Chanhassen Earth Home: 1975-1979

Photo Courtesy Jamie Heilicher

Conceived during the energy crisis of the 1970s, this earth-sheltered home in Chanhassen, MN sought to take advantage of natural heating and cooling properties by burrowing into the earth, reflecting one of the directions that architecture was taking at the time.

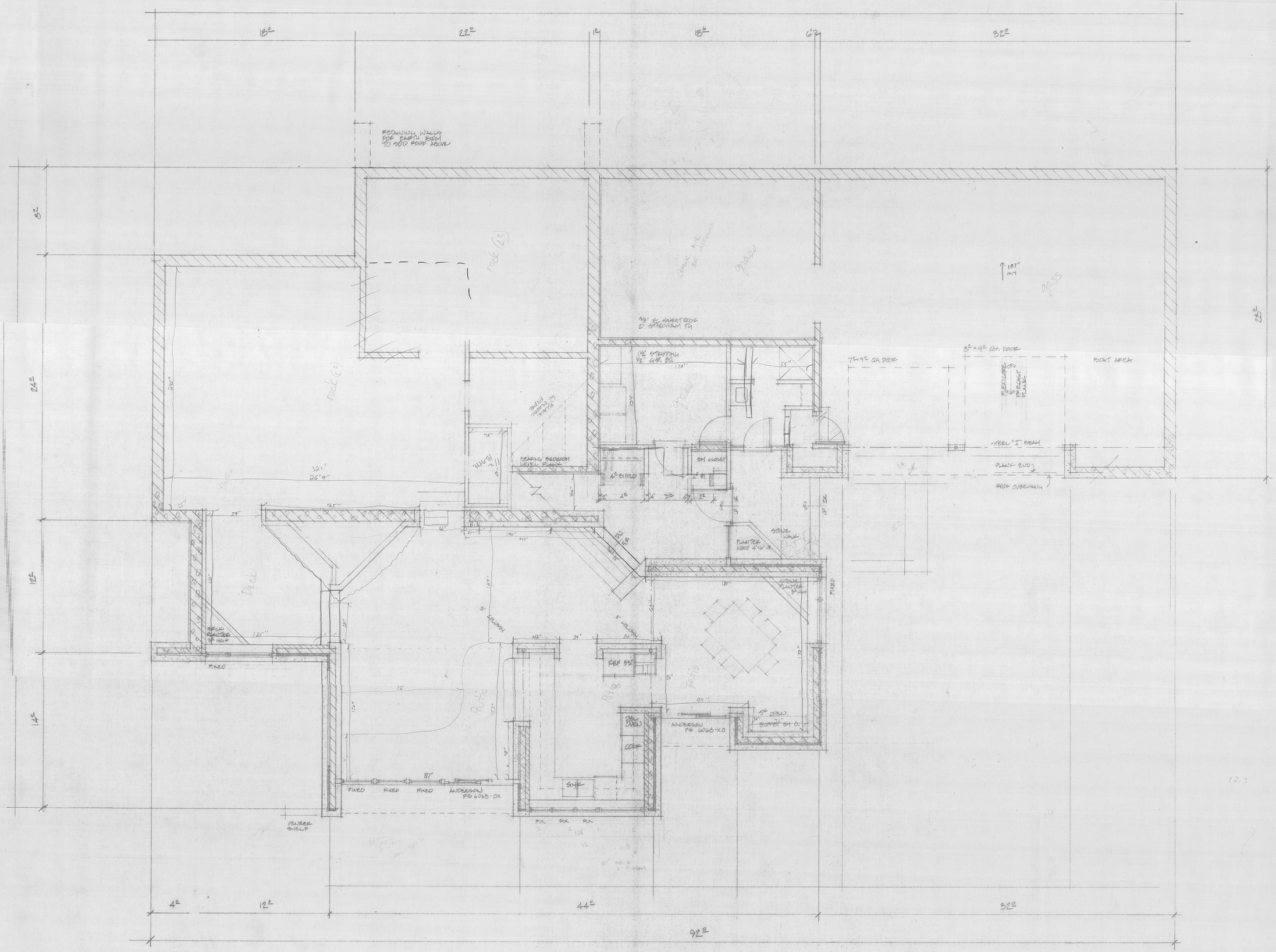
The house was designed by Architect Bruce Knutson of K.K. Designs (St. Louis Park, MN) for Lee and Jane Mosman. Construction began in 1975. Lee Mosman was a second generation mason and built the house himself as contractor. He spent about 4 years building the home as he did most of the work himself and completed it in 1979.

The home includes Old Chicago Brick (over 10,000 on the interior), Rocky Mountain quartzite flooring, oak tongue and groove paneling on walls, pine tongue and groove ceilings in lofted areas, Spancrete ceilings in rest of structure, and the exterior is covered with rocks – accumulated in the low area near the house from the farmland that used to surround the home.

The multi-level level home is earth-sheltered, with the lowest portion about 25 feet below grade. Originally all flat areas were covered with earth and grass, but over time these areas have changed to decking, pavers, and rock due to leaking issues – it turns out that Minnesota's climate made earth-sheltered structures more complicated than everyone thought at the time!

Photo Courtesy Jamie Heilicher

1981 Star Tribune Photo by Arthur Hager



LEE & JANE

MOSMAN

K.K. DESIGNS
DIV. OF R.C.A.D. CORP.
ARCHITECTS
PLANNERS
CONSULTANTS

6112 EXCELSIOR BOULEVARD
ST. LOUIS PARK, MINNESOTA

PROJ. NO.
DESIGN BY:
DATE:

REVISIONS:

SHEET

40'-0"

18'-0" VENEER SHELF | 1'-4" | 19'-8" | 1'-4"

MAKE DOUBLE

4'-0"

5'-6" STONE

8'-0"

2" INSULATION 12" CONC. FDN.

32'-0"

24'-0" VENEER SHELF

23'-0"

SECTION AT VENEER SHELF

SECTION AT VENEER SHELF

12"

8'-0"

AXSIT CX15ST

CX15ST CX15ST

17'-0"

BEDROOM

BEDROOM

VERT. FINISH WITH OWNER

117"

110"

118"

SHELVES

HI/LOW PODS

4'-0"

2'-0"

LIN (SF)

5'-0" VANITY

7'-1"

2'-8"x6'-8"

30" FAUCET

CERAMIC SHOWER

STEEL COLUMN STEEL PLATE (VERIFY) BASE

STEEL COLUMN

STEEL I BEAM FOR PLANK SPAN

6'-0"x6'-8" BI FOLD

6'-0"x6'-8" BI FOLD

WINDOW BY OWNER

93"

200"

2'-0"

7'-0"

3'-0"

6'-0"

2'-6"

SAUNA

LIN

FACE FRAME

FRAME

2'-6"x6'-8"

2'-6"x2'-8"

2'-8"

7'-2"

5'-0" TUB

BATH

4'-0" VANITY

8" STEPPING LIGHT BLOCK WALL

FLEXIBLE PRECAST PANEL

FD.

45°∠

45°∠

3'-0"

3'-8"

3'-8"

5'-2"

5'-7"

MSTR BEDROOM

21'

13'-0"

3'-8"

1'-6"

2'-8"x6'-8"

2'-10"

9'-7"

CX14T

1'-4"

FIREPLACE

5" WOOD RAIL

(FIRE SECTION)

CX14T LPLAT

2"x8" INSULATION

OPEN TO FAMILY ROOM

WOOD ROOF ON UNDERSIDE OF SLANT

1'-4"

5'-4"

16'-4"

39'-4"

LEE & JANE

K.K. DESIGNS
OF BOCA, CORP.