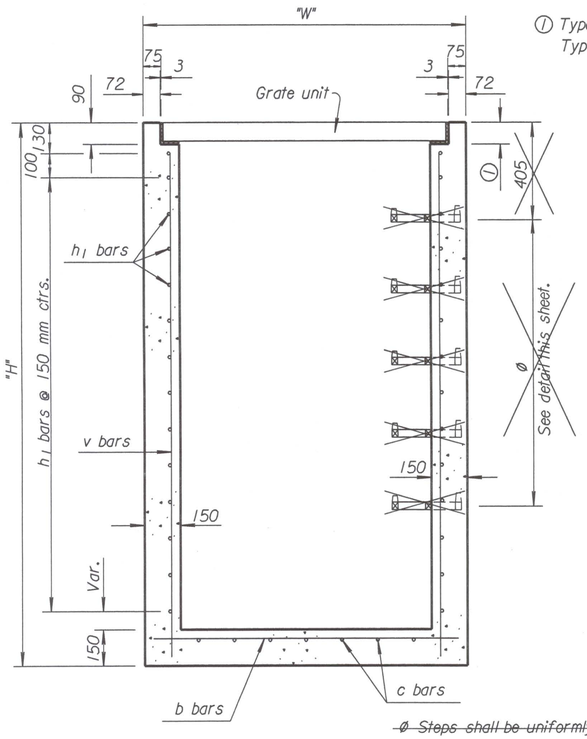
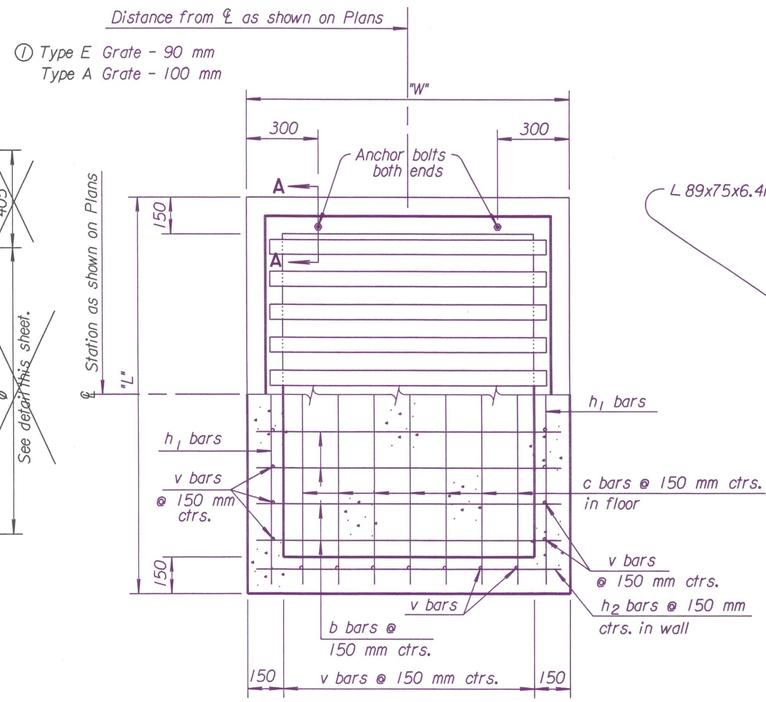
FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	54-87 K-6657-01	2002	141	1122

Note to Designer: For dimensions in any direction larger than those listed on this sheet, a structural design of both the inlet and grate should be performed.

