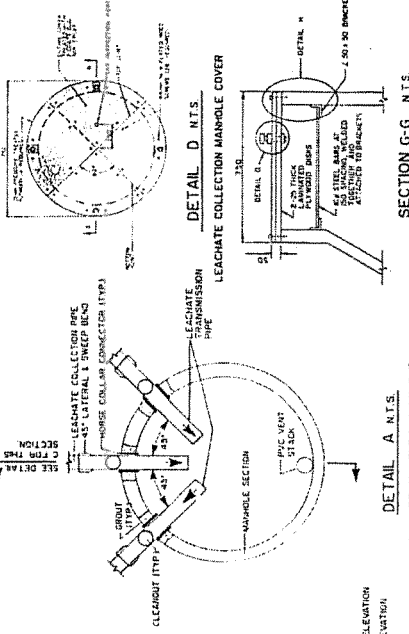
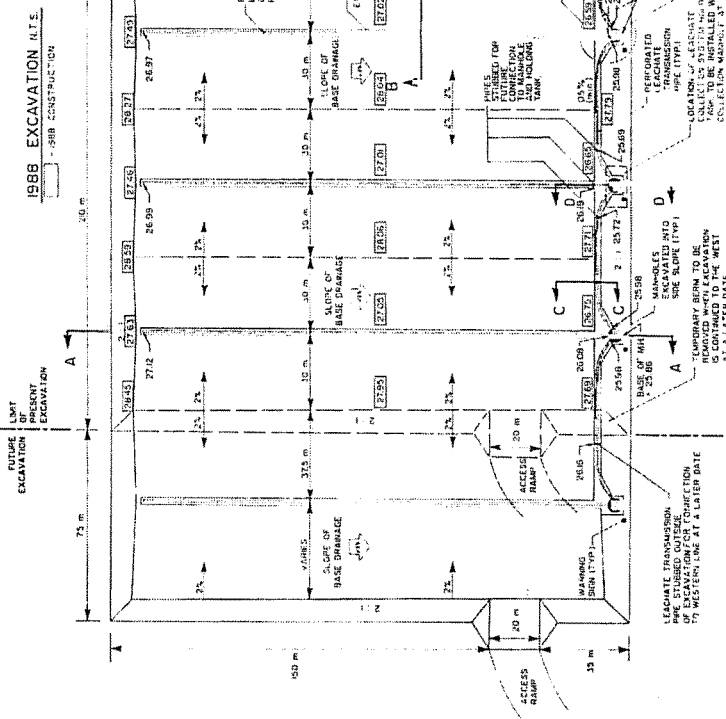


## **APPENDIX G – EXISTING LEACHATE COLLECTION SYSTEM DETAILS**



**GENERAL NOTES AND SPECIFICATIONS**

1. VERIFY EXISTING UTILITIES AND CONNECTIONS WITH EXISTING RECORDS AND FIELD SURVEY.
2. EXISTING MANHOLE COVERS SHALL BE REPLACED WITH NEW MANHOLE COVERS AS SHOWN ON THESE PLANS.
3. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
4. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
5. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
6. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
7. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
8. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
9. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.
10. ALL EXISTING UTILITIES SHALL BE PROTECTED AND SUPPORTED AS SHOWN ON THESE PLANS.

**MANHOLE SIZE**

MANHOLE SIZE: 18" DIA. (TYP.)

**MANHOLE COVER**

MANHOLE COVER: 18" DIA. (TYP.)

**MANHOLE FRAME**

MANHOLE FRAME: 18" DIA. (TYP.)

**MANHOLE LINING**

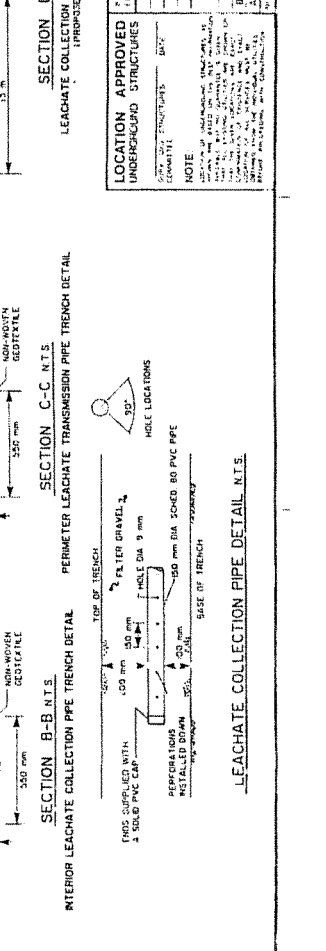
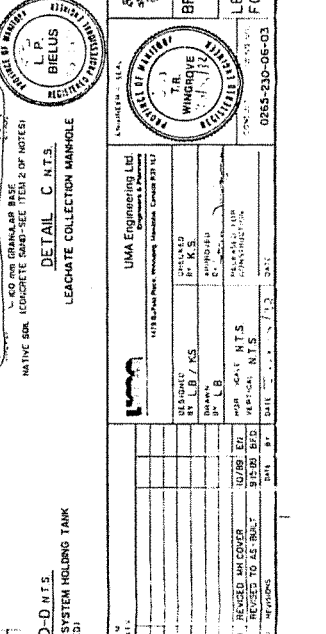
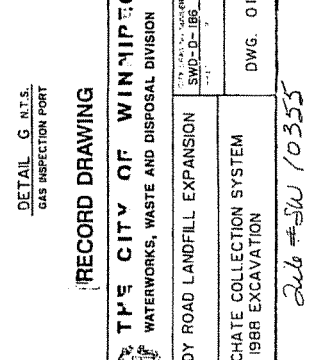
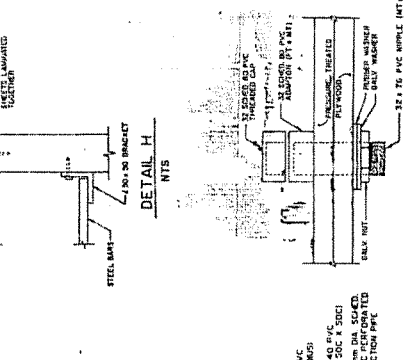
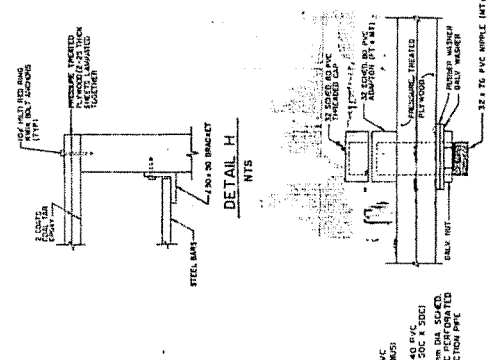
MANHOLE LINING: 18" DIA. (TYP.)

**MANHOLE JOINTS**

MANHOLE JOINTS: 18" DIA. (TYP.)

**MANHOLE ACCESSORIES**

MANHOLE ACCESSORIES: 18" DIA. (TYP.)



**THE CITY OF WINNIPEG**  
 WATERWORKS, WASTE AND DISPOSAL DIVISION

BRADY ROAD LANDFILL EXPANSION  
 LEACHATE COLLECTION SYSTEM FOR 1988 EXCAVATION

0955-230-06-03  
 DWG. 01

**RECORD DRAWING**

DATE: 11/15/88  
 DRAWN BY: J. B. WINGROVE  
 CHECKED BY: K. S. WINGROVE  
 APPROVED BY: J. B. WINGROVE

UMA Engineering Ltd.  
 1115 St. James Street West  
 Winnipeg, R4S 1X5

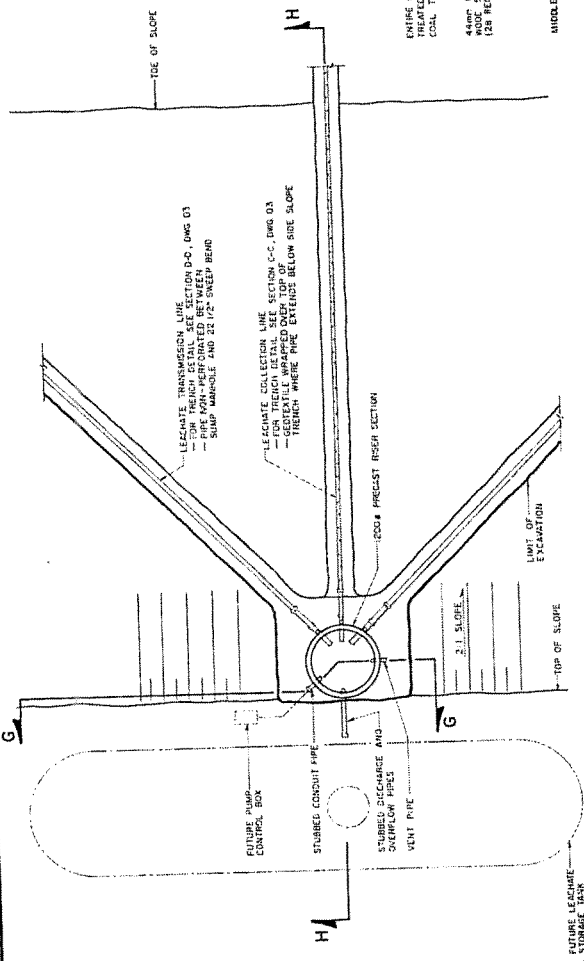
**LOCATION APPROVED UNDERGROUND STRUCTURES**

NOTE: THIS DRAWING IS A RECORD DRAWING AND IS NOT TO BE USED FOR CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES BEFORE CONSTRUCTION.

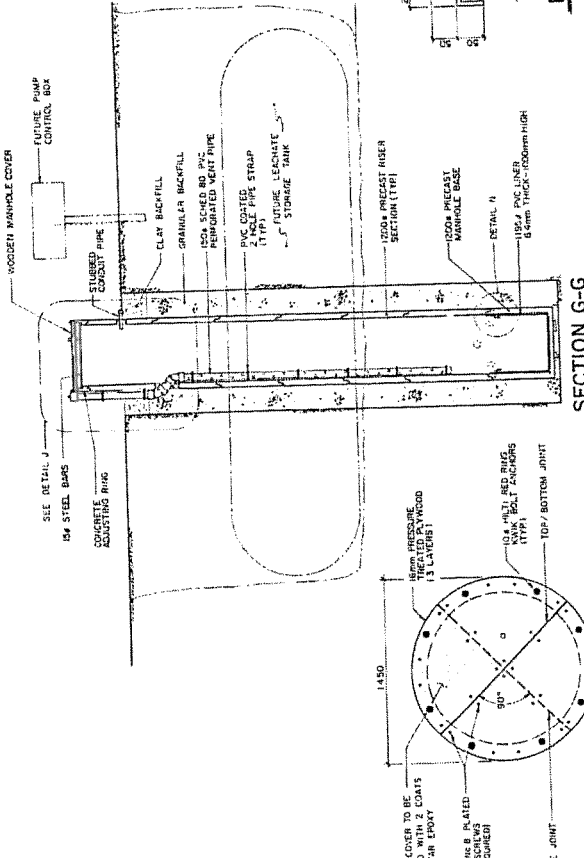
DATE: 11/15/88  
 DRAWN BY: J. B. WINGROVE  
 CHECKED BY: K. S. WINGROVE  
 APPROVED BY: J. B. WINGROVE

