

## ROAD and DRAINAGE STANDARDS

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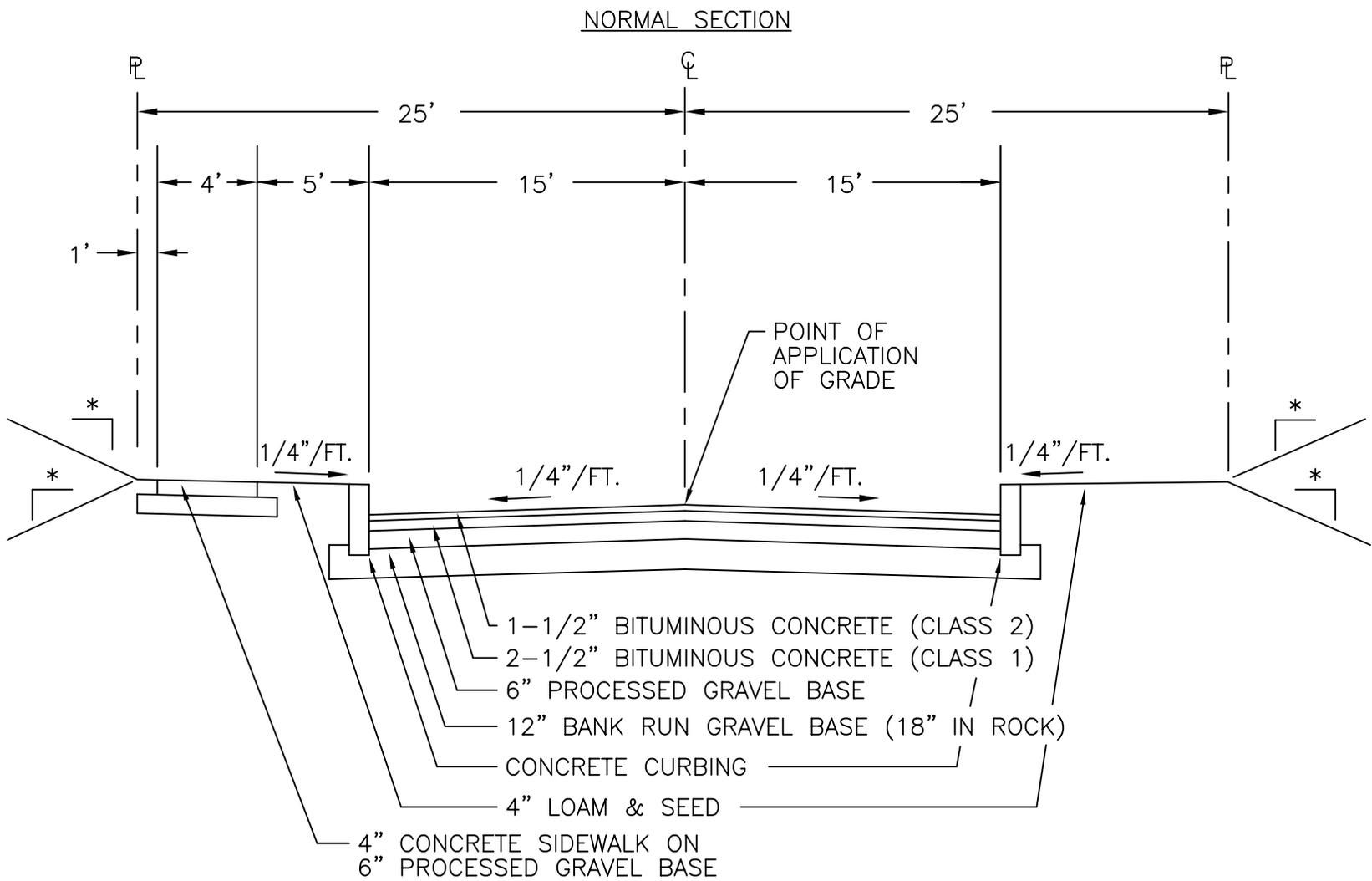
## ROAD and DRAINAGE STANDARDS

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DATE				
REVISION				
	<i>Town of Groton</i> <i>Department of Public Works</i>			
	ROAD & DRAINAGE STANDARDS RESIDENTIAL ACCESS STREET			
	DWN BY: GMJ	APD BY:	DATE: 6/20/00	DWG NO. RDS-102

NOT TO SCALE

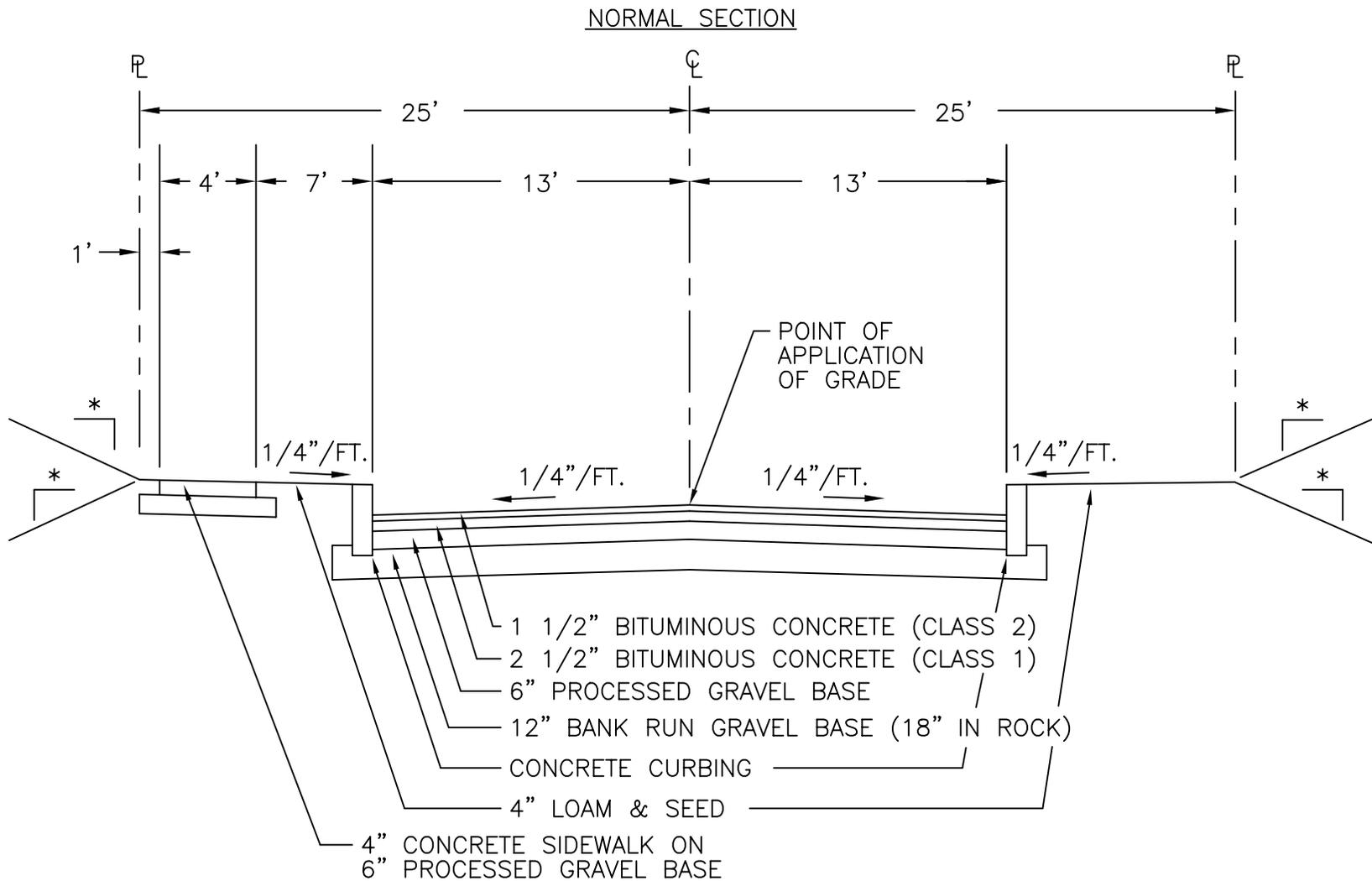


NOTE:  
1. SIDEWALK SHOWN ON ONE SIDE ONLY. MAY BE REQUIRED ON BOTH SIDES OF ROAD.

\* - 2 HORIZONTAL TO 1 VERTICAL MAXIMUM. IN LAWN AREAS, 4 HORIZONTAL TO 1 VERTICAL IS PREFERRED.

DATE				
REVISION				
	<i>Town of Groton</i>			
	<i>Department of Public Works</i>			
	ROAD & DRAINAGE STANDARDS			
	VILLAGE ROAD			
	DWN BY: GMJ			
	APD BY:			
	DATE: 3/22/99			
	DWG NO. RDS-103			

NOT TO SCALE

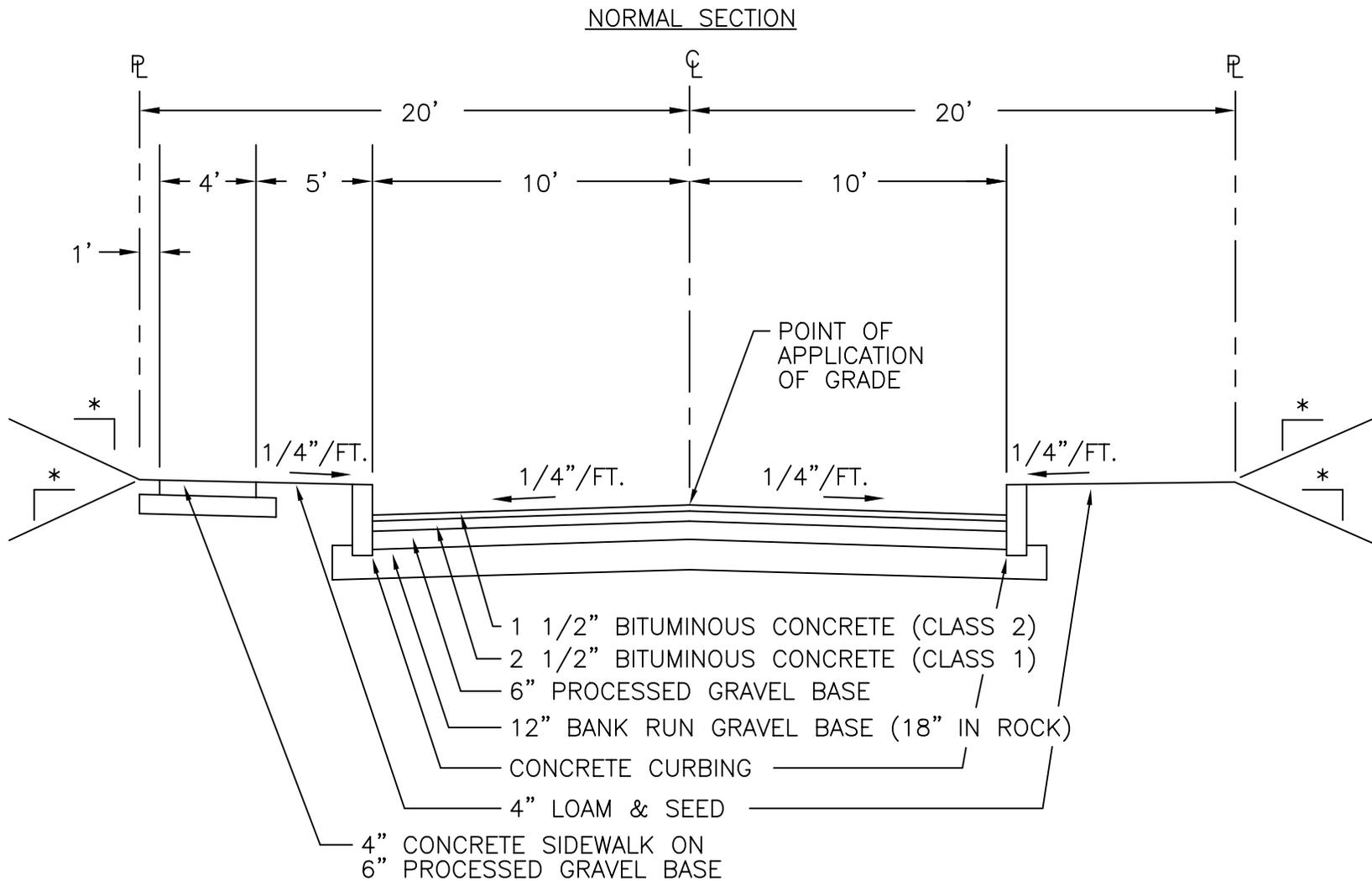


NOTE:  
 1. SIDEWALK SHOWN ON ONE SIDE ONLY. MAY BE REQUIRED ON BOTH SIDES OF ROAD.

\* - 2 HORIZONTAL TO 1 VERTICAL MAXIMUM. IN LAWN AREAS, 4 HORIZONTAL TO 1 VERTICAL IS PREFERRED.

DATE				
REVISION				
ROAD & DRAINAGE STANDARDS		<i>Town of Groton</i>		
SUB-VILLAGE ROAD		<i>Department of Public Works</i>		
DWG NO.	RDS-104	DWN BY:	GMJ	
DATE:	3/22/99	APD BY:		

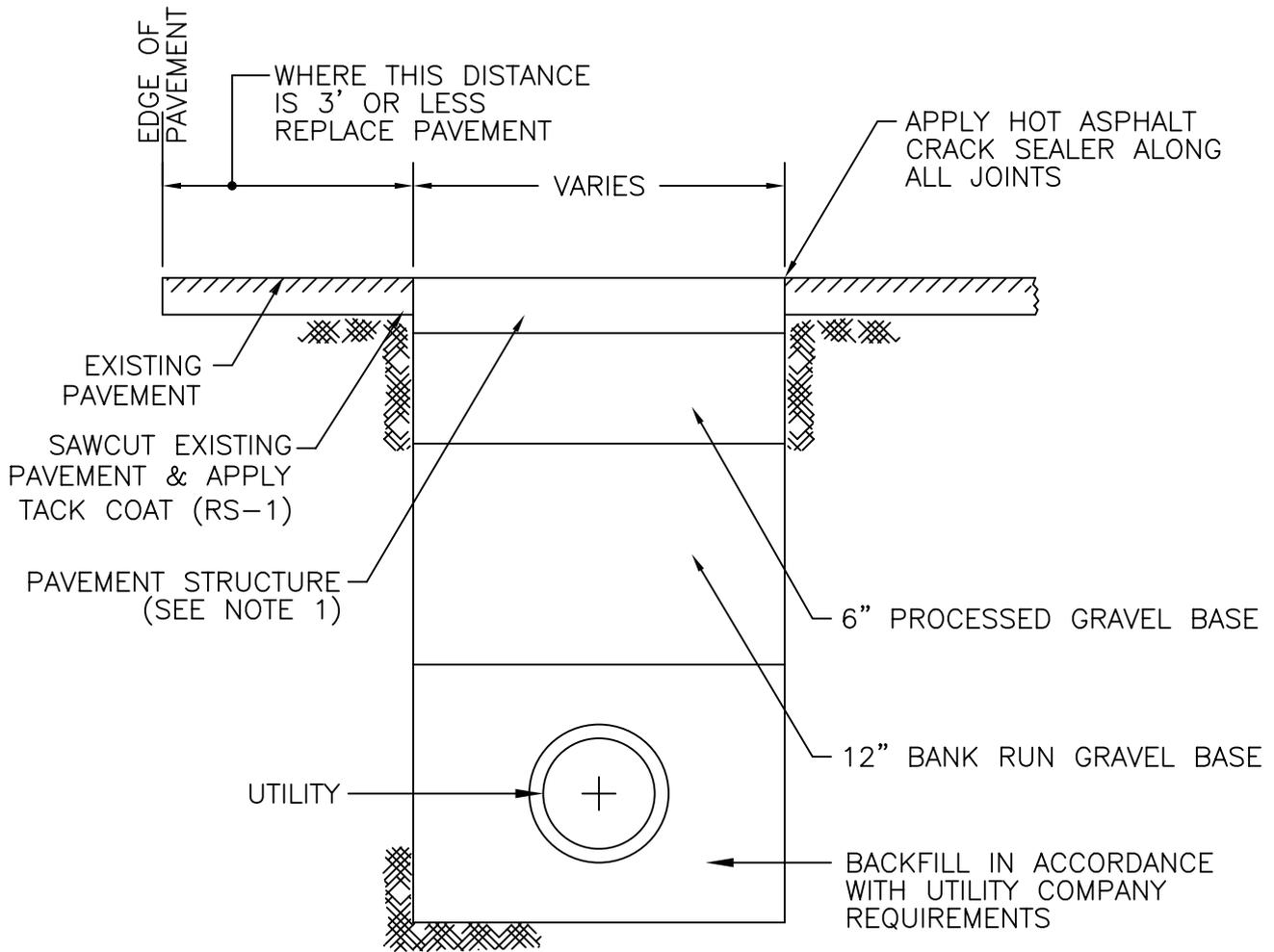
NOT TO SCALE



NOTE:  
 1. SIDEWALK SHOWN ON ONE SIDE ONLY. MAY BE REQUIRED ON BOTH SIDES OF ROAD.

\* - 2 HORIZONTAL TO 1 VERTICAL MAXIMUM. IN LAWN AREAS, 4 HORIZONTAL TO 1 VERTICAL IS PREFERRED.



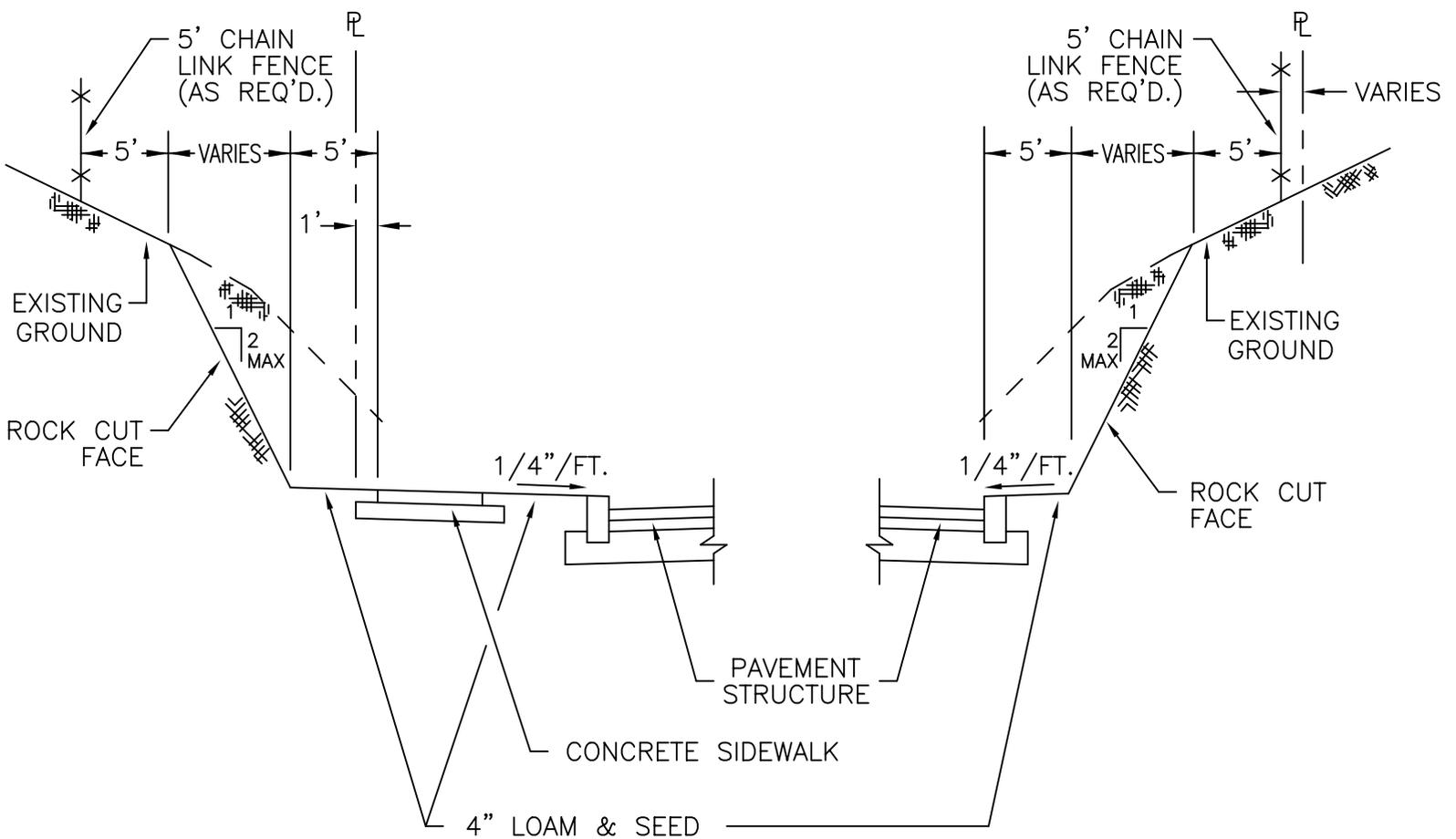


**NOTES:**

1. THE PAVEMENT STRUCTURE SHALL BE BUILT IN ACCORDANCE WITH DWG. NOS. RDS-101, 102, 103 AND 104 DEPENDING ON THE CLASSIFICATION OF THE STREET BEING TRENCHED OR MATCH EXISTING, WHICHEVER IS GREATER.
2. IF A TEMPORARY PATCH IS USED, OR REQUIRED, IT SHALL BE A MINIMUM OF 2 INCHES THICK BITUMINOUS CONCRETE (CLASS 1).

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS UTILITY TRENCH PATCH	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-106

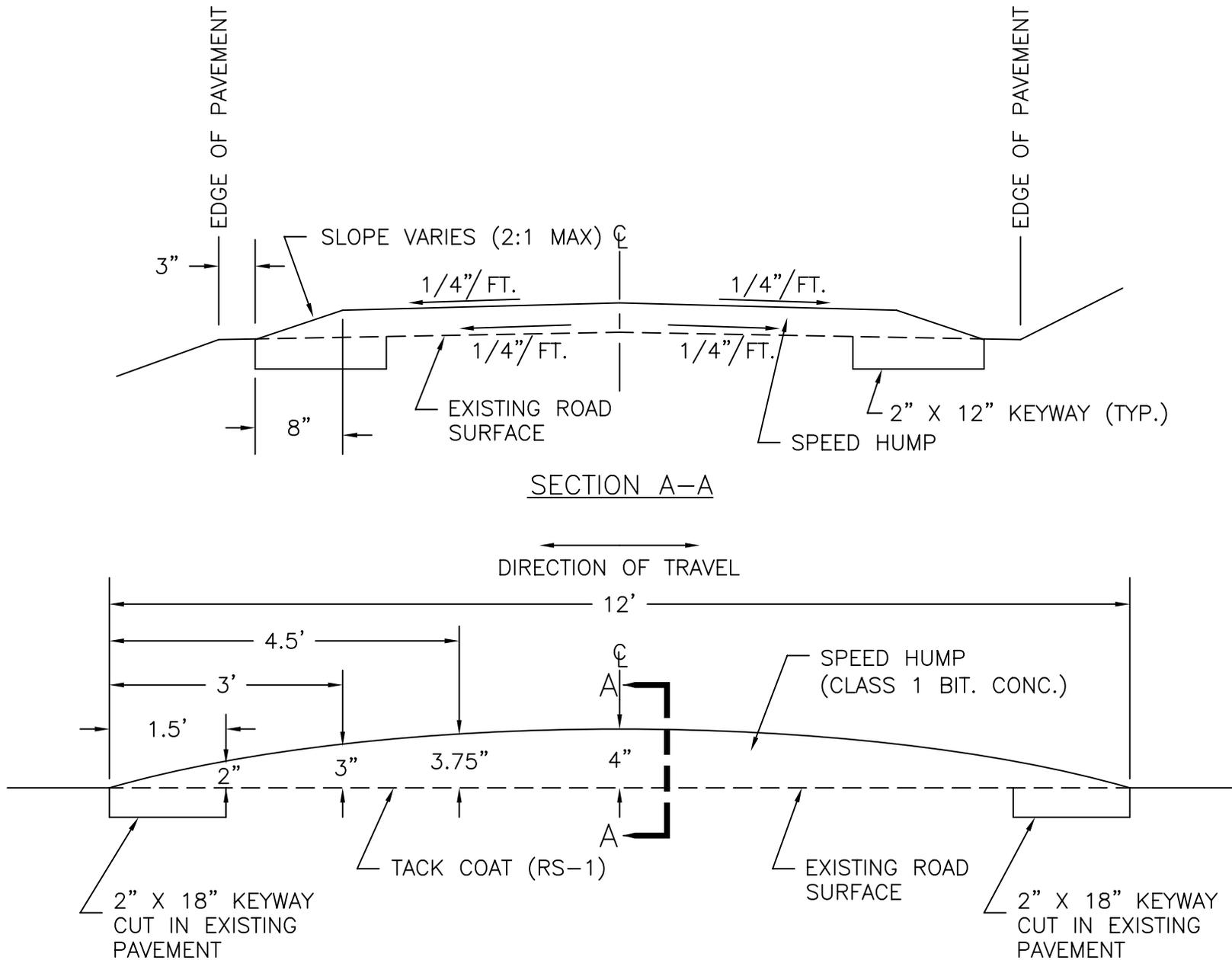


NOT TO SCALE

		<i>Town of Groton</i>		DWN BY: GMJ	
		<i>Department of Public Works</i>		APD BY:	
		ROAD & DRAINAGE STANDARDS		DATE: 3/22/99	
		ROCK CUT		DWG NO. RDS-107	
DATE	REVISION				

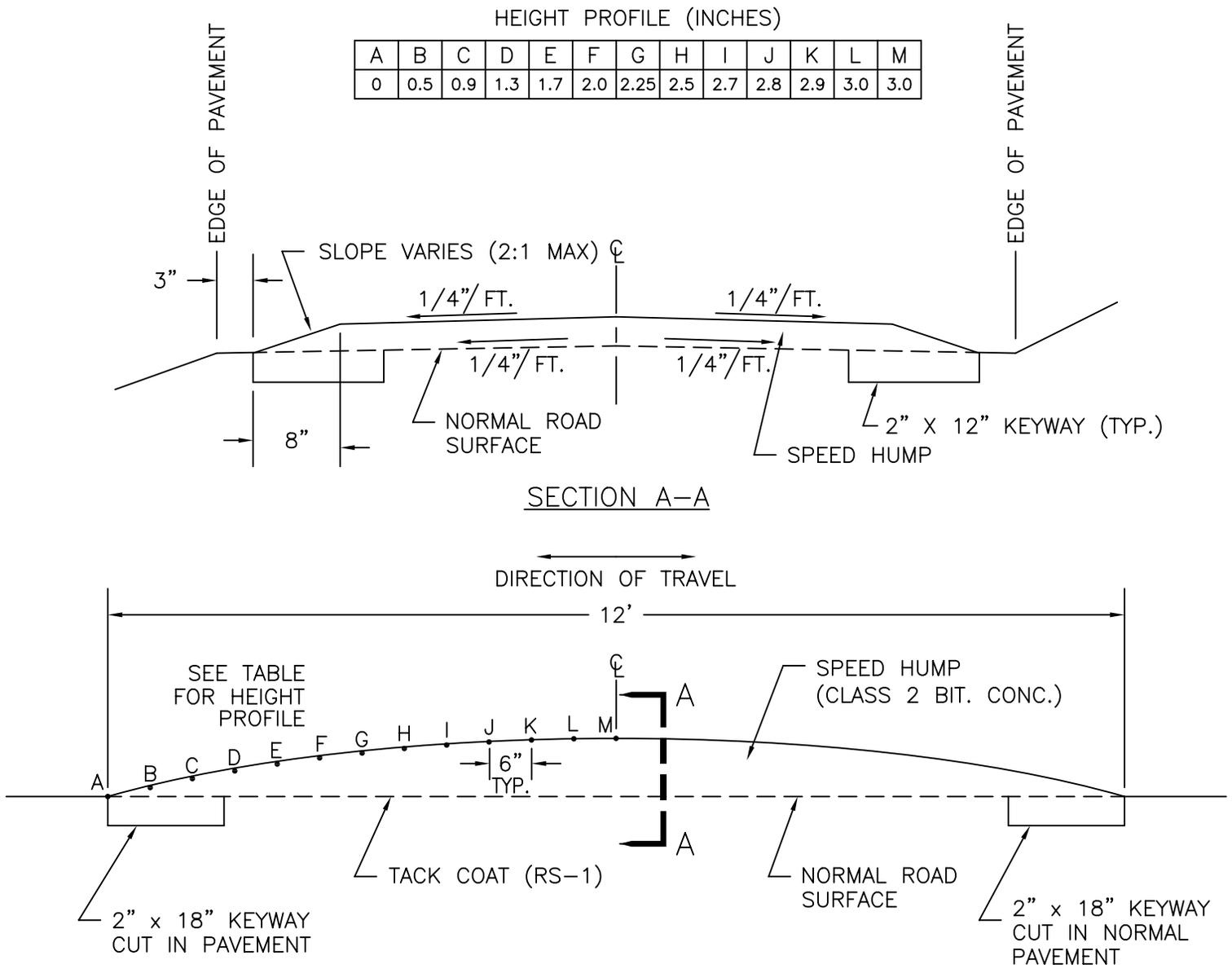
DATE	REVISION	<i>Town of Groton</i> <i>Department of Public Works</i>	ROAD & DRAINAGE STANDARDS 4" SPEED HUMPS	DWN BY: GMJ
				APD BY:
			DATE: 3/22/99	
			DWG NO. RDS-108	

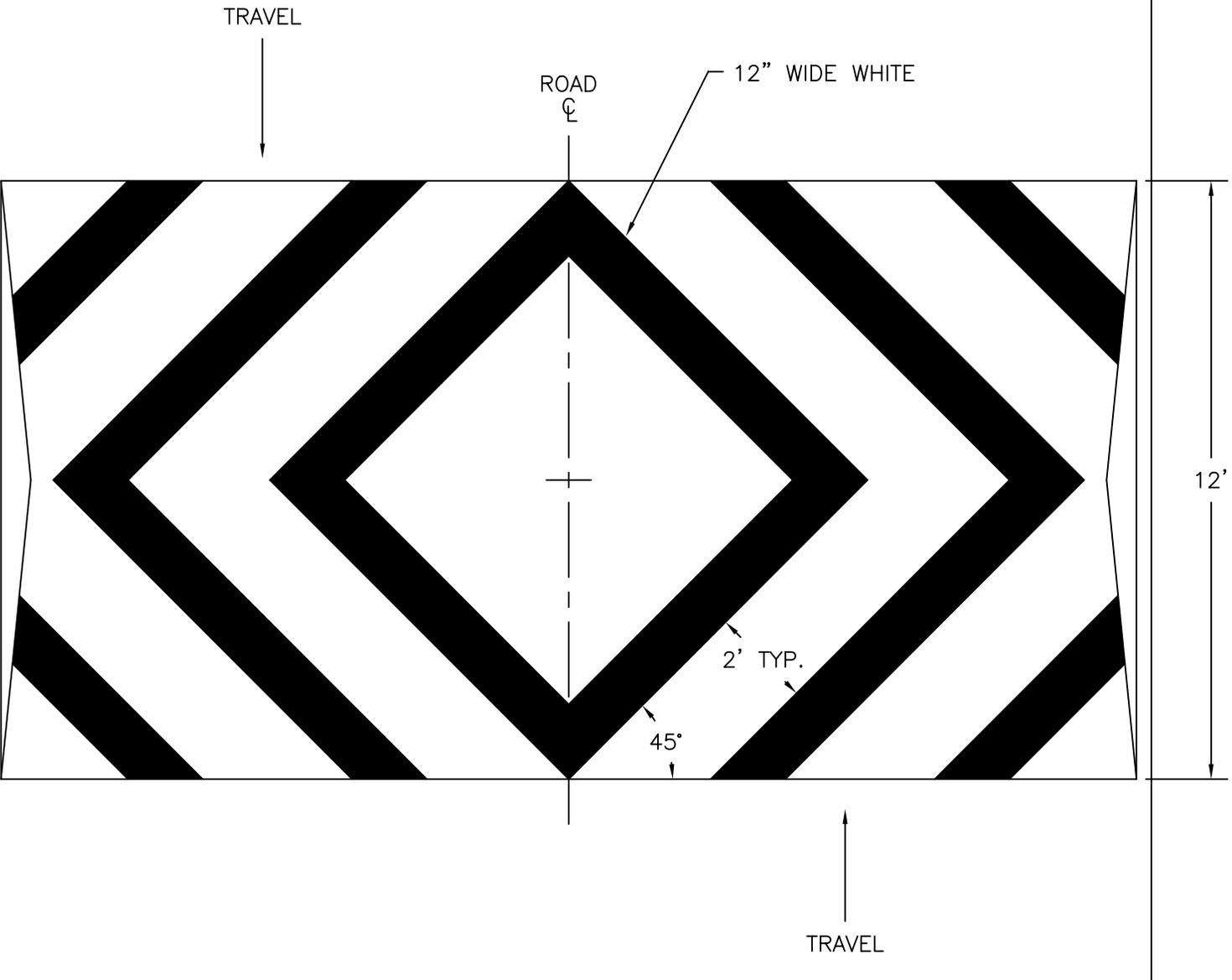
NOT TO SCALE



7/29/05	ADDED PROFILE TABLE	Town of Groton Department of Public Works	ROAD & DRAINAGE STANDARDS 3" SPEED HUMP	DWN BY: GMJ
DATE	REVISION			APD BY:
				DATE: 3/29/99
				DWG NO. RDS-109A

