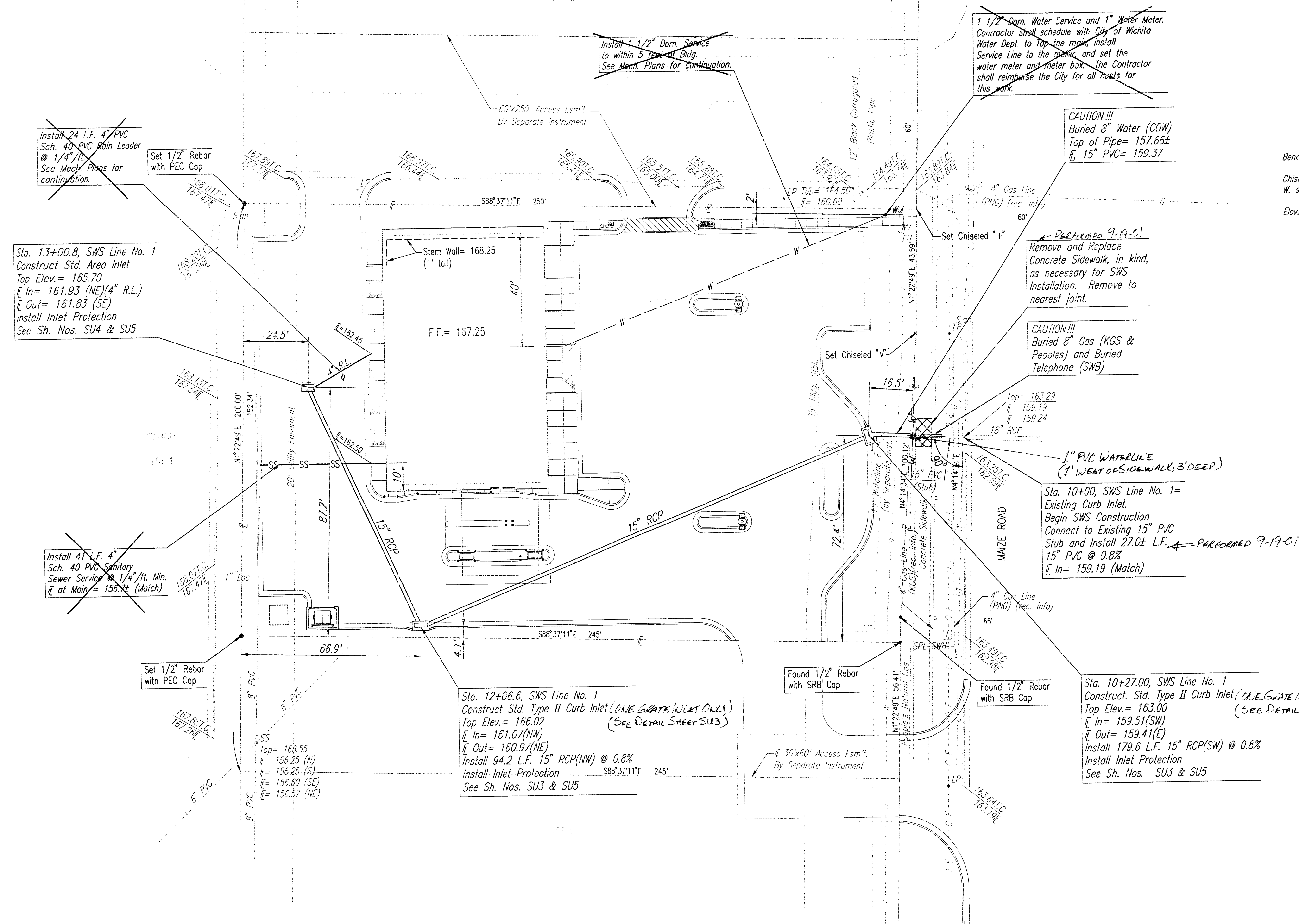


PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-8000	SU2	6

PSNR, S&D, OPER, S&D SCALE: 1"=20.00'
 0.12.001 (0425) Utility 08-23-2001 01:33:35 pm



SCALE: 1"=20'

Benchmark #1:

Chiseled "d" N. end HDWL 1/4" side RCB
 W. side Maize Rd. 300'± N. of 21st. N.
 Elev. = 163.26 City Datum

LEGAL DESCRIPTION

THE NORTH 152.34 FEET OF LOT 5,
 BLOCK 1, NEWMARKET SQUARE, AN
 ADDITION TO WICHITA, SEDGWICK
 COUNTY, KANSAS.

LEGEND

- BM BENCH MARK
- LP LIGHT POLE
- OVERHEAD ELECTRIC
- TELEPHONE BOX
- BURIED TELEPHONE
- W/V WATER VALVE
- FH FIRE HYDRANT
- WATER LINE
- SS SANITARY SEWER MANHOLE
- GAS LINE

4" RAIN LEADER SHALL BE INSPECTED BY O.C.I.

NOTE: CONTRACTOR SHALL VERIFY ALL INLET LOCATIONS
 WITH DIMENSIONED SITE PLAN PRIOR TO BEGINNING
 SWS CONSTRUCTION.