266 #SW 10333

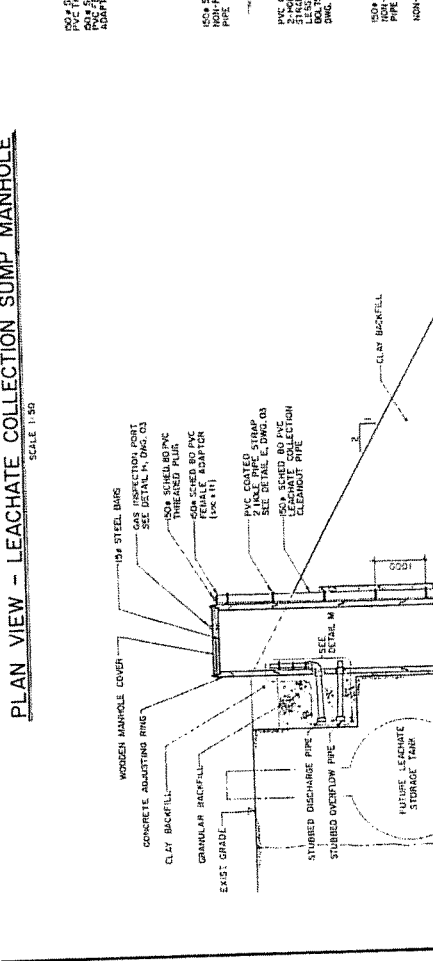




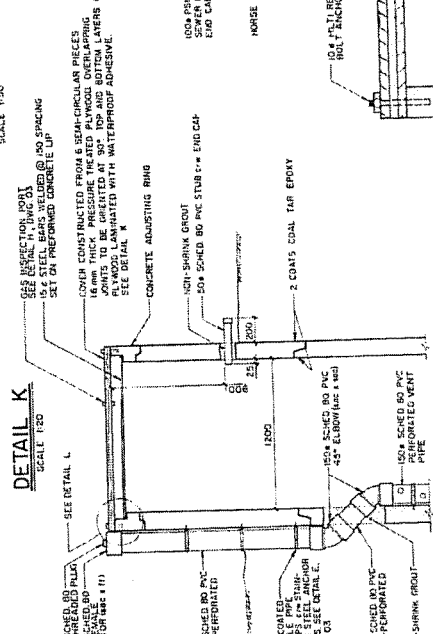
PLAN VIEW - LEACHATE COLLECTION SUMP MANHOLE  
SCALE 1:30



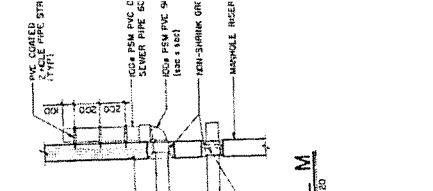
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SCALE 1:30



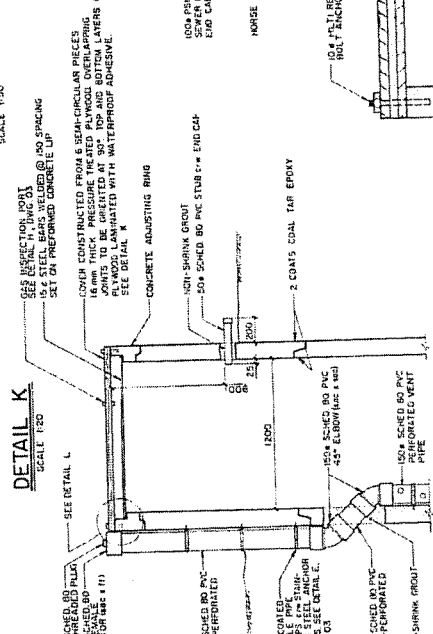
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SCALE 1:30



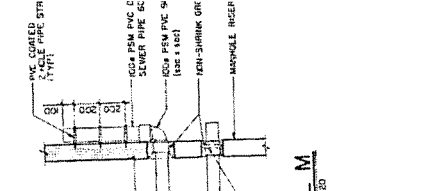
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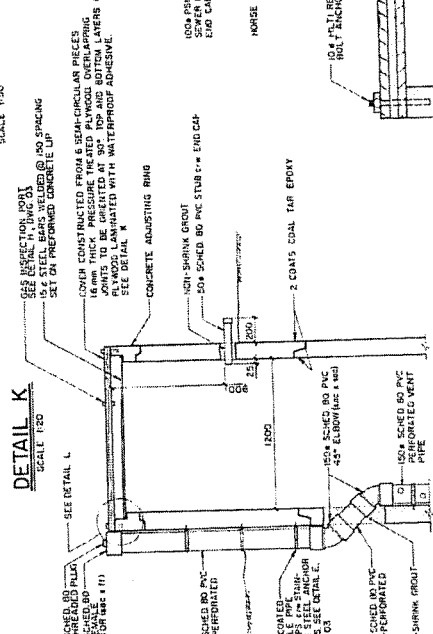
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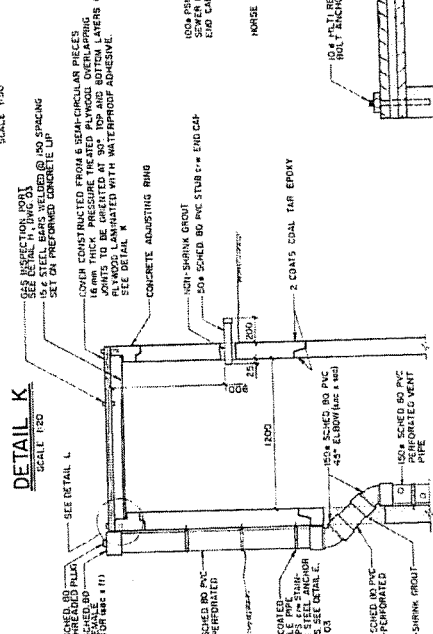
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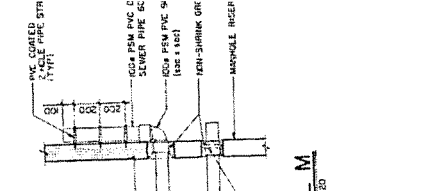
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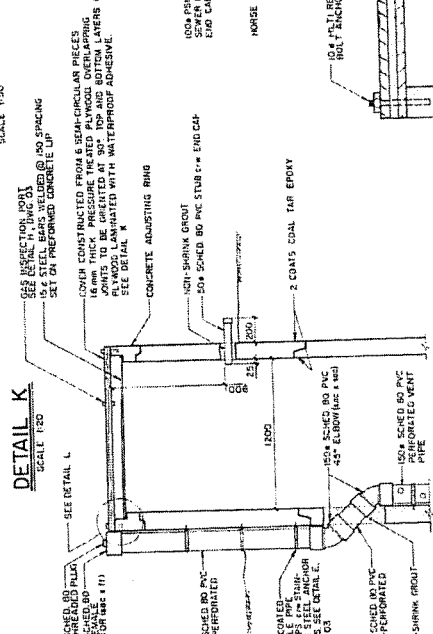
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SCALE 1:20



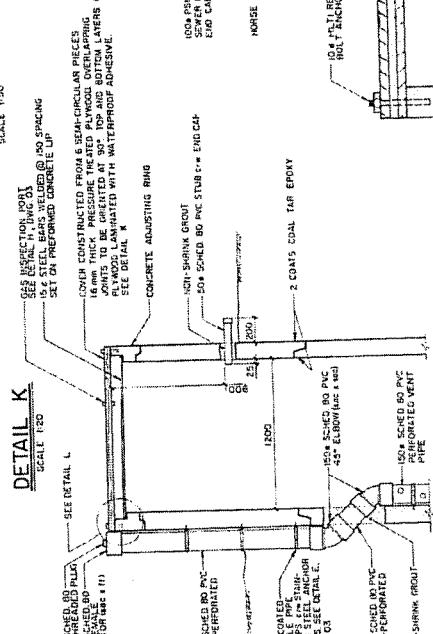
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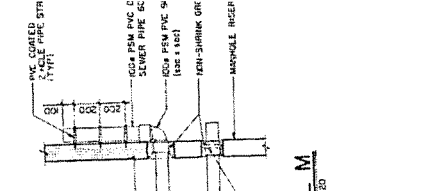
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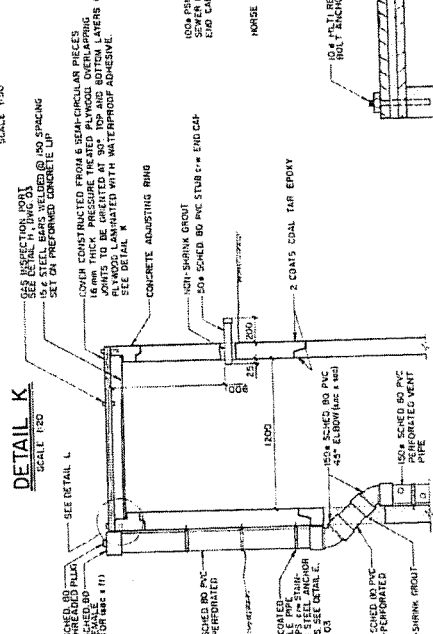
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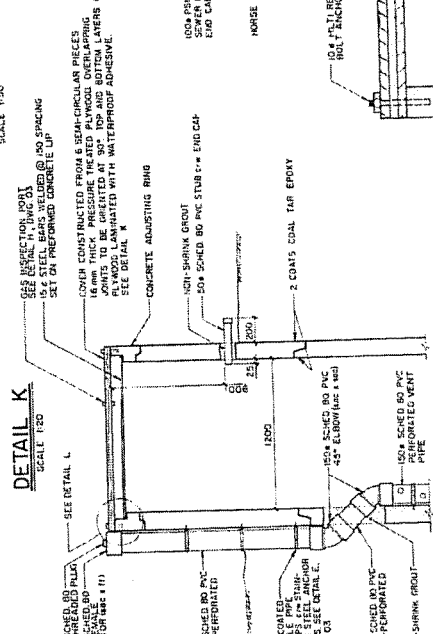
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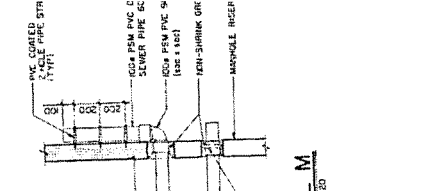
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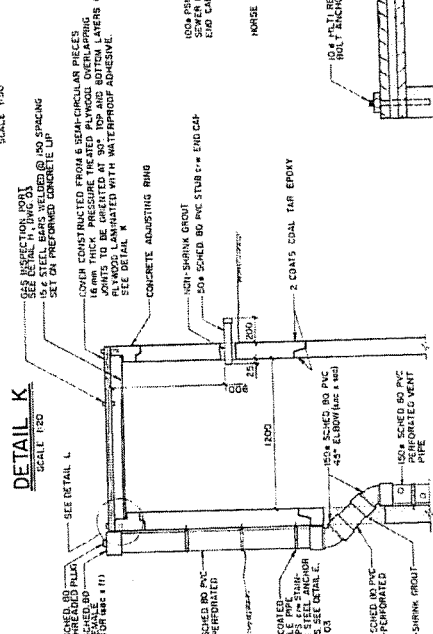
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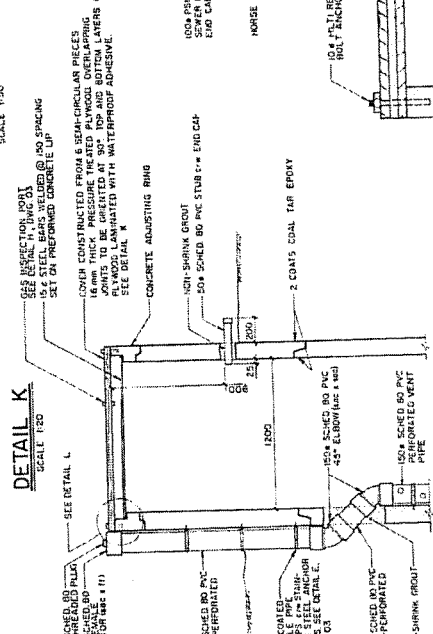
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SCALE 1:20