NOT TO SCALE





NOT TO SCALE

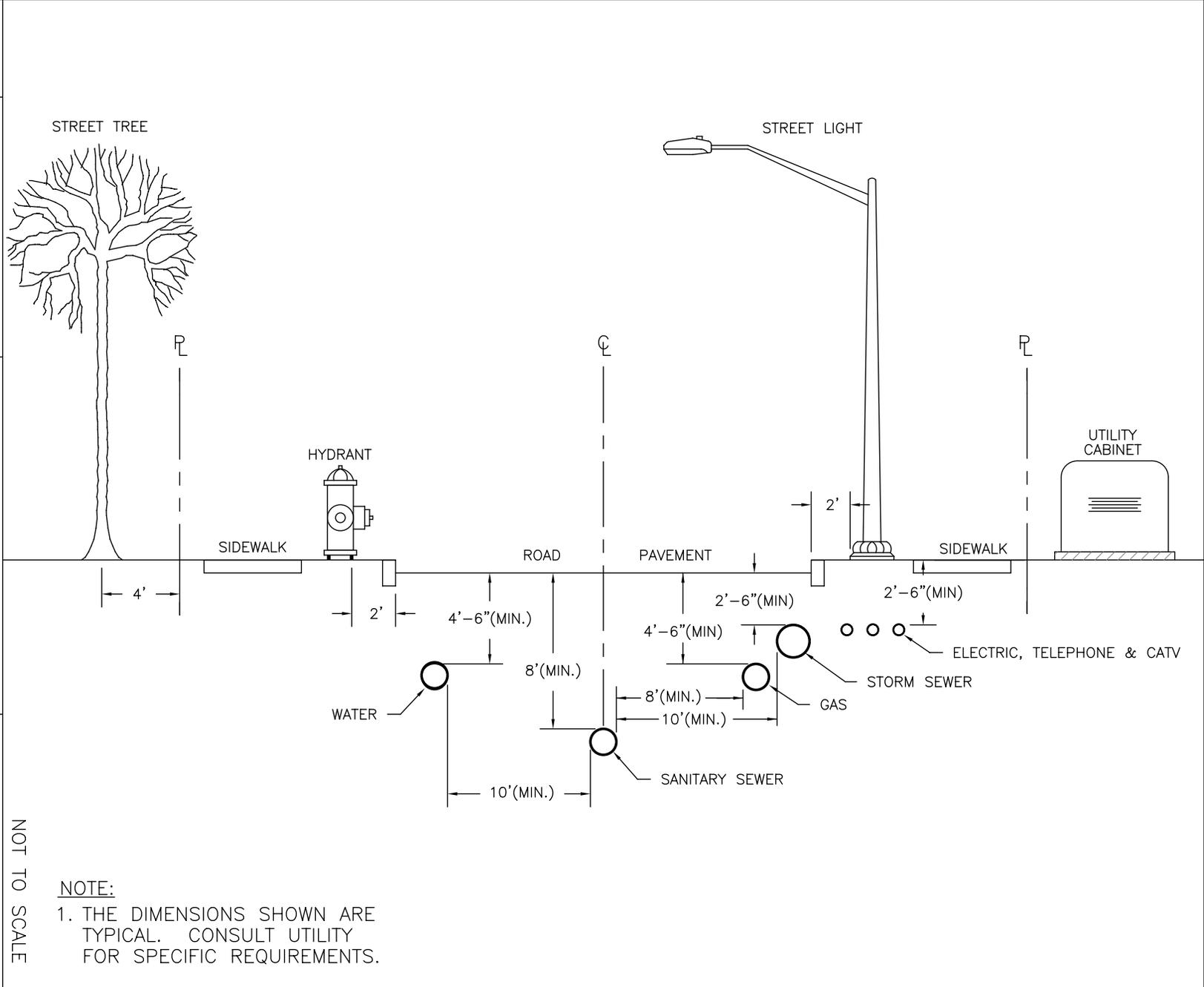
		<i>Town of Groton</i>	
		<i>Department of Public Works</i>	
		DWN BY: GMJ	
		APD BY:	
		DATE: 7/28/05	
		DWG NO. RDS-109B	
DATE	REVISION		

DATE	
REVISION	

*Town of Groton  
Department of Public Works*

ROAD & DRAINAGE STANDARDS  
UTILITY LOCATIONS

DWN BY: GMJ
APD BY: _____
DATE: 07/10/03
DWG NO. RDS-110

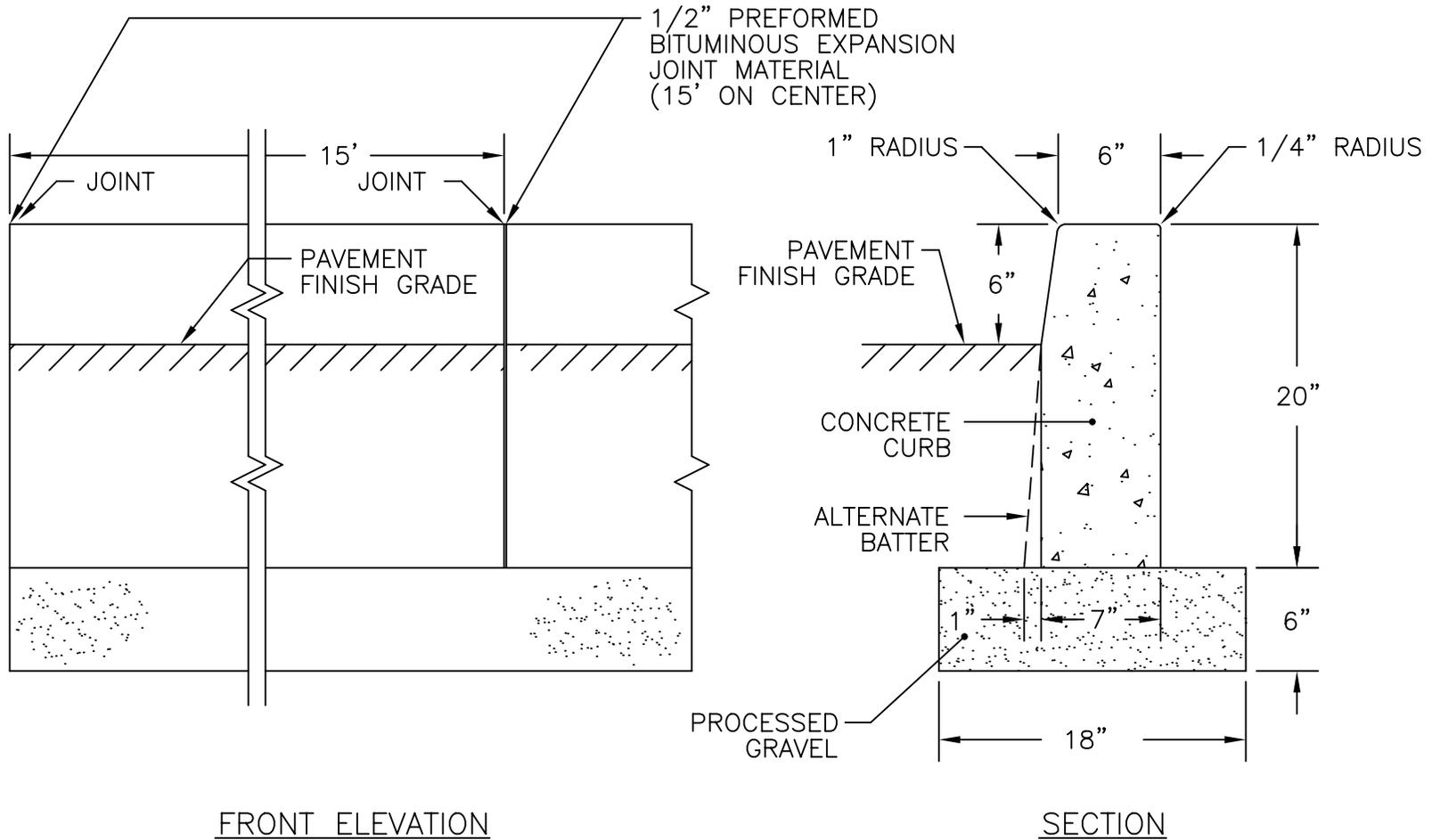


NOT TO SCALE

**NOTE:**  
1. THE DIMENSIONS SHOWN ARE TYPICAL. CONSULT UTILITY FOR SPECIFIC REQUIREMENTS.

DATE				
REVISION				
ROAD & DRAINAGE STANDARDS		<i>Town of Groton</i>		
CONCRETE CURBING		<i>Department of Public Works</i>		
DWG NO.	RDS-201	APD BY:	DWN BY: GMJ	
DATE:	3/22/99			

NOT TO SCALE

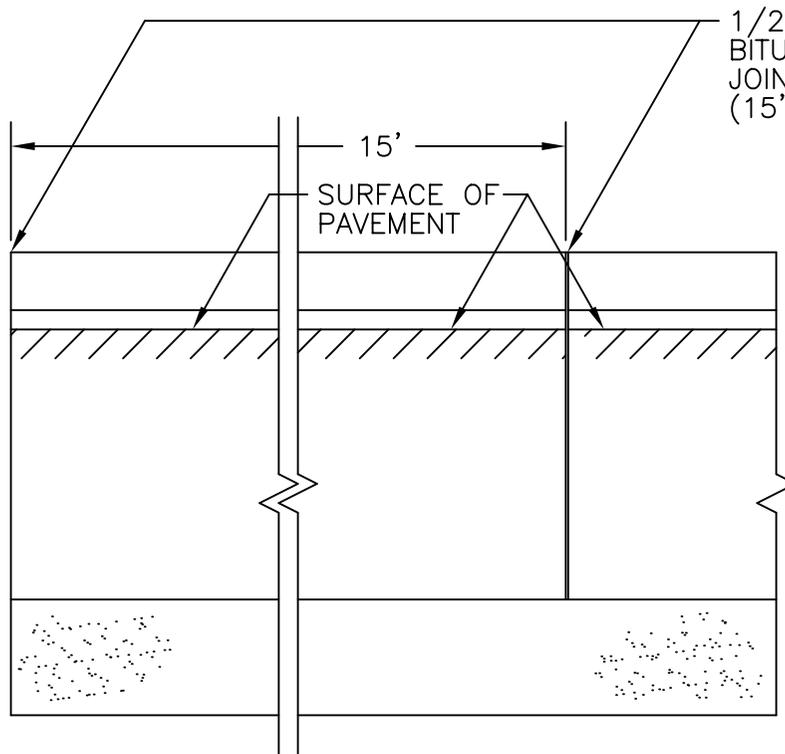


NOTES:

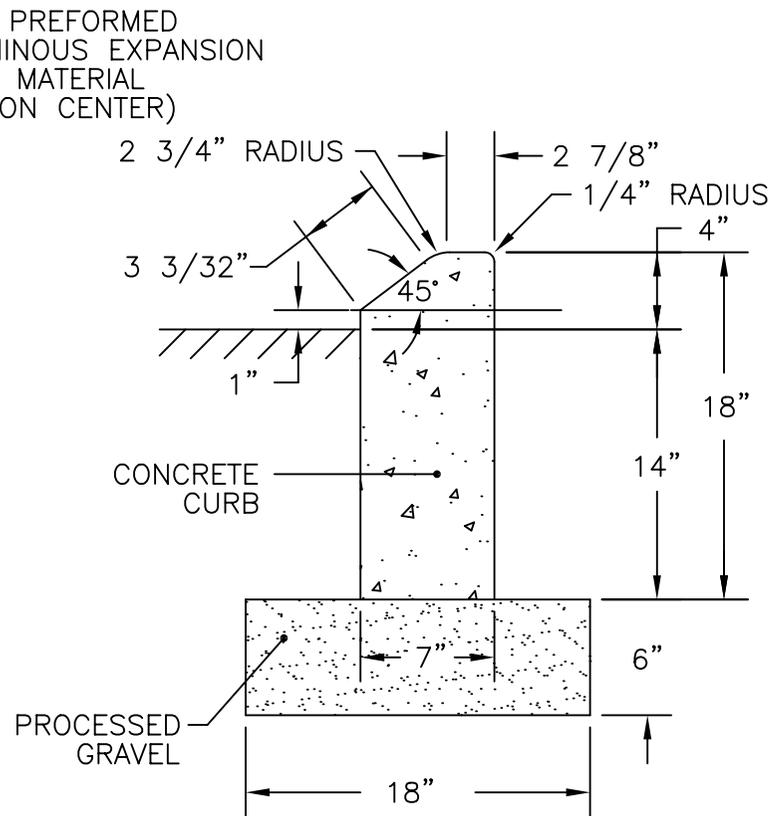
1. PROVIDE SMOOTH TROWEL OR HAIR BRUSH FINISH TO ALL EXPOSED SURFACES.
2. PRECAST CONCRETE CURB MAY BE USED WITH APPROVAL BY THE TOWN.
  - 2A. PRECAST CURBING SIZE SHALL MEET THE SIZE SHOWN ABOVE (18" HEIGHT MAY BE USED).
  - 2B. STRAIGHT SECTIONS SHALL NOT BE USED FOR RADII LESS THAN 100'.
  - 2C. CURBING SECTIONS SHALL BE PINNED TOGETHER.

DATE	REVISION	<i>Town of Groton Department of Public Works</i>	ROAD & DRAINAGE STANDARDS CONC. MOUNTABLE CURBING	DWN BY: GMJ
				APD BY:
				DATE: 11/17/99
				DWG NO. RDS-202

NOT TO SCALE



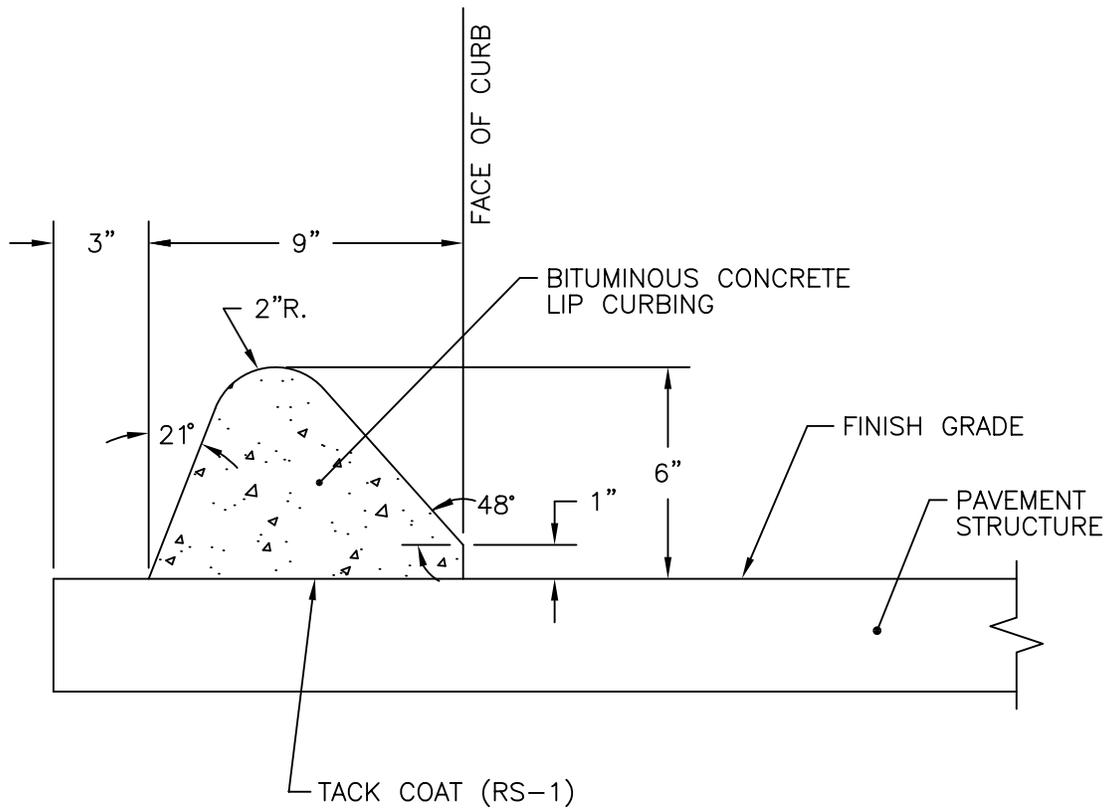
FRONT ELEVATION



SECTION

NOTES:

1. PROVIDE SMOOTH TROWEL OR HAIR BRUSH FINISH TO ALL EXPOSED SURFACES.
2. PRECAST CONCRETE CURB MAY BE USED WITH APPROVAL BY THE TOWN.
  - 2A. PRECAST CURBING SIZE SHALL MEET THE SIZE SHOWN ABOVE.
  - 2B. STRAIGHT SECTIONS SHALL NOT BE USED FOR RADII LESS THAN 100'.
  - 2C. CURBING SECTIONS SHALL BE PINNED TOGETHER.
3. ONLY TO BE USED WHERE ALLOWED BY THE PUBLIC WORKS DEPARTMENT.

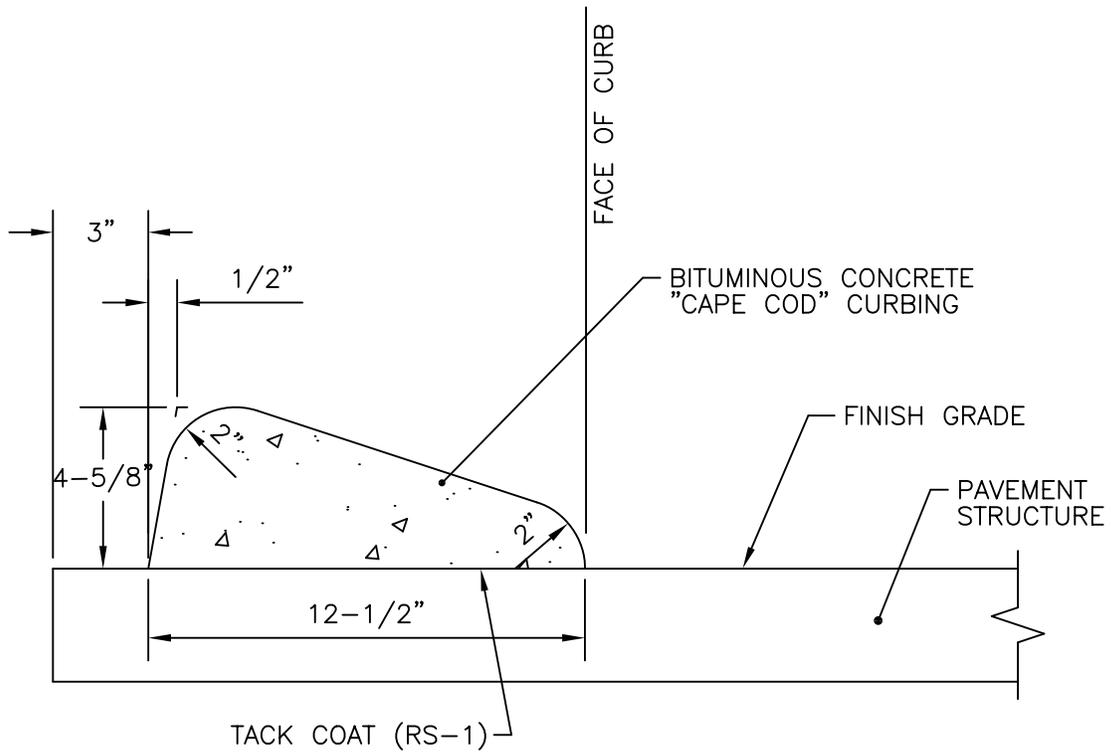


**NOTE:**

1. USE BITUMINOUS CONCRETE CLASS 3 FOR CURBING.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i> ROAD & DRAINAGE STANDARDS BIT. CONC. LIP CURBING	DWN BY: GMJ
			APD BY:
			DATE: 11/17/99
DATE	REVISION		DWG NO. RDS-203A

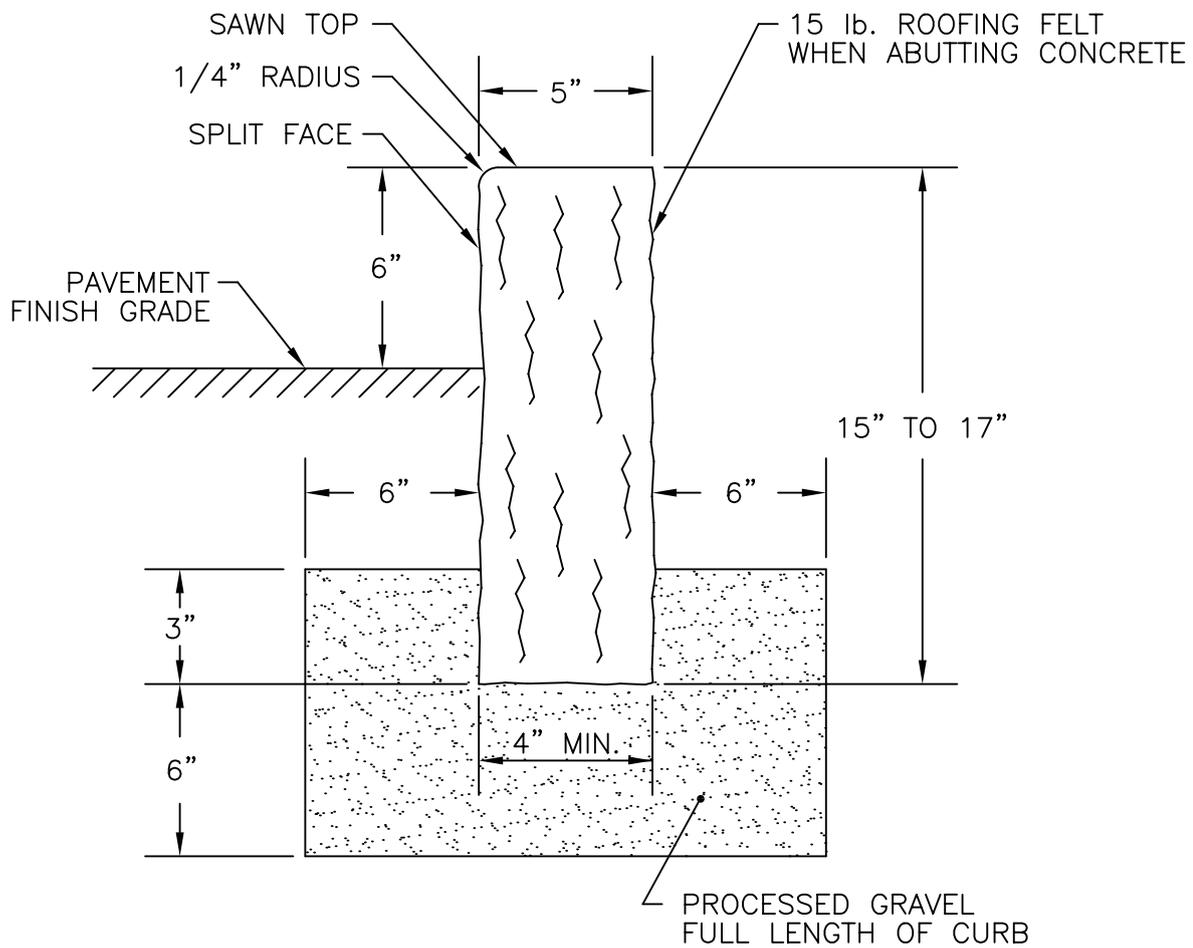


**NOTE:**

1. USE BITUMINOUS CONCRETE CLASS 3 FOR CURBING.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS BITUMINOUS CONCRETE "CAPE COD" CURB	DATE: 11/17/99
DATE	REVISION		DWG NO. RDS-203B



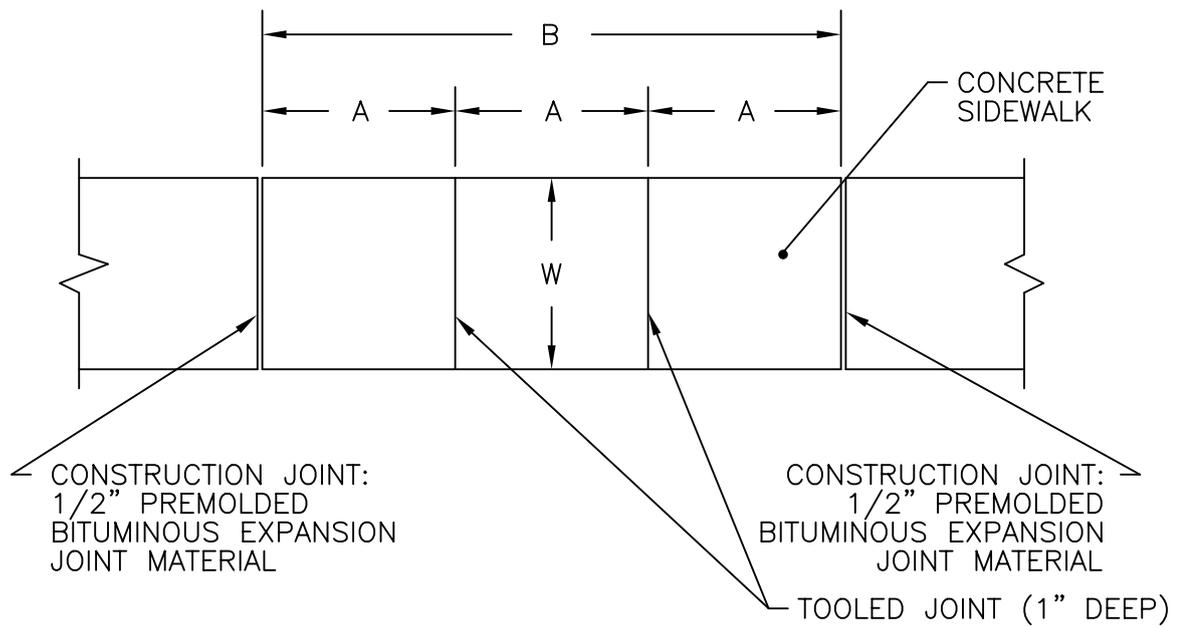
SECTION

NOTES:

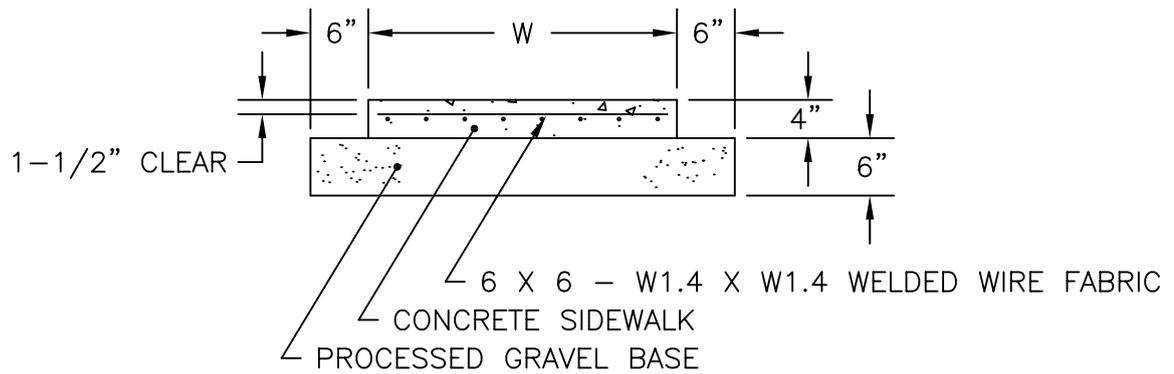
1. MORTAR ALL JOINTS. LEAVE UNMORTARED JOINT EVERY 50'±.
2. MAXIMUM ALLOWABLE BREAK BACK  
     9" FOR CURB LENGTHS OF 6' OR MORE  
     6" FOR CURB LENGTHS OF LESS THAN 6'
3. MINIMUM ACCEPTABLE LENGTH IS 3'.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS GRANITE CURBING	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-204



PLAN

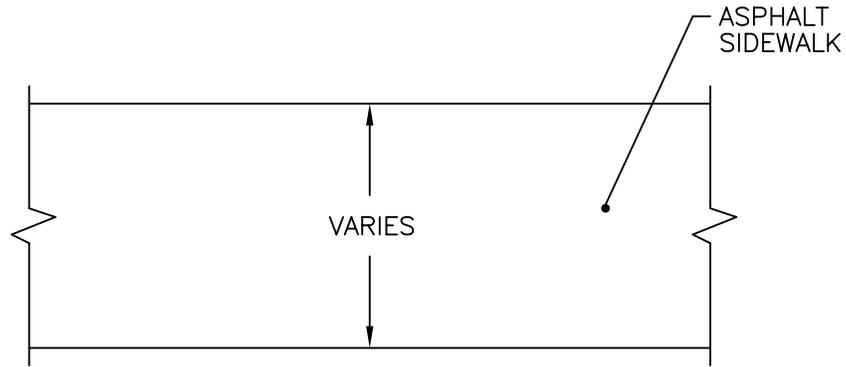


SECTION

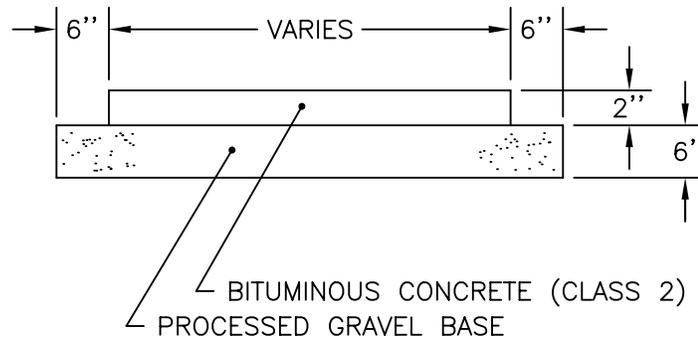
WIDTH W	A	B
4'	4'	12'
5'	5'	15'

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CONCRETE SIDEWALK	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-205



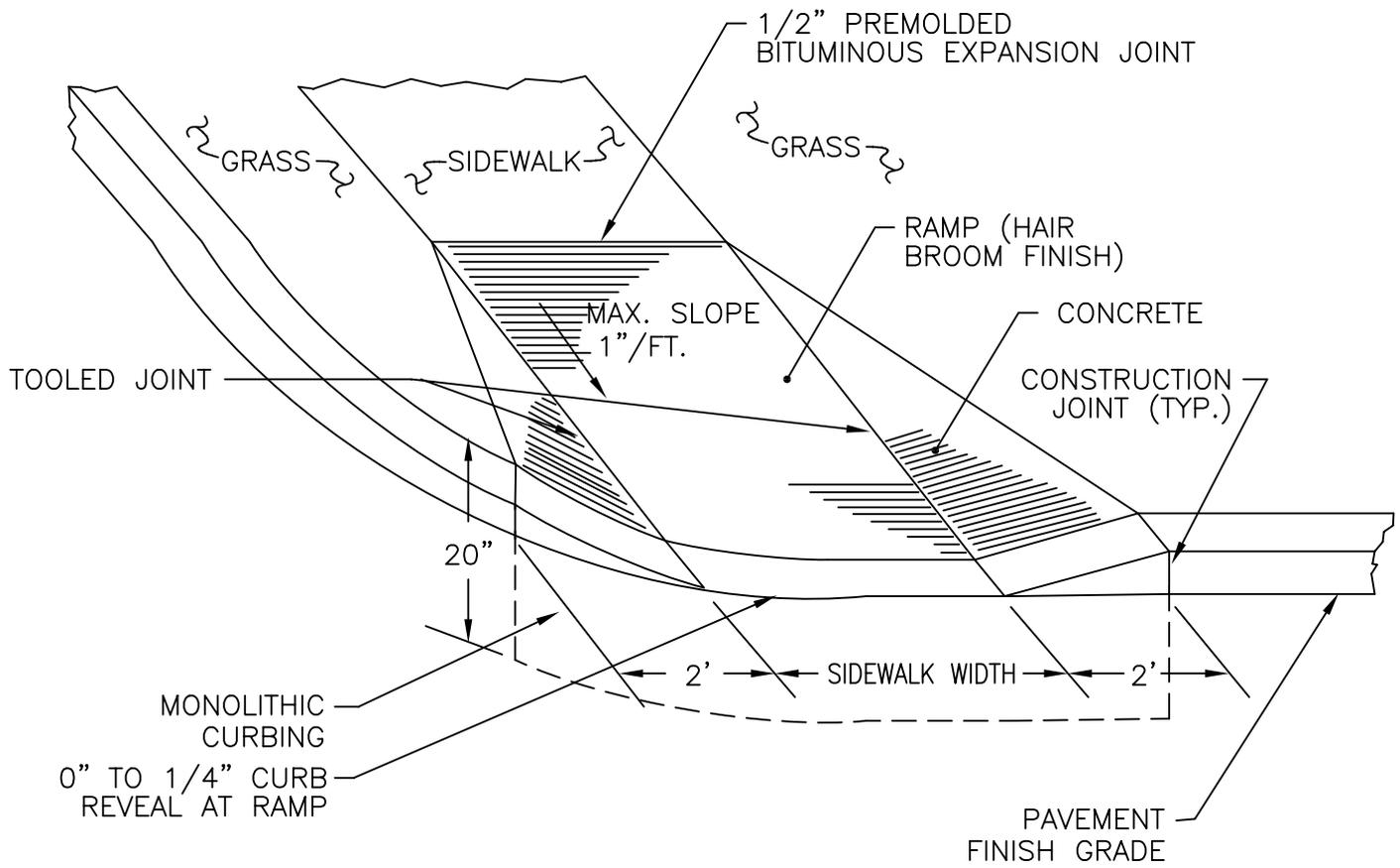
PLAN



SECTION

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i> ROAD & DRAINAGE STANDARDS ASPHALT SIDEWALK	DWN BY: GMJ
			APD BY:
			DATE: 3/22/99
			DWG NO. RDS-206
DATE	REVISION		

