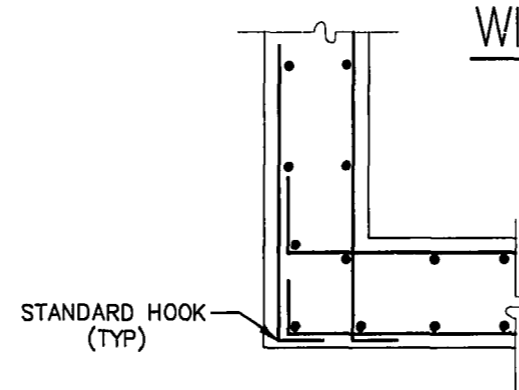


DETAIL OF EAST & WEST WALL ROUND OPENINGS

SCALE 1:20

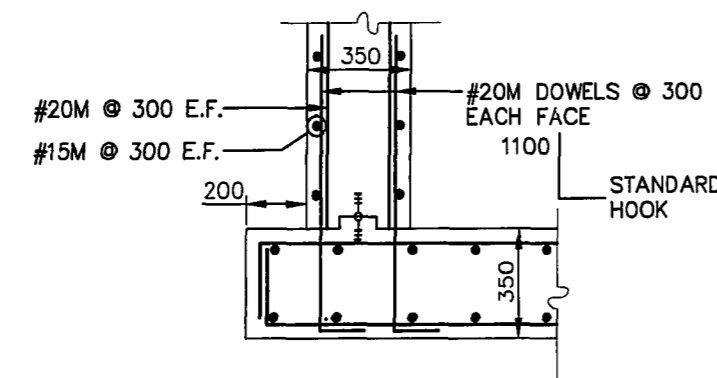


LOWER SECTION SOUTH WALL



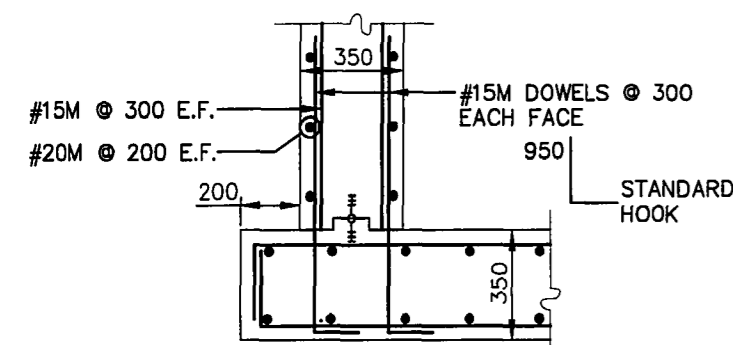
CORNER DETAIL BETWEEN 2 WALLS (EXTERIOR) & LOWER SECTION (ROOF & SOUTH WALL)

