200648

Certificate of Appropriateness

Milwaukee Historic Preservation Commission/200 E. Wells Street/Milwaukee, WI 53202/phone 414-286-5712/fax 414-286-3004

Property 2659 N. LAKE DR. North Point North HD

Description of work 1. Six downspouts need to be replaced. Some are completely detached and all are damaged. To be replaced with aluminum downspouts matching the existing shape, painted to match the existing color.
2. Built in gutter on the northeast corner needs to be replaced. It was incomplete and is damaged beyond repair. The new gutter will be made of copper and all seams will be soldererd.
3. The metal flat roofs are rusting and poorly flashed. Note this isn't the main roof, but small roofs over the the entryway and a bay window, as indicated in the pictures. They are to be replaced with a copper flat seam roof, with all seams being soldered.

Date issued 9/4/2020 PTS ID 115022 COA: garage roof and gutters

In accordance with the provisions of Section 320-21 (11) and (12) of the Milwaukee Code of Ordinances, the Milwaukee Historic Preservation Commission has issued a certificate of appropriateness for the work listed above. The work was found to be consistent with preservation guidelines. The following conditions apply to this certificate of appropriateness:

No dormers, chimneys, moldings parapets, or other permanent features will be altered or removed. No box vents, if used, will be visible from the street. If they are installed, they must be on a rear slope not visible from the street and they must be painted to blend with the color of the roofing material. A continuous ridge vent can be installed in place of box vents, but the vent must extend across the entire ridge and not stop short. Built-in rain gutters will be retained and sealed where needed. Valleys must be metal W-shape with no interweaving of shingles. Valleys and flashing must be painted or factory-finished to match the roofing color, unless copper. When installing new flashing at a masonry feature, the flashing must be stepped or cut into the mortar joints. The bricks may not be cut to install flashing at an angle.

We strongly recommend that that the Wisconsin Historical Society's best practices for re-roofing be used to extend the life of your new roof. (Synthetic underlayment is an acceptable alternative to 30lb felt.) https://www.wisconsinhistory.org/Records/Article/CS4260

All work must be done in a craftsman-like manner, and must be completed within one year of the date this certificate was issued. Staff must approve any changes or additions to this certificate before work begins. Work that is not completed in accordance with this certificate may be subject to correction orders or citations. If you require technical assistance, please contact hpc@milwaukee.gov.

If permits are required, you are responsible for obtaining them from the Milwaukee Development Center. If you have questions about permit requirements, please consult the Development Center's web site, www.milwaukee.gov/build, or call (414) 286-8210.

City of Milwaukee Historic Preservation Staff

Copies to: Development Center, Ald. Nik Kovac, Contractor , Inspector Paul Wolfgramm (286-2590)

Typical built-in gutter and secondary roof conditions.

Box Gutter Lining

Drawing No. 16

The details in Drawing No. 16 show the method of lining wood sheathed box gutters with sheet metal and connecting them to sheet metal or wood cornices and flat seam roofing.

Fig. 1 shows how the gutter is formed on sheathing laid inside of a sheet metal cornice. The cornice is constructed with a drip at *A* in the foot mold, with projecting edge at *X* above the crown mold. When the wall is built to the bottom line of the foot mold at *A*, a space of 4 in. (one course of bricks) is left and then the wall carried up as high as *F* to receive the wooden lookouts for the gutter. The wall is then continued and the rafters set. Thus there is an open space of 4 in. from *A* upward. The braces are located on the wall and wall hooks driven in the brick joint as at *B*, with the top of the hook turned inward as at C. The lower anchor on the cornice also has an acute angle as at *D*.

The cornice is set on the wall and the drip drawn snugly against the wall line by twisting the wire as at *E*. The cornice is set plumb and true by temporary fastenings and the anchor *F* bolted to the brace as at *G*. The brick wall is completed in the 4-in. space up to the top of the rafter, which holds the cornice in position.

In sheathing the gutter it is essential that all nails are driven flush and the proper grade given to the outlets. Note that there are no right angular corners in the gutter. The sheet metal gutter lining is locked to the front edge of the metal cornice as shown and turned on the roof with a lock secured with cleats. All cross seams in the gutter are cleated.

As shown at *a* the upper flange of the cornice is nailed in a straight line about 2 or 3 in. apart.

