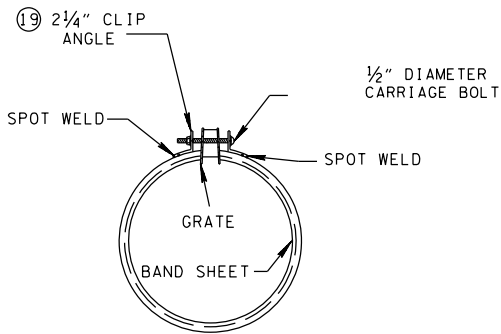
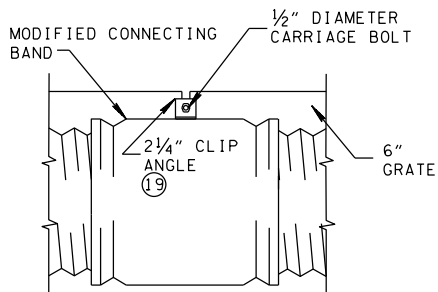


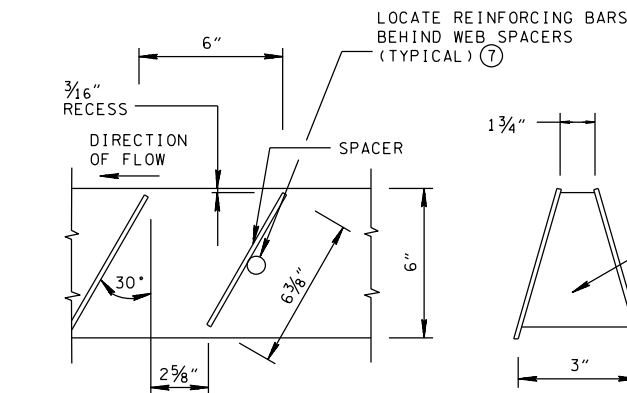
MODIFIED CONNECTING BAND
TOP VIEW



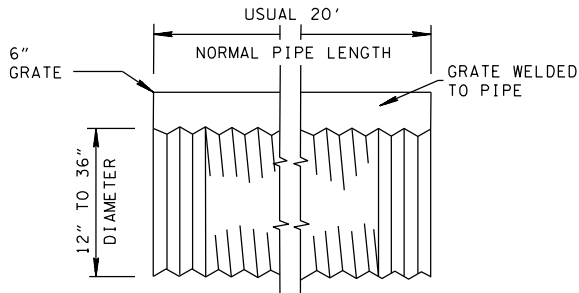
MODIFIED CONNECTING BAND
END VIEW
(SECTION C-C)



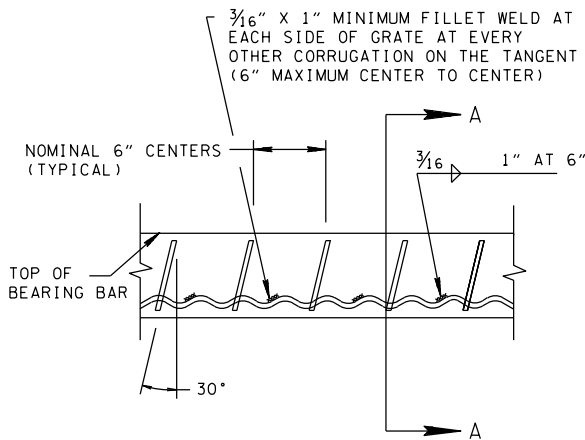
MODIFIED CONNECTING BAND
SIDE VIEW



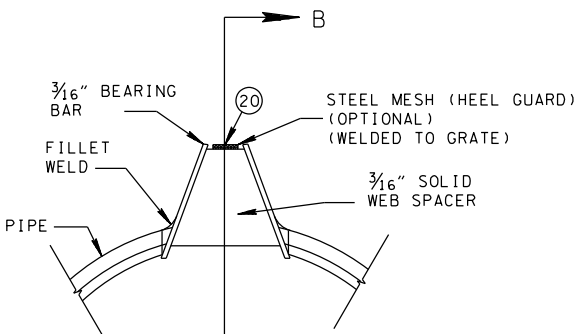
SLANTED WEB SPACERS DETAILS
SIDE VIEW
(FOR USE WITH TRAPEZOIDAL GRATES ONLY)



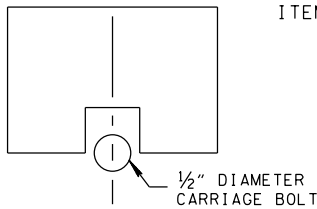
TYPICAL PIPE SECTION



GRATE (BEARING BAR) WELDING DETAIL
(WITH SLANTED WEB SPACERS)