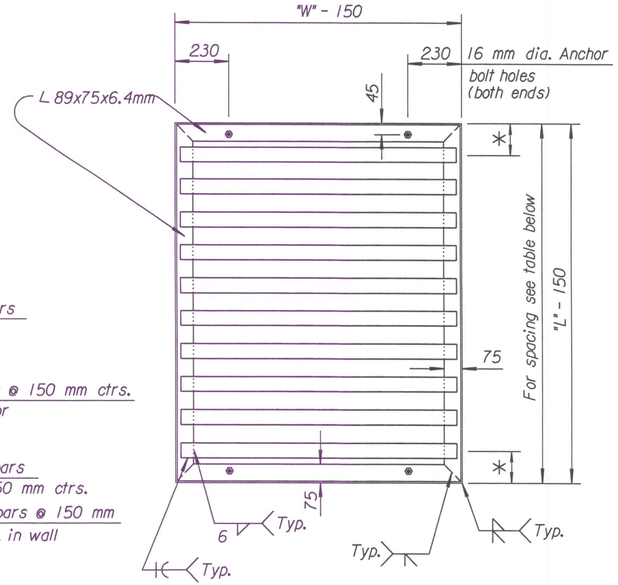


SECTION



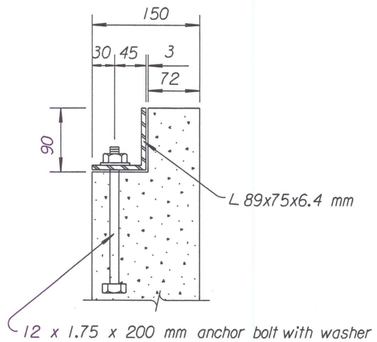
PLAN AND SECTION

~~Ø Steps shall be uniformly spaced. Spacing shall be 300 mm minimum and 420 mm maximum.~~



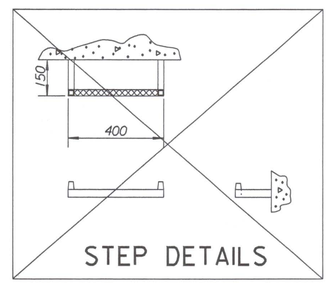
GRATE UNIT DETAILS (TYPE E)

Note: Grate Unit (Type A) shall be a Deeter 2126.



SECTION A-A

Note: Anchor bolts are subsidiary to the bid item "Inlet-Manhole, Special".



STEP DETAILS

~~Note~~ Steps shall not be installed in inlets and manholes on this project.

GENERAL NOTES

Use Class A Concrete throughout. All exposed edges shall be finished with an edging tool.

At the contractors option, Class A Concrete (AE) or mix used in concrete pavement may be used throughout.

In general, pipes will enter and leave the manhole at various positions. Where possible bend bars around pipes.

Floor of inlet shall be shaped as shown in various "Examples" on Reinforced Concrete Manhole Standard Drawing RD730 SI. Concrete used for shaping shall be unreinforced Class "A" Concrete or concrete pavement mix. No addition in concrete quantities shall be made for shaping floor of inlets.

~~Manhole steps, where used, shall be placed to afford easy access to top of shaped invert.~~

No deductions in concrete quantities shall be made for pipe openings.

All bars are #13 @ 150 mm spacing and shall have a minimum clearance of 40 mm unless otherwise noted on the plans.

The top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions as directed by the Engineer.

~~Steps shall be installed on all storm sewer inlets when specified in the plans or when "H" is equal to or greater than 1.8 m. Steps shall comply with the KDOT Standard Specification.~~

The grate shall be fabricated from standard or commercial grade structural steel and black steel pipe. The unit shall be hot dipped galvanized after fabrication, in accordance with ASTM A123 except the mass of coating shall average not less than 0.61 kg/m^2 of actual surface and no individual test shall show less than 0.55 kg/m^2 of actual surface area.

BILL OF MATERIALS FOR INLET-MANHOLE (SPECIAL)