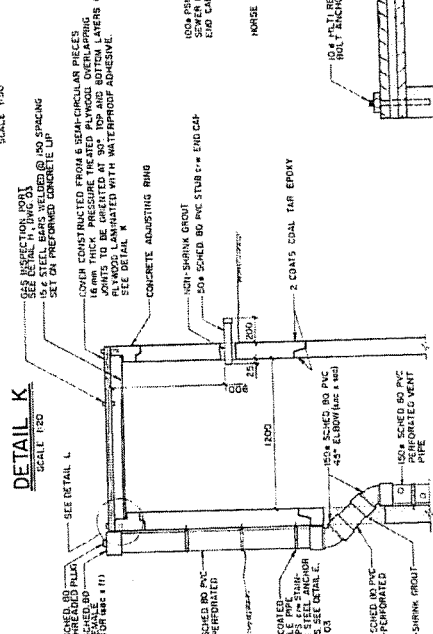
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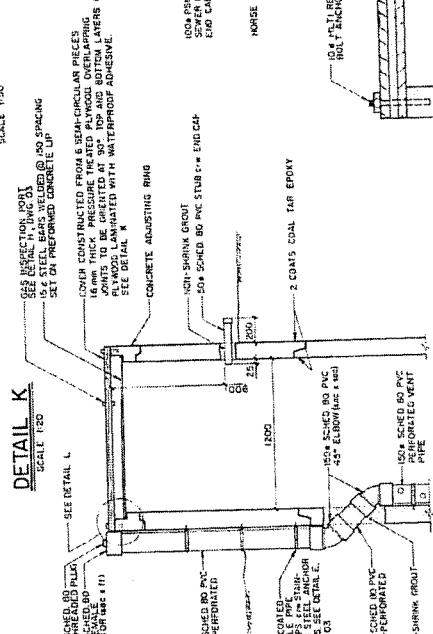
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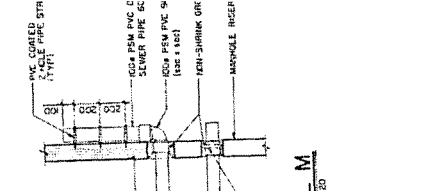
SECTION H-H  
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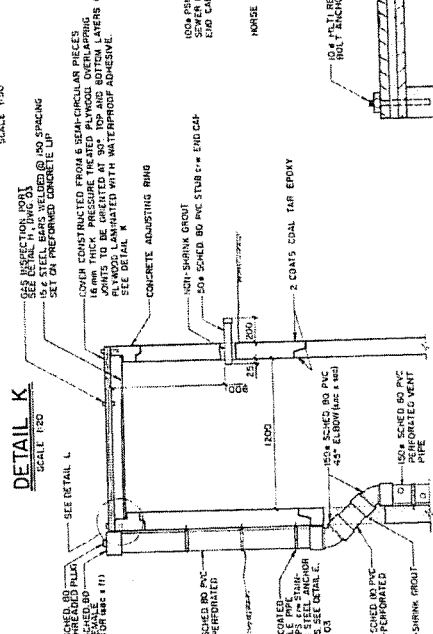
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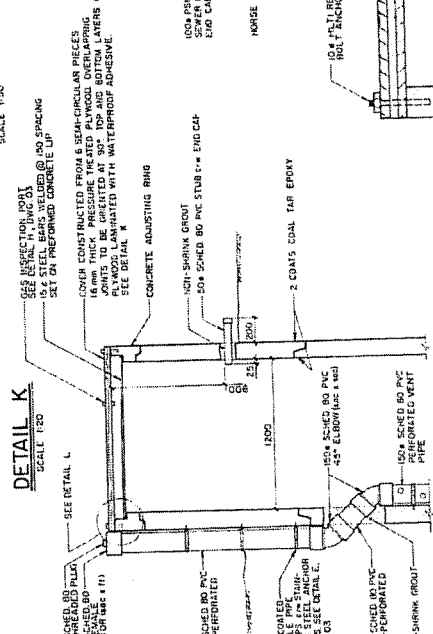
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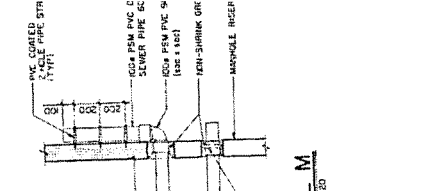
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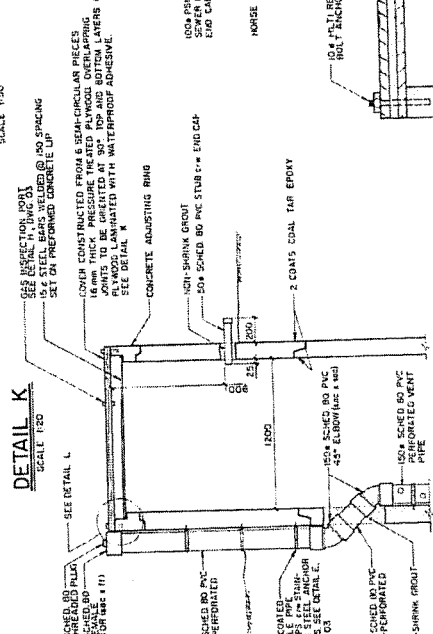
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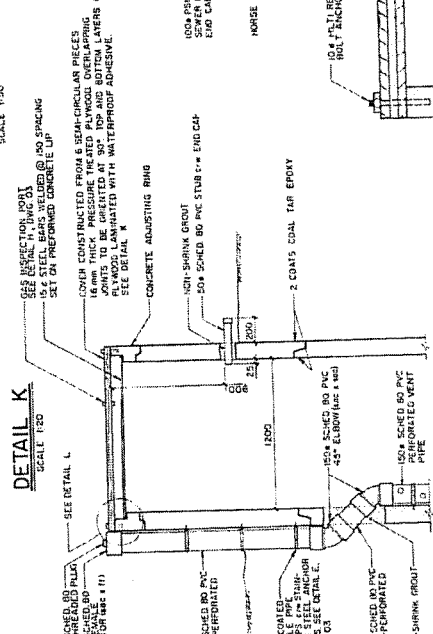
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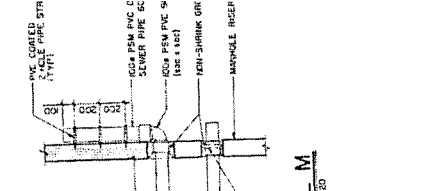
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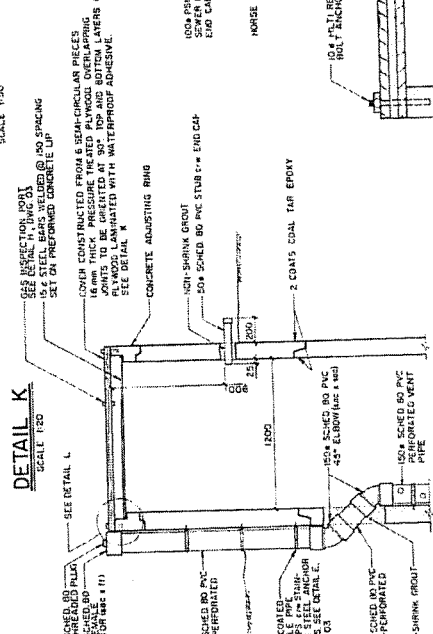
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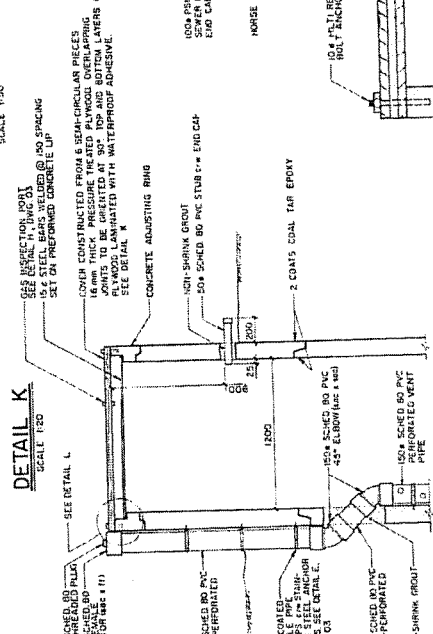
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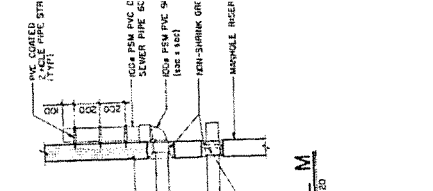
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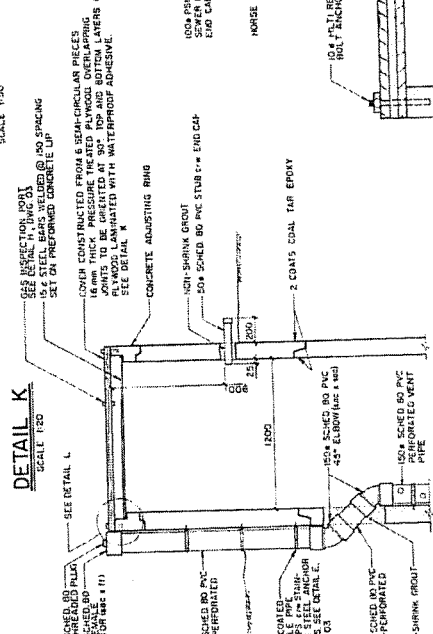
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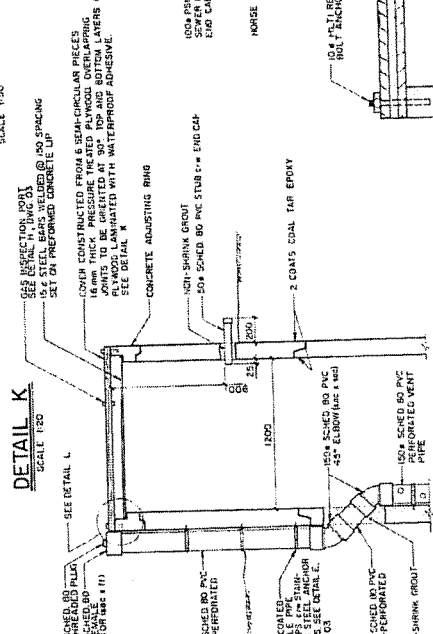
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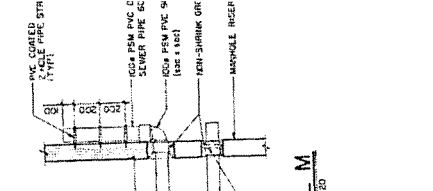
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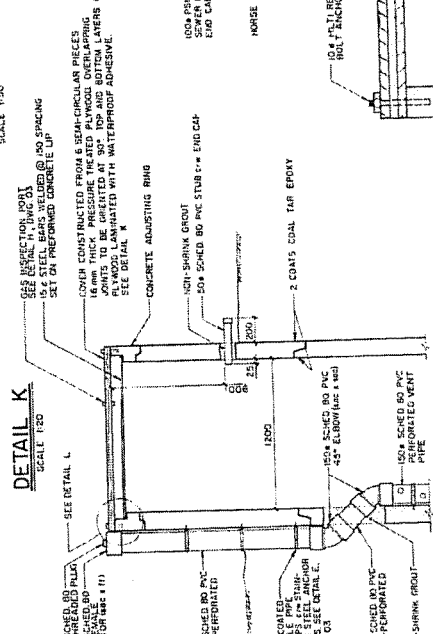