NEW MARKET SQUARE ADDITION

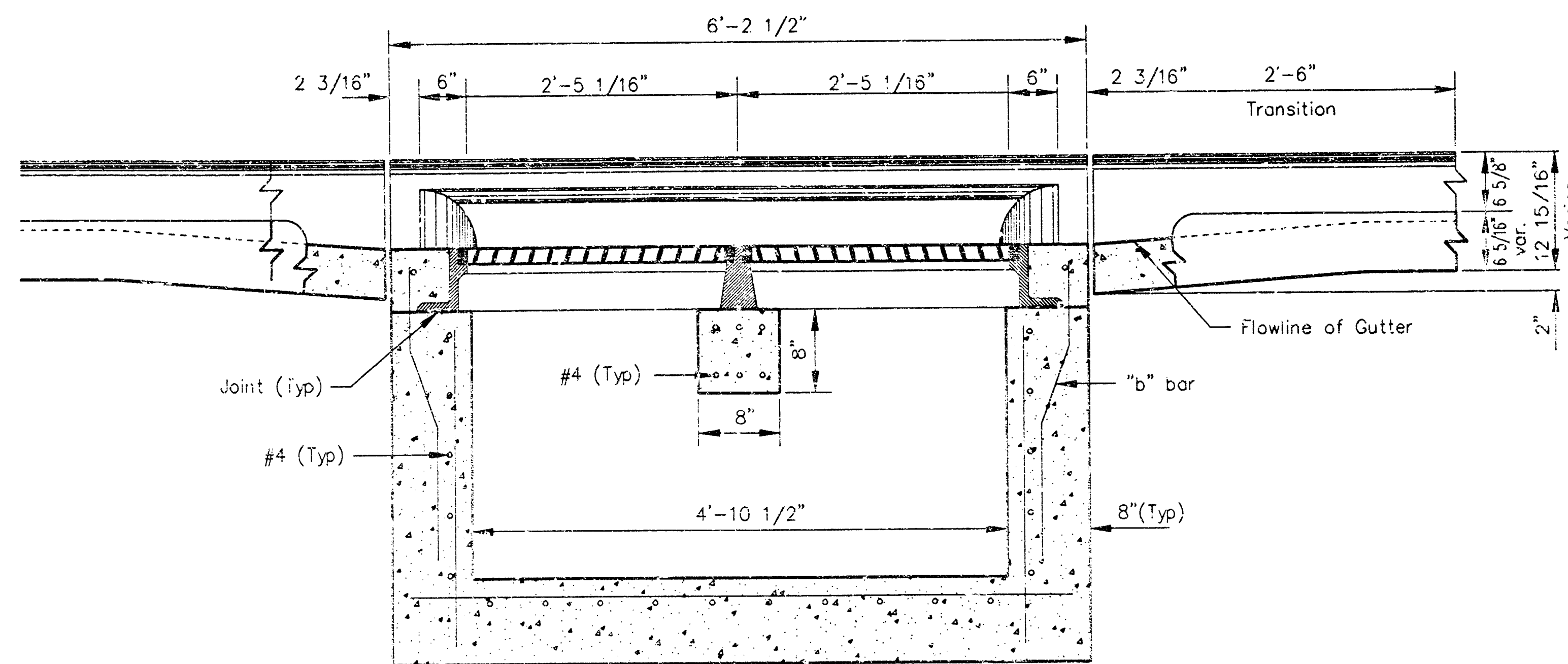
NEW MARKET SQUARE
 TENANT BUILDING
 SITE UTILITY PLAN

Professional Engineering Consultants, P.C.
 300 S. TOPEKA • WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3003

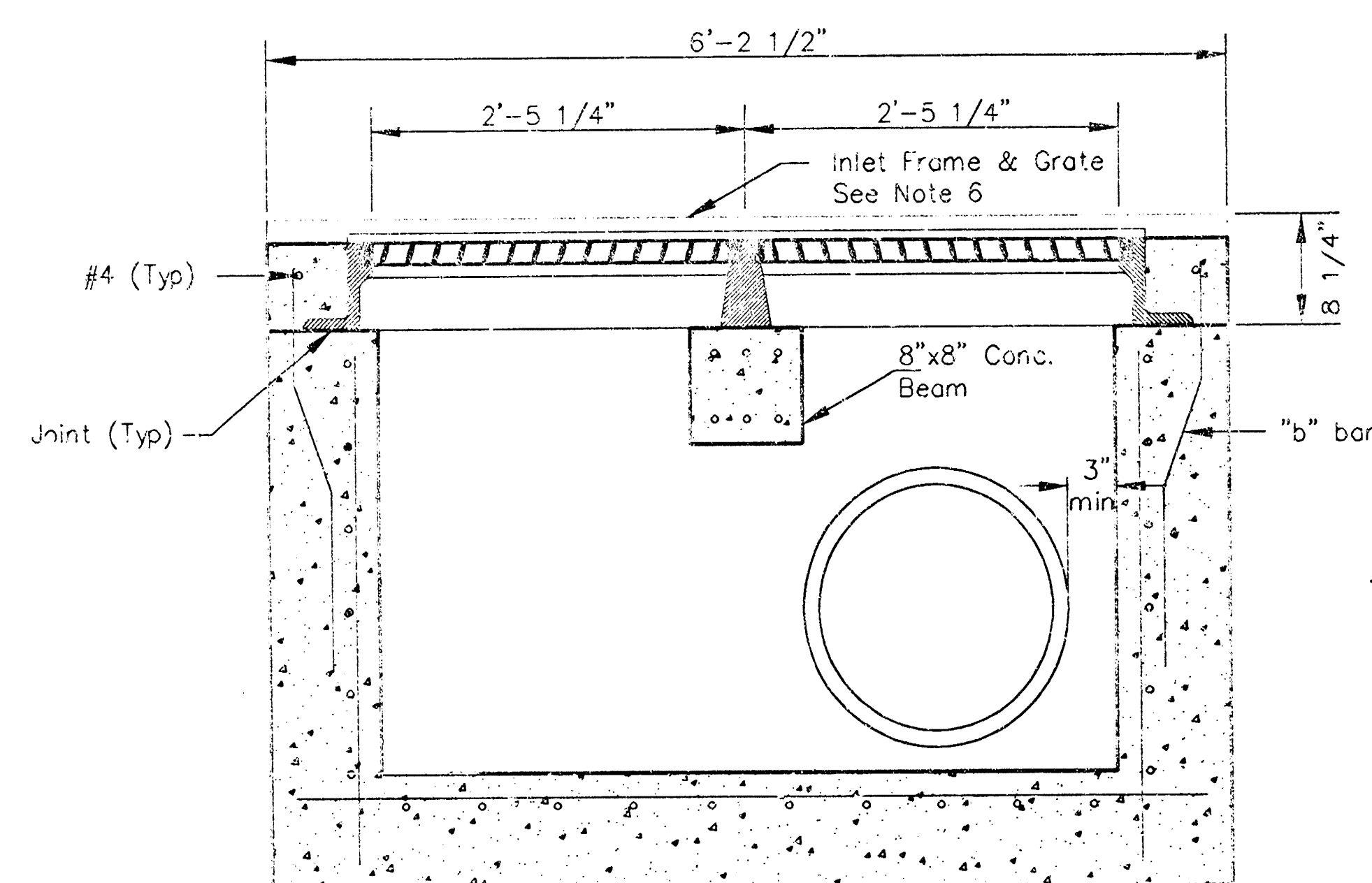
Designed by: DAR
 Drawn by: SAD
 Date: AUG 2001
 Job No: 01425