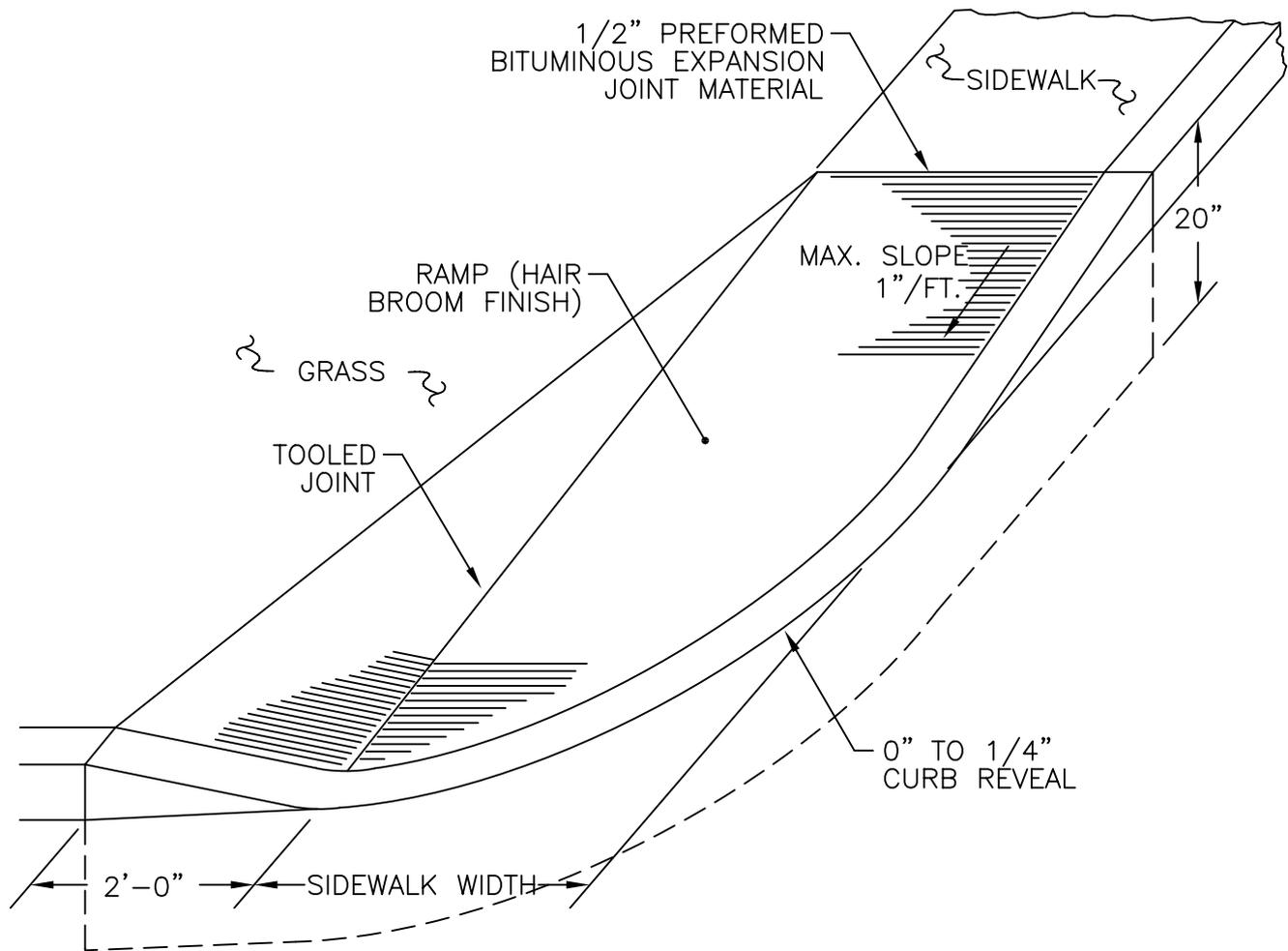


**NOTE:**

1. RAMP SECTION SHALL CONFORM TO DWG. NO. RDS-210.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS TYPE I HANDICAP RAMP	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-207A

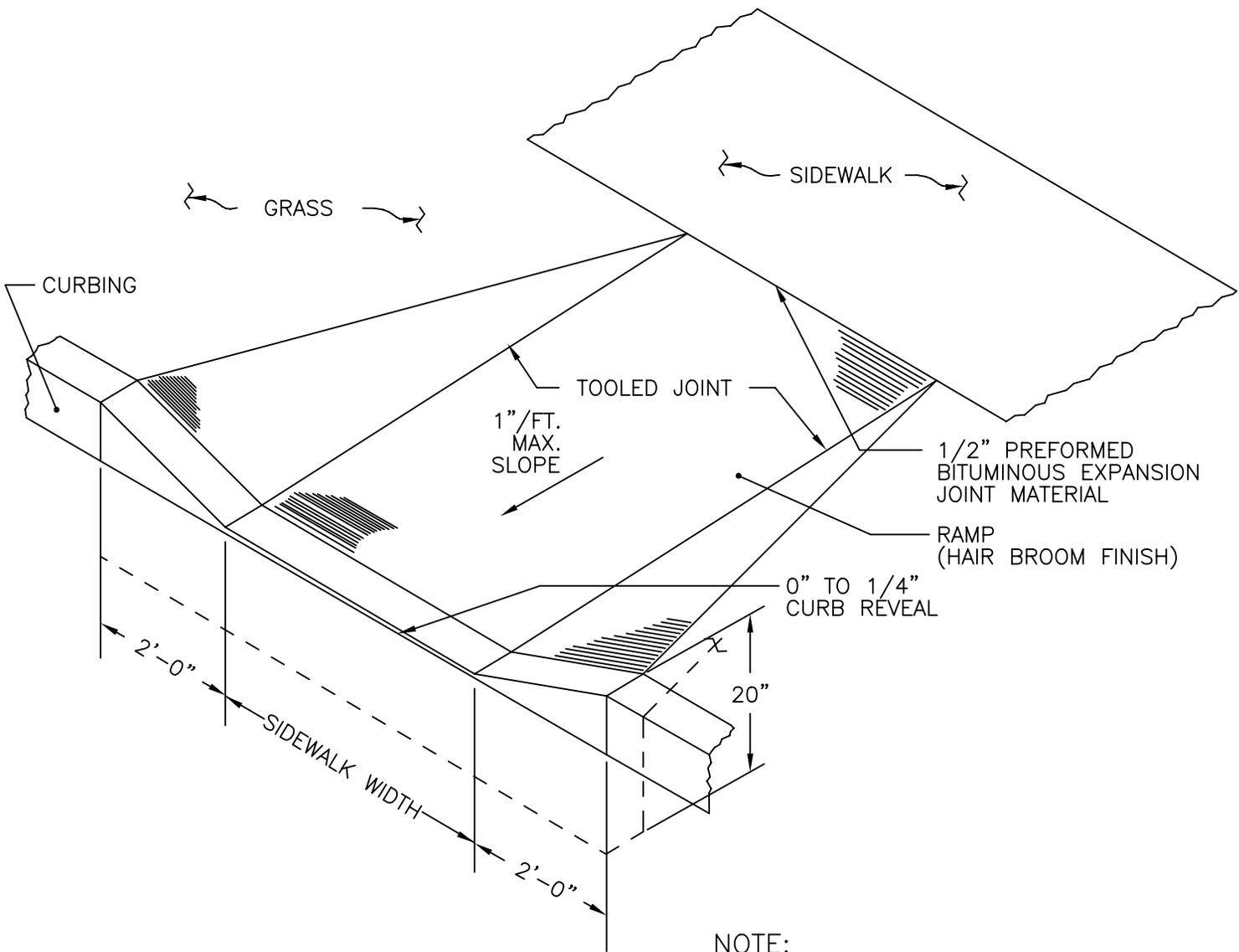


**NOTE:**

1. RAMP SECTION SHALL CONFORM TO DWG. NO. RDS-210 & DWG. NO. RDS-213.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS TYPE IA HANDICAP RAMP	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-207B



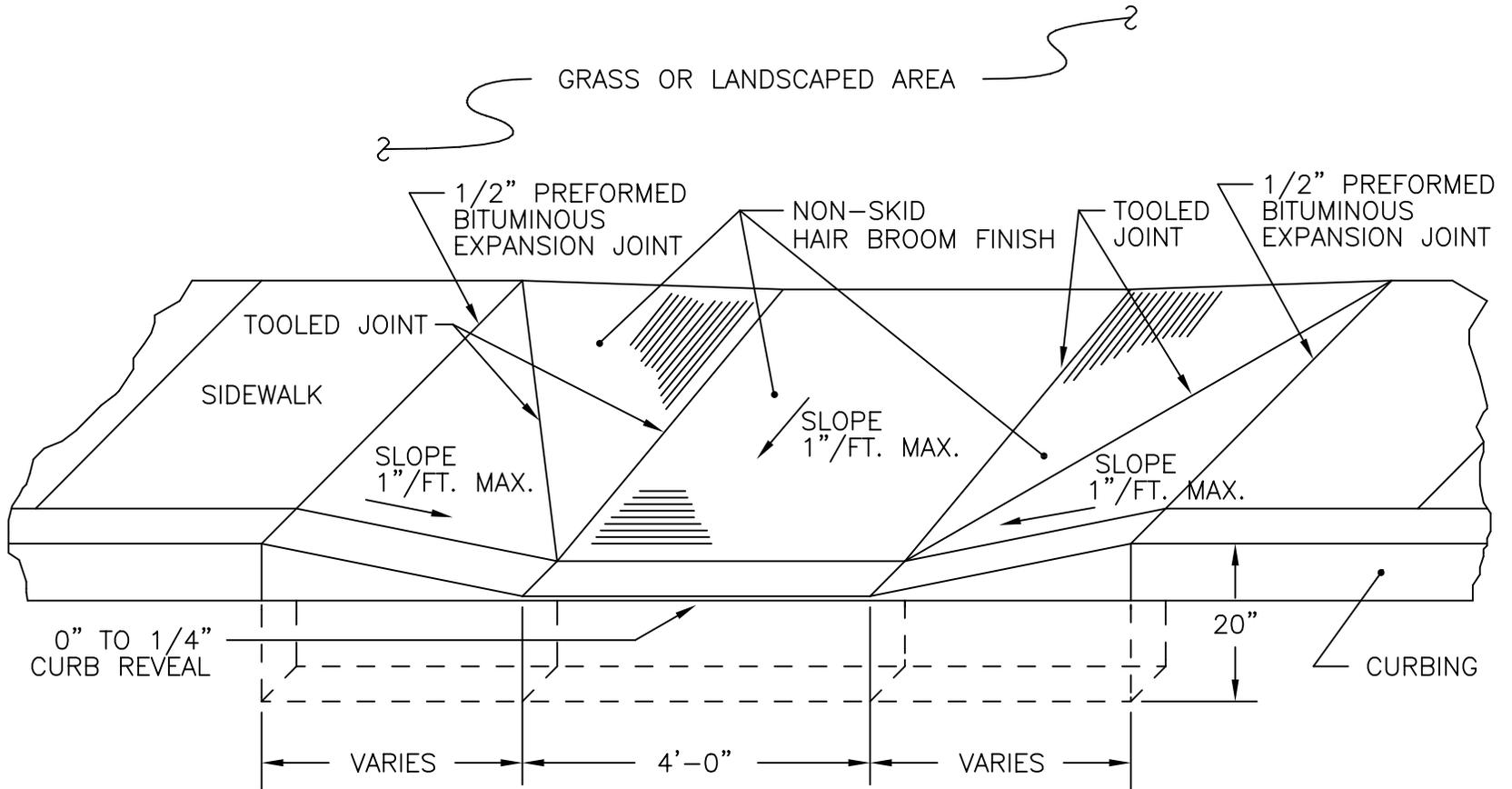
**NOTE:**  
 1. RAMP SECTION SHALL CONFORM TO  
 DWG. NO. RDS-210.

NOT TO SCALE

		<i>Town of Groton Department of Public Works</i>		DWN BY: GMJ	
		ROAD & DRAINAGE STANDARDS		APD BY:	
		TYPE II HANDICAP RAMP		DATE: 3/22/99	
DATE	REVISION			DWG NO. RDS-208	

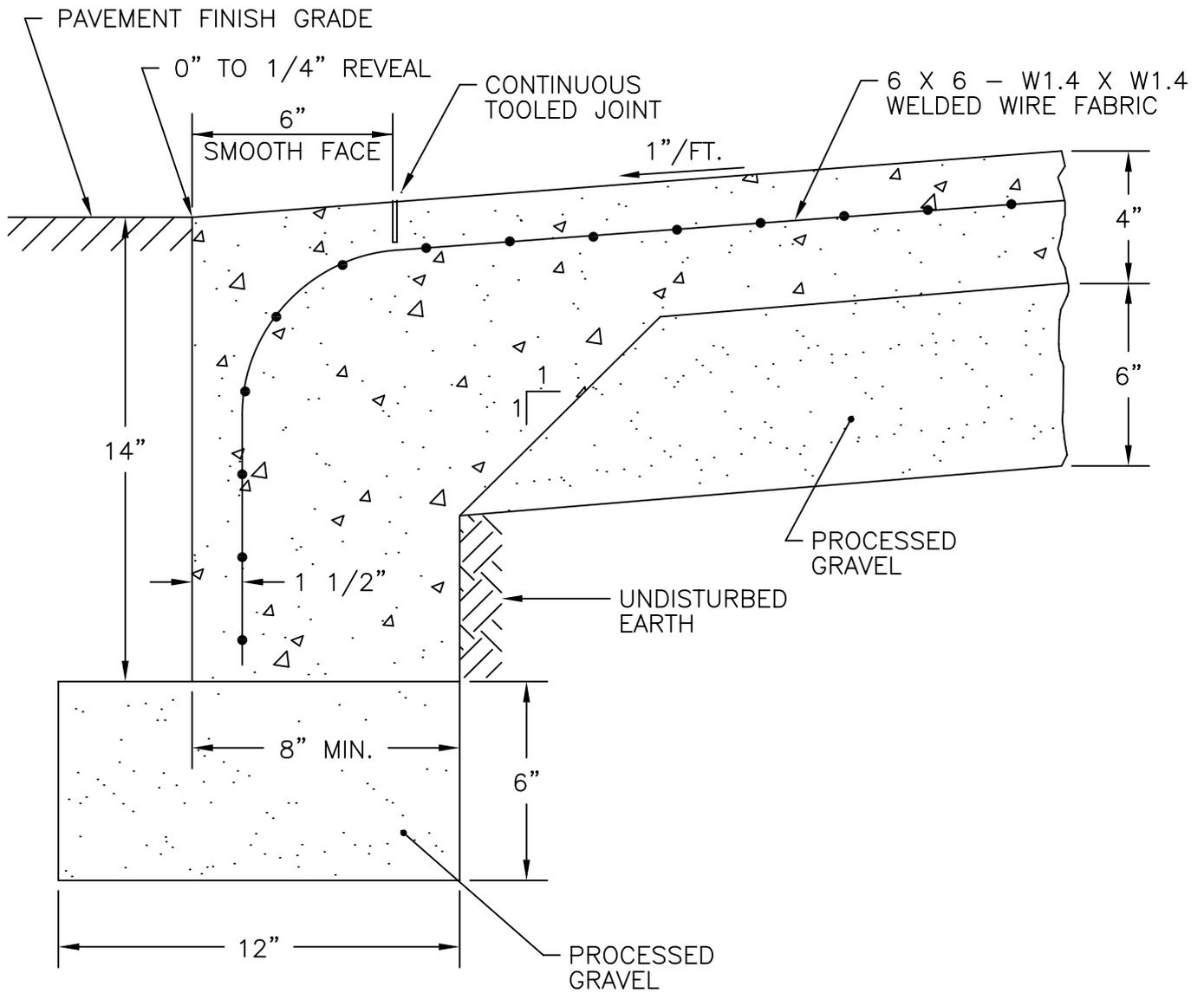
DATE				
REVISION				
ROAD & DRAINAGE STANDARDS		<i>Town of Groton</i>		
TYPE III HANDICAP RAMP		<i>Department of Public Works</i>		
DWG NO.	RDS-209	DWN BY:	GMJ	
DATE:	3/22/99	APD BY:		

NOT TO SCALE



NOTE:

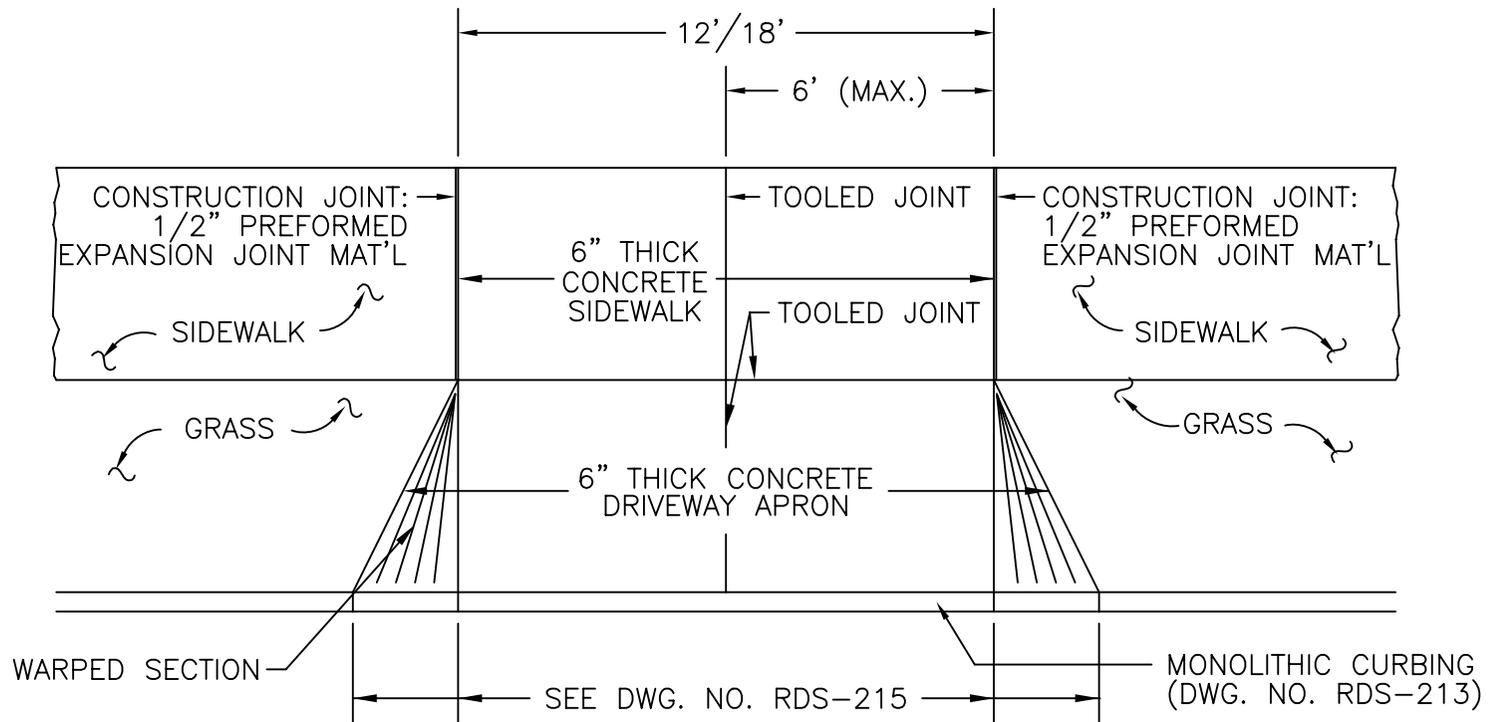
1. RAMP SECTION SHALL CONFORM TO DWG. NOS. RDS-210 & RDS-213.



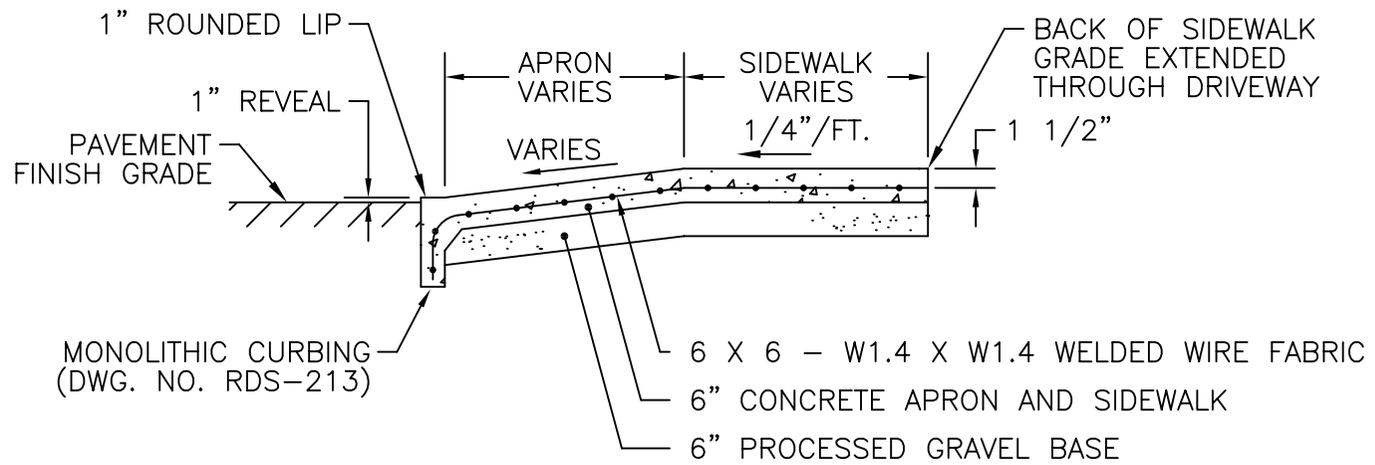
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS HANDICAP RAMP & CURB	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-210

DATE				
REVISION				
CONCRETE DRIVEWAY APRON		<i>Town of Groton</i> <i>Department of Public Works</i>		
ROAD & DRAINAGE STANDARDS		DWN BY: GMJ		
APD BY:		APD BY:		
DATE: 3/22/99		DATE: 3/22/99		
DWG NO. RDS-211		DWG NO. RDS-211		

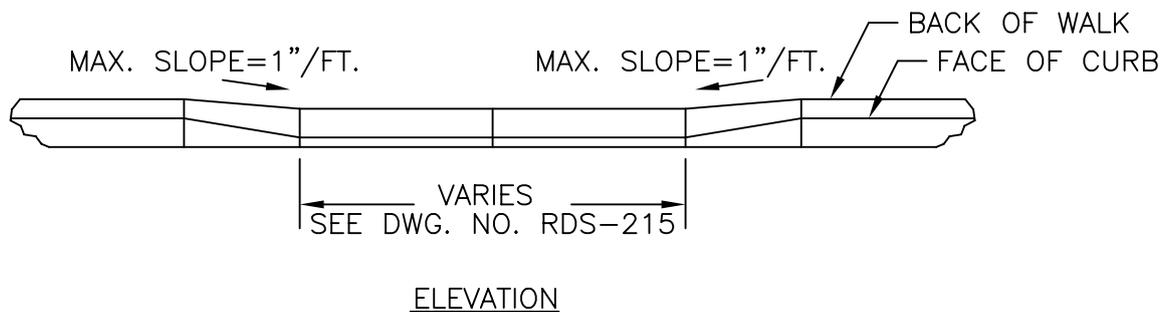
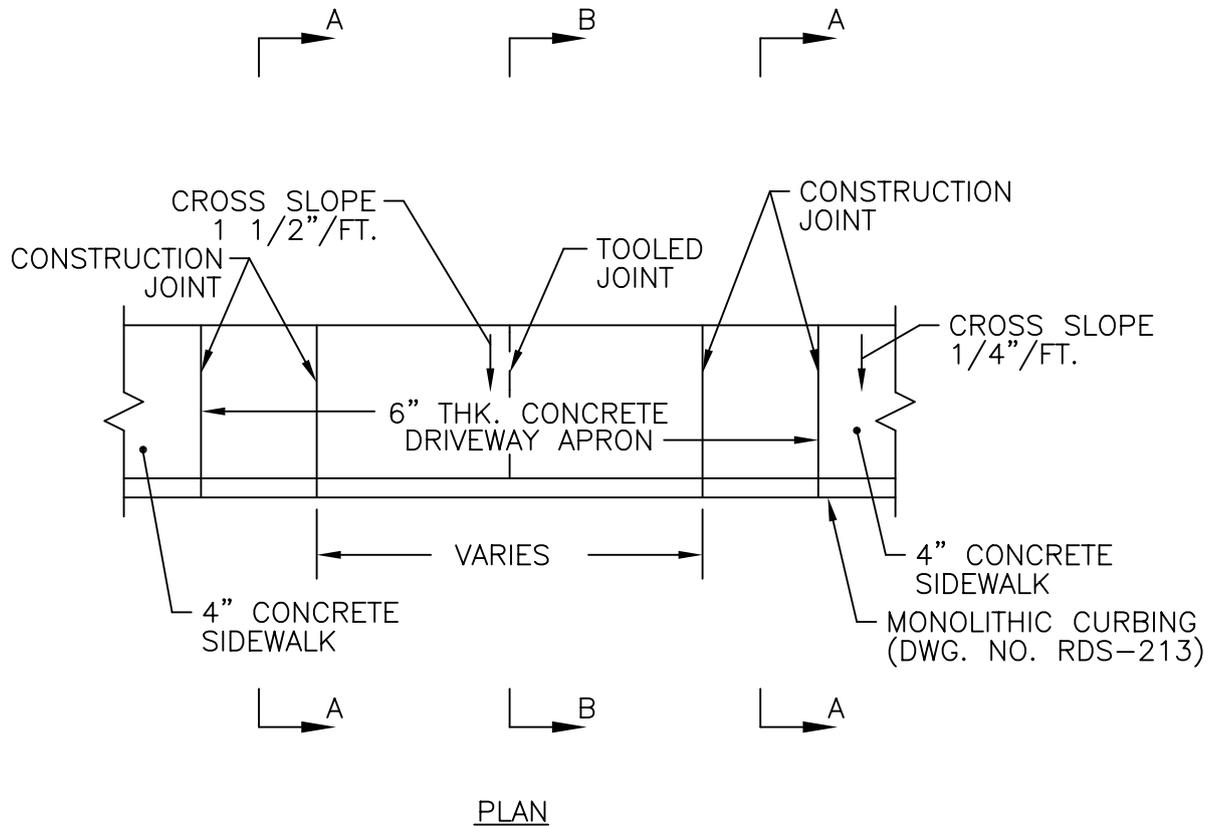


PLAN



SECTION

NOT TO SCALE

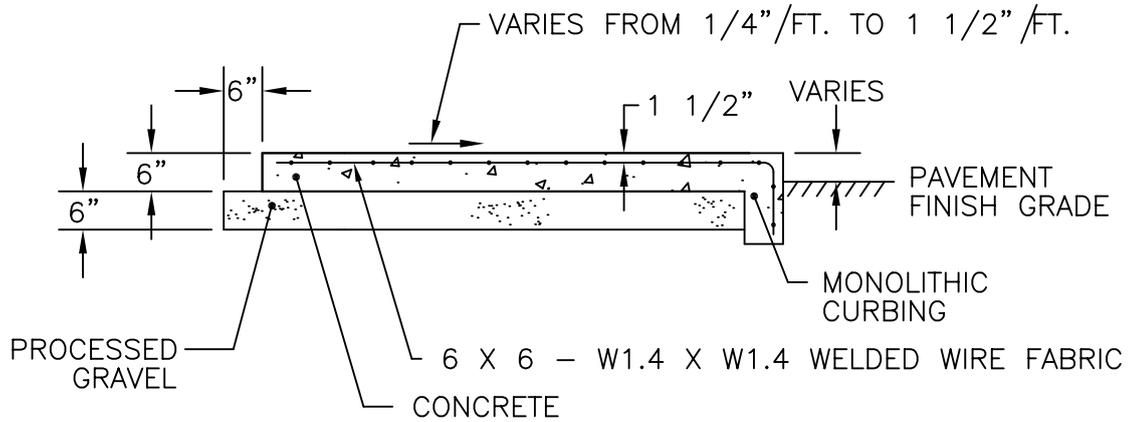


**NOTES:**

1. SEE DWG. RDS-212B FOR SECTIONS.
2. TO BE USED ONLY WHERE RIGHT-OF-WAY WIDTH PROHIBITS INSTALLATION OF DRIVEWAY APRON AS PER DWG. RDS-211.

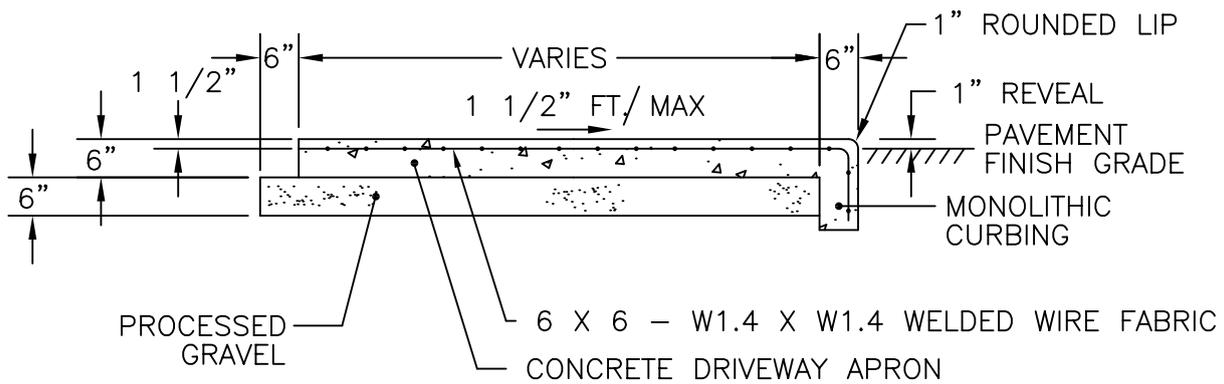
NOT TO SCALE

		<i>Town of Groton</i>	DWN BY: GMJ
		<i>Department of Public Works</i>	APD BY:
		ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
		CONCRETE DRIVEWAY APRON	DWG NO. RDS-212A
DATE	REVISION	ADJACENT SIDEWALK	



\*TOOLED JOINTS IN DRIVEWAY APRON TO BE PLACED WHERE DIRECTED WITH 6' MAXIMUM SPACING.