Fig. 2 shows how the gutter lining is connected to the wood cornice to allow for expansion and contraction and to avoid nailing along the front gutter edge, as is frequently done. Two methods are shown. The first one, *A*, consists of a double fold angle nailed to the top of the cornice as at *b* to which the gutter lining is locked. In the other method presented in Fig. 3, a single angle is employed with a hem edge at the bottom as shown, nailed to the front edge of the crown mold as at *C* to which the lining is locked. To cover the nail heads, the lock is turned down as shown at *B* in Fig. 4.

Expansion Joint for Box Gutter Lining

Drawing No. 17

In Drawing No. 17 is shown how the lock is made between flat seam roofing and box gutter lining so that the expansion joints may be constructed at both high and low points of the gutter lining.

Fig. 1 shows the construction of the lock at the eaves line joining the gutter lining. While a flat seam roof is here shown, this lock is used also with standing seam and batten roofing. It is also used in connection with the eaves strip on composition, flat tile, slate and Spanish tile roofs.

The upper part of the metal cornice shown in Fig. 1 has a roof flange as indicated at *A*, which is nailed to the sheathing. Over this flange the gutter lining locks as at *B*. At the eaves of the roof the gutter lining is turned out $\frac{5}{8}$ in. as shown at *C*. The flange *C* is secured every 8 or 10 in. with cleats, as at *D*, over which the roofing sheets are locked as indicated at *E*. Note the small drip bent on the roofing lock at *F*, which prevents capillary attraction.

To allow for the expansion and contraction of the gutter in its length, expansion joints are placed at the high and low points of the gutter. When the head is soldered in, the upper flange extends below the gutter flange a distance equal to *W*. The height at *X* is just enough to permit the locks on both sides of the sliding cap to slip in with ease, which is clearly indicated in Fig. 2 and 3.

In Fig. 2 is shown the connection of the heads and sliding cap at the upper end of the gutter, under the gutter flange at the eaves. Note that the sliding cap has an upturned lock at *A*, which slips under the $\frac{5}{8}$-in. outward turned flange of the gutter lining, as shown at the left and over this gutter flange and lock of the sliding cap, the roofing is locked. Where the roofing fastens over the lock of the sliding cap, the drip shown at *B* is notched out.

Fig. 3 shows clearly the connection of the heads and sliding cap at the lower end of the gutter where it joins the cornice flange. Note the broken view along *B-C-D*. The height of the head at *F* is exaggerated. It should be high enough to allow the lock *D* to slip in with ease.

To prevent the rain water from following the

(Continued on page 34)

Drawing No. 17—(Continued from page 31)

sliding cap and dripping over the edge of the cornice, a water stop *E* is placed at the lower end, which sheds the water on each side into the gutter, as indicated by the arrow.

Assuming that the gutter is 60 ft. long and there are two leaders or conductors, as shown in Fig. 4, and that copper is used for the lining, as the sheet copper expands and contracts approximately $\frac{1}{8}$ in. for every 10 ft. in a rise of temperature from Zero to 100 deg., 60 ft. will expand or contract $\frac{3}{4}$ in. This is taken care of by three expansion joints, *A*, *B* and *C*, which allow for $\frac{1}{4}$ in. each. Note that the distance between the heads, as at *U* in Fig. 1, 2 and 3, is determined by the temperature at the time the work is erected. If each run of the gutter is 30 ft., as shown in Fig. 4, and the space allowed at each expansion joint is $\frac{1}{4}$ in., then if the work is being erected at a temperature of 50 deg., the minimum distance required between the heads is $\frac{1}{8}$ in., as shown in the lower center diagram.

Fig. 5 shows a 1-in. scale drawing of the outlet tube at the low point of the gutter, connecting to the leader head.