Checked by:
 Date: AUG 2001
 Job No: 01425

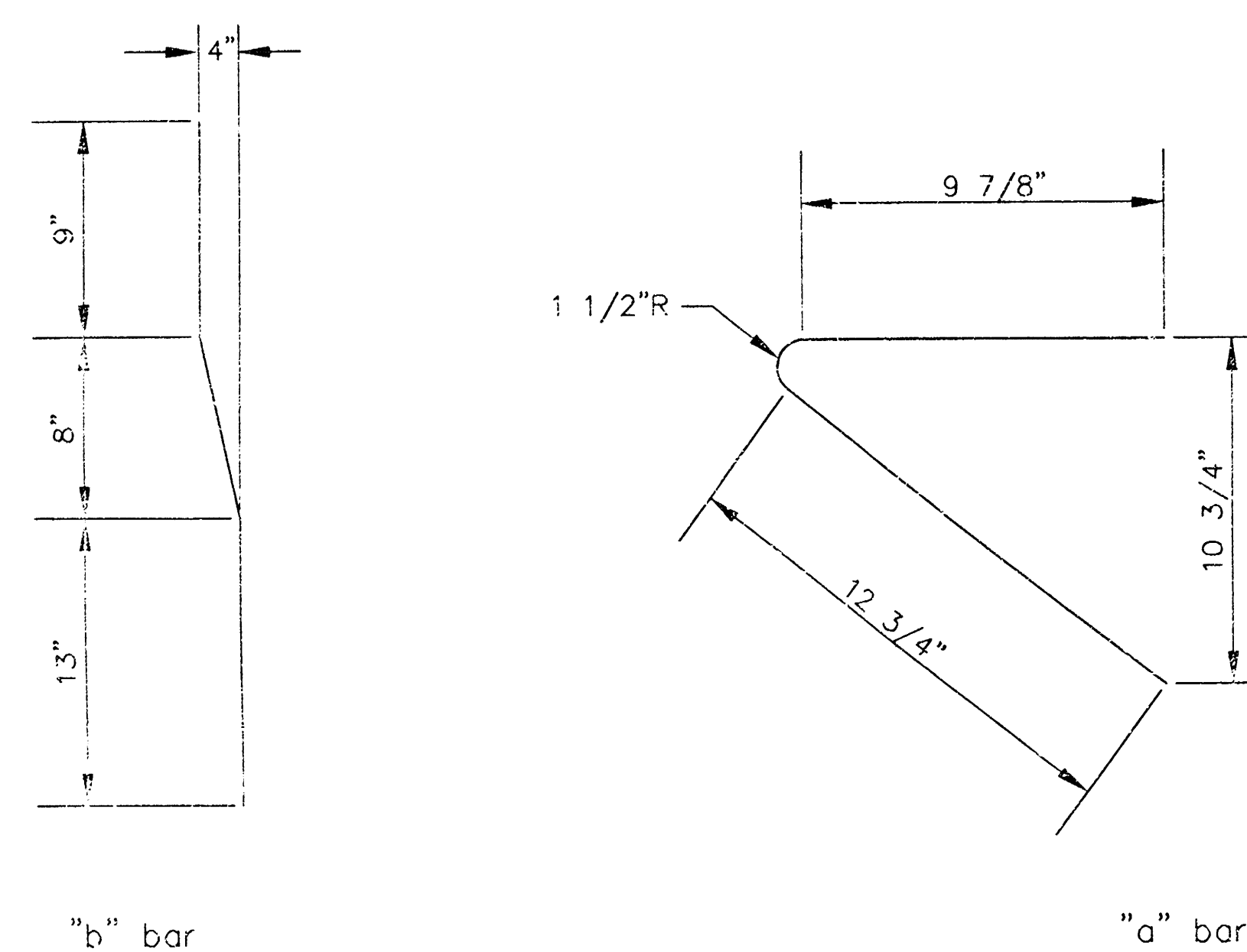
A. BUILT BY HAROLD FORAYER, DED
 11-2-01