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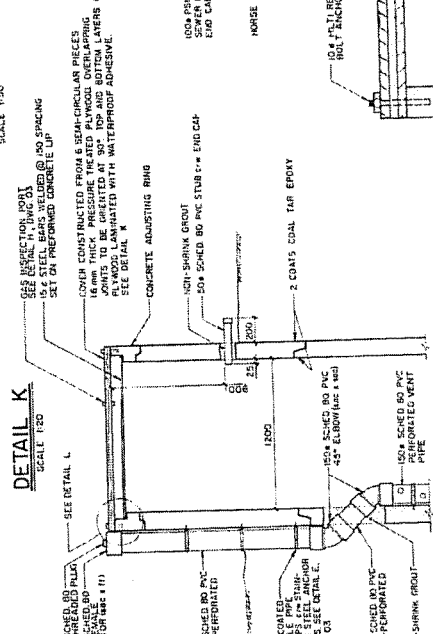
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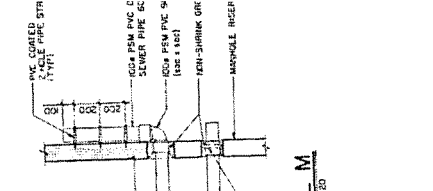
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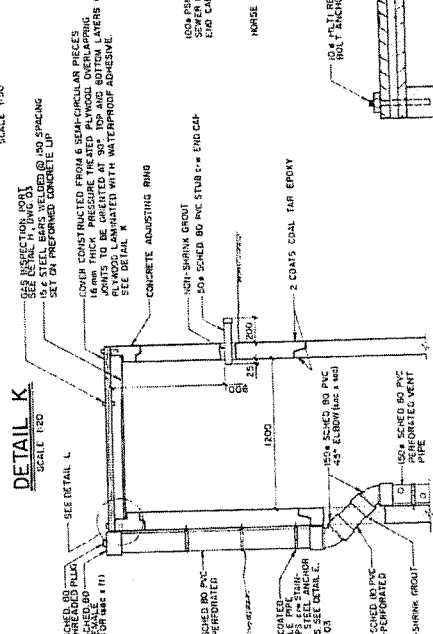
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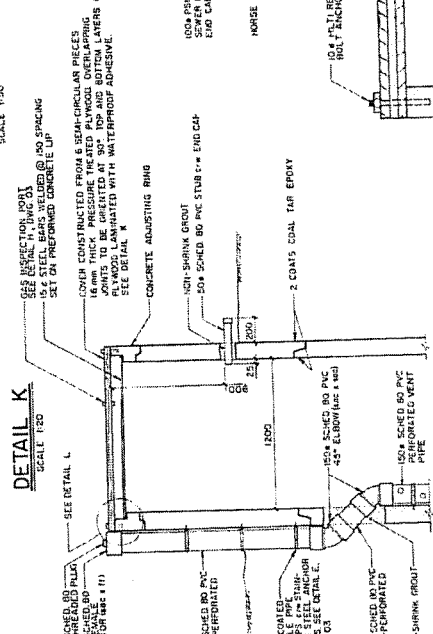
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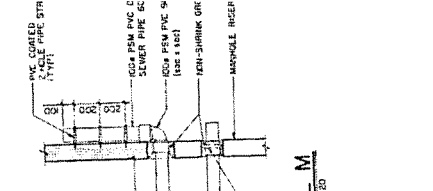
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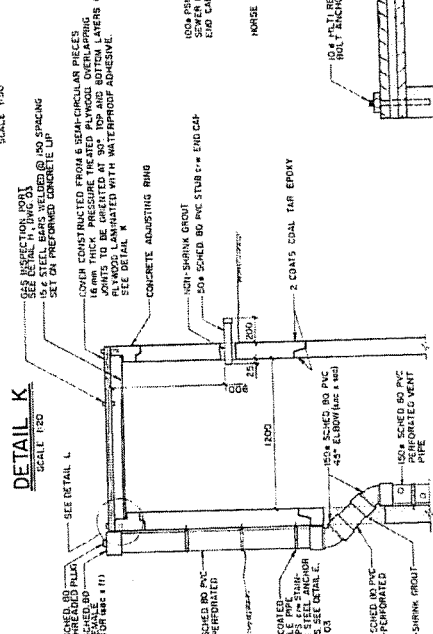
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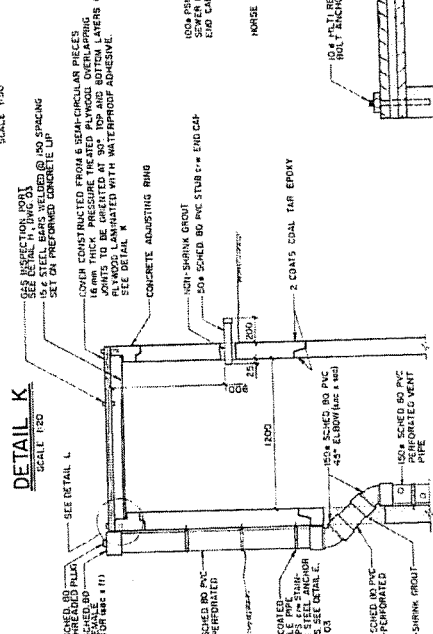
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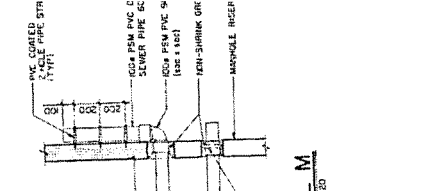
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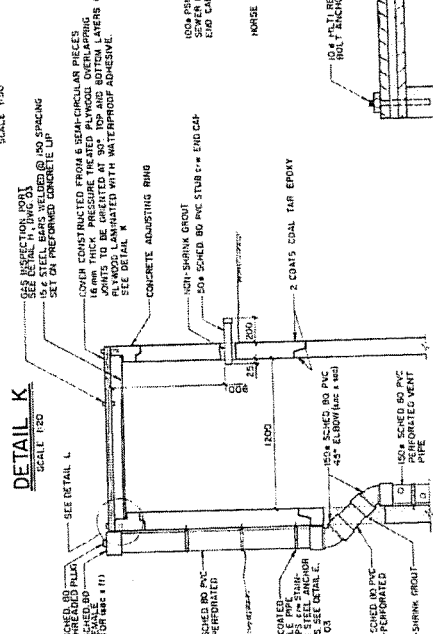
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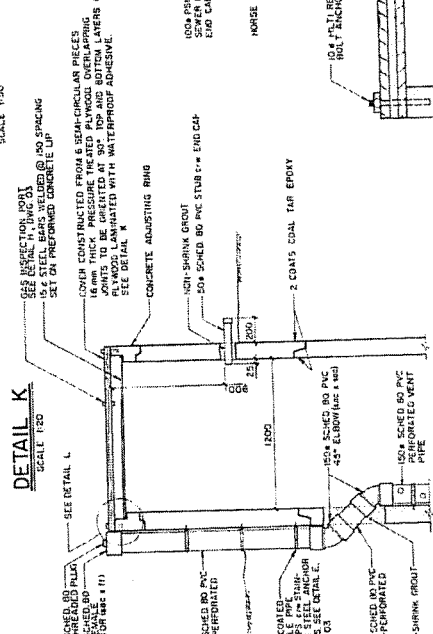
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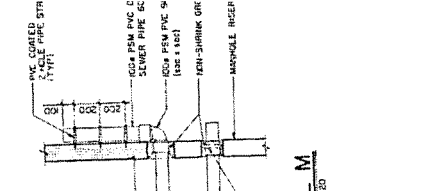
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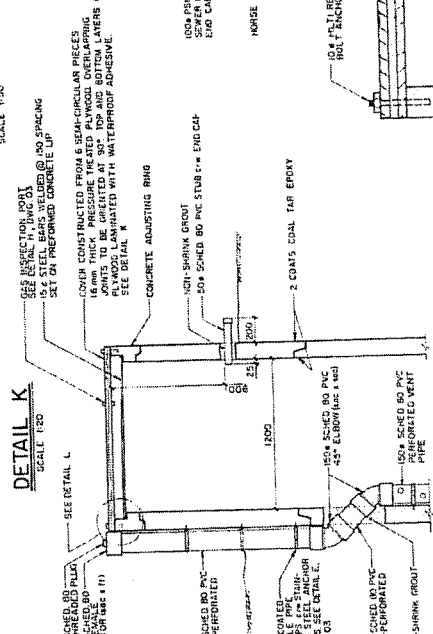
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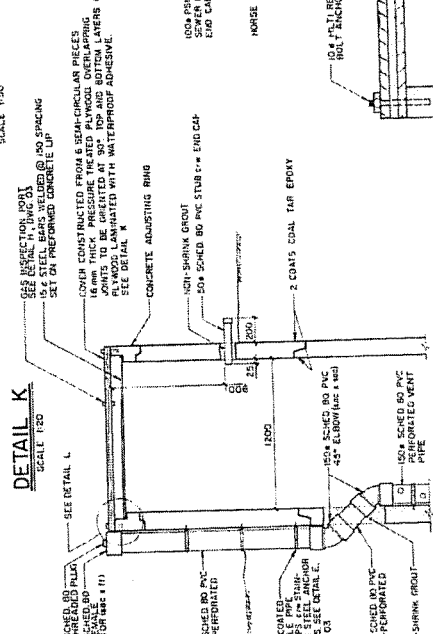
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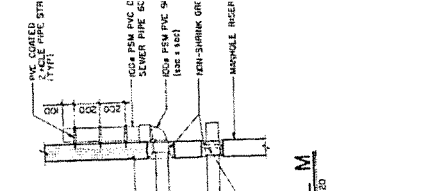
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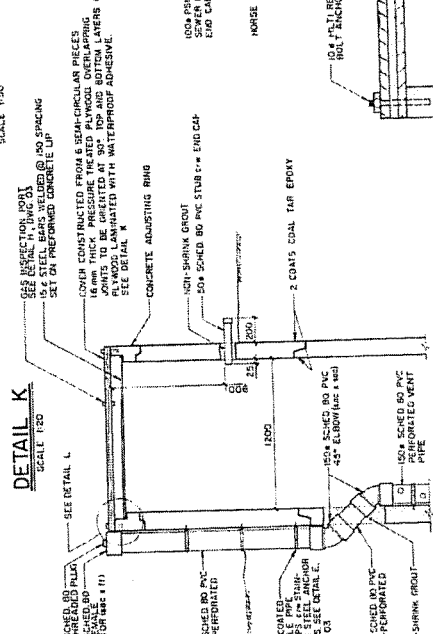
