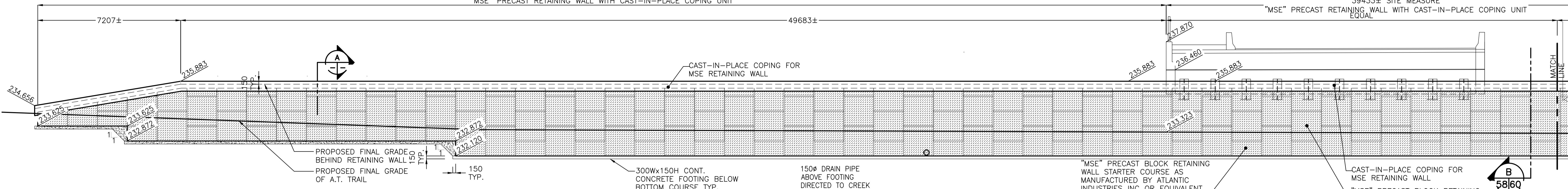


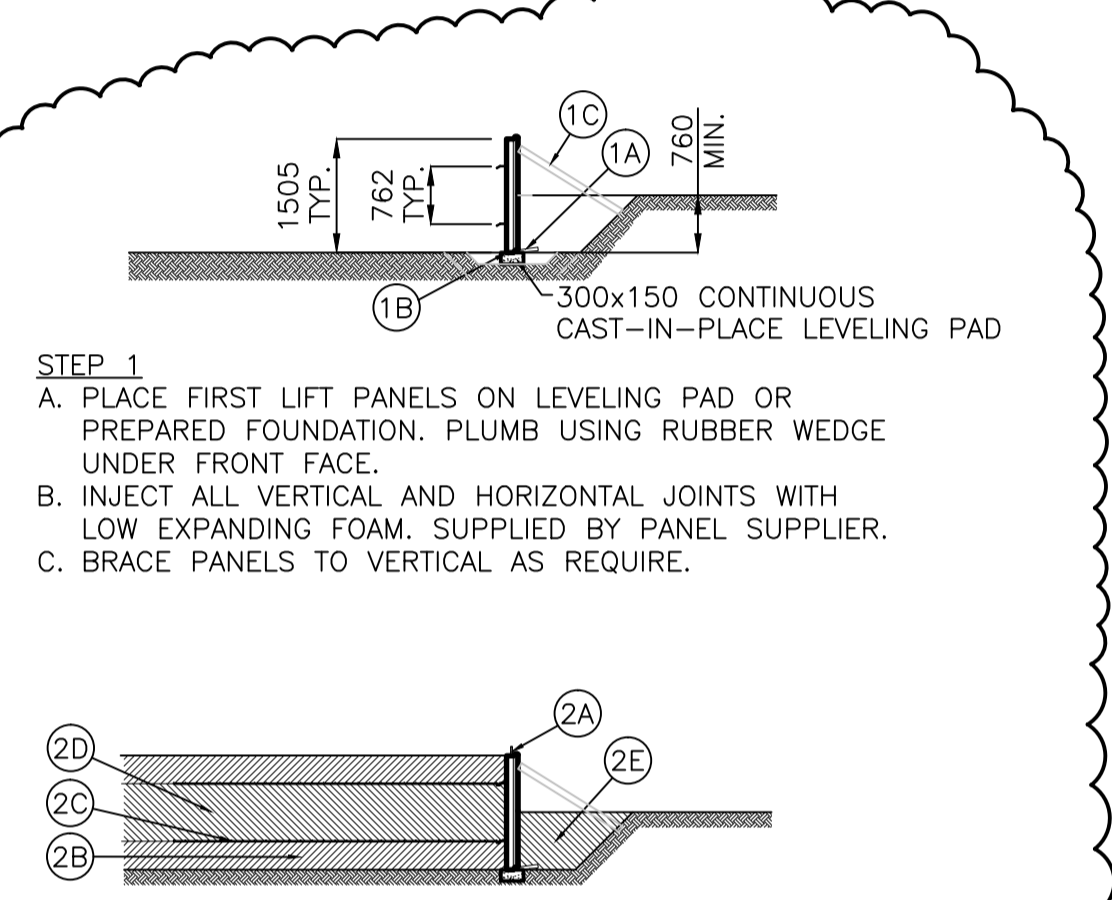
56890± SITE MEASURE
"MSE" PRECAST RETAINING WALL WITH CAST-IN-PLACE COPING UNIT

39433± SITE MEASURE
"MSE" PRECAST RETAINING WALL WITH CAST-IN-PLACE COPING UNIT
EQUAL



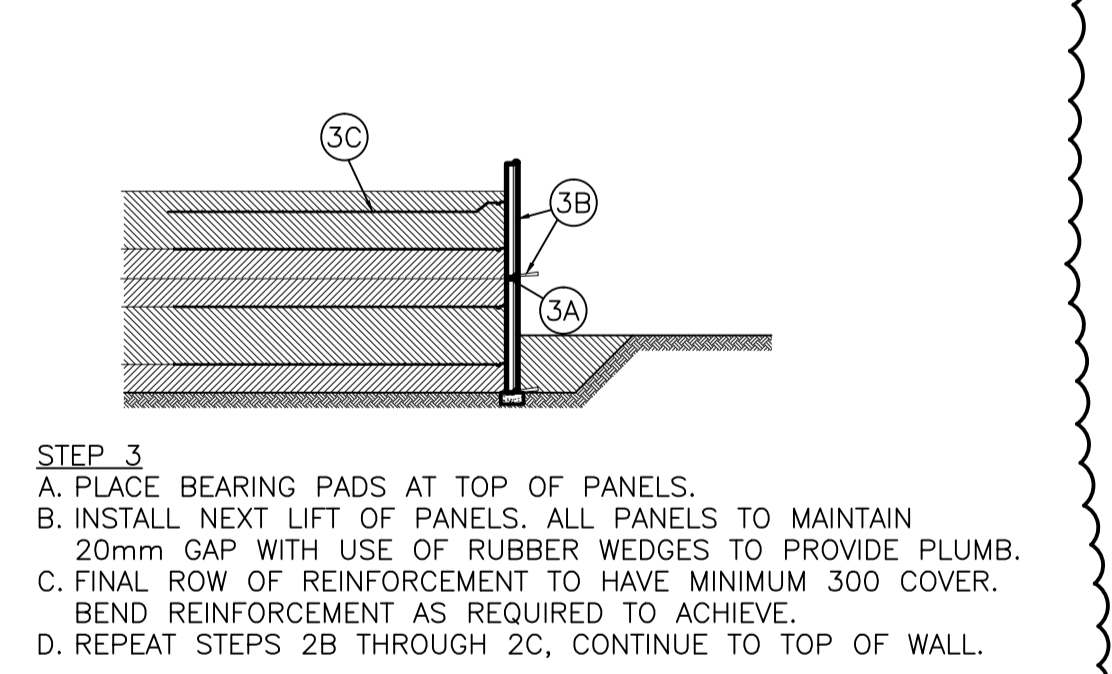
NOTE:
CONTRACTOR TO PROVIDE DRAWINGS AND DESIGN NOTES FOR MSE BLOCK RETAINING WALL, CONCRETE FOOTINGS, WALL BACKFILL, MECHANICAL ANCHORAGE AND DRAINAGE. CONTRACTOR TO CONFIRM FOOTING AND FILL REQUIREMENTS WITH GEOTECHNICAL ENGINEER. RETAINING WALL DRAWINGS AND DESIGN NOTES TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA

1 RETAINING WALL 'A' ELEVATION
57 58 1:100
NOTE: CHAIN LINK FENCE ANCHORED TO RETAINING WALL NOT SHOWN FOR CLARITY REFER TO SHEET 49



STEP 1
A. PLACE FIRST LIFT PANELS ON LEVELING PAD OR PREPARED FOUNDATION. PLUMB USING RUBBER WEDGE UNDER FRONT FACE.
B. INJECT ALL VERTICAL AND HORIZONTAL JOINTS WITH LOW EXPANDING FOAM. SUPPLIED BY PANEL SUPPLIER.
C. BRACE PANELS TO VERTICAL AS REQUIRE.