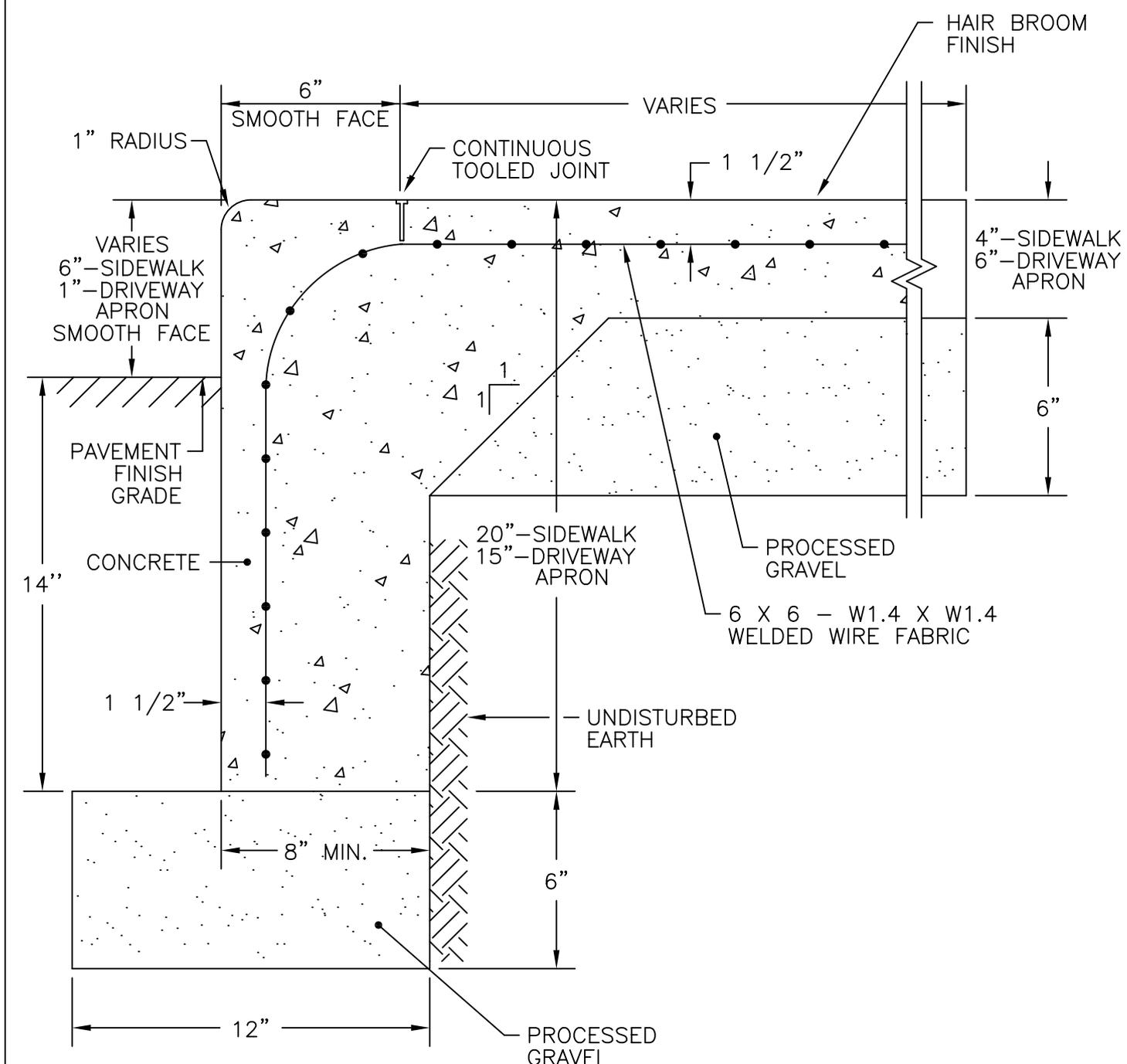
SECTION A-A



SECTION B-B

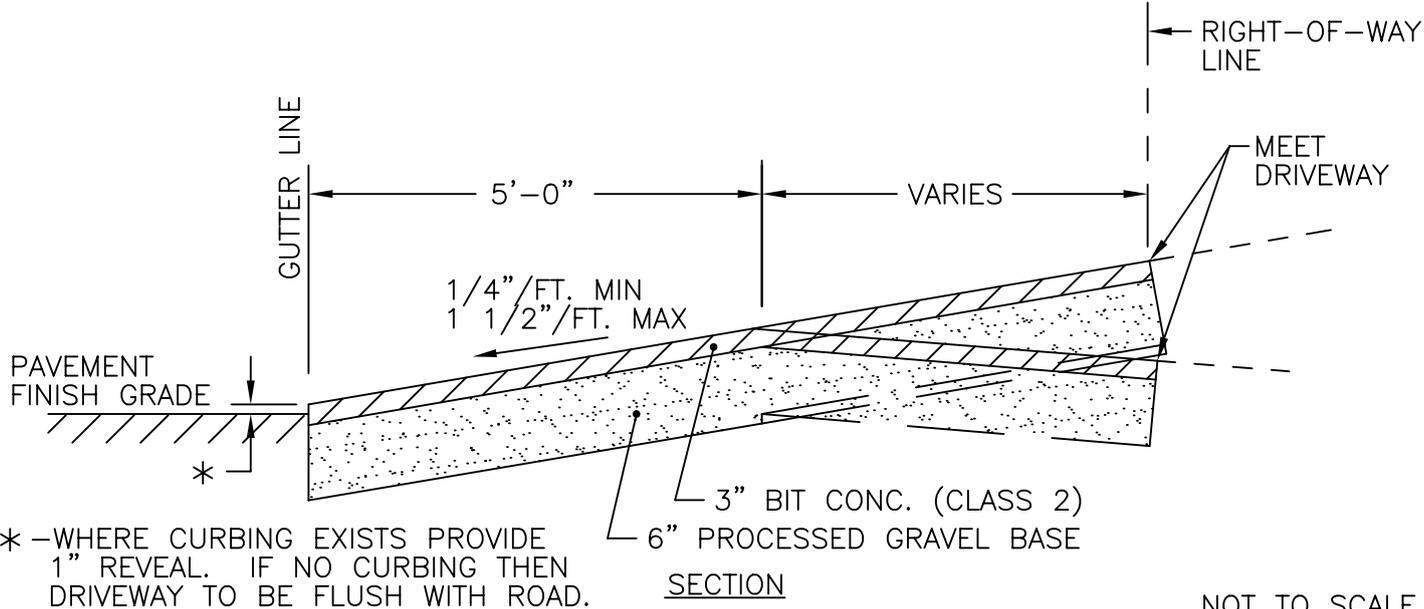
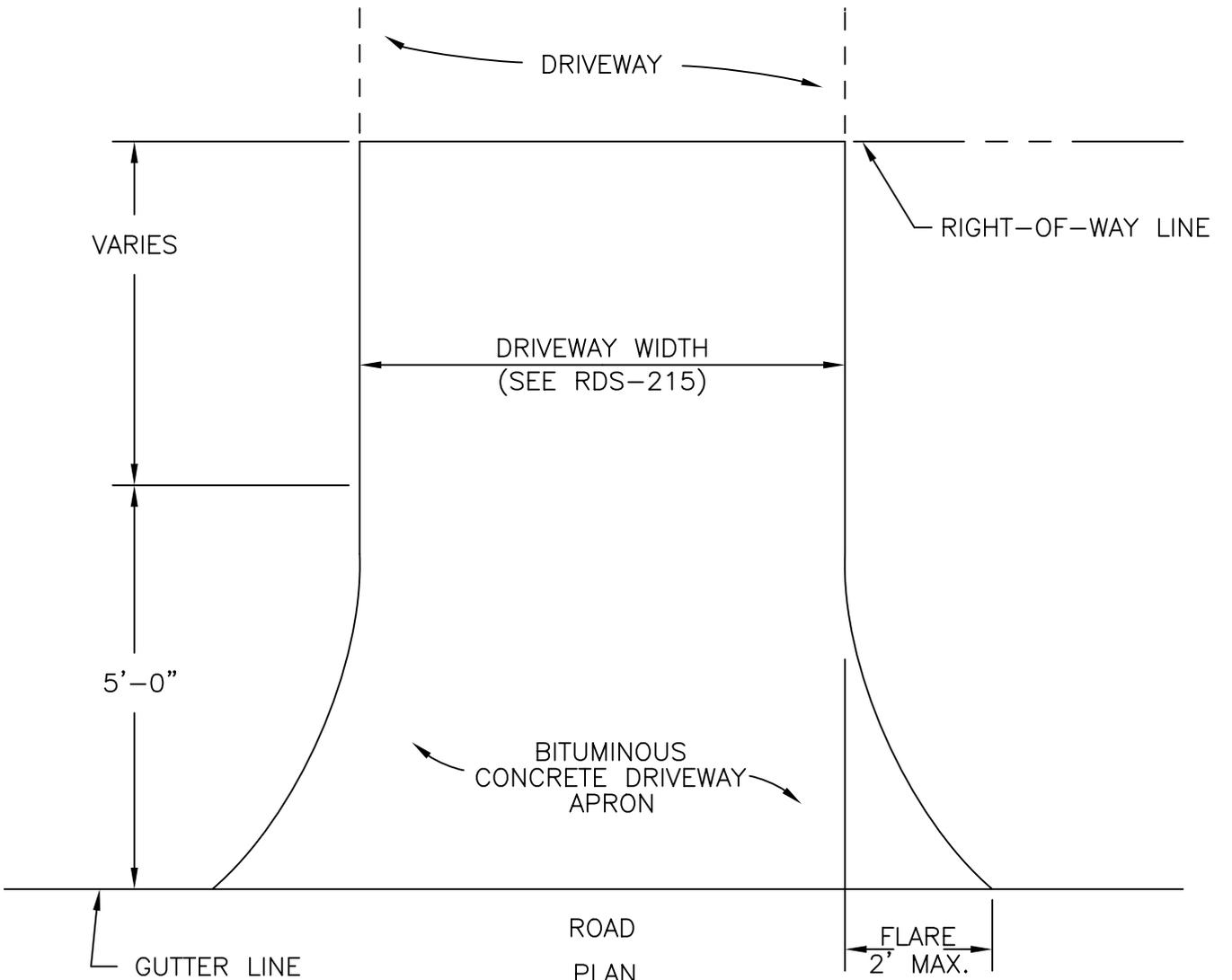
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CONCRETE DRIVEWAY APRON ADJACENT SIDEWALK	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-212B



NOT TO SCALE

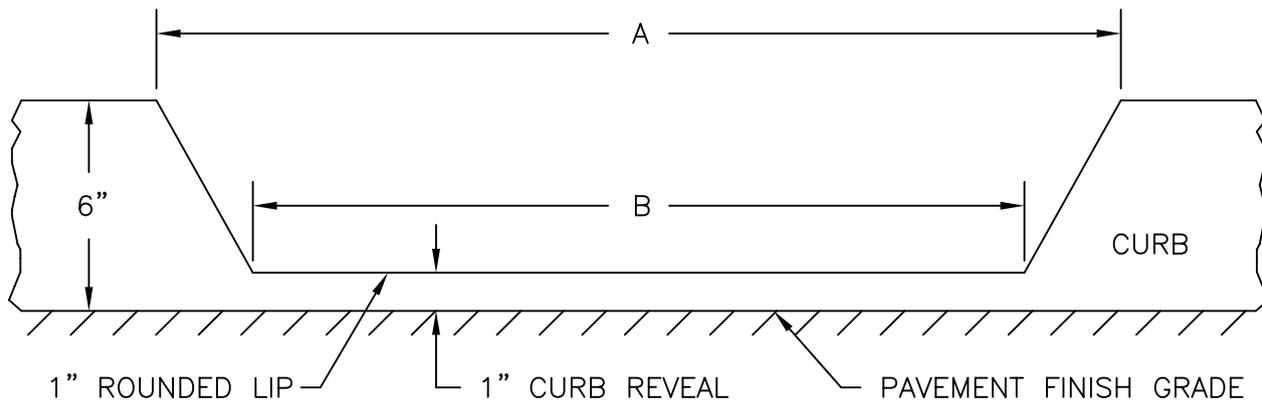
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MONOLITHIC CURB AND SIDEWALK/DRIVEWAY APRON	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-213



\* -WHERE CURBING EXISTS PROVIDE 1" REVEAL. IF NO CURBING THEN DRIVEWAY TO BE FLUSH WITH ROAD.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
DATE	REVISION	BIT. CONC. DRIVEWAY APRON	DWG NO. RDS-214



SINGLE DRIVEWAY

A = 16'  
B = 12'

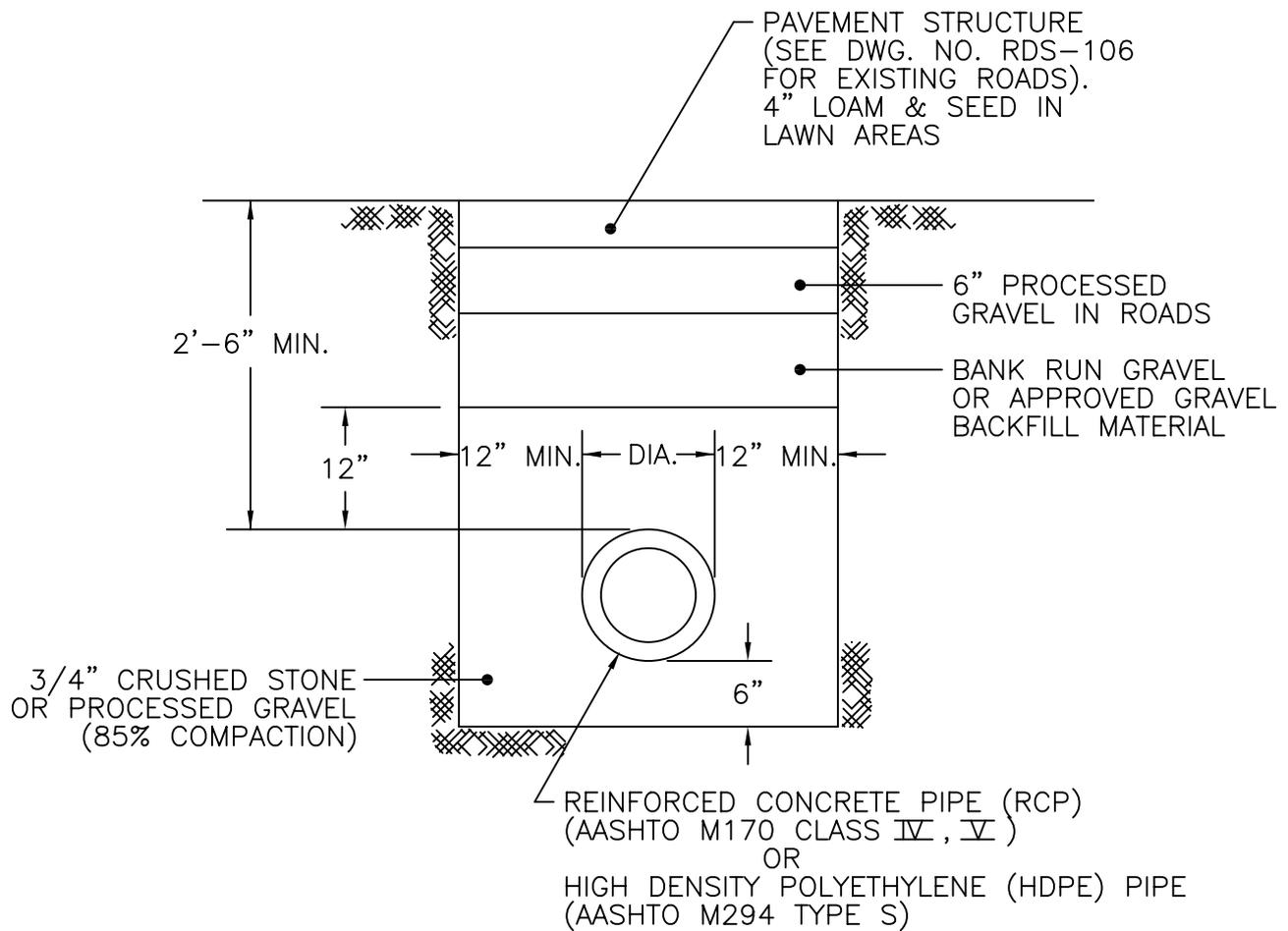
DOUBLE DRIVEWAY

A = 22'  
B = 18'

NOTE: DIMENSION "A" DOES NOT APPLY WHEN DRIVEWAY APRON IS IN A SIDEWALK ADJACENT TO CURB. SEE DWG. RDS-212A.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS DRIVEWAY CUTS	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-215

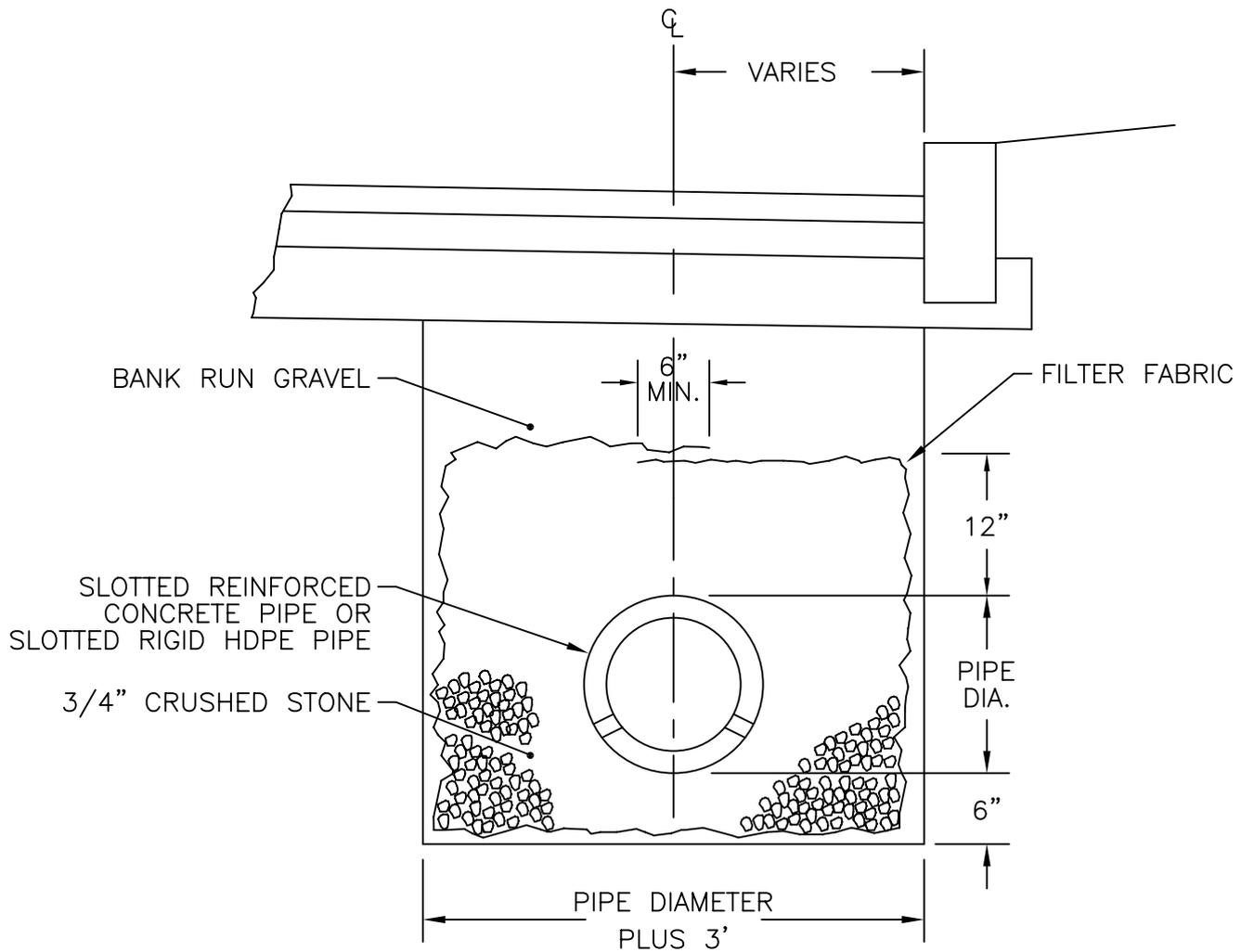


NOTE:

1. IF PIPE IS PLACED IN OR ON LEDGE, ALL LEDGE WITHIN 12" OF PIPE SHALL BE REMOVED AND REPLACED WITH PIPE BEDDING.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS DRAINAGE PIPE TRENCH	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-301

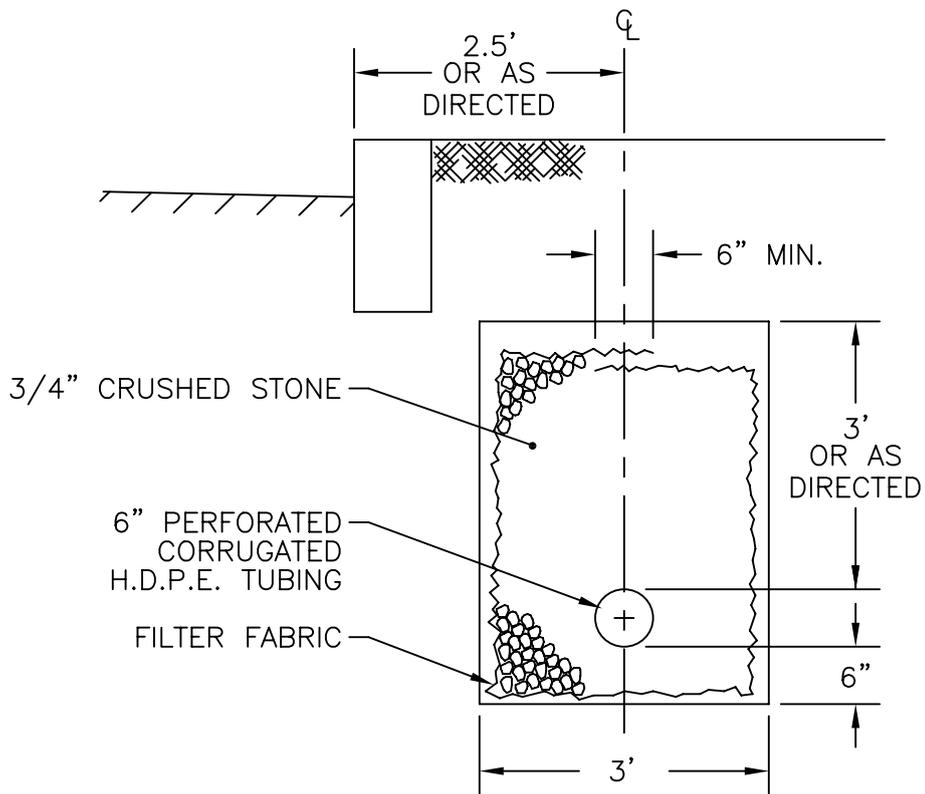


**NOTE:**

1. SLOTS SHALL BE PLACED DOWN.
2. FILTER FABRIC SHALL BE MIRAFI 140NS, EXXON 150EX, AMOCO 4545, TREVIRA 1114 OR APPROVED EQUAL.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS SLOTTED UNDERDRAIN	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-302

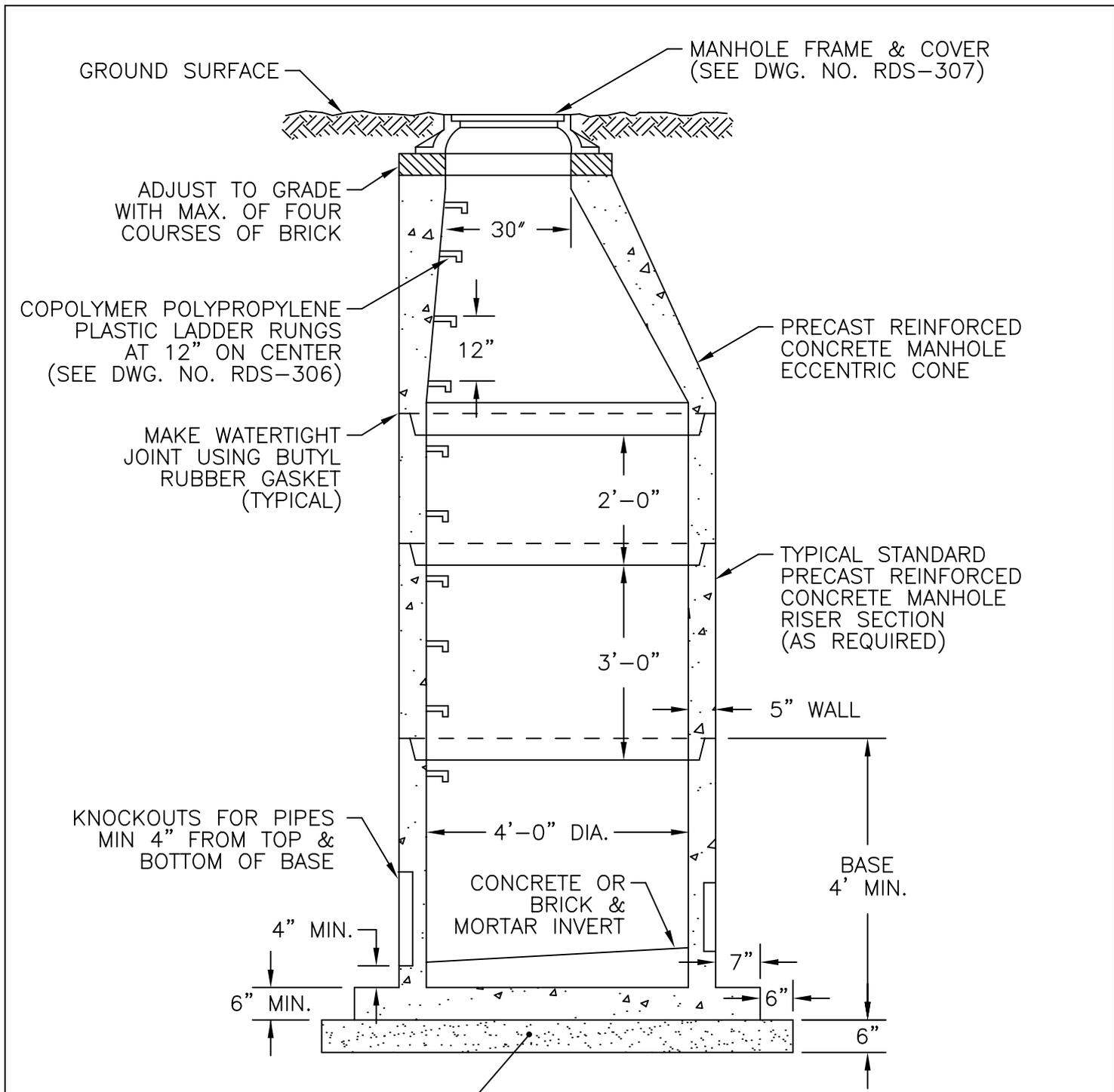


**NOTES:**

1. PERFORATIONS SHALL BE PLACED DOWN.
2. PIPE SHALL NOT BE PLACED WITHIN 36" OF ANY UTILITY POLE.
3. FILTER FABRIC SHALL BE MIRAFI 140NS, EXXON 150EX, AMOCO 4545, TREVIRA 1114 OR APPROVED EQUAL.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS UNDERDRAIN WITH 6" PIPE	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-303



GROUND SURFACE

MANHOLE FRAME & COVER  
(SEE DWG. NO. RDS-307)

ADJUST TO GRADE  
WITH MAX. OF FOUR  
COURSES OF BRICK

COPOLYMER POLYPROPYLENE  
PLASTIC LADDER RUNGS  
AT 12" ON CENTER  
(SEE DWG. NO. RDS-306)

PRECAST REINFORCED  
CONCRETE MANHOLE  
ECCENTRIC CONE

MAKE WATERTIGHT  
JOINT USING BUTYL  
RUBBER GASKET  
(TYPICAL)

TYPICAL STANDARD  
PRECAST REINFORCED  
CONCRETE MANHOLE  
RISER SECTION  
(AS REQUIRED)

KNOCKOUTS FOR PIPES  
MIN 4" FROM TOP &  
BOTTOM OF BASE

CONCRETE OR  
BRICK &  
MORTAR INVERT

BASE  
4' MIN.

3/4" CRUSHED STONE

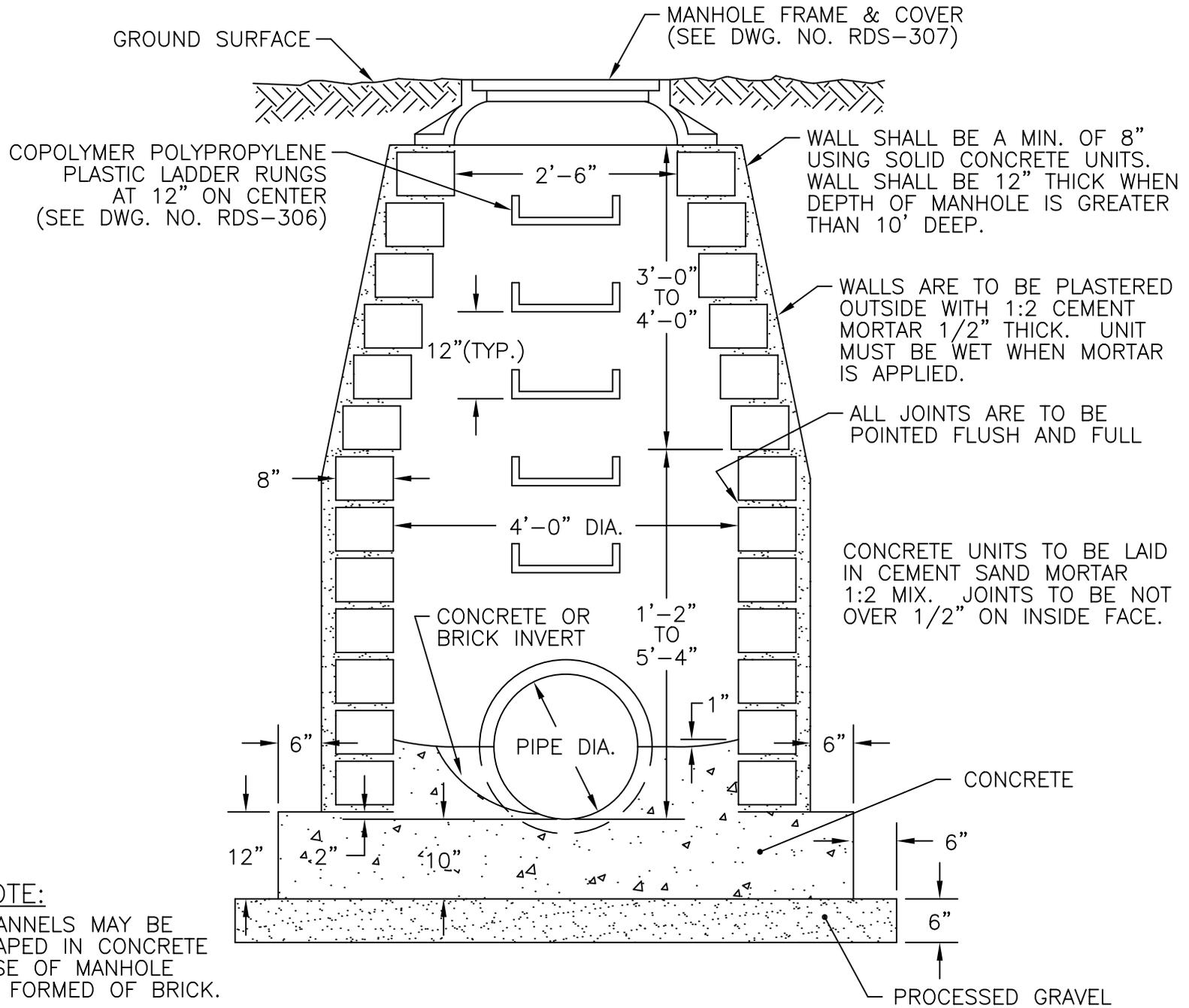
**NOTE:** 5' OR 6' DIA. PRECAST BASES MAY BE  
USED WHEN REQUIRED DUE TO SIZE OR  
NUMBER OF PIPES AT THE MANHOLE.  
PRECAST REDUCERS WILL BE PLACED  
ABOVE THE 5' AND 6' BASES AS  
DIRECTED BY THE ENGINEER. WALL  
THICKNESS TO INCREASE 1" FOR EACH  
1' OF INSIDE DIAMETER INCREASE.

NOT TO SCALE

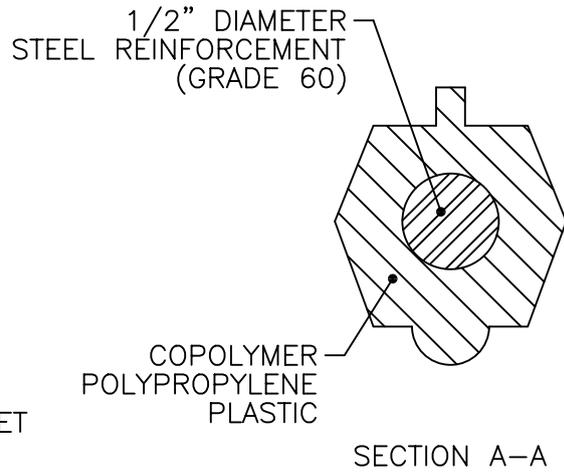
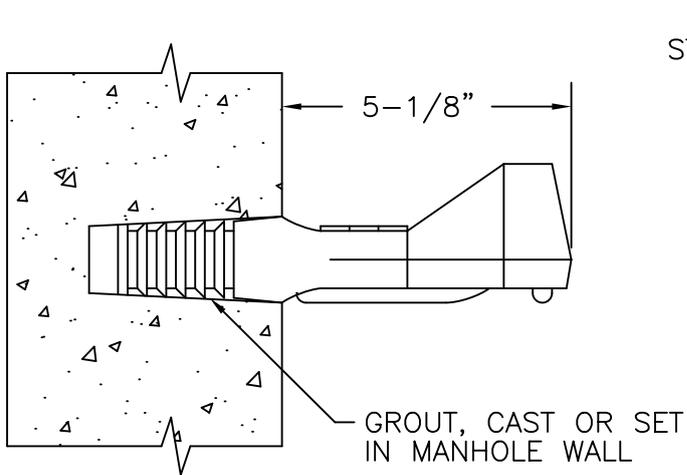
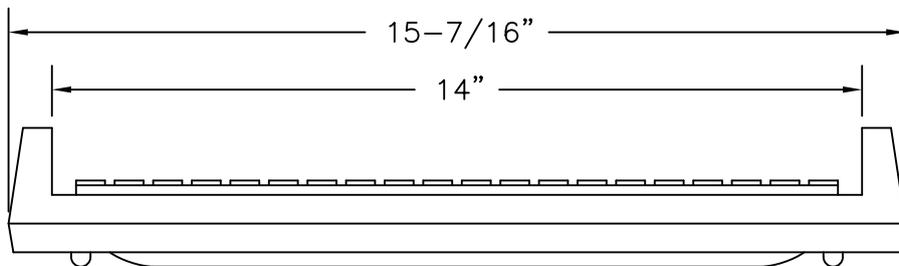
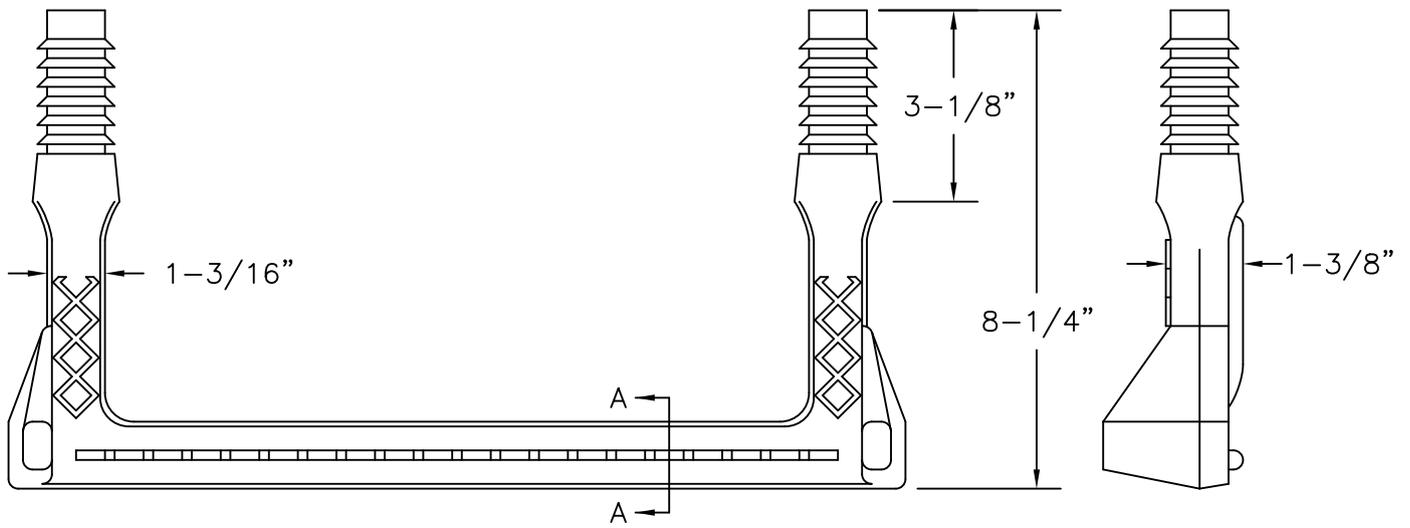
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS PRECAST CONCRETE DRAINAGE MANHOLE	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-304