SCALE 1:20



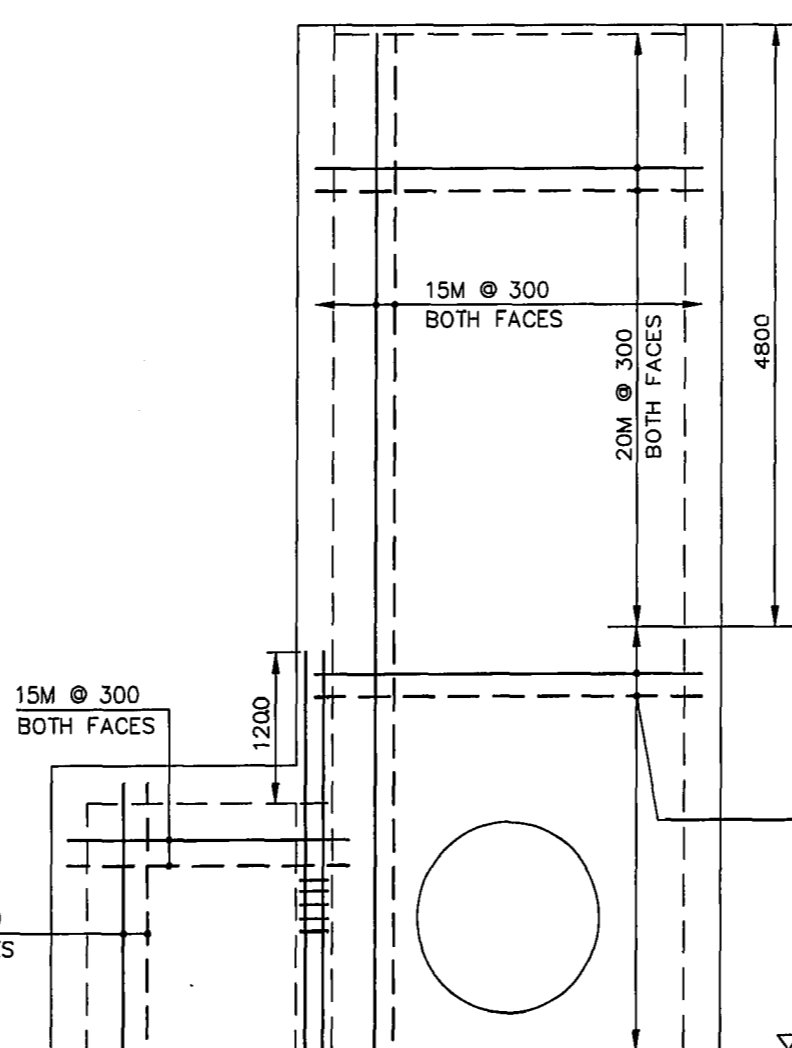
JOINT BETWEEN FLOOR & LOWER SECTION WALLS

SCALE 1:20

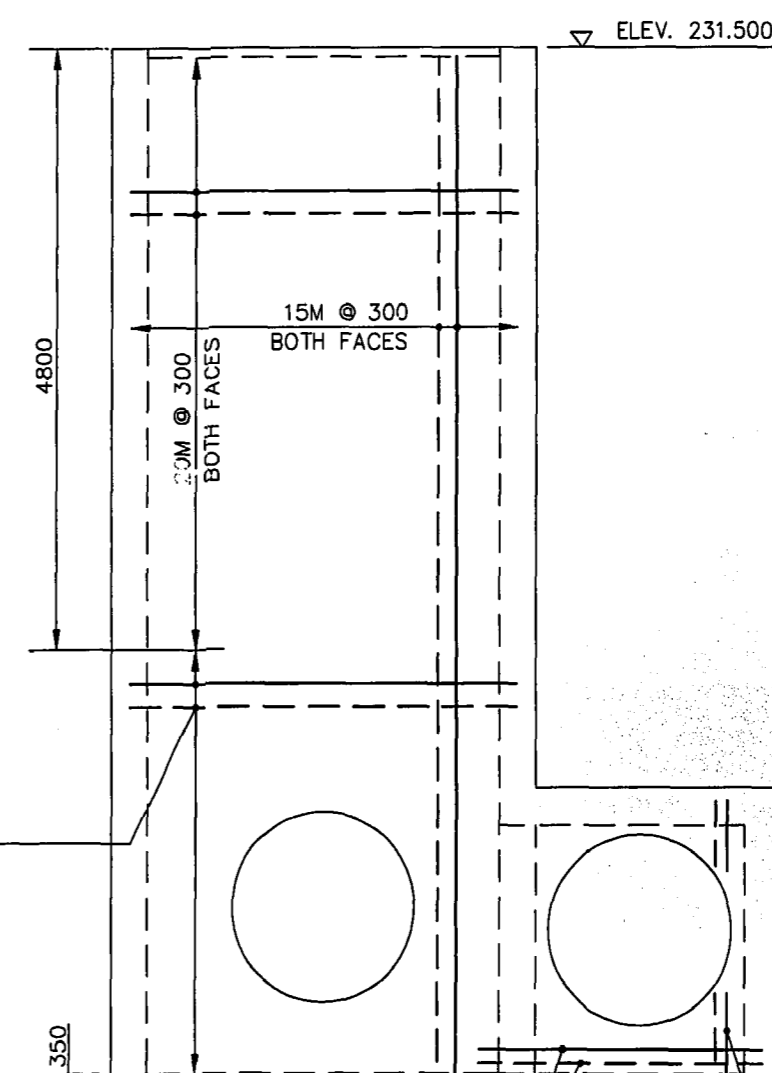


JOINT BETWEEN FLOOR & OUTSIDE WALLS