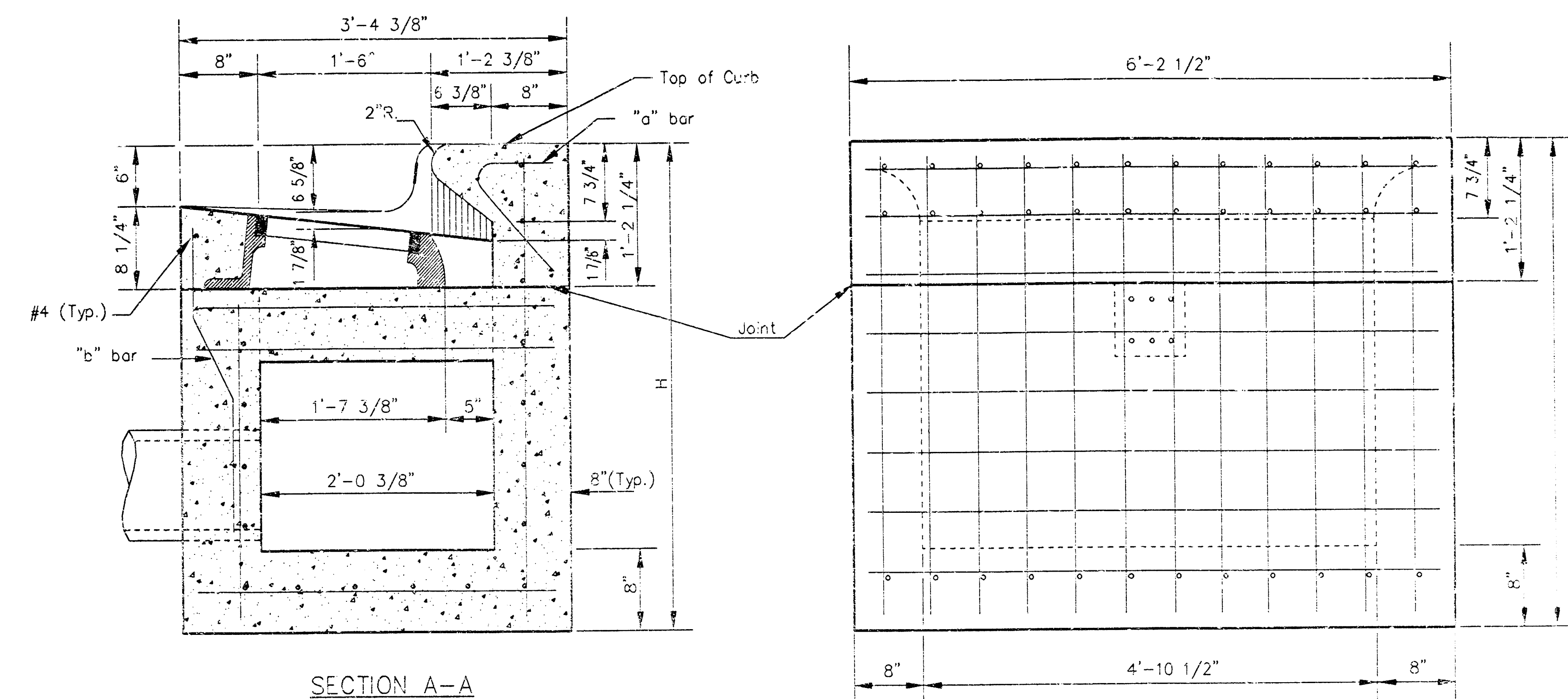
SECTION C-C



SECTION D-D



BENDING DIAGRAM

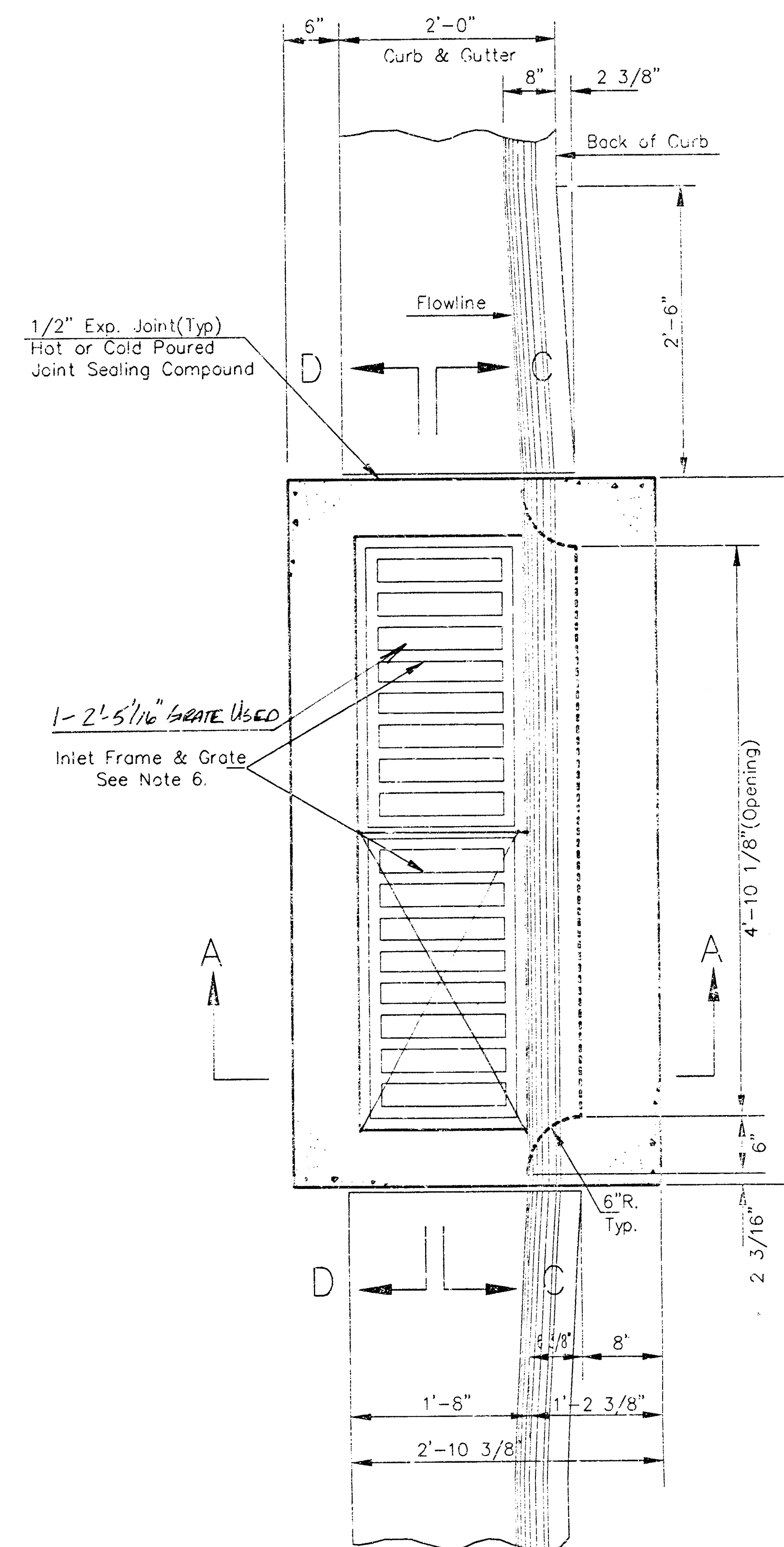


SECTION A-A

REAR WALL

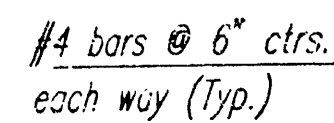
GENERAL NOTES

1. Use the concrete mix specified for the City of Wichita concrete pavement throughout. All exposed edges shall be finished with an edging tool. Reinforcing bars shall be bent around pipe.
2. Inlet invert shall be shaped with 8 sack mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
3. All bars are #4 with 6" spacing and shall have a minimum clearance of 1 1/2 inches unless otherwise noted on the plans.
4. When directed by the Engineer, a small opening may be required in the back of the inlet in order to drain a low area. Reinforcing bars will extend through the openings. No deductions in concrete quantities will be made for these openings.
5. No deductions will be made in pay length of curb, gutter, or curb and gutter through the inlet area.
6. Use Neenah R-3288 HV Inlet Frame with ~~Two~~ ^{ONE} Piece Grate ~~as~~ ^{USED} approved equal. Inlet frame to be proof load tested to 40,000 lbs. on unsupported side.
7. Reinforcing bars shall be cut or bent around pipes. No deduction in concrete quantities shall be made for pipe openings.
8. The vanes of the grate shall be oriented with respect to the flow arrows shown on the plans.
9. DEETER FOUNDARY, Inc. casting No. 2442/43 with style H grate is an approved equal to NEENAH castings specified. Inlet drawing is based on NEENAH castings and concrete walls and supports will require some field modification to accommodate DEETER castings.



THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 266-4501 (316) 266-4114 FAX	STANDARD TYPE II INLET OPENING 6" x 4'-10 1/8"	
	M. E. LINDERAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 472-8XXXX	DCA NO. XXXXXX
	DATE MAR 96	SHEET SU3 OF 5

As-Built, by HAZEL FURAKER, CED
11-2-01

5

SECTION A-A



PLAN

GENERAL NOTES-
AREA IN FTS

CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4
ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO WALLS.

REINFORCING STEEL SHALL BE GRADE 60, A.S.T.M. A615.
ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO THE
CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

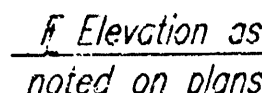
INLET CASTINGS SHALL BE MANUFACTURED USING DUCTILE IRON
CONFORMING TO ASTM A536-80 GRADE 65-45 12.
DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE
CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE
DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED
CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES,
POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

INLET FLOOR SHALL BE SHAPED WITH UNREINFORCED CONCRETE (8 SACK SAND MIX) TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

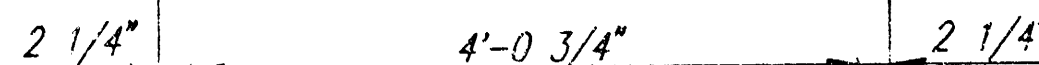
PIPES ENTERING EXISTING STRUCTURE SHALL BE CENTERED ON INSIDE
FACE OF WALL.

ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC PRIMER AND THEN WITH A TOP COAT OF OR A FIELD COAT OF ORGANIC ZINC, EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH A.S.T.M. A36. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE A.W.S. D1.1-88.

AREA INLETS MAY BE PRECAST AT THE CONTRACTOR'S OPTION, WITH APPROVAL OF THE ENGINEER.

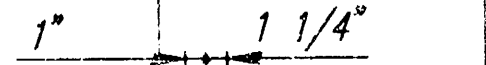


SECTION B-E



FRAME DETAIL
(Wt.=440 lbs.)

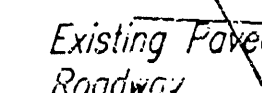
Note:
Frame to mate with 2 Neenah R-4826 Grates
or approved equal.



GRATE DETAIL
(Wt. = 190 lbs.)
(2 Required)

Note:
Grate shall be Neenah R-4826
or approved equal.

STANDARD AREA INLET (2'X'4')



SECTION C-0

Diversion ridge required
where grade exceeds 2.

2% of Grep

— Filter Fabric for Stabilization

NOTE:
USE SANDBAGS, STRAW BALES
OR OTHER APPROVED METHODS
TO CHANNELIZE RUNOFF TO BASIN
AS REQUIRED.

Supply water to wheels if necessary



3 94058 3-0-10

STABILIZED CONSTRUCTION ENTRANC

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL BE CLEANED FROM ROCK DEBRIS AND JUNGLE.