Instructions for box gutter construction

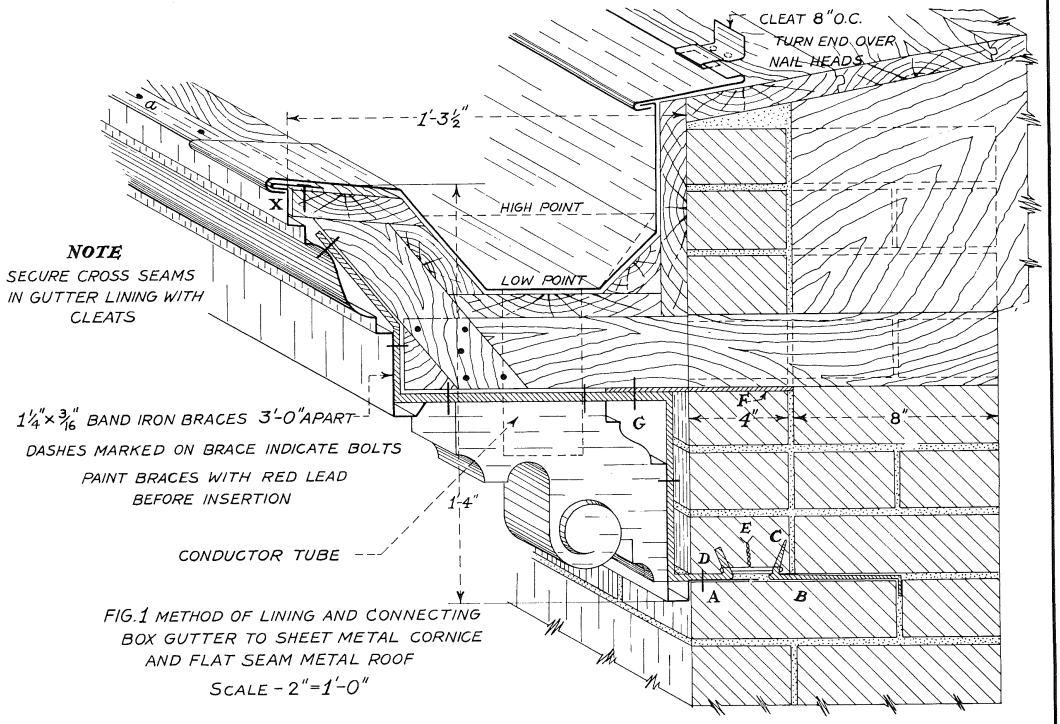
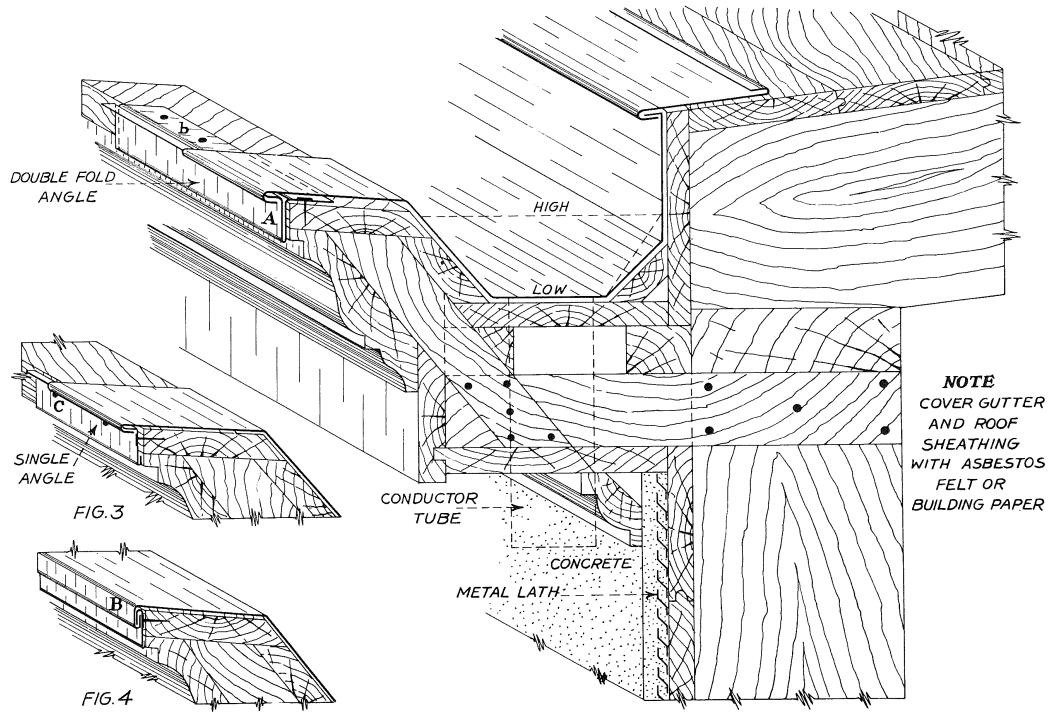