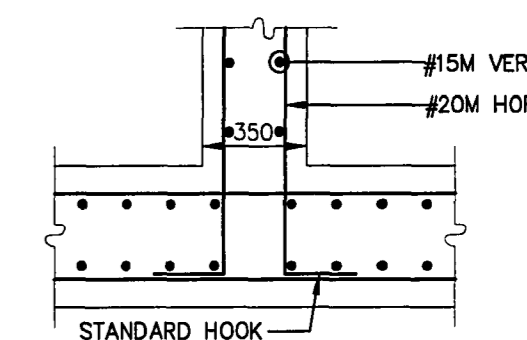
SCALE 1:20



EAST WALL

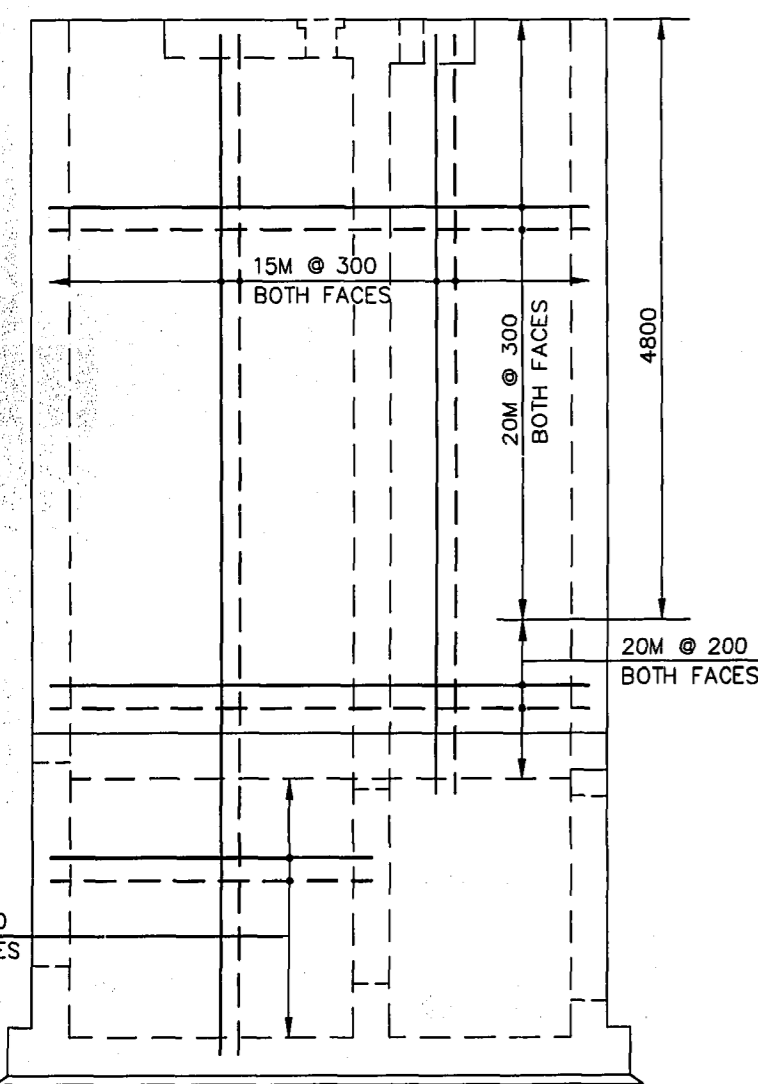


WEST WALL

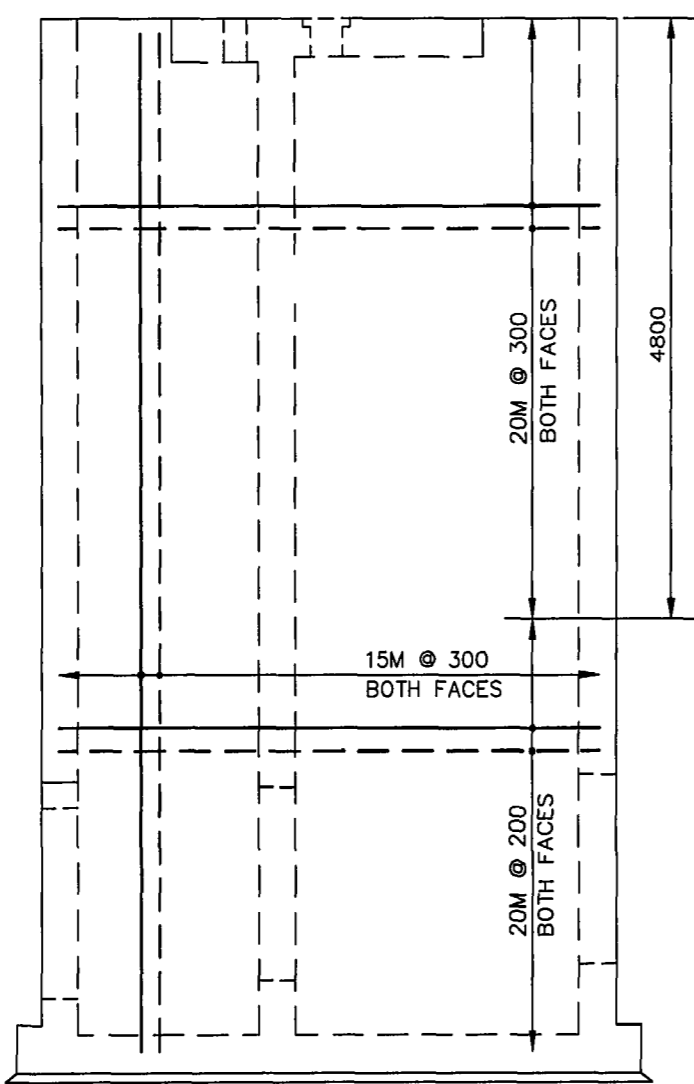


CORNER DETAIL BETWEEN INSIDE & OUTSIDE WALL