NEWMARKET SQUARE

MISCELLANEOUS DETAILS



Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by

Checked 1

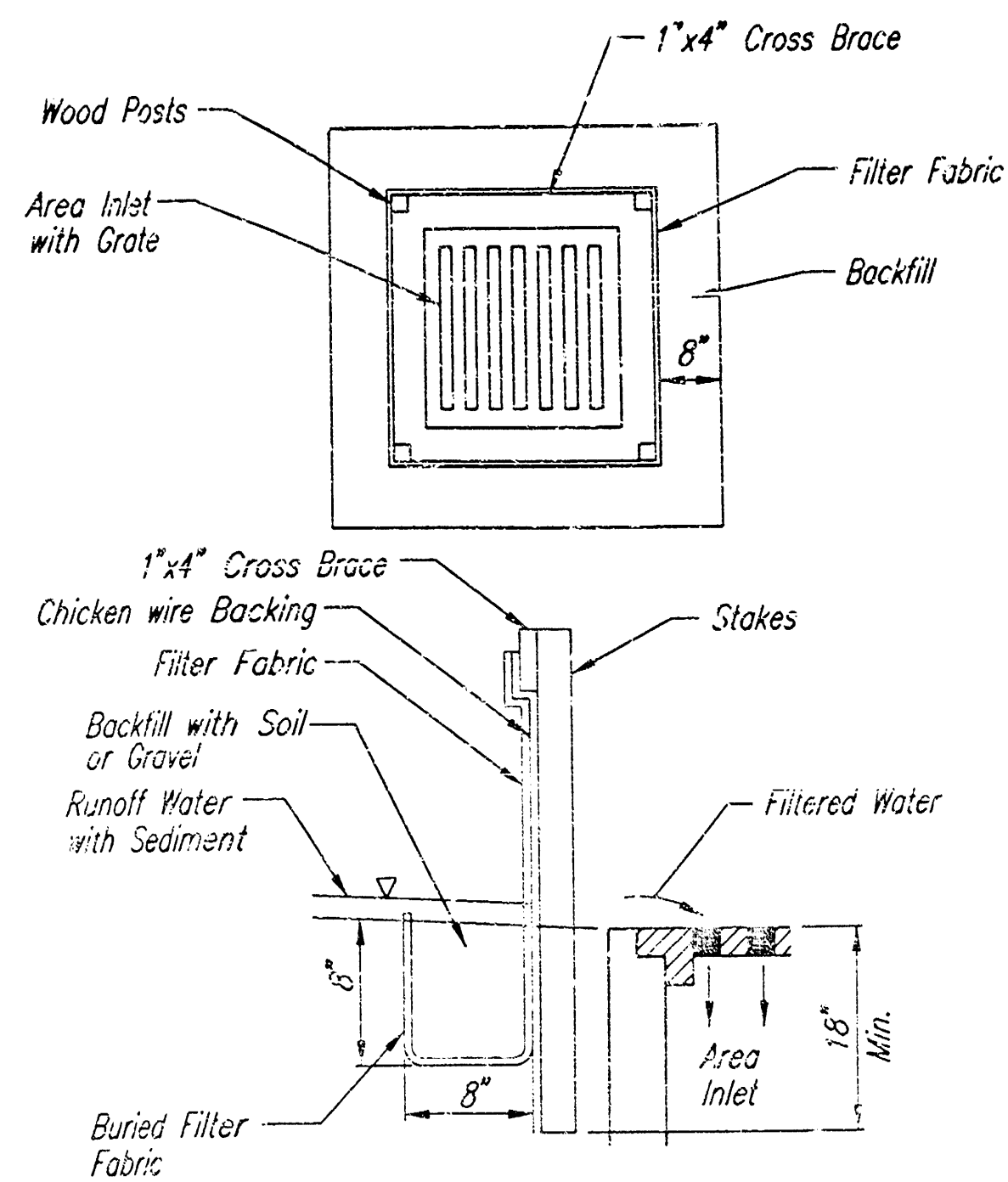
Drawn by

Date AUG

360 No. 61

As-Built, By HARLAN FORAKER, CE
11-3-01

11-2-c



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. The material used to frame the tops of the posts should be 1" by 4" boards. Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

Placement:

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped. Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped. When used as a barrier for area inlets, silt fence fabric and posts must be supported at the top by a wooden frame. When a silt fence barrier for area inlets is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper installation method:

Excavate a trench around the perimeter of the area inlet that is at least 8" deep by 8" wide. Drive posts to a depth of at least 18" around the perimeter of the area inlet. The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them. Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening. Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails. Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed. Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