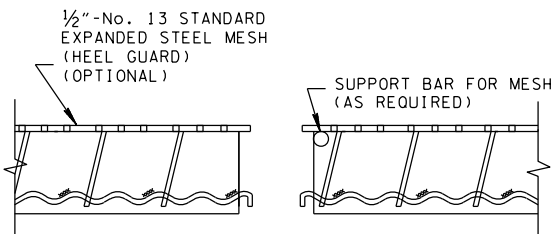
ALTERNATE TRAPEZOIDAL
GRATE DETAIL WITH MESH
(SECTION A-A)



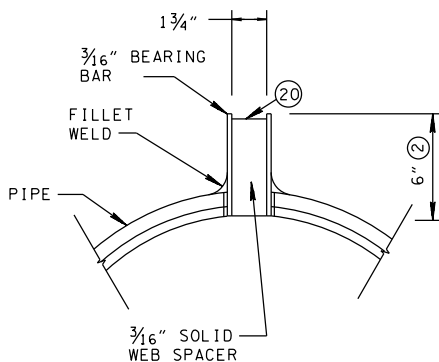
GAP PLATE (OPTIONAL)
MAY BE PLACED DIRECTLY
OVER BAND BOLT TO PROVIDE
CONTINUOUS FORM FOR GROUTING.

* SLOTTED DRAIN PIPE
EXTENSIONS TO BE
PAID FOR UNDER ITEM
NO. 607-45 THROUGH
ITEM NO. 607-45.05

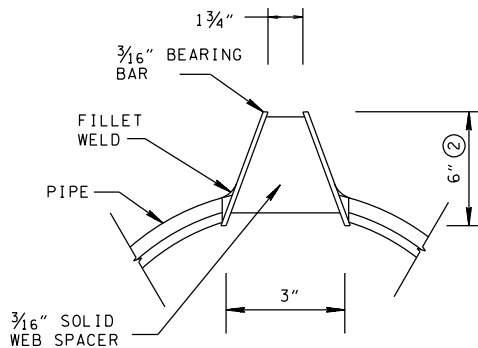
SLOTTED DRAIN PIPE ITEM LISTING *		
ITEM NO.	DESCRIPTION	UNIT
607-45	12" SLOTTED DRAIN PIPE	L.F.
607-45.01	15" SLOTTED DRAIN PIPE	L.F.
607-45.02	18" SLOTTED DRAIN PIPE	L.F.
607-45.03	24" SLOTTED DRAIN PIPE	L.F.
607-45.04	30" SLOTTED DRAIN PIPE	L.F.
607-45.05	36" SLOTTED DRAIN PIPE	L.F.



SECTION B-B



STANDARD PARALLEL (VERTICAL)
SIDE GRATE DETAIL
(SECTION A-A)
(WITH VERTICAL WEB SPACERS)



ALTERNATE TRAPEZOIDAL
GRATE DETAIL
(SECTION A-A)

MANUFACTURING TOLERANCES FOR 20' CMP SECTION	
1.	VERTICAL BOW $\pm \frac{3}{8}$ "
2.	HORIZONTAL BOW $\pm \frac{5}{8}$ "
3.	TWIST $\pm \frac{1}{2}$ "

MISCELLANEOUS ITEM LISTING		
ITEM NO.	DESCRIPTION	UNIT
204-07	BEDDING MATERIAL (PIPE) (CLASS B)	C.Y.
204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	C.Y.
702-03	CONCRETE COMBINED CURB AND GUTTER	C.Y.
703-02.05	CEMENT CONCRETE DITCH PAVING (SLOTTED DRAINS)	C.Y.

GENERAL NOTES

- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- SLOTTED DRAIN SHALL BE GALVANIZED CORRUGATED METAL PIPE AND GRATE, CORRUGATED ALUMINUM PIPE AND GRATE OR ALUMINUM COATED STEEL PIPE AND GRATE MEETING THE REQUIREMENTS OF SECTION 607 (PIPE CULVERTS AND STORM SEWERS) AND SECTION 915 (METALLIC PIPE). GAGE 14 PIPE SHALL BE USED.
- BACKFILL MATERIAL (FLOWABLE FILL) SHALL BE USED IN LOCATIONS SUBJECT TO TRAFFIC LOADS. BEDDING MATERIAL CLASS "B" MAY BE USED IN ALL OTHER LOCATIONS.