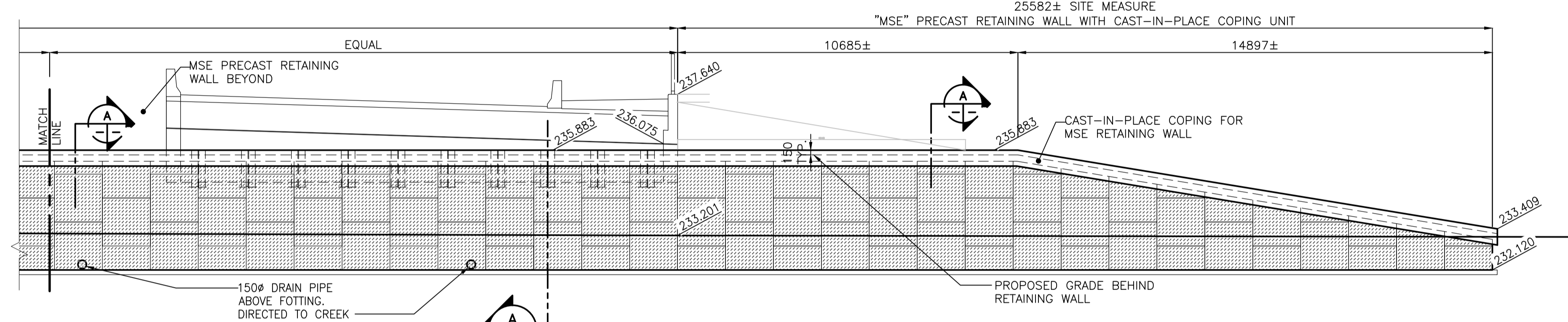
STEP 2
A. INSTALL PANEL ALIGNMENT PINS BEFORE BEGINNING ANY BACKFILL.
B. PLACE AND FOAM CEMENT (IN MAX 250mm LIFTS) FOR FIRST LIFT. FILL TO THE LEVEL OF THE FIRST ROW OF PANEL ANCHORS.
C. INSTALL REINFORCEMENT MATS. ANCHOR THE MAT IN PLACE (2 PER MAT) TO REMOVE ANY SLACK.
D. PLACE FOAM CEMENT TO THE LEVEL OF THE NEXT ROW OF PANEL ANCHORS.
E. BACKFILL AND COMPACT FILL TO 95% STANDARD PROCTOR DENSITY ALONG FACE OF LOWER PORTION OF WALL PANEL.



