

March 9, 2010

AMEC File: BX30108

Renneberg - Walker Engineering Associates Ltd  
9320 - 49 Street  
Edmonton, Alberta, T6B 2L7

**Attention: Mr. Russ Renneberg, P.Eng.**

**RE: SEISMIC SITE CLASSIFICATION  
PROPOSED FLOOR SLAB RECONSTRUCTION  
ANIMAL DISEASE RESEARCH INSTITUTE, LETHBRIDGE, ALBERTA**

At the request of Renneberg – Walker Engineering Associates Ltd., AMEC Earth & Environmental, a division of AMEC Americas Limited (AMEC) is pleased to provide seismic site classification information for the above captioned site to support the design of a structural floor slab. It is understood that the structural slab will replace an existing grade supported slab which is characterized by excessive settling and movement.

In preparation of the current report, the following site specific geotechnical and geological information was reviewed:

- AGRA Earth & Environmental: *Foundation Movement Investigation, Main Laboratory Building, Animal Research Institute, Lethbridge, Alberta.* AGRA Reference BXO3843 dated August, 1994
- Thurber Engineering Ltd.: *500 Wing, Lethbridge, Alberta.* Thurber Reference 16-4-73 dated July 22, 1991

In addition, borehole logs from a 1983 investigation by Public Works Canada were also reviewed as part of the current assessment.

### **Geological Setting**

In general, the ADRI building appears to be located on an alluvial fan along the east side of the Oldman River valley. This fan is comprised primarily of fine-grained materials (silts and clays) eroded from the uplands to the east. These uplands rise to an elevation of about 900 m, while the ADRI building is situated at about 870 m.

Fluvial gravels and sands at the base of the fan are likely pre-glacial deposits infilling a buried valley that underlies this site. The present Oldman River has incised its channel deeper than the pre-glacial valley and these sands and gravels are generally very well drained. Some colluvial materials would have likely also washed down from the adjacent slopes to mantle the fan, and some windblown deposits (loess) may also be present on the fan.

Alluvial fan deposits, because of their rapid mode of deposition in generally arid climates, tend to have relatively low moisture contents and potentially metastable structures. These moisture-deficient, unconsolidated, low-density sediments tend to have considerable dry strength; however, when such sediments are thoroughly wetted for the first time, their intergranular strength is weakened and rapid settlement occurs. This phenomenon is particularly likely to occur when irrigation is applied to these low-density loessic and alluvial deposits in arid or semi-arid environments, such as southern Alberta.

Based on the results of boreholes drilled within the building site itself, the subsurface soil profile generally comprises clay and/or gravel fill to depths of up to about 5 metres, underlain by natural low plastic clay and silt sediments to depths of about 9 to 12 metres. Underlying the clay and silt strata, sand and gravel deposits are generally encountered, which in turn generally overly a claystone stratum below a depth of about 17 metres.

Comparative study of the 1983 borehole information with the 1994 borehole information suggest a significant increase in post development soil moisture content, accompanied by a significant loss of shear strength within the low plastic clay and silt strata at the building site. These results appear to support that at least some of the low plastic clay and silt at the site has some degree of metastability, with shear strength loss as a result of wetting and breakdown of intergranular soil particle bonds, and appear to provide rational for the excessive settlement and consolidation of soils beneath the grade supported slabs at the subject facility.

### **Seismic Site Classification**

The 2006 Alberta Building Code (ABC) has adopted the National Building Code (NBCC) requirements for Seismic Design Consideration. The earthquake/seismic design parameters should be reviewed by a Structural Engineer and incorporated into the design as required. In this regard, the following information is provided regarding the geotechnical Site Properties:

- Based on soil conditions reported in the above-referenced documents and published information for the area, the subgrade soils are generally characterized as soft soils over bedrock. In this regard, the Site is classified as Class E, as shown in Table 4.1.8.4.A in the 2006 ABC.

As noted above, the structural engineer should ensure that the structural design incorporates deflections and specified loading resulting from earthquake motion.

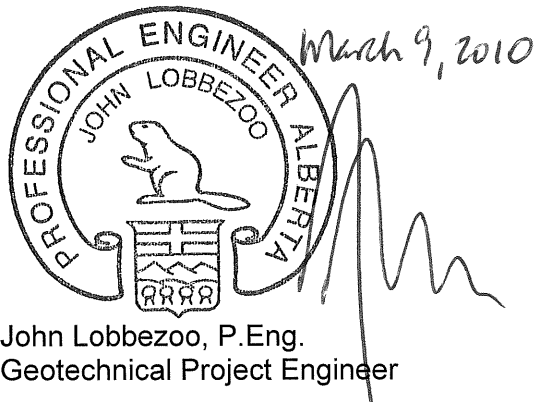
## Closure

The recommendations given in the above sections are based upon interpreted conditions as summarized within previous geotechnical study of the site. Should subsurface conditions other than those presented in this report be encountered during construction, the Client should notify our office so that these recommendations can be reviewed.

This report has been prepared for the exclusive use of the Renneberg – Walker Engineering Associates Ltd for the specific application to the development described in this report. Any use that a third party makes of this report, or any reliance or decisions based on this report are the sole responsibility of those parties. This report has been prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

Respectfully submitted,

**AMEC Earth & Environmental**  
**A division of AMEC Americas Ltd.**

The image shows a circular professional engineer's seal for John Lobbezoo, Alberta. The seal features a beaver in the center and the text "PROFESSIONAL ENGINEER ALBERTA" around the perimeter. A handwritten signature is written over the seal, and the date "March 9, 2010" is written above it. Below the seal, the text "John Lobbezoo, P.Eng. Geotechnical Project Engineer" is printed.

John Lobbezoo, P.Eng.  
Geotechnical Project Engineer

Reviewed by:

Kevin Spencer, P.Eng  
Associate Geotechnical Engineer

**APEGGA PERMIT P4645**

RENNEBERG — WALKER  
ENGINEERING ASSOCIATES LTD.

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Edmonton, Alberta  
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March 31, 2010

Canadian Food Inspection Agency  
715 Square Victoria Suite 410  
Montreal, Quebec  
H2Y 2H7

Attention: Ms. Shama Dad, M.Arch., Project Manager

Dear Madame:

RE: General Services Building at Canadian Food Inspection Agency  
(CFIA) Lethbridge Laboratory - Investigation of slab settlement  
problem and suggested remediation plan

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The General Services Building is part of the complex known as the Lethbridge Laboratory (LAB) formerly known as the ADRI Lethbridge Complex. The Laboratory is situated along the Oldman River approximately 15 kilometers SW of Lethbridge, Alberta.

The Laboratory (LAB), with a gross area of approximately 13,300 square meters, was constructed during the period 1984 thru 1987 and a Large Animal Studies (LAS) addition was constructed in 1992 (gross area of approximately 1320 square meters). A stand-alone General Services Building (GSB) was constructed in 1996.

Foundation settlement problems became apparent almost immediately after construction of the LAB which was designed on a deep foundation system consisting of drilled caissons of varying depths between 6 and 11 meters. Foundation rehabilitation took place between 1995 and 2008 after extensive study of the problem by Public Works and Government Services Canada in the form of underpinning to bedrock or dense gravel immediately above the bedrock with a hydraulically jacked deep foundation system consisting of steel pipe piles segmentally installed for permanent support. This work was completed by W & R Foundation Specialists Ltd. with Public Works and Government Services Canada (PWGSC) as the construction manager. The initial contract in 1995 was done on an emergency basis, the next contract was done on a proposal basis

with a technical analysis assessment being used to determine the most appropriate bid and the last phases were negotiated on a sole source basis.

The LAS and GSB structures were originally built on driven steel H piles to bedrock. No structural issues have surfaced with these buildings, but the GSB has a slab-on-grade throughout which has suffered severe differential settlement since the structure was built and especially over the past several years.

We have completed a forensic investigation into the slab settlement problem and are writing to report as follows concerning the identification of existing conditions within the structure, analysis and detailed description of the slab problem including causation, recommendations for resolving the slab settlement problems and provision of a detailed budget proposal and schedule for the work required in order to permanently remedy the problem.

To that end, an initial site visit was conducted on February 2, 2010, in order to familiarize ourselves with the site. Following that, we initiated a complete survey of the slab within the structure and made a comparison with a survey that we had completed in April of 2006. The survey and comparison is attached. You will note that significant differential has taken place since 2006 in various locations. As well, we have prepared contour surveys for both dates when monitoring took place and attach these as well.

Holes were cored in five locations in order to determine the extent, if any, of voids that may exist below the slab. Voids in excess of 225 mm were found at several locations with the other three having voids ranging from 15 to 125 mm.

A complete review of the existing drawings was completed in order to determine design criteria used for original construction. Of particular interest was the fact that the slab was designed for a main floor live load of 12 kPa (250 lbs per square foot). As constructed, it was a 150 mm thick slab reinforced with 10M @ 300 o.c. over 150 um(6 mil) polyethylene vapour barrier on 50 mm rigid insulation on 150 mm compacted crushed gravel base on 150 mm compacted granular sub-base in the central area and without the 50 mm rigid insulation on both north and south sides.

The settlement problems below the LAB were studied extensively in 1994 by AGRA Earth & Environmental. Their report gave the reasons for the settlement problem as being directly related to the presence of a collapsible soil below the structure.

The investigation determined: i) that the soil moisture content of the foundation supporting soils had increased significantly since the LAB was constructed in 1985-86; ii) the increase in moisture content caused a significant decrease in the supporting capability of the soil; and iii) the soil providing the foundation support for the building is a collapsible soil under given moisture and loading conditions. The investigation also determined that the water soluble sulphate content of the soil recorded in lab testing ranged to as high as 0.52 percent. Any concentration of above 0.20 percent sulphate concentration would generally require the use of sulphate resistant cement (Type HS) for any concrete in contact with soil.

Given the close proximity of the GSB to the LAB, the differential settlement of the existing slab-on-grade and the visual presence of considerable settlement of soil against the exterior grade beams of the GSB structure and in areas where sidewalks are present, it is evident that similar soil problems are present below the footprint of the GSB compared to the LAB.

Allowable load on the soil in place for a slab-on-grade is nil or next to nil based on the decrease in soil strength with increase in moisture content. This results in the necessity of the installation of a structurally supported slab throughout which will have its support founded at or near bedrock elevation as is the structural support for the building.

The choice of an underpinning system for the LAB was done by Public Works and Government Services Canada (PWGSC) after extensive research. The system needed to be one that was guaranteed for the life of the structure and which allowed for levelling of the worst settled portions of the structure after all underpinning was complete.

**A support system identical to that which was installed to structurally support the LAB between 1995 and 2008 is required and is recommended.** In order to properly support a new structural slab for the GSB and minimize differential between the slab and the structure, it will be necessary to enhance the capability of the structure to support some slab load as well as deep foundation support for the slab within the structure.

The support system spoken of above consists of hydraulically jacked steel pipe piles below the structure and any existing trenches and pits which are deemed economical to save. Support for the structural slab at the interior will consist of driven steel pipe piles installed using specially built tight access and low-headroom equipment specifically designed for this

purpose. Allowance must be made for cleaning of the piles to ensure that they penetrate into the dense gravel and/or clay-shale bedrock below the dense gravel. **As well, allowance must be made in the design to allow for considerable downdrag of the piles during their lifetime. The load expected from downdrag over the life of the structure will exceed the actual design loading for the slab.**

It is expected that considerable consolidation will take place within the approximate 13 to 15 meter depth of soils above dense gravel and bedrock which could be subject to collapse with an increase in moisture content. This could mean a further 600 to 800 mm of settlement of the surficial soils, or more as the soils are moistened and consolidation takes place.

In the case of the GSB, the soil problems are identical to those encountered below the LAB. They require treatment for remedial purposes in an identical manner to the remediation completed during the period 1995 thru 2008. This is a very difficult soil condition requiring driven and/or hydraulically jacked piles to bedrock or dense gravel immediately above the bedrock (reference is the geotechnical report completed by Agra E&E in 1994 on this site).

Existing structural capacity of the grade beams on the perimeter and dividing walls is insufficient to handle the additional loads that will be brought onto the structure by adding the load of the structural slab. Installation of a hydraulically jacked steel pipe pile at midspan between existing driven pile support will allow for the existing grade beams to take on the additional load from the proposed new structural slab.

The slab will be 200 thick with 10M reinforcing @ 300 each way T&B, staggered by 150. Thickened sections will be designed at each pile location with an extra mat of reinforcing being 10M @ 150 each way to cover an area 750 x 750. All piles will be filled with concrete and each pile will have 4-15M dowels which will tie into the slab.

The design elevations of the slab at various locations will remain as noted on the original drawings. The in-floor heating system within the central area will be renewed with appropriate insulation below the slab in the heated area.

The specified design loading that is to be considered for the new structural floor and support will be as follows:

1. Dead Load (slab self weight = 5.75 kPa)

2. Specified Uniformly distributed Live Load - 12 kPa

The minimum concrete strength that will be used is 30 Mpa Type HS (formerly T-50). This is a high sulphate resistant cement for use in applications that require high levels of sulphate resistance. HS cement generally gains strength more slowly than the other types. Note that the original design drawings of December 1995 called for 25 Mpa T-10 (now Type GU).

There are two alternatives for remediation that are suitable for consideration in our opinion:

1. The first is to completely replace the existing slab-on-grade with a new structural slab supported by a deep foundation system to bedrock as is the existing driven H-pile foundation system. This would require the complete evacuation of the building at some point, removal of all architectural finishes, partition walls, mechanical and electrical and rebuilding of same after completion of the piling required and installation of the new structural slab.

It is estimated that the time required to complete the work would be approximately 12 to 13 months and that the building would not be available for use in the first floor office area (grid lines 7 thru 12) for about six months. The work would commence between grid lines 1 thru 6 and be totally complete prior to commencing work between grid lines 7 thru 12.

The mechanical and most of the electrical would have to be completely replaced as well as the main floor office area being completely rebuilt. All existing sumps would have to be removed and rebuilt.

The total cost (including design and installation) is estimated to be in the range of \$2.5M to \$2.7M, GST excluded, not including allowance for the cost to move people into different facilities while the work is being completed within the office area. Design loading for the new slab between grid lines 1 thru 6 would remain at 12 kPa and between grid lines 7 thru 12 would be reduced to 4.8 kPa to reflect true loading conditions.

2. The second alternative is to replace the slab-on-grade between grid lines 1 thru 6 as above with a new structural slab and remediate the existing slab between grid lines 7 thru 12 from below without the necessity to



move out of the area. Although there has been substantial differential settlement of the slab in this area, the condition of the slab is substantially better than that between grid lines 1 thru 6 and because the actual design loading conditions within the office area are considerably less than those required in the area between grid lines 1 thru 6 (4.8 kPa vs 12 kPa), the slab can be saved and converted to a structural slab.

This alternative is attractive for several reasons compared to complete replacement. It allows use of the office portion of the main floor (grid lines 7 thru 12) throughout, that is, it will not be necessary to vacate the premises at all, and the cost will be substantially lower.

The total cost (including design and installation) is estimated to be in the range of \$1.8M to \$2.0M with duration being estimated at 10 to 11 months, realizing a savings in cost over the first alternative of between \$0.5M and \$0.9M.

The underpinning of this area would be accomplished by excavating below the slab from the exterior, temporarily supporting as excavation takes place, installing driven piles with specially built equipment to support the slab as required, lifting the existing slab to original design elevation after all underpinning has been installed and leaving the remaining crawlspace for servicing as has been done below a portion of the LAB which had an existing structural slab-on-grade converted to a structural slab with crawlspace.

In order to satisfy seismic requirements, the converted structural slab would have to be attached to the structure with a positive connection between slab and grade beam and allowance for the cost to accomplish this has been made in the budget estimate.

In both cases, it is assumed that existing conditions regarding electrical and mechanical would be replicated. It is assumed that the facility management would move all furnishings and contents from the main floor office area prior to work being commenced in that area under the alternative one scenario. No removal of furnishings or contents would be required under alternative two in the office area.

In both cases, approximately 80% of the existing trench

would be saved and rehabilitated after underpinning in order to reduce costs as much as possible.

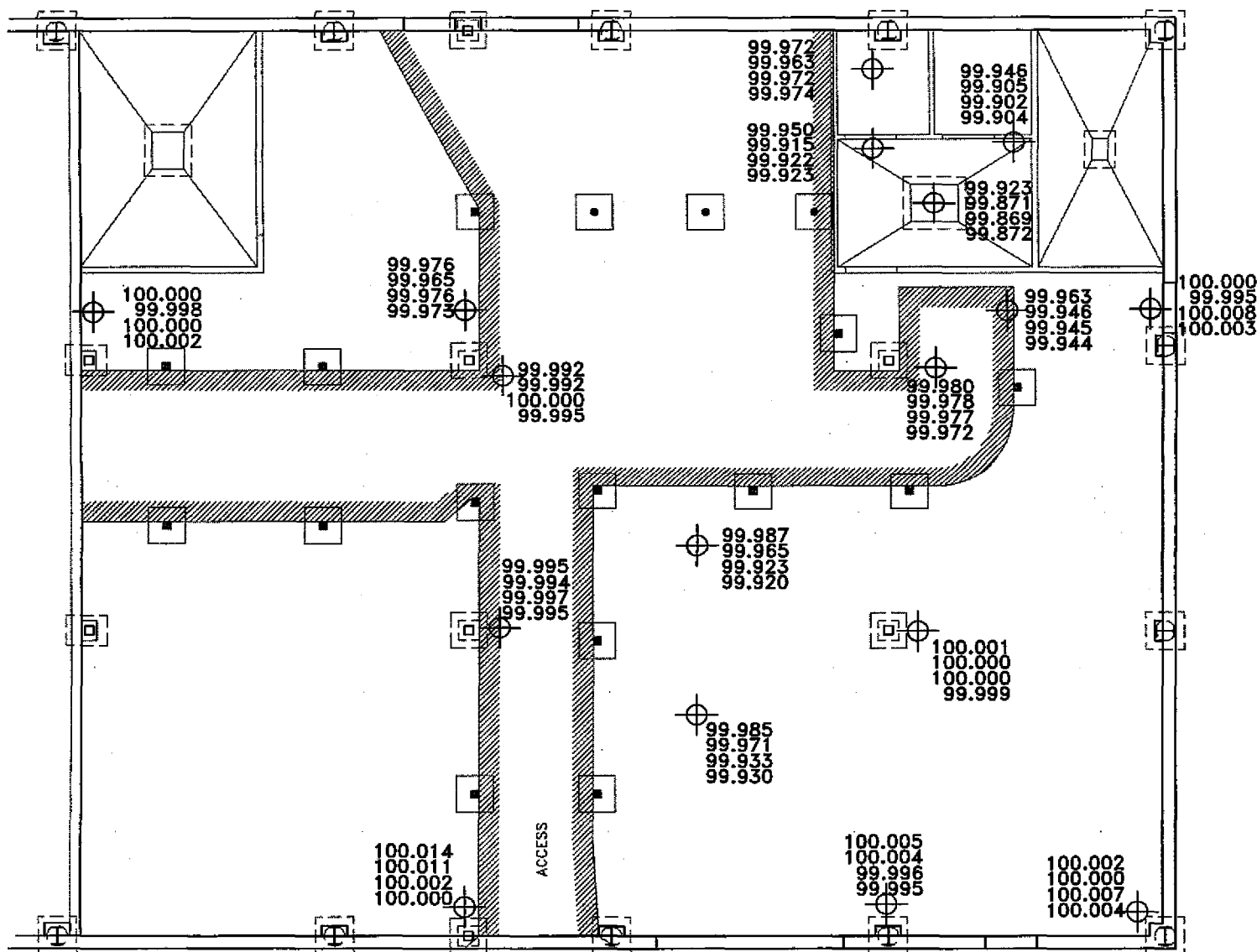
The work could commence within four to six weeks and be complete between grid lines 1 thru 6 before the winter of 2010, but the ability to proceed would have to be forthcoming by the end of April at the very latest in order to meet this schedule.

Please advise if any questions arise regarding this letter report and its attachments.

RENNEBERG - WALKER  
ENGINEERING ASSOCIATES LTD.

R. J. Renneberg, P.Eng., FCSCE

rjr  
attachments



TOP NUMBER REPRESENTS FLOOR ELEVATION FROM APRIL 3, 2006 SURVEY  
 SECOND NUMBER REPRESENTS FLOOR ELEVATION FROM FEBRUARY 3, 2010 SURVEY  
 THIRD NUMBER REPRESENTS FLOOR ELEVATION FROM FEBRUARY 6, 2013 SURVEY  
 BOTTOM NUMBER REPRESENTS FLOOR ELEVATION FROM MARCH 12, 2013 SURVEY

DATUM 100.000 IS COLUMN BASE ON SOUTH SIDE OF WEST OVERHEAD DOOR

**\*\*NOTE:** THIS DRAWING TAKEN FROM RENNEBERG-WALKER ENG ASSOC DWG-029S0  
 DATED FEBRUARY 3, 2010

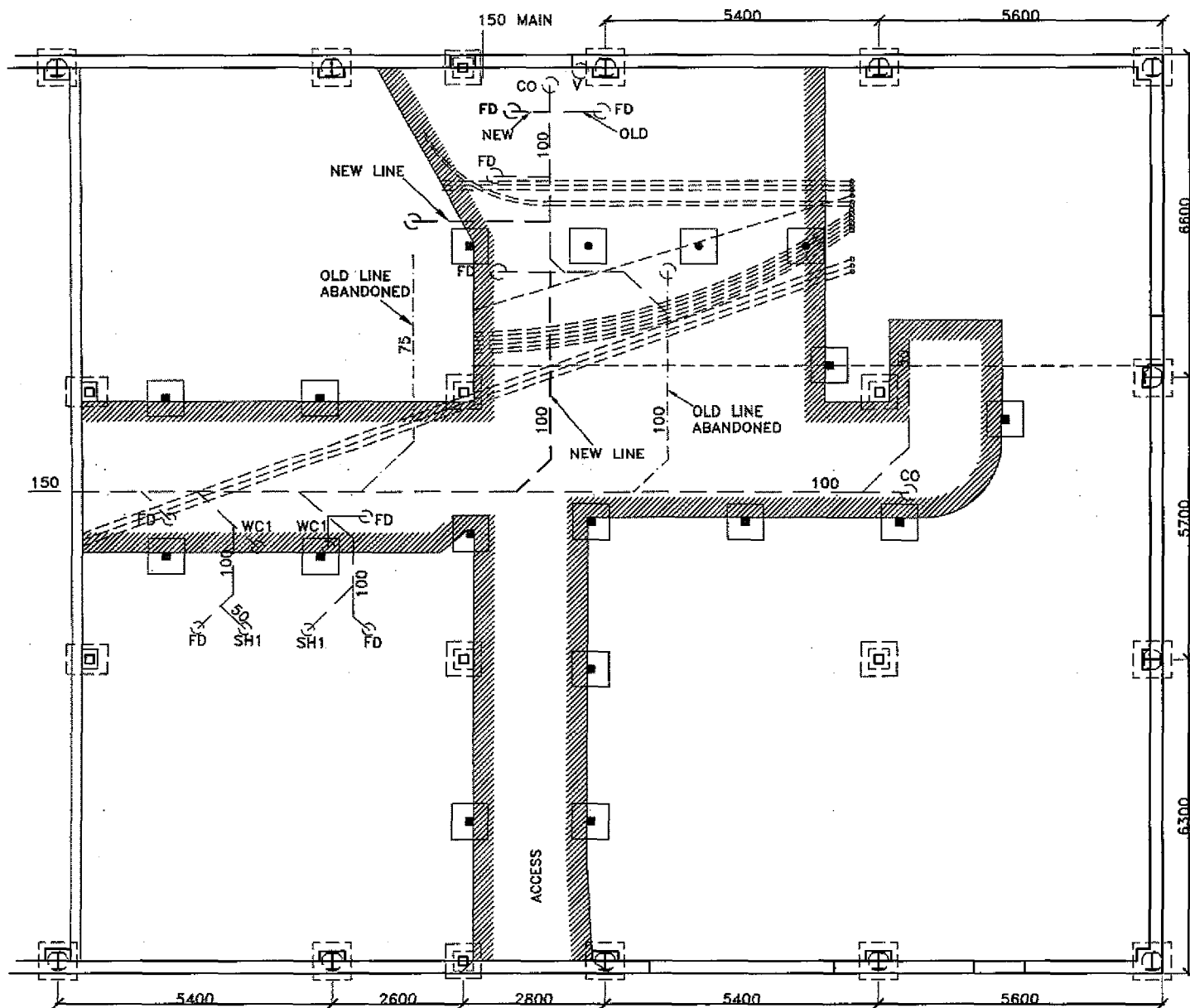
W & R FOUNDATION SPECIALISTS LTD

**LETHBRIDGE ADRI**

LETHBRIDGE, ALBERTA

**GENERAL SERVICES BUILDING  
 FOUNDATION PLAN - FLOOR ELEVATIONS  
 WITH TUNNELING SUPERIMPOSED**

DATE	MARCH 12, 2013	SCALE	1 : 125
DRAWN	B.E.R.	DRAWING NUMBER	<b>029-S02B</b>



- MECHANICAL LINES
- NEW MECHANICAL LINES
- OLD MECHANICAL LINES
- - - ELECTRICAL LINES

W & R FOUNDATION SPECIALISTS LTD

**LETHBRIDGE ADRI**

LETHBRIDGE, ALBERTA

**GENERAL SERVICES BUILDING**

PLUMBING & ELECTRICAL AS-FOUND

DATE MARCH 12, 2013 SCALE 1 : 125

DRAWN B.E.R. DRAWING NUMBER **029-SOR3**



# ANIMAL DISEASES RESEARCH INSTITUTE GENERAL SERVICES BUILDING LETHBRIDGE, ALBERTA PROJECT NO. 626029

## LIST OF DRAWINGS

### ARCHITECTURAL

W-A01	SITE PLAN
W-A02	MAIN FLOOR PLAN
W-A03	SECOND FLOOR PLAN
W-A04	BUILDING ELEVATIONS
W-A05	BUILDING SECTIONS AND DETAILS
W-A06	WALL SECTIONS
W-A07	STAIR SECTION AND DETAILS
W-A08	MAIN & SECOND FLOOR REFLECTED CEILING PLANS
W-A09	DOOR AND WINDOW DETAILS
W-A10	MISCELLANEOUS SECTIONS AND DETAILS
W-A11	MILLWORK PLANS, ELEVATIONS AND SECTIONS
W-A12	WASHROOM LAYOUT AND MISCELLANEOUS DETAILS

### STRUCTURAL

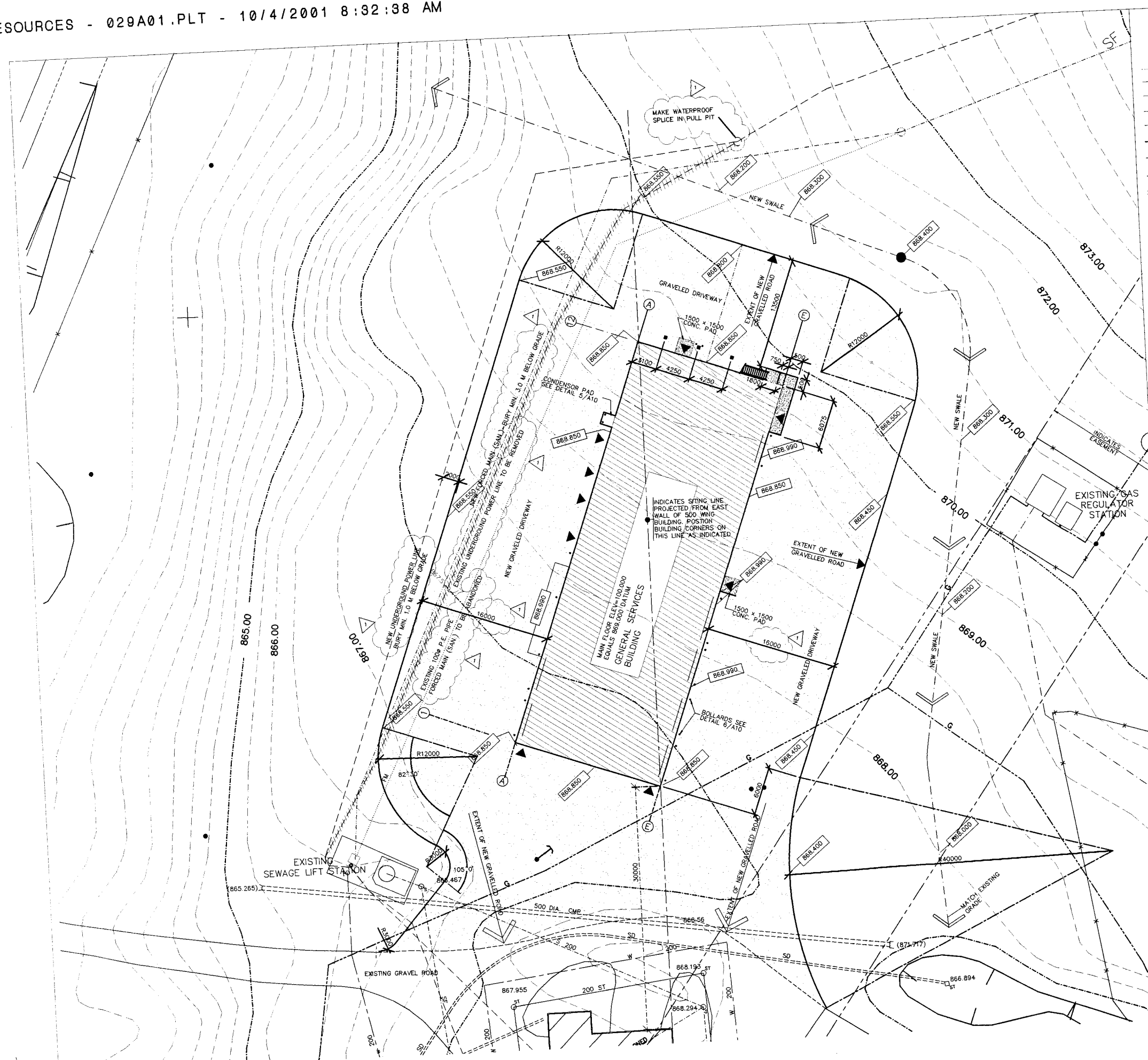
W-S1	FOUNDATION PLAN & DETAILS
W-S2	SECOND FLOOR/ROOF FRAMING & Z-GIRT ELEVATIONS
W-S3	FOUNDATION DETAILS
W-S4	SECOND FLOOR FRAMING DETAILS

### MECHANICAL

W-M1	MECHANICAL SITE PLAN & LEGEND
W-M2	MECHANICAL MAIN FLOOR AND SECOND FLOOR PLAN, PLUMBING LAYOUT
W-M3	MECHANICAL MAIN FLOOR AND SECOND FLOOR PLAN, HEATING LAYOUT
W-M4	MECHANICAL MAIN FLOOR AND 2ND FLOOR PLAN, VENTILATION AND AIR CONDITIONING
W-M5	MECHANICAL SPRINKLER LAYOUT
W-M6	MECHANICAL MAIN FLOOR PLAN AND 2ND FLOOR MECHANICAL ROOM LAYOUTS
W-M7	MECHANICAL ROOM SECTIONS
W-M8	MECHANICAL SECTIONS AND DETAIL SHEET
W-M9	MECHANICAL CONTROL SCHEMATIC LAYOUTS
W-M10	MECHANICAL CONTROL SCHEMATIC LAYOUTS

### ELECTRICAL

W-E1	SITE PLAN, LEGEND AND DETAILS
W-E2	MAIN AND SECOND FLOOR LIGHTING
W-E3	MAIN AND SECOND FLOOR POWER AND LOW TENSION
W-E4	EQUIPMENT SCHEDULE, FIXTURE SCHEDULE, F.A. SCHEDULE AND TELEPHONE RISER DIAGRAM
W-E5	SINGLE LINE DIAGRAM, PANEL SCHEDULE AND MCC ELEVATIONS



LEGEND

ABANDONED LINES  
UNDERGROUND CABLE LINE  
E-ELECTRICAL LINES  
E/T-ELECTRICAL & TELEPHONE LINES  
G-GAS LINES  
SS-SANITARY SEWER LINES  
W-WATER LINES  
FM-SEWAGE FORCE MAIN  
SD-STORM DRAIN  
EXISTING ELEVATION  
NEW ELEVATION

NEW  
CONCRETE WALKWAY

NEW  
GRAVELLED AREA

MANDOOR LOCATIONS

EXISTING UNDERGROUND POWER  
LINE TO BE REMOVED

EXISTING FORCED MAIN TO  
BE ABANDONED

EXISTING GAS  
REGULATOR  
STATION

EXTENT OF NEW  
GRAVELLED ROAD

INDICATES SETTING LINE  
PROJECTED FROM EAST  
WALL OF 500 WING  
BUILDING. POSITION  
BUILDING CORNERS ON  
THIS LINE AS INDICATED


MAIN FLOOR ELEV. = 100.000  
EQUALS 869,000 DATUM  
GENERAL SERVICES  
BUILDING



EXISTING  
SEWAGE LIFT STATION

SITE PLAN

0 4000 8000

20000 MM

	CHANGE NOTICE NUMBER 2	5/03/96
revision		date

A detail no.  
no. du detail  
 B location drawing no.  
sur dessin no.  
 C drawing no.  
dessin no.

project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
SITE PLAN

DESIGNED	S.C.	CON
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DATE AUG. 29, 1995 FRW DESS

DRAWN \_\_\_\_\_  
DATE \_\_\_\_\_

DATE \_\_\_\_\_ EXAM \_\_\_\_\_  
REVIEWED \_\_\_\_\_

DATE DECEMBER 22, 1995  
APPROVED \_\_\_\_\_ APPRO \_\_\_\_\_

DATE \_\_\_\_\_

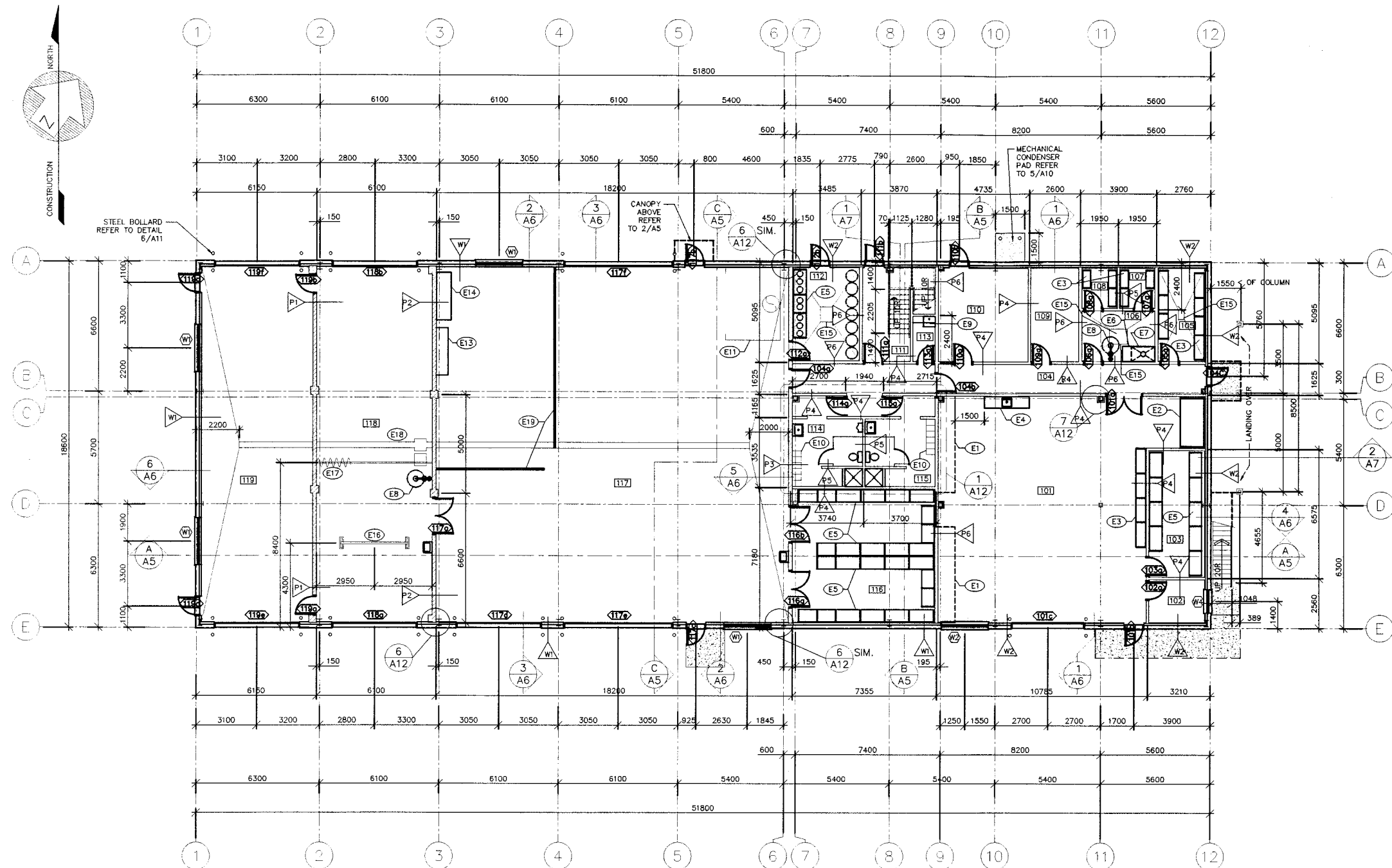
TENDER	SOUNDS
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PWC PROJECT MANAGER  
PROJECT NUMBER NO. DU PR

626029

DRAWING NUMBER

W-401



MAIN FLOOR PLAN  
0 2000 4000 10000 MM  
SCALE = 1:100

BUILDING CODE INFORMATION  
OCCUPANCY: GROUP 'F', DIVISION 2  
BUILDING AREA: 963.5 SQUARE METERS  
NON-COMBUSTIBLE CONSTRUCTION  
2 STOREY BUILDING FACING ONE STREET  
SECOND FLOOR ASSEMBLY 45 MINUTE FIRE RATING  
SPRINKLERED

EXTERIOR WALL SCHEDULE  
W1 - PREFINISHED VERTICAL METAL SIDING  
- HORIZONTAL METAL 'Z' GIRTS @ 1220 O.C.  
- RSI 2.1 BATT INSULATION  
C/W AIR BARRIER BACKING  
- METAL LINER TO 2440 mm HEIGHT  
W2 - PREFINISHED VERTICAL METAL SIDING  
- HORIZONTAL METAL 'Z' GIRTS @ 1220 O.C.  
- RSI 2.1 BATT INSULATION  
C/W AIR BARRIER BACKING  
- 20 mm VERTICAL STRAPPING @ 400 O.C.  
- 12.7 mm GYPSUM WALLBOARD

INTERIOR PARTITION SCHEDULE MAIN FLOOR  
P1 - TWO HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER U905  
- 200mm CONCRETE BLOCK  
P2 - 200 mm CONCRETE BLOCK WALL  
P3 - 2 HOUR RATED CONSTRUCTION @ ROOM 112  
ULC DESIGN NUMBER U905  
1 HOUR RATED CONSTRUCTION ELSEWHERE  
- 200mm CONCRETE BLOCK WALL TO  
EXTEND UP TO SECOND FLOOR LEVEL  
P4 - ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W415  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 O.C.  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
P4A - ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W415  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 O.C.  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- ALL COMPONENTS TO EXTEND 100mm  
ABOVE FINISHED CEILING  
P5 - 12.7 mm GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 mm O.C.  
- 12.7mm GYPSUM WALLBOARD  
- ALL COMPONENTS TO EXTEND 100mm  
ABOVE FINISHED CEILING