DATE			
REVISION			
	<i>Town of Groton Department of Public Works</i>		
	ROAD & DRAINAGE STANDARDS MASONRY UNIT DRAINAGE MANHOLE		
	DWN BY: GMJ	APD BY:	
	DATE: 3/22/99		
	DWG NO. RDS-305		

NOT TO SCALE

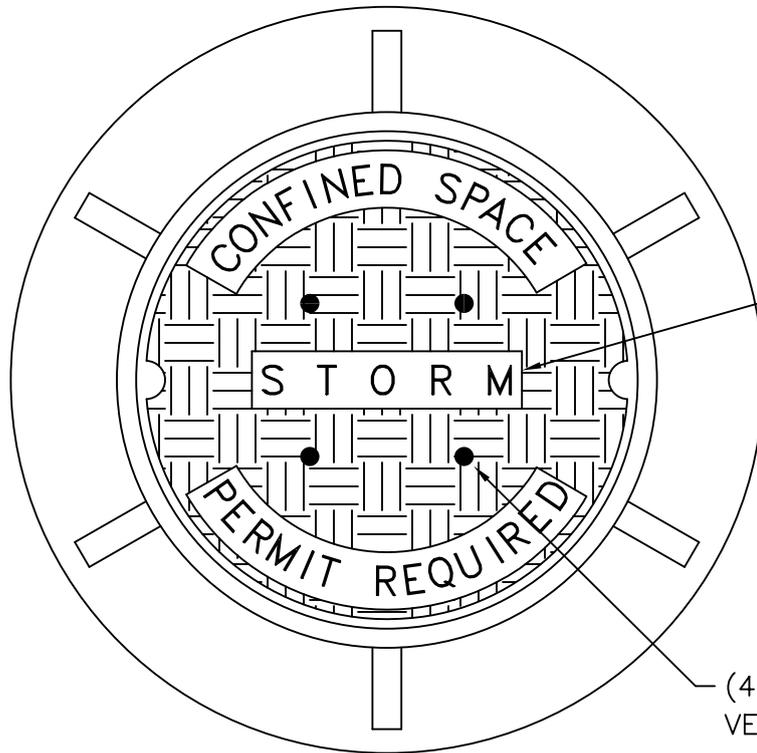


**NOTE:**  
CHANNELS MAY BE SHAPED IN CONCRETE BASE OF MANHOLE OR FORMED OF BRICK.



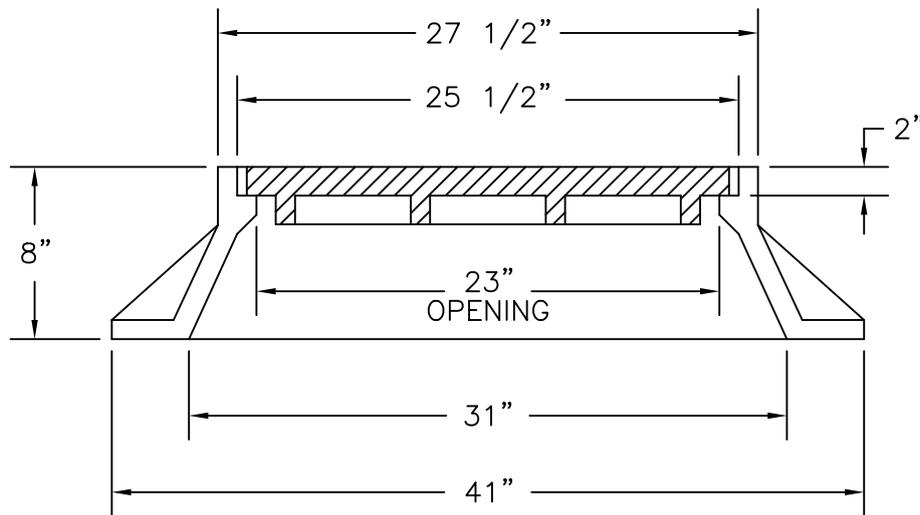
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MANHOLE STEP	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-306



"STORM" &  
"CONFINED SPACE  
PERMIT REQUIRED"  
CAST IN COVER

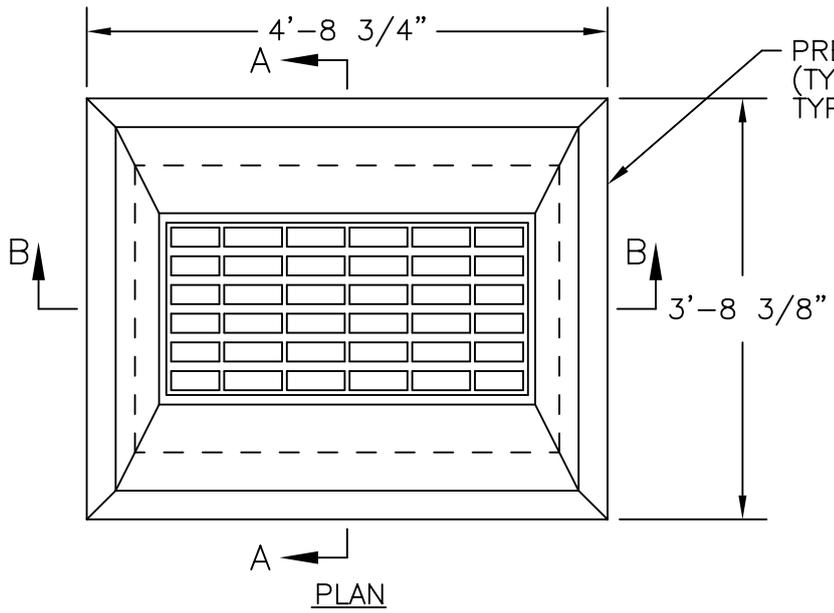
(4)-3/4" / 1" DIA.  
VENT HOLES



FRAME AND COVER SHALL BE:  
LeBARON FOUNDRY CATALOG NO. LK 310  
MINIMUM WEIGHT OF FRAME AND COVER = 500 LBS.

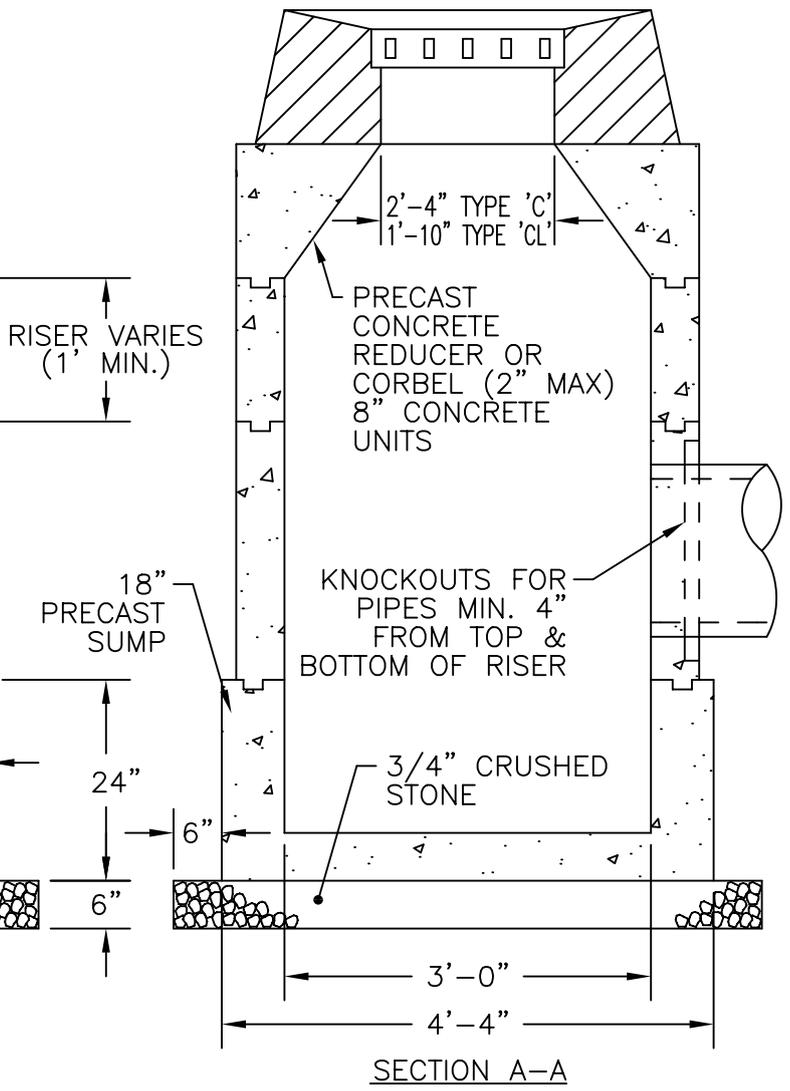
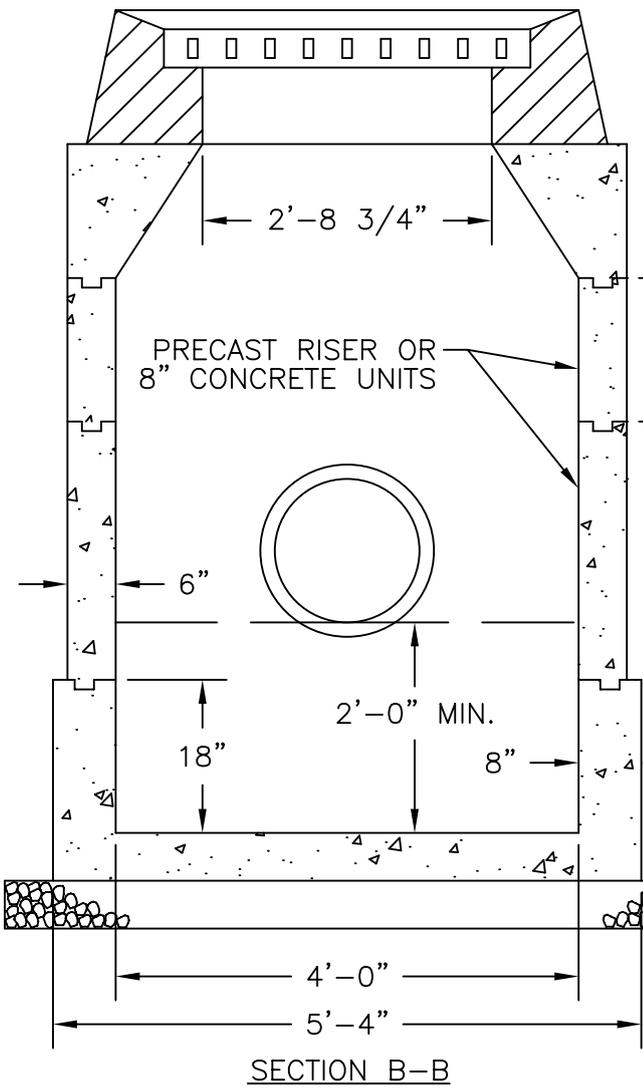
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS	DATE: 4/20/01
DATE	REVISION	MANHOLE FRAME & COVER	DWG NO. RDS-307



**NOTES:**

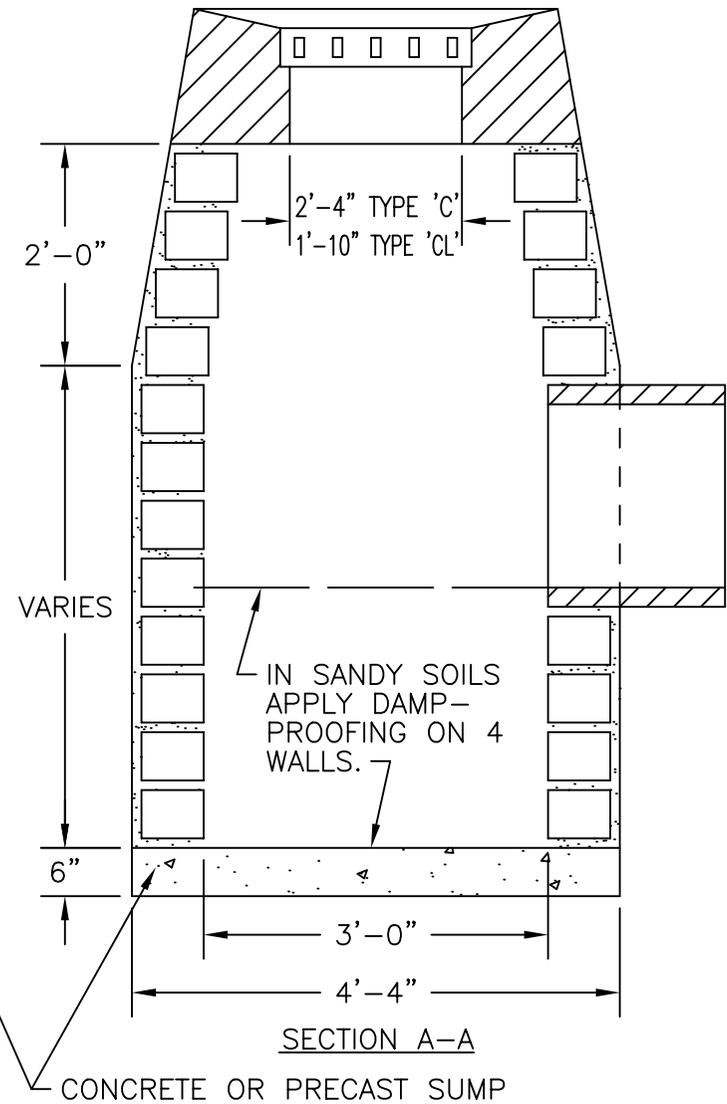
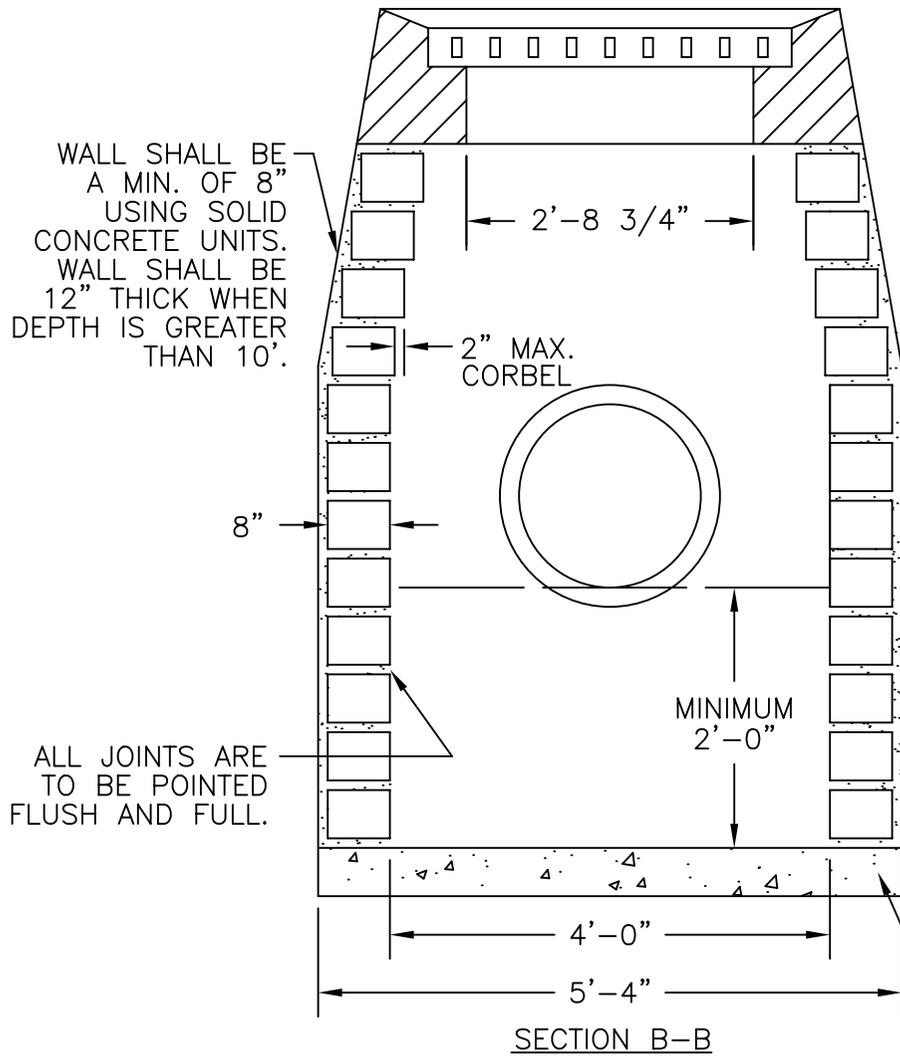
1. IN PRECAST RISER SECTIONS, THE KNOCKOUTS OR OPENINGS AROUND THE PIPES SHALL BE MORTARED TO 6".
2. PRECAST REDUCER SHALL BE SPECIFICALLY SIZED & PLACED FOR THE TYPE OF TOP USED.
3. PLACE ALL PRECAST UNITS, TOPS AND CONCRETE BLOCKS IN A CEMENT MORTAR BED.
4. PRECAST UNITS SHALL BE REINFORCED WITH WELDED WIRE FABRIC.



NOT TO SCALE

		Town of Groton Department of Public Works	DWN BY: GMJ
			ROAD & DRAINAGE STANDARDS
		PRECAST CATCH BASIN	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-308

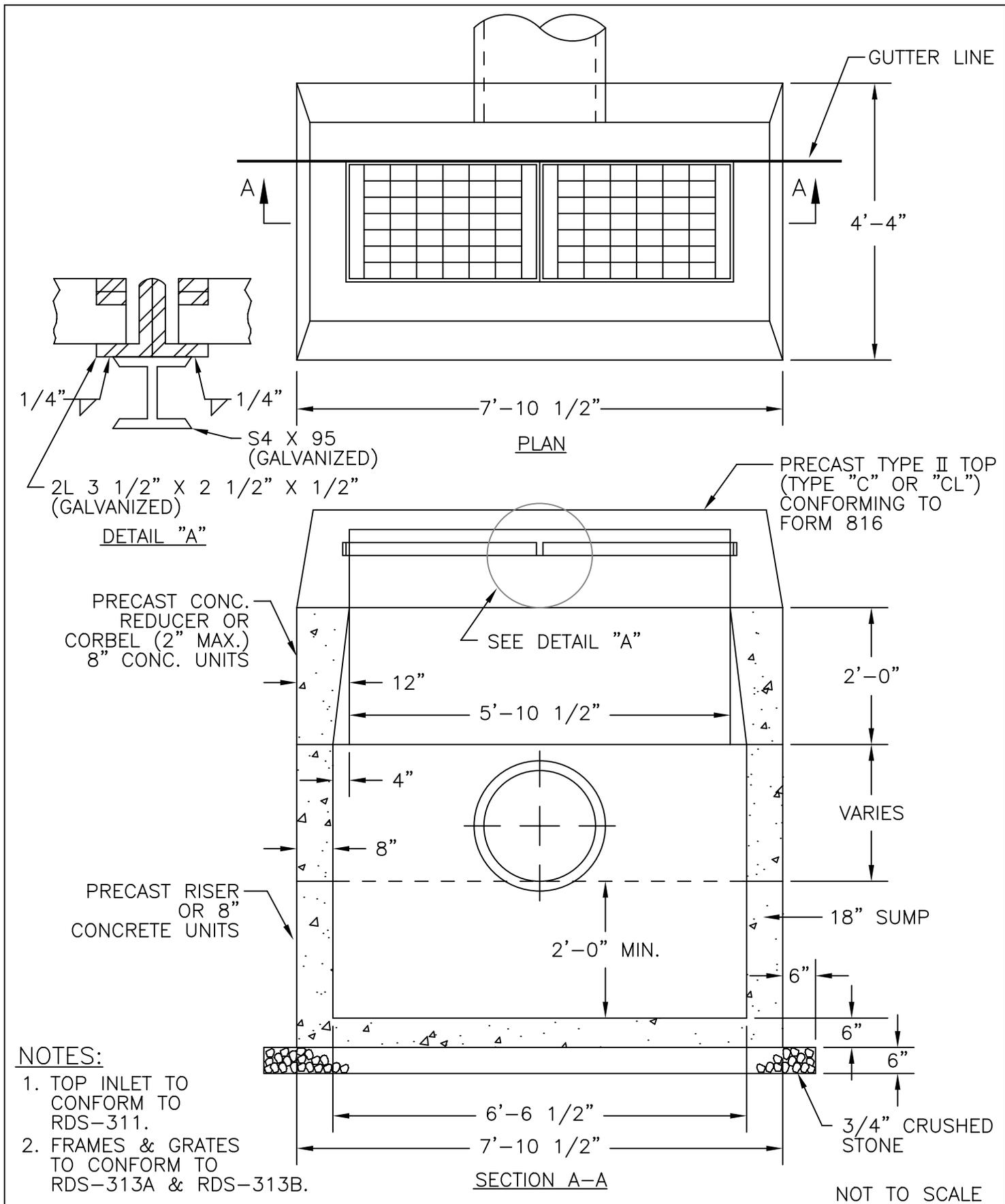
DATE			
REVISION			
MASONRY UNIT CATCH BASIN	Town of Groton Department of Public Works		
	ROAD & DRAINAGE STANDARDS		
DWG NO. RDS-309	DATE: 3/22/99	APD BY:	DWN BY: GMJ



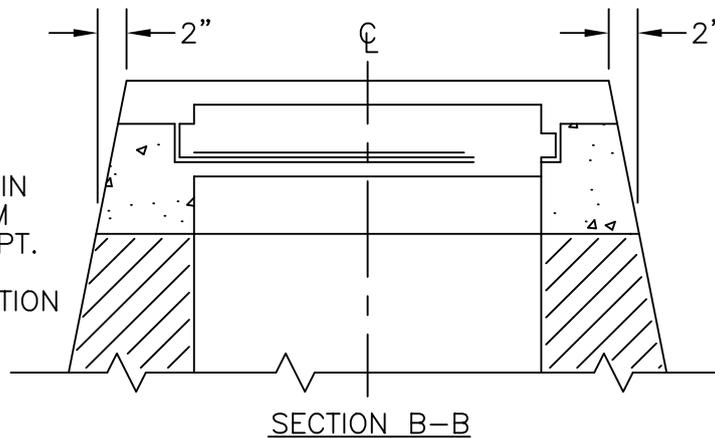
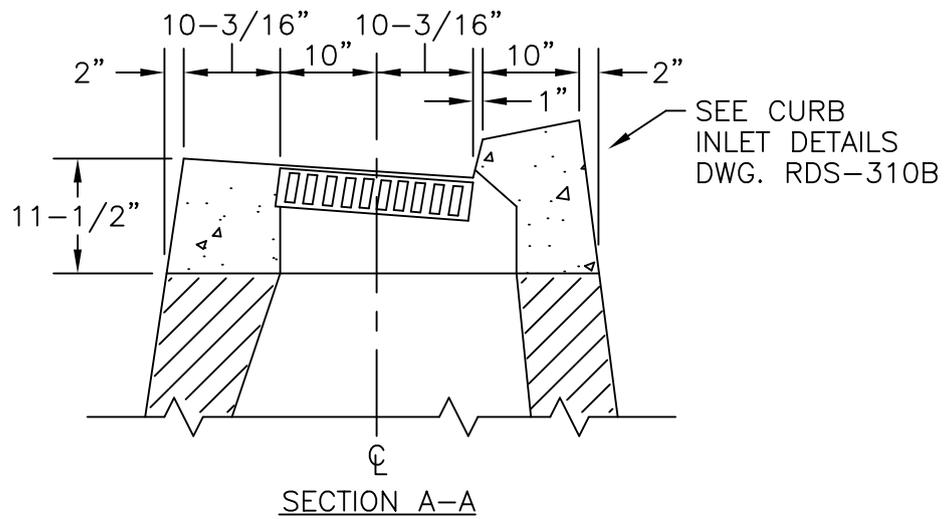
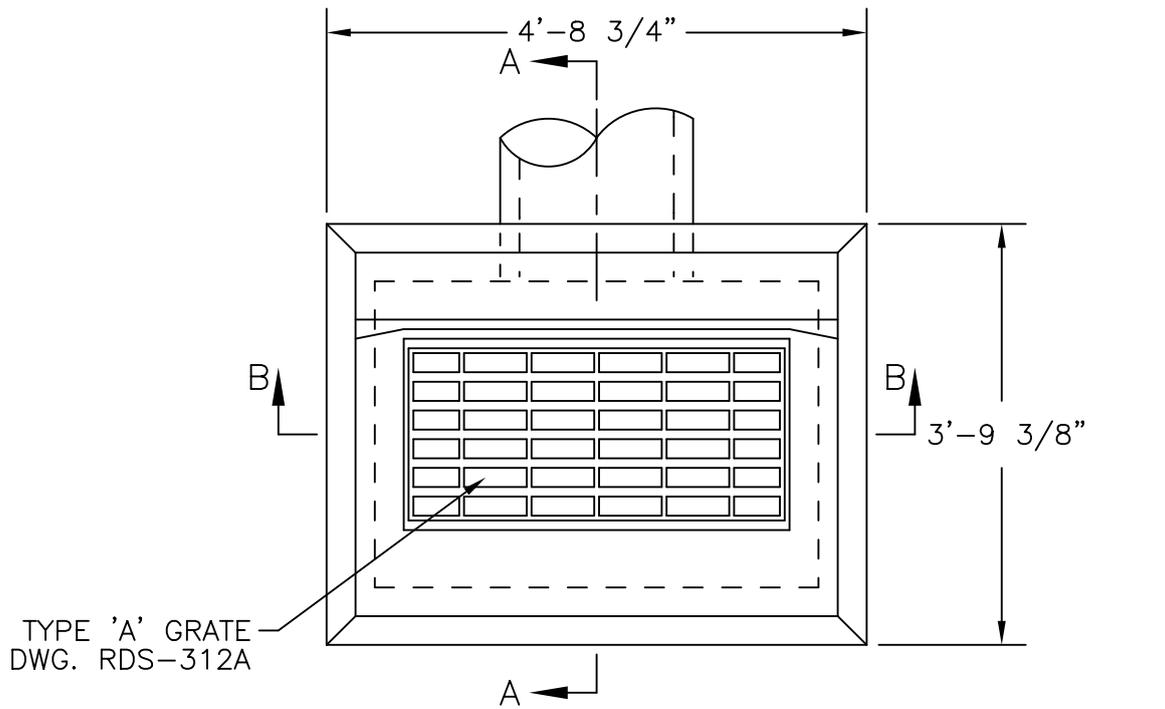
**NOTES:**

1. WHERE PRECAST CONCRETE UNIT IS USED FOR SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN.
2. CONCRETE UNITS TO BE LAID IN CEMENT SAND MORTAR 1:2 MIX. JOINTS NOT TO BE OVER 1/2" ON INSIDE FACE.
3. WALLS ARE TO BE PLASTERED OUTSIDE WITH 1:2 CEMENT MORTAR 1/2" THICK. UNITS MUST BE WET WHEN MORTAR IS APPLIED.

NOT TO SCALE



		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS DOUBLE CATCH BASIN	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-310

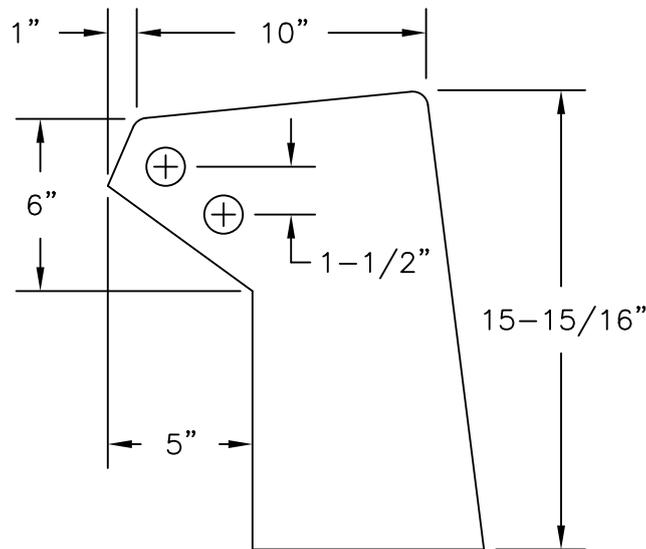


**NOTE:**

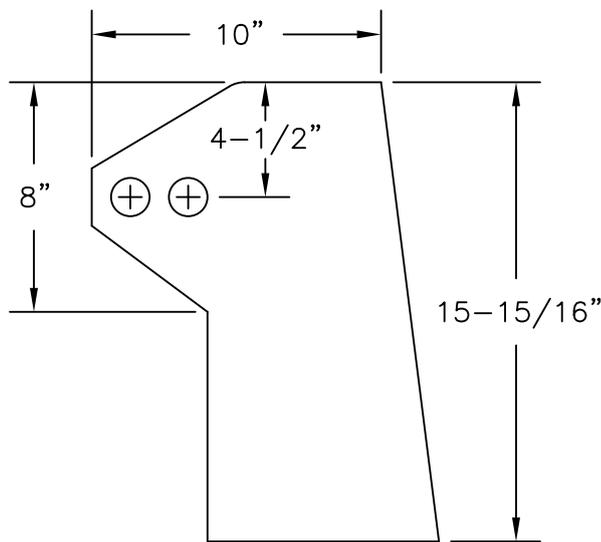
1. TYPE 'C' CATCH BASIN TOP SHALL CONFORM TO CONNECTICUT DEPT. OF TRANSPORTATION STANDARD SPECIFICATION FORM 816 SECTION: M.08.02-4.