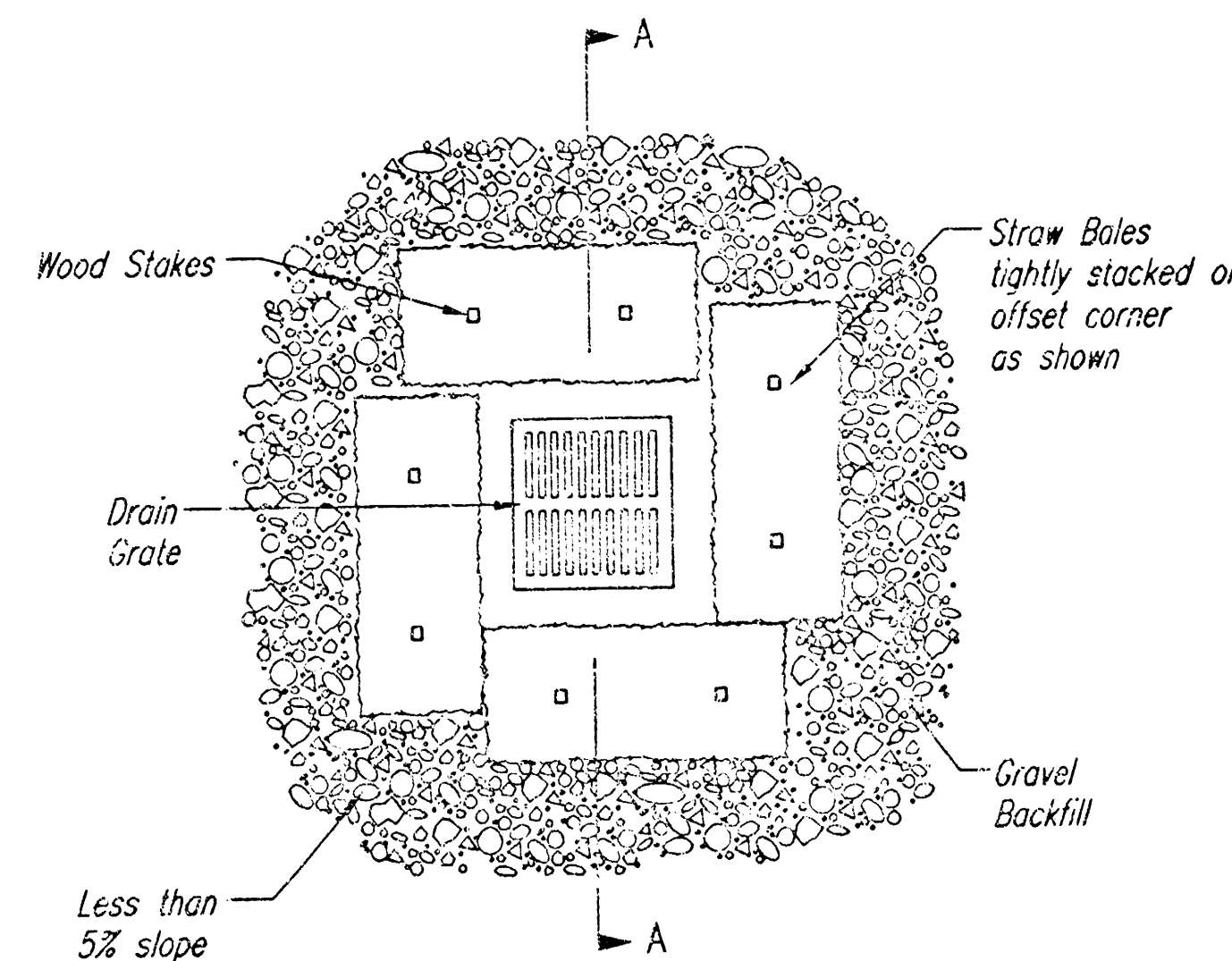
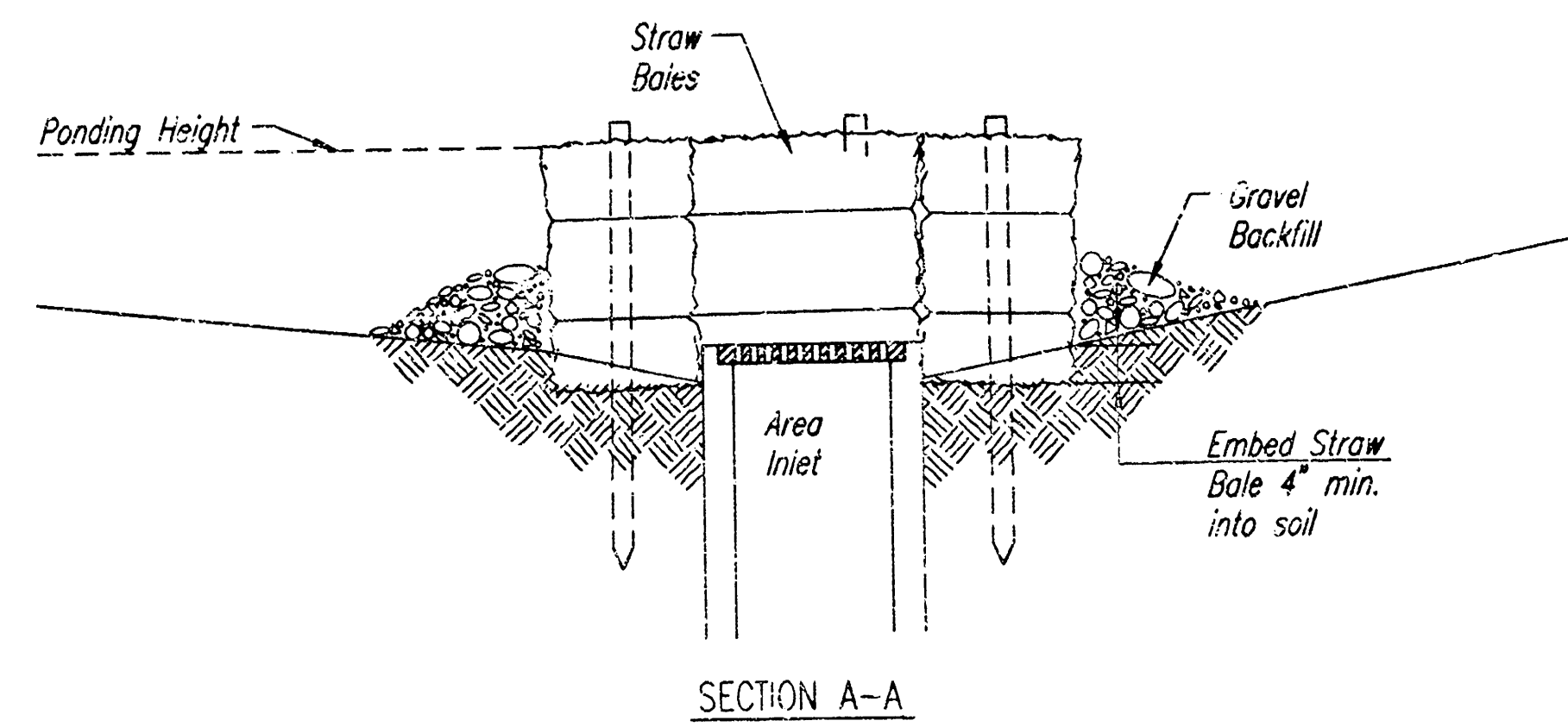
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence barrier for area inlet—not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped. Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not install silt fence barrier for area inlets without framing the top of the posts. The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

Inspection and Maintenance:

Silt fence barrier for area inlets should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- Does water flow under the silt fence?
- Does the silt fence sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the area inlet barrier?



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture. The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

Placement:

Bale area inlet barriers should be placed directly around the perimeter of a drop inlet. When a bale area inlet barrier is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper Installation Method:

Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bale's width wide. Place the bales in the trench, making sure that they are butted tightly. Some bales may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bale, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground. Once all the bales have been installed and anchored, place the excavated soil against the receiving side of the barrier and compact it. The compacted soil should be no more than 3" to 4" deep. Note: When a bale area inlet barrier is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