FIG.1 METHOD OF LINING AND CONNECTING BOX GUTTER TO SHEET METAL CORNICE AND FLAT SEAM METAL ROOF

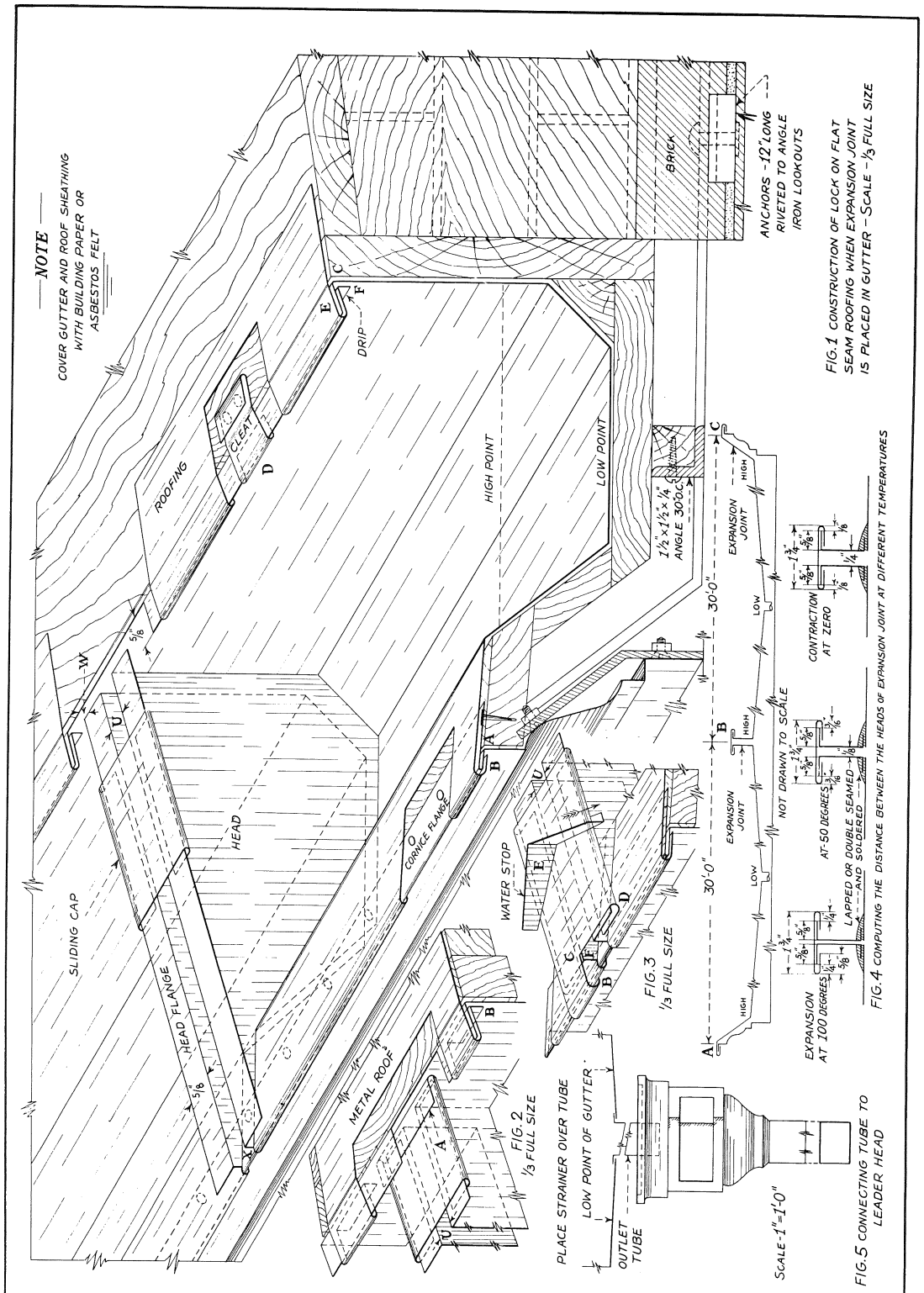
SCALE - 2"=1'-0"



SCALE - 2"=1'-0" FOR FIG. 2-3 AND 4

FIG. 2 METHOD OF LINING AND CONNECTING BOX GUTTER TO WOOD CORNICE AND FLAT SEAM METAL ROOF

TRADE DEVELOPMENT COMMITTEE National Association Sheet Metal Contractors	BOX GUTTER LINING	DRAWING NUMBER 16



TRADE DEVELOPMENT COMMITTEE National Association Sheet Metal Contractors	EXPANSION JOINT FOR BOX GUTTER LINING	DRAWING NUMBER 17