NOT TO SCALE

		<i>Town of Groton Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
DATE	REVISION	TYPE 'C' CATCH BASIN TOP	DWG NO. RDS-311A



FOR USE WITH CONCRETE AND GRANITE CURBING



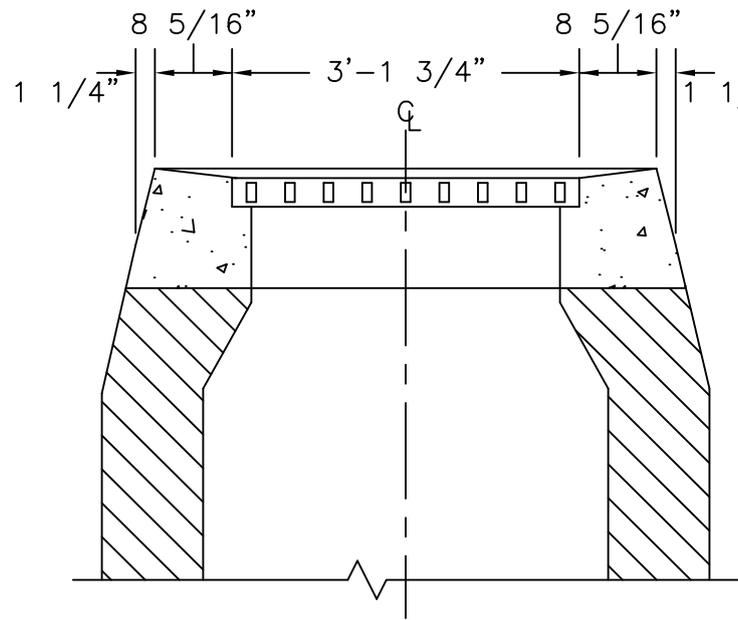
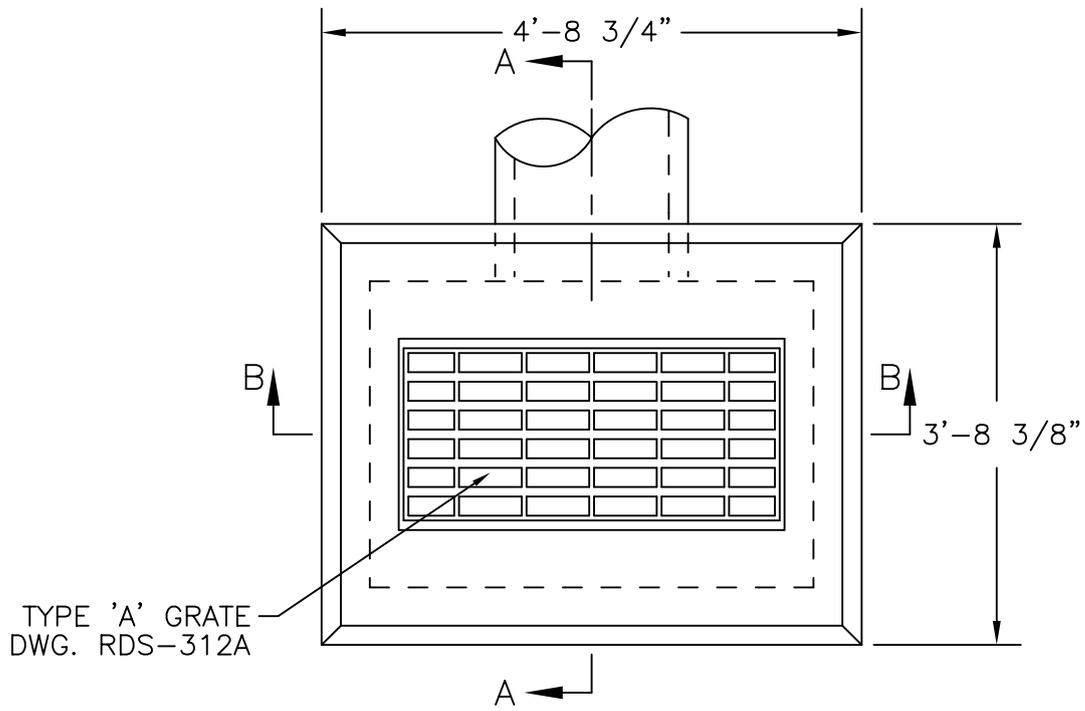
FOR USE WITH BITUMINOUS CURBING

**NOTE:**

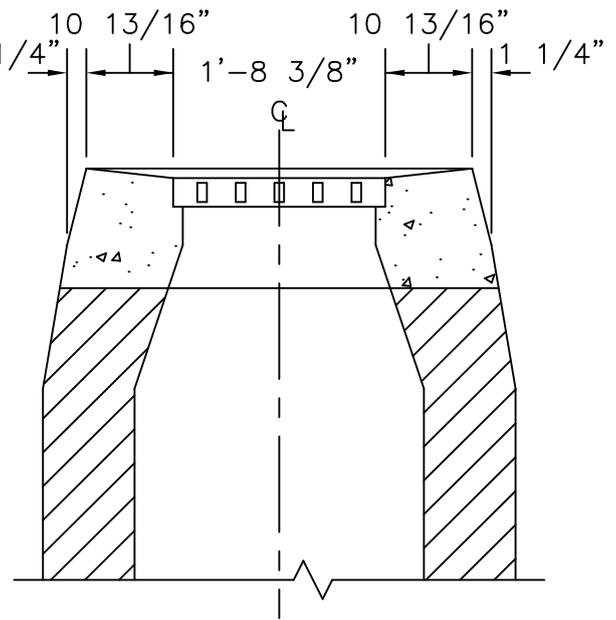
1. CURB INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONNECTICUT D.O.T. STANDARDS.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CURB INLETS	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-311B



SECTION B-B



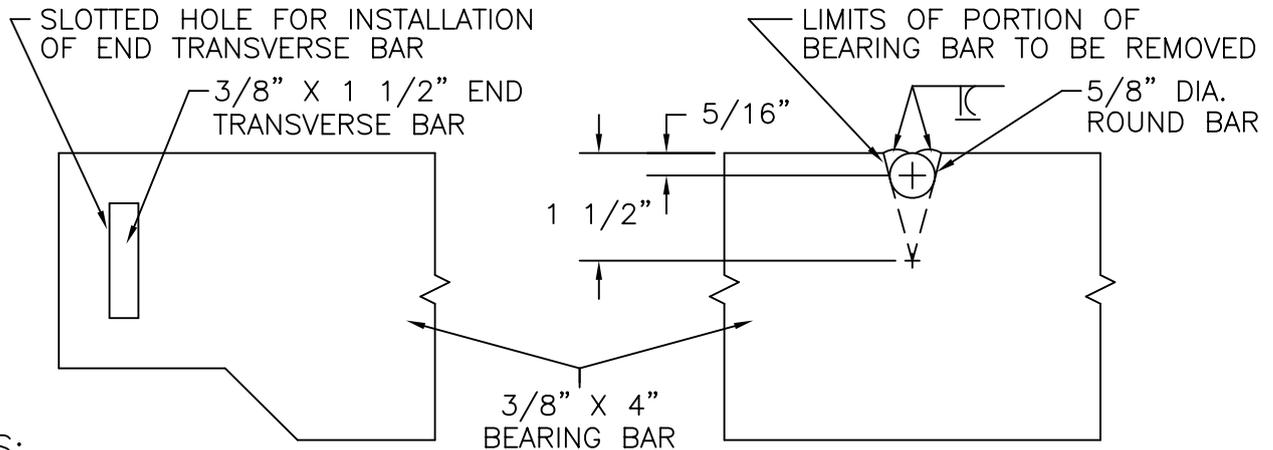
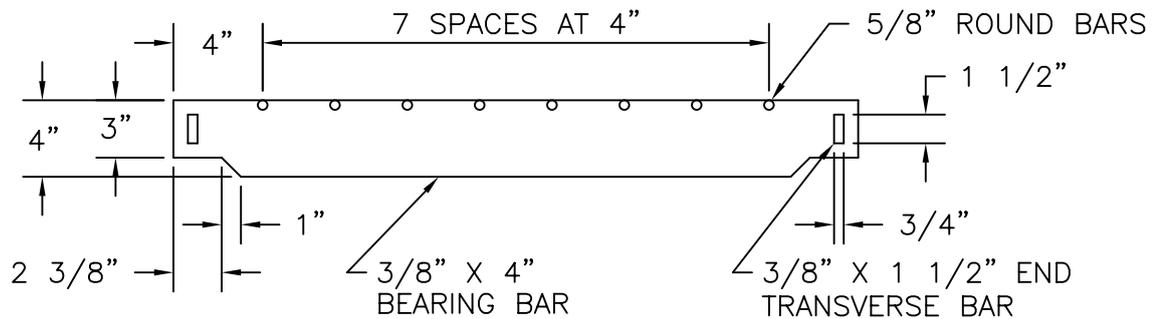
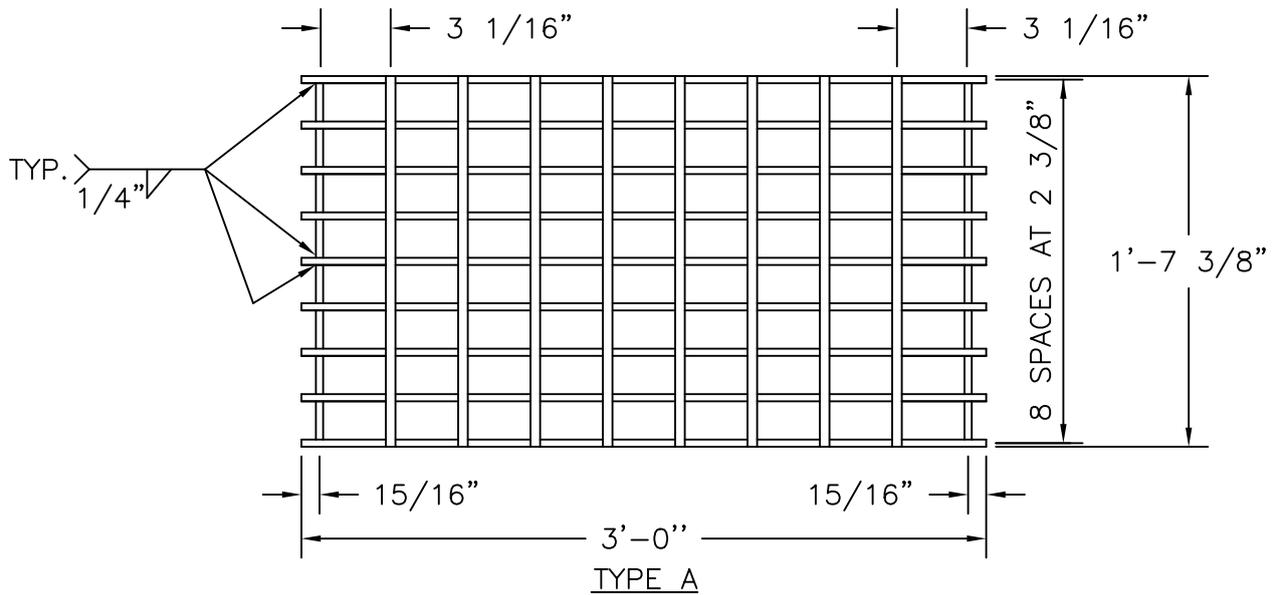
SECTION A-A

**NOTE:**

1. TYPE 'CL' CATCH BASIN TOPS SHALL CONFORM TO CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FORM 816 SECTION: M.08.02-4.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
DATE	REVISION	TYPE 'CL' CATCH BASIN TOP	DWG NO. RDS-312



**NOTES:**

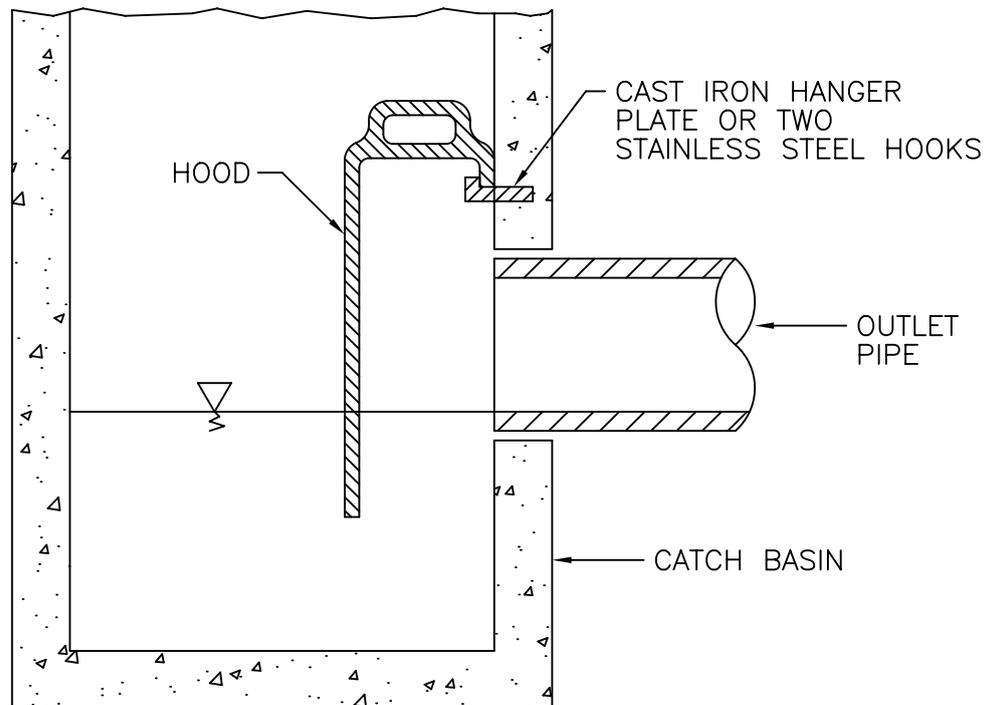
1. CATCH BASIN GRATE SHALL CONFORM TO CONNECTICUT D.O.T. STANDARD DRAWING #507K TYPE-A.
2. STEEL FRAMES AND GRATES SHALL BE GALVANIZED IN ACCORDANCE WITH M.06.03 OF D.O.T. FORM 816.
3. ALL BARS SHALL BE WELDED AT ALL INTERSECTIONS.
4. ALL METAL UNITS SUBJECT TO MANUFACTURING TOLERANCES.
5. ONLY LOW HYDROGEN ELECTRODES SHALL BE USED.
6. DIMENSIONAL TOLERANCES MAY BE  $\pm 1/16$ ".
7. WELDING WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS CATCH BASIN GRATE	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-313A



PIPE SIZE	PATTERN NUMBER*
15"	2564
18"	2565
21"	2566
24"	2568A
30" & LARGER	CONSULT MANUF.



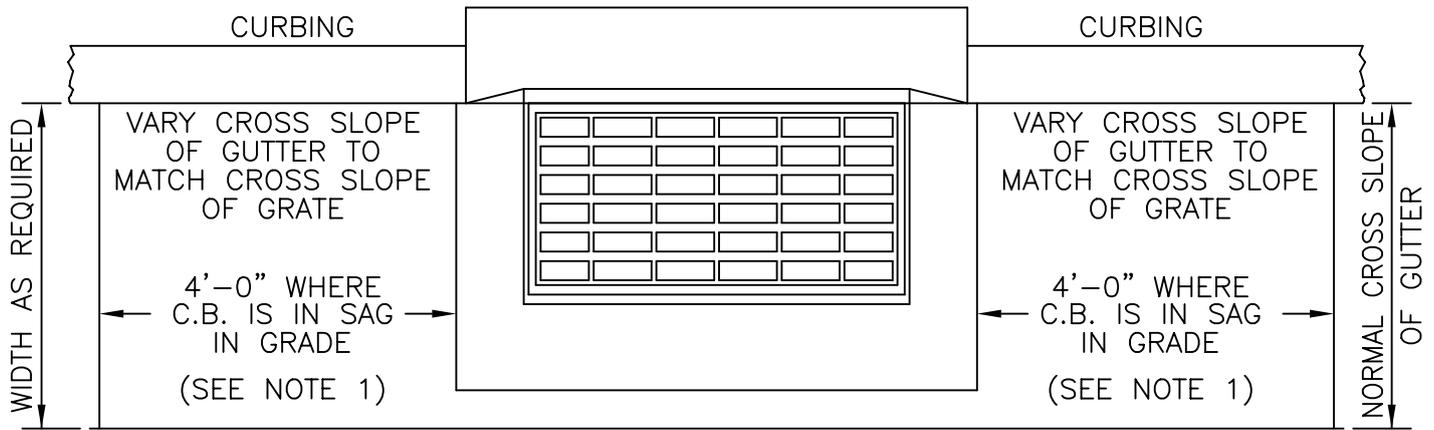
**NOTES:**

1. USE CAST IRON HOOD FOR PIPE SIZES UP TO 24".
2. USE GALVANIZED FABRICATED STEEL HOOD FOR PIPE SIZES 24" AND LARGER.

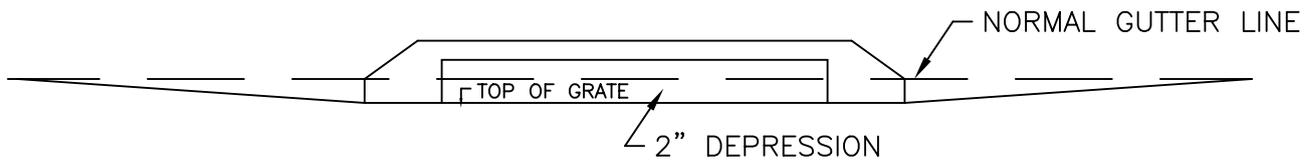
\* CAMPBELL FOUNDRY CO. PATTERN NUMBERS

NOT TO SCALE

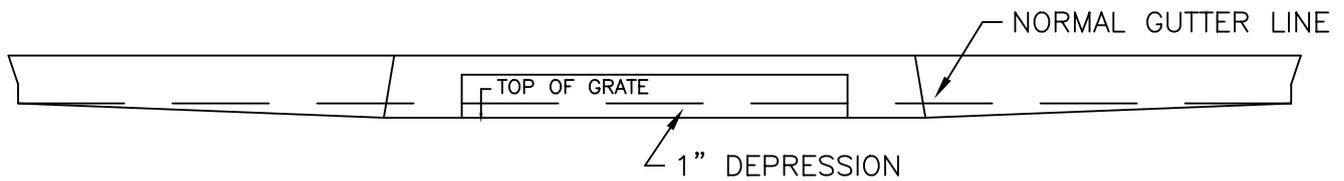
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CATCH BASIN HOOD	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-314



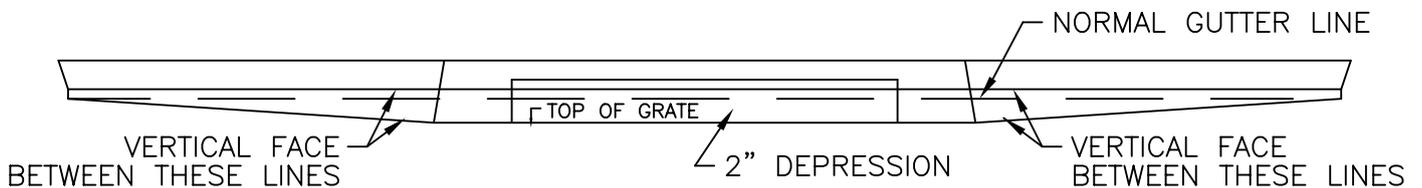
PLAN



FOR CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED.



FOR CATCH BASINS IN A LINE OF CONCRETE CURBING OR GRANITE CURBING.



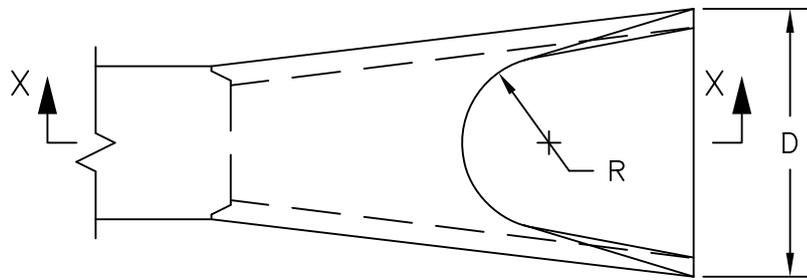
FOR CATCH BASINS IN A LINE OF BITUMINOUS CONCRETE LIP CURBING.

NOTE:

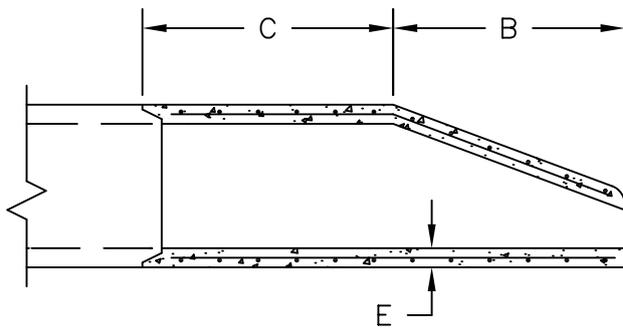
1. 6'-0" ON UPGRADE SIDE OF CONTINUOUS GRADE, 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.

NOT TO SCALE

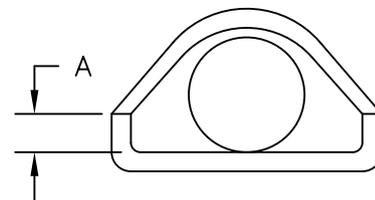
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CATCH BASIN GUTTER DEPRESSION	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-315



PLAN



SECTION X-X



END VIEW

DIMENSION TABLE

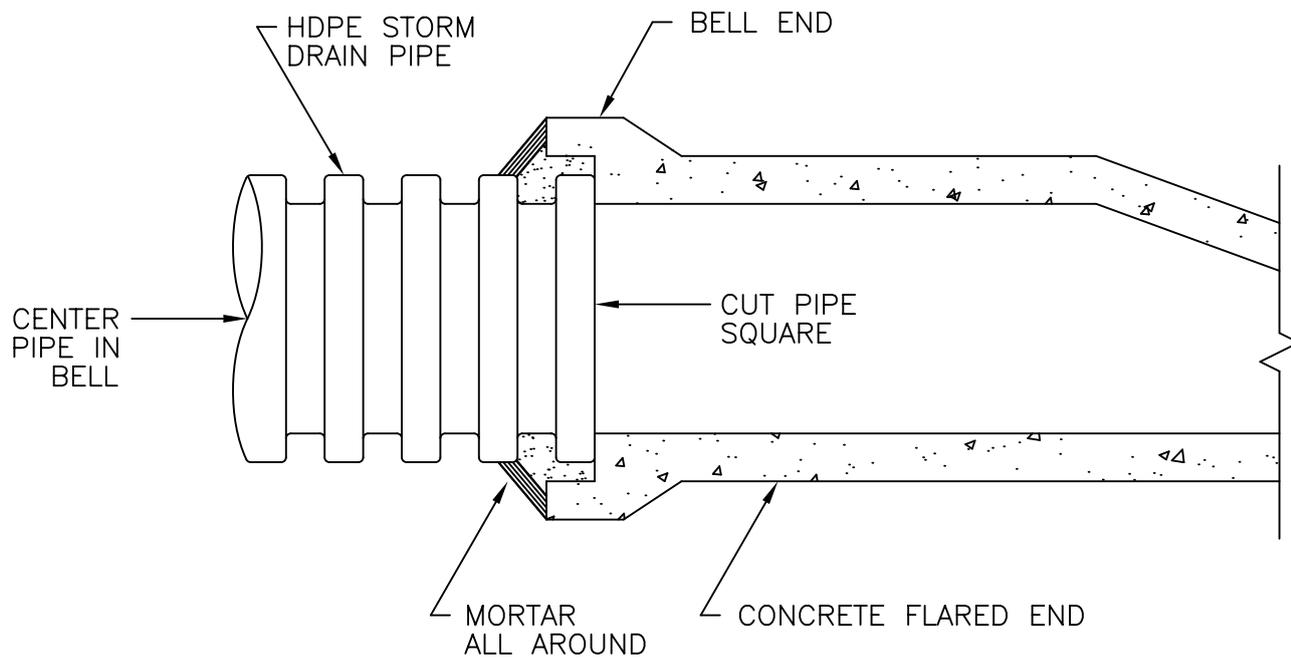
DIA.	A	B	C	D	E	R
15"	6"	2'-3"	3'-10"	2'-6"	2 1/4"	11"
18"	9"	2'-3"	3'-10"	3'-0"	2 1/2"	12"
24"	9 1/2"	3'-7 1/2"	2'-6"	4'-0"	3"	14"
30"	12"	4'-6"	1'-7 3/4"	5'-0"	3 1/2"	15"
36"	15"	5'-3"	2'-10 3/4"	6'-0"	4"	20"
42"	21"	5'-3"	2'-11"	6'-6"	4 1/2"	22"
48"	24"	6'-0"	2'-2"	7'-0"	5"	22"
54"	27"	5'-5"	2'-11"	7'-6"	5 1/2"	24"
60"	30"	5'-0"	3'-3"	8'-0"	6"	24"

**NOTE:**

1. CULVERT END (FLARED END) SECTIONS SHALL CONFORM TO CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FORM 816 SECTION: M.08.01-22.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS FLARED END	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-316



NOTE:

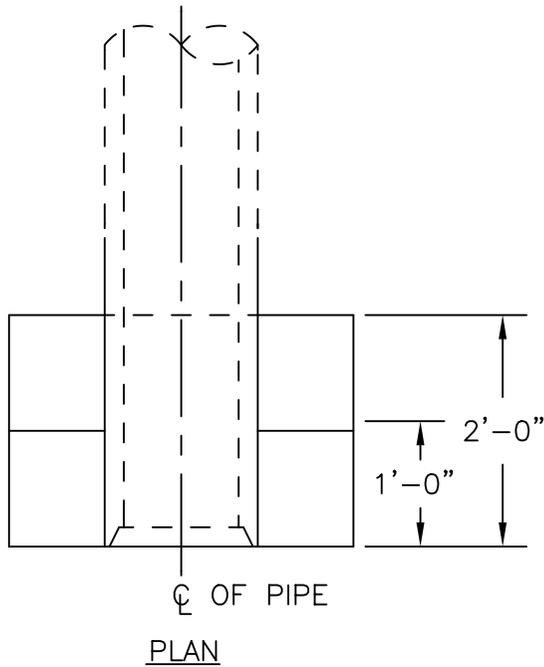
1. WHEN USING HDPE PIPE, CONCRETE FLARED ENDS MUST BE USED. HDPE FLARED ENDS WILL NOT BE ALLOWED.
2. FLARED END SHALL CONFORM TO DWG. NO. RDS-314.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
DATE	REVISION	HDPE PIPE FLARED END	DWG NO. RDS-317



DATE				
REVISION				
ROAD & DRAINAGE STANDARDS		<i>Town of Groton</i>		
TYPE II ENDWALL		<i>Department of Public Works</i>		
DWG NO. RDS-319	DATE: 3/22/99	DWN BY: GMJ	NOT TO SCALE	
	APD BY:			

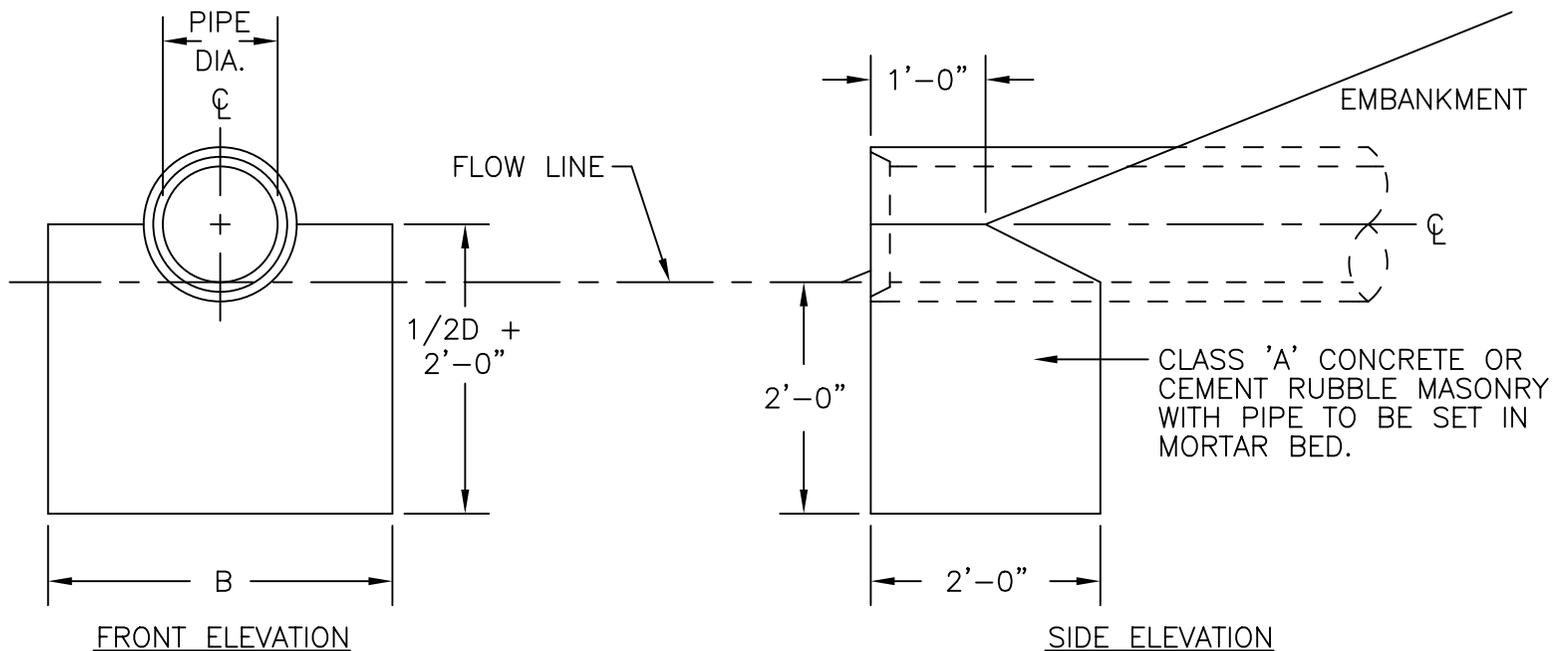


TABULATION		
D	B	VOLUME OF ENDWALL
IN.	FT. & IN.	CU. YDS.
12	3'-0"	0.49
15	3'-9"	0.63
18	4'-6"	0.77
21	5'-3"	0.95
24	6'-0"	1.09
30	7'-6"	1.35
36	8'-0"	1.55
42	8'-6"	1.69
48	9'-0"	1.82
54	9'-6"	1.95
60	10'-0"	2.08
72	11'-0"	2.34

**NOTE:**

WHEN ONE ENDWALL IS TO BE USED FOR TWO PIPES, THE DIMENSIONS OF THAT ENDWALL SHALL CONFORM TO THOSE REQUIRED FOR THE LARGER PIPE, EXCEPT THE DIMENSION 'B' SHALL BE INCREASED BY THE OUTSIDE DIAMETER OF THE SMALLER PIPE PLUS TWO FEET.

D = DIAMETER OF PIPE



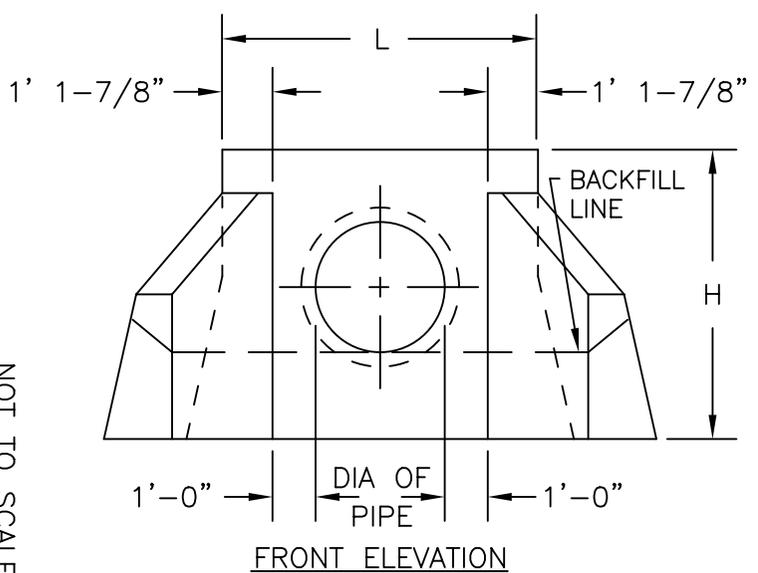
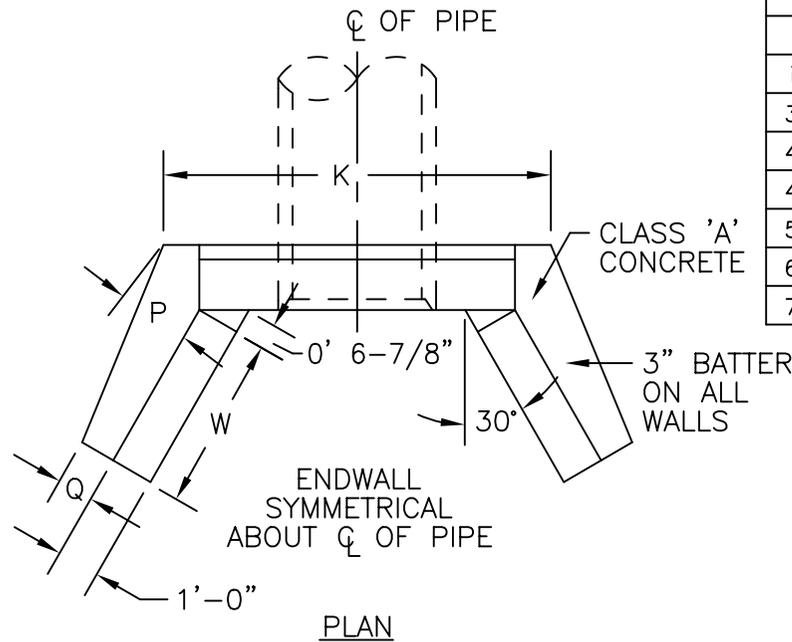
DATE	
REVISION	

Town of Groton  
Department of Public Works

ROAD & DRAINAGE STANDARDS  
TYPE III ENDWALL

DWN BY: GMJ
APD BY:
DATE: 3/22/99
DWG NO. RDS-320

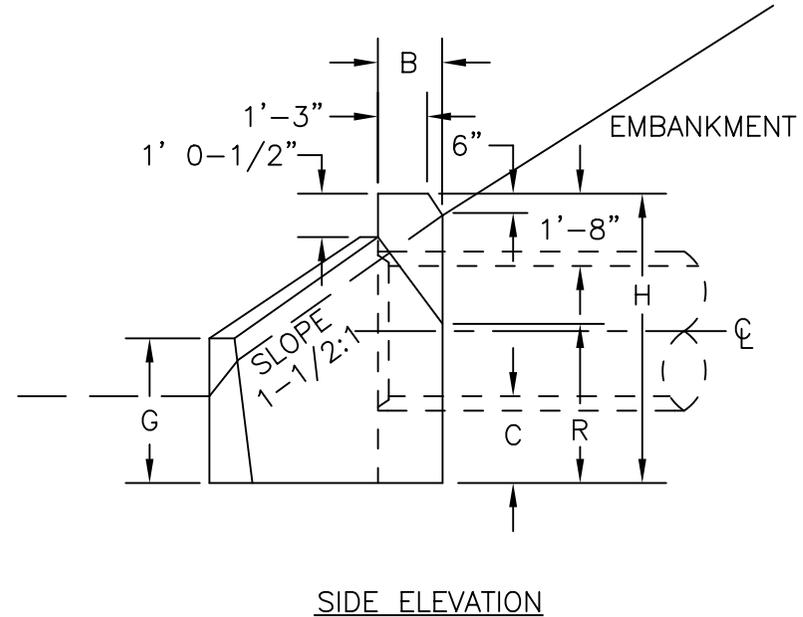
NOT TO SCALE

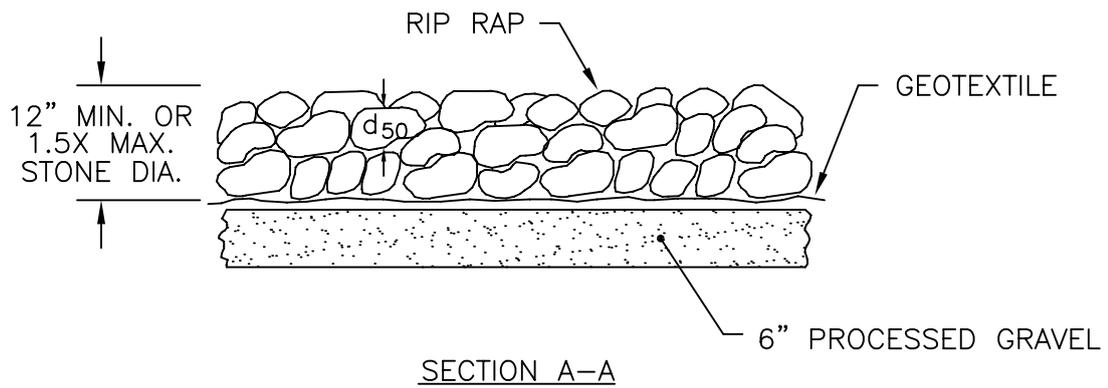
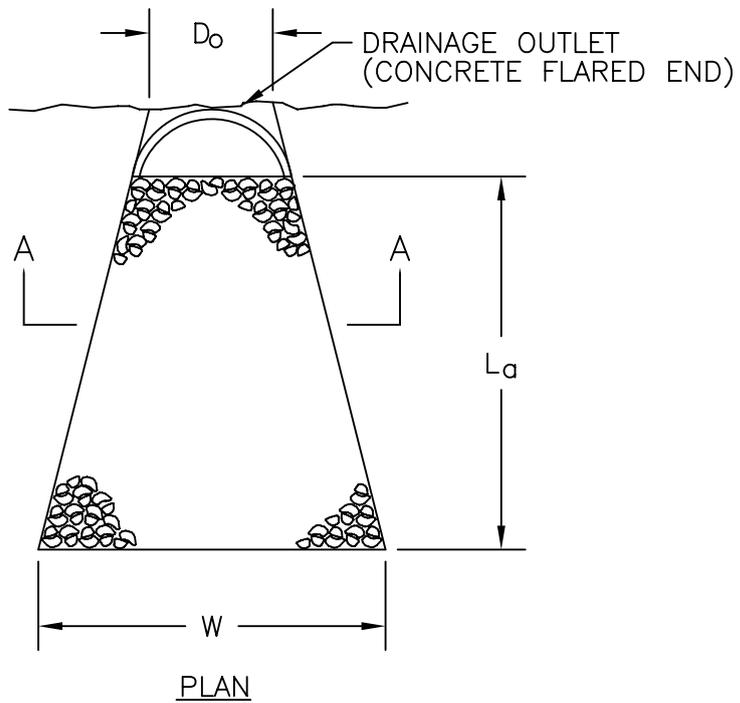


DIMENSIONS & QUANTITIES FOR ONE WING TYPE ENDWALL											
D	B	C	G	H	K	L	P	Q	R	W	VOL.
in	ft & in	ft & in	ft & in	ft & in	ft & in	ft & in	ft & in	ft & in	ft & in	ft & in	cu yds
36"	1'-6"	2'-0"	3'-3"	6'-8"	9'-1 1/2"	7'-3 3/4"	1'-4 7/8"	0'-9 3/4"	3'-4 7/8"	4'-1 3/8"	5.17
42"	1'-6"	2'-0"	3'-3"	7'-2"	9'-10 1/2"	7'-9 3/4"	1'-6 3/8"	0'-9 3/4"	3'-10 1/2"	4'-11 3/4"	5.75
48"	1'-7"	2'-6"	3'-9"	8'-2"	10'-10"	8'-3 3/4"	1'-9 3/8"	0'-11 1/4"	4'-9"	5'-10"	7.78
54"	1'-7"	2'-6"	3'-9"	8'-8"	11'-7 1/2"	8'-9 3/4"	1'-10 7/8"	0'-11 1/4"	5'-3"	6'-8 1/2"	8.51
60"	1'-7"	2'-6"	3'-9"	9'-2"	12'-4 1/2"	9'-3 3/4"	2'-0 3/8"	0'-11 1/4"	5'-9"	7'-7"	10.46
72"	1'-7"	2'-6"	3'-9"	10'-2"	13'-10 3/4"	10'-3 3/4"	2'-3 3/8"	0'-11 1/4"	6'-9"	9'-3 3/4"	13.56

**NOTES:**

1. WHEN ONE END WALL IS TO BE USED FOR TWO PIPES, THE DIMENSIONS OF THE ENDWALL SHALL CONFORM TO THOSE REQ'D. FOR THE LARGER PIPE, EXCEPT THE DIMENSION "L" SHALL BE INCREASED BY THE OUTSIDE DIAMETER OF THE SMALLER PIPE PLUS TWO FEET.
2. ALL EDGES OF EXPOSED SURFACES SHALL BE CHAMFERED ONE INCH.