SCALE 1:20



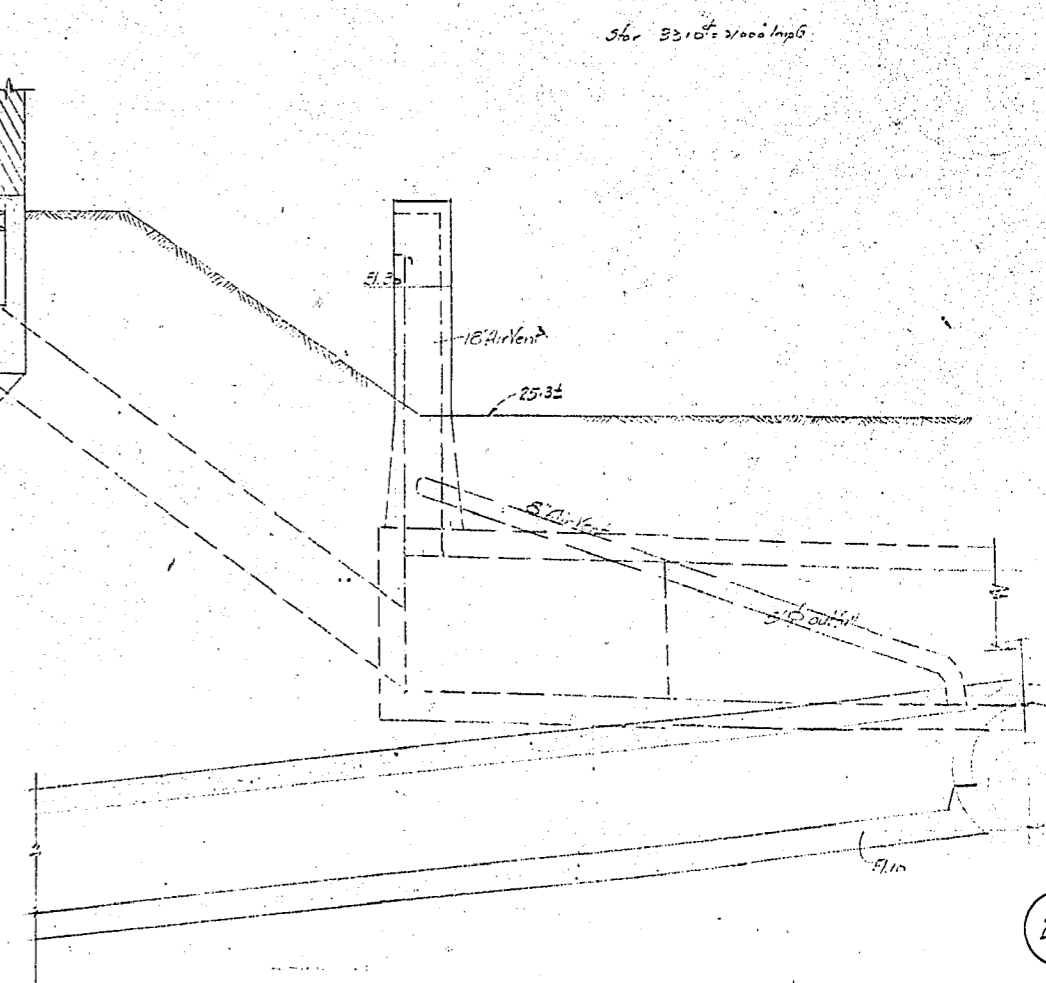
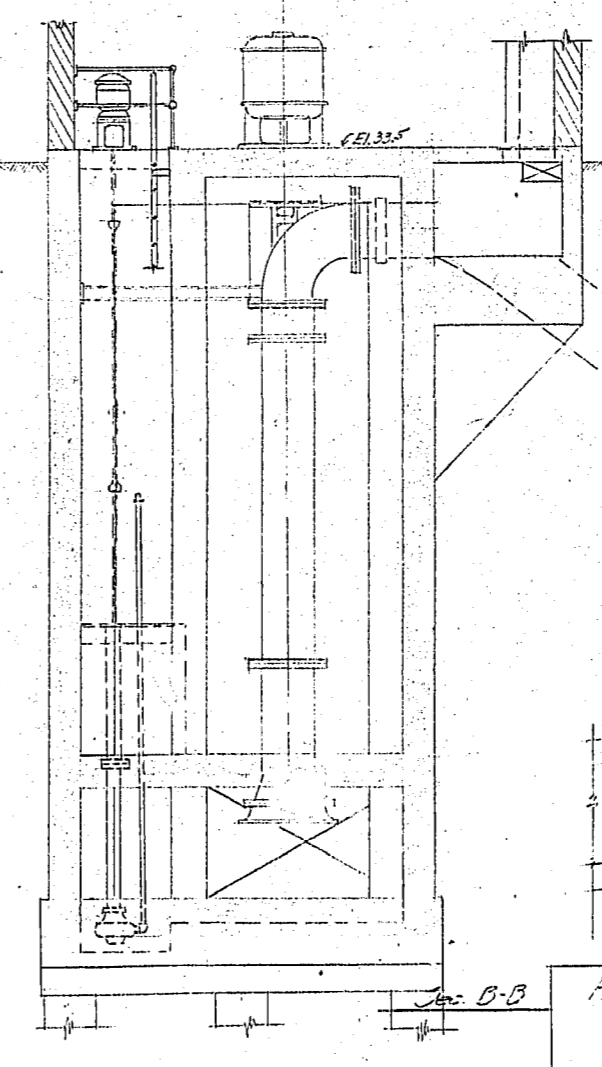
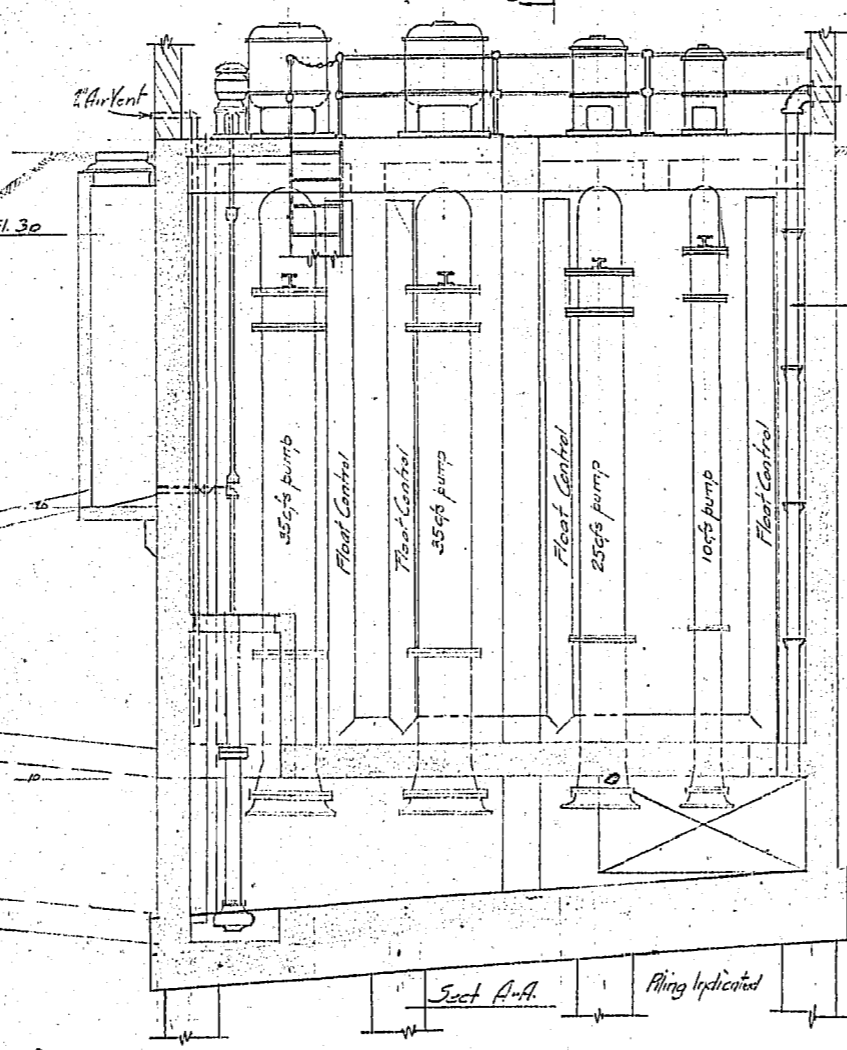
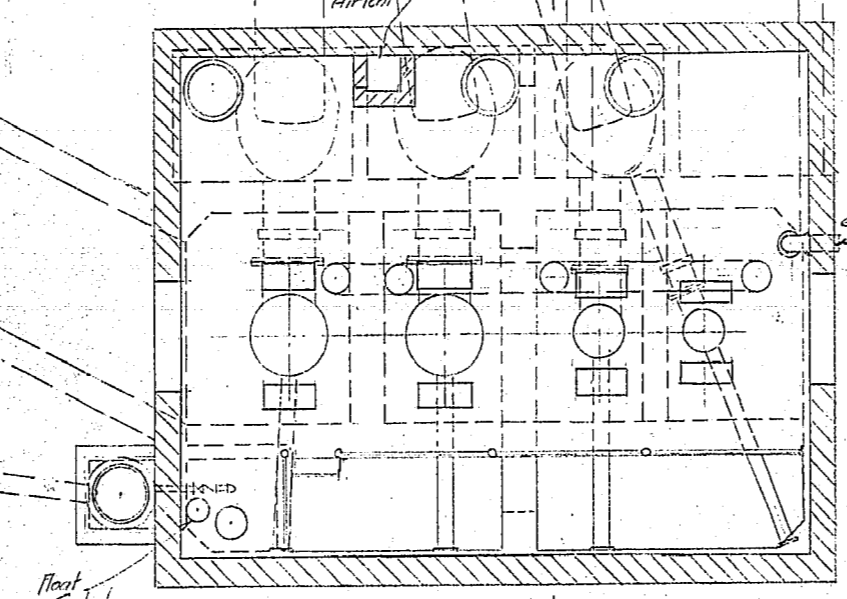