"L" 1 200	"W" x 1 200	"H" x 1 220		"L" 1 200	"W" x 1 200	"H" x 0 910		"L" 1 500	"W" x 1 500	"H" x 1 070		"L" 1 500	"W" x 1 500	"H" x 1 520									
Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length
v	24	#13	1 050	v	24	#13	0 740	v	32	#13	0 900	v	32	#13	1 350	v				v			
c	6	#13	1 120	c	6	#13	1 120	c	8	#13	1 420	c	8	#13	1 420	c				c			
b	6	#13	1 120	b	6	#13	1 120	b	8	#13	1 420	b	8	#13	1 420	b				b			
h_1	14	#13	1 120	h_1	10	#13	1 120	h_1	12	#13	1 420	h_1	18	#13	1 420	h_1				h_1			
h_2	14	#13	1 120	h_2	10	#13	1 120	h_2	12	#13	1 420	h_2	18	#13	1 420	h_2				h_2			
Class "A" Conc.		0.9	m^3	Class "A" Conc.		0.7	m^3	Class "A" Conc.		1.1	m^3	Class "A" Conc.		1.4	m^3	Class "A" Conc.			m^3	Class "A" Conc.			m^3
Reinf. steel		70	kg	Reinf. steel		54	kg	Reinf. steel		85	kg	Reinf. steel		117	kg	Reinf. steel			kg	Reinf. steel			kg
Struct. steel		95	kg	Struct. steel		95	kg	Struct. steel		146	kg	Struct. steel		146	kg	Struct. steel			kg	Struct. steel			kg
Class III Excav.		3.9	m^3	Class III Excav.		3.0	m^3	Class III Excav.		4.7	m^3	Class III Excav.		6.7	m^3	Class III Excav.			m^3	Class III Excav.			m^3

BILL OF MATERIALS FOR INLET-MANHOLE (SPECIAL)

"L" 1 200	"W" x 1 200	"H" x 1 220		"L" 1 400	"W" x 1 400	"H" x 1 200		"L" 1 400	"W" x 1 400	"H" x 1 400		"L" 1 200	"W" x 1 200	"H" x 0 910		"L" 1 200	"W" x 1 200	"H" x 1 070	
Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length	Bar	No.	Size	Length
v	24	#13	1 050	v	28	#13	1 030	v	28	#13	1 230	v	24	#13	0 740	v	24	#13	0 900
c	6	#13	1 120	c	7	#13	1 320	c	7	#13	1 320	c	6	#13	1 120	c	6	#13	1 120
b	6	#13	1 120	b	7	#13	1 320	b	7	#13	1 320	b	6	#13	1 120	b	6	#13	1 120
h_1	14	#13	1 120	h_1	14	#13	1 320	h_1	16	#13	1 320	h_1	10	#13	1 120	h_1	12	#13	1 120
h_2	14	#13	1 120	h_2	14	#13	1 320	h_2	16	#13	1 320	h_2	10	#13	1 120	h_2	12	#13	1 120
Class "A" Conc.		0.9	m^3	Class "A" Conc.		1.0	m^3	Class "A" Conc.		1.2	m^3	Class "A" Conc.		0.7	m^3	Class "A" Conc.		0.8	m^3
Reinf. steel		70	kg	Reinf. steel		84	kg	Reinf. steel		95	kg	Reinf. steel		54	kg	Reinf. steel		62	kg
Struct. steel		*	kg	Struct. steel		124	kg	Struct. steel		124	kg	Struct. steel		*	kg	Struct. steel		*	kg
Class III Excav.		3.9	m^3	Class III Excav.		4.8	m^3	Class III Excav.		5.6	m^3	Class III Excav.		3.0	m^3	Class III Excav.		3.5	m^3

* A Deeter 2126 grate unit to be installed.

PIPE DIMENSIONS AND SPACING

L x W	No. of Bars	Dia. x Length	Spacing	*
2 200x1 400	14	64 Ø x 1 220	140	115
1 600x1 400	9	64 Ø x 1 220	150	125
1 400x1 400	8	64 Ø x 1 220	140	135
1 200x1 200	7	64 Ø x 1 020	140	105

NO.	DATE	REVISIONS	BY	APP'D
6	12-05-00	Added Note to Designer	R.J.S.	J.O.B.
5	10-03-00	Revised bolt callouts	R.J.S.	J.O.B.
4	7-12-00	Revised bar quantities	R.J.S.	J.O.B.
3	12-15-97	Revised step spacing	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

INLET - MANHOLE, SPECIAL

~~RD732 SI~~

FHWA APPROVAL	12-21-00	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seltz

Drawn By: :s$USERNAME$s Plotted : 8-13-2001
File : i:/1997/97362/sws/standards/rd732si.dgn