**NOTES:**

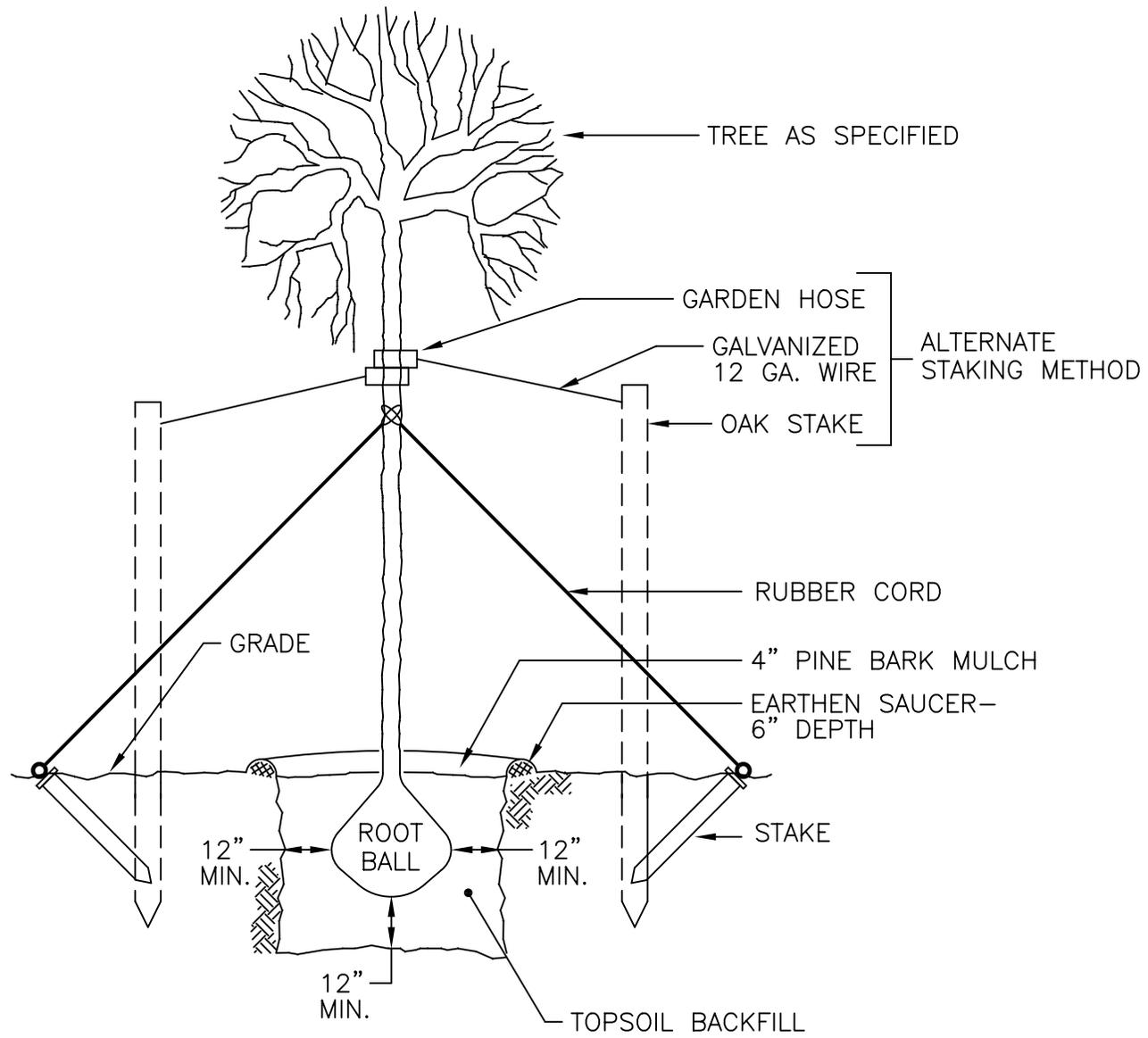
1. ALL SIZES SHOWN  $L_a$ ,  $W$ ,  $D_o$  AND  $d_{50}$  SHALL BE CALCULATED USING CONNECTICUT GUIDELINES FOR SOIL EROSION & SEDIMENT CONTROL.
2. FILTER FABRIC SHALL BE MIRAFI 500X, EXXON GTF200, AMOCO 2199 OR APPROVED EQUAL.
3. RIP RAP PROTECTION SHALL BE PLACED AT ALL DRAINAGE INLETS AND OUTLETS.
4. RIP RAP STONE SHALL MEET THE REQUIREMENTS OF CONNECTICUT D.O.T. STANDARD SPECIFICATION FORM 816 SECTION: M.12.02.

NOT TO SCALE

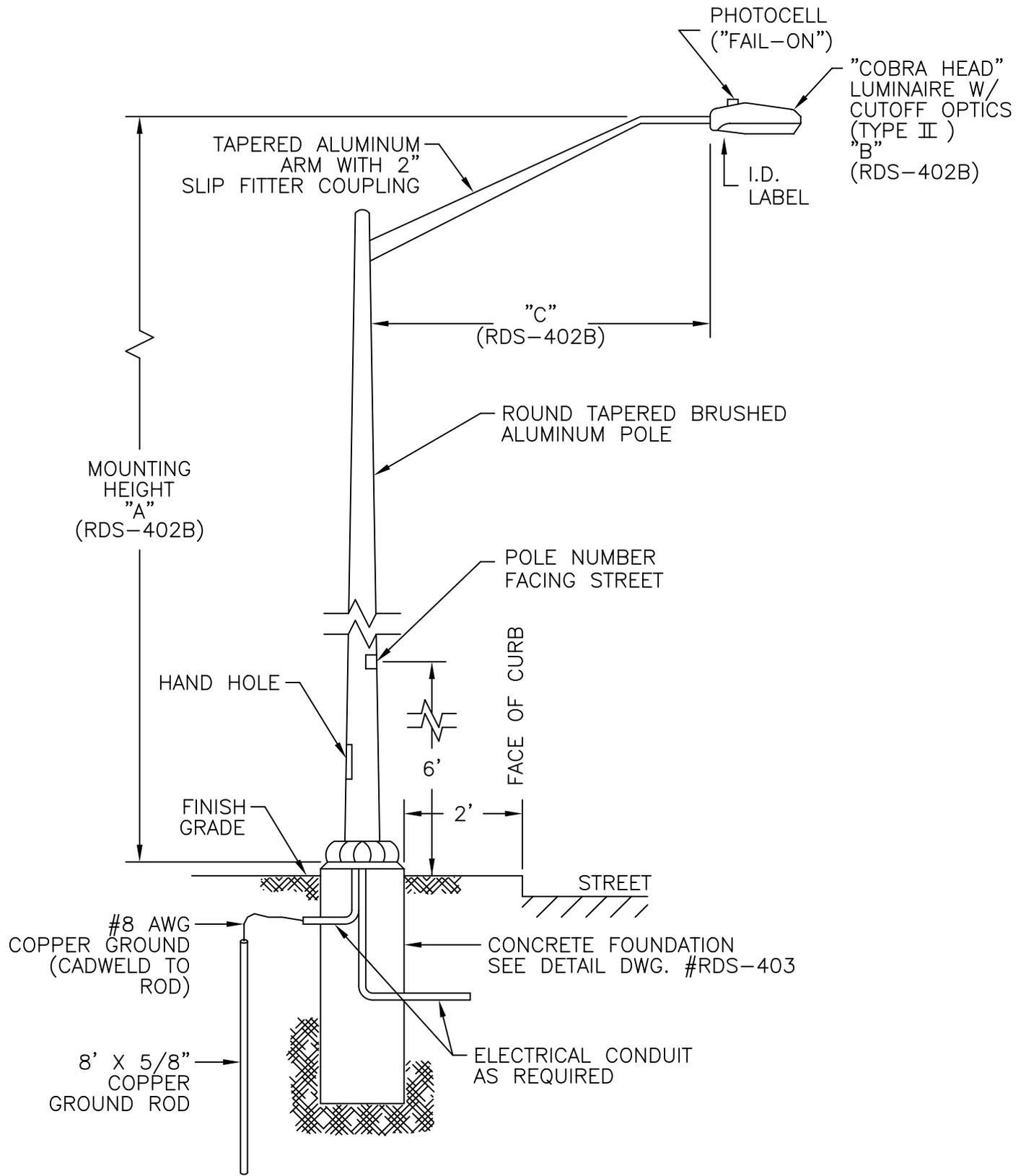
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
5/8/07	CONNDOT FORM 816	ROAD & DRAINAGE STANDARDS RIP RAP OUTLET	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-321

DATE	REVISION	<i>Town of Groton</i> <i>Department of Public Works</i> ROAD & DRAINAGE STANDARDS TREE PLANTING	DWN BY: GMJ
			APD BY:
			DATE: 3/22/99
			DWG NO. RDS-401

NOT TO SCALE



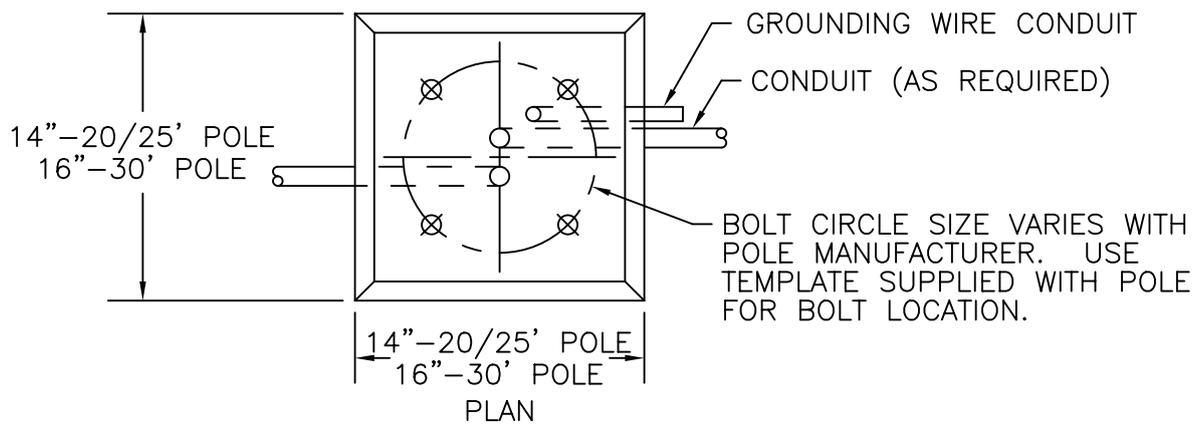
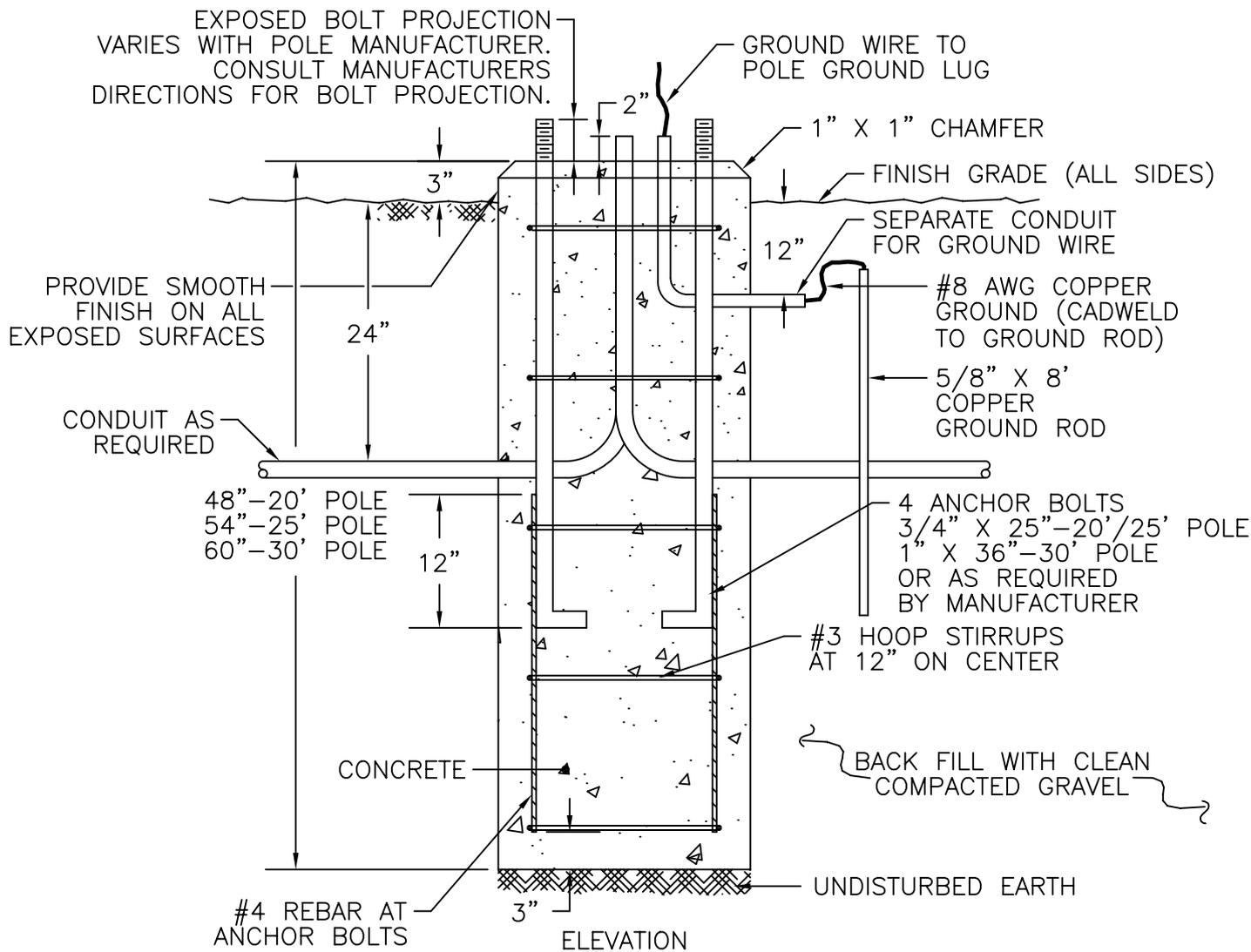
DATE	REVISION
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NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS STREET LIGHT	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-402A





**NOTES:**

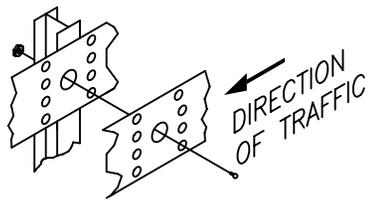
1. AFTER PLUMBING POLE, INSTALL NON-SHRINK GROUT BETWEEN POLE ANCHOR BASE AND TOP OF FOOTING. PROVIDE WEEP HOLE FOR MOISTURE TO DRAIN.
2. FOOTING SIZES SHOWN ARE MINIMUM. A LICENSED PROFESSIONAL ENGINEER SHALL VERIFY SIZE BASED ON SOIL CONDITIONS, WIND CONDITIONS, AND POLE AND LUMINAIRE SIZE AND WEIGHT.
3. PRECAST FOOTINGS MAY BE USED WITH APPROVAL BY THE TOWN. NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS STREET LIGHT FOOTING	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-403

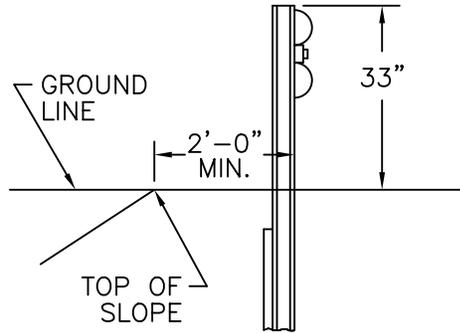


DATE	REVISION	<i>Town of Groton Department of Public Works</i> ROAD & DRAINAGE STANDARDS METAL BEAM RAIL TYPE 'RI'	DWN BY: GMJ
			APD BY:
			DATE: 3/22/99
			DWG NO. RDS-404B

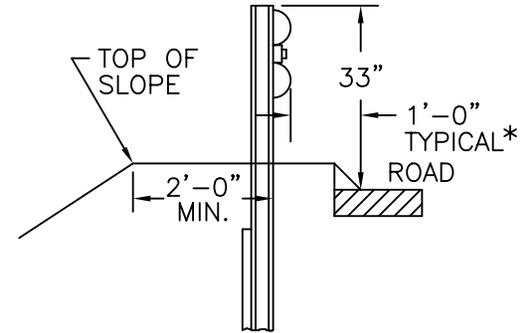
NOT TO SCALE



LAP RAIL SECTIONS  
IN DIRECTION  
OF TRAFFIC



SECTION A-A  
NORMAL HEIGHT



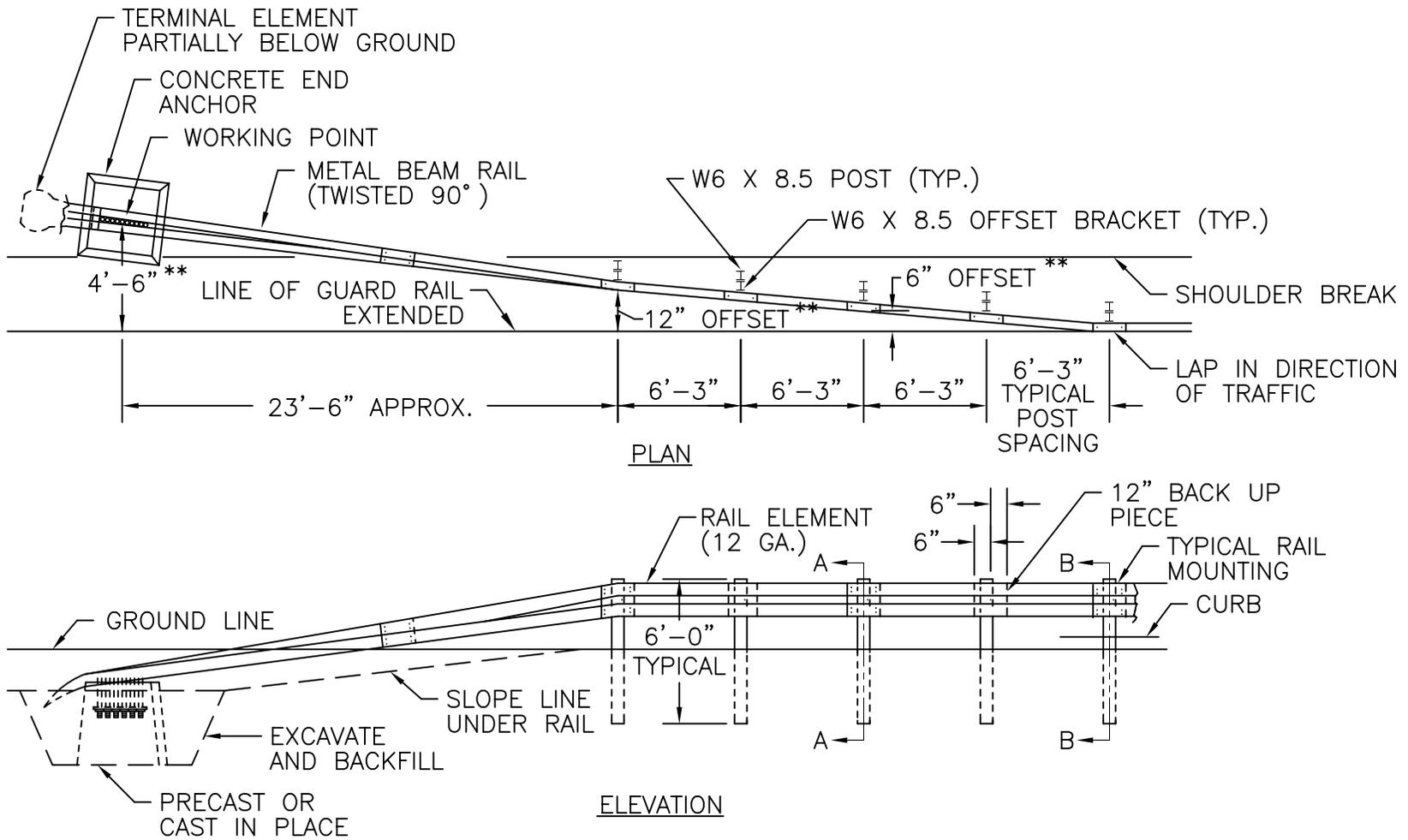
SECTION B-B  
HEIGHT WITH CURBING

NOTE:

\* WHERE THIS DIMENSION IS LESS THAN 2'-0" THE HEIGHT WILL BE MEASURED FROM THE GUTTER LINE (AS SHOWN) AND WHERE IT IS GREATER THAN 2'-0" THE NORMAL 33" HEIGHT WILL BE MEASURED FROM THE GROUND LINE (SECTION A-A).

DATE				
REVISION				
	ROAD & DRAINAGE STANDARDS	<i>Town of Groton Department of Public Works</i>		
	METAL BEAM RAIL TYPE 'RB'			
DWG NO.	RDS-405A	APD BY:	DWN BY:	
		3/22/99	GMJ	

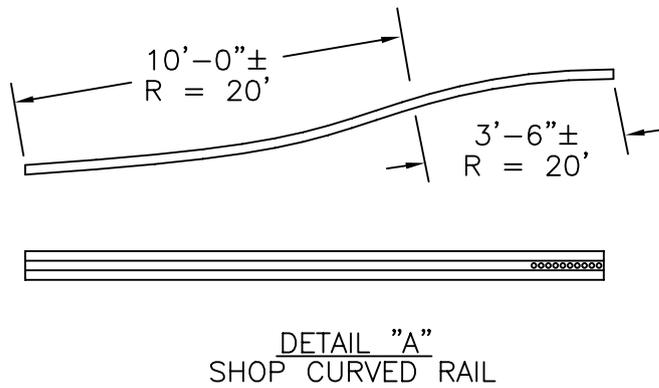
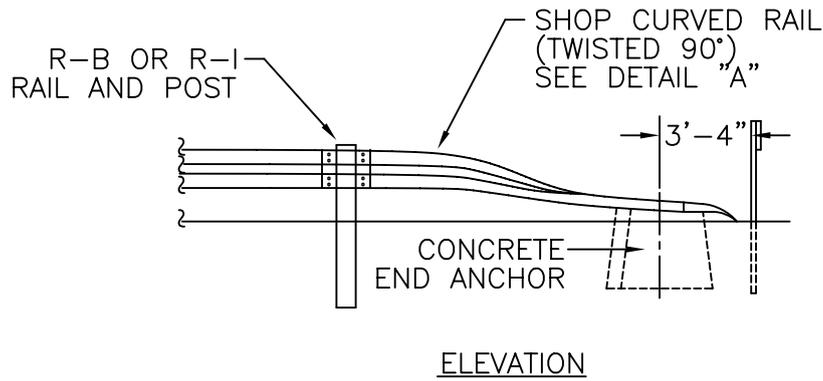
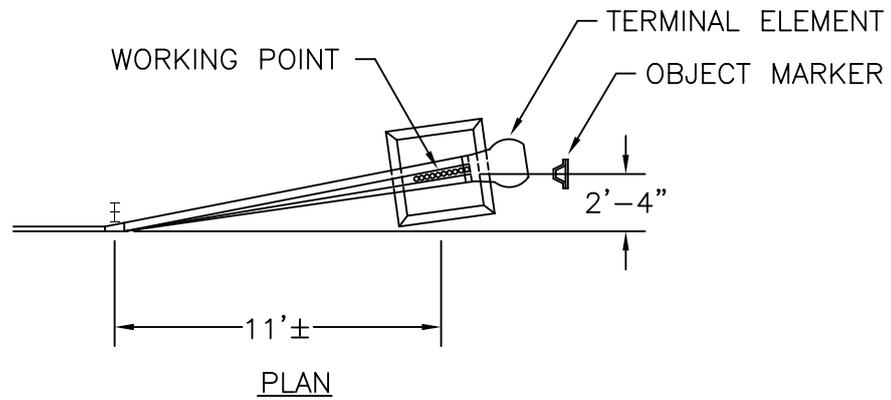
NOT TO SCALE



**NOTES:**

1. CONCRETE END ANCHOR AND ALL RAIL COMPONENTS ARE DETAILED ON, AND SHALL CONFORM TO, CONNECTICUT D.O.T. DWG. 910-C.
  2. BACK UP PIECES TO BE CLASS A (12 GA.) FOR ALL RAIL, AND TO BE PLACED BEHIND RAIL ELEMENTS AT NON-SPLICE POSTS.
  3. FOR CURVES WITH RADII OF 150' OR LESS ALL RAIL MEMBERS SHALL BE FABRICATED TO THE PROPER RADIUS.
  4. STRUCTURAL SHAPE W6 X 9 MAY BE USED IN PLACE OF W6 X 8.5 FOR POSTS OR BRACKETS.
  5. TYPE I END ANCHORAGE SHOWN. TYPE II END ANCHORAGE (RDS-406) MAY BE USED WHERE NECESSARY.
  6. ALL RAILS, POSTS AND COMPONENTS SHALL BE GALVANIZED.
- \*\* OFFSET DIMENSIONS AS SHOWN FOR R-B END ANCHORAGE TYPE I APPLY TO TRAILING END ONLY. LOCATION OF LEADING END ANCHORAGE AS DIRECTED.



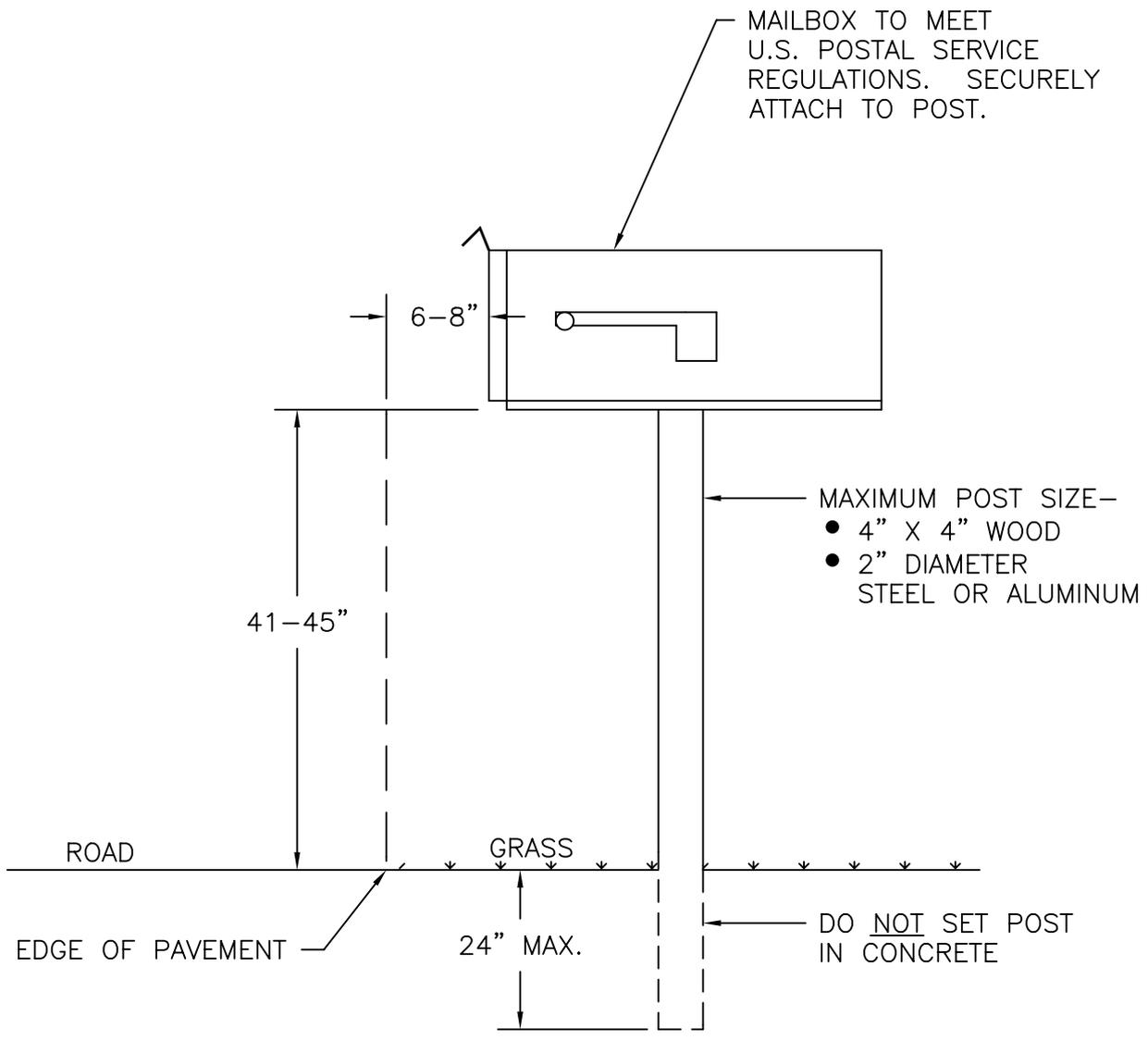


NOTES:

1. CONCRETE END ANCHOR AND ALL RAIL COMPONENTS ARE DETAILED ON, AND SHALL CONFORM TO, CONNECTICUT D.O.T. DWG. 910-C.
2. END ANCHORAGE TYPE II WILL BE USED ONLY WHERE NARROW OPENINGS ARE REQUIRED ALONG THE GUIDE RAILING ALIGNMENT, SUCH AS DRIVEWAYS.
3. OTHER RADII CONFIGURATIONS WHICH CAN BE DEMONSTRATED TO PROVIDE THE INSTALLATIONS SHOWN IN END ANCHORAGES TYPE II MAY BE APPROVED.