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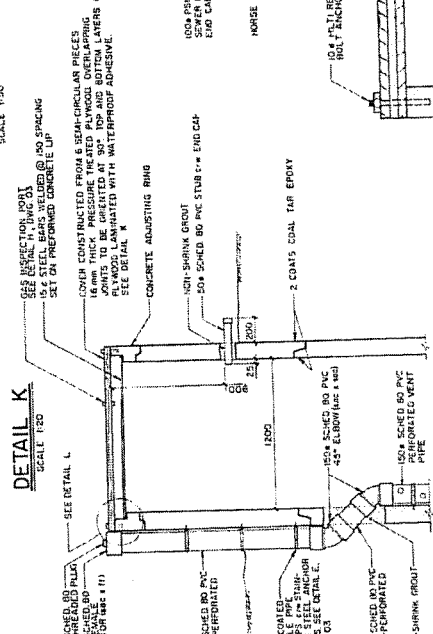
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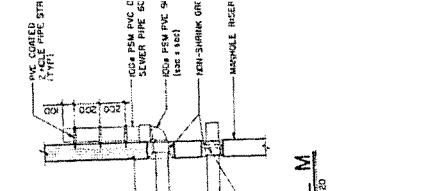
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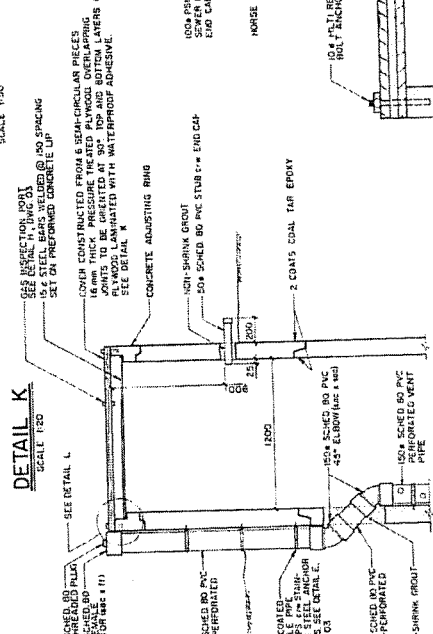
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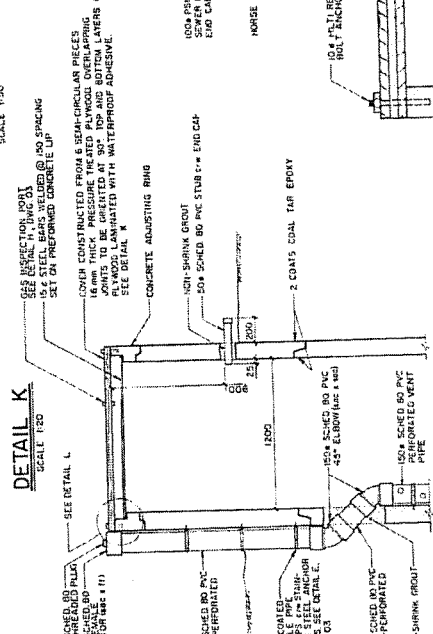
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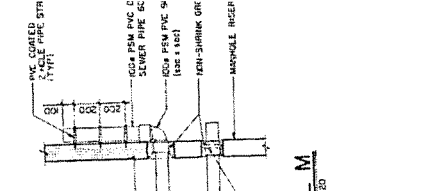
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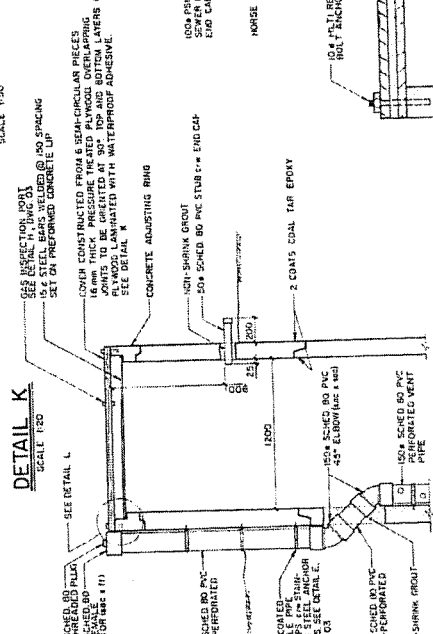
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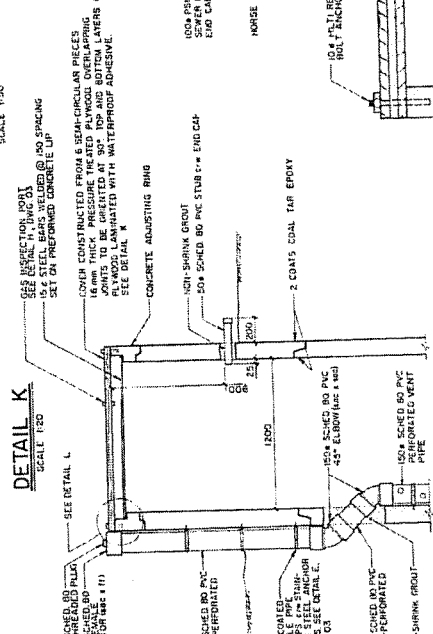
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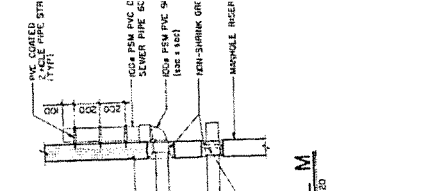
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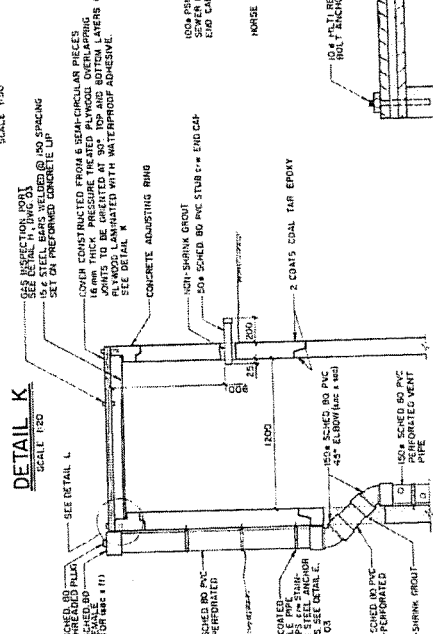
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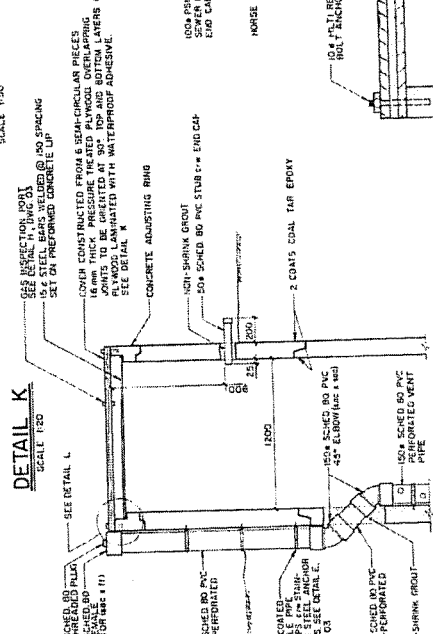
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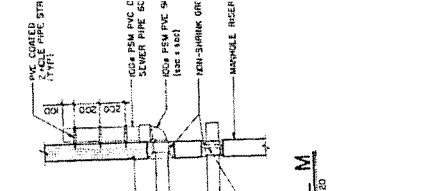
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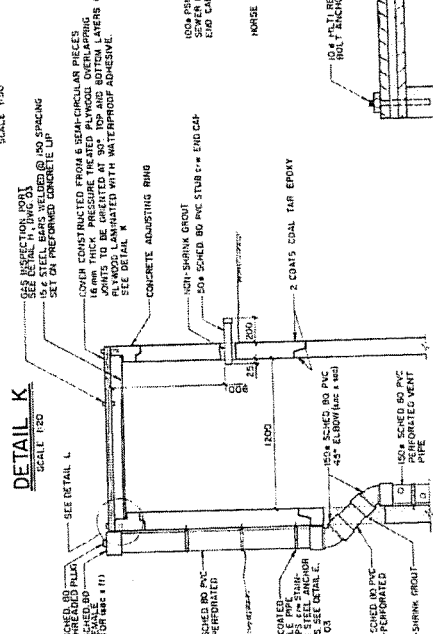
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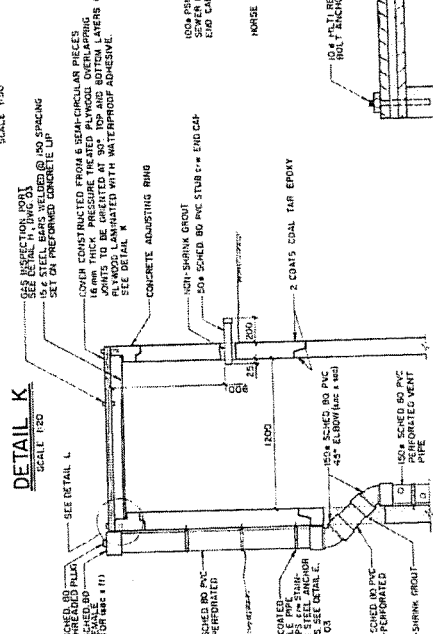
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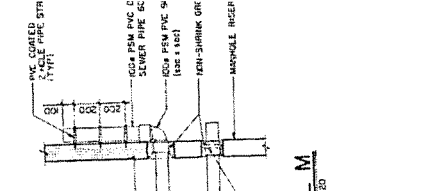
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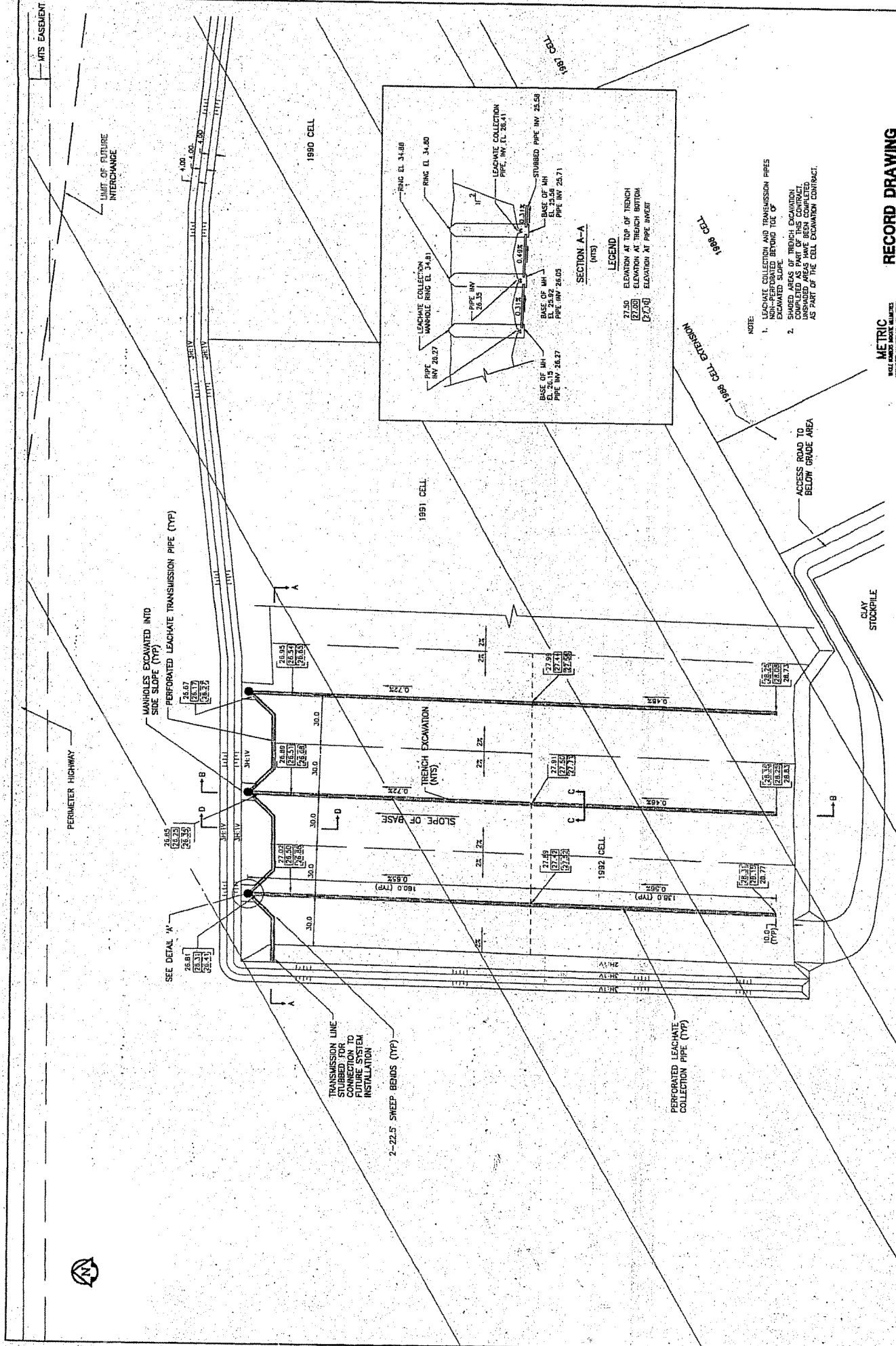