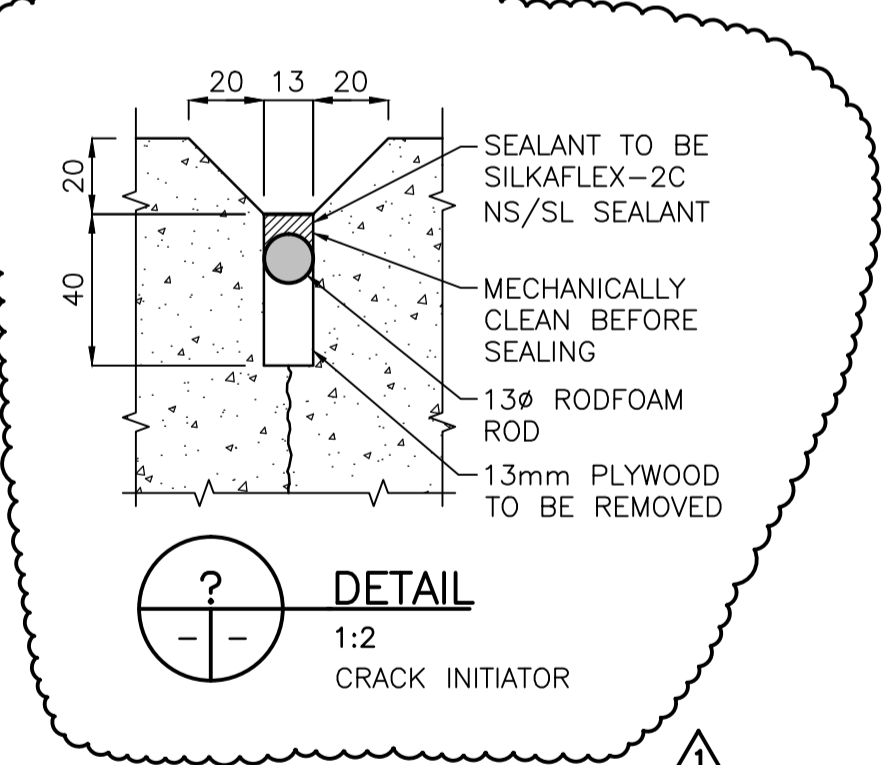
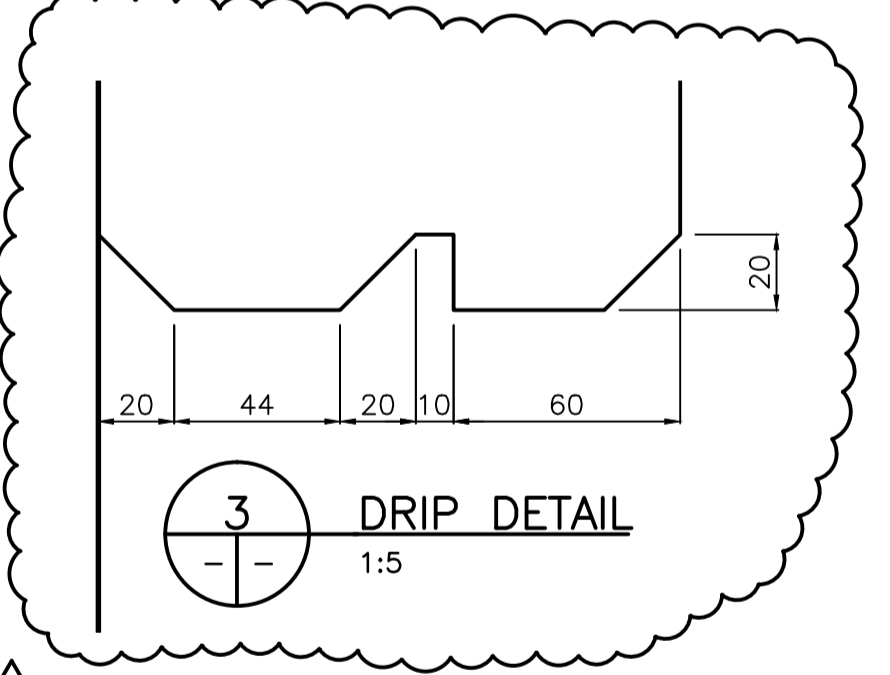
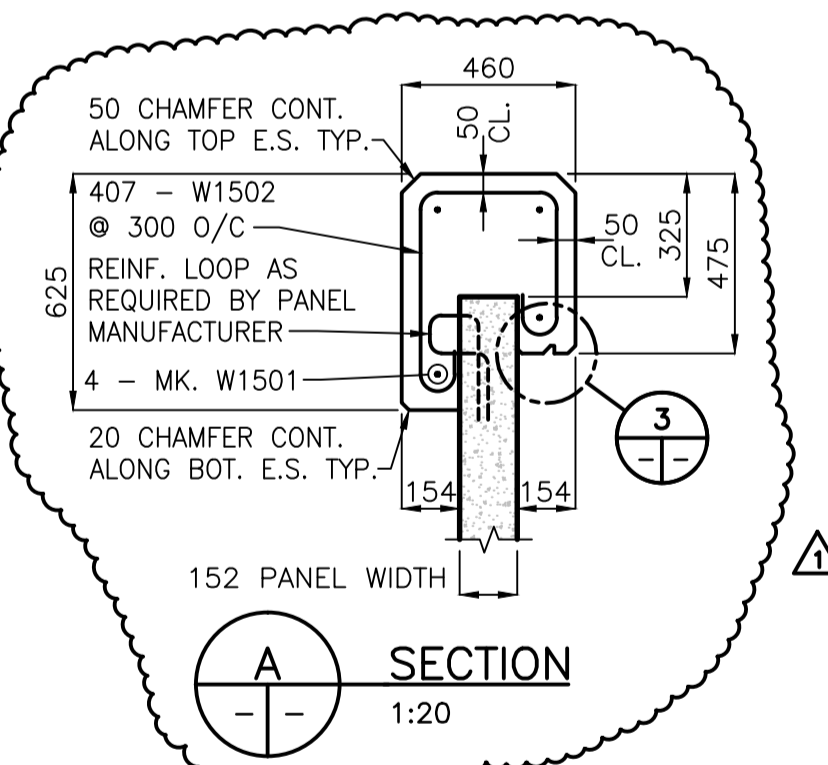
STEP 3
A. PLACE BEARING PADS AT TOP OF PANELS.
B. INSTALL NEXT LIFT OF PANELS. ALL PANELS TO MAINTAIN 20mm GAP WITH USE OF RUBBER WEDGES TO PROVIDE PLUMB.
C. FINAL ROW OF REINFORCEMENT TO HAVE MINIMUM 300 COVER. BEND REINFORCEMENT AS REQUIRED TO ACHIEVE.
D. REPEAT STEPS 2B THROUGH 2C, CONTINUE TO TOP OF WALL.