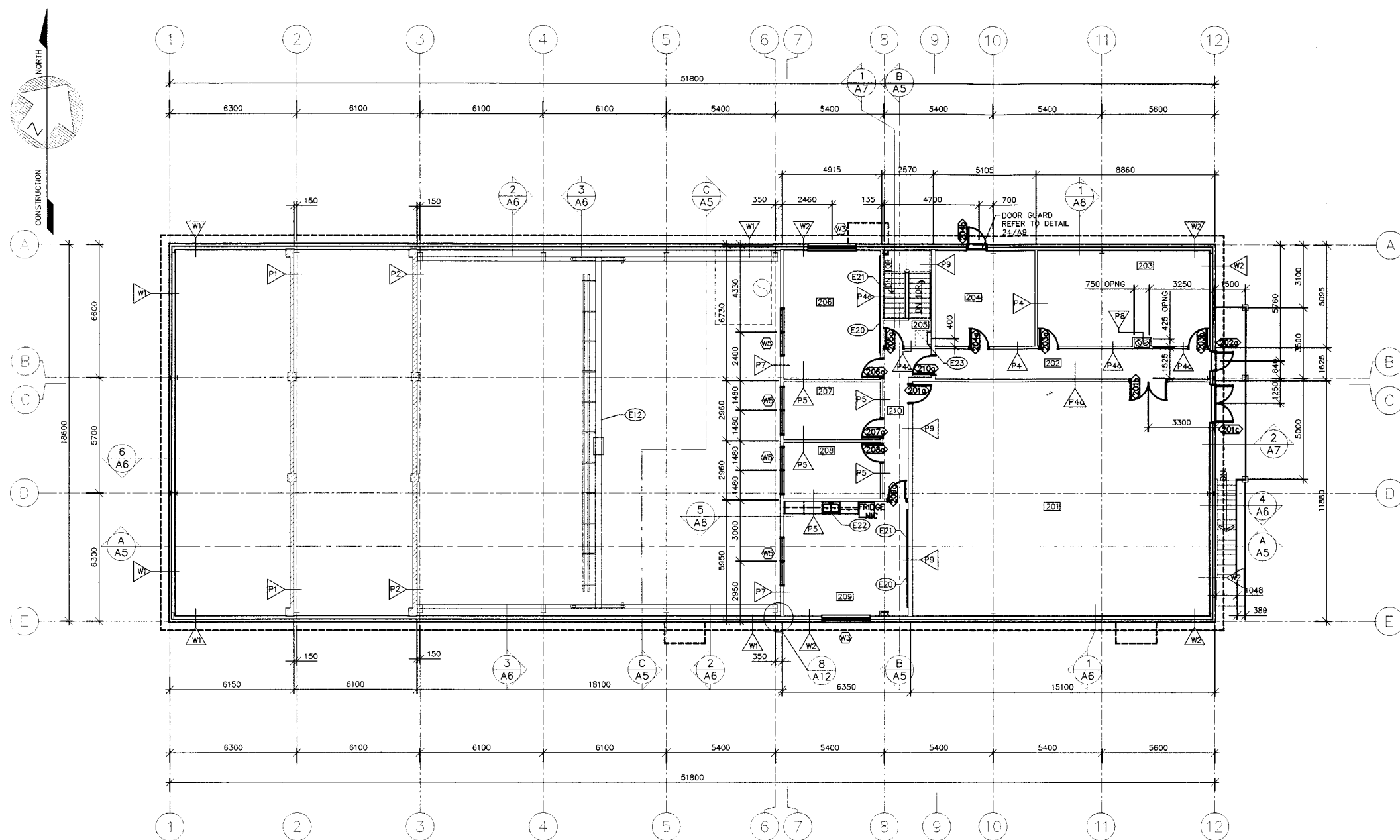
- ROOM LEGEND (100)
- 101 CARPENTRY SHOP
  - 102 DRAFTING ROOM
  - 103 TOOL STORAGE
  - 104 CORRIDOR
  - 105 PAINT STORAGE
  - 106 PESTICIDE TRANSFER ROOM
  - 107 HERBICIDE STORAGE
  - 108 INSECTICIDE STORAGE
  - 109 ELECTRICAL ROOM
  - 110 MECHANICAL ROOM
  - 111 STAIR #1
  - 112 LUBRICANT STORAGE
  - 113 JANITOR ROOM
  - 114 MALE WASHROOM
  - 115 FEMALE WASHROOM
  - 116 GOODS STORAGE
  - 117 VEHICLE AND EQUIPMENT
  - 118 MAINTENANCE BAY
  - 119 WASHBAY
  - 120 FIRE TRUCK AND GRADER BAY
- NOTE:  
DOOR #120, 1060 & 1050  
TO SIT ON TOP OF CONC.  
CURB SEE DETAIL 4/S1
- EQUIPMENT LEGEND (E0)
- E1 WORD BENCHES - OWNER SUPPLIED  
CONTRACTOR INSTALLED
  - E2 1210mm X 2440mm METAL SHELVING  
REFER TO SPECS
  - E3 450mm WIDE METAL SHELVING  
REFER TO SPECS
  - E4 COUNTER c/w SINK - REFER TO  
DETAIL 4/A11
  - E5 600mm WIDE METAL SHELVING  
REFER TO SPECS
  - E6 COUNTER c/w STAINLESS STEEL TOP  
REFER TO DETAIL 2/A11
  - E7 FUME HOOD - REFER TO MECH
  - E8 EMERGENCY EYEWASH/SHOWER  
REFER TO MECHANICAL
  - E9 SHELF DETAIL - REFER TO DETAIL  
8/A10
  - E10 METAL LOCKERS - REFER TO SPECS
  - E11 PAINT BOOTH - REFER TO SPECS
  - E13 WELDING AREA TOOL CABINET  
REFER TO DETAIL 5/A11
  - E14 WELDING BENCH - REFER TO  
DETAIL 7/A10
  - E15 CATCH BASIN AND GRATE  
REFER TO MECH AND STRUCT
  - E16 TWO POST ABOVE GROUND LIFT  
REFER TO SPECS
  - E17 WASH BAY CURTAIN - REFER TO 2/A12
  - E18 FLOOR TRENCH c/w SUMP - REFER  
TO MECH AND STRUCT
  - E19 8 SAFETY SCREENS - REFER TO SPECS

Public Works  
And  
Government Services  
Canada  
Travaux publics  
et Services  
gouvernement  
Canada  
Architectural & Engineering Services  
Western Region

Agriculture  
Canada

revision		date	
A	A detail no. no. du detail	A	
B	B location drawing no. sur dessin no.	B	
C	C drawing no. dessin no.	C	
project	project		
GENERAL SERVICES BUILDING A.D.R.I. LETHBRIDGE ALBERTA			
drawing	drawing		
MAIN FLOOR PLAN			
DESIGNED	S.C.	CONCU	
DATE	AUG. 29, 1995	DESINE	
DRAWN	B.C.	REVIEWED	
DATE	DECEMBER 22, 1995	EXAMINE	
APPROVED		APPROVE	
DATE		APPROVE	
TENDER		SOUSSION	
PWC PROJECT MANAGER			
PROJECT NUMBER		NO. DU PROJET	
			626029





SECOND FLOOR PLAN

0 2000 4000 10000 MM

SCALE = 1:100

BUILDING CODE INFORMATION

OCCUPANCY: GROUP 'F', DIVISION 2  
BUILDING AREA: 963.5 SQUARE METERS  
NON-COMBUSTIBLE CONSTRUCTION  
2 STOREY BUILDING FACING ONE STREET  
SECOND FLOOR ASSEMBLY 45 MINUTE FIRE RATING  
SPRINKLERED

WINDOW ELEVATIONS - REFER  
TO 23/A09

EXTERIOR WALL SCHEDULE

- W1 - PREFINISHED VERTICAL  
METAL SIDING  
- HORIZONTAL METAL 'Z' GIRTS @ 1220 O.C.  
- RSI 2.1 BATT INSULATION  
C/W AIR BARRIER BACKING  
- METAL LINER TO 2440 mm HEIGHT
- W2 - PREFINISHED VERTICAL  
METAL SIDING  
- HORIZONTAL METAL 'Z' GIRTS @ 1220 O.C.  
- RSI 2.1 BATT INSULATION  
C/W AIR BARRIER BACKING  
- 20 mm VERTICAL STRAPPING @ 400 O.C.  
- 12.7 mm GYPSUM WALLBOARD

INTERIOR PARTITION SCHEDULE MAIN FLOOR

- P1 - TWO HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER U905  
- 200mm CONCRETE BLOCK
- P2 - 200 mm CONCRETE BLOCK WALL
- P3 - 2 HOUR RATED CONSTRUCTION @ ROOM 112  
ULC DESIGN NUMBER U905  
1 HOUR RATED CONSTRUCTION ELSEWHERE  
ULC DESIGN NUMBER U905  
- 200mm CONCRETE BLOCK WALL TO  
EXTEND UP TO SECOND FLOOR LEVEL
- P4 - ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W415  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 O.C.  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD
- P4A - ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W415  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 O.C.  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- ALL COMPONENTS TO EXTEND 100mm  
ABOVE FINISHED CEILING
- P5 - 12.7 mm GYPSUM WALLBOARD  
- 92 mm METAL STUDS @ 400 mm O.C.  
- 12.7mm GYPSUM WALLBOARD  
- ALL COMPONENTS TO EXTEND 100mm  
ABOVE FINISHED CEILING
- P6 - TWO HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W404  
- TWO LAYERS 15.9mm TYPE  
'X' GYPSUM WALLBOARD  
- 92mm METAL STUDS @ 400 O.C.  
- TWO LAYERS 15.9mm TYPE  
'X' GYPSUM WALLBOARD
- P7 - 12.7mm GYPSUM WALLBOARD  
- 152mm METAL STUDS @ 400mm oc  
- RSI 2.1 BATT INSULATION  
- 20mm HORIZONTAL STRAPPING  
@ 400mm oc  
- METAL LINER
- P8 - ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W506  
- 15.9mm TYPE 'X' GYPSUM WALLBOARD  
- 63.5mm C-H METAL STUDS @ 400 O.C.  
- 25mm FIREGAURD SHAFTLINER PANEL
- P9 - TWO HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W404  
- TWO LAYERS 15.9mm TYPE  
'X' GYPSUM WALLBOARD  
- 152mm METAL STUDS @ 400 O.C.  
- TWO LAYERS 15.9mm TYPE  
'X' GYPSUM WALLBOARD

ROOM LEGEND

- 201 DRY STORAGE  
202 CORRIDOR #1  
203 ARCHIVE STORAGE #2  
204 MECHANICAL ROOM  
205 STAIR #1  
206 WORK STATION  
207 WORK STATION  
208 COMPUTER ROOM  
209 LUNCH/MEETING ROOM  
210 CORRIDOR #2

EQUIPMENT LEGEND

- E12 OVERHEAD CRANE - REFER TO SPECS  
E20 1200 X 2400 TACKBOARD  
REFER TO SPECS  
E21 1200 X 2400 CHALKBOARD  
REFER TO SPECS  
E22 COUNTER c/w SINK & MICRO SHELF  
REFER TO DETAIL 1/A10  
E23 ROOF ACCESS LADDER & HATCH  
REFER TO DETAIL 3/A5

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revision date

A detail no.  
no. du detail  
B location drawing no.  
sur dessin no.  
C drawing no.  
dessin no.

project project

GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing dessin

SECOND FLOOR PLAN

DESIGNED S.C. CONCU

DATE AUG. 29, 1995

DRAWN B.C. DESSINE

DATE DECEMBER 22, 1995

REVIEWED EXAMINE

DATE DECEMBER 22, 1995

APPROVED APPROUVE

DATE

TENDER SOUMISSION

PWC PROJECT MANAGER

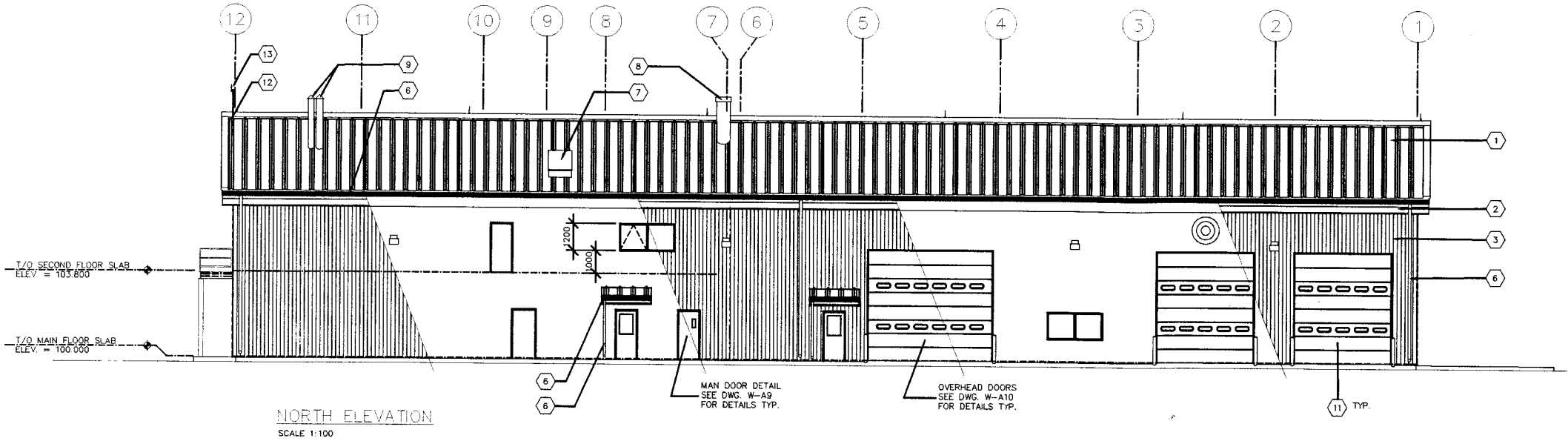
PROJECT NUMBER NO. DU PROJET

626029

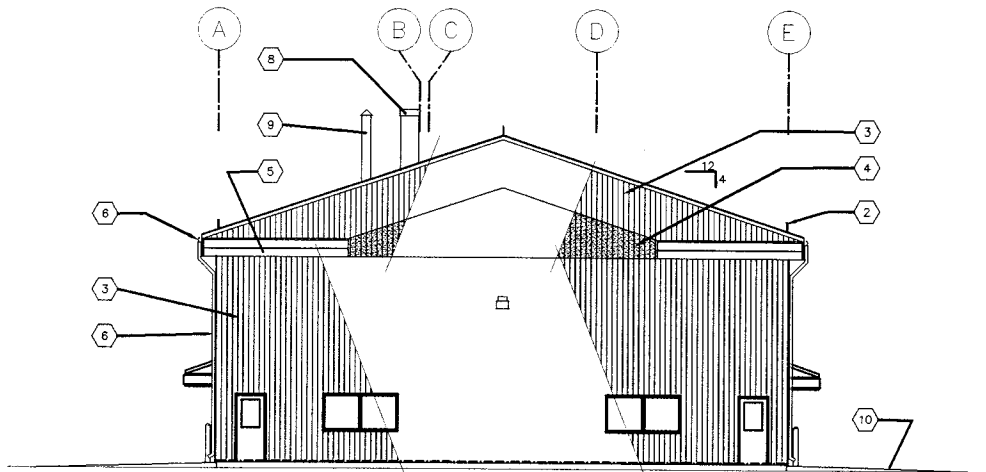
Agriculture  
Canada

GENERAL NOTES

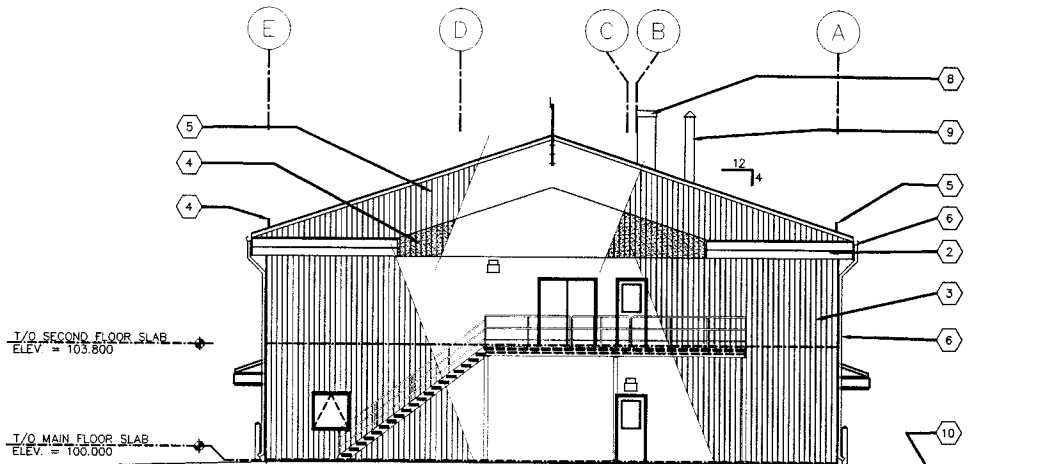
- 1 PRE-FINISHED METAL ROOF  
COLOUR QC199  
BRIARWOOD TAN
- 2 PRE-FINISHED METAL  
SNOW DAM SECURED TO  
METAL ROOF - ANCHORED  
TO EVERY SECOND SEAM.
- 3 PRE-FINISHED METAL SIDING  
COLOUR QC199  
BRIARWOOD TAN
- 4 PRE-FINISHED METAL SIDING  
COLOUR QC259 TILE RED  
100 x 100 x 6 mm STEEL
- 5 PRE-FINISHED METAL FASCIA  
COLOUR QC259 TILE RED
- 6 PRE-FINISHED METAL  
EAVESTROUGH & DOWNSPOUT  
COLOUR QC199  
BRIARWOOD TAN
- 7 PREFABRICATED METAL  
ACCESS ROOF HATCH
- 8 METAL EXHAUST DUCT  
REFER TO MECH. DWG'S  
FOR FINISH & ANCHORING
- 9 METAL EXHAUST DUCT &  
FUME DUCT REFER TO  
MECHANICAL DWG'S  
FOR FINISH & ANCHORING
- 10 GRAVELLED DRIVEWAY  
REFER TO SPECIFICATIONS  
FOR GRAVEL TYPE & SUB-BASE
- 11 OVERHEAD DOOR REFER  
TO DOOR SCHEDULE
- 12 50mm ~ RIGID STEEL CONDUIT  
FOR MICROWAVE DISH ON EAST  
REFER TO ELEC DRAWINGS
- 13 LIGHTNING ARRESTOR ROD  
REFER TO ELEC DRAWINGS



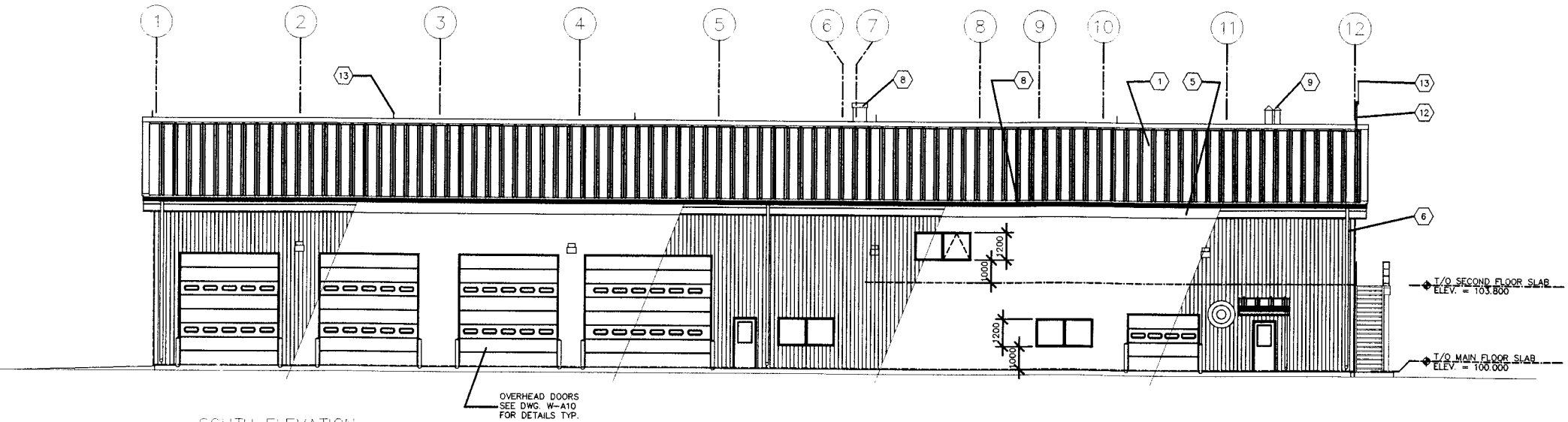
NORTH ELEVATION  
SCALE 1:100



WEST ELEVATION  
SCALE 1:100



EAST ELEVATION  
SCALE 1:100



SOUTH ELEVATION

revision date

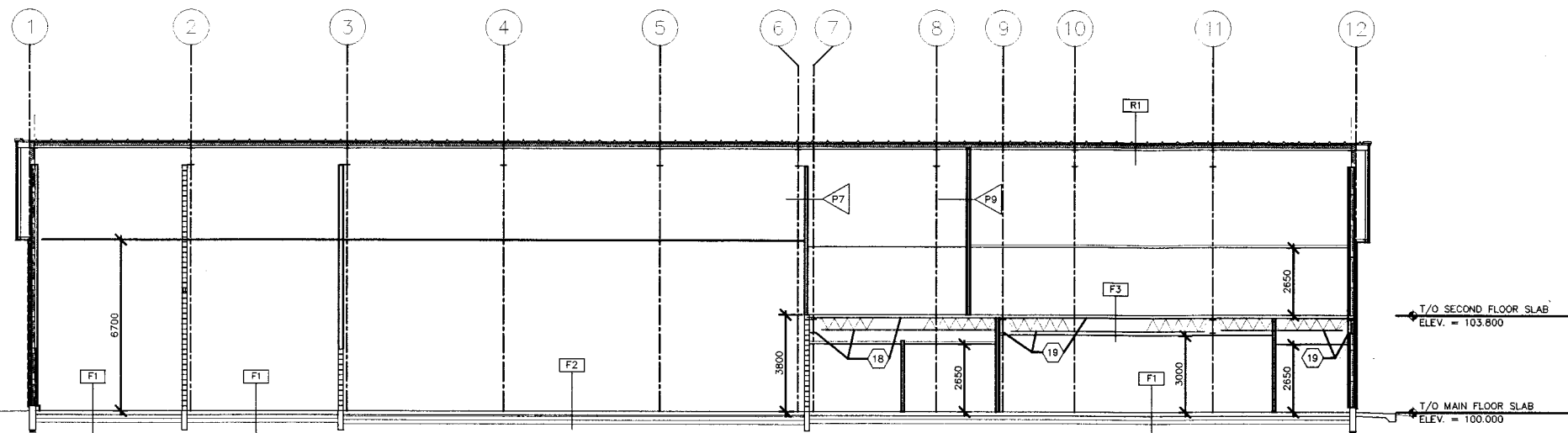
A detail no.  
no. du détail  
B location drawing no.  
sur dessin no.  
C drawing no.  
dessin no.

project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA  
drawing  
dessin

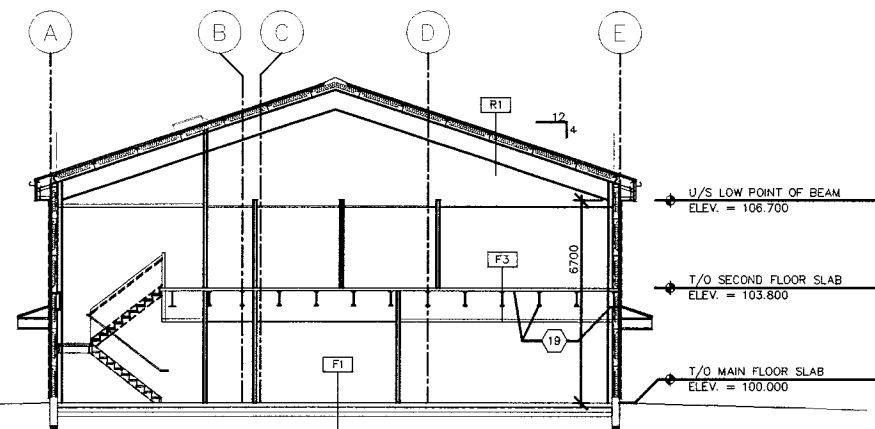
BUILDING  
ELEVATIONS

DESIGNED S.C. CONCU  
DATE AUG. 29, 1995  
DRAWN E.R.W. DESSINÉ  
DATE  
REVIEWED EXAMINÉ  
DATE DECEMBER 22, 1995  
APPROVED APPROUVÉ  
DATE  
TENDER SOUMISSION

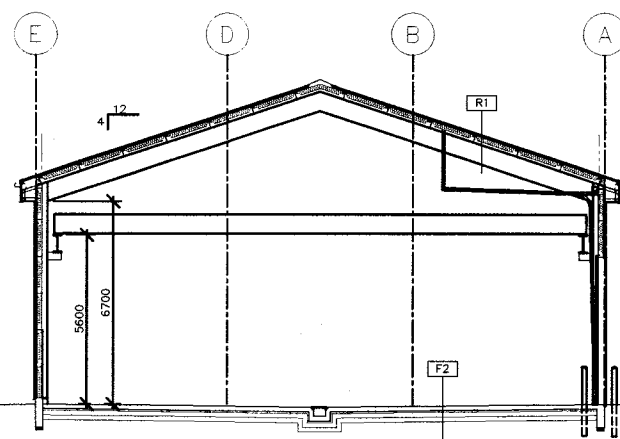
PWC PROJECT MANAGER  
PROJECT NUMBER NO. DU PROJET  
626029



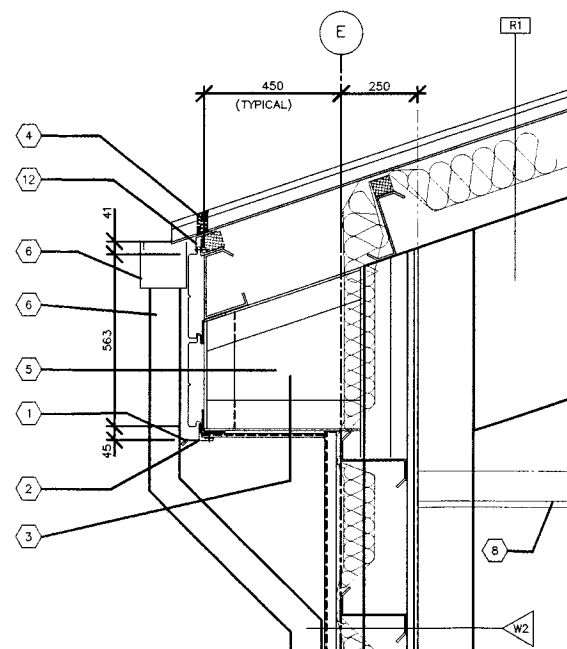
A BUILDING SECTION  
A5 SCALE 1:100



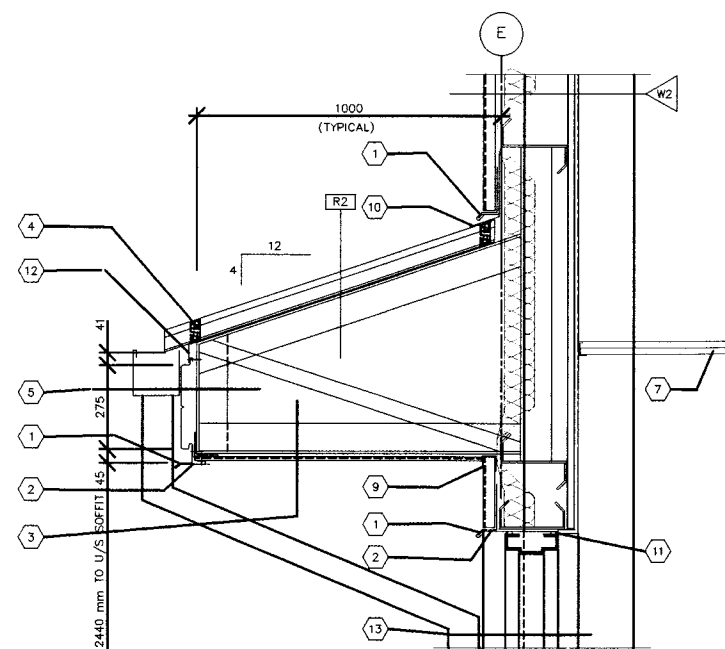
B BUILDING SECTION  
A5 SCALE 1:100



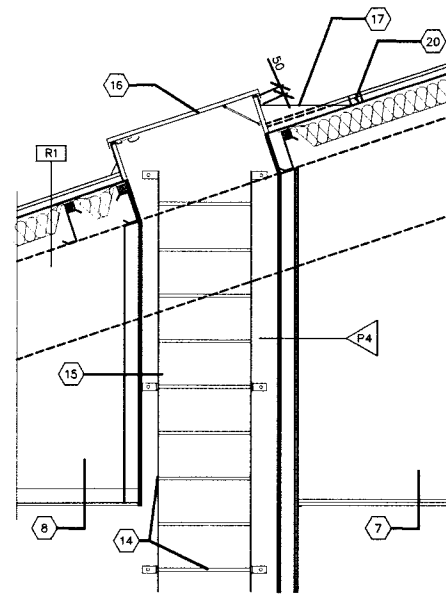
C BUILDING SECTION  
A5 SCALE 1:100



1 OVERHANG DETAIL  
SCALE 1:20



2 CANOPY DETAIL  
SCALE 1:20



3 ACCESS HATCH DETAIL  
SCALE 1:20

#### ROOF TYPE

R1 PRE-FINISHED METAL  
STANDING SEAM ROOF  
"Z" GIRTS @ 1500 mm O.C.  
VINYL BACKED  
BATT INSULATION RSI=3.5  
STRUCTURAL STEEL SUPPORTS

R2 PRE-FINISHED METAL STANDING  
SEAM ROOF SUPPORTED ON  
STEEL FRAMING DESIGNED  
BY BUILDING MANUFACTURER

#### FLOOR TYPE

F1 FINISHED FLOOR AS SPECIFIED  
150 mm CONCRETE SLAB  
REINFORCED WITH 10M @ 300 O.C. EACH WAY  
150 um POLY. VAPOUR BARRIER  
50 mm COMPACTED CRUSHED GRAVEL  
150 mm COMPACTED GRANULAR GRAVEL

F2 FINISHED FLOOR AS SPECIFIED  
150 mm CONCRETE SLAB  
REINFORCED WITH 10M @ 300 O.C. EACH WAY  
150 um POLY. VAPOUR BARRIER  
50 mm COMPACTED CRUSHED GRAVEL  
150 mm COMPACTED GRANULAR GRAVEL

F3 FINISHED FLOOR AS SPECIFIED  
67 mm CONCRETE SLAB  
38 mm METAL FLOOR DECKING  
OPEN WEB STEEL JOISTS  
REFER TO STRUCTURAL DRAWINGS

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And  
Government Services  
Canada  
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et Services  
du gouvernement  
Canada  
Architectural & Engineering Services  
Western Region

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#### GENERAL NOTES

- PRE-FINISHED METAL  
DRAIN FLASHING TO  
EXTEND UP BEHIND  
METAL SIDING
- PRE-FINISHED METAL  
TRIM FLASHING
- PRE-FINISHED METAL  
SOFFIT SECURED TO STEEL  
FRAMING DESIGNED BY  
BUILDING MANUFACTURER
- NEOPRENE CLOSURE  
BETWEEN FLUTES
- FASCIA BAND CONSTRUCTION:  
PRE-FINISHED HORIZONTAL  
METAL SIDING SECURED TO  
STEEL FRAMING DESIGNED  
BY BUILDING MANUFACTURER
- PRE-FINISHED METAL  
EAVES TROUGH &  
DOWNSPOUT
- SUSPENDED ACOUSTIC TILE  
"T-BAR" CEILING
- SUSPENDED CEILING CONSTR.  
15.9 mm G.W.B. ON M.S.S.
- CLOSURE TRIM
- PRE-FINISHED COUNTER  
BASE FLASHING-EXTEND  
UP BEHIND SIDING  
200 mm MINIMUM
- CAULKING & BACKING  
ROD BOTH SIDES  
ALL AROUND
- PRE-FINISHED TRIM  
FLASHING TO EXTEND  
UP U/S METAL ROOF
- DOOR & FRAME REFER  
TO DOOR & FRAME SCHEDULE
- SHIPS LADDER  
50 x 8 mm STEEL STRINGERS  
20 mm STEEL RUGS @ 300 O.C.  
50 x 100 mm LONG BRACKETS  
C/W 12 mm ANCHOR BOLTS
- ACCESS LADDER SHAFT WALL  
92 mm METAL STUD FRAMING  
15.9 mm G.W.B.
- PREFABRICATED INSULATED  
METAL ACCESS ROOF HATCH  
INSTALL WITH ALL NECESSARY  
FLASHING & SEALANT AS PER  
SUPPLIER'S RECOMMENDATIONS
- PRE-FINISHED TAPERED  
METAL BACK SLOPED CRICKET  
SECURED TO METAL ROOF &  
ACCESS HATCH CURB  
EXTEND FLASHING 100 mm TO  
UNDERSIDE METAL ROOFING
- 2 HOUR FIRE PROTECTIVE  
SPRAY TO BEAMS, JOISTS &  
TO U/S METAL DECK
- 1 HOUR FIRE PROTECTIVE  
SPRAY TO BEAMS, JOISTS &  
TO U/S METAL DECK
- PROVIDE CLOSURE

revision date

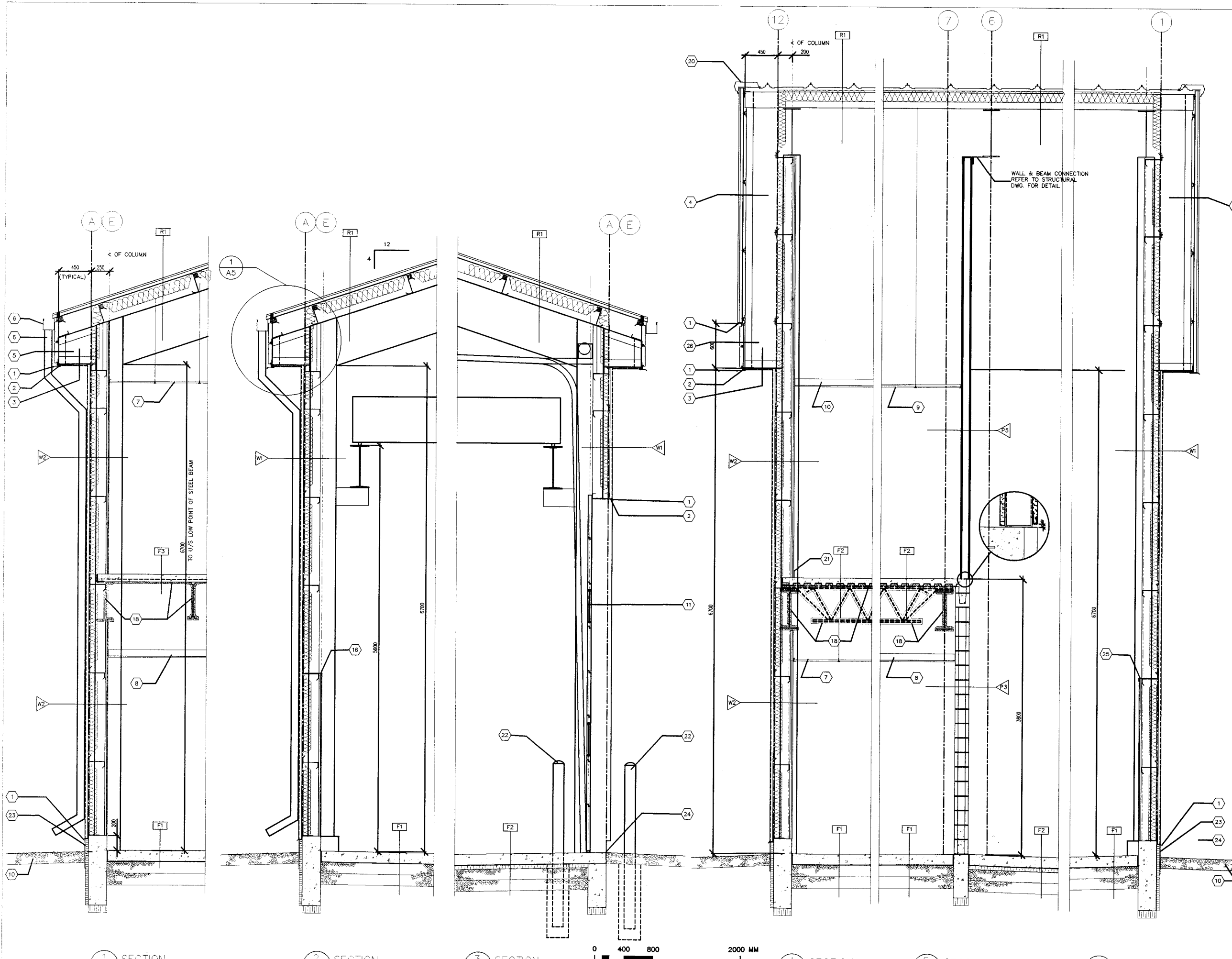
A detail no.  
no. du détail  
B location drawing no.  
sur dessin no.  
C drawing no.  
dessin no.

project project

GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing design  
BUILDING SECTIONS  
AND DETAILS

DESIGNED S.C. CONÇU  
DATE AUG. 29, 1995  
DRAWN E.R.W. DESSINÉ  
DATE  
REVIEWED EXAMINÉ  
DATE DECEMBER 22, 1995  
APPROVED APPROUVÉ  
DATE  
TENDER SOUMISSION  
PWC PROJECT MANAGER  
PROJECT NUMBER NO. DU PROJET  
626029