DETAIL BA  
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DETAIL BB  
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**RECORD DRAWING**

**THE CITY OF WINNIPEG**  
WORKS AND OPERATIONS DIVISION  
WATERWORKS, WASTE & DISPOSAL

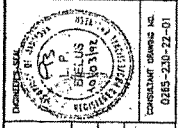
BRADY ROAD LANDFILL EXPANSION

CITY DRAWING NUMBER  
S.W.D.-D-26.51

SHEET 2 OF 3

PROJECT NUMBER  
1992 CELL

CONTRACT NUMBER  
0215-230-22-01



**UMA Engineering Ltd.**  
Engineers & Planners  
1478 Brillon Place, Winnipeg, Manitoba, Canada R2T 1J7

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]

DATE: MAY 1991

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	MAY 1991
2	ISSUED FOR CONSTRUCTION	MAY 1991
3	ISSUED FOR RECORD	MAY 1991

**LOCATION APPROVED UNDERGROUND STRUCTURES**

DATE: \_\_\_\_\_

SCALE: 1:1000

VERTICAL SCALE: AS SHOWN

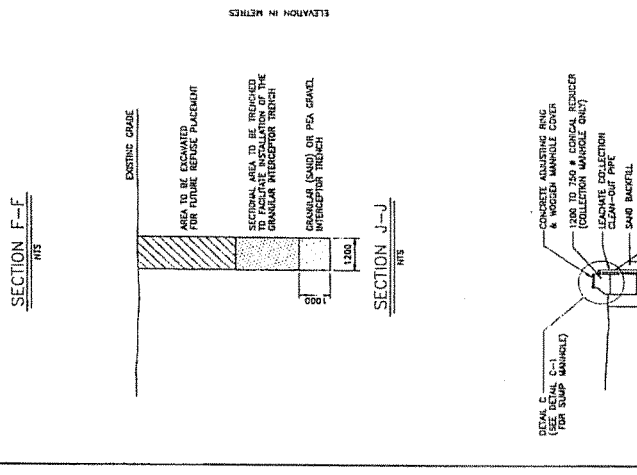
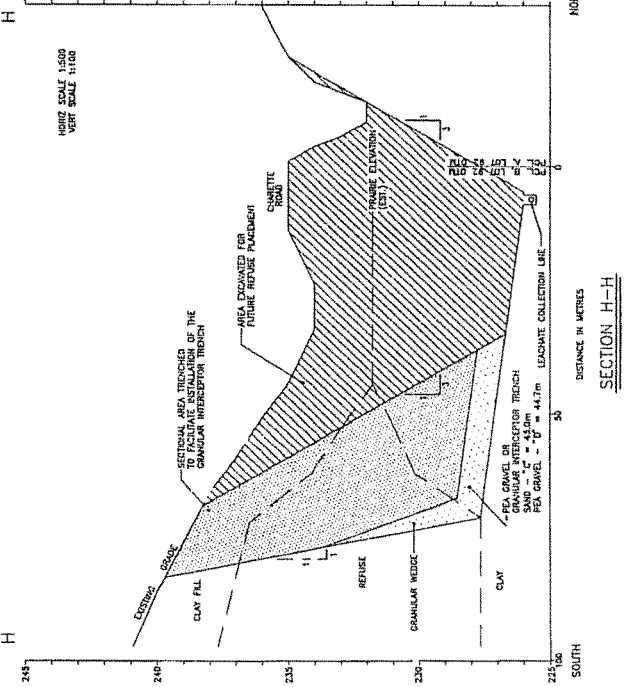
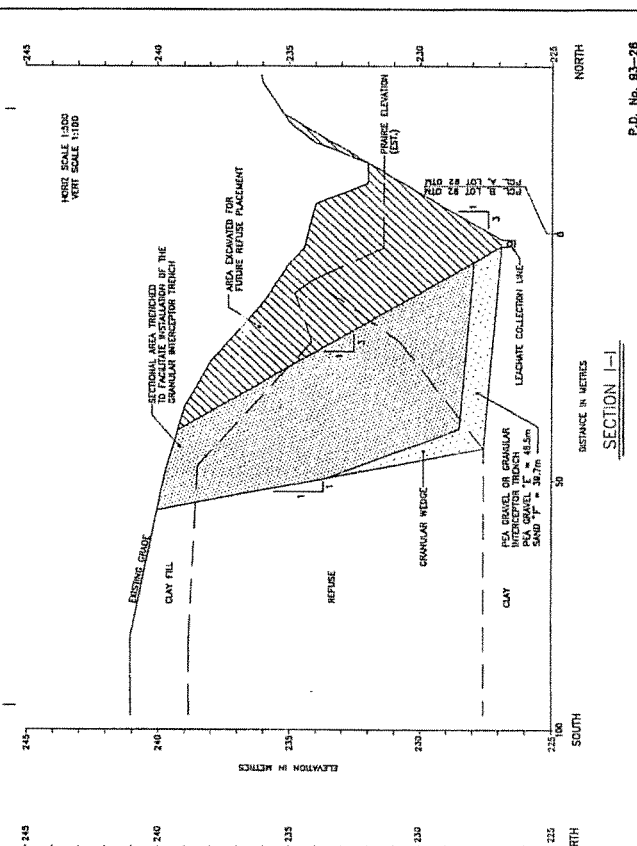
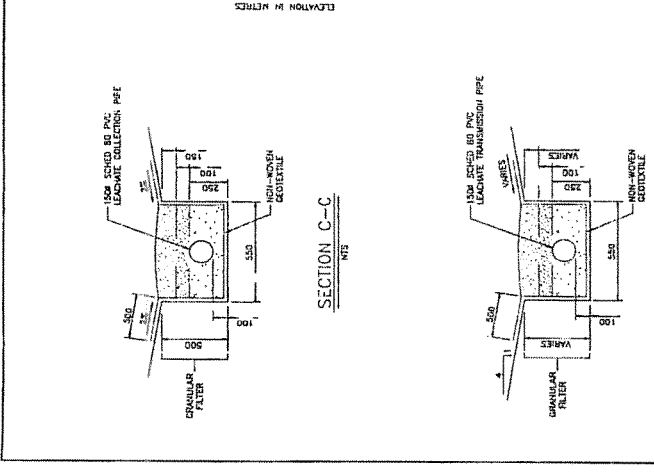
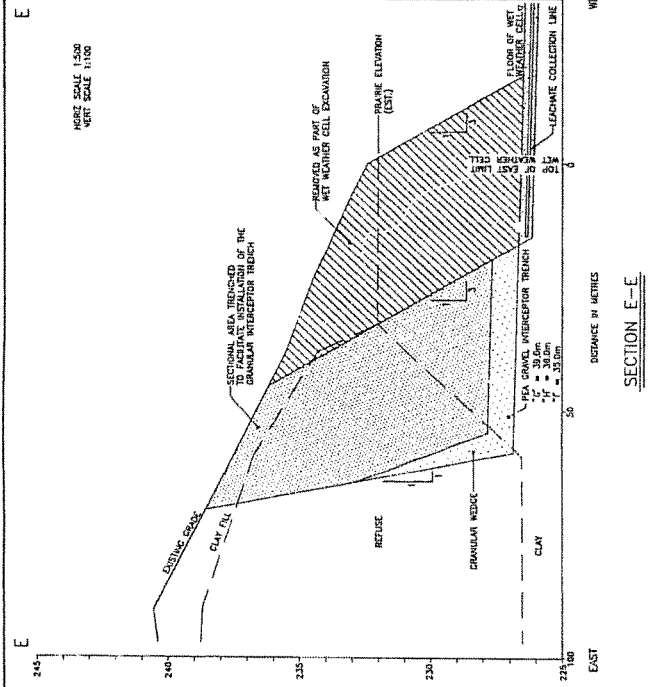
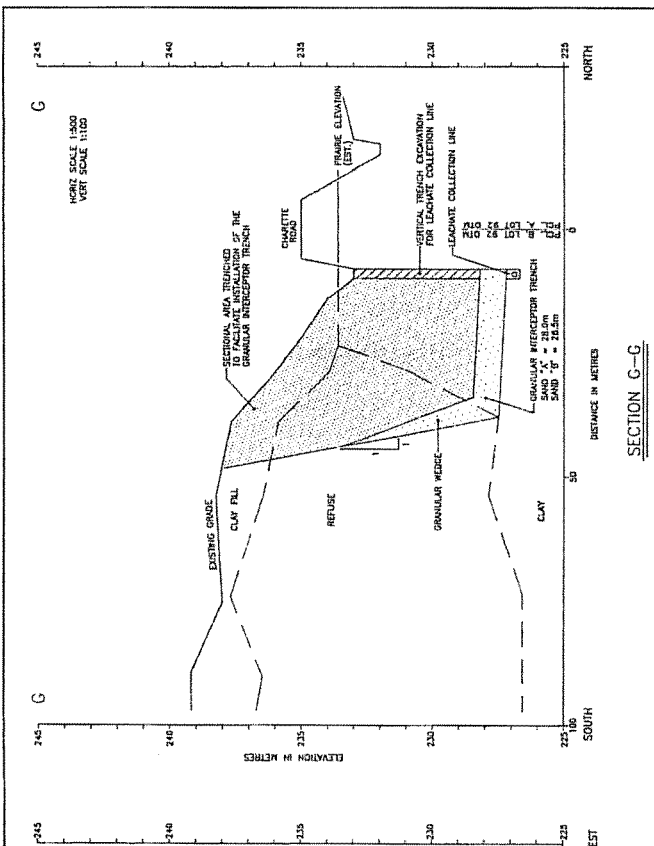
SCALE: 1:1000

VERTICAL SCALE: AS SHOWN

DATE: MAY 1991







P.D. No. 83-26  
**THE CITY OF WINNIPEG**  
 WORKS AND OPERATIONS DIVISION  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT  
 BRADY ROAD LANDFILL EXPANSION  
 1993 LEACHATE COLLECTION SYSTEMS