STEP 4
A. INSTALL REMAINING COPED PANELS, PLUMB WITH RUBBER WEDGES.
B. PROVIDE FORMWORK AND BRACING AS REQUIRED.
C. INSTALL CONTINUOUS CAST-IN-PLACE CONCRETE COPING.
D. PLACE REMAINING FILL AND PROVIDE SWALE TO MANAGE SURFACE WATER AWAY FROM WALL. MAINTAIN 1000 MINIMUM CLAY AND EARTH BACKFILL OVER FOAM CONCRETE.

PROCEDURE NOTES
1:100



2 RETAINING WALL 'A' ELEVATION CONTINUED
57 58 1:100
NOTE: CHAIN LINK FENCE ANCHORED TO RETAINING WALL NOT SHOWN FOR CLARITY REFER TO SHEET 49



BILL OF REINFORCING STEEL

STRAIGHT BARS				BENT BARS									
MARK	QTY.	LENGTH (mm)	MASS (kg)	MARK	QTY.	TYPE	A	B	C	D	E	LENGTH (mm)	MASS (kg)
W1501	36	14100	769.9	W1502	407	M	525	360	375	90	105	1650	1054.3
TOTAL MASS OF BLACK STEEL REINFORCING												1851.2 kg	

BENT TYPES

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301 Date: _____

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

NO.	REVISIONS	DATE	BY
1	REVISED PER ADDENDUM No.1	12.01.18	K.S.A.
0	ISSUED FOR TENDER	11.12.15	K.S.A.

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Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY: K.S.A. CHECKED BY: K.S.A.
DRAWN BY: V.J.F. APPROVED BY: B.J.W.
HOR. SCALE: AS SHOWN
VERTICAL: _____
RELEASED FOR CONSTRUCTION: _____
DATE: DEC. 15, 2011

ENGINEER'S SEAL
CONSULTANT DRAWING NO. S-802

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

STURGEON ROAD
BRIDGE REPLACEMENT
PORTAGE AVENUE TO HALLONQUIST DRIVE
NORTH BANK MODULAR BLOCK
RETAINING WALL ELEVATIONS

SHEET 58 OF 82
CAD FILE DRAWING NUMBER 31590s-601-767.dwg
CITY DRAWING NUMBER B120-12-058

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Date: 2012 Jan 16 5:45pm Login: Bremeris, James