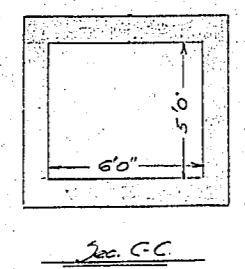
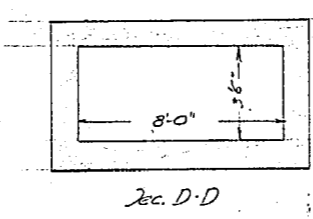
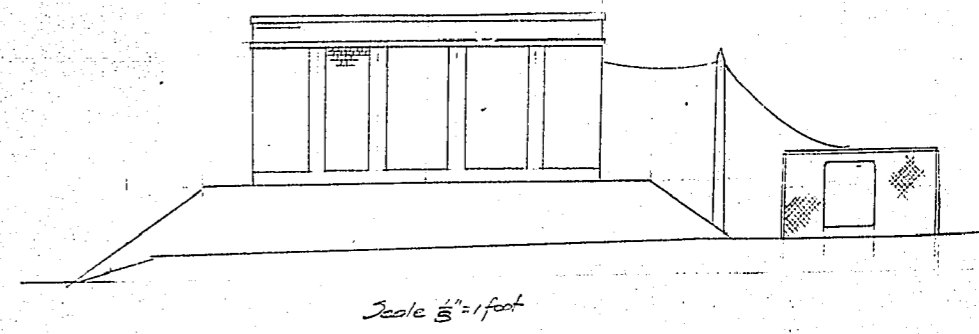
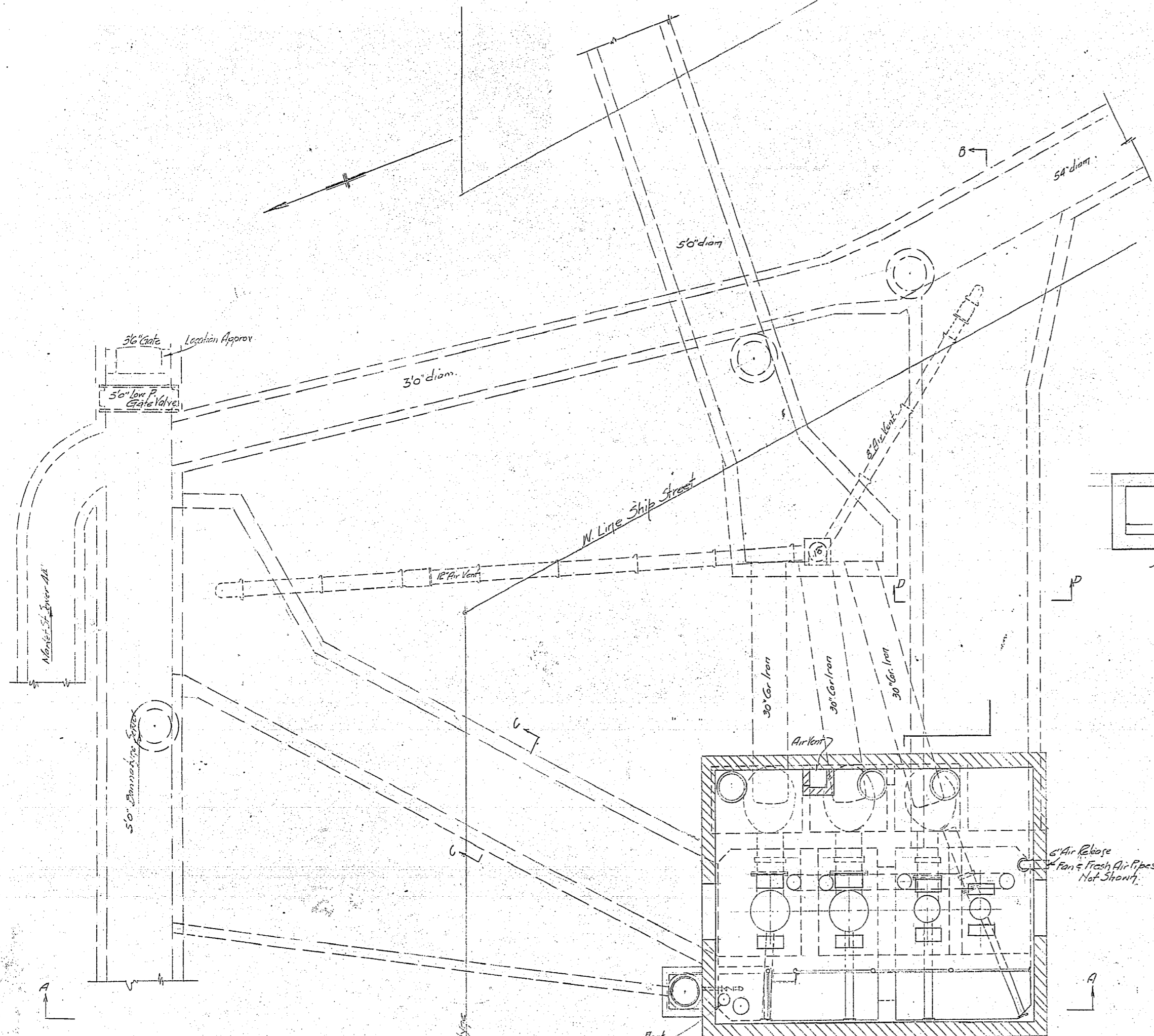
SOUTH WALL