CITY BRIDGE NUMBER  
 SHEET 4 OF 5  
 REF - 04

LEACHATE COLLECTION SYSTEM SECTIONS

CONSULTANT DRAWING NO  
 05-40265-230-28

DATE: 11/04/13  
 RELEASED FOR CONSTRUCTION

DATE: 11/04/13  
 RELEASED FOR CONSTRUCTION

DATE: 11/04/13  
 RELEASED FOR CONSTRUCTION

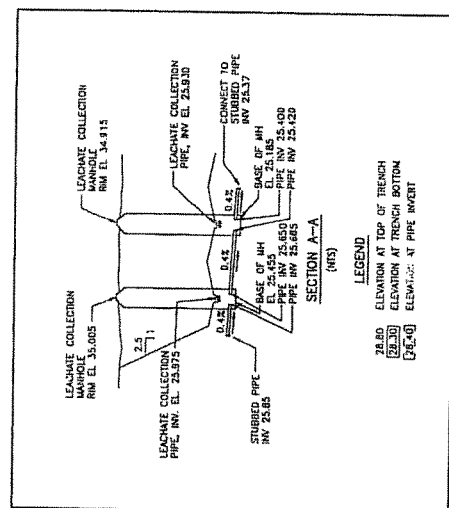
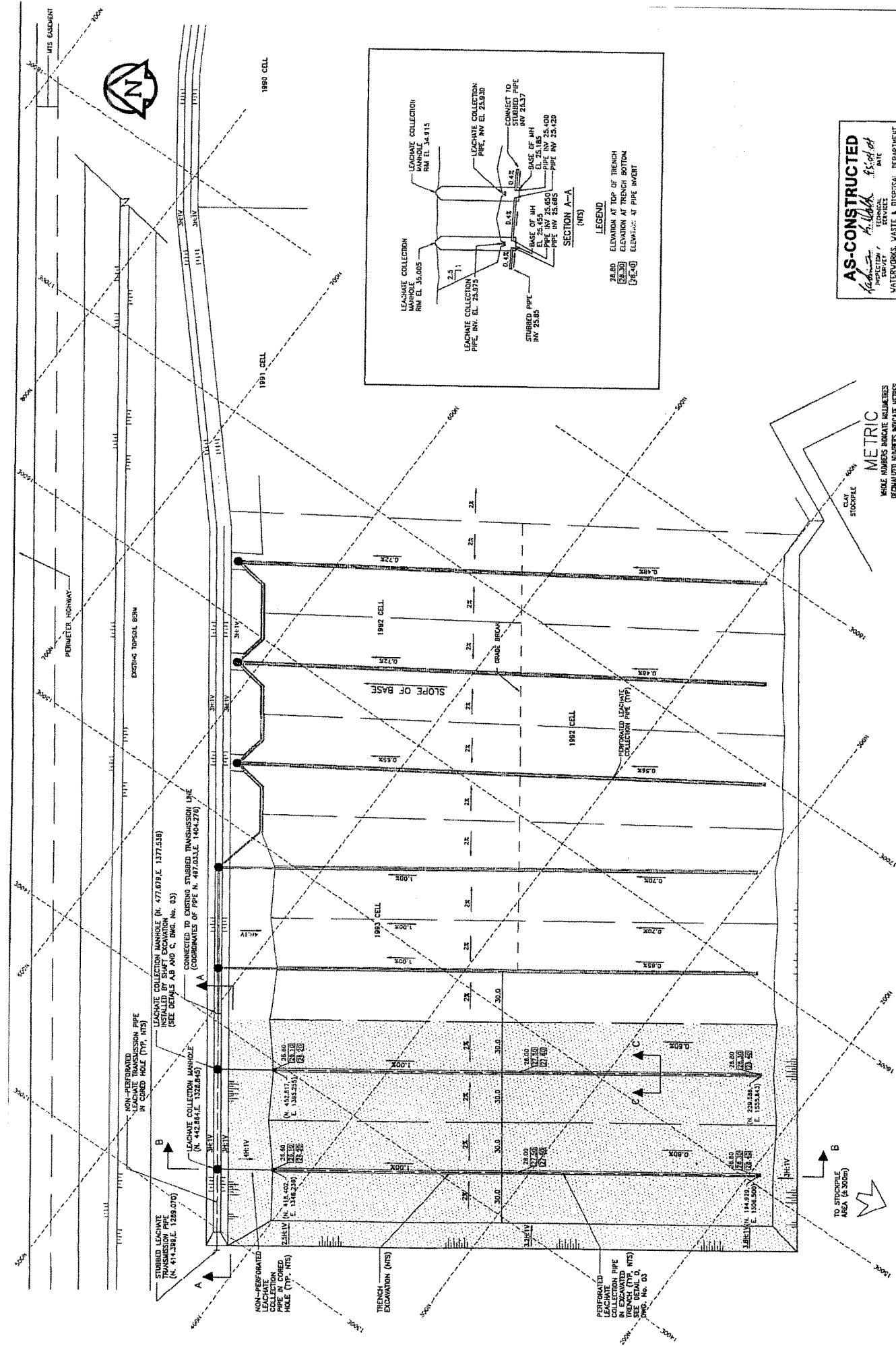
DATE: 11/04/13  
 RELEASED FOR CONSTRUCTION

DATE: 11/04/13  
 RELEASED FOR CONSTRUCTION

FILE # 5W10417

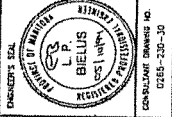
AUTOCAD V10





**AS-CONSTRUCTED**  
*As-Constructed*  
 CONTRACTOR'S SIGNATURE  
 DATE

P.D. No. 94-177  
**THE CITY OF WINNIPEG**  
 WORKS AND OPERATIONS DIVISION  
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT  
 BRADY ROAD LANDFILL EXPANSION  
 1984 LEACHATE COLLECTION SYSTEM  
 SHEET 3 OF 3  
 PLAN VIEW  
 02 A



**UMA Environmental**  
 A Division of the Engineering Ltd.  
 1978 Buffalo Plaza, Winnipeg, Manitoba, Canada R3T 1T7  
 CHECKED BY: LB  
 DRAWN BY: DML/JMF  
 DATE: 11/00  
 HOP SCALE: 1:1000  
 RELEASED BY: [Signature]  
 DATE: 05/19/99

NO.	REVISIONS	DATE	BY

**LOCATION APPROVED**  
 UNDERGROUND STRUCTURES  
 DATE:  

**NOTE:**  
 1. ALL UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND FIELD SURVEY DATA. THE CITY OF WINNIPEG ASSUMES NO LIABILITY FOR ERRORS OR OMISSIONS IN THE DESIGN OR CONSTRUCTION OF THESE STRUCTURES AND DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

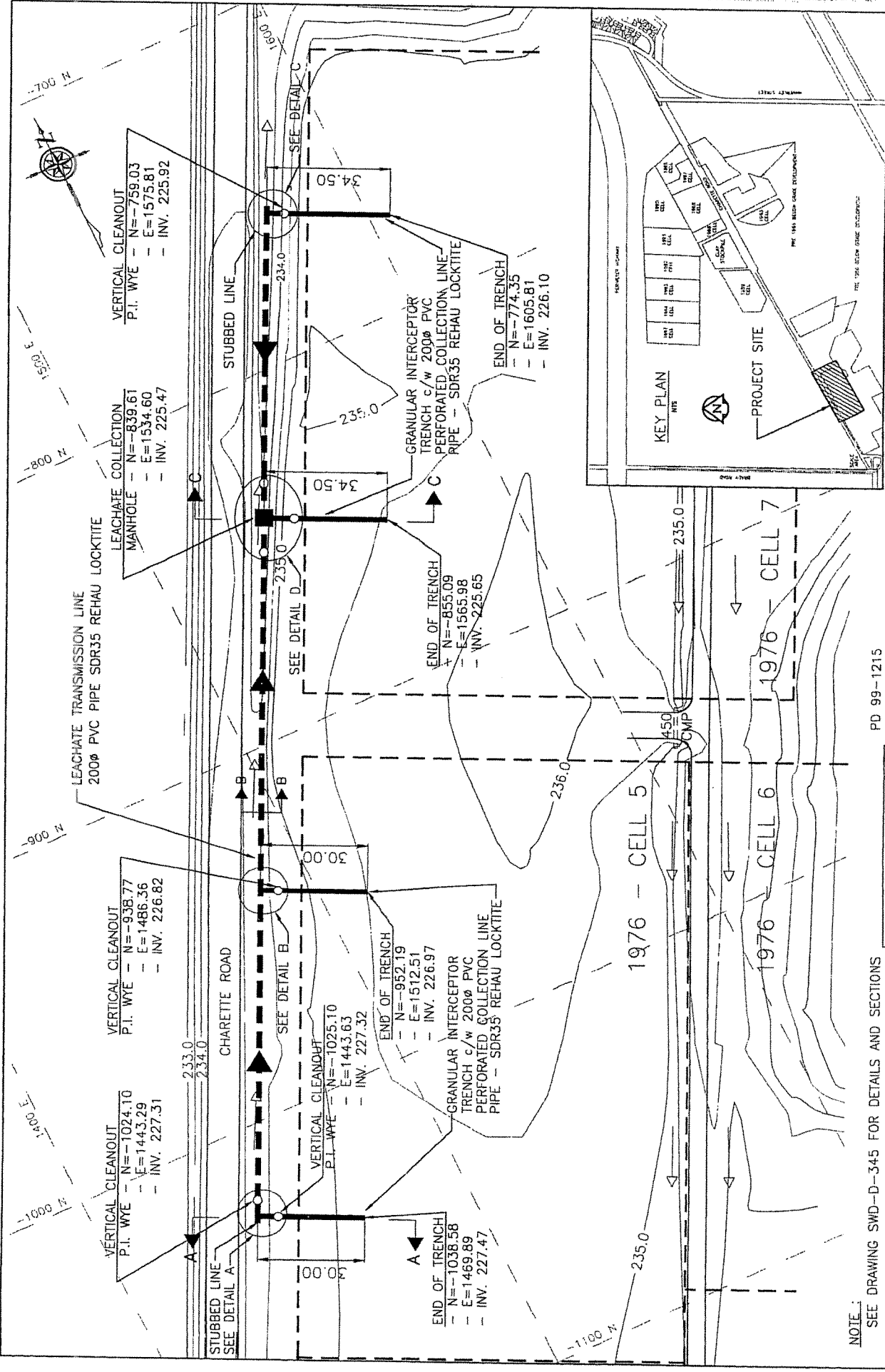
**GRID REFERENCE:**  
 - POINT NUMBER 100, THE NORTH EAST CORNER OF NORTH 1/2 OF LOT 94, PLAN 3751,  
 EAST COORDINATE 20+00.000  
 - POINT NUMBER 200, THE NORTH EAST CORNER OF PARCEL A, PLAN 15793,  
 NORTH COORDINATE 10+00.000,  
 EAST COORDINATE 21+34.202