FOOTNOTES

- TYPICAL DETAIL ONLY; DIMENSIONS AND CURB TYPE WILL VARY.
- TYPICAL GRATING SHALL BE 6" IN DEPTH. 3" DEPTH GRATING IS AVAILABLE FOR SPECIAL CASES IF NEEDED AND AS SPECIFIED IN THE ROADWAY PLANS.
- FOR USE IN CURB AND GUTTER, PAVED AREA, OR MEDIAN SECTIONS WHICH ARE SUBJECT TO TRAFFIC LOADS.
- BACKFILL MATERIAL (FLOWABLE FILL) SHALL MEET THE REQUIREMENTS OF SECTION 204 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR UNDER ITEM 204-08.01, BACKFILL MATERIAL (FLOWABLE FILL) BY THE CUBIC YARD.
- MAXIMUM SIZE FOR USE WITH CURB AND GUTTER.
- RECESS TOP OF SLOTTED DRAIN GRATE $\frac{1}{8}$ " TO $\frac{1}{2}$ " BELOW FINISHED SURFACE OF THE CONCRETE GUTTER.
- REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 907 OF THE STANDARD SPECIFICATIONS, DRILLING THROUGH THE GRATE SHALL BE DONE IN THE SHOP.
- EXAMPLE ONLY: PAVEMENT DESIGN REQUIRED TO SET ACTUAL PROJECT MATERIAL THICKNESS.
- VARIABLE 6" MAXIMUM FOR 18" CMP, 3" MINIMUM FOR 24" CMP.
- TO BE PAID FOR AS ITEM NO. 703-02.05 "CEMENT CONCRETE DITCH PAVING (SLOTTED DRAINS)" (CUBIC YARD).
- A 3-PIECE 90° ELBOW MAY BE USED AS APPROVED BY THE ENGINEER.
- REQUIRED AT ALL JUNCTIONS OF LATERALS AND AT ALL ENDS OF LINES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- SLOTTED DRAIN SHALL BE INSTALLED IN 20 FOOT LENGTHS WHEREVER PRACTICAL TO MINIMIZE THE NUMBER OF JOINTS REQUIRED.
- LATERAL CONNECTION SLIP JOINT SHALL BE BACKED WITH A SUITABLE COMPRESSIBLE MATERIAL TO RETAIN GROUT IN PLACE DURING CURING. SLIP JOINTS SHALL BE GROUTED WITH BACKFILL MATERIAL (FLOWABLE FILL), AS REQUIRED.
- LATERALS MAY BE A SERIES OF PIPE JOINTS PLACED AT ANGLES AS DETERMINED BY MANUFACTURING AVAILABILITY.
- DESIRABLE MINIMUM SLOPE = 0.40% FOR FLATTER SLOPES, AS MAY BE REQUIRED, INCREASE PIPE DIAMETER AND/OR THE NUMBER OF OUTLETS (LATERALS).
- UNIT PRICE PER LINEAR FOOT (L.F.) FOR SLOTTED DRAINS SHALL INCLUDE TEES, WYES, ELBOWS, PLUGS, BANDS, JUNCTIONS, ANGLE/TEE COMBINATIONS, GRATES, PLATE REDUCERS, END CAPS, STRUCTURAL EXCAVATION, HEEL GUARD GRATE, AND PLATES.
- IN AREAS WHERE THE SLOTTED DRAIN PIPE PROFILE GRADE IS LESS THAN 0.40%, THE GRATE DEPTH MAY VARY AS SHOWN TO MAINTAIN A STEEPER PROFILE GRADE OF THE PIPE. THE MANUFACTURER SHALL CONSTRUCT THIS IN THE SHOP.
- FOR 6" VERTICAL AND TRAPEZOIDAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH A 4" BAND ANGLE.
- VERTICAL GRATE EXTENSIONS ARE AVAILABLE FOR FUTURE RAISING OF THE PAVEMENT GRADE DUE TO RESURFACING.

- REV. 10-26-95: CHANGED DESCRIPTION OF PAY ITEM NO. 204-08.01. CHANGED FOOTNOTE NOS. (4) AND (7).
- REV. 10-26-96: IN MISCELLANEOUS ITEM LISTING CHANGED ITEM NO. 702-03.05 TO 702-03.
- REV. 12-18-97: CHANGED REFERENCE THROUGHOUT DRAWING OF FLOWABLE MORTAR TO BACKFILL MATERIAL (FLOWABLE FILL).
- REV. 5-27-01: CHANGED DESCRIPTION FOR ITEM NO. 204-07.
- REV. 2-2-16: CORRECTED PAY ITEM NUMBERS.

NOTE:
SEE SHEET D-SLD-1
AND D-SLD-2 FOR
ADDITIONAL
DETAILS

NOT TO SCALE

MINOR REVISION -- FHWA
APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SLOTTED DRAINS

1=28=92

D-SLD-3