Public Works  
And  
Government Services  
Canada

Travaux publics  
et Services  
du gouvernement  
Canada

Architectural & Engineering Services  
Western Region

Agriculture  
Canada

GENERAL NOTES

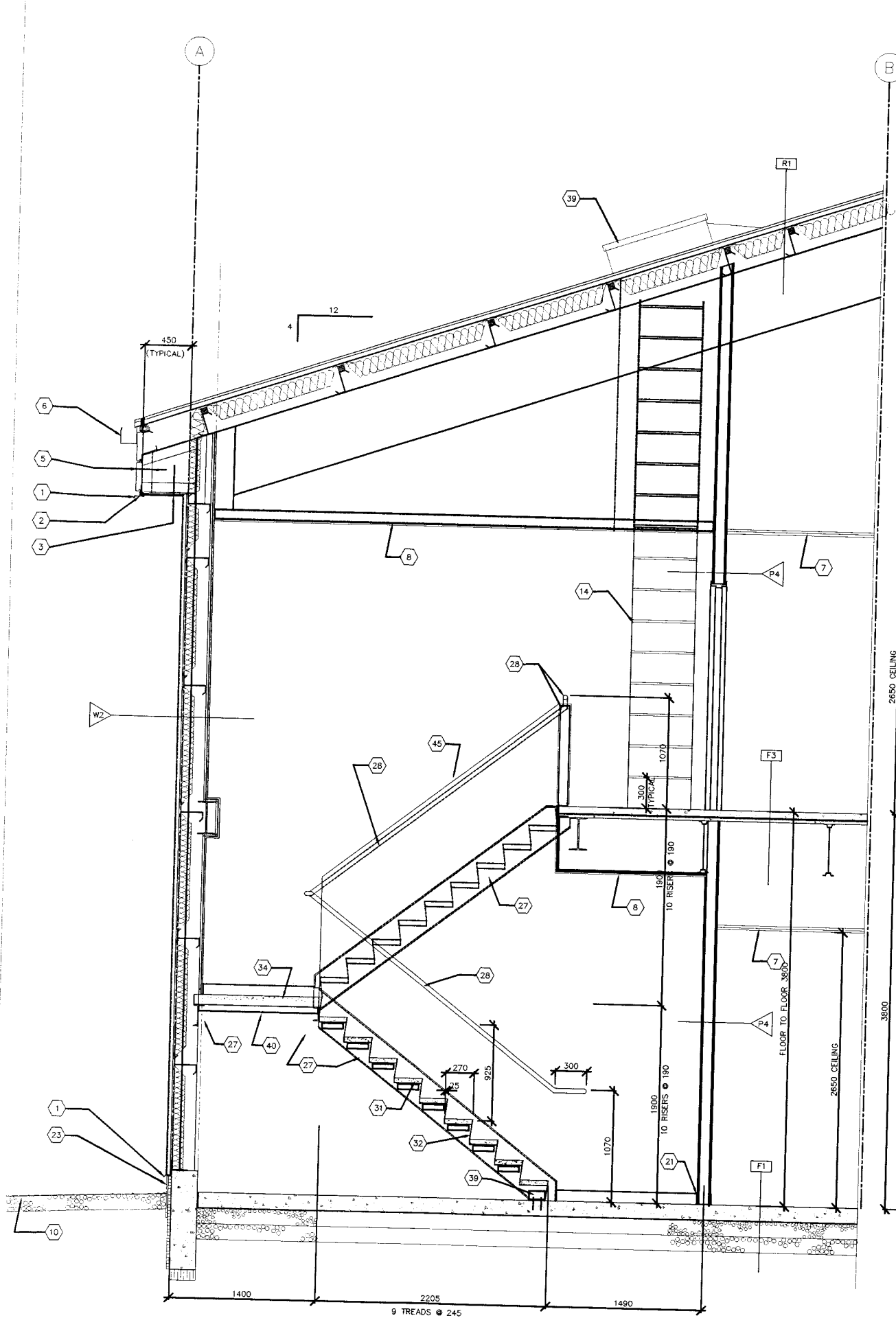
- 1 PRE-FINISHED METAL Drip FLASHING TO EXTEND UP BEHIND METAL SIDING
- 2 PRE-FINISHED METAL TRIM FLASHING
- 3 PRE-FINISHED METAL SOFFIT SECURED TO STEEL FRAMING BY BUILDING MANUFACTURER
- 4 GABLE END OVERHANG. PRE-FINISHED VERTICAL METAL SIDING SECURED TO STEEL FRAMING BY BUILDING MANUFACTURER
- 5 FASCIA BAND CONSTRUCTION. PRE-FINISHED HORIZONTAL METAL SIDING SECURED TO STEEL FRAMING BY BUILDING MANUFACTURER
- 6 PRE-FINISHED METAL EAVESTROUGH & DOWNSPOUT
- 7 SUSPENDED ACOUSTIC TILE "T-BAR" CEILING
- 8 SUSPENDED CEILING CONSTR. 15.9 mm G.W.B. ON M.S.S.
- 10 GRAVELLED APRON REFER TO SPECIFICATIONS FOR GRAVEL TYPE
- 11 OVERHEAD DOOR REFER TO DOOR SCHEDULE
- 18 2 HOUR FIRE PROTECTIVE SPRAY TO BEAMS, JOISTS AND U/S METAL DECK
- 20 PRE-FINISHED CAP FLASHING TRIM BY ROOF SUPPLIER
- 21 100 mm RUBBER BASE
- 22 150 mm ~ STEEL BUMPER POST CONCRETE FILLED C/W 400 mm~ CONC. PILE
- 23 13 mm PROTECTION BOARD 38 mm RIGID INSULATION CONT. OVER CONC. GRADE BEAM (TYPICAL)
- 24 90 X 90 X 8 mm GALVANIZED STEEL ANGLE CAST-IN CONC. GRADE BEAM C/W STUD ANCHORS
- 25 PRE-FINISHED METAL CAP TRIM OVER METAL LINER AND "Z"-GRITS
- 26 FASCIA BAND AS NOTED ON NOTE 5 TO WRAP AROUND GABLE END OVERHANG AND EXTEND TO A LENGTH OF 4800 mm(TYPICAL) REFER TO END ELEVATIONS

revision	date
A	
B	
C	

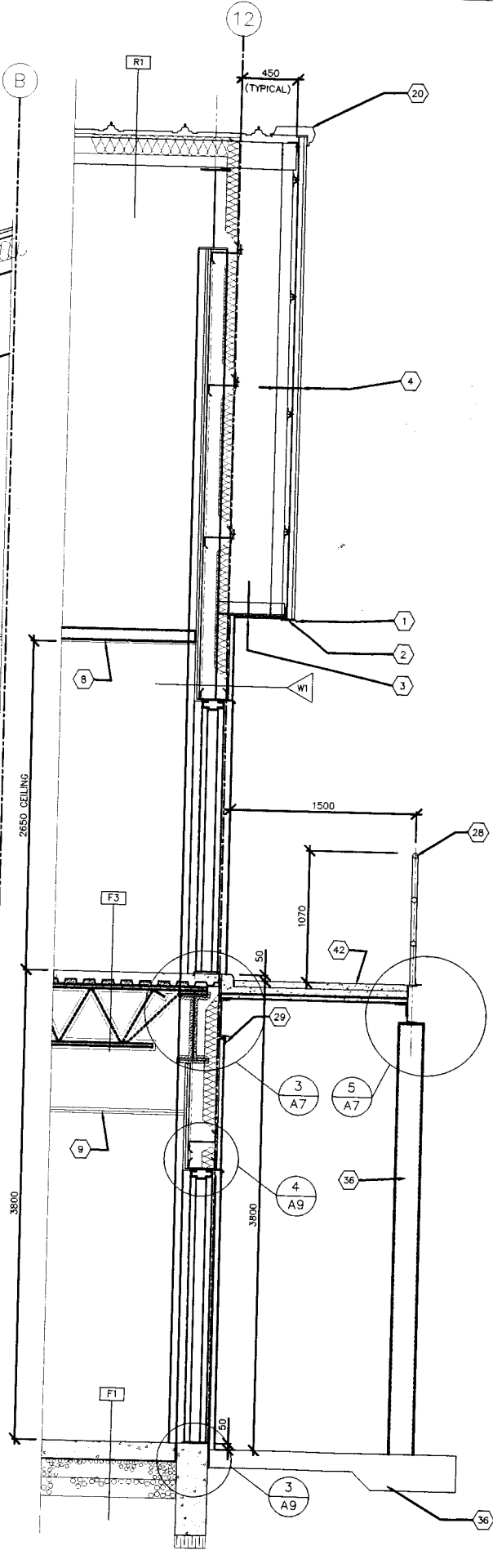
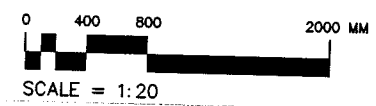
project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
WALL SECTIONS

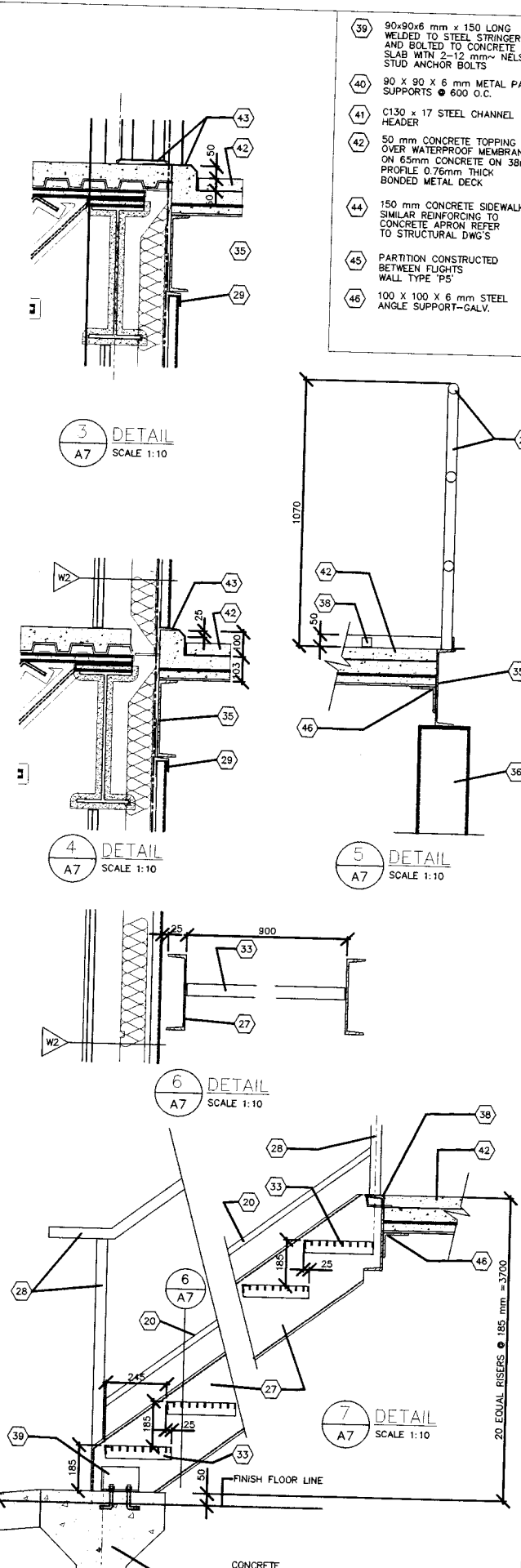
DESIGNED S.C. CONÇU  
DATE AUG. 29, 1995  
DRAWN E.R.W. DESSINÉ  
DATE  
REVIEWED EXAMINÉ  
DATE DECEMBER 22, 1995  
APPROVED APPROUVÉ  
DATE  
TENDER SOUMISSION  
PWC PROJECT MANAGER  
PROJECT NUMBER 626029

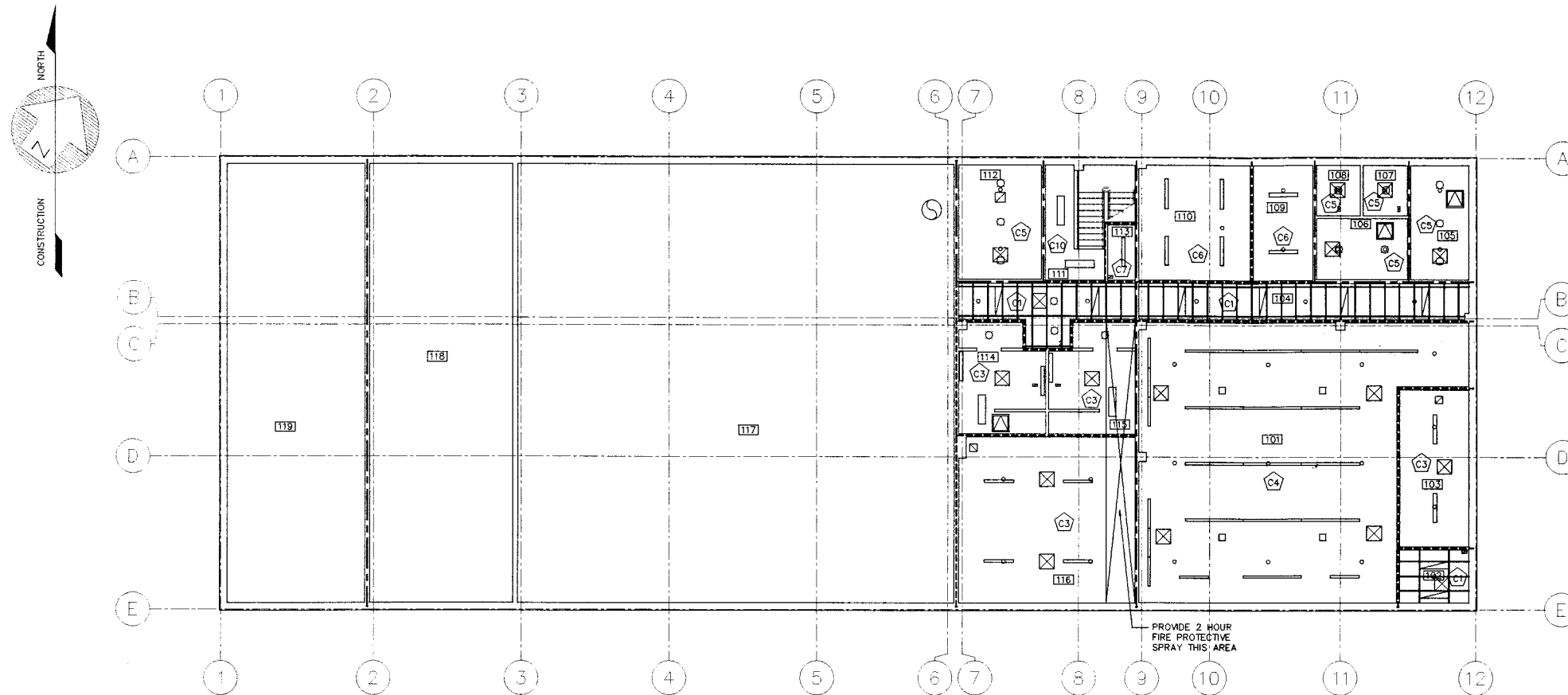


1 INTERIOR STAIR SECTION  
A7 SCALE 1:20

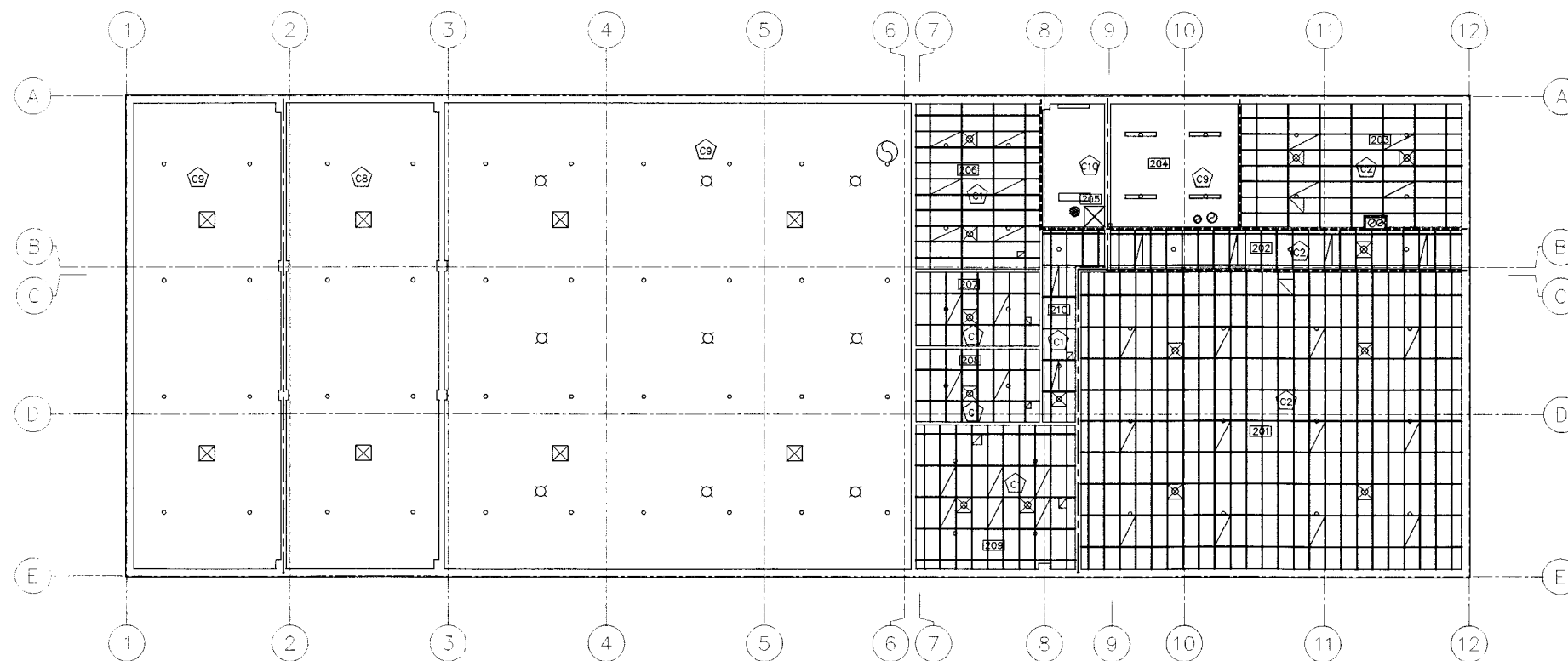


2 EXTERIOR STAIR SECTION  
A7 SCALE 1:20

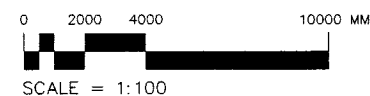




MAIN FLOOR REFLECTED CEILING PLAN  
SCALE 1:100



SECOND FLOOR REFLECTED CEILING PLAN



#### ROOM LEGEND

- 101 CARPENTRY SHOP
- 102 DRAFTING ROOM
- 103 TOOL STORAGE
- 104 CORRIDOR
- 105 PAINT STORAGE
- 106 PESTICIDE TRANSFER ROOM
- 107 HERBICIDE STORAGE
- 108 INSECTICIDE STORAGE
- 109 ELECTRICAL ROOM
- 110 MECHANICAL ROOM
- 111 STAIR #1
- 112 LUBRICANT STORAGE
- 113 JANITOR ROOM
- 114 MALE WASHROOM
- 115 FEMALE WASHROOM
- 116 GOODS STORAGE
- 117 VEHICLE AND EQUIPMENT MAINTENANCE BAY
- 118 WASHBAY
- 119 FIRE TRUCK AND GRADER BAY

#### FIRE RATING LEGEND

- 2 HOUR FIRE RATED WALL
- 1 HOUR FIRE RATED WALL

#### ROOM LEGEND

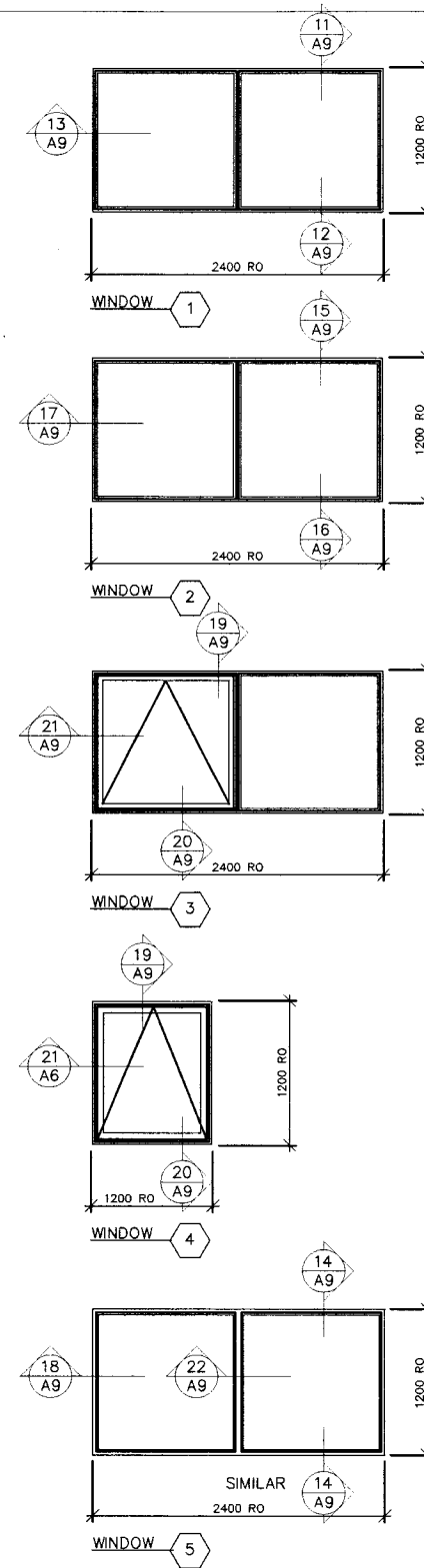
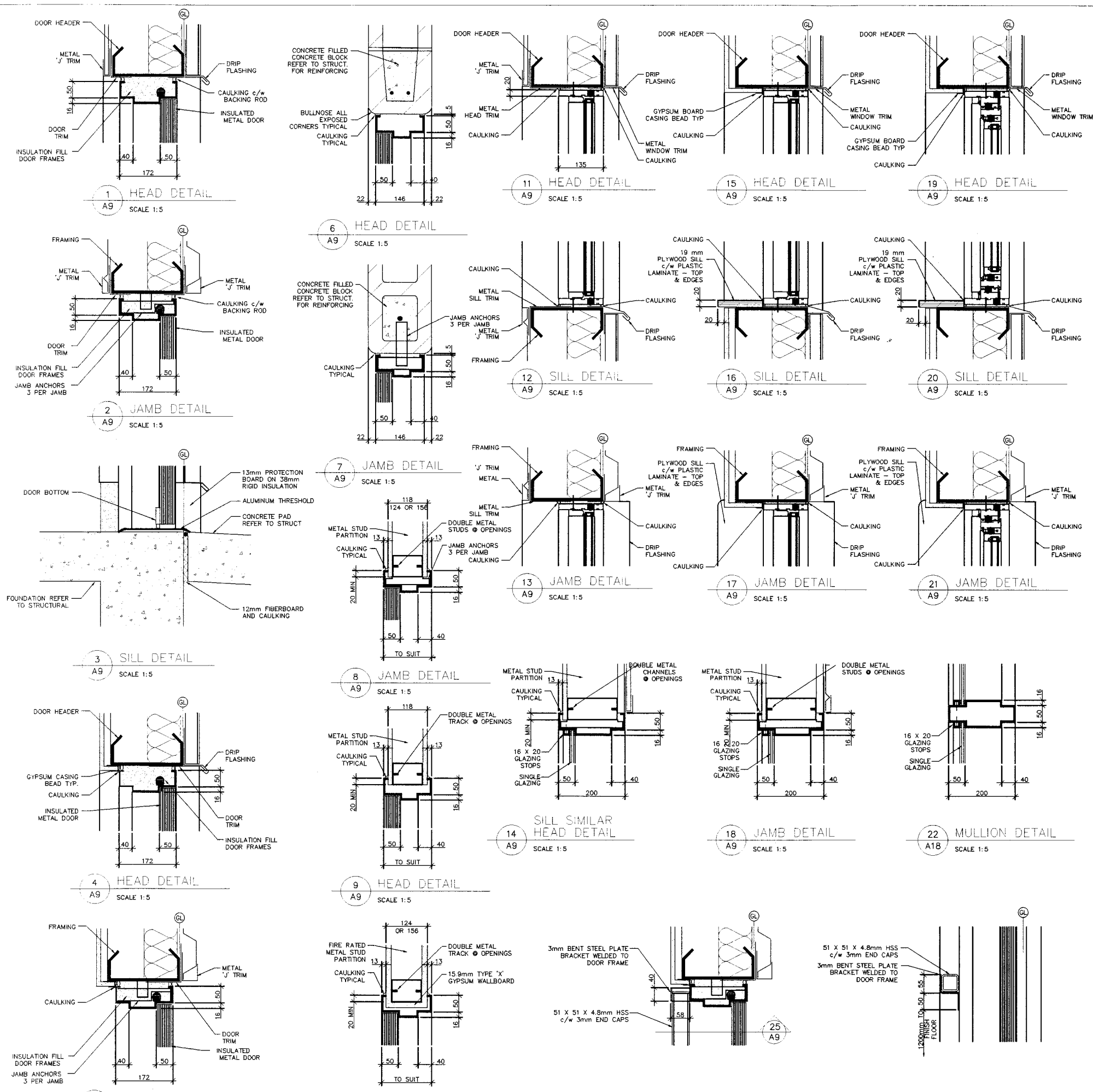
- 201 ARCHIVE STORAGE #1
- 202 CORRIDOR #1
- 203 ARCHIVE STORAGE #2
- 204 MECHANICAL ROOM
- 205 STAIR #1
- 206 GENERAL OFFICE
- 207 MANAGER'S OFFICE
- 208 COMPUTER ROOM
- 209 LUNCH/MEETING ROOM
- 210 CORRIDOR #2

#### CEILING LEGEND

- C1 SUSPENDED ACOUSTIC T-BAR  
CEILING TILE, 1200 X 1200 GRID  
MODULE - UNDERSIDE OF  
CEILING - 2650
- C2 SUSPENDED ACOUSTIC T-BAR  
CEILING TILE, 1200 X 1200 GRID  
MODULE - UNDERSIDE OF CEILING  
- 2650, FIRE RATED
- C3 12.7mm GYPSUM BOARD ON 92mm  
METAL FRAMING JOISTS @ 400mm o/c  
UNDERSIDE OF CEILING - 2650  
1 HOUR FIRE PROTECTIVE SPRAY  
TO UNDERSIDE OF STRUCTURE  
ABOVE
- C4 12.7mm GYPSUM BOARD ON 92mm  
METAL FRAMING JOISTS @ 400mm o/c  
UNDERSIDE OF CEILING - 3100  
1 HOUR FIRE PROTECTIVE SPRAY  
TO UNDERSIDE OF STRUCTURE  
ABOVE
- C5 12.7mm GYPSUM BOARD ON 92mm  
METAL FRAMING JOISTS @ 400mm o/c  
UNDERSIDE OF CEILING - 2650  
2 HOUR FIRE PROTECTIVE SPRAY  
TO UNDERSIDE OF STRUCTURE  
ABOVE
- C6 1 HOUR FIRE PROTECTIVE SPRAY  
TO UNDERSIDE OF STRUCTURE  
ABOVE
- C7 ONE HOUR RATED CONSTRUCTION  
ULC DESIGN NUMBER W506  
15.9mm TYPE 'X' GYPSUM WALLBOARD  
63.5mm C-H METAL STUDS @ 400 O.C.  
25mm FIREGAURD SHAFTLINER PANEL  
UNDERSIDE OF CEILING - 2650
- C8 PREFINISHED METAL CEILING  
BY BUILDING SUPPLIER  
ATTACHED TO STRUCTURE  
ELEVATION VARIES
- C9 EXPOSED BUILDING STRUCTURE  
ELEVATION VARIES  
REFER TO SPECS AND DETAILS
- C10 ONE HOUR FIRE RATED CEILING  
15.9mm TYPE 'X' GYPSUM BOARD  
ON 92mm METAL FRAMING JOISTS  
@ 400mm o/c. UNDERSIDE OF  
CEILING - 2650
- RECESSED FLOURESCENT FIXTURE  
REFER TO ELECTRICAL DRAWINGS
- SURFACE MOUNTED FLOURESCENT  
FIXTURE REFER TO ELECTRICAL  
DRAWINGS
- SMOKE OR HEAT DETECTOR  
REFER TO ELECTRICAL DRAWINGS
- ELECTRICAL PULL BOX  
REFER TO ELECTRICAL DRAWINGS
- CEILING MOUNT LIGHT FIXTURE  
REFER TO ELECTRICAL DRAWINGS
- SPRINKLER SYSTEM HEAD  
REFER TO MECHANICAL DRAWINGS
- DIFUSER PANEL  
REFER TO MECHANICAL DRAWINGS  
FOR SIZE AND TYPE
- DIFUSER PANEL  
REFER TO MECHANICAL DRAWINGS  
FOR SIZE AND TYPE
- RETURN AIR GRILLE  
REFER TO MECHANICAL DRAWINGS  
FOR SIZE AND TYPE
- ACCESS PANEL  
REFER TO MECHANICAL DRAWINGS  
FOR SIZE AND TYPE

Agriculture  
Canada

revision		date
A	A detail no.	A
B	B location drawing no.	B
C	C drawing no.	C
project		
GENERAL SERVICES BUILDING A.D.R.I. LETHBRIDGE, ALBERTA		
drawing		
MAIN & SECOND FLOOR REFLECTED CEILING PLANS		
DESIGNED		
DATE		
DRAWN		
DATE		
REVIEWED		
DATE		
APPROVED		
DATE		
TENDER		
PWC PROJECT MANAGER		
PROJECT NUMBER		
626029		
DRAWING NUMBER		
NO. DU DESSIN		



23 WINDOW ELEVATIONS  
SCALE 1:25

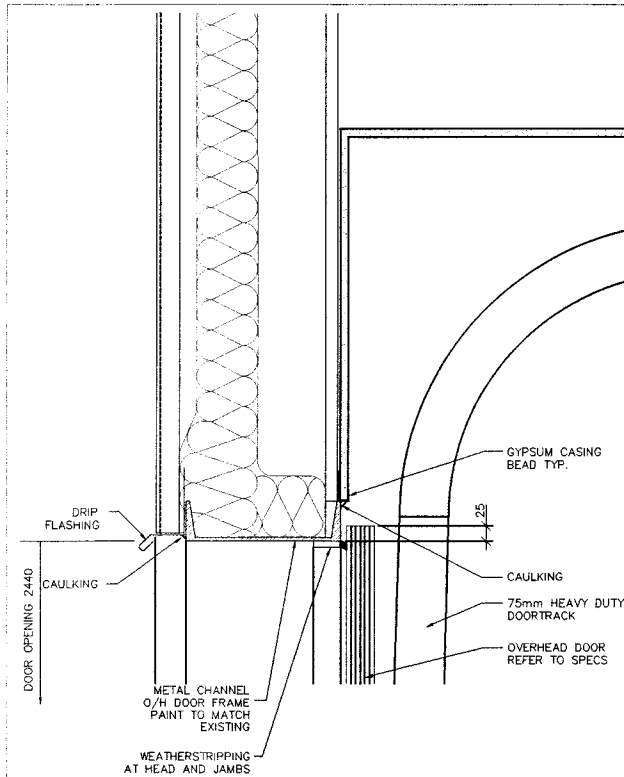
NOTE:  
REFER TO FLOOR PLANS W-A01 &  
W-A03 FOR LOCATION OF WINDOWS

Public Works  
And  
Government Services  
Canada  
Architectural & Engineering Services  
Western Region

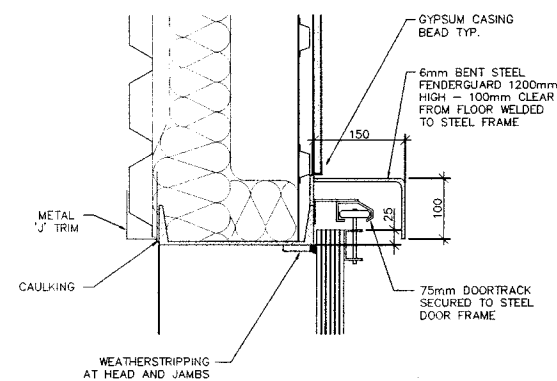
Agriculture  
Canada

revision	date
A	A
C	B/C
project	project
GENERAL SERVICES BUILDING A.D.R.I. LETHBRIDGE, ALBERTA	
drawing	design
DOOR AND WINDOW DETAILS	
DESIGNED	S.C. CONCU
DATE	AUG. 29, 1995
DRAWN	B.C. DESINE
DATE	
REVIEWED	EXAMINE
DATE	DECEMBER 22, 1995
APPROVED	APPROVE
DATE	
TENDER	SUBMISSION
PWC PROJECT MANAGER	
PROJECT NUMBER	NO. DU PROJET
626029	

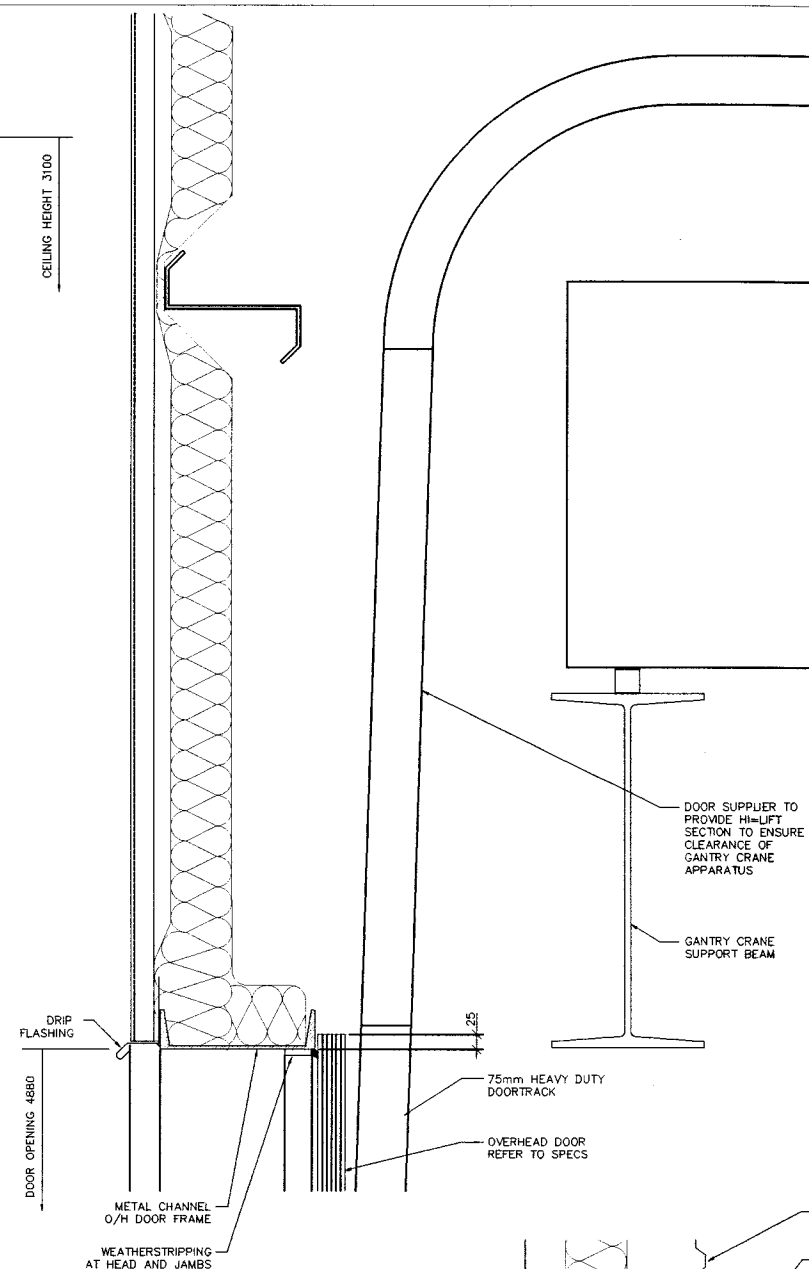




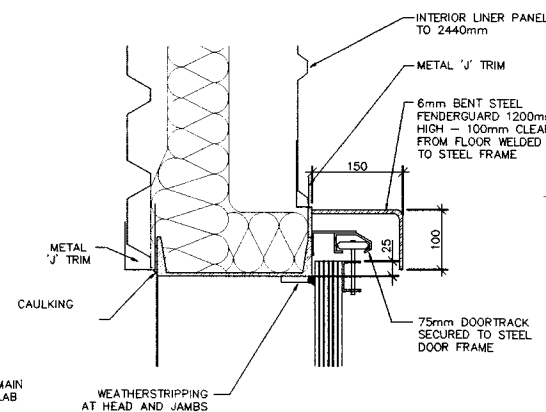
1 HEAD DETAIL  
A10 SCALE 1:5



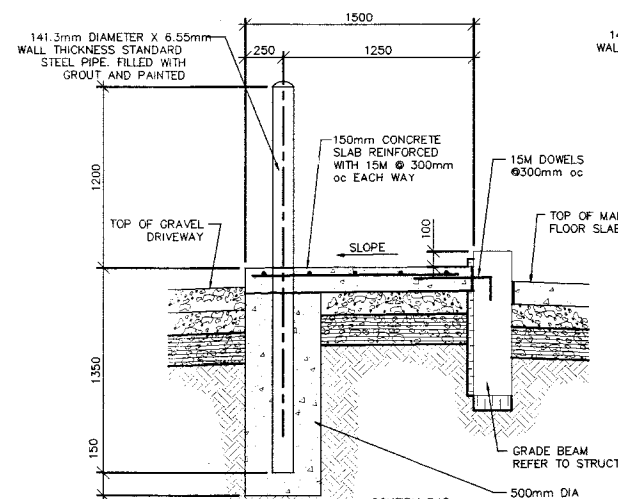
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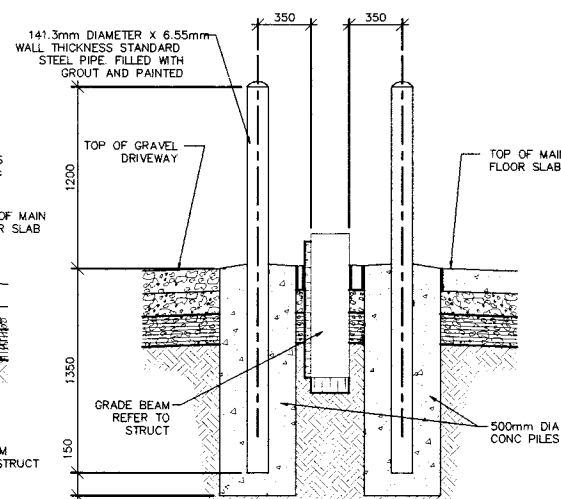
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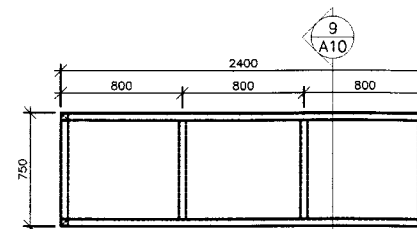
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A10 SCALE 1:5



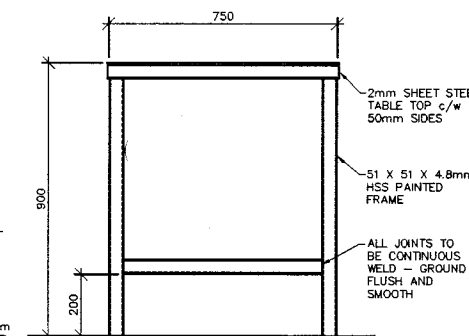
5 CONDENSER PAD SECTION  
A10 SCALE 1:20



6 STEEL BOLLARD DETAIL  
A10 SCALE 1:20

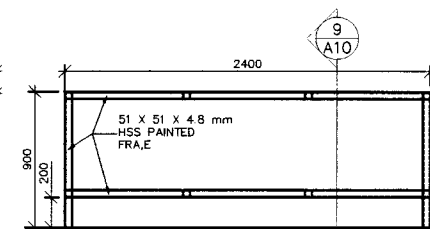


7 WELDING AREA ROOM 117 WORK TABLE  
A10 SCALE 1:20



8 JANITOR ROOM 113 SHELVEING DETAIL  
A2 SCALE 1:10

9 WELDING AREA ROOM 117 WORK TABLE  
A10 SCALE 1:10



ELEVATION

revision	date
A	detail no.
B	location drawing no.
C	drawing no.

project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
MISCELLANEOUS  
SECTIONS AND  
DETAILS

DESIGNED	S.C.	CONCU
DATE	AUG. 29, 1995	
DRAWN	B.C.	DESSINÉ
DATE		
REVIEWED		EXAMINÉ
DATE	DECEMBER 22, 1995	
APPROVED		APPROUVÉ
DATE		
TENDER		SOUSSION
PWC PROJECT MANAGER		
PROJECT NUMBER	626029	NO. DU PROJET
DRAWING NUMBER		NO. DU DESSIN



Agriculture  
Canada

KEYNOTES

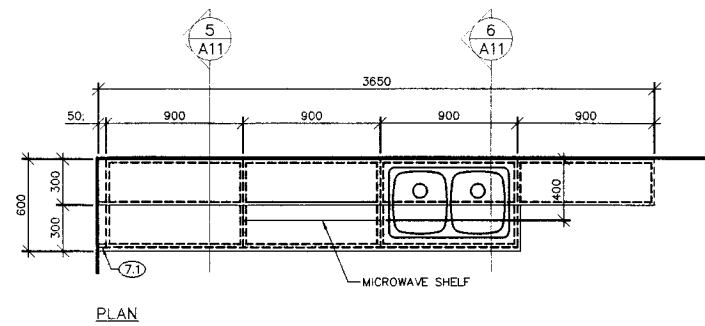
- 1.1 STAINLESS STEEL FINISH TOP & EDGES ON 19mm PLYWOOD. 19 X 89mm SUBFRAME.
- 1.2 PLASTIC LAMINATE FINISH ON ALL EXPOSED PLYWOOD SURFACES AND EDGES.
- 1.3 PLASTIC LAMINATE FINISH ON POST-FORMED 19mm PARTICLE BOARD TOP, WITH INTEGRAL SPLASHBOARD AND FRONT EDGE. 19 X 89mm SUBFRAME.
- 2.1 CABINET CONSTRUCTION: 19mm BIRCH PLYWOOD TOP, BOTTOM, GABLE ENDS, BULKHEAD DIVIDERS AND BASES. PROVIDE 2 - 19mm PLYWOOD LAYERS WHERE INDICATED. SOLID BIRCH EDGING WHERE INDICATED, VENEER EDGING TO ALL OTHER EXPOSED EDGES.
- 2.2 STAIN AND VARNISH FINISH TO ALL EXPOSED PLYWOOD SURFACES. VENEER EDGES. SOLID EDGING, AND TRIM AS PER SPECS.
- 2.3 PAINTED FINISH TO ALL EXPOSED PLYWOOD, VENEER EDGES, SOLID EDGING AND TRIM AS PER SPECS.
- 3.1 DRAWER CONSTRUCTION: 19mm BIRCH PLYWOOD FRONT, 12mm BIRCH PLYWOOD SIDES, BACK AND SUB-FRONT. 6mm BIRCH PLYWOOD BOTTOM. 10mm SOLID BIRCH EDGING FOR DRAWER FRONTS. PROVIDE 19 X 89mm PLYWOOD SUBFRAME BELOW DRAWERS WITH 19mm PLYWOOD DIVIDER SUPPORTS BETWEEN PAIRS OF DRAWERS.
- 4.1 DOOR CONSTRUCTION: 19mm BIRCH PLYWOOD DOORS WITH 10mm SOLID BIRCH EDGING.
- 5.1 SHELF CONSTRUCTION: 19mm BIRCH PLYWOOD SHELVES WITH 10mm SOLID BIRCH EDGES 2 SIDES. PROVIDE ADJUSTABLE METAL BRACKETS AND CLIPS AS INDICATED.
- 5.2 SHELF CONSTRUCTION: 19mm BIRCH PLYWOOD SHELVES WITH 20 X 50mm SOLID BIRCH SET IN FRONT EDGE.
- 6.1 CABINET BACKS: 6mm BIRCH PLYWOOD ON 19 X 89mm @ 400mm oc SUB-FRAME.
- 7.1 ADJACENT FINISH ON 19mm PLYWOOD FILLER STRIP OR FILLER PANEL SIZED TO SUIT.
- 7.2 20 X 30mm CLEATS

revision		date
A	A detail no. no. du detail	A
B	B location drawing no. sur dessin no.	B
C	C drawing no. dessin no.	C