**NOTE:**  
 - ALL MANHOLES INSTALLED BY SHAFIT EXCAVATION.

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETERS  
 DECIMALIZED NUMBERS INDICATE METRES







**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**BRADY ROAD LANDFILL**  
1999 LEACHATE COLLECTION SYSTEM

**LEACHATE COLLECTION SYSTEM**  
PLAN VIEW

**PROJECT COMPLETION : 1999 11 09**

**AS-CONSTRUCTED**  
CONTRACT ADMINISTRATION  
DRAWING & GRADING SERVICES

**UMA Engineering Ltd.**  
1475 Balmors Place, Winnipeg, Manitoba, Canada R2T 1T0

**CONSULTANT NUMBER: 1999-251-03-00**

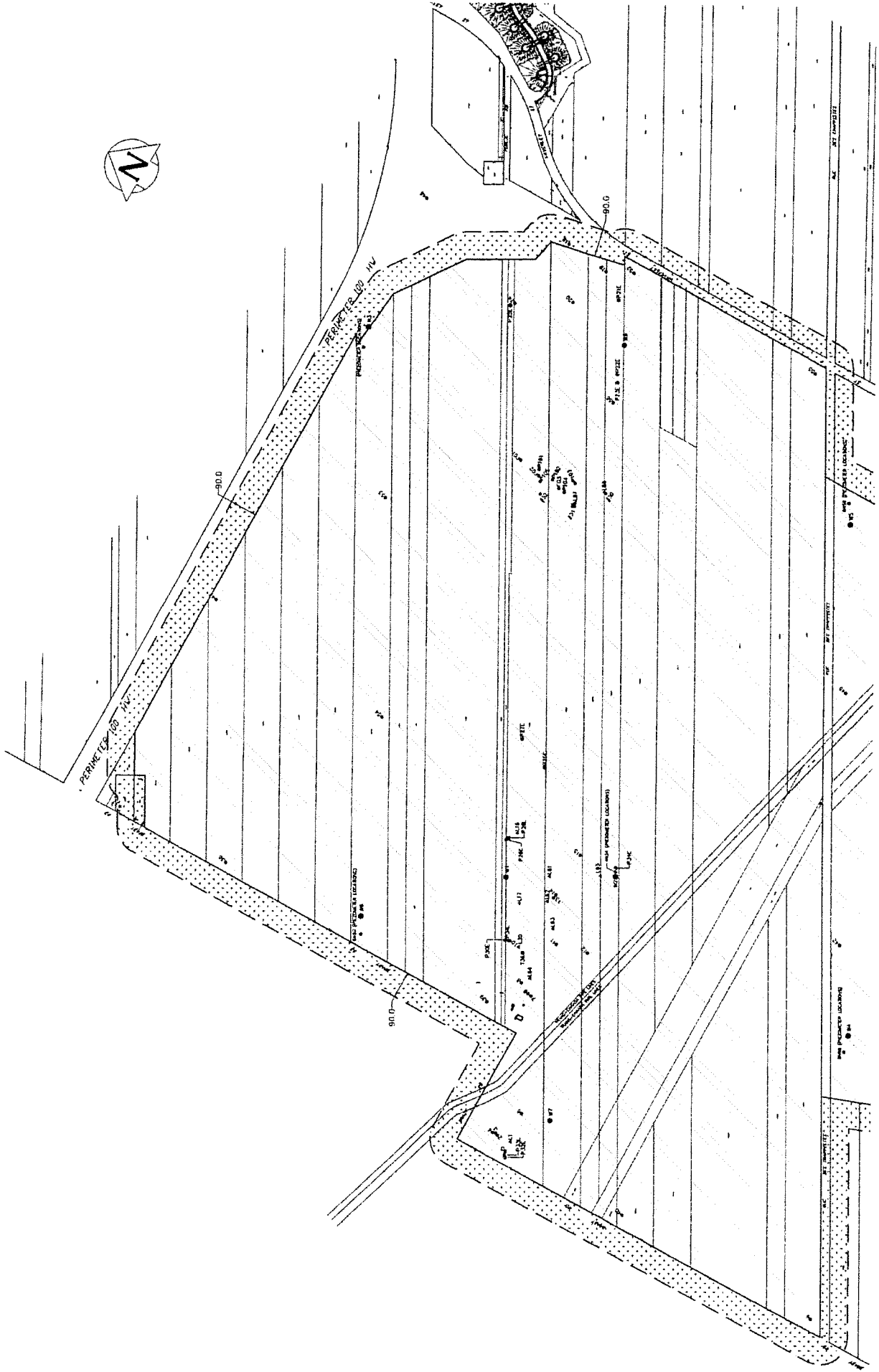
DESIGNED BY	UM
CHECKED BY	UM
APPROVED BY	UM
DATE	1999 09 01

**METRIC**  
WALL AND ROOF MARKS SHOULD HAVE METRIC DIMENSIONS

**NOTE:**  
SEE DRAWING SWD-D-345 FOR DETAILS AND SECTIONS

**LEGEND**

- LEACHATE COLLECTION MANHOLE
- LOCATION OF VERTICAL CLEANOUT
- LEACHATE TRANSMISSION LINE / DIRECTION OF FLOW
- GRANULAR INTERCEPTOR TRENCH / LEACHATE COLLECTION
- APPROXIMATE LIMIT OF BELOW GRADE EXCAVATION



**"WARNING"**

THE EXACT BOUNDARY OF REFUSE CAN BE CERTIFIED ONLY BY DETAILED INVESTIGATION. THE EXISTENCE AND EXACT LOCATION OF ALL UNDERGROUND SERVICES INCLUDING NEW CONNECTIONS MUST BE CHECKED WITH THE APPROPRIATE UTILITIES.

**LEGEND**

- ▬ CONTROL ZONE
- ▬ DUMP OR LANDFILL SITE
- TEST HOLE ( BY LANDFILL ENVIRONMENTAL SECTION )
- ⊙ GAS PROBE ( BY LANDFILL ENVIRONMENTAL SECTION )
- ▲ LEACHATE PROBE
- ⊖ PIEZOMETER NEST
- GROUND WATER WELL

**METRIC**  
 1 MILLIMETER EQUALS 0.03937 INCHES

DATE	10/20/99	BY	DL
PROJECT NO.	NO. 25	DATE	10/20/99
PROJECT NAME	BRADY ROAD LANDFILL SITE & DETAIL NORTH SECTION	SCALE	AS SHOWN
PROJECT LOCATION	BRADY ROAD LANDFILL SITE & DETAIL NORTH SECTION	DATE	10/20/99
PROJECT NO.	NO. 25	DATE	10/20/99
PROJECT NAME	BRADY ROAD LANDFILL SITE & DETAIL NORTH SECTION	SCALE	AS SHOWN
PROJECT LOCATION	BRADY ROAD LANDFILL SITE & DETAIL NORTH SECTION	DATE	10/20/99

**THE CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT  
 SOLID WASTE DIVISION

NO. 25  
 BRADY ROAD  
 LANDFILL SITE & DETAIL  
 NORTH SECTION

CITY ENGINEER  
 SWD-D-356



RETIRED AND LEACHATE  
COLLECTION MANHOLE AND  
TRANSMISSION LINE TO BE  
REMOVED BY OTHERS  
SUPPLIED BY OTHERS

**SECTION D-D**  
SCALE = 1:1000

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
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CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

CONSTRUCTED BY LOCAL  
LEACHATE COLLECTION PIPE  
MANHOLE

**POINT DATA TABLE**

NO.	DESCRIPTION	EASTING	NORTHING	ELEVATION
1	EXCAVATION	239855.940	5013022.000	33.00
2	EXCAVATION	239868.287	5013018.211	33.00
3	EXCAVATION	239871.018	5013015.287	33.00
4	RAMP	239872.232	5013015.287	28.00
5	RAMP	239872.232	5013015.287	28.00
6	EXCAVATION	239872.232	5013015.287	28.00
7	EXCAVATION	239872.232	5013015.287	28.00
8	EXCAVATION	239872.232	5013015.287	28.00
9	EXCAVATION	239872.232	5013015.287	28.00
10	EXCAVATION	239872.232	5013015.287	28.00
11	EXCAVATION	239872.232	5013015.287	28.00
12	EXCAVATION	239872.232	5013015.287	28.00
13	EXCAVATION	239872.232	5013015.287	28.00
14	EXCAVATION	239872.232	5013015.287	28.00
15	EXCAVATION	239872.232	5013015.287	28.00
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METRIC  
SCALE: 1:1000  
FOR ALL DIMENSIONS UNLESS NOTED

**RECORD DRAWING**  
WATER AND WASTE DEPARTMENT

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

BRADY ROAD LANDFILL - CONSTRUCTION OF NEW 2002 REFUSE CELL AND LEACHATE COLLECTION SYSTEM

CELL DESIGN

PROJECT NO. 101-2001

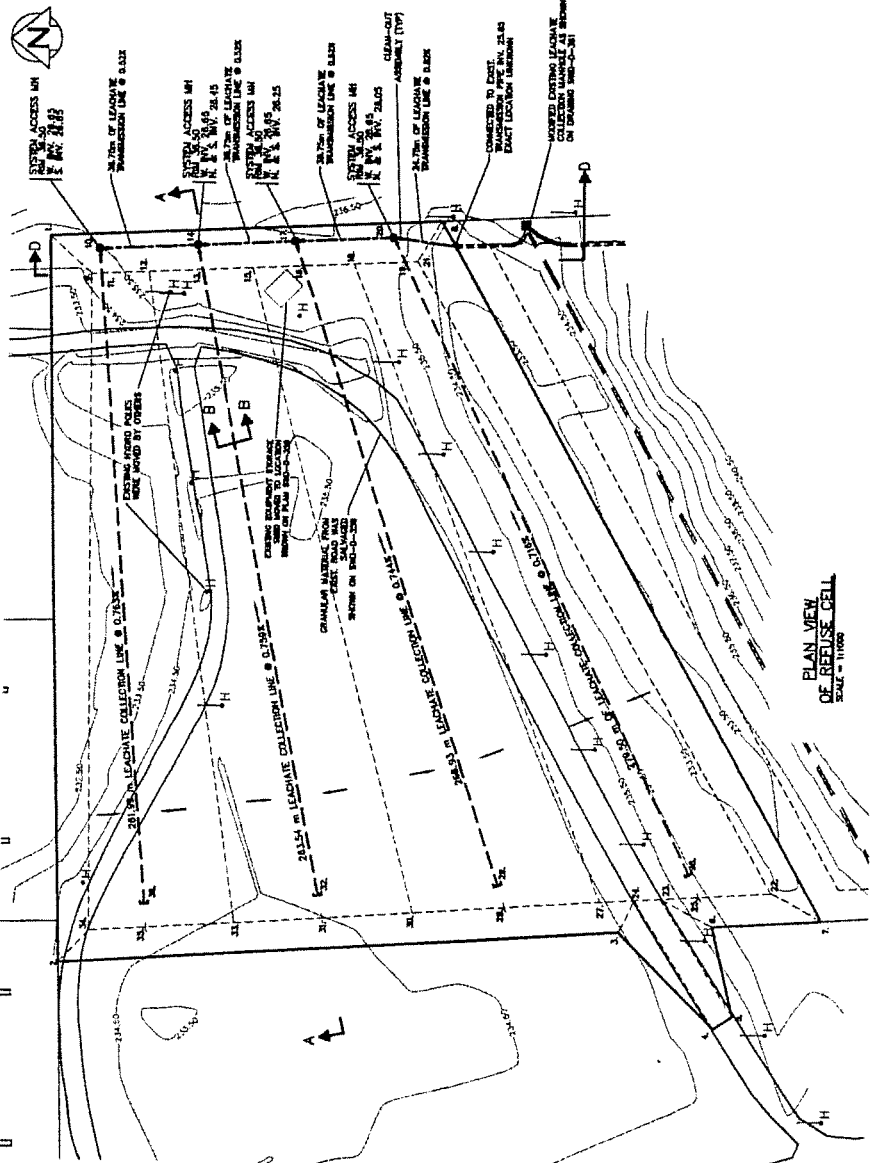
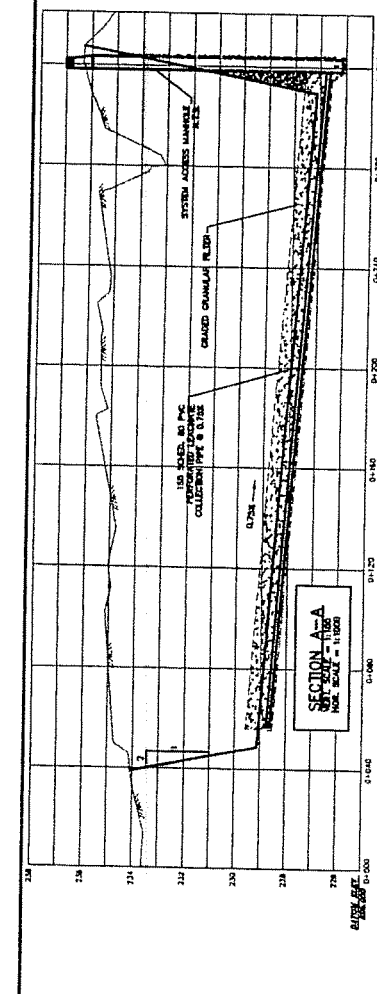
DATE: 08/09/06

DESIGNED BY: K.R. ZUREK

CHECKED BY: [ ]

APPROVED BY: [ ]

SCALE: 1:1000



**PLAN VIEW OF REFUSE CELL**  
SCALE = 1:1000

NO.	DESCRIPTION	DATE	BY	FOR
1	ISSUED FOR PERMIT	08/09/06	K.R. ZUREK	PERMITTING
2	ISSUED FOR RECORD	08/09/06	K.R. ZUREK	RECORDING
3	ISSUED FOR CONSTRUCTION	08/09/06	K.R. ZUREK	CONSTRUCTION

DESIGNED BY	K.R. ZUREK	CHECKED BY	[ ]
APPROVED BY	[ ]	DATE	08/09/06

PROJECT NO.	101-2001
SCALE	1:1000

DATE	08/09/06
BY	K.R. ZUREK

PROJECT NO.	101-2001
SCALE	1:1000

DATE	08/09/06
BY	K.R. ZUREK