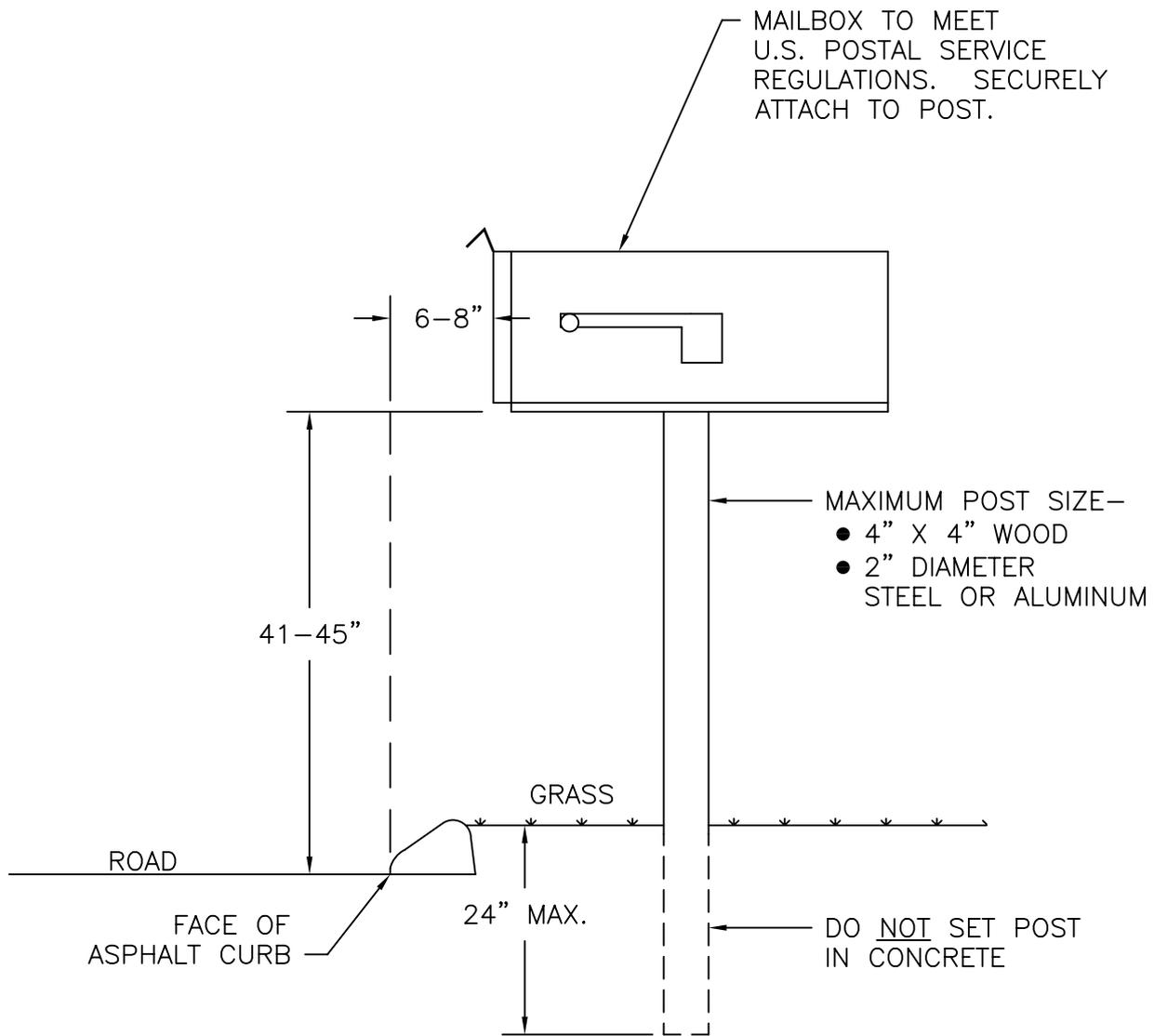
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS METAL BEAM RAIL END ANCHORAGE TYPE II	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-406



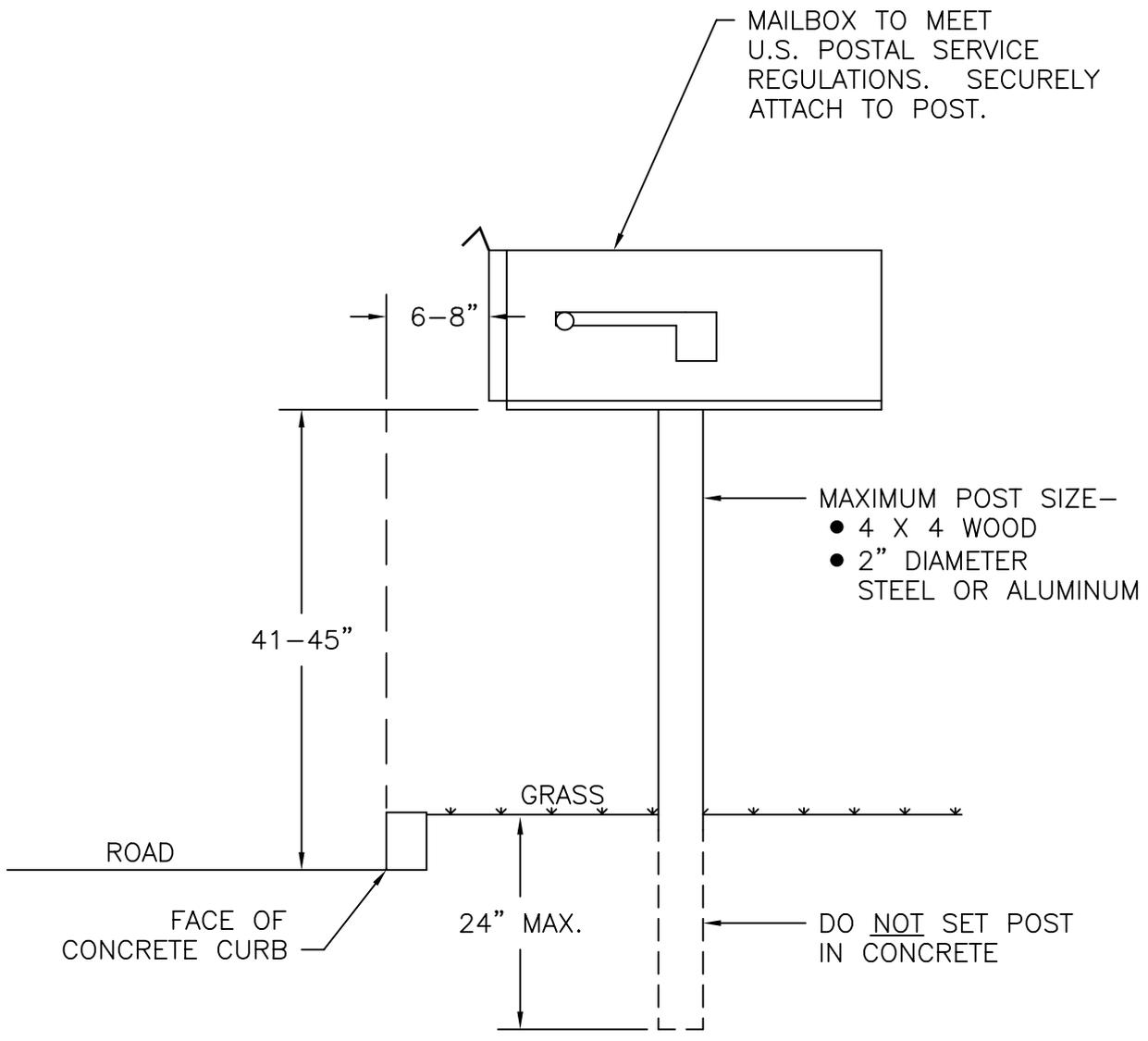
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MAILBOX INSTALLATION NO CURBING	DATE: 8/22/03
DATE	REVISION		DWG NO. RDS-407



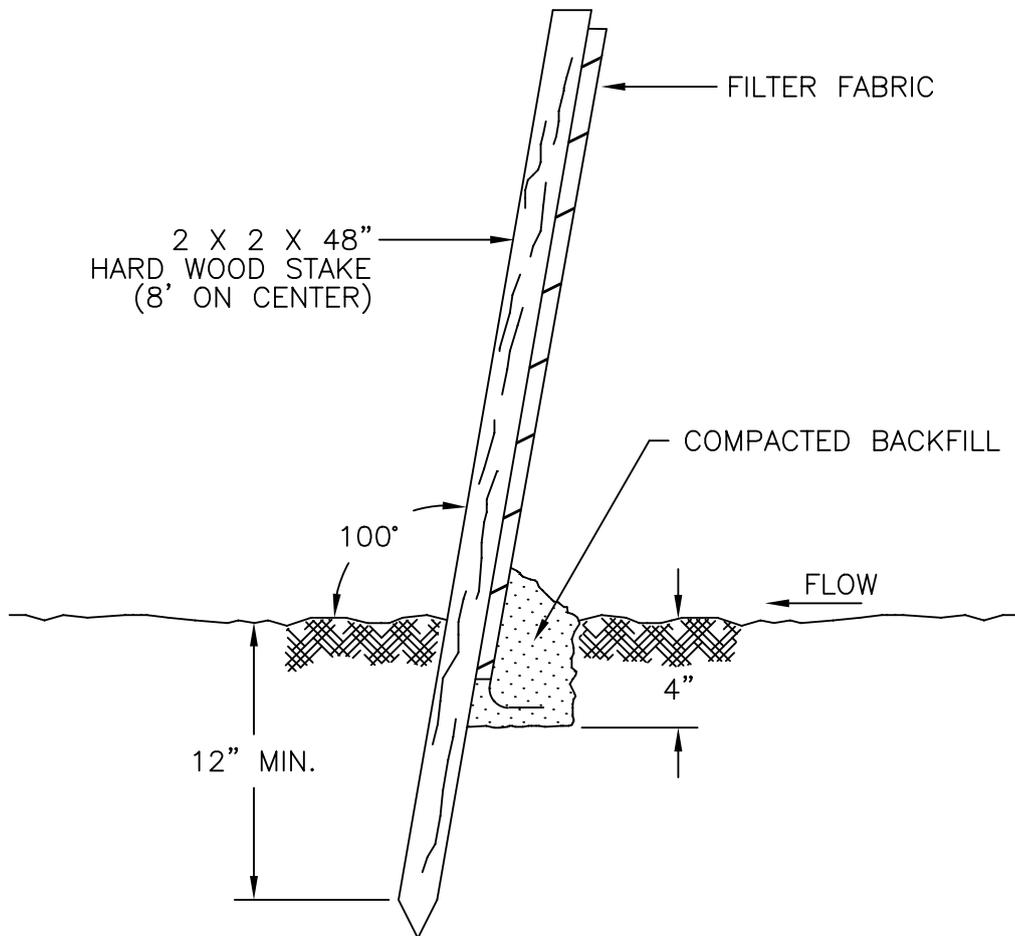
NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MAILBOX INSTALLATION ASPHALT CURBING	DATE: 8/22/03
DATE	REVISION		DWG NO. RDS-408



NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MAILBOX INSTALLATION CONCRETE CURBING	DATE: 8/22/03
DATE	REVISION		DWG NO. RDS-409



**NOTE:**

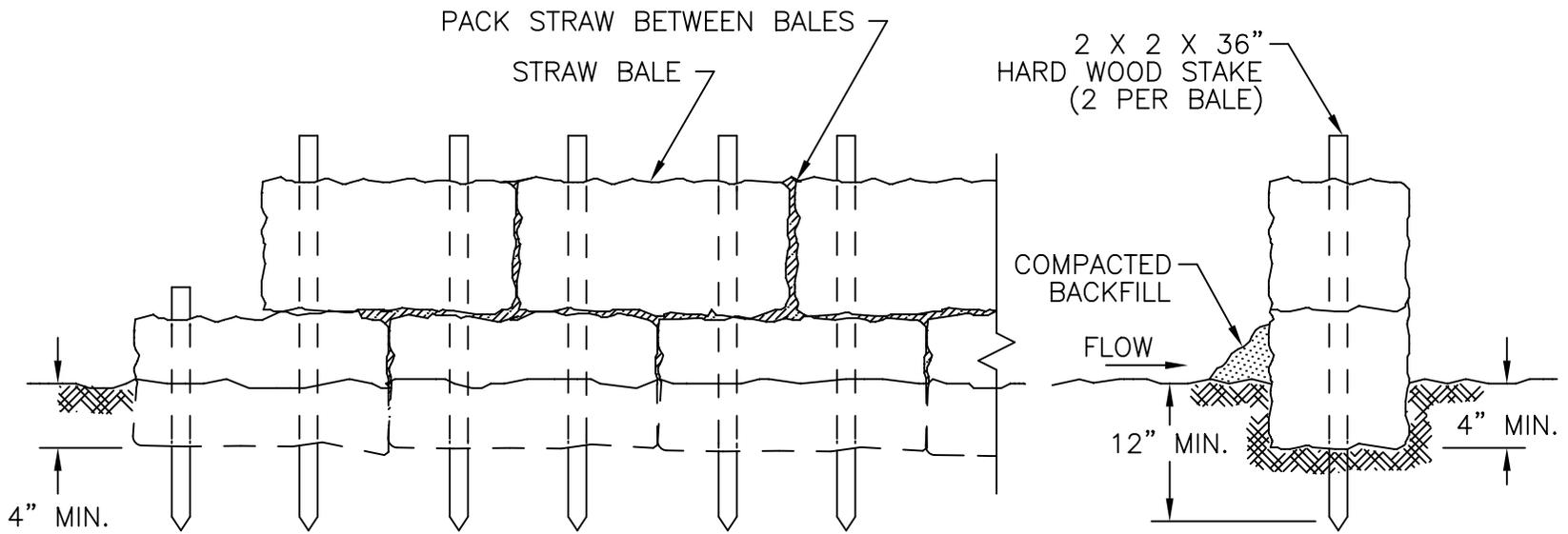
1. FILTER FABRIC SHALL BE MIRAFI "SILT FENCE", EXXON GTF 180, AMOCO 1380, OR APPROVED EQUAL.

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS SEDIMENT CONTROL FILTER FABRIC BARRIER	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-501

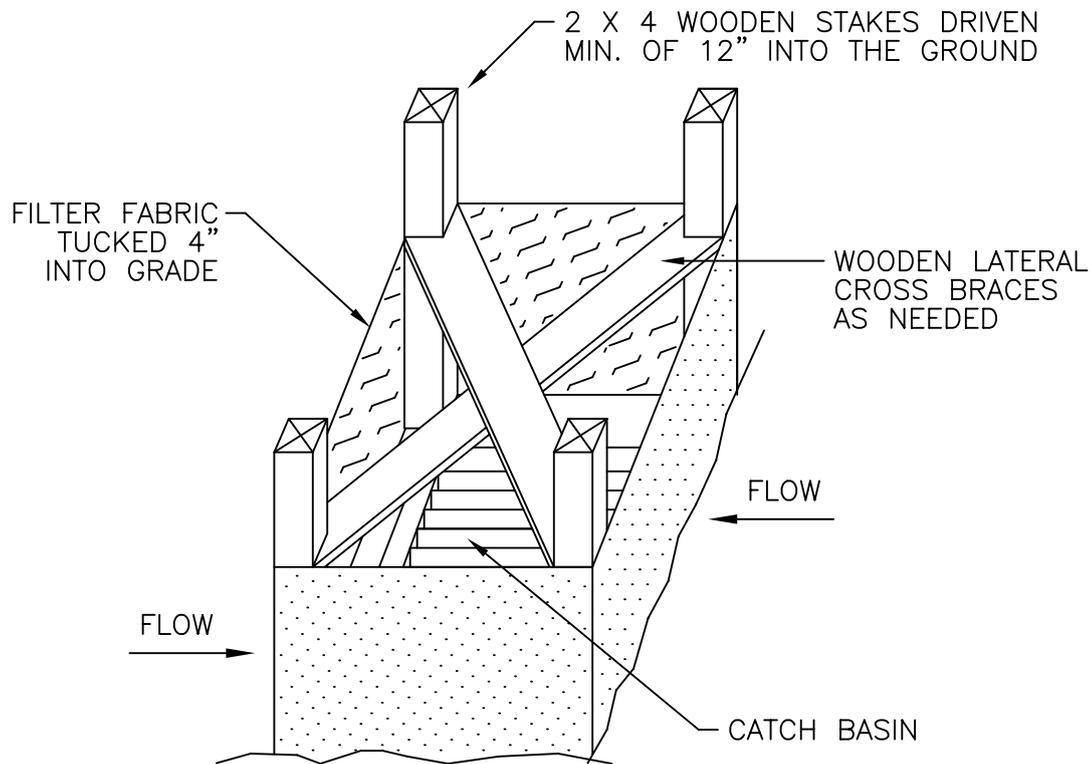
DATE	REVISION	Town of Groton Department of Public Works ROAD & DRAINAGE STANDARDS SEDIMENT CONTROL STRAW BALE BARRIER	DWN BY: GMJ APD BY: DATE: 3/22/99 DWG NO. RDS-502

NOT TO SCALE

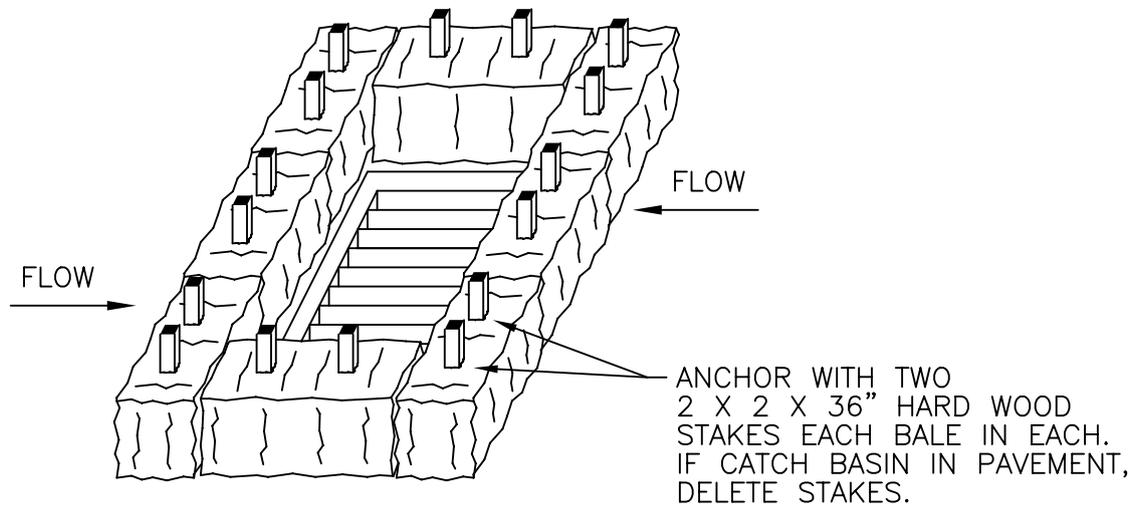


NOTE:

1. USE SINGLE OR DOUBLE BALE HEIGHT AS REQUIRED.



SILT FENCE INSTALLATION AT  
CATCH BASINS



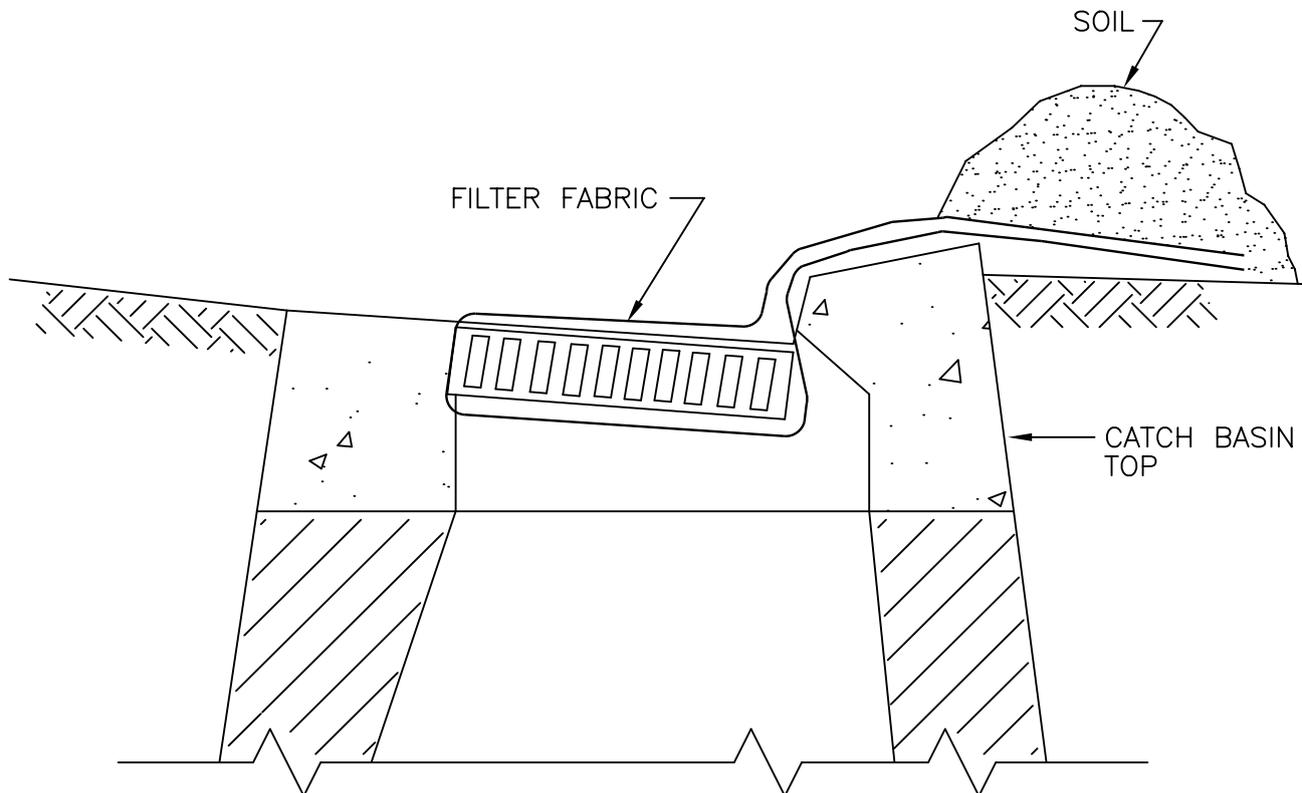
HAY BALE INSTALLATION AT  
CATCH BASINS

NOTE:

1. FILTER FABRIC SHALL BE MIRAFI "SILT FENCE", EXXON GTF 180, AMOCO 1380 OR APPROVED EQUAL.

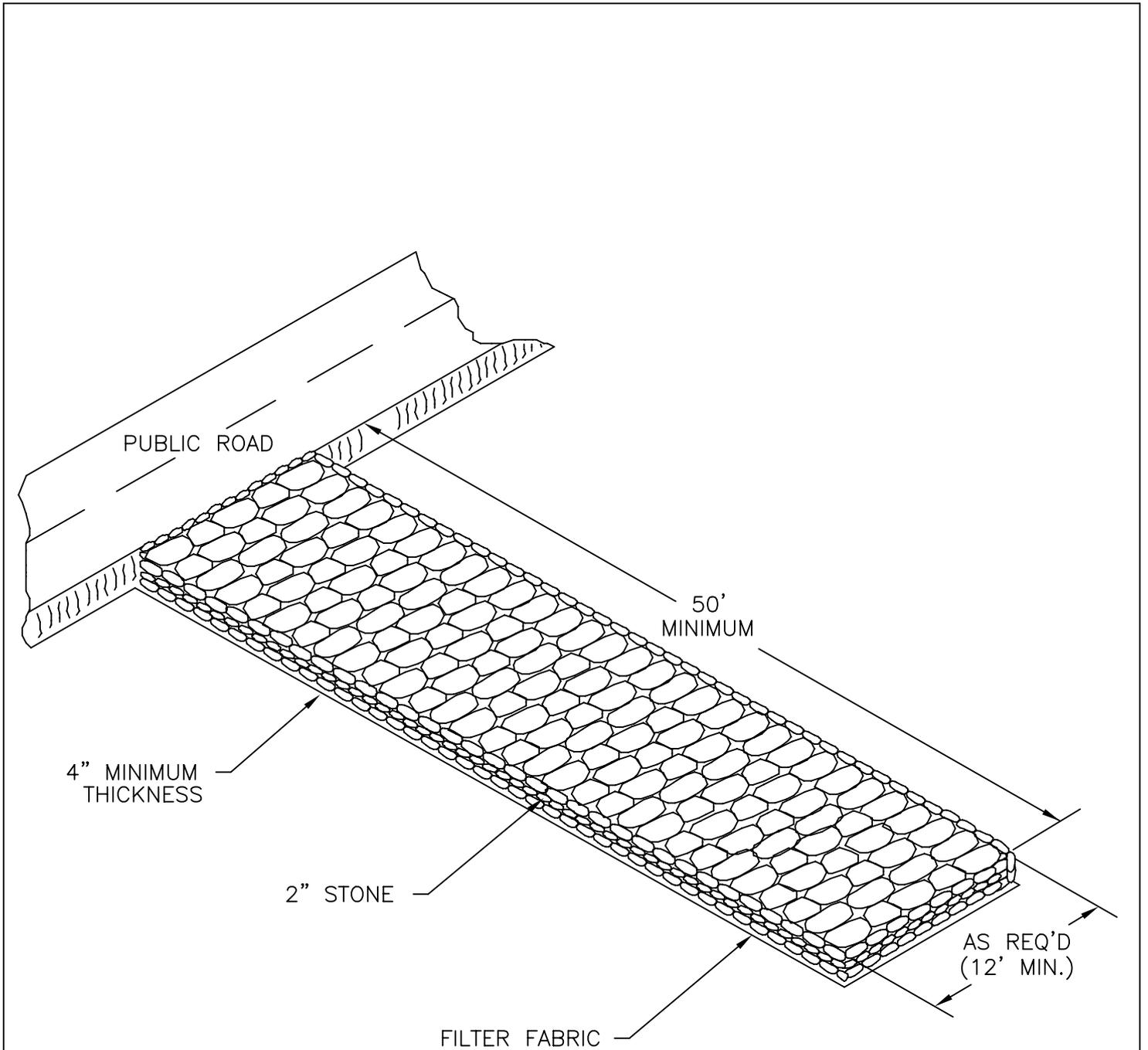
NOT TO SCALE

		<i>Town of Groton Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CATCH BASIN BARRIERS	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-503A



NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CATCH BASIN BARRIERS	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-503B



**NOTE:**

- 1. FILTER FABRIC SHALL BE MIRAFI 500X, EXXON GTF 200, AMOCO 1199 OR APPROVED EQUAL.

NOT TO SCALE

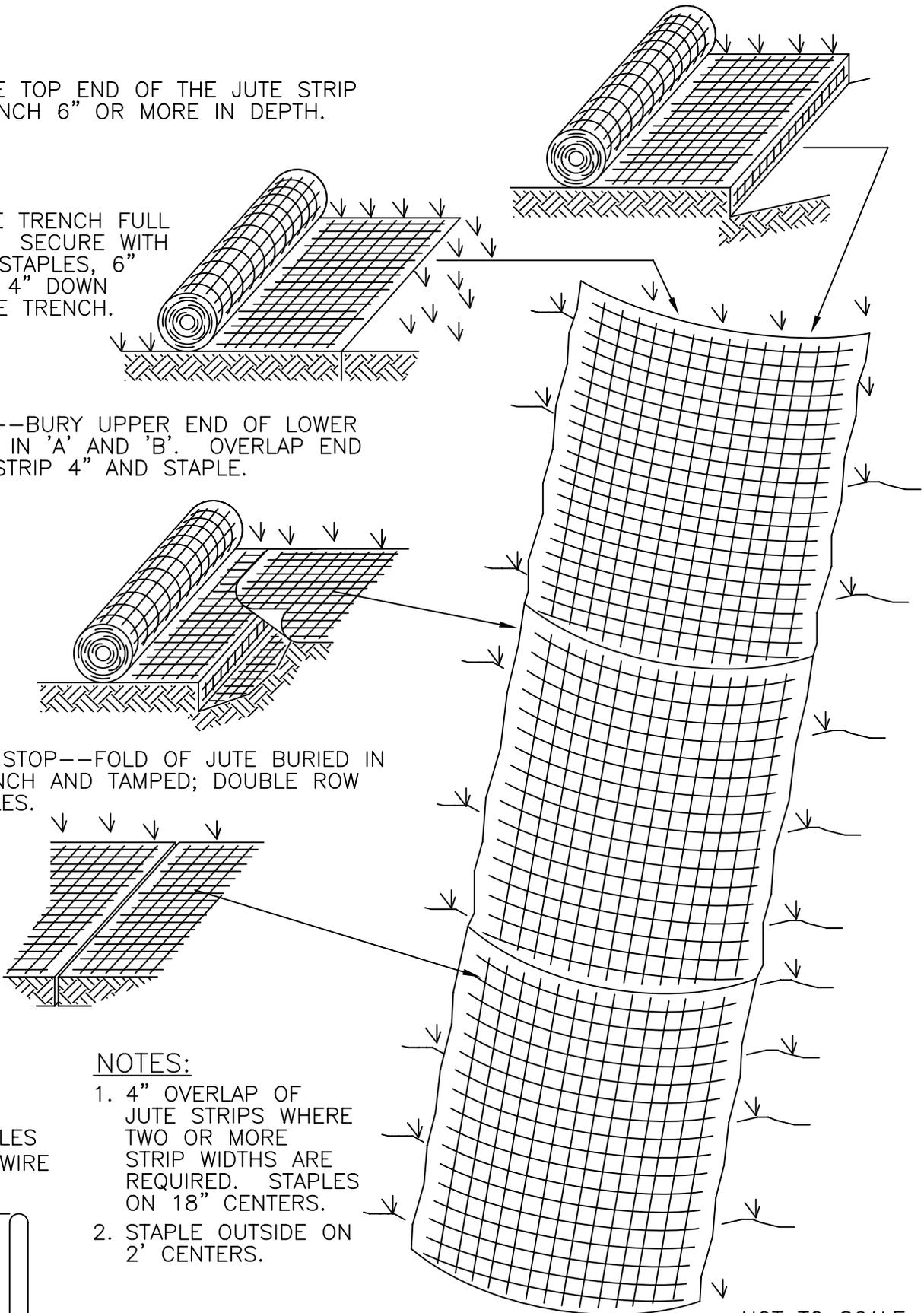
		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS CONSTRUCTION ENTRANCE	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-504

A. BURY THE TOP END OF THE JUTE STRIP IN A TRENCH 6" OR MORE IN DEPTH.

B. TAMP THE TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 6" SPACING, 4" DOWN FROM THE TRENCH.

C. OVERLAP--BURY UPPER END OF LOWER STRIP AS IN 'A' AND 'B'. OVERLAP END OF TOP STRIP 4" AND STAPLE.

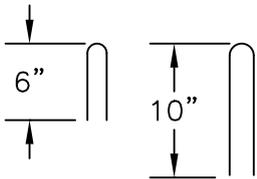
D. EROSION STOP--FOLD OF JUTE BURIED IN SLIT TRENCH AND TAMPED; DOUBLE ROW OF STAPLES.



**NOTES:**

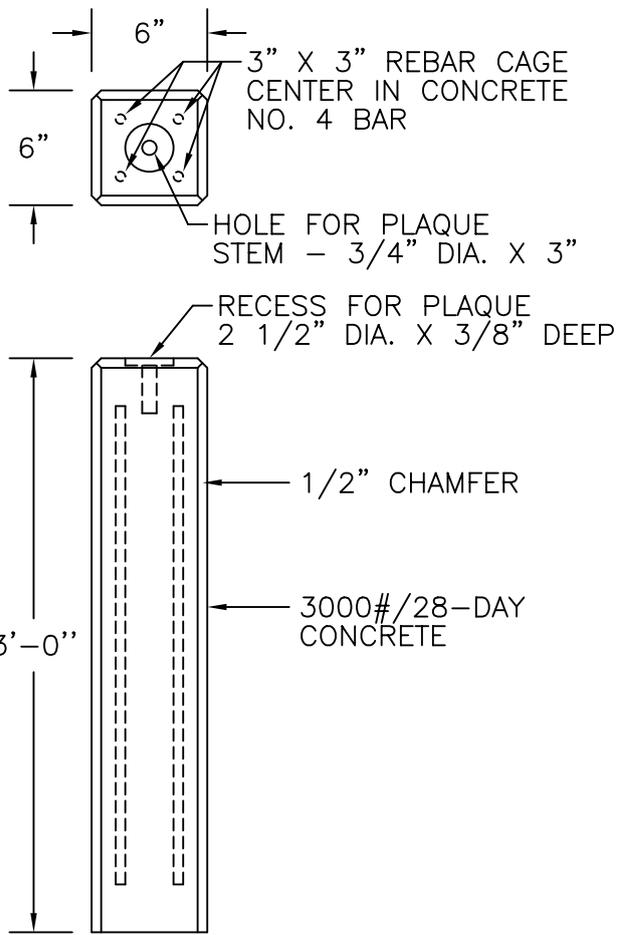
1. 4" OVERLAP OF JUTE STRIPS WHERE TWO OR MORE STRIP WIDTHS ARE REQUIRED. STAPLES ON 18" CENTERS.
2. STAPLE OUTSIDE ON 2' CENTERS.

TYPICAL STAPLES  
NO. 8 GAUGE WIRE

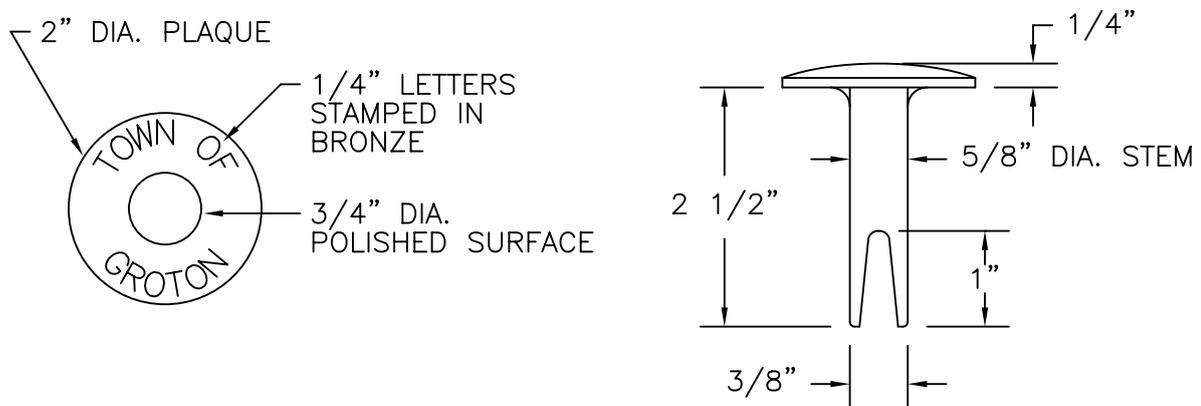


NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS	DATE: 3/22/99
DATE	REVISION	INSTALLATION OF JUTE NETTING	DWG NO. RDS-505



CONCRETE MONUMENT



BRONZE PLAQUE

NOT TO SCALE

		<i>Town of Groton</i> <i>Department of Public Works</i>	DWN BY: GMJ
			APD BY:
		ROAD & DRAINAGE STANDARDS MONUMENT & PLAQUE	DATE: 3/22/99
DATE	REVISION		DWG NO. RDS-601