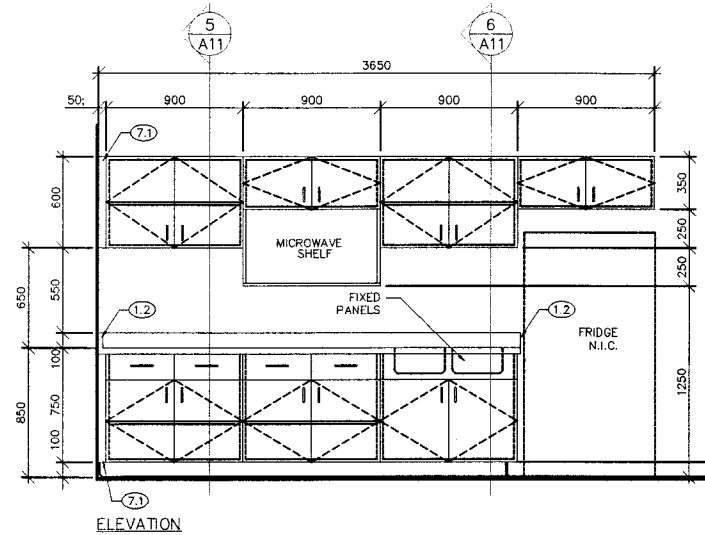
project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
MILLWORK PLANS  
ELEVATIONS AND  
SECTIONS

DESIGNED	S.C.	CONÇU
DATE	AUG. 29, 1995	
DRAWN	B.C.	DESSINÉ
DATE		
REVIEWED		EXAMINÉ
DATE	DECEMBER 22, 1995	
APPROVED		APPROUVÉ
DATE		
TENDER		SOUSSION
PMC PROJECT MANAGER		
PROJECT NUMBER	NO. DU PROJET	
	626029	
DRAWING NUMBER	NO. DU DESSIN	

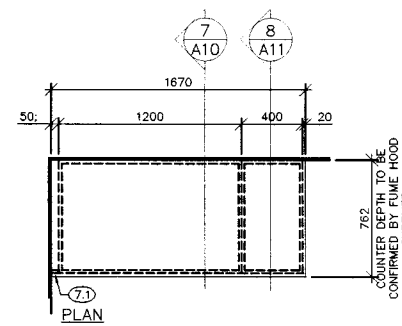


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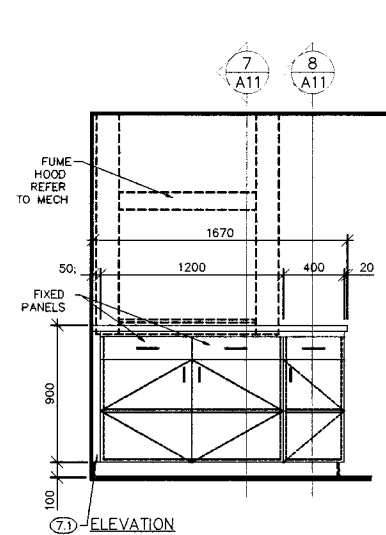


ELEVATION

1 LUNCH/MEETING ROOM 209  
A2 COUNTER PLAN & ELEVATION  
SCALE 1:20

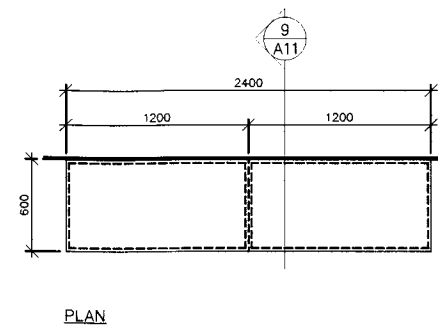


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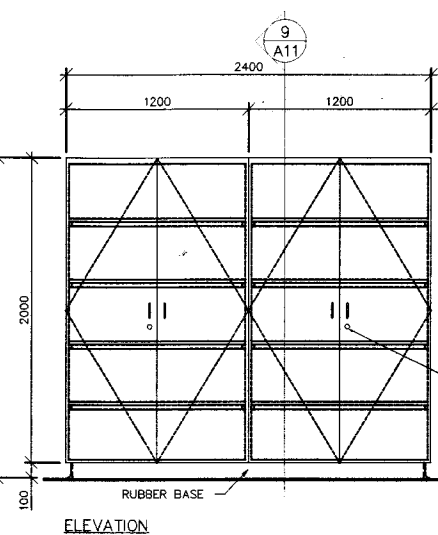


ELEVATION

2 PESTICIDE TRANSFER 106  
A2 COUNTER PLAN & ELEVATION  
SCALE 1:20

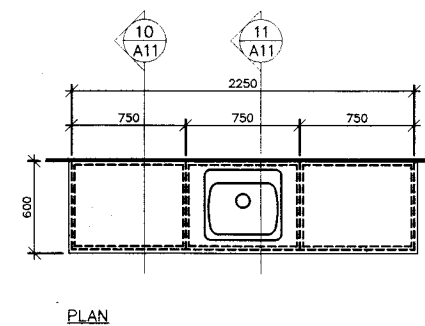


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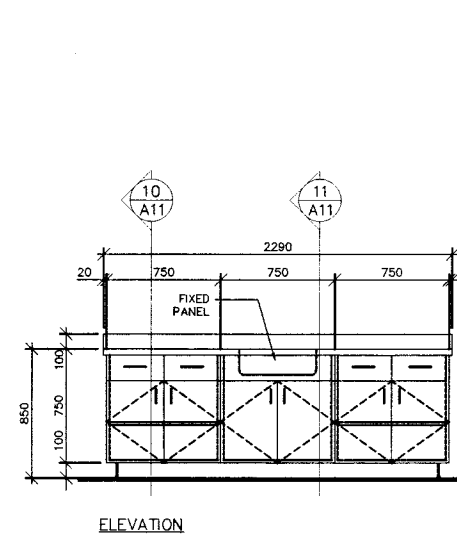


ELEVATION

3 WELDING AREA TOOL CABINET 117  
A2 PLAN & ELEVATION  
SCALE 1:20

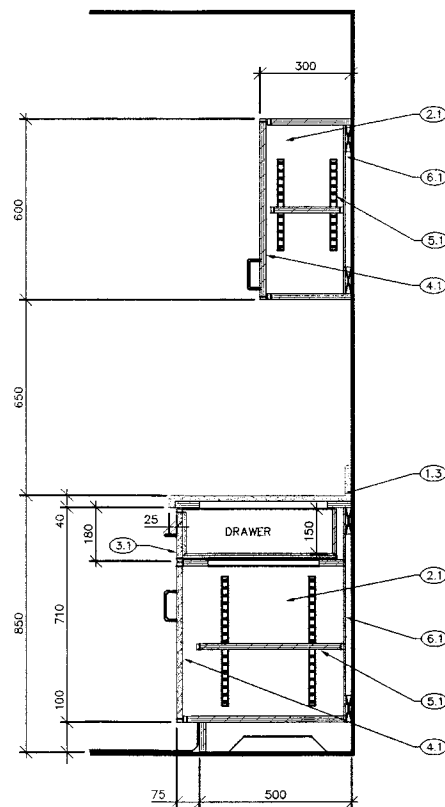


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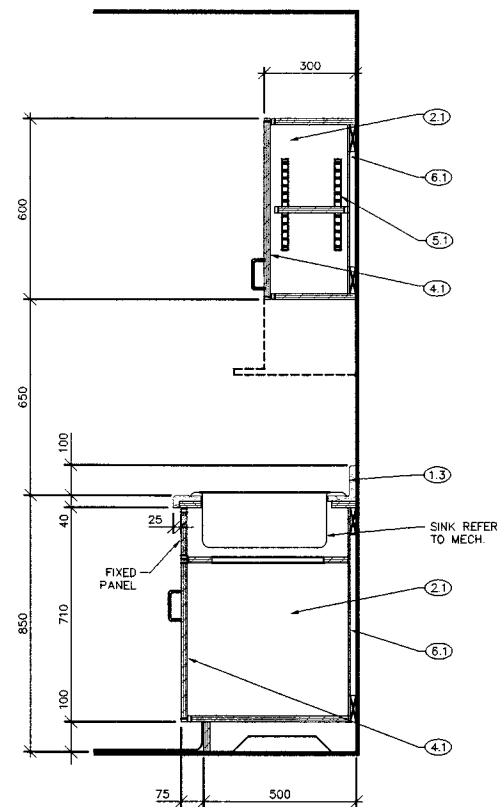


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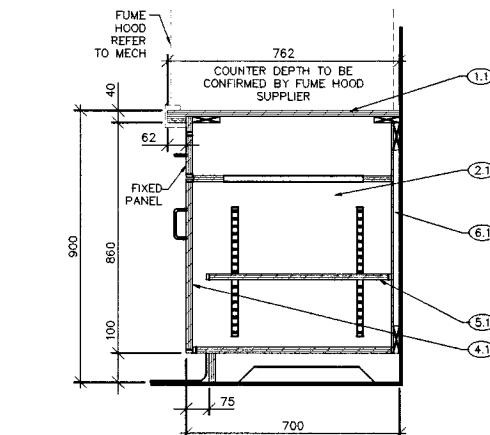
4 CARPENTRY SHOP 101  
A2 PLAN & ELEVATION  
SCALE 1:20



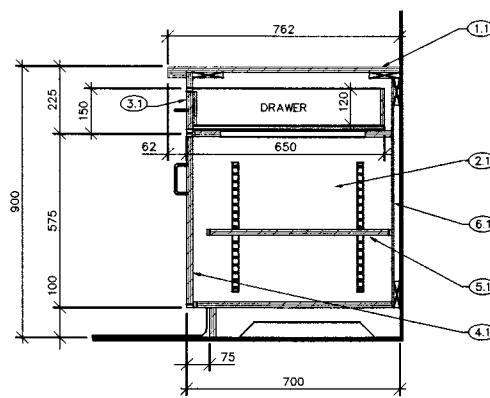
5 LUNCH/MEETING ROOM 209  
A11 SECTION



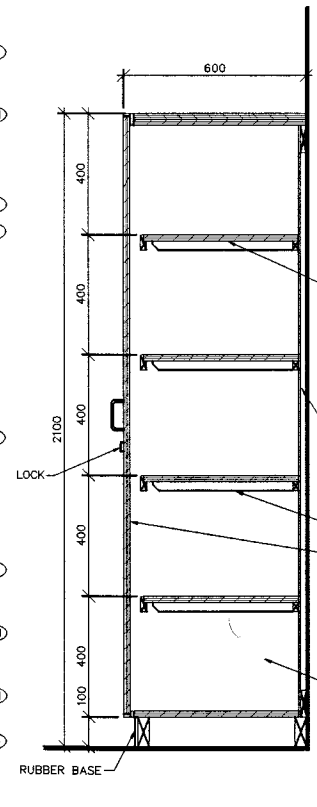
6 LUNCH/MEETING ROOM 209  
A11 SECTION



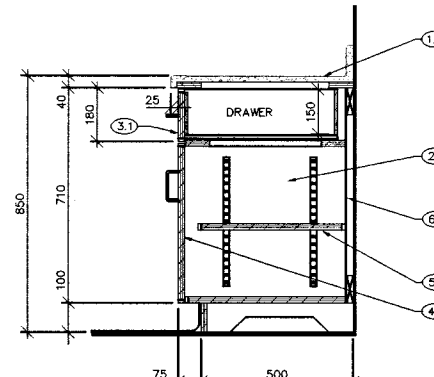
7 PESTICIDE TRANSFER 106  
A11 SECTION  
SCALE 1:10 (2.2) (2.3)



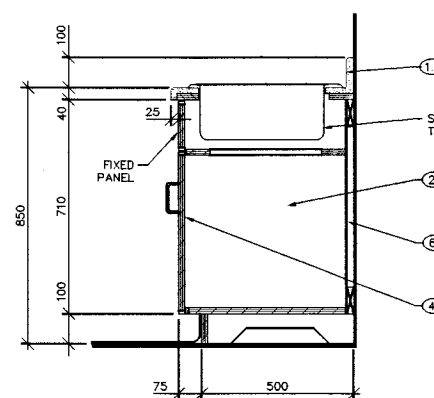
8 PESTICIDE TRANSFER 106  
A11 SECTION



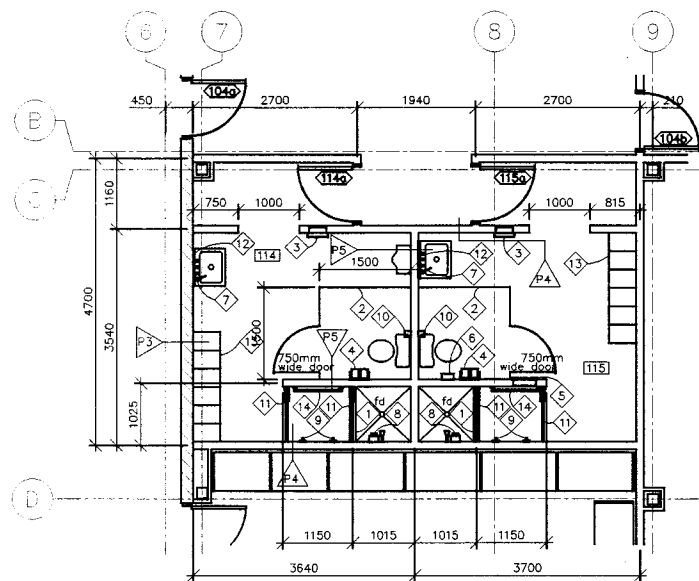
9 WELDING AREA TOOL CABINET 117  
A11 SECTION



10 CARPENTRY SHOP 101  
A11 SECTION  
SCALE 1:10 (2.2) (2.3)



11 CARPENTRY SHOP 101  
A11 SECTION

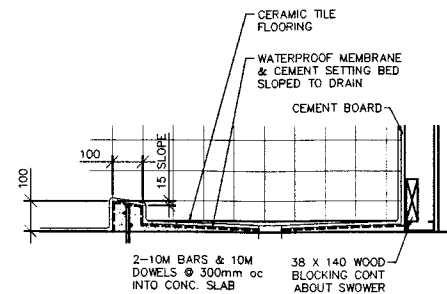


1 WASHROOM PLAN  
A2 SCALE 1:50

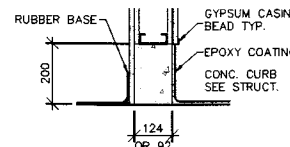
WASHROOM ACCESSORIES LEGEND

- 1 SHOWER CURB - REFER TO DETAIL 2/A12
- 2 METAL TOILET PARTITIONS
- 3 SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE MOUNTING HEIGHT 1600mm TO TOP OF UNIT
- 4 SURFACE MOUNTED DOUBLE ROLL TOILET PAPER DISPENSER MOUNTING HEIGHT 600mm TO CENTER OF UNIT
- 5 SEMI-RECESSED SANITARY NAPKIN/TAMPON VENDOR MOUNTING HEIGHT 1400mm TO TOP OF UNIT
- 6 SURFACE MOUNTED SANITARY NAPKIN DISPOSAL UNIT MOUNTING HEIGHT 600mm TO TOP OF UNIT
- 7 SINK MOUNTED LIQUID SOAP DISPENSER
- 8 SURFACE MOUNTED SOAP DISH MOUNTING HEIGHT 1000mm TO CENTER OF UNIT
- 9 ROBE HOOK MOUNTING HEIGHT 1675 TO CENTER
- 10 SURFACE MOUNTED DEODORANT BLOCK FIXTURE MOUNTING HEIGHT 2300mm TO TOP OF UNIT
- 11 SHOWER ROD AND CURTAIN AS SPECIFIED
- 12 MIRROR - 600mm WIDE X 900mm HIGH c/w STAINLESS STEEL FRAME MOUNTING HEIGHT 1000mm TO BOTTOM
- 13 LOCKERS - REFER TO SPECS
- 14 TOWEL BAR - 750mm LONG MOUNTING HEIGHT 1000 TO CENTER

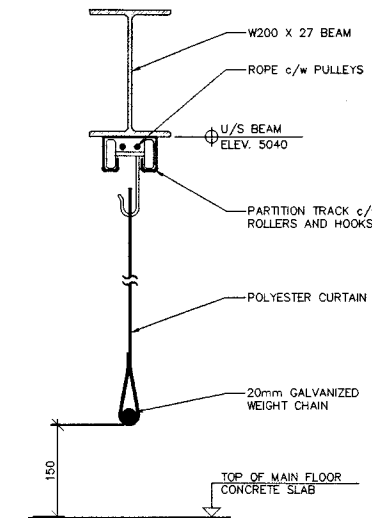
NOTE  
PROVIDE ADDITIONAL LAYER CEMENT BOARD BEHIND CERAMIC TILES IN SHOWER STALLS AND DRYING AREAS ALONG FIRE RATED PARTITION. SUBSTITUTE CEMENT BOARD FOR GYPSUM BOARD BEHIND CERAMIC TILES IN REMAINDER OF SHOWER STALLS AND DRYING AREAS.



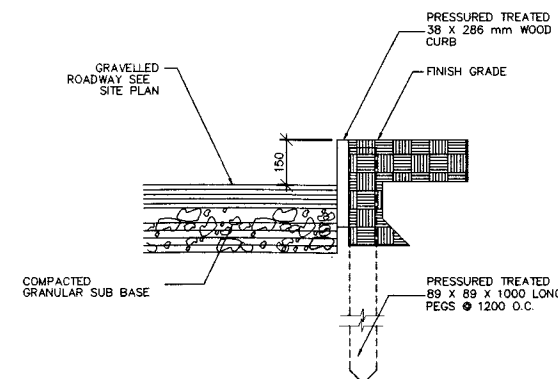
3 TYPICAL SHOWER CURB  
A12 SCALE 1:10



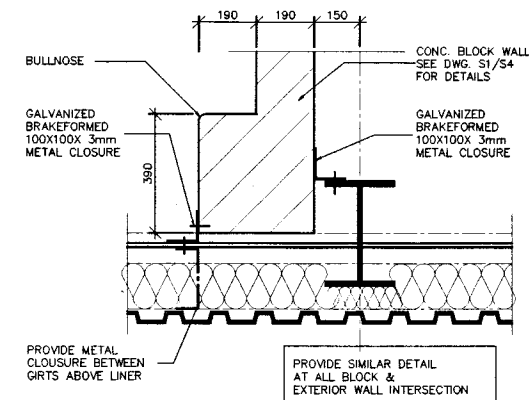
4 CONTAINMENT CURB DETAIL  
A02 ROOMS 105, 106, 107, 108, 112  
SCALE 1:10



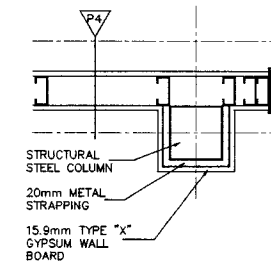
5 WASH BAY DIVIDER DETAIL  
A12 SCALE 1:5



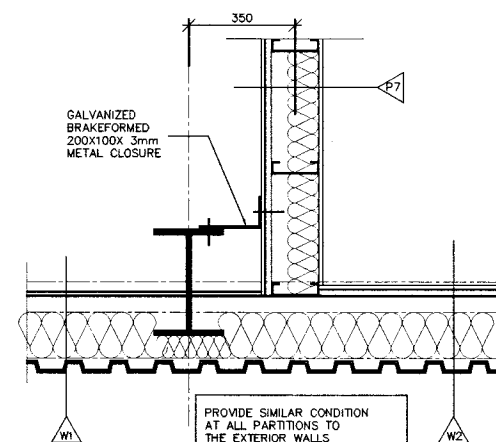
9 CURB SECTION  
A01 SCALE 1:10



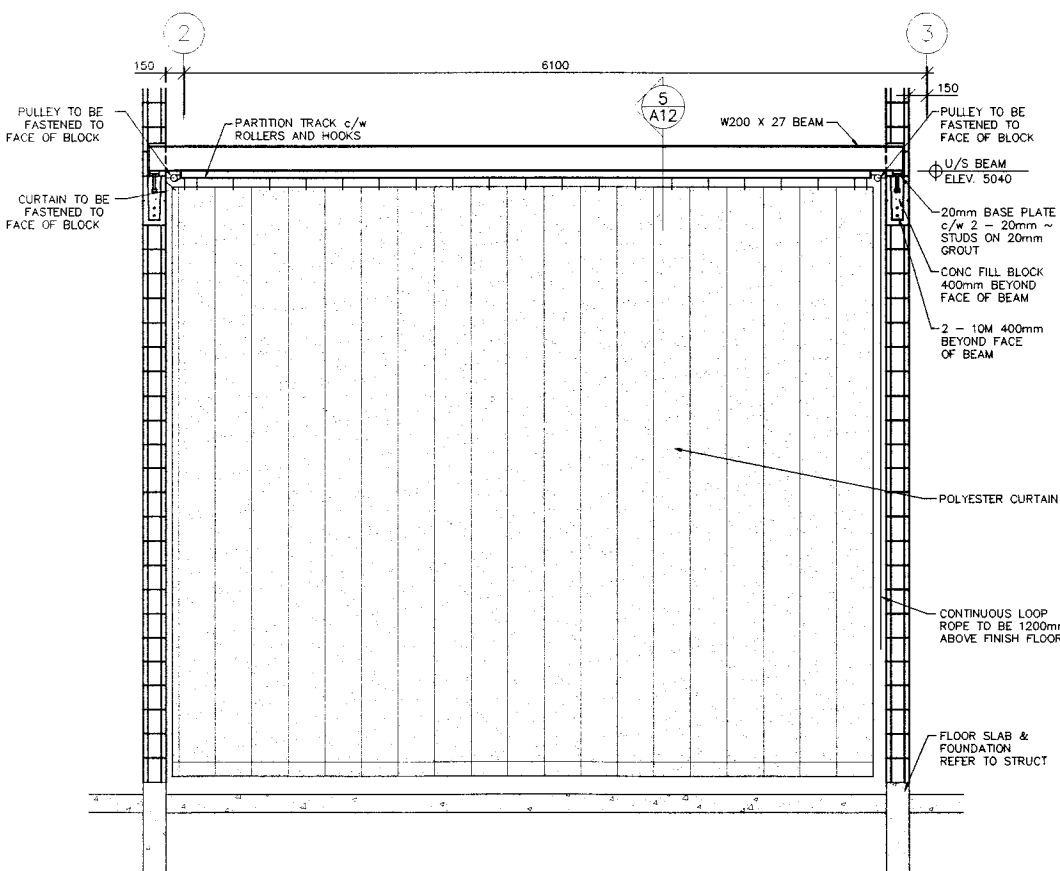
6 DETAIL  
A02 SCALE 1:10



7 DETAIL  
A02 SCALE 1:10

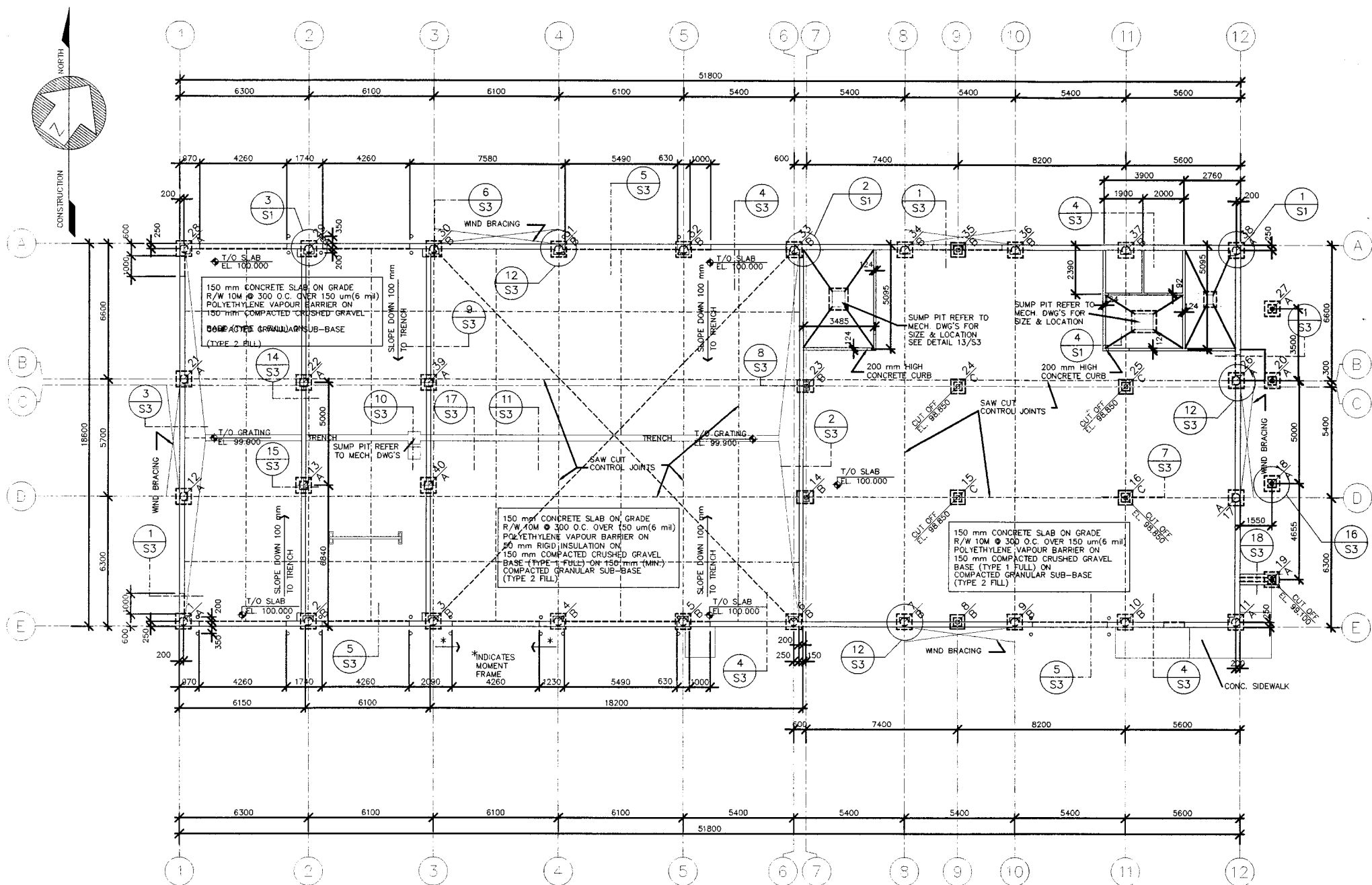


8 DETAIL  
A03 SCALE 1:10

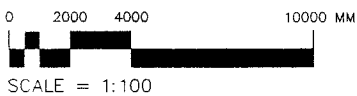


2 WASHBAY DIVIDER ELEVATION  
A2 SCALE 1:25

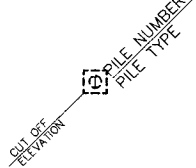
revision		date
A	detail no. no. du détail	A
B	location drawing no. sur dessin no.	B
C	drawing no. dessin no.	C
project	GENERAL SERVICES BUILDING A.D.R.I. LETHBRIDGE, ALBERTA	
drawing	WASHROOM LAYOUT AND MISCELLANEOUS DETAILS	
DESIGNED	S.C.	CONCU
DATE	AUG. 29, 1995	
DRAWN	B.C.	DESSINÉ
DATE	DECEMBER 22, 1995	
REVIEWED		EXAMINÉ
APPROVED		APPROUVÉ
DATE		
TENDER		SOUSSION
PWC PROJECT MANAGER		
PROJECT NUMBER	626029	NO. DU PROJET
DRAWING NUMBER		NO. DU DESSIN



FOUNDATION PLAN

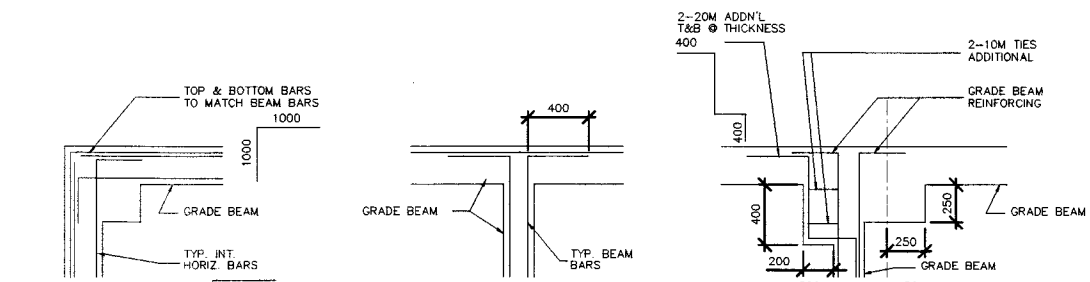


PILE LEGEND



NOTE:

-MAIN FLOOR ELEVATION = 100.000, REFERS TO SITE DATUM. REFER TO SITE PLAN.  
-UNLESS NOTED OTHERWISE, PILE CUT-OFF ELEV.=98.700



1 TYP. HOR. CORNER BAR DETAIL

2 TYP. T-INTERSECTION BAR DETAIL

3 TYP. HOR. @ PILASTER BAR DETAIL

4 CRUB DETAIL SCALE 1:20

5 CONTROL JOINT DETAIL SCALE 1:5

GENERAL NOTES:

- DESIGN IS IN ACCORDANCE WITH NATIONAL BUILDING CODE 1990 AND ALBERTA BUILDING CODE 1991.
- STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND WITH THE SPECIFICATIONS.
- MAIN FLOOR ELEVATION = 100.000 REFERS TO SITE DATUM. REFER TO SITE PLAN. ALL DIMENSIONS ARE IN MILLIMETER.
- REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. REFER TO THE DRAWINGS OF OTHER DISCIPLINES TO CONFIRM SIZE AND LOCATION OF ALL OPENINGS AND NOTIFY ENGINEER PRIOR TO PROCEEDING IF CONDITION DIFFER SIGNIFICANTLY BETWEEN DRAWINGS.
- FOR EXCAVATION, BACKFILLING AND COMPACTION-REFER TO THE SPECIFICATIONS.
- PIILING:
  - ALL PILES SHALL BE STEEL H-PILES AS PER PILE SCHEDULE. DRIVEN TO PRACTICAL REFUSAL DOWN TO CLAYSTONE BEDROCK.
  - IT IS ANTICIPATED THAT PRACTICAL REFUSAL FOR PILES SHALL BE ACHIEVED AT AN APPROXIMATE DEPTH OF 17.00 m BELOW EXISTING GRADE. PILE TIP ELEVATION SHALL BE ASSUMED AT ELEVATION 82.00 (WITH REFERENCE TO 100.000 FOR MAIN FLOOR) FOR TENDER PURPOSE. REFER TO ELSE WHERE IN THE CONTRACT DOCUMENTS FOR PROVISIONS FOR VARIATIONS IN PILE DEPTHS DUE TO ACTUAL SITE CONDITIONS.
  - REFER TO THE SPECIFICATIONS FOR TEST HOLE DATA AND PILE DRIVING REQUIREMENTS.
  - PILE TIP SHALL BE PROTECTED WITH DRIVING SHOE TO BE APPROVED BY ENGINEER.

PILE SCHEDULE

PILE No.	TYPE	SIZE	DRIVING ENERGY KJ	PILE CAPACITY (KN)	REFUSAL CRITERIA
-	A	HP 200x54	27.5	335	10 BLOWS / 25 mm PENETRATION TO BE ESTABLISHED FOR LAST 150 mm PENETRATION.
-	B	HP 250x62	30	445	
-	C	HP 310x79	35	670	

- CONCRETE:
  - ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS AND CAN/CSA-A23.1-M90 COLD WEATHER REQUIREMENTS OF THE SPECIFICATIONS MUST BE STRICTLY ADHERED TO.
  - PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1-M90 ALTERNATIVE 1, TO GIVE THE FOLLOWING PROPERTIES:

LOCATION	CEMENT TYPE	f <sub>c</sub> (28 DAY) (MPa)	MAX. AGG. (mm)	SLUMP (mm)	AIR CONT. %
GRADE BEAMS, PILE CAPS, CURB	10	25	20	75 +/- 25	4 - 6
INTERIOR SLAB ON GRADE	10	25	20	50 to 75	4 - 6
CONCRETE BLOCK CORE FILL	10	20	10	100 TO 125	NIL
EXTERIOR SIDEWALKS, APRON SLABS AND PADS	10	30	20	50 TO 75	4 - 6

NOTE: ALL SLABS, APRONS FINISHED WITH DRY SHAKE HARDENER TO CONTAIN ARTIFICIALLY ENTRAINED AIR HARDENER AS RECOMMENDED BY HARDENER MANUFACTURER.

- CONCRETE SLAB ON GRADE SHALL BE POURED IN CHECKER BOARD PATTERN IN AREAS AS INDICATED ON PLAN. (Ø GRID SPACING OF APPROXIMATELY 3.0 m) ALTERNATELY, SAW CUT SLAB AT LOCATIONS SHOWN TO A DEPTH OF 30 mm WITHIN 24 HOURS OF CASTING AND CAULK WITH SEALANT. CUT ALTERNATE BARS AT ALL JOINT LINES.
- REINFORCING STEEL:
  - REINFORCING STEEL SHALL BE DEFORMED BARS GRADE 400 EXCEPT FOR TIES AND STIRRUPS WHICH SHALL BE GRADE 300. ALL CONFORMING TO CSA G30.12-M77. WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT SHALL CONFORM TO CSA G30.5-M83.
  - MINIMUM CONCRETE COVER FOR REINFORCEMENT:
    - CONCRETE POURED AGAINST EARTH 75 mm
    - FORMED SURFACE IN CONTACT WITH SOIL 50 mm
    - PIERS, GRADE BEAMS 40 mm
    - SLAB ON GRADE 40 mm FROM TOP FACE 30 mm
  - ALL REINFORCING BARS TO BE CONTINUOUS, UNLESS NOTED OTHERWISE. LAP BARS WHERE NOTED ON DRAWINGS. OTHERWISE LAP TOP BARS AT MIDSPAN, BOTTOM BARS AT SUPPORT AS REQUIRED FOR LENGTH, UNLESS NOTED OTHERWISE. LAP BARS A MINIMUM OF 40 DIA. AT SPLICES AND CORNERS.
  - UNLESS OTHERWISE NOTED PROVIDE 2-15M TOP AND BOTTOM (AT SLAB) OR EACH FACE (AT WALL) ON ALL SIDES OF OPENINGS THRU SLABS AND WALLS. BARS TO EXTEND 600 mm BEYOND CORNERS OR PROVIDE HOOKS WHERE THIS IS NOT POSSIBLE.
- VOID FORM-BIODEGRADABLE 100 mm DEEP. STRUCTURALLY SUFFICIENT TO SUPPORT WEIGHT OF CONCRETE AND OTHER SUPERIMPOSED LOADS WITHOUT COLLAPSING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO SUPPORT THESE LOADS AFTER WHICH FORM MUST PROMPTLY DEGRADE.
- PRE-ENGINEERED STEEL BUILDING TO BE DESIGNED FOR THE LOADS INDICATED WITH STRAIGHT COLUMNS. THE DESIGN SHALL ALLOW FOR DEAD AND LIVE LOADS FROM SECOND FLOOR BETWEEN GRID LINE 7 & 12 AND GANTRY CRANE LOADS BETWEEN 1 & 6 TO BE CARRIED BY BUILDING FRAME SYSTEM. STEEL BUILDING TO BE COMPLETE WITH RIGID FRAME, BEAMS, COLUMNS, GANTRY CRANE SUPPORT BRACKETS, PURLINS, GIRTS, FASCIA FRAMING, BRACING, CLADDING CONNECTIONS (INCLUDING ALL SECOND FLOOR CONNECTIONS) AND ANCHOR BOLTS AS NECESSARY. METAL BUILDING TO BE DESIGNED AND FABRICATED IN ACCORDANCE WITH CSSIB STANDARD AND ALSO INCORPORATING ALL THE REQUIREMENTS OF THE DRAWINGS AND THE SPECIFICATIONS.