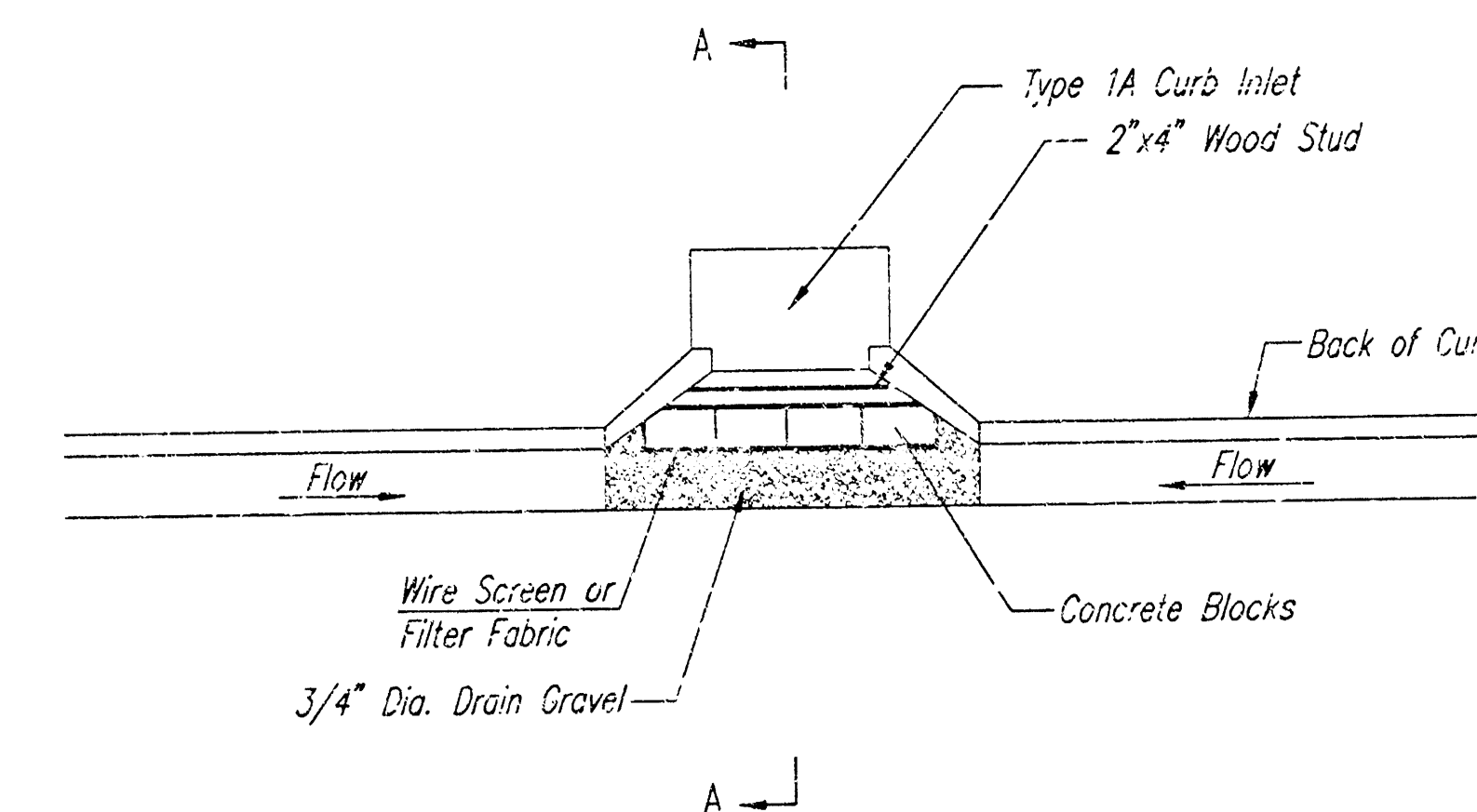
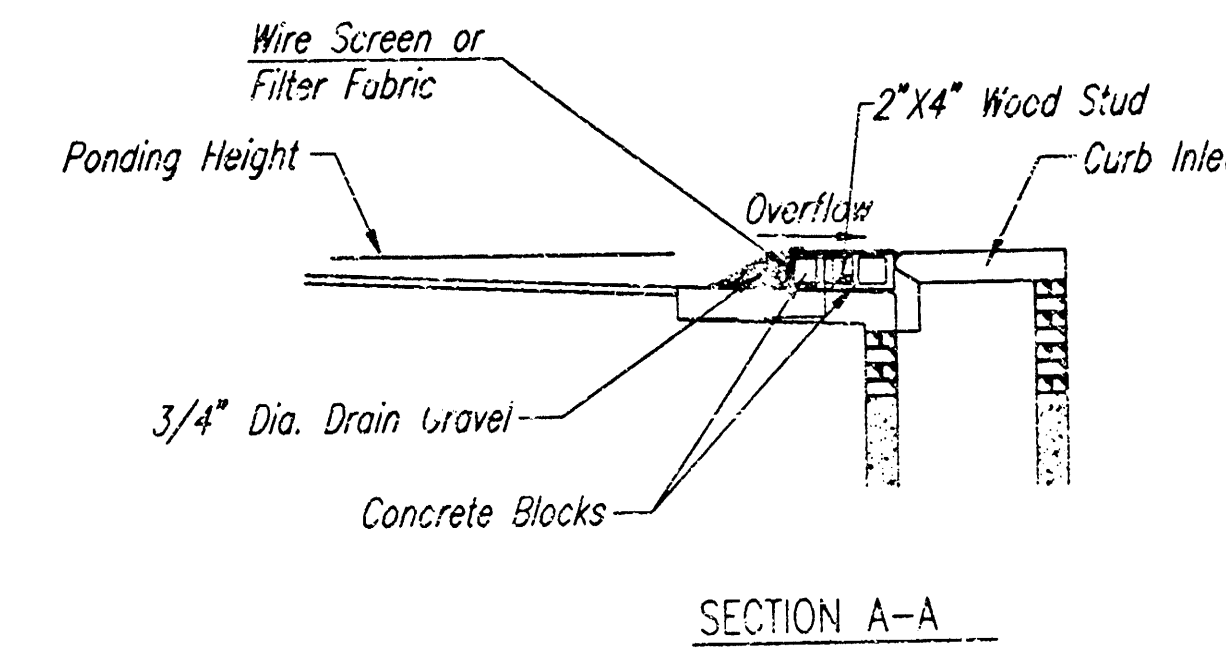
List of common placement/installation mistakes to avoid:

Bales should be placed directly against the perimeter of the area inlet. This allows overtopping water to flow directly into the inlet instead of onto nearby soil causing scour. Bale area inlet barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- Does water flow under the area inlet barrier?
- Does water flow through spaces between abutting bales?
- Are any bales dislodged?
- Are bales decomposing due to age and/or water damage?
- Does sediment need to be removed from behind the area inlet barrier?



CURB INLET GRAVEL FILTERS
(INLET PROTECTION—RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

Instructions for Installing:

- STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.

	INLET PROTECTION RMP DETAILS	
	CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER	
	PROJECT NUMBER	DCA NO.
	DATE MAY 2001	SHEET SU5 OF 5

AS-BUILT BY HAROLD KRAUSE, CED
11-2-01

18 11 01 10