NORTH WALL

AS-CONSTRUCTED
Rebecca K. Dalton 97.10.23
 CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES DATE
 WATER AND WASTE DEPARTMENT

B.M. ELEV.				
DESIGNED BY	RDL	CHECKED BY	JE	BANNATYNE FLOOD PUMPING STATION GATE CHAMBER
DRAWN BY	WKT	APPROVED BY		
SCALE	1:50 UNLESS OTHERWISE NOTED		RELEASER FOR CONSTRUCTION <i>[Signature]</i>	REINFORCING DETAILS LD-1548 FILE # GC10110
NO. REVISIONS	DATE	BY	DATE	
1.)	REVISED TO AS-BUILT	97.10.21	WKT	SHEET 4 OF 5 PD 96-181 PLOT DATE: 97.10.21 AUTOCAD: 12.0 DRAWINGS LANDDRAN/FLOPUMP/LD-1548.DWG



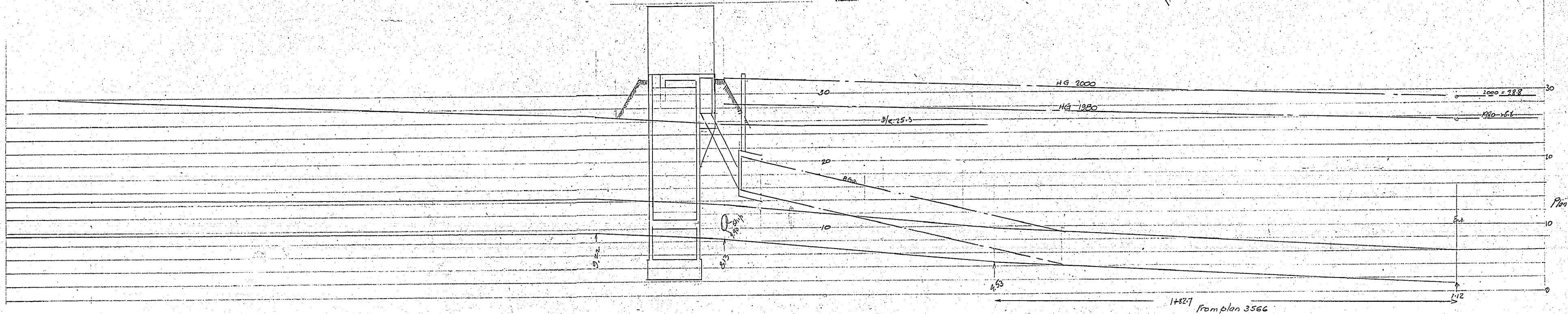
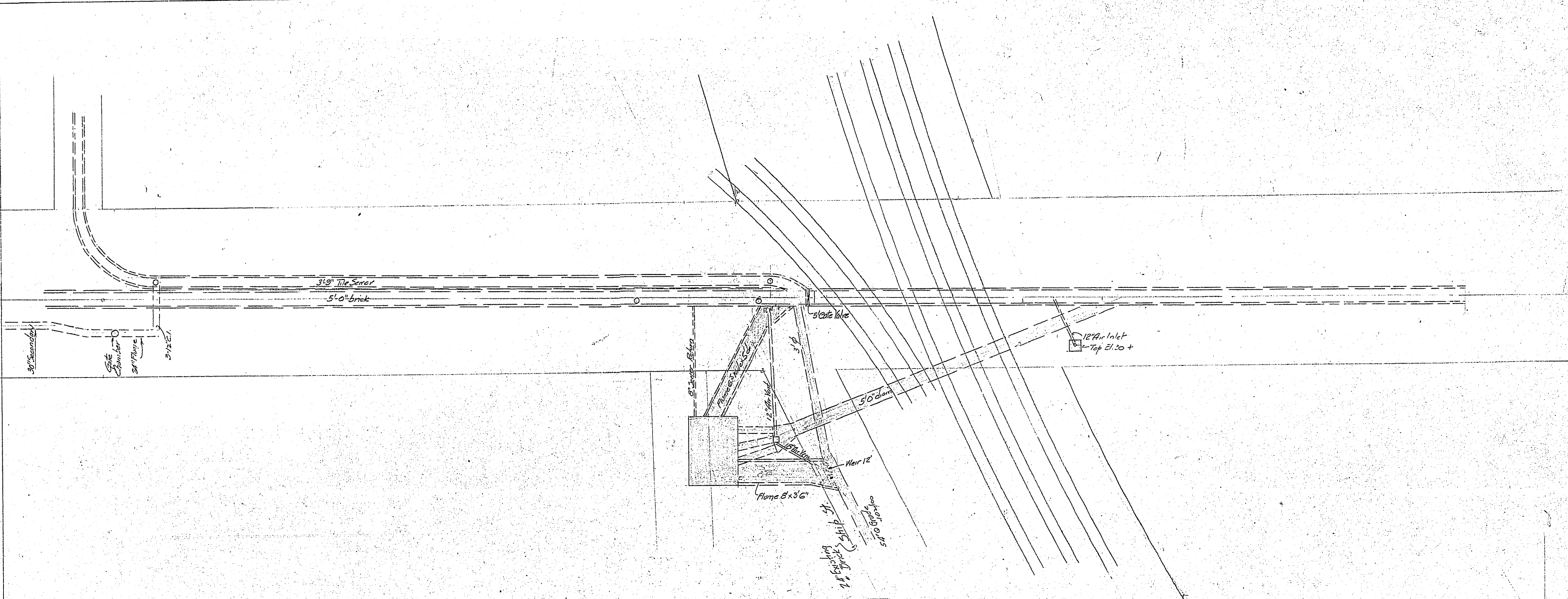
Proposed Flood Pumping Station
 Bonnalynne Avenue
 Automatic