- SPECIFIED DESIGN LOADS:
  - ROOF: S<sub>s</sub> = 1.1 kPa S<sub>r</sub> = 0.1
  - GANTRY CRANE - 3000 Kg CAPACITY BETWEEN GRID LINE 7 TO 12. SPAN 18.1 m BETWEEN COLUMN <
  - 2nd FLOOR: - LIVE LOAD 7.2 kPa
  - & EXTERIOR DEAD LOAD 2.7 kPa
  - STAIR
  - MAIN FLOOR: - LIVE LOAD 12.0 kPa
  - WIND LOAD: - q/30 0.76 kPa

- MASONRY:
  - CONCRETE BLOCK MASONRY UNITS FOR WALLS SHALL CONFORM TO CSA A165.1-M85 AND SHALL HAVE THE CLASSIFICATION H/15/C/M.
  - MORTAR MIX FOR BLOCK MASONRY TO BE TYPE S CONFORMING TO CSA A179-M76 GROUT FOR CORE FILLS SHALL CONFORM TO CSA A179-M76, TABLE 3.
  - MASONRY CORES WITH VERTICAL REINFORCING TO BE GROUT FILLED AND BOND BEAMS & UNTELS SHALL BE FILLED WITH 20 MPa CONCRETE. AS SPECIFIED HORIZONTAL REINFORCING IN MASONRY BED JOINTS @ 400mm oc VERTICALLY (EVERY SECOND COURSE)
- STRUCTURAL STEEL, STEEL JOISTS AND METAL DECK:
  - STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21. ROLLED SHAPES AND PLATES TO BE GRADE 300 W AND HSS TO BE GRADE 350 W. CLASS C. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CAN/CSA-S16.1-M89.
  - ALL OPEN WEB STEEL JOISTS AND BRACING SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA-S16.1-M89 AND TO DETAILS INDICATED ON DRAWING AND THE SPECIFICATIONS. JOISTS SHALL BE DESIGNED FOR LOADS (LIVE, DEAD & ANY OTHER ADDITIONAL CONCENTRATED) AS INDICATED. DESIGN JOISTS FOR A MAXIMUM LIVE LOAD DEFLECTION OF SPAN/360 AND A MAXIMUM TOTAL LOAD DEFLECTION OF SPAN/300. JOISTS SHALL BE WELDED TO THE SUPPORTS.
  - COMPOSITE FLOOR STEEL DECK SHALL BE EMBOSSED, GALVANIZED (Z275) 38 mm DEEP PROFILE x 0.76 mm MINIMUM THICKNESS. STEEL DECK SHALL SAFELY CARRY ALL DESIGN LOADS INDICATED AND ANY ADDITIONAL LOAD THAT MAY BE PRESENT DURING CONSTRUCTION. LENGTH OF DECKING SHALL BE 3 OR MORE SPAN CONTINUOUS. NUMBER OF

Public Works  
And  
Government Services  
Canada  
Architectural & Engineering Services  
Western Region

Agriculture  
Canada

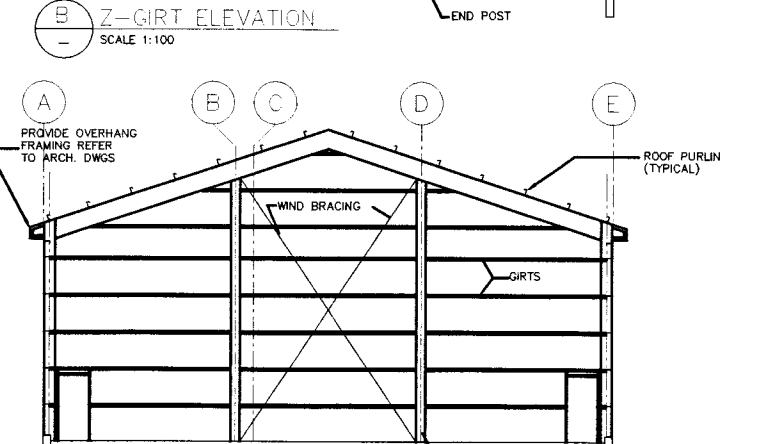
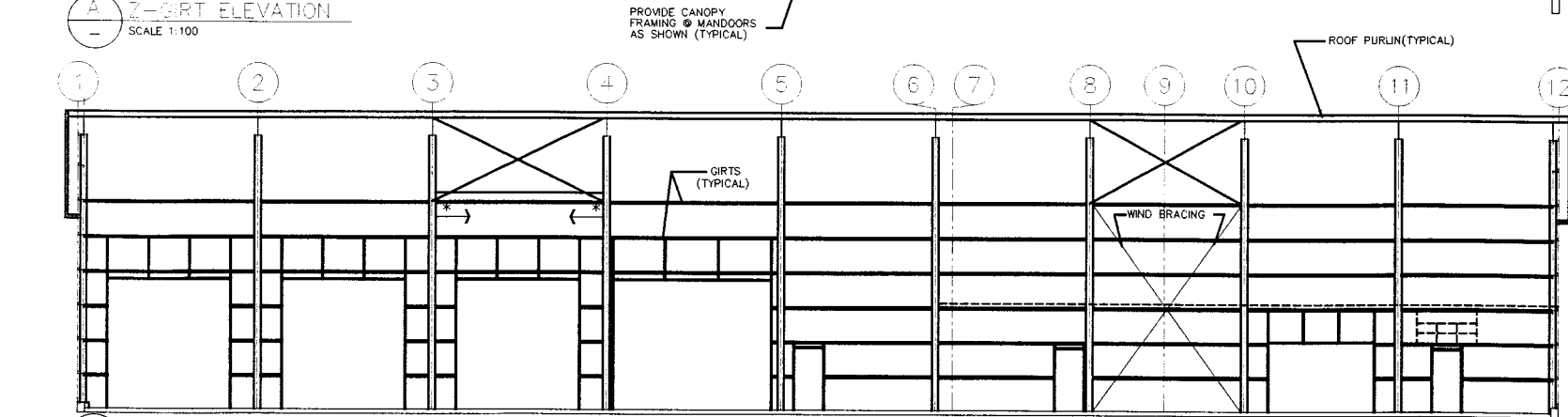
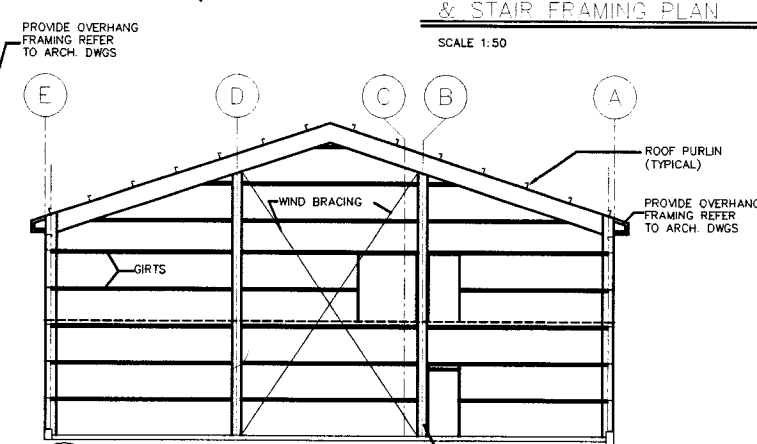
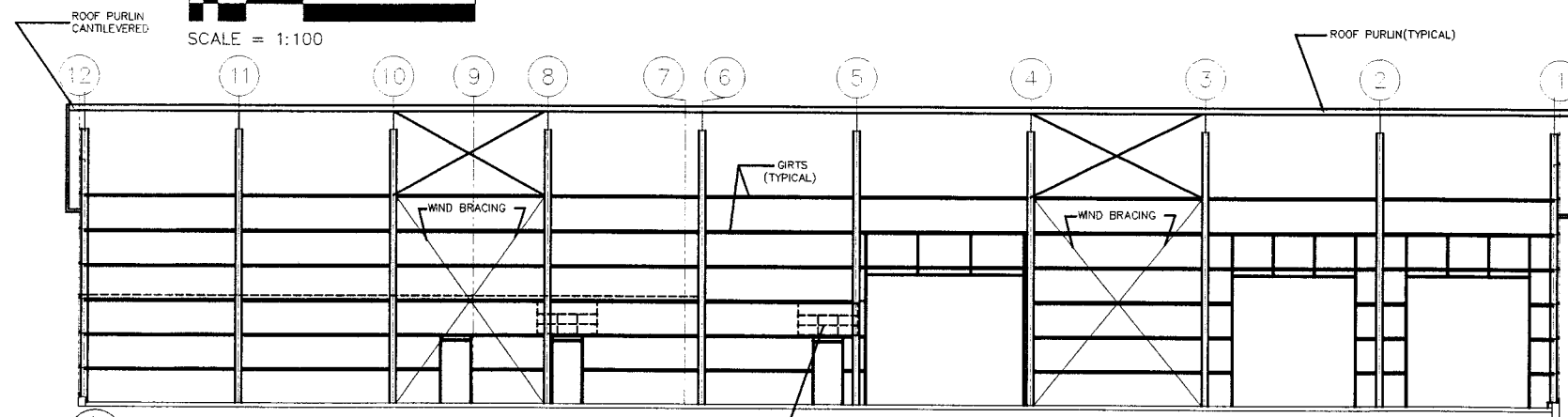
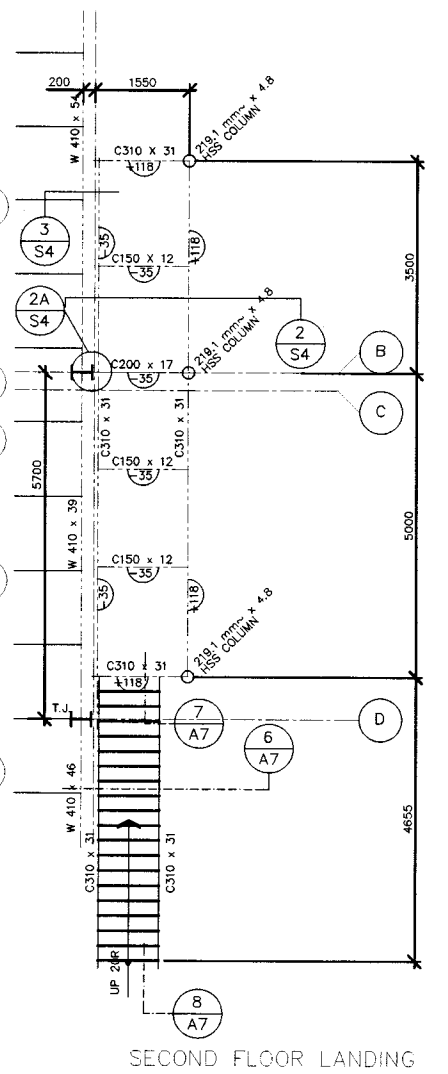
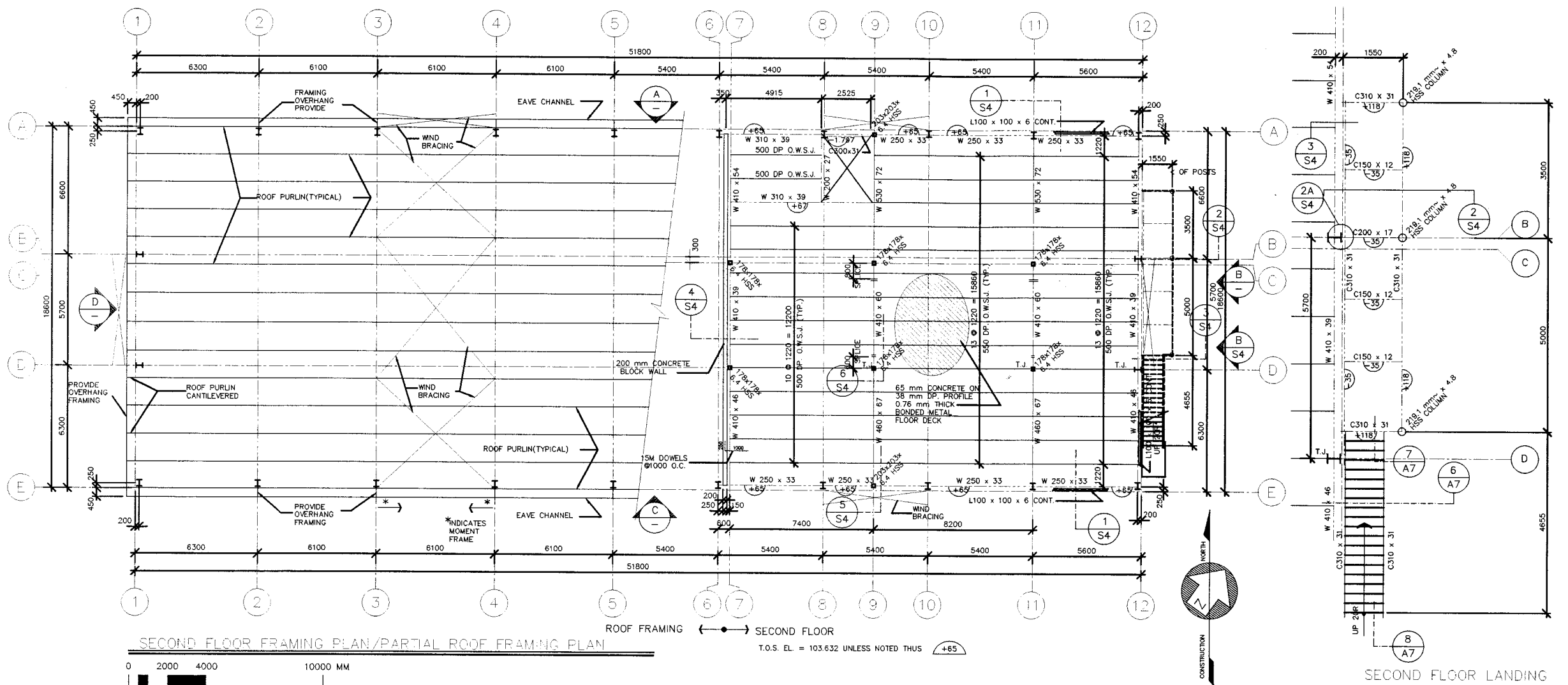
revision date

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B location drawing no.  
C drawing no.

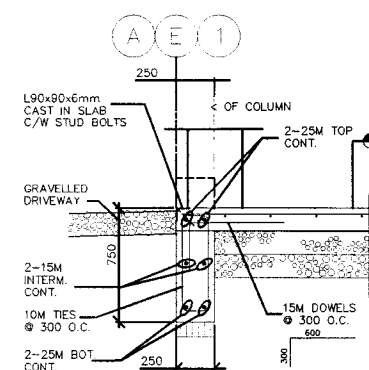
project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing design  
FOUNDATION PLAN  
AND DETAILS

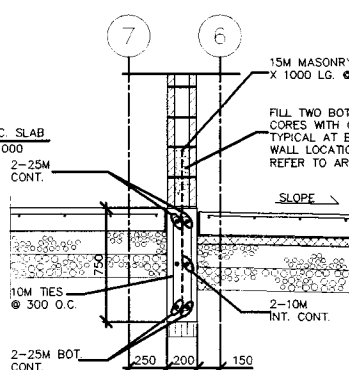
DESIGNED D.K.C. CONCU  
DATE AUG. 29, 1995  
DRAWN E.R.W. DESINE  
DATE  
REVIEWED EXAMINE  
DATE DECEMBER 22, 1995  
APPROVED APPROVE  
DATE  
TENDER SUBMISSION  
PMC PROJECT MANAGER  
PROJECT NUMBER NO. DU PROJET  
626029  
DRAWING NUMBER NO. DU DESSIN



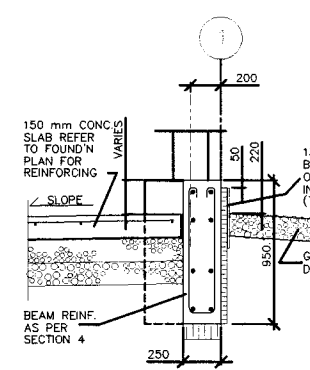
revision		date
A	detail no. no. du détail	A
B	location drawing no. sur dessin no.	B/C
C	drawing no. dessin no.	
project	GENERAL SERVICES BUILDING A.D.R.I. LETHBRIDGE ALBERTA	
drawing	SECOND FLOOR/ROOF FRAMING PLAN & Z-GIRT ELEVATIONS	
DESIGNED	D.K.C.	CONÇU
DATE	AUG. 29, 1995	
DRAWN	E.R.W.	DESSINÉ
DATE		
REVIEWED		EXAMINÉ
DATE	DECEMBER 22, 1995	
APPROVED		APPROUVÉ
DATE		
TENDER		SOUMISSION
PWC PROJECT MANAGER		
PROJECT NUMBER		NO. DU PROJET
		626029



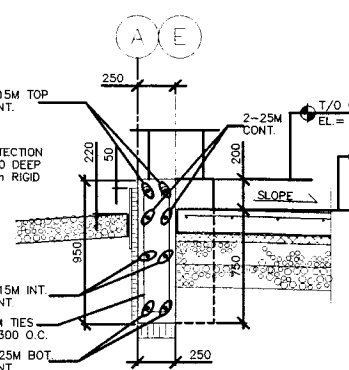
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S3 SCALE 1:20



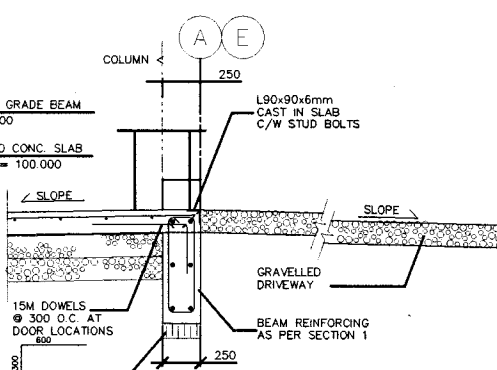
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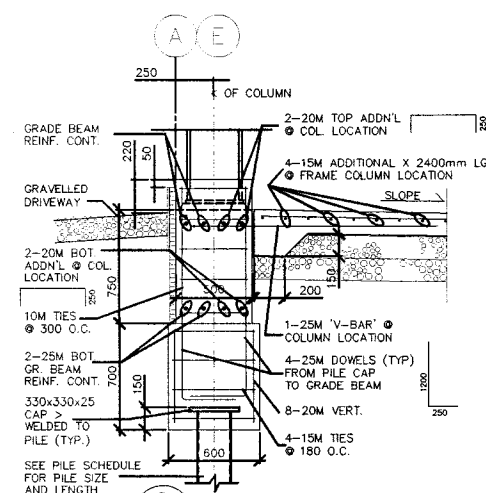
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S3 SCALE 1:20



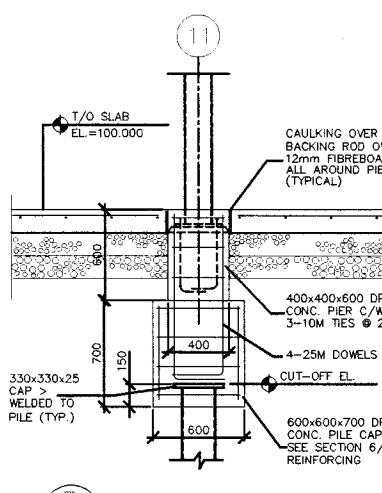
4 SECTION DETAIL  
S3 SCALE 1:20



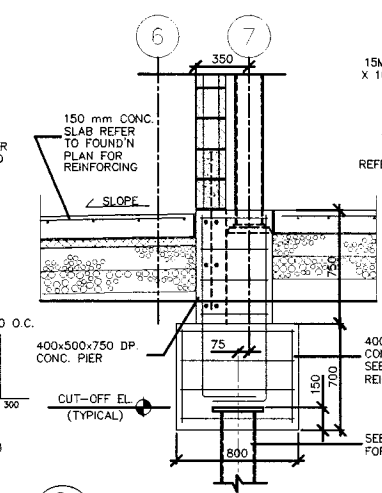
5 SECTION DETAIL  
S3 SCALE 1:20



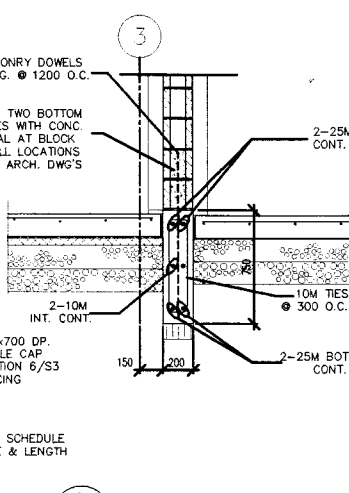
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S3 SCALE 1:20



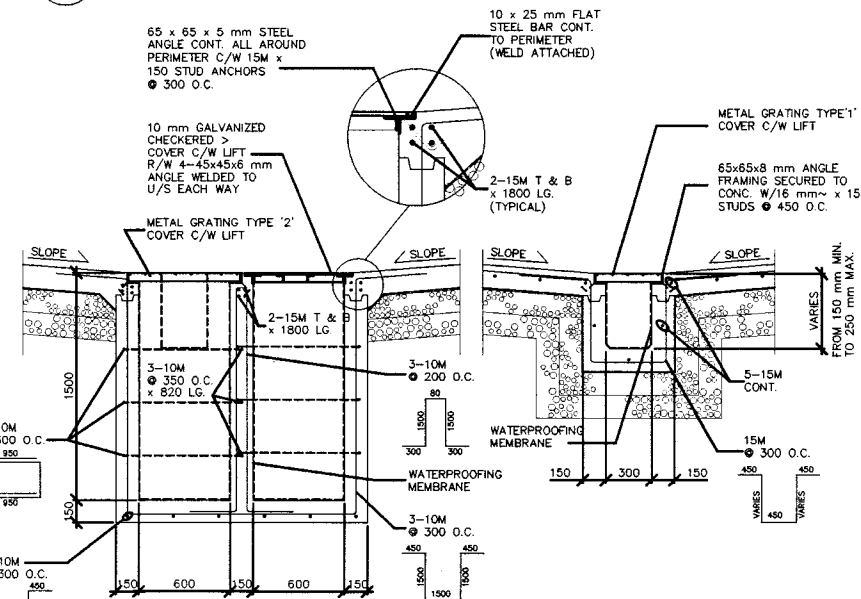
7 SECTION DETAIL  
S3 SCALE 1:20



8 SECTION DETAIL  
S3 SCALE 1:20

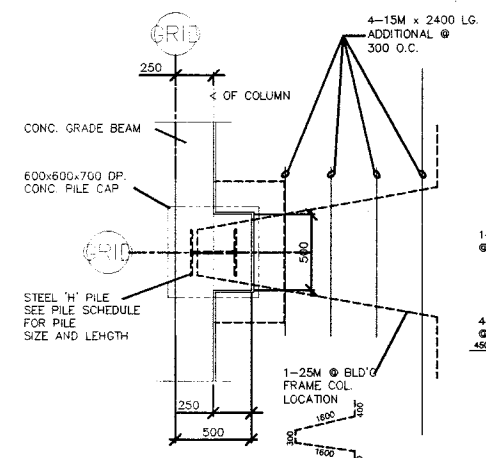


9 SECTION DETAIL  
S3 SCALE 1:20

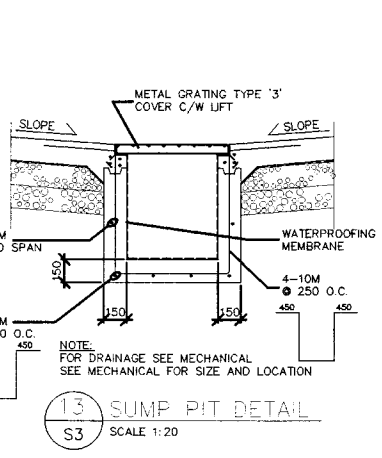


10 SUMP PIT DETAIL  
S3 SCALE 1:20

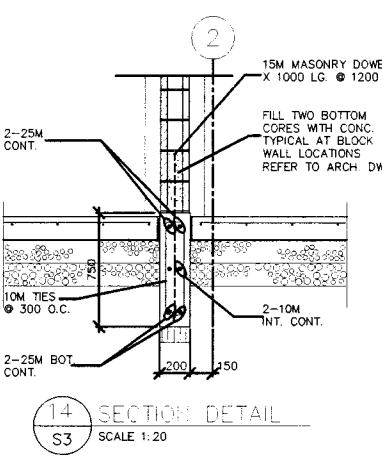
11 TRENCH DETAIL  
S3 SCALE 1:20



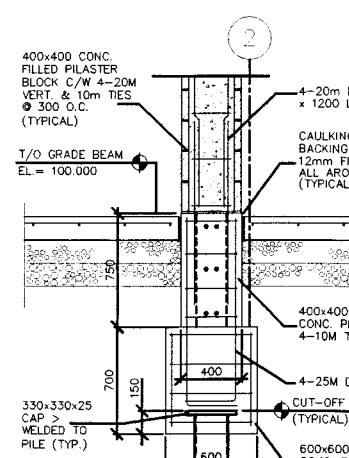
12 PLAN DETAIL  
S3 SCALE 1:20



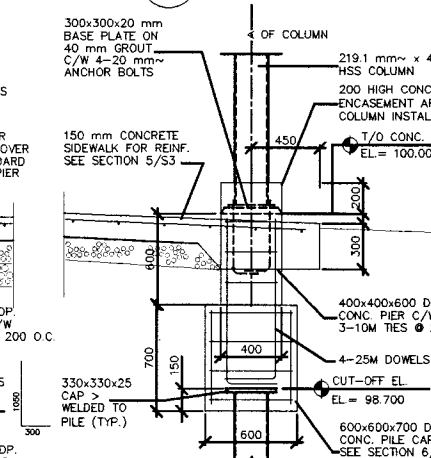
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S3 SCALE 1:20



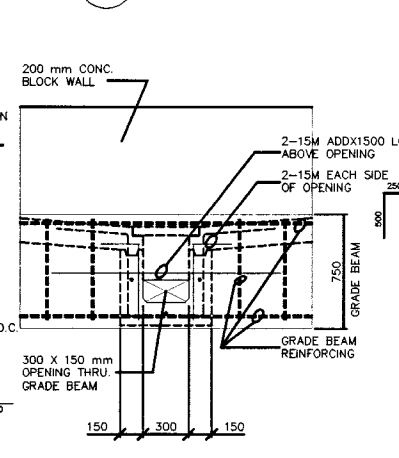
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S3 SCALE 1:20



15 SECTION DETAIL  
S3 SCALE 1:20



16 SECTION DETAIL  
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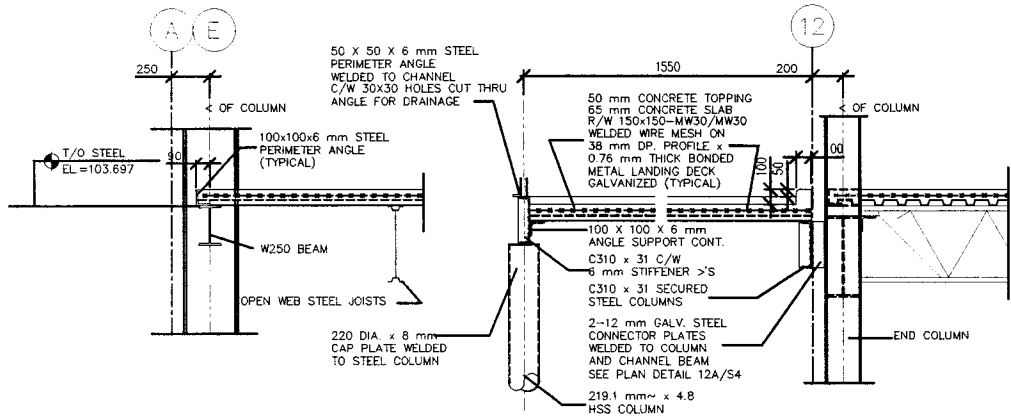


17 OPENING THRU GRADE BEAM  
S3 SCALE 1:20

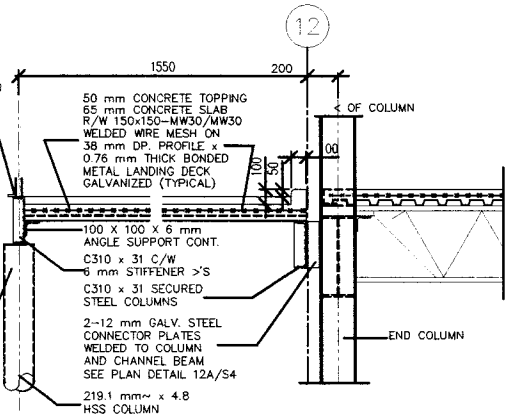
GRATINGS:  
TYPE '1' - HEAVY DUTY WELDED STEEL GRATING (GALVANIZED)  
TYPE (HD-30-102) - BEARING BARS SIZE 38 mm x 6.4 mm-FOR TRENCH  
TYPE '2' - HEAVY DUTY WELDED STEEL GRATING (GALVANIZED)  
TYPE (HD-30-102) - BEARING BARS SIZE 50 mm x 6.4 mm-FOR SUMP & ROOM 118  
TYPE '3' - WELDED STEEL GRATING (GALVANIZED)  
TYPE (30-102) - BEARING BARS SIZE

0 400 800 2000 MM

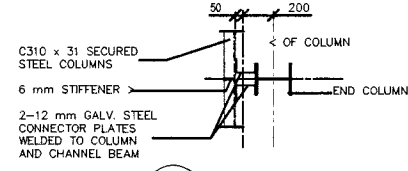
revision	date
A	
B	
C	
project	
GENERAL SERVICES BUILDING	
A.D.R.I. LETHBRIDGE, ALBERTA	
drawing	
FOUNDATION DETAILS	
DESIGNED	D.K.C.
DATE	AUG. 29, 1995
DRAWN	E.R.W.
DATE	
REVIEWED	
DATE	DECEMBER 22, 1995
APPROVED	
DATE	
TENDER	
PWC PROJECT MANAGER	
PROJECT NUMBER	NO. DU PROJET
626029	



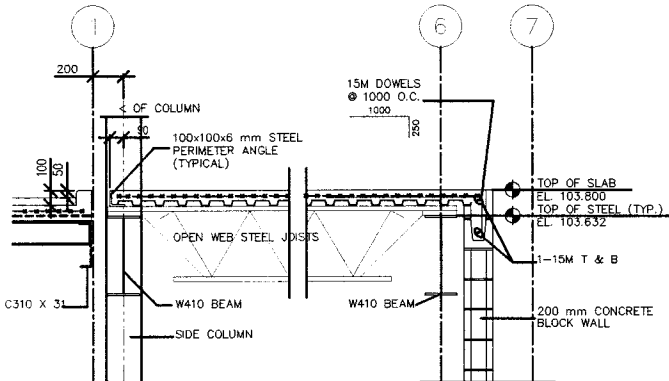
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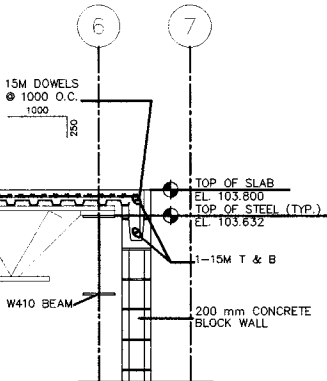
2 SECTION  
S4 SCALE 1:20



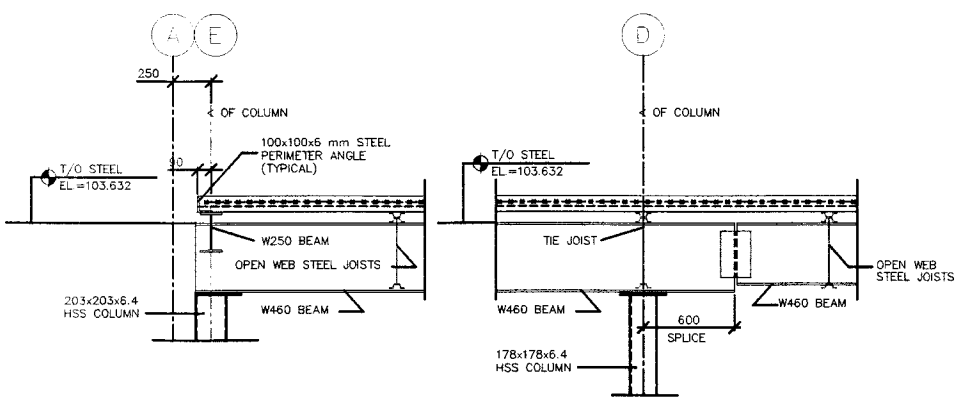
2A PLAN DETAIL  
S4 SCALE 1:20



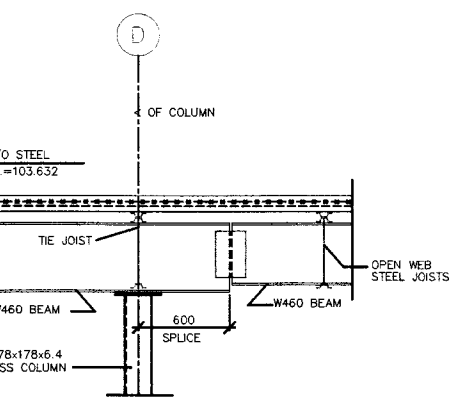
3 SECTION  
S4 SCALE 1:20



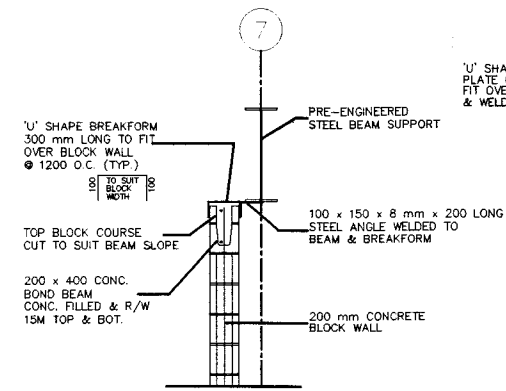
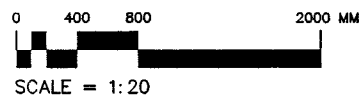
4 SECTION  
S4 SCALE 1:20



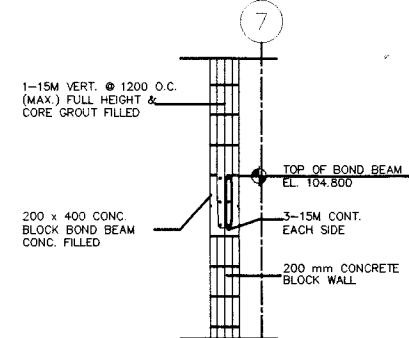
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S4 SCALE 1:20



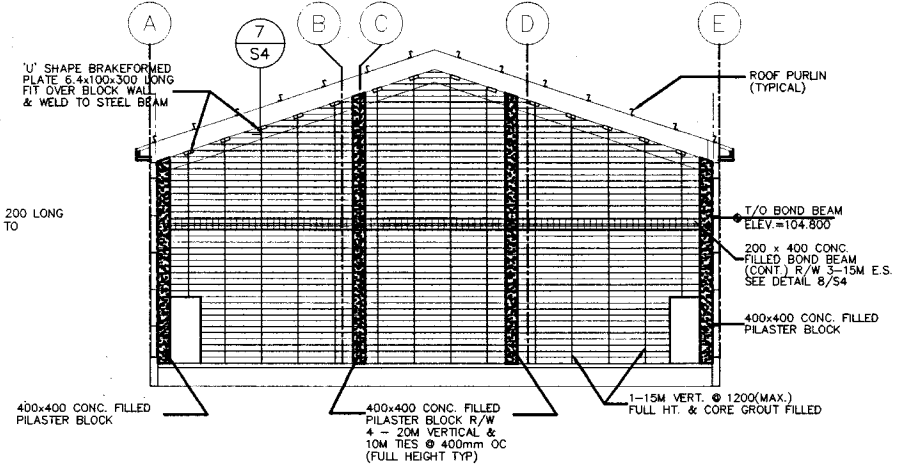
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S4 SCALE 1:20



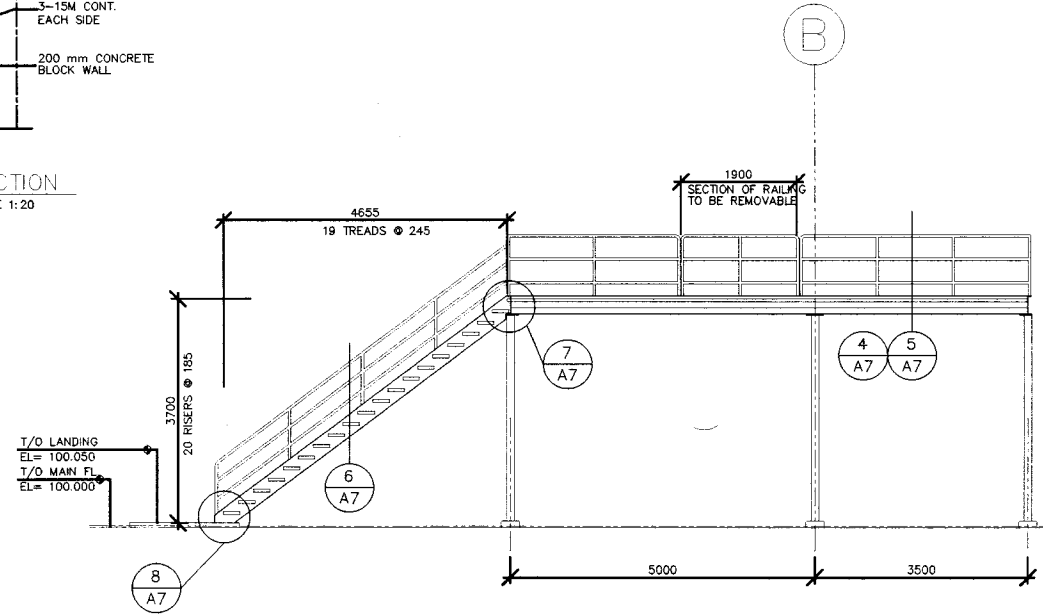
7 SECTION  
S4 SCALE 1:20



8 SECTION  
S4 SCALE 1:20



A BLOCK WALL ELEVATION  
S4 SCALE 1:100 (ALONG GRID LINE 2 AND 3)



B EXTERIOR STAIR ELEVATION  
S4 SCALE 1:50

revision	date
A	detail no.
B	location drawing no.
C	surf. design no.
	drawing no.
	design no.
project	project
GENERAL SERVICES BUILDING	
A.D.R.I.	
LETHBRIDGE, ALBERTA	
drawing	design
SECOND FLOOR FRAMING DETAILS	
DESIGNED	D.K.C.
DATE	AUG. 29, 1995
DRAWN	E.R.W.
DATE	DECEMBER 22, 1995
REVIEWED	EXAMINE
APPROVED	APPROVE
DATE	
TENDER	SUBMISSION
PWC PROJECT MANAGER	
PROJECT NUMBER	NO. DU PROJET
626029	





LEGEND

-----	ABANDONED LINES
-----	UNDERGROUND CABLE LINE
-----	ELECTRICAL LINES
-----	ELECTRICAL & TELEPHONE LINES
-----	GAS LINES
-----	SANITARY SEWER LINES
-----	WATER LINES

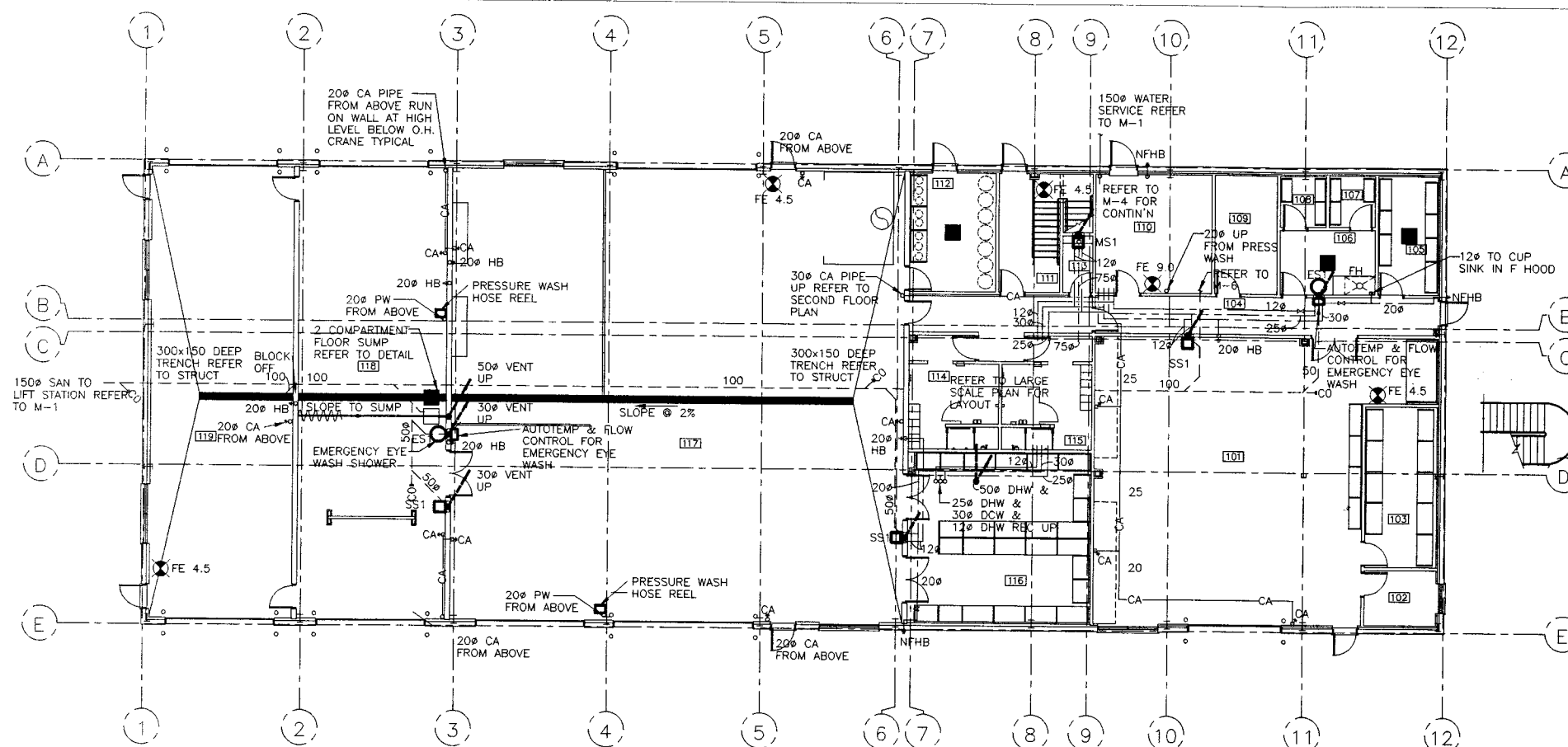
LEGEND

PLUMBING	
DOM. COLD WATER LINE	-----
DOM. HOT WATER LINE	-----
DOM. HOT WATER RECIPI. LINE	-----
NATURAL GAS LINE	-----
SANITARY LINE - BURIED	-----
SEWER VENT	-----
PRESSURE WASH.	-----
CLEANOUT	-----
NON-FREEZE HOSE BIBB	-----
FLOOR DRAIN	-----
PLUMBING FEATURE (TYPE NOTED)	-----
HEATING	
HEATING WATER SUPPLY LINE	-----
HEATING WATER RETURN LINE	-----
RADIATION SYMBOL	-----
VALVES	
DATE VALVE	-----
GLOBE VALVE	-----
BALL VALVE	-----
GAS COCK	-----
CHECK VALVE	-----
STRAINER	-----
FIRE PROTECTION	
FIRE EXTINGUISHER (TYPE)	-----
FIRE HYDRANT	-----
HEADS UPRIGHT	-----
HEADS DOWN	-----
VENTILATION	
ACOUSTIC INSULATION	-----
SUPPLY AIR DUCT	-----
RETURN AIR DUCT	-----
EXHAUST AIR DUCT	-----
FRESH AIR DUCT	-----
ROUND DUCT	-----
FLEXIBLE CONNECTION	-----
BALANCING DAMPER	-----
OPPOSED BLADE BALANCING DAMPER	-----
FIRE DAMPER	-----
FIRE STOP FLAP	-----
TURNING VANES	-----
DIFFUSER	-----
DOOR GRILLE	-----
DIFFUSER SYMBOL	-----

