NEENAH R-3493-A OR EQUAL EXTRA
HEAVY DUTY FRAME AND LID. APPROX.
WEIGHT 440 POUNDS.

23 5/8"
1 1/4"
8 1/2"
1 1/2"
FRAME LIP
21"
24"
25 3/8"
37 1/2"
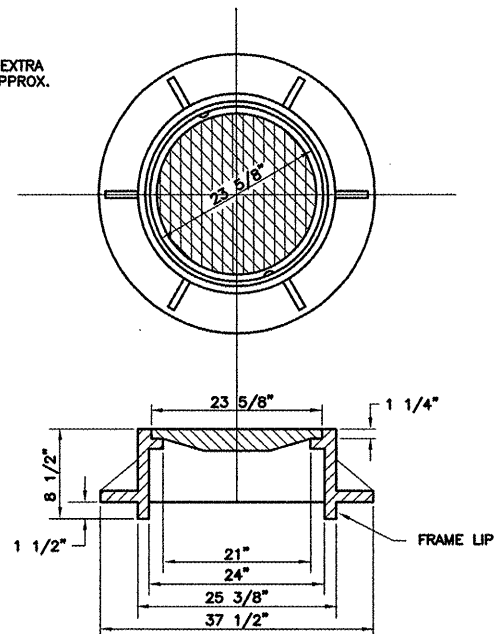
NOTES:
1. USE FOR ALL MANHOLES (UNLESS
   NOTED OTHERWISE ON THE PLAN SHEETS).
2. REMOVE BOLTS THAT HOLD THE GRATE TO