CITY OF WINNIPEG
 ENGINEERING DEPARTMENT
 W. D. HURST, CITY ENGINEER
 A. J. S. TAUNTON, DEPUTY CITY ENGINEER

DRAWN BY... DATE Aug 1928
 CHECKED BY...
 APPROVED...

SCALE
 1/8" = 1 foot
 DRAWING NO.
 666-12

R-49



See 620
Plan 3531

21

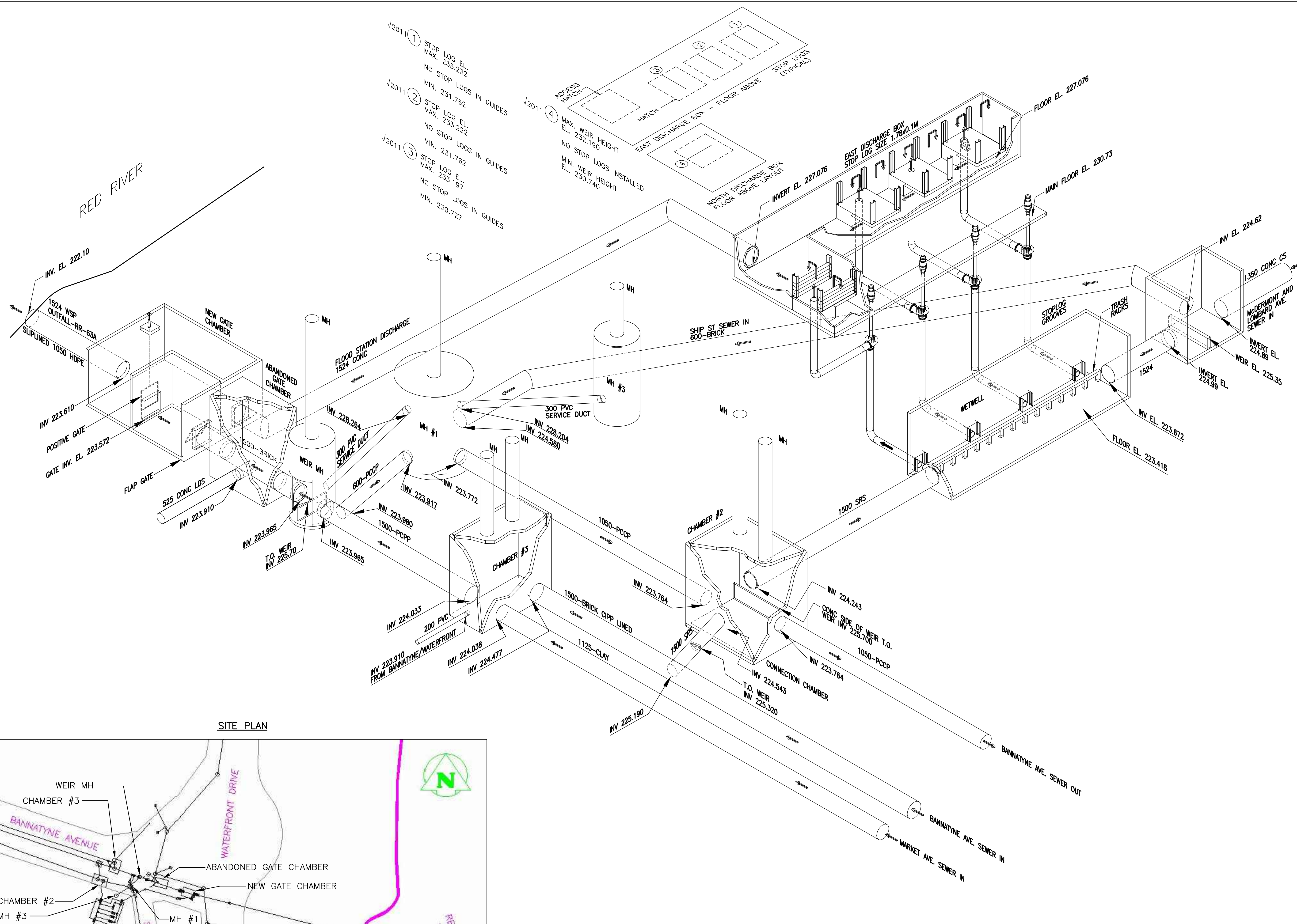
Proposed Flood Pumping Station
Dannotype Avenue

CITY OF WINNIPEG
ENGINEERING DEPARTMENT
W. D. HURST, CITY ENGINEER
A. J. S. TAUNTON, DEPUTY CITY ENGINEER

DRAWN BY: *LDW* DATE: *Aug 1928*
TRACED BY: _____
CHECKED BY: _____
APPROVED: _____

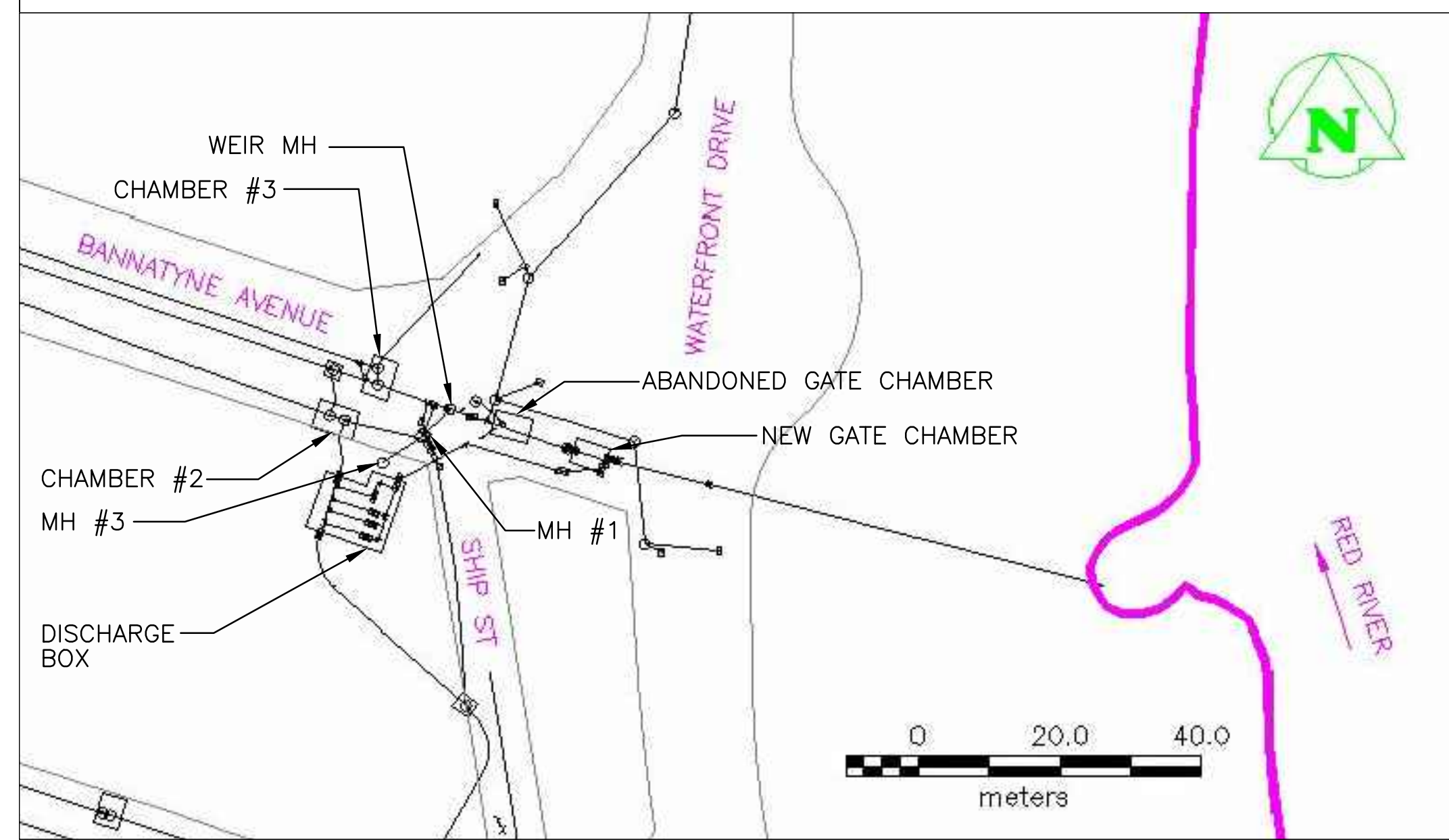
SCALE
1/4" = 1'-0"
DRAWING NO.
666-13

R-50



RED RIVER

SITE PLAN



- √2011 ① STOP LOG EL. MAX. 233.232
NO STOP LOGS IN GUIDES
MIN. 231.762
- √2011 ② STOP LOG EL. MAX. 233.222
NO STOP LOGS IN GUIDES
MIN. 231.762
- √2011 ③ STOP LOG EL. MAX. 233.197
NO STOP LOGS IN GUIDES
MIN. 230.727
- √2011 ④ MAX. WEIR HEIGHT EL. 232.190
NO STOP LOGS INSTALLED
MIN. WEIR HEIGHT EL. 230.740

LOCATION

- AREA NORTH
- SECTOR 12
- ADDRESS

KEY ELEVATIONS

- JAMES ST. 25.8 FT. = 7.864m
- LOW BASEMENT 228.3
- MAXIMUM ACTIVATION
- ACTUAL ACTIVATION
 - JAMES 15 Ft
 - SITE RIVER 226.33
- PUMP START/STOP 1 226.41/225.64
- 2 226.41/225.80
- 3 226.56/225.95
- 4 226.71/226.10
- HIGH ALARM

NOTES

1. SOURCE OF DATA SHOWN CAN BE TRACED BY REFERRING TO THE BASELINE DATA SPREADSHEETS. FOR SPECIFIC CROSS REFERENCES ON THE DRAWING (IE.) , REFER TO THE FPS BASELINE DATA SPREADSHEET-SUPERSCRIPT CROSS-REFERENCE SHEET.

PUMP INFORMATION

PUMP REF No.	HP	CAPACITY	
		NO STOPLOGS (CMS)	FULL STOPLOGS (CMS)
5	45	0.33	0.24
6	100	0.76	0.64
7	125	1.12	0.97
8	125	1.12	0.97
TOTAL		3.34	2.83

√2011 - INDICATES FIELD CONFIRMED

NO.	D / M / Y	DESCRIPTION	BY
4	10/12/20	UPDATED	DW
3	19/05/17	UPDATED	RED
2	30/04/13	UPDATED	RED
1	10/03/05	UPDATED	RED

REVISIONS / ISSUE

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

FLOOD ACTIVITY / EMERGENCY MANUAL

TITLE: BANNATYNE FPS ISOMETRIC

JOB No. 020-08-09-09-00 DATE: MAR. 19, 2003

SCALE: N.T.S. DWG. No. M006

CHECKED: HW/DW