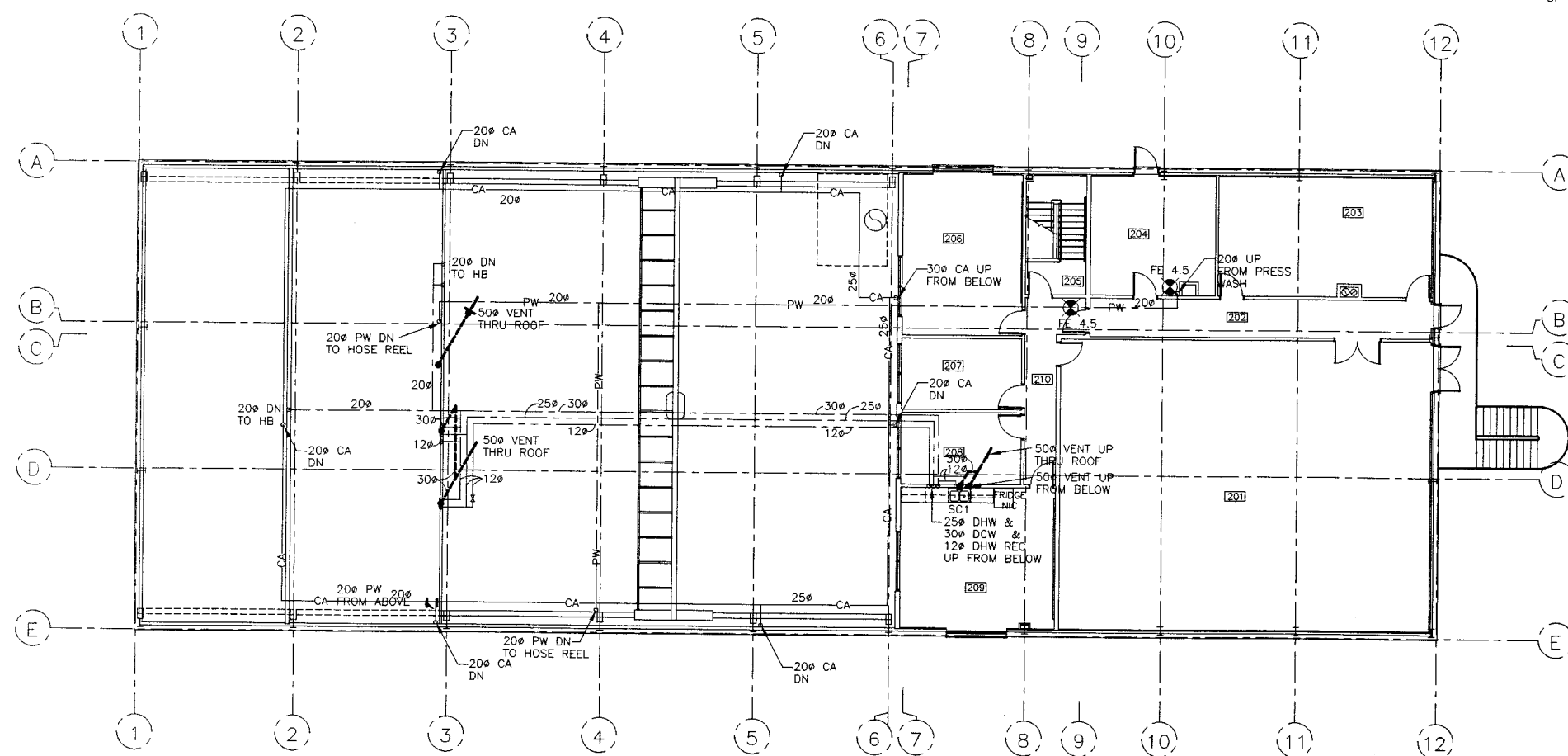
NATURAL GAS INFORMATION		
ITEM	DESCRIPTION	LOAD (Kw)
B#7	HEATING BOILER	231.4
B#8	HEATING BOILER	231.4
DHW HEATER #1	HOT WATER HEATER	14.7
PW	PRESSURE WASHER	109.9
TOTAL		582.4

MECHANICAL CONTRACTOR INFORMATION	
MINIMUM DISTANCE BETWEEN N. GAS LINE & UNDERGROUND SERVICES = 2 METRES	
MECHANICAL CONTRACTOR SHALL, BEFORE BEGINNING INSTALLATION INSIDE THE BUILDING CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY, WATER AND GAS LINES.	

revisions	description	date
1	ISSUED FOR REVIEW	05/09/05
A	A detail no.	
B	B location, size no.	
C	C drawing no.	
project	GENERAL SERVICES BUILDING	
project	A.D.R.I. LETHBRIDGE, ALBERTA	
drawing	MECHANICAL SITE PLAN & LEGEND	
designed	D.W.	conçu
date	SEPT., 1994	
drawn	R.M.P.	dessiné
date	SEPT., 1994	
reviewed	D.W.	examiné
date	MARCH, 1995	
approved		approuvé
date		
Tender		Soumission
PWC PROJECT MANAGER	Administrateur de projets TPC	
project number	626029	no. du projet



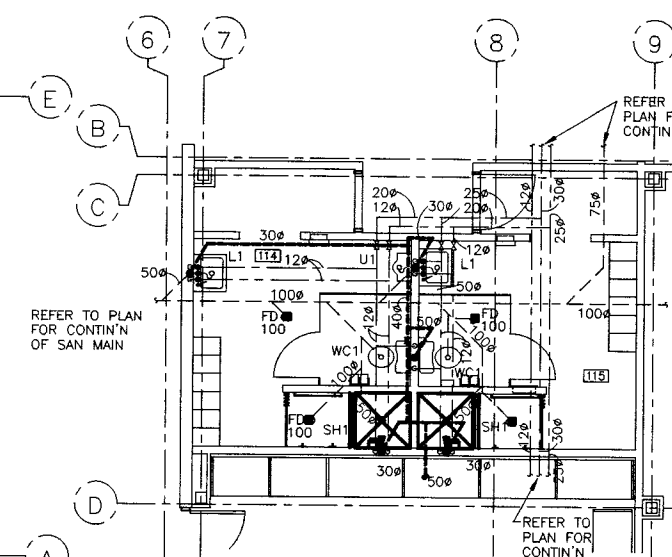
MAIN FLOOR PLAN



SECOND FLOOR PLAN

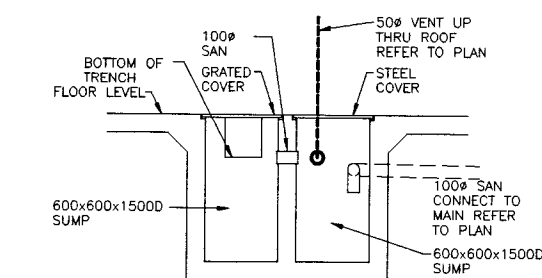
0 2000 4000 10000 MM

- 101 CARPENTRY
- 102 DRAFTING ROOM
- 103 TOOL STORAGE
- 104 CORRIDOR
- 105 PAINT STORAGE
- 106 PESTICIDE TRANSFER ROOM
- 107 HERBICIDE STORAGE
- 108 INSECTICIDE STORAGE
- 109 ELECTRICAL ROOM
- 110 MECHANICAL ROOM
- 111 STAIRWAY
- 112 LUBRICANT STORAGE
- 113 JANITOR ROOM
- 114 MALE WASHROOM
- 115 FEMALE WASHROOM
- 116 GOODS STORAGE
- 117 VEHICLE AND EQUIPMENT
- 118 MAINTENANCE BAY
- 119 WASHBAY
- 201 ARCHIVE STORAGE
- 202 CORRIDOR
- 203 ARCHIVE STORAGE
- 204 MECHANICAL ROOM
- 205 STAIRWAY
- 206 GENERAL OFFICE
- 207 MANAGER'S OFFICE
- 208 COMPUTER ROOM
- 209 LUNCH/MEETING ROOM

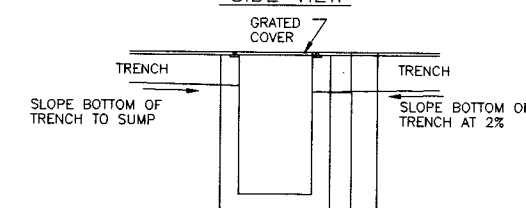


WASHROOM LAYOUT

SCALE: 1:50



SIDE VIEW



END VIEW

1	ISSUED FOR REVIEW	95/05/05
revisions	description	date

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B	B location tag no.	B/C
C	C drawing no.	

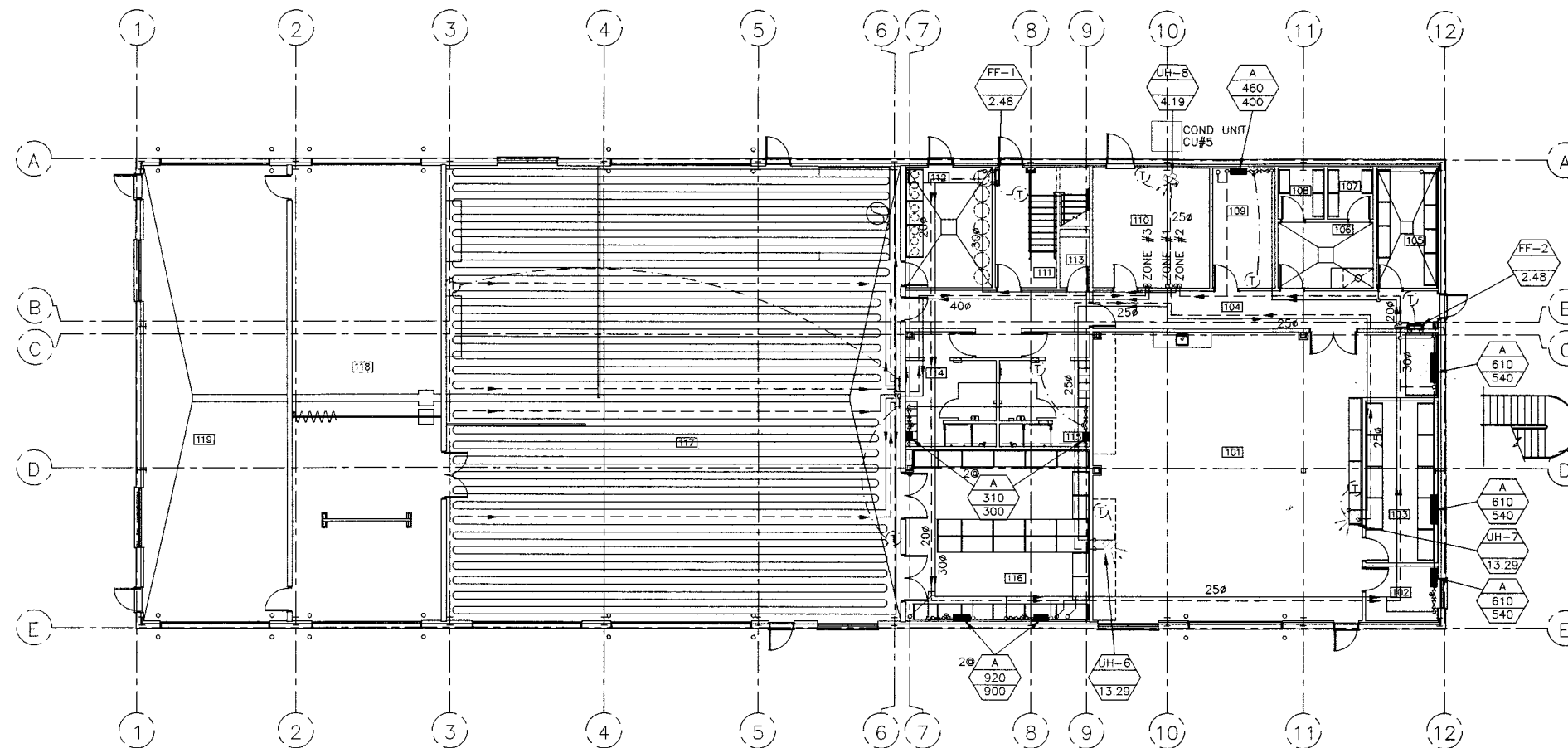
project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
MECHANICAL  
MAIN FLOOR AND  
SECOND FLOOR  
PLAN, PLUMBING  
LAYOUT

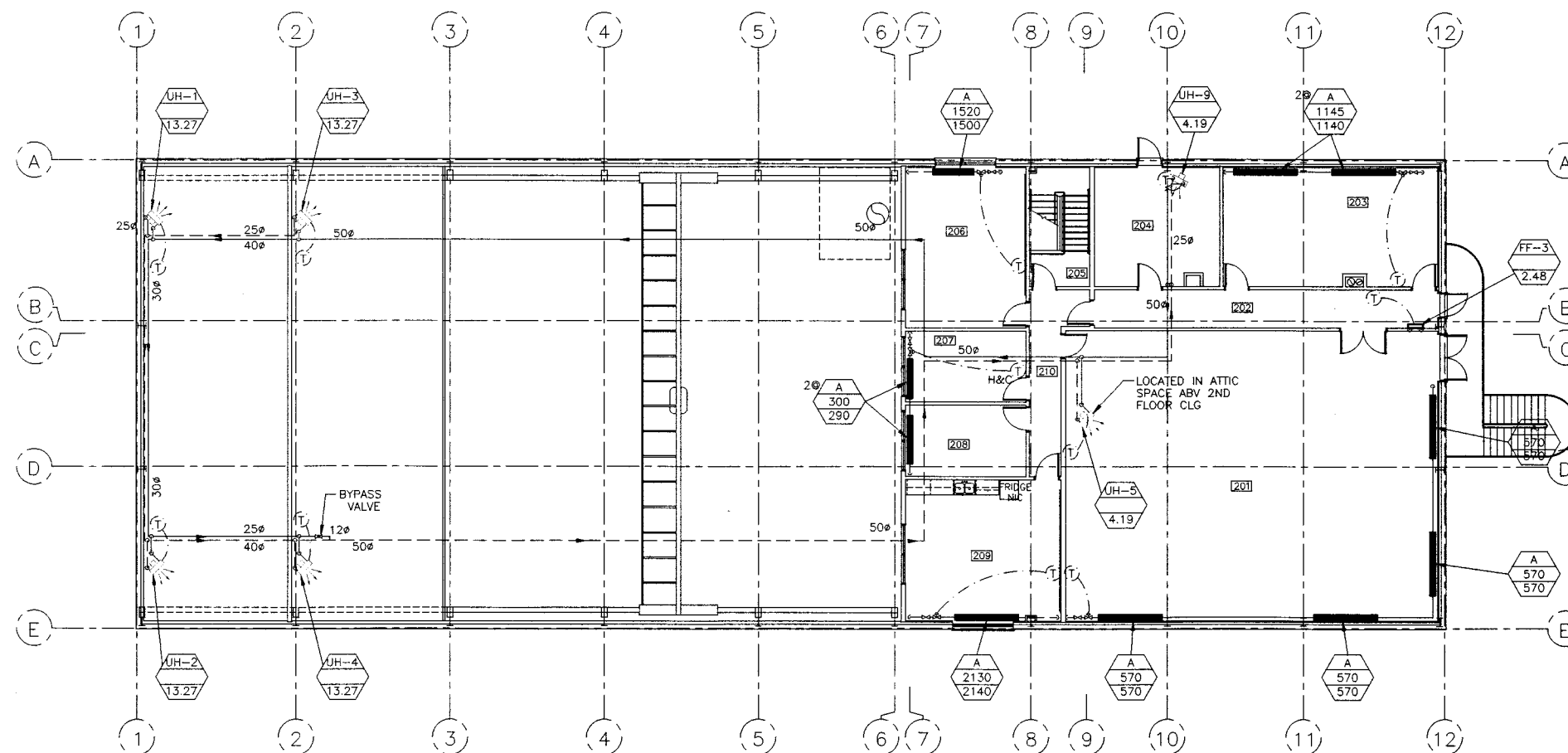
designed D.W. concu  
date SEPT., 1994  
drawn R.M.P. dessine  
date SEPT., 1994  
reviewed D.W. examine  
date MARCH, 1995  
approved approve  
date  
Tender Soumission

PWC PROJECT MANAGER Administrateur de projets TPC  
project number 626029 no. du projet





MAIN FLOOR PLAN

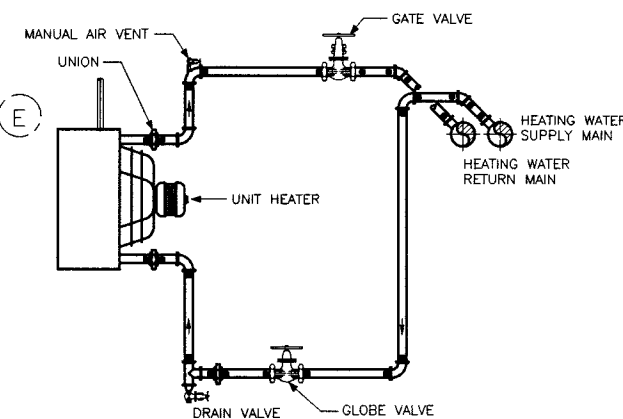


SECOND FLOOR PLAN

0 2000 4000 10000 MM



- 101 CARPENTRY
- 102 DRAFTING ROOM
- 103 TOOL STORAGE
- 104 CORRIDOR
- 105 PAINT STORAGE
- 106 PESTICIDE TRANSFER ROOM
- 107 HERBICIDE STORAGE
- 108 INSECTICIDE STORAGE
- 109 ELECTRICAL ROOM
- 110 MECHANICAL ROOM
- 111 STAIRWAY
- 112 LUBRICANT STORAGE
- 113 JANITOR ROOM
- 114 MALE WASHROOM
- 115 FEMALE WASHROOM
- 116 GOODS STORAGE
- 117 VEHICLE AND EQUIPMENT
- 118 MAINTENANCE BAY
- 119 WASHBAY



HORIZONTAL UNIT HEATER PIPING DETAIL  
UH - 1, UH - 8

### HEATING ZONES

- ZONE NO. AREAS
1. SHOPS AND EQUIPMENT
  2. OFFICE AND STORAGE
  3. VEHICLE EQUIPMENT MAINT. BAY

- 201 ARCHIVE STORAGE
- 202 CORRIDOR
- 203 ARCHIVE STORAGE
- 204 MECHANICAL ROOM
- 205 STAIRWAY
- 206 GENERAL OFFICE
- 207 MANAGER'S OFFICE
- 208 COMPUTER ROOM
- 209 LUNCH/MEETING ROOM

Public Works  
And  
Government Services  
Canada

Travaux publics  
et Services  
gouvernement  
Canada

Architectural & Engineering Services  
Western Region

Agriculture  
Canada

revisions description date

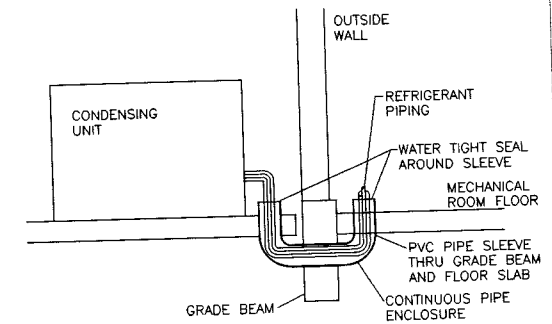
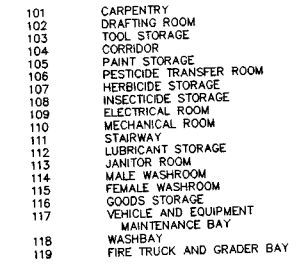
A detail no.  
B location draw no.  
C drawing no.  
drawing no.

project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

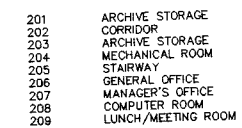
drawing  
MECHANICAL  
MAIN FLOOR AND  
SECOND FLOOR  
PLAN, HEATING  
LAYOUT

designed **D.W.** concu  
date **SEPT., 1994**  
drawn **R.M.P.** dessine  
date **SEPT., 1994**  
reviewed **D.W.** examine  
date **MARCH, 1995**  
approved  
date  
Tender Soumission

PWC PROJECT MANAGER Administrateur de projets TPC  
project number  
626029




MAIN FLOOR PLAN



SECOND FLOOR PLAN

0      2000      4000      10000 MM

1	ISSUED FOR REVIEW	01/06/05
revisions	description	date


 A detail no.  
 no. du detail  
 B location dwg. no.  
 sur dessin no.  
 C drawing no.  
 dressin no.

project GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing

MECHANICAL  
MAIN FLOOR AND  
2ND FLOOR PLAN  
VENTILATION AND  
AIR CONDITIONING

design

designed	D.W.	conclu
date	SEPT., 1994	
drawn	R.M.P.	dessine
date	SEPT., 1994	
reviewed	D.W.	examine
date	MARCH, 1995	

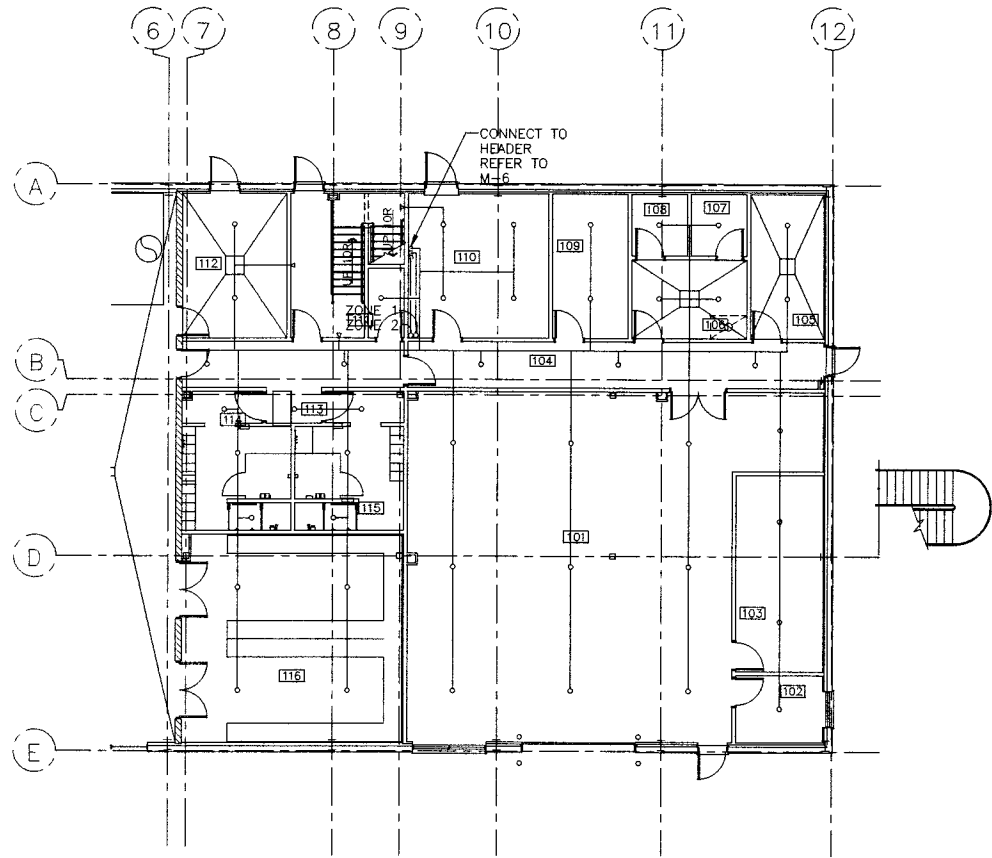
approved	approve
date	
Tender	Submission

PWC PROJECT MANAGER Administrateur de projets TPC  
project number no. du projet

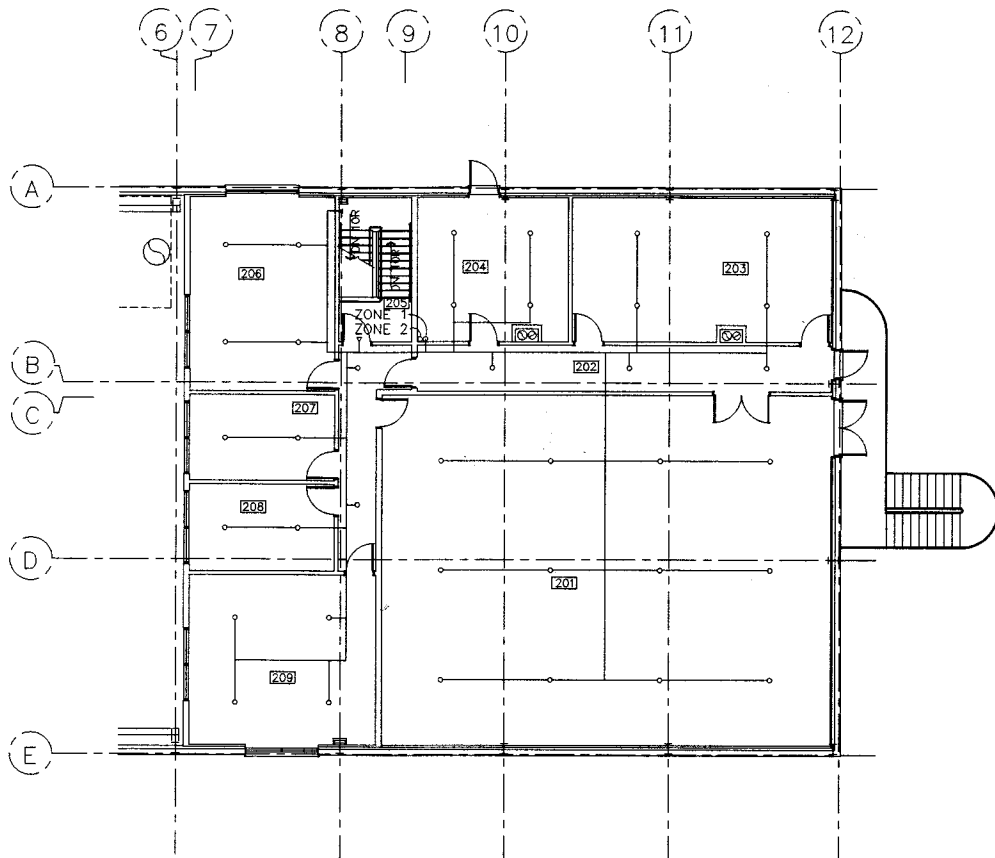
626029

drawing no.	no. du dessin
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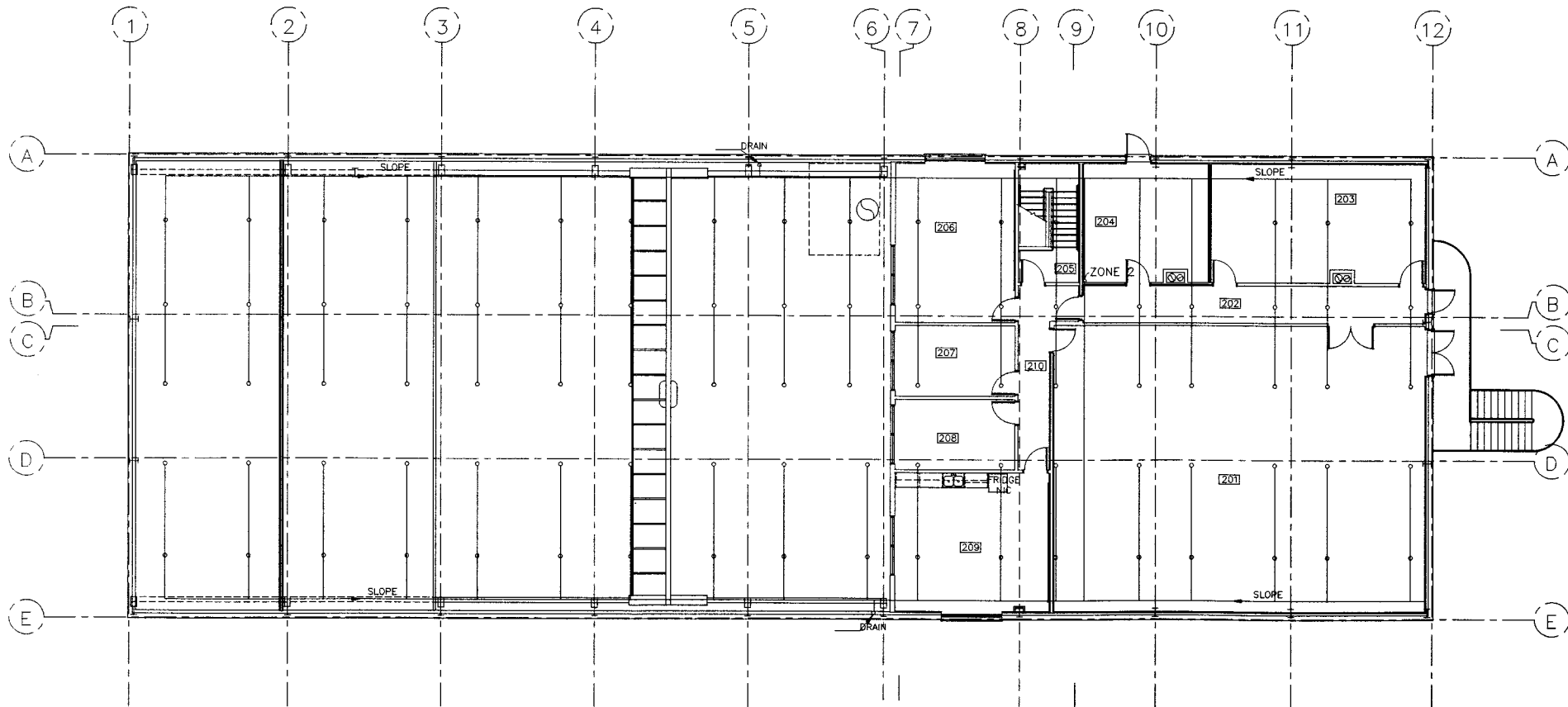
W-M4



MAIN FLOOR PLAN



SECOND FLOOR PLAN



ROOF AREA PLAN

- 101 CARPENTRY
- 102 DRAFTING ROOM
- 103 TOOL STORAGE
- 104 CORRIDOR
- 105 PAINT STORAGE
- 106 PESTICIDE TRANSFER ROOM
- 107 HERBICIDE STORAGE
- 108 INSECTICIDE STORAGE
- 109 ELECTRICAL ROOM
- 110 MECHANICAL ROOM
- 111 STAIRWAY
- 112 LUBRICANT STORAGE
- 113 JANITOR ROOM
- 114 MALE WASHROOM
- 115 FEMALE WASHROOM
- 116 GOODS STORAGE
- 117 VEHICLE AND EQUIPMENT
- 118 MAINTENANCE BAY
- 119 WASHBAY
- 120 FIRE TRUCK AND GRADER BAY

- 201 ARCHIVE STORAGE
- 202 CORRIDOR
- 203 ARCHIVE STORAGE
- 204 MECHANICAL ROOM
- 205 STAIRWAY
- 206 GENERAL OFFICE
- 207 MANAGER'S OFFICE
- 208 COMPUTER ROOM
- 209 LUNCH/MEETING ROOM

AREAS  
1. OFFICE (WET)  
2. ROOF (DRY)  
REFER TO SPEC FOR  
DESIGN REQUIREMENTS

Public Works  
And  
Government Services  
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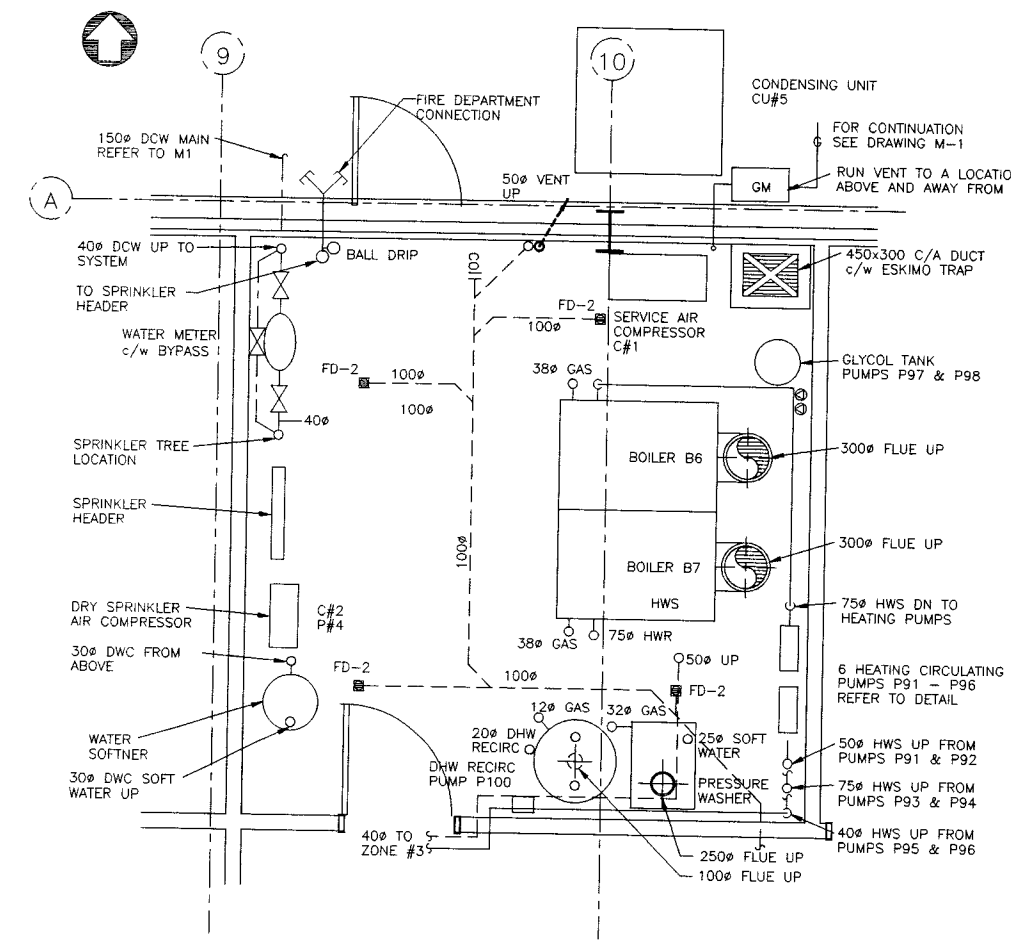
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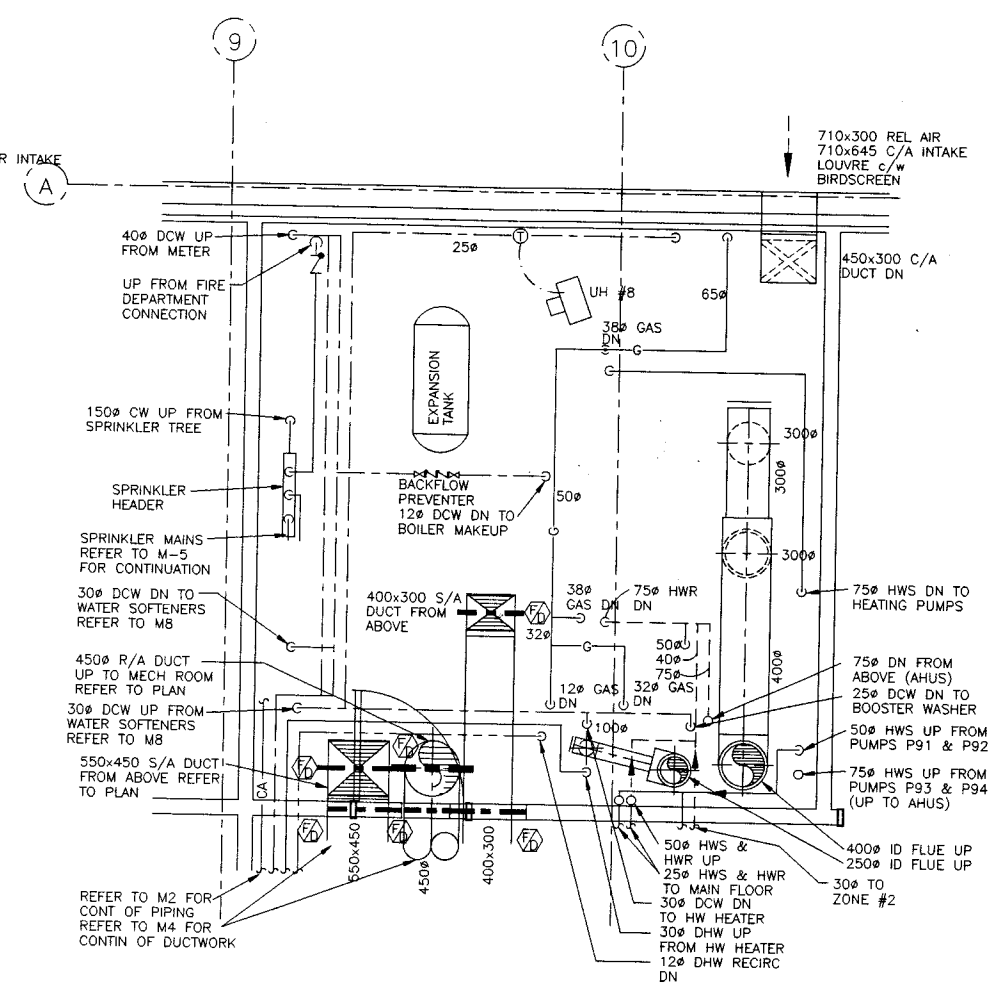
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A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
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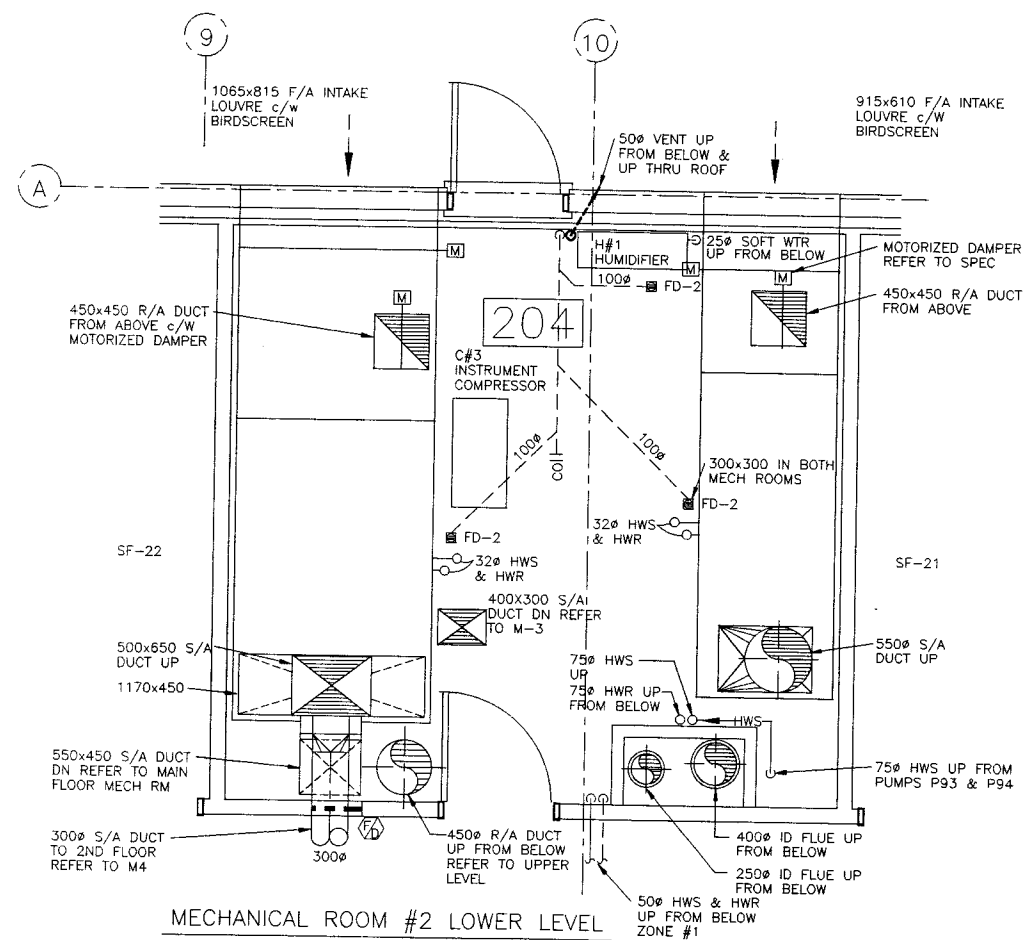
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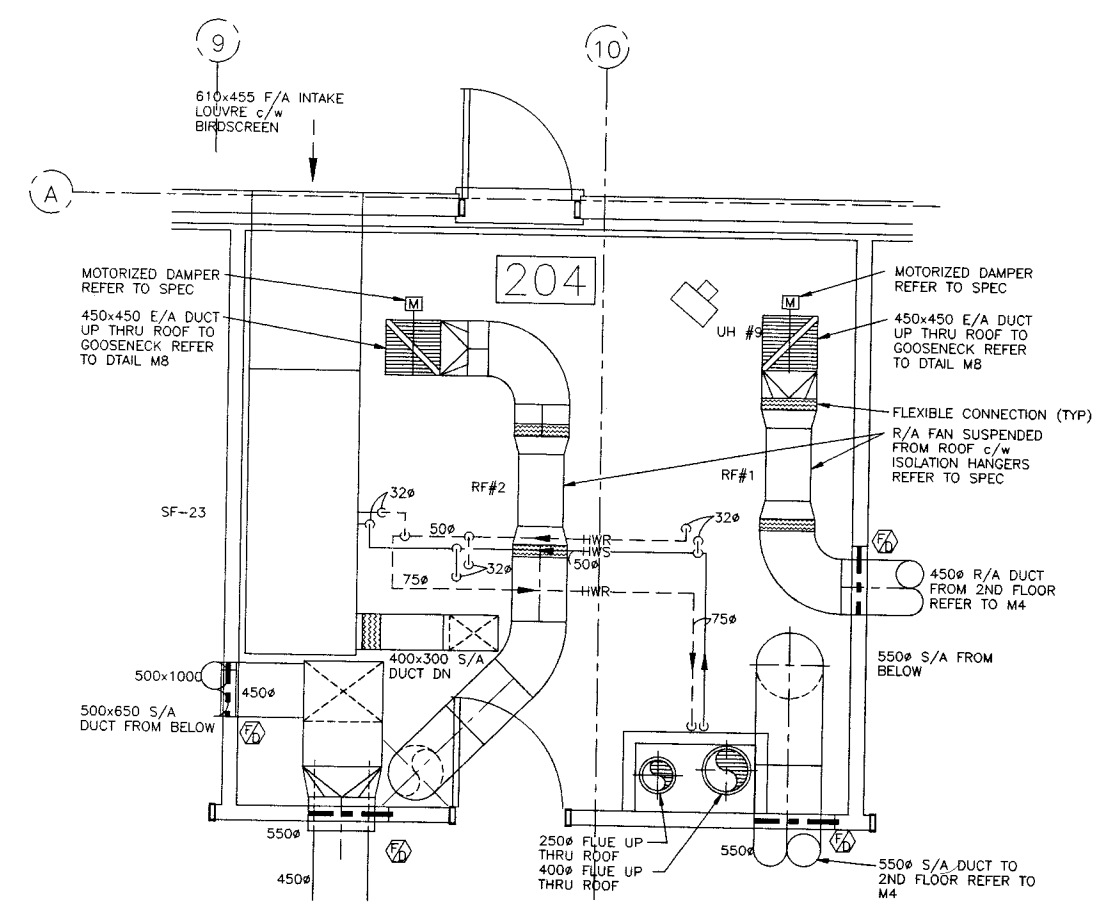
MECHANICAL ROOM #1 LOWER LEVEL  
SCALE: 1 : 25



MECHANICAL ROOM #1 UPPER LEVEL  
SCALE: 1 : 25



MECHANICAL ROOM #2 LOWER LEVEL  
SCALE: 1 : 25



MECHANICAL ROOM #2 UPPER LEVEL  
SCALE: 1 : 25

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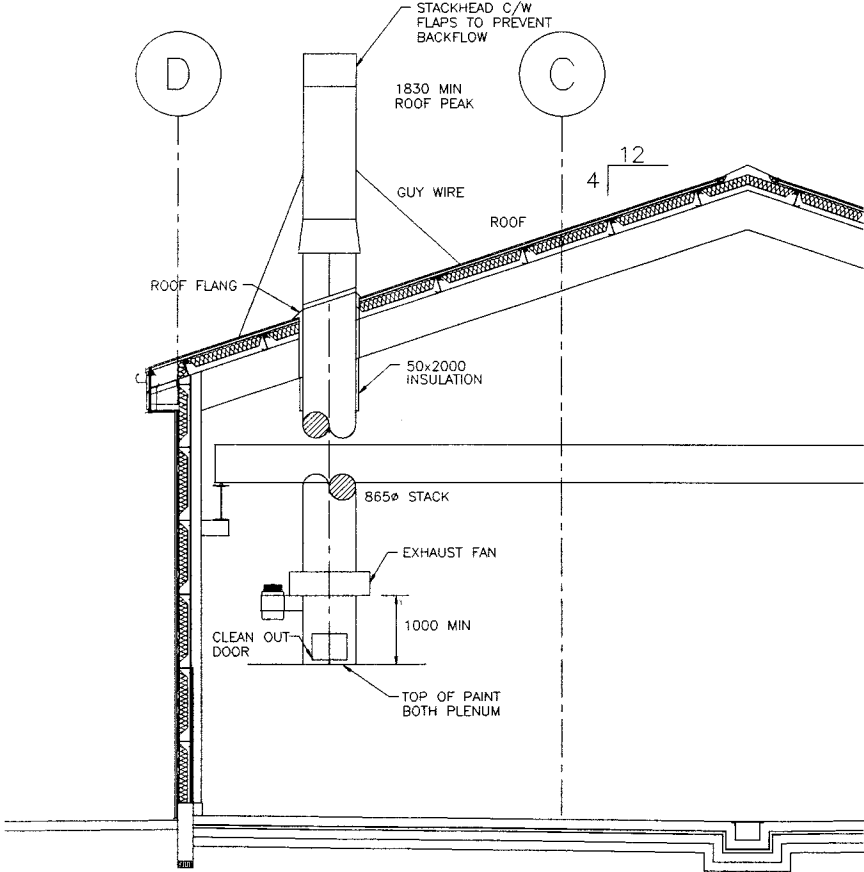
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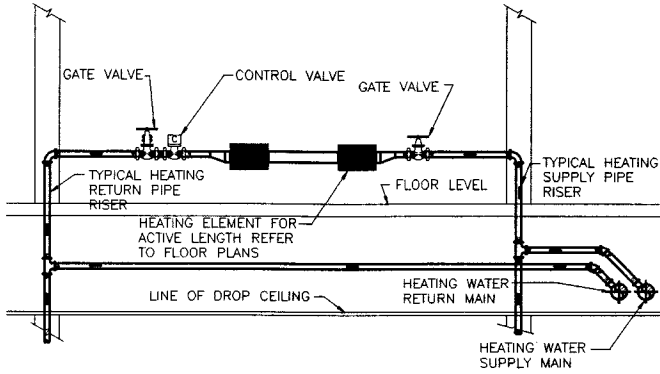
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Architectural & Engineering Services  
Western Region

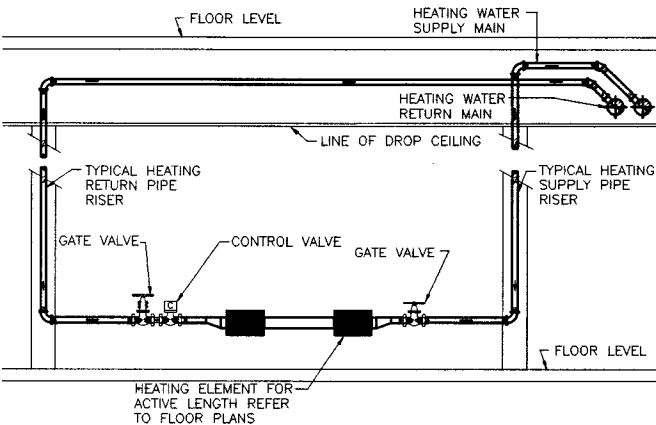
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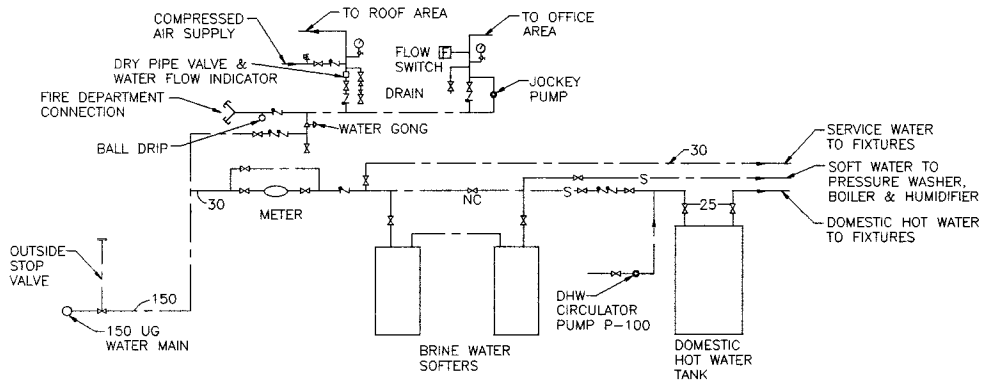
SECTION SHOWING PAINT BOTH EXHAUST



SINGLE ROW BASEBOARD RADIATION PIPING DETAIL



SINGLE ROW BASEBOARD RADIATION PIPING DETAIL



BASIC WATER SUPPLY SCHEMATIC

1	ISSUED FOR REVIEW	95/09/05
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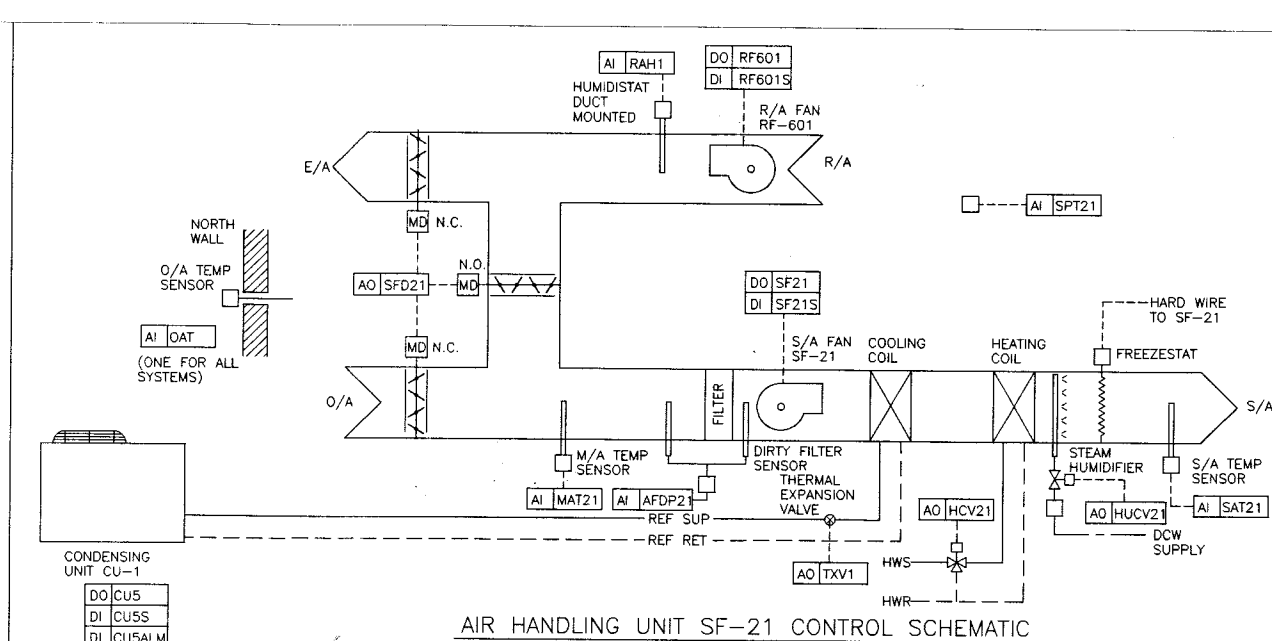
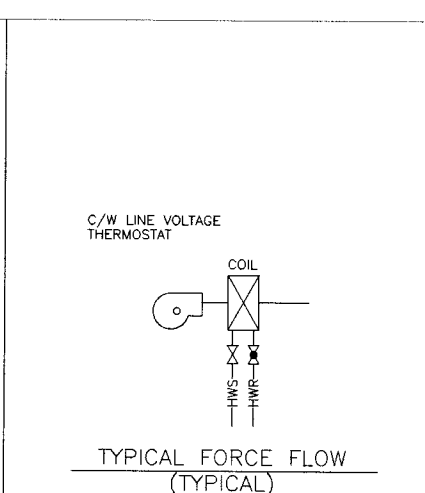
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project  
GENERAL SERVICES  
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drawing  
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DETAIL SHEET

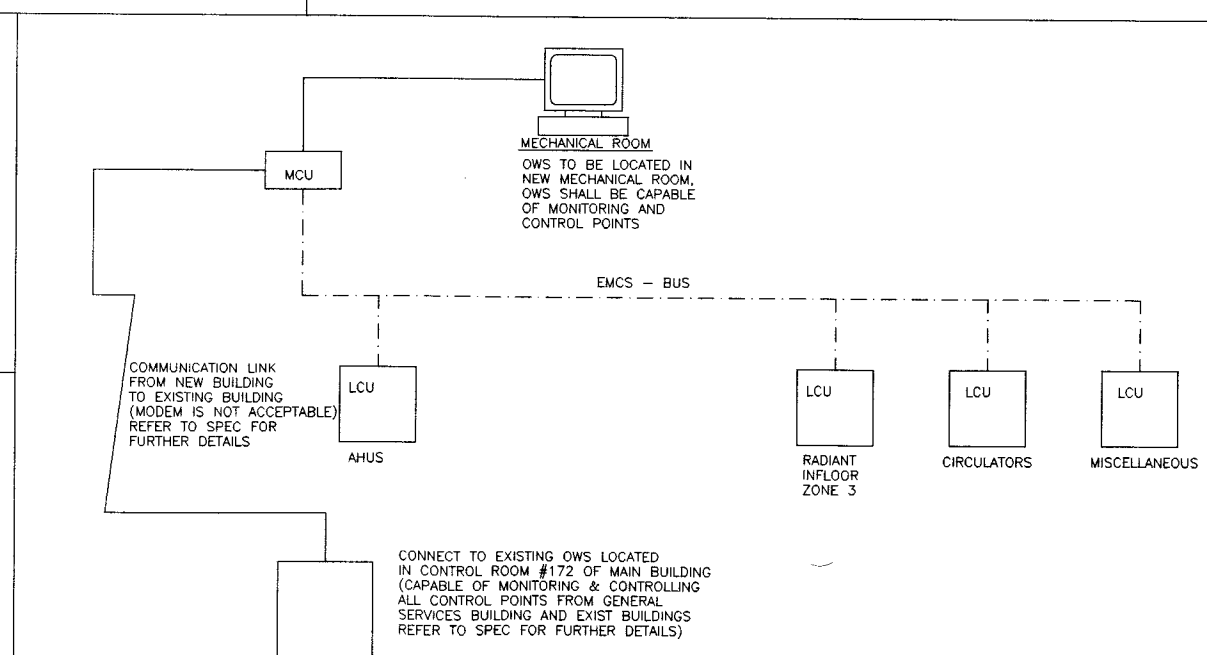
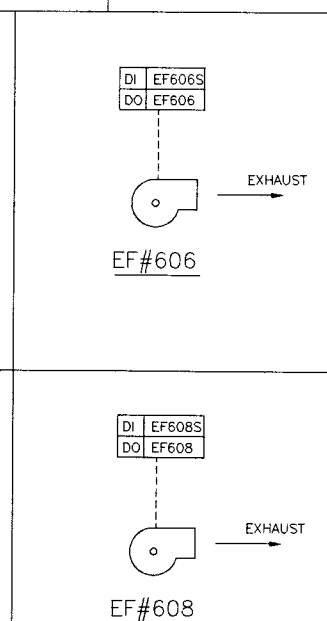
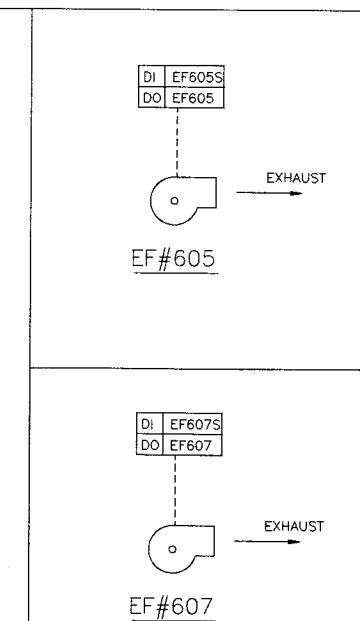
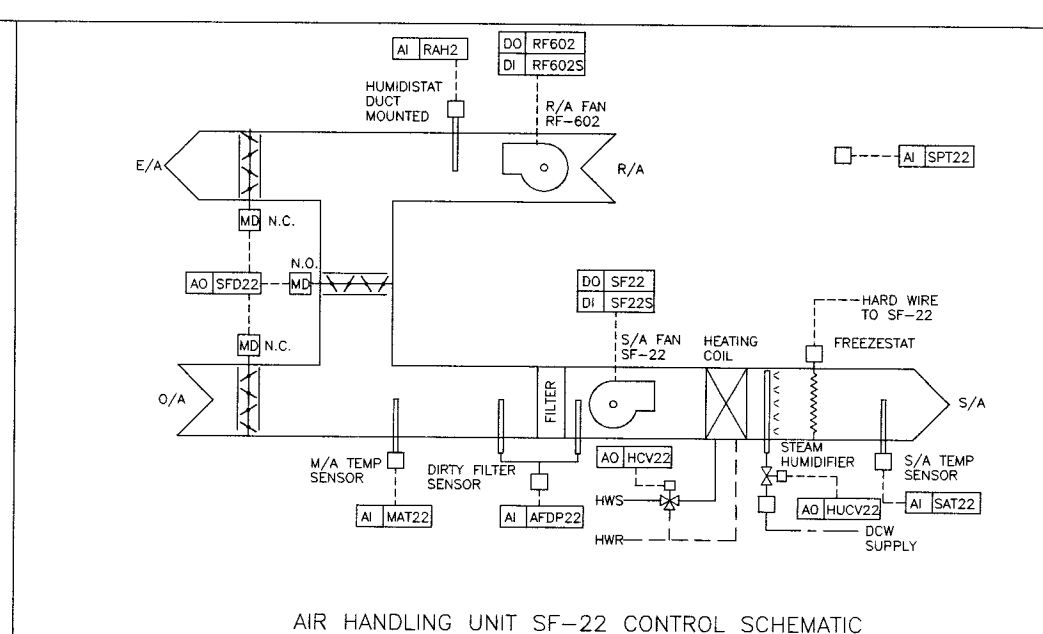
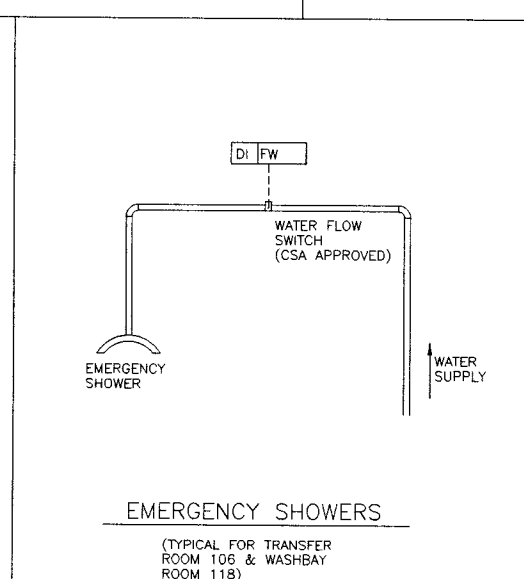
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



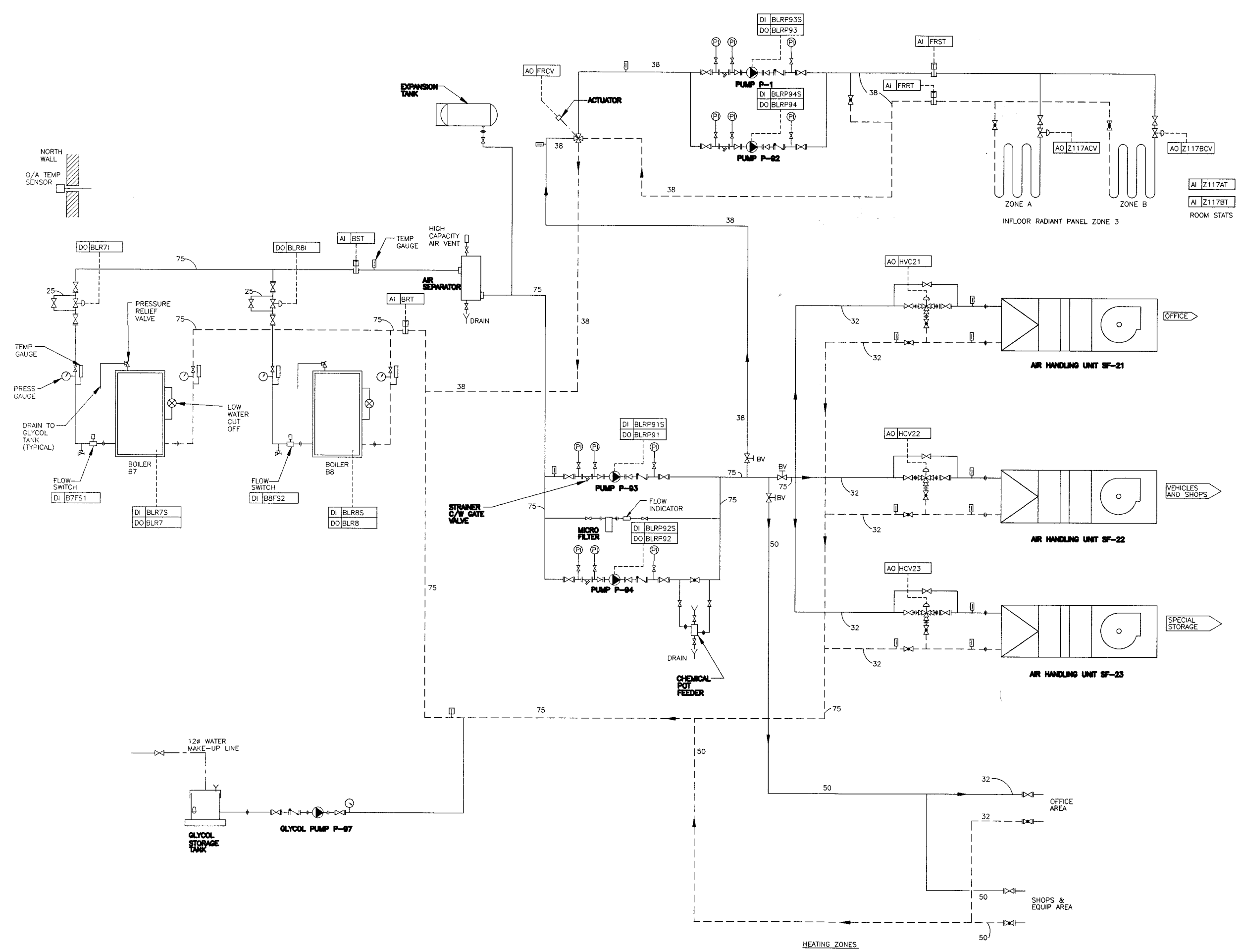
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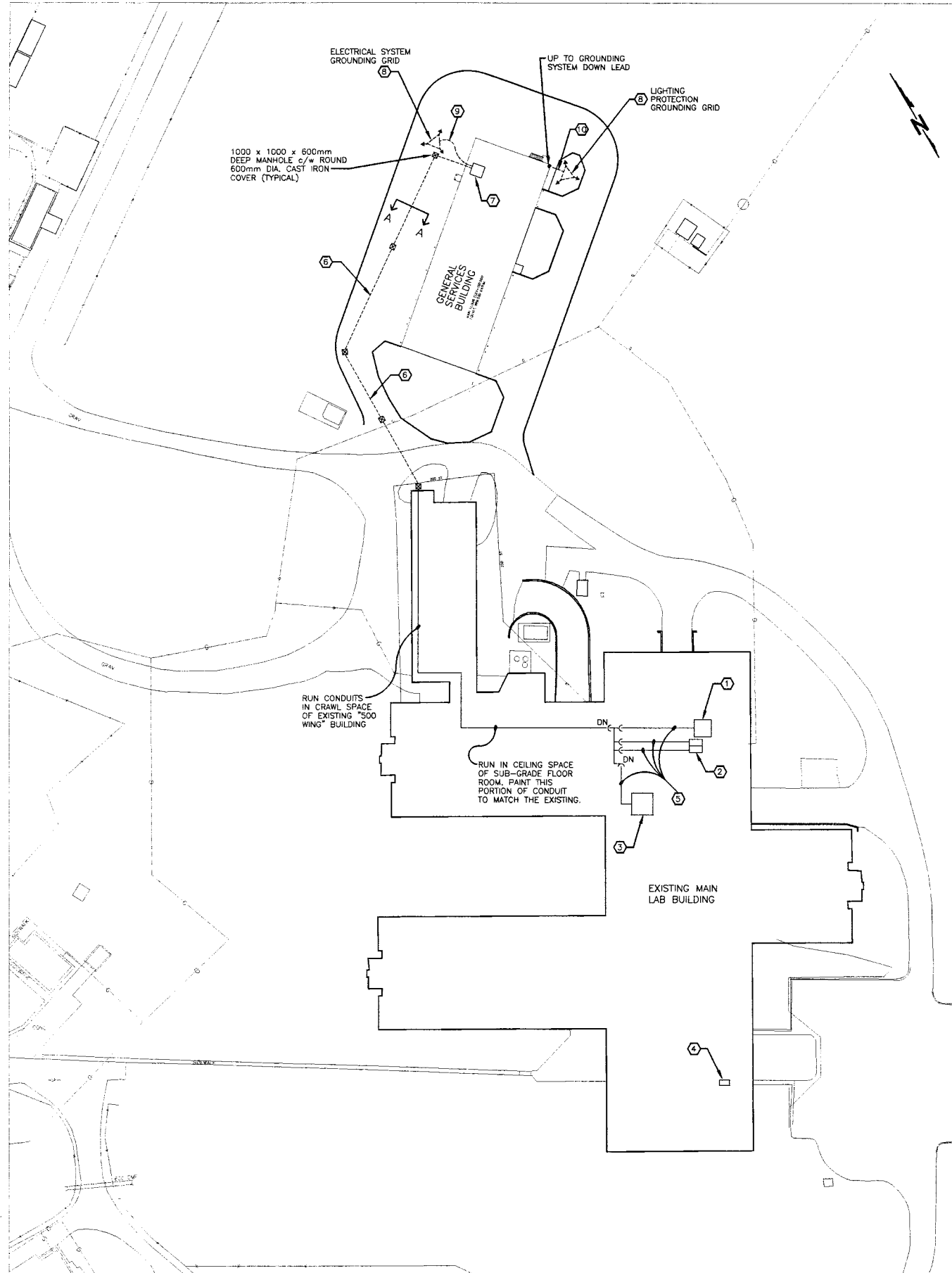
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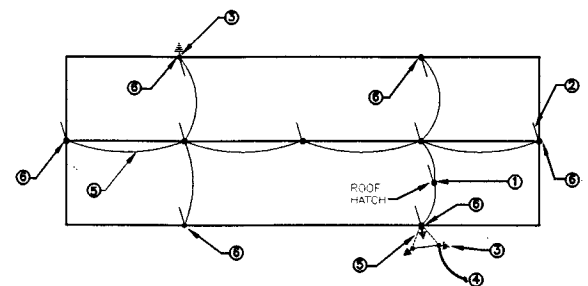


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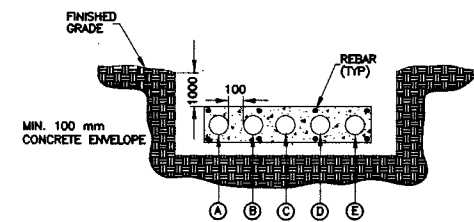


SITE PLAN  
SCALE 1:500



- 1 BOND ALL STACKS, EXHAUST DUCTS, CHIMNEY, ROOF LATCH, DOWN SPROUT, AND ALL OTHER PROJECTIONS ON THE ROOF.
- 2 15 mm x 500 mm SOLID COPPER AIR TERMINAL (TYPICAL).
- 3 19 mm x 3 m LONG COPPER CLAD ROD (TYPICAL).
- 4 INTERCONNECT LIGHTNING GROUND GRID WITH ELECTRICAL GROUNDING GRID.
- 5 GROUNDING CONDUCTOR 4 OZ./FT.
- 6 BOND TO STRUCTURAL STEEL BEAM AT LOCATIONS IDENTIFIED.

ROOF PLAN - LIGHTNING PROTECTION  
N.T.S.



- A 100 mm PVC CONDUIT c/w NORMAL POWER CONDUCTORS.
- B 100 mm PVC CONDUIT c/w EMERGENCY POWER CONDUCTORS.
- C 100 mm PVC CONDUIT FOR CONTROL, TELEPHONE CABLE, (CABLE SUPPLIED & INSTALLED BY OWNER).
- D 100 mm PVC CONDUIT c/w FIRE ALARM & BUILDING AUTOMATION CONTROL CABLE. (SEE NOTE NO. 11 BELOW).
- E 100 mm SPARE PVC CONDUIT. (SEE NOTE NO. 12 BELOW).

SECTION A-A  
N.T.S.

NOTES

- 1 EMERGENCY STAND-BY GENERATOR ROOM WITH PANEL "BED-1". USE EXISTING 60 AMP, 3 POLE SWITCH FUSED UNIT. INSTALL THREE 15, 50 AMP FUSES, TYPE "J".
- 2 NORMAL POWER ELECTRICAL ROOM WITH PANEL "BD2". USE EXISTING 400 AMP, 3 POLE SWITCH FUSED UNIT. REPLACE EXISTING FUSES WITH THREE 15, 250 AMP FUSES, TYPE "J".
- 3 EXISTING FIRE ALARM PANEL & BUILDING CONTROL CENTER IN CONTROL ROOM. MAKE CONNECTION TO THE FIRE ALARM PANEL CONNECTION OF BUILDING CONTROL CABLE BY DIV. 15.
- 4 EXISTING REMOTE FIRE ALARM ANNUNCIATION PANEL.
- 5 RUN CONDUITS IN CEILING SPACE OF BOILER ROOM. PAINT THIS PORTION OF CONDUIT TO MATCH EXISTING CONDUITS.
- 6 RUN DUCTS MINIMUM 1 METRE BELOW FINISHED GRADE.
- 7 ELECTRICAL ROOM OF THE GENERAL SERVICES BUILDING.
- 8 THREE 3 METRE LONG x 20 mm DIA. COPPERCLAD GROUND RODS 6 METRE APART. INTERCONNECT WITH #4/0 BARE COPPER CONDUCTORS. GROUND ROD AND CONDUCTOR CONNECTIONS ARE MADE WITH THERMOWELD PROCESS.
- 9 #4/0 BARE COPPER GROUND CONDUCTOR IN 25 mm RIGID STEEL CONDUIT TO SERVICE.
- 10 #4/0 BARE COPPER GROUND CONDUCTOR IN 25 mm RIGID STEEL CONDUIT TO STRUCTURAL STEEL AND ROOF LEADER.
- 11 THE BUILDING AUTOMATION CONTROL CABLE WILL BE SUPPLIED BY DIV. 15 FOR INSTALLATION BY DIV. 16. INSTALL THIS CABLE IN THE SAME CONDUIT FOR F/A CONTROL CABLE. IN GENERAL SERVICES BUILDING LEAVE SUFFICIENT SLACK CABLE AT DDC IN RM. 100. IN MAIN LAB BUILDING LEAVE SUFFICIENT SLACK CABLE AT CONTROLLER. FURTHER CONNECTION AT BOTH ENDS BY DIV. 15.
- 12 TERMINATE ONE-100mm SPARE DUCT IDENTIFIED IN SECTION A-A ABOVE IN ELECTRICAL ROOM OF THE NEW & EXISTING BUILDINGS. INSTALL NYLON PULL ROPE.
- 13 CONDUIT RUNS BETWEEN EXISTING MAIN LAB BUILDING AND NEW GENERAL SERVICES BUILDING TO BE:  
A) RIGID PVC UNDER GROUND  
B) EMT CONDUIT WITHIN THE BUILDING

SYMBOL SCHEDULE

	SWITCHING OR CIRCUITING GROUP
	CONDUIT, CABLE, ETC.
	CONDUIT OR CABLE UNDERGROUND
	CEILING MOUNTED FLUORESCENT FIXTURE
	FIXTURE TYPE 'A', CR. 12, PANEL 'B' (EXAMPLE ONLY)
	WALL MOUNTED FLUORESCENT FIXTURE
	CEILING MOUNTED LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	EXIT LIGHT w/DIRECTION ARROW
	EMERGENCY LIGHT BATTERY UNIT c/w TWO EMERGENCY LIGHTING HEADS
	WALL MOUNTED TELEPHONE OUTLET, 300mm UP OR AS SPEC.
	WALL MOUNTED DUPLEX RECEPTACLE, 300mm UP OR AS SPEC.
	WALL MOUNTED DUPLEX RECEPTACLE, WEATHERPROOF TYPE
	WALL MOUNTED DUPLEX SPLIT RECEPTACLE
	WALL MOUNTED SPECIAL RECEPTACLE, WITH AMP RATING AS SHOWN
	SWITCHES - LOW VOLTAGE 24V AC C/W ON/OFF INDICATING RED/GREEN LIGHTS & GANGED SWITCHES.
	LOW VOLTAGE SWITCH AS ABOVE BUT LIGHTS CONTROLLED FROM MORE THAN ONE PLACE AS INDICATED
	SWITCH 120V AC WITH PILOT LIGHT
	MANUAL STARTER C/W PILOT LIGHT
	MANHOLE
	DISCONNECT SWITCH
	PUSHBUTTON
	BUZZER WITH TRANSFORMER
	FIRE ALARM BELL c/w STROBE LIGHT
	FIRE ALARM PULL STATION
	HEAT DETECTOR, FIX TEMP., 58°C AND 88°C
	SMOKE DETECTOR - DUCT TYPE
	SMOKE DETECTOR - IONIZATION TYPE
	BUZZER
	BOX - DIRECT CONNECTION, JUNCTION, PULL
	THERMOSTAT
	MOTOR
	SWITCHES - ONE ABOVE THE OTHER - LOWER ONE AT NORMAL HEIGHT
	OUTLETS - NEATLY IN A LINE
	PANEL OR BOX - FLUSH, SURFACE
	GROUND ROD
	GROUND FAULT INTERRUPTING TYPE DUPLEX RECEPTACLE
	WEATHERPROOF
	PHOTOELECTRIC CELL CONTROLLED CIRCUIT
	TIMEDLOCK CONTROLLED CIRCUIT
	SINGLE RECEPTACLE FOR BATTERY PACK
	FLUSH MOUNTED DOOR CONTACT
	RECESSED MOUNTED 100mm x 100mm JUNCTION BOX FOR FUTURE KEY PAD (SECURITY SYSTEM AND CARD ACCESS SYSTEM).
	SURFACE MOUNTED 100mm x 100mm JUNCTION BOX FOR OVERHEAD DOOR CONTACT (SECURITY SYSTEM).
	RECESSED MOUNTED OUTLET BOX FOR FUTURE MOTION DETECTOR (SECURITY SYSTEM).
	PUSHBUTTON STATION FOR OVERHEAD DOOR OPERATOR (SUPPLIED BY OTHER DIVISION).

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DATE: OCT 27/95  
PLOT # 1-500/1000-707  
CAD FILE: AGRICAN\LETHBR\826029\PROGRESS\029ED1

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project

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BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

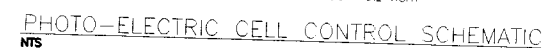
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SITE PLAN, LEGEND  
AND DETAILS

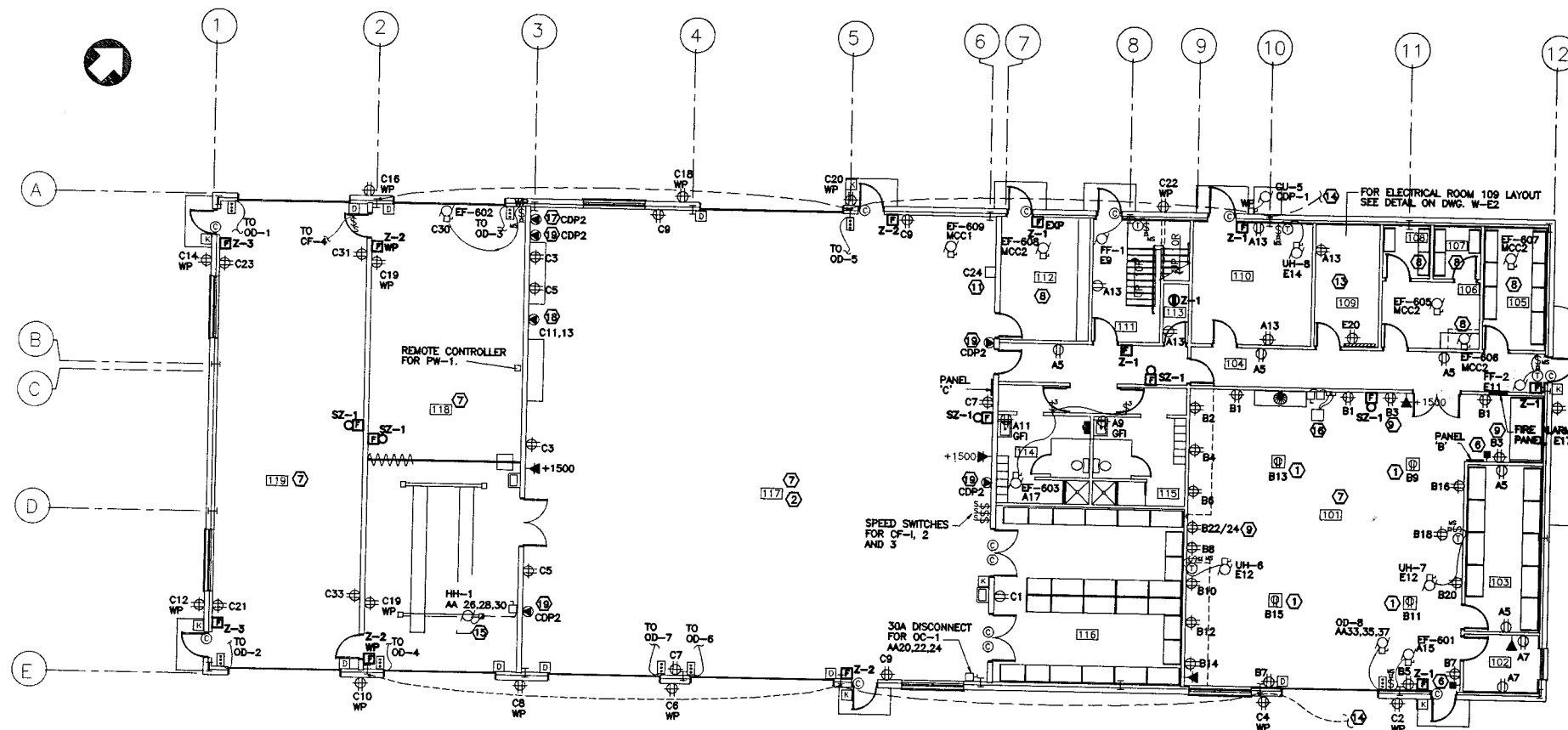
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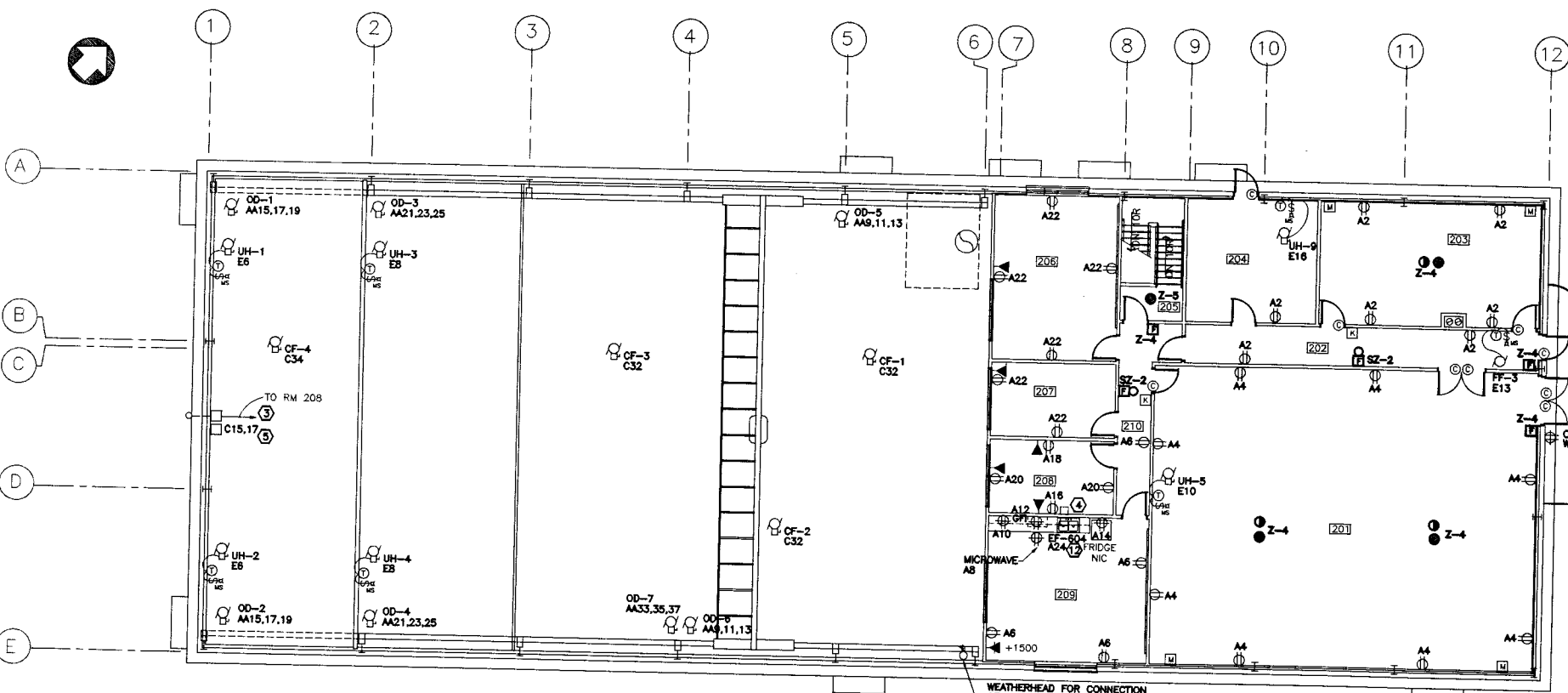
- (1) INSTALL TYPE "H" LIGHT FIXTURES WITH BOTTOM OF FIXTURES APPROXIMATELY 7 METER ABOVE FINISHED FLOOR. ENSURE THAT THERE IS ENOUGH CLEARANCE FOR FREE TRAVEL OF OVERHEAD CRANE AND OVERHEAD DOORS.
- (2) INSTALL TYPE "A" LIGHT FIXTURES IN WASH BAY 118 AND FIRE TRUCK/GRADER BAY 119 WITH CENTER LINE OF FIXTURES APPROXIMATELY 4 METER ABOVE FINISHED FLOOR.
- (3) INSTALL TYPE "A" LIGHT FIXTURES IN MAINTENANCE BAY 117 ON WALL APPROXIMATELY 4 METER ABOVE FINISHED FLOOR. ENSURE THAT THE FIXTURES ARE FREE OF ANY OBSTRUCTIONS DUE TO THE TRAVELLING CRANE.
- (4) EXT LIGHT FIXTURES IN RM. 118 TO BE WEATHER-PROOF.
- (5) LIGHT FIXTURES TYPE-R IN ROOM 101 TO BE CONTINUOUS IN ONE ROW AS SHOWN .
- (6) TERMINATE CONTROL WIRES FROM EXISTING MAIN LAB BUILDING AT DDC IN ROOM-109. CONNECTION TO DDC BY DW.15. (READ NOTE No. 17 ON DWG. W-E1).
- (7) INSTALL WEATHER PROOF SWITCH COVER OVER LIGHT SWITCHES IN ROOM 118.
- (8) ALL LIGHTS ARE CONTROLLED BY 24V AC OPERATED RELAYS AND LIGHT SWITCHES. LOCATE LIGHTING CONTROL RELAY PANEL IN ROOM 109 AS INDICATED.



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DATE	DECEMBER 22, 1985	
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MAIN FLOOR PLAN  
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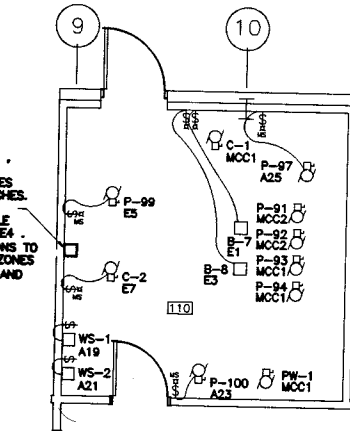


SECOND FLOOR PLAN  
1 : 100 mm

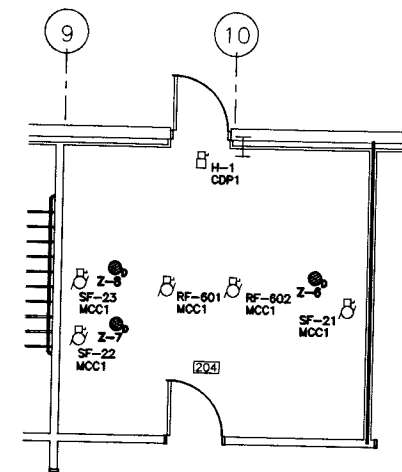
# NOTES

- 1 CEILING MOUNTED ELECTRIC CORD REEL EQUAL TO DANIEL WOODHEAD CAT. No. 943.
- 2 CONFIRM EXACT CONFIGURATIONS AND LOCATIONS OF ALL SPECIAL OUTLETS IN MAINTENANCE BAY 117 WITH ENGINEER PRIOR TO ROUGH-IN.
- 3 50 mm EMPTY CONDUIT c/w WEATHERHEAD EXTENDING 1 METRE ABOVE ROOF PEAK FOR MICROWAVE DISH. TERMINATE CONDUIT IN OUTLET BOX IN COMPUTER RM. 208. PROVIDE LB'S AT ALL 90° BENDS. REFER TO NOTE 4.
- 4 OUTLET BOX FOR TERMINATION OF MICROWAVE DISH CONDUIT. CONFIRM EXACT LOCATION BOX PRIOR TO ROUGH-IN. PROVIDE STAINLESS STEEL COVERPLATE c/w 25 mm DIA. GROMMETTED OPENING.
- 5 WALL MOUNTED J.B. LOCATED AT MICROWAVE DISH CONDUIT ENTRY POINT FOR POWER REQUIREMENT. TERMINATE CIRCUITS IN J.B. FOR FURTHER CONNECTION BY OTHERS.
- 6 RED MUSHROOM TYPE PUSHBUTTON TO DE-ENERGIZE PANEL 'B'.
- 7 ALL OUTLETS IN CARPENTER SHOP 101, MAINTENANCE BAY 117, WASHBAY 118 AND TRUCK/GARAGE BAY 119 ARE TO BE MOUNTED 800 mm AFF UNLESS SHOWN OTHERWISE. AT WORK BENCH IN CARPENTRY 101, MOUNT RECEPTACLES 300 mm ABOVE BENCHES.
- 8 ALL ELECTRICAL INSTALLATION IN ROOM 105, 106, 107, 108 AND 112 ARE TO BE DONE TO CSA C22-1, CLASS I, DIV. II STANDARD.
- 9 IN ROOM 101, RECEPTACLES B3 TO BE 120V, 20AMP, CSA 5-20R AND RECEPTACLE B22/24 TO BE CSA 6-15R. EXACT LOCATION TO BE FIELD DETERMINED. CONSULT ENGINEER PRIOR TO ROUGH IN.
- 10 NOT USED
- 11 CONNECT PAINT BOOTH EXHAUST FAN ON/OFF SWITCH AND LIGHT FIXTURE SUPPLIED BY DIV. 15. COORDINATE WITH DIV. 15 FOR EXACT REQUIREMENT.
- 12 PROVIDE ONE 80W A19 LAMP IN FAN HOOD LOCATED IN ROOM 209. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION.
- 13 TELEPHONE TERMINAL BACKBOARD LOCATED IN ELECTRICAL ROOM 109 TO BE 1200 x 2400 x 20 mm PLYWOOD PAINTED GRAY.
- 14 #4 AWG BARE GROUND CONDUCTOR C/WELDED TO BASE OF STRUCTURAL STEEL COLUMNS AS SHOWN. PROVIDE CONDUIT SLEEVINGS IN CONCRETE PILES FOR ROUTING OF CONDUCTOR. CONNECT FINAL RUN TO GROUND GRID. REFER TO DRAWING W-E1 FOR GROUND GRID LOCATION.
- 15 FOR HH-1 IN AREA 118, PROVIDE 50 mm CONDUIT UNDER FLOOR SLAB AND STUB UP AS SHOWN. MAKE CONNECTION TO HOIST MOTOR. CONSULT ENGINEER FOR EXACT LOCATION PRIOR TO ROUGH-IN.
- 16 INSTALL DISCONNECT SWITCH, DUST COLLECTOR CONTROLLER AND TWO CORD REELS ON THE WALL AND MAKE CONNECTION TO THE PORTABLE DUST COLLECTOR. SEE DETAIL ON DRAWING W-E4. PROVIDE SECURE SUPPORT FOR THE CORD REELS. DUST COLLECTOR AND CONTROLLER SUPPLIED BY OWNER FOR INSTALLATION UNDER THIS CONTRACT. EXACT LOCATION IN ROOM 101 WILL BE FIELD DETERMINED BY ENGINEER.
- 17 WELDING OUTLET: 100 AMP, 2 POLE, 3 WIRE, 208V, CROUSE-HINDS MODEL #AR1038 c/w BASE BOX MODEL #AJ.
- 18 CUT OFF SAW RECEPTACLE TO BE CSA CONFIGURATION No. L6-20R.
- 19 WELDING OUTLET: 50 AMP, 2 POLE, 3 WIRE, 208V, CSA CONFIGURATION No. 6-30R.

SPRINKLER TREE, LOCATION OF SPRINKLER VALVES AND FLOW SWITCHES. REFER TO F.A. ZONING SCHEDULE ON DRAWING W-E4. MAKE CONNECTIONS TO THE SPRINKLER ZONES Z-8 AND Z-10 AND TROUBLE ZONES T21 TO T24.



MECHANICAL ROOM 110 DETAIL  
1 : 50 mm



MECHANICAL ROOM 204 DETAIL  
1 : 50 mm

DATE: OCT 31/95  
PLUT # 1-100/1000/707  
CAD FILE: AGRICULTURE/204/205/PROJ/204/205/205/205

ISSUED FOR REVIEW  
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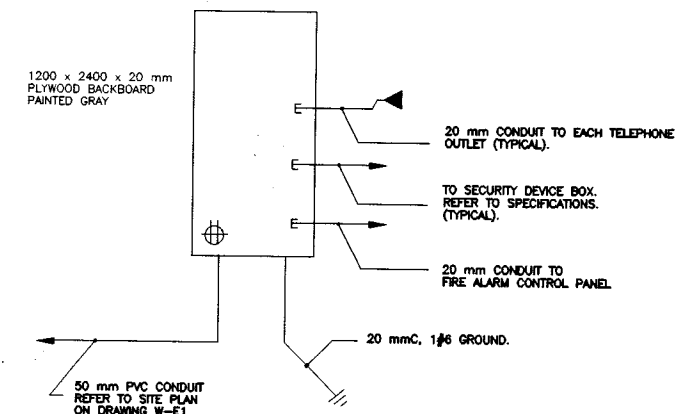
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project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE,  
ALBERTA

drawing  
MAIN AND SECOND  
FLOOR - POWER  
AND LOW VOLTAGE

DESIGNED MBT CONQU  
DATE  
DRAWN GDL DESSINE  
DATE DECEMBER 22, 1995 EXAMINE  
DATE  
APPROVED APPROUVE  
DATE  
TENDER SOUMISSION  
PWC PROJECT MANAGER  
PROJECT NUMBER 626029 NO. DU PROJET  
DRAWING NUMBER NO. DU DESSIN

MECHANICAL EQUIPMENT SCHEDULE										
No.	EQUIPMENT	LOAD	PHASE	VOLTS	CONDUIT/WIRE	BREAKER	CONTROL AND REMARKS			
EF-601	EXHAUST FAN (CARPENTRY SHOP)	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
EF-602	EXHAUST FAN (WASH BAY)	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
EF-603	EXHAUST FAN (MAIN FLOOR WASHROOM)	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/3-WAY SWITCHES/RED LED INDICATING LAMPS ON SW. PLATES.			
EF-604	EXHAUST FAN (LUNCH ROOM)	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
EF-605	EXHAUST FAN (TRANSFER ROOM)	FHP	1	120	12C, 2#12	3MCP	DISCONNECT/STARTER/MCC2/H-O-A ON STARTER			
EF-606	EXHAUST FAN (FUME HOOD)	FHP	1	120	12C, 2#12	3MCP	DISCONNECT/STARTER/MCC2/H-O-A ON STARTER			
EF-607	EXHAUST FAN (PAINT STORAGE)	FHP	1	120	12C, 2#12	3MCP	DISCONNECT/STARTER/MCC2/H-O-A ON STARTER			
EF-608	EXHAUST FAN (LUBE STORAGE)	FHP	1	120	12C, 2#12	3MCP	DISCONNECT/STARTER/MCC2/H-O-A ON STARTER			
EF-609	EXHAUST FAN (PAINT BOOTH)	3 HP	3	575	19C, 3#12	7MCP	DISCONNECT/STARTER/MCC1/LOCAL ON-OFF SWITCH c/w PILOT LIGHT			
CF-1 TO CF-4	SLOW MOVING FAN	FHP	1	120	12C, 2#12	15A/1P	VARIABLE SPEED SWITCH SUPPLIED BY DIV.15, WIRED BY DIV.16/DISCONNECT			
FF-1	FORCED FLOW	FHP	1	120	12C, 2#12	15A/1P	T*STAT SUPPLIED BY DIV.15, WIRED BY DIV.16/MANUAL STARTER			
FF-2	FORCED FLOW	FHP	1	120	12C, 2#12	15A/1P	T*STAT SUPPLIED BY DIV.15, WIRED BY DIV.16/MANUAL STARTER			
FF-3	FORCED FLOW	FHP	1	120	12C, 2#12	15A/1P	T*STAT SUPPLIED BY DIV.15, WIRED BY DIV.16/MANUAL STARTER			
RF-601	RETURN AIR FAN	1/2 HP	3	575	19C, 3#12	3MCP	DISCONNECT/STARTER/MCC1/FIRE ALARM SHUT-DOWN/H-O-A ON STARTER			
RF-602	RETURN AIR FAN	1/2 HP	3	575	19C, 3#12	3MCP	DISCONNECT/STARTER/MCC1/FIRE ALARM SHUT-DOWN/H-O-A ON STARTER			
B-7	BOILER	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT			
B-8	BOILER	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT			
P-91	IN FLOOR CIRCULATOR 1	FHP	1	120	12C, 2#12	3 MCP	DISCONNECT/STARTER/MCC-2/H-O-A ON STARTER			
P-92	IN FLOOR CIRCULATOR 2	FHP	1	120	12C, 2#12	3 MCP	DISCONNECT/STARTER/MCC-2/H-O-A ON STARTER			
P-93	MAIN CIRCULATOR 3	1 1/2 HP	3	575	19C, 3#12	3MCP	DISCONNECT/STARTER/MCC1/H-O-A ON STARTER			
P-94	MAIN CIRCULATOR 4	1 1/2 HP	3	575	19C, 3#12	3MCP	DISCONNECT/STARTER/MCC1/H-O-A ON STARTER			
P-97	GLYCOL PUMP	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
P-99	SPRINKLER JOCKEY	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
P-100	HOT WATER RECIRC.	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT/MANUAL STARTER			
C-1	SERVICE AIR COMPRESSOR	10 HP	3	575	25C, 3#10	30MCP	DISCONNECT/STARTER/MCC1			
C-2	SPRINKLER AIR COMPRESSOR	0.5	1	120	12C, 2#12	20A/1P	DISCONNECT/MANUAL STARTER			
SF-21	AIR HANDLING UNIT (OFFICE)	3 HP	3	575	19C, 3#12	7MCP	DISCONNECT/STARTER/MCC1/DUCT-TYPE SMOKE DETECTOR IN MAIN BRANCH			
SF-22	AIR HANDLING UNIT (VEHICLE & SHOPS)	5 HP	3	575	19C, 3#12	15MCP	DISCONNECT/STARTER/MCC1/DUCT-TYPE SMOKE DETECTOR IN MAIN BRANCH			
SF-23	AIR HANDLING UNIT (SPECIAL STORAGE)	1 HP	3	575	25C, 6#12	3MCP	DISCONNECT/2 SPEED STARTER/MCC1/DUCT-TYPE SMOKE DETECTOR IN MAIN BRANCH			
CU-5	CONDENSING UNIT	5 KW	3	575	25C, 3#10	20A/3P	DISCONNECT/CDP-1			
WS-1	WATER SOFTENER	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT			
WS-2	WATER SOFTENER	FHP	1	120	12C, 2#12	15A/1P	DISCONNECT			
H-1	HUMIDIFIER	20 KW	3	575	25C, 3#8	30A/3P	DISCONNECT			
UH-1 TO UH-9	UNIT HEATERS	FHP	1	120	12C, 2#12	15A/1P	THERMOSTAT AND VALVE BY DIV.15, WIRED BY DIV.16/DISCONNECT/MANUAL STARTER			
PW-1	PRESSURE WASHER	3 HP	3	575	19C, 3#12	7MCP	DISCONNECT/STARTER/MCC1/REMOTE CONTROLLERS BY DIV. 15 INSTALLED & WIRED BY DIV. 16			
OC-1	OVERHEAD CRANE	5 HP	3	575	25C, 3#10	30A/3P	LOCAL DISCONNECT SWITCH AND WEATHERHEAD			
HH-1	HYDRAULIC HOIST	2 HP	3	575	19C, 3#12	15A/3P	LOCAL DISCONNECT SWITCH			
OD-1 TO OD-8	OVERHEAD DOOR OPERATOR	3/4 HP	3	575	19C, 3#12	15A/3P	LOCAL DISCONNECT/PUSHBUTTON STATION AT DOOR			
CONFIRM EXACT LOADS AND REQUIREMENTS OF ALL EQUIPMENT WITH SUPPLIER PRIOR TO ROUGH-IN.										
NOTES: 1) ALL EQUIPMENT NUMBERS SHOWN IN THIS TABLE AND IN ONE LINE DIAGRAM WILL BE CHANGED BY ENGINEER DURING CONSTRUCTION. ALL NAME PLATES, SHOP DRAWINGS, WIRING, MARKERS AND RECORD PLANS TO REFLECT THESE CHANGES. 2) STARTER SIZES ARE SHOWN ON DWG. W-E05.										

TELEPHONE RISER DIAGRAM  
N.T.S.

## FIRE ALARM ZONING SCHEDULE

## ALARM ZONES (Z)

DESCRIPTION	
Z-1	MAIN FLOOR - NORTH
Z-2	MAINTENANCE BAY 117 & WASH BAY 118
Z-3	FIRE TRUCK & GRADER BAY 119
Z-4	SECOND FLOOR
Z-5	STAIRWAY 111
Z-6	SF-21
Z-7	SF-22
Z-8	SF-23
Z-9	SPRINKLER FLOW - ROOF AREA
Z-10	SPRINKLER FLOW - OFFICE AREA

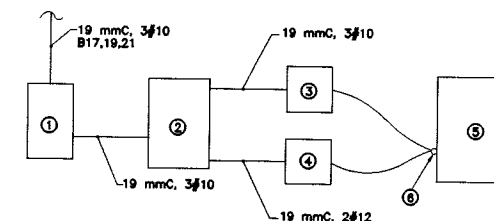
## TROUBLE ZONES (TZ)

DESCRIPTION	
TZ-1	SPRINKLER VALVE - MAIN
TZ-2	SPRINKLER VALVE - ROOF AREA
TZ-3	SPRINKLER - OFFICE AREA
TZ-4	SPRINKLER - LOSS OF PRESSURE

## SIGNAL ZONES (SZ)

DESCRIPTION	
SZ-1	MAIN FLOOR
SZ-2	SECOND FLOOR

FIXTURE SCHEDULE					
TYPE	MANUFACTURER	TYPE	CATALOGUE No.	LAMPS	MOUNTING AND REMARKS
A-120V B-347V C-18°C BALLAST H-HIGH POWER FACTOR BALLAST E-ELECTRONIC BALLAST T-MOUNTING ACCESSORIES TYPE HUBBELL CAT NO. 'HOOK', 'LOOP' & 'PHE'					
A	CFI	FLUORES/ VAPOUR PROOF	VT 248	2x32W T8	WALL MOUNTED IN VERTICAL POSITION/B.E.H
B	LITHONIA	4' FLUORESCENT STRIP	P SERIES	2x32W T8	SURFACE/H.E.B/WIREGUARDS
C	HUBBELL "INDIGO"	FLUORESCENT	WM42	2x32W T8	SURFACE/H.E.B/CLEAR ACRYLIC PRISMATIC LENS
D	PEERLESS	FLUORESCENT	CNB SERIES	2x32W T8	SURFACE/H.E.B
E	PEERLESS	1' x 4' FLUORESCENT	NITF SERIES	2x32W T8	RECESSED/H.E.B/T-BAR
F	PEERLESS	2' x 4' FLUORESCENT	NITF SERIES	3x32W T8	RECESSED/H.E.B/T-BAR/MIDDLE LAMP ON 1 SWITCH & REMAINING ON ANOTHER
G	PEERLESS	2' x 4' FLUORESCENT	NITF SERIES	2x32W T8	RECESSED/H.E.B/T-BAR
H	HUBBELL	METAL HALIDE	BL-400H6-EG	1x400W MH	SURFACE SUSPENDED ABOVE OC-1 RAILS/ H.B.T
J	CROUSE-HINDS	EXPLOSIONPROOF FLUORES.	EVCK215	1x13W PL13	SURFACE/A
L	LITHONIA	HIGH PRESSURE SODIUM	TWH SERIES	1x250W HPS	SURFACE/H.B.C
L1	LITHONIA	HIGH PRESSURE SODIUM	TWH SERIES	1x70W HPS	SURFACE/H.B.C
M	PRESCOLITE	COMPACT FLUOR.	PBX-T045	2x13W TT	RECESSED/H.B
N	NOT USED				
P	LITHONIA	HIGH PRESSURE SODIUM	LH70S-RL5	1x70W B17	RECESSED/H.B.C/SUITABLE FOR EXTERIOR USE
Q	METALIX	INDUSTRIAL FLUOR.	IA SERIES	2x32W T8	PROVIDE ANGLES/CHAIN SUSPENDED ABOVE WORK BENCHES/H.E.B/ SUBMIT MOUNTING DETAILS FOR APPROVAL
R	LITHONIA	6' FLUORESCENT STRIP	P SERIES (TANDEM)	4x32W T8	SURFACE/H.E.B/WIREGUARDS
EXIT				LED.	RED LETTERS/ METAL STENCIL FACE/DIRECTIONAL ARROWS AS SHOWN/MOUNTED AS SHOWN. TWO FIXTURES IN RM. 118 TO BE WEATHERPROOF.



## NOTES

- DISCONNECT SWITCH, 30AMP, 208V, 3#, 4W. INSTALL ON THE WALL.
- DUST COLLECTOR CONTROLLER. INSTALL ON THE WALL. (SUPPLIED BY OWNER FOR INSTALLATION UNDER THIS CONTRACT).
- RETRACTABLE CORD REEL, DANIEL WOODHEAD MODEL #9242 WITH 3#10 CONDUCTORS. SECURELY INSTALL ON THE WALL.
- RETRACTABLE CORD REEL, DANIEL WOODHEAD MODEL #9383 WITH 3#12 CONDUCTORS. SECURELY INSTALL ON THE WALL.
- PORTABLE DUST COLLECTOR ON WHEEL. (SUPPLIED BY OWNER FOR INSTALLATION UNDER THIS CONTRACT).
- CONNECTION OF CORDS FROM TWO CORD REELS TO THE DUST COLLECTOR. SECURELY FASTEN CORDS TO THE DUST COLLECTOR.

DUST COLLECTOR CONNECTION DETAIL  
N.T.S. (SEE NOTE 16 ON DWG. W-E3)Agriculture  
CanadaDATE: OCT. 31/98  
PLUT # 1-100/1000-707  
CND FILE: AGRICULTURE/LETHBRIDGE/PROGRESS/028024ISSUED FOR REVIEW  
SEPT. 5, 1995  
revision  
dateA detail no.  
no. du detail  
B location drawing no.  
sur dessin no.  
C drawing no.  
dessin no.project  
GENERAL SERVICES  
BUILDING  
A.D.R.I.  
LETHBRIDGE  
ALBERTA  
projectdrawing  
dessinEQUIPMENT SCHEDULE,  
FIXTURE SCHEDULE,  
F.A. SCHEDULE AND  
TELEPHONE RISER  
DIAGRAM

DESIGNED MBT CONCU

DATE

DRAWN GDL DESSINE

DATE DECEMBER 22, 1995

REVIEWED EXAMINE

DATE

APPROVED APPROUVE

DATE

TENDER SOUMISSION

PWC PROJECT MANAGER

PROJECT NUMBER NO. DU PROJET

626029

PANEL 'AA' 347/600V 3PH 4WIRE 225A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
LTG - MAIN FLR EAST	15	1	2	15	LTG - 203, 204, 206	15	1	2	15
LTG - 101	15	3	4	15	LTG - 202, 207, 208, 209, 210	15	3	4	15
LTG - 116	15	5	6	15	LTG - 201	15	5	6	15
SPARE	15	7	8	15	LTG - 117	15	7	8	15
OD-5, 6 117	15	9	10	15	LTG - 118, 119	15	9	10	15
	15	11	12	15	LTG - 117	15	11	12	15
	3P	13	14	15	SPARE	15	13	14	15
OD-1, 2 119	15	15	16	15	SPARE	15	15	16	15
	15	17	18	15	SPARE	15	17	18	15
	3P	19	20	15	OVERHEAD CRANE	15	19	20	15
OD-3, 4 118	15	21	22	15	OC-1 117	15	21	22	15
	3P	23	24	15		15	23	24	15
	15	25	26	15	HYDRAULIC LIFT	15	25	26	15
	15	27	28	15	HH-1 118	15	27	28	15
SPARE	15	29	30	15		15	29	30	15
	3P	31	32	15		15	31	32	15
	15	33	34	15		15	33	34	15
OD-7 117, OD-8 101	15	35	36	15		15	35	36	15
	3P	37	38	15		15	37	38	15
	15	39	40	15		15	39	40	15
	15	41	42	15		15	41	42	15

PANEL 'B' 120/208V 3PH 4WIRE 100A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
REC - 101(NORTH WALL)	15	1	2	15	REC - 101(WEST)	15	1	2	15
REC - 101(AIR COMP.)	20	3	4	15	REC - 101(WEST)	15	3	4	15
REC - 101(SOUTH)	15	5	6	15	REC - 101(WEST)	15	5	6	15
REC - 101(SOUTH)	15	7	8	15	REC - 101(WEST)	15	7	8	15
REEL CORD - 101	15	9	10	15	REC - 101(WEST)	15	9	10	15
REEL CORD - 101	15	11	12	15	REC - 101(WEST)	15	11	12	15
REEL CORD - 101	15	13	14	15	REC - 101(WEST)	15	13	14	15
REEL CORD - 101	15	15	16	15	REC. 101(EAST)	15	15	16	15
PORTABLE	30	17	18	15	REC. 101(EAST)	15	17	18	15
DUST COLLECTOR	30	19	20	15	REC. 101(EAST)	15	19	20	15
	3P	21	22	20	REC. 101(RADIAL ARM SAW)	20	21	22	20
	15	23	24	15		15	23	24	15
	15	25	26	15		15	25	26	15
	15	27	28	15		15	27	28	15
	15	29	30	15		15	29	30	15

PANEL 'C' 120/208V 3PH 4WIRE 225A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
REC - 116	15	1	2	15	REC - EXTERIOR (SOUTH)	15	1	2	15
REC - 117 (WEST)	15	3	4	15	REC - EXTERIOR (SOUTH)	15	3	4	15
REC - 117 (WEST)	15	5	6	15	REC - EXTERIOR (SOUTH)	15	5	6	15
REC - 117	15	7	8	15	REC - EXTERIOR (SOUTH)	15	7	8	15
REC - 117	15	9	10	15	REC - EXTERIOR (SOUTH)	15	9	10	15
CUTOFF	20	11	12	15	REC - EXTERIOR (WEST)	15	11	12	15
SAW - 117	2P	13	14	15	REC - EXTERIOR (WEST)	15	13	14	15
SUPPLY TO ROOFTOP ANTENNA	15	15	16	15	REC - EXTERIOR (NORTH)	15	15	16	15
SUPPLY TO ROOFTOP ANTENNA	15	17	18	15	REC - EXTERIOR (NORTH)	15	17	18	15
REC - 118	15	19	20	15	REC - EXTERIOR (NORTH)	15	19	20	15
REC - 119 (S.W.)	15	21	22	15	REC - EXTERIOR (NORTH)	15	21	22	15
REC - 119 (N.W.)	15	23	24	15	PAINT BOOTH 117	15	23	24	15
SPARE	15	25	26	15	SPARE	15	25	26	15
SPARE	15	27	28	15	SPARE	15	27	28	15
SPARE	15	29	30	15	EF-602 118	15	29	30	15
REC - 119 (N.E.)	15	31	32	15	CF-1, 2, 3 118	15	31	32	15
REC - 119 (S.E.)	15	33	34	15	CF-4 119	15	33	34	15
SPARE	15	35	36	15	SPARE	15	35	36	15
SPARE	15	37	38	15	SPARE	15	37	38	15
SPARE	15	39	40	15	SPARE	15	39	40	15
SPARE	15	41	42	15	SPARE	15	41	42	15

PANEL 'E' 120/208V 3PH 4WIRE 100A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
B-7 110	15	1	2	15	LIGHTING CONTROL RELAY PNL	15	1	2	15
B-8 110	15	3	4	15	DDC CONTROL PNL-109	15	3	4	15
P-99 110	15	5	6	15	UH-1, 2 119	15	5	6	15
C-2 110	20	7	8	15	UH-3, 4 118	15	7	8	15
FF-1 111	15	9	10	15	UH-5 201	15	9	10	15
FF-2 104	15	11	12	15	UH-6, 7 101	15	11	12	15
FF-3 202	15	13	14	15	UH-8 110	15	13	14	15
SPARE	15	15	16	15	UH-9 204	15	15	16	15
FIRE ALARM SYSTEM	15	17	18	15	SPARE	15	17	18	15
EXIT LIGHTS	15	19	20	15	TELEPHONE TERMINAL BOARD 108	15	19	20	15
SPARE	15	21	22	15	OUTDOOR LIGHT CONTROL	15	21	22	15
SPARE	15	23	24	15		15	23	24	15
	15	25	26	15		15	25	26	15
	15	27	28	15		15	27	28	15
	15	29	30	15		15	29	30	15

PANEL 'EE' 347/600V 3PH 4WIRE 100A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
LTG - EXTERIOR	15	1	2	15	LTG - EXTERIOR	15	1	2	15
NIGHT LIGHTS	15	3	4	15	SPARE	15	3	4	15
LTG - 111, 205	15	5	6	15	SPARE	15	5	6	15
LTG - EXTERIOR	15	7	8	40		15	7	8	40
	15	9	10		30 KVA TRANSFORMER	15	9	10	
	15	11	12	3P		15	11	12	3P

PANEL 'A' 120/208V 3PH 4WIRE 225A BUS									
SERVICE	AMP	NO	NO	AMP	SERVICE	AMP	NO	NO	AMP
REC - 105, 106, 107, 108	15	1	2	15	REC - 202, 203, 204	15	1	2	15
REC - 112	15	3	4	15	REC - 201	15	3	4	15
REC - 103, 104, 113	15	5	6	15	REC - 209, 210	15	5	6	15
REC - 102	15	7	8	15	REC - 109 MICROWAVE	15	7	8	15
REC - 114	15	9	10	15	REC - 209	15	9	10	15
REC - 115	15	11	12	15	REC - 209	15	11	12	15
REC - 109, 110, 111, 113	15	13	14	15	REC - 209 FRIDGE	15	13	14	15
EF-601 101	15	15	16	15	REC - 208	15	15	16	15
EF-603 114	15	17	18	15	REC - 208	15	17	18	15
WS-1 110	15	19	20	15	REC - 208	15	19	20	15
WS-2 110	15	21	22	15	REC - 206, 207	15	21	22	15
P-100 110	15	23	24	15	EF-604 209	15	23	24	15
P-97 110	15	25	26	15	SPARE	15	25	26	15
SPARE	15	27	28	15		15	27	28	15
SPARE	15	29	30	15		15	29	30	15
SPARE	15	31	32	15		15	31	32	15
SPARE	15	33	34	15		15	33	34	15
	15	35	36	15		15	35	36	15
	15	37	38	15		15	37	38	15
	15	39	40	15		15	39	40	15
	15	41	42	15		15	41	42	15

P-91	EF-605
FHP 1#, 120V	FHP 1#, 120V
SIZE-0	SIZE-0
P-92	EF-606
FHP 1#, 120V	FHP 1#, 120V
SIZE-0	SIZE-0
SPACE	EF-607
FOR SIZE-1	FHP 1#, 120V
	SIZE-0
SPACE	EF-608
FOR SIZE-1	FHP 1#, 120V
	SIZE-0

RF-601	C-1	SPARE
1/2HP	10HP	3#, 575V
3#, 575V	SIZE-1	SIZE-1
SIZE-0		
RF-602	SF-21	PW-1
1/2HP	3 HP	3#, 575V
3#, 575V	SIZE-0	SIZE-0
SIZE-0		
P-93	SF-22	EF-609
FHP 1#, 120V	3 HP	3#, 575V
SIZE-0	SIZE-1	SIZE-0
P-94	SF-23	SPACE
FHP 1#, 120V	1HP	FOR SIZE-1
SIZE-0	3#, 575V	
	2-SPEED	
	SIZE-0	

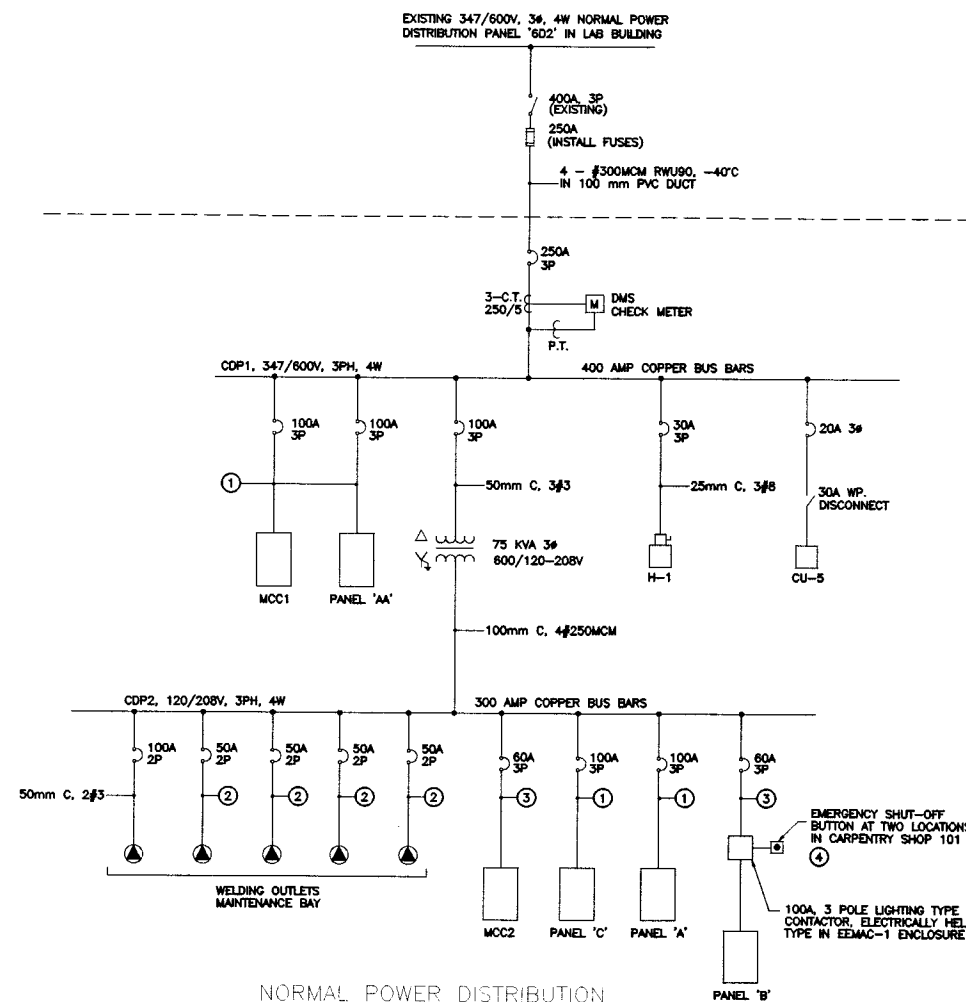
MCC2  
120/208V, 3Ø

MCC1  
347/600V, 3Ø

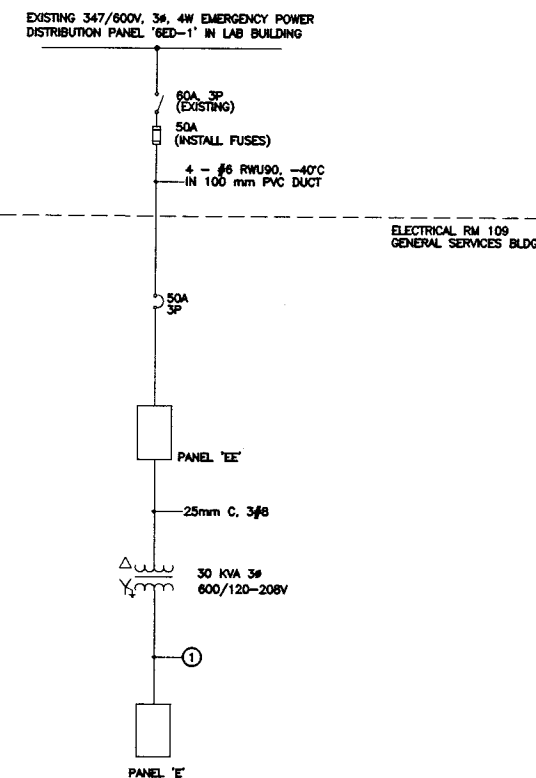
# MOTOR CONTROL CENTRE ELEVATIONS N.T.S.

## MOTOR STARTER NOTE

- MOTOR STARTER SIZES SHOWN ARE EEMAC SIZES.
- PROVIDE SPARE SPACES IN BOTH MCC'S AS SHOWN.



NORMAL POWER DISTRIBUTION



EMERGENCY POWER DISTRIBUTION

## NOTES

- 50 mmC, 4#3
- 25 mmC, 2#6
- 40 mmC, 4#6
- PUSHBUTTON FOR EMERGENCY POWER SHUTOFF TO PANEL 'B' TO BE HEAVY DUTY, OIL TIGHT TYPE, WITH 40 mm DIA. RED MUSHROOM HEAD WITH MAINTAINED CONTACT IN BOTH 'ON' AND 'OFF' POSITION. MOUNT BUTTON IN FS BOX WITH LAMCOC NAMEPLATE TO READ 'PUSH FOR EMERGENCY POWER CUT OFF'. NAMEPLATE TO BE RED BACKGROUND, WHITE LETTERING 1/4" HIGH.

## ONE LINE DIAGRAM

N.T.S.  
(READ NOTE SHOWN IN  
'MECH. EQUIP. SCHEDULE'  
IN DWG. W-E4)

**GENERAL SERVICES  
BUILDING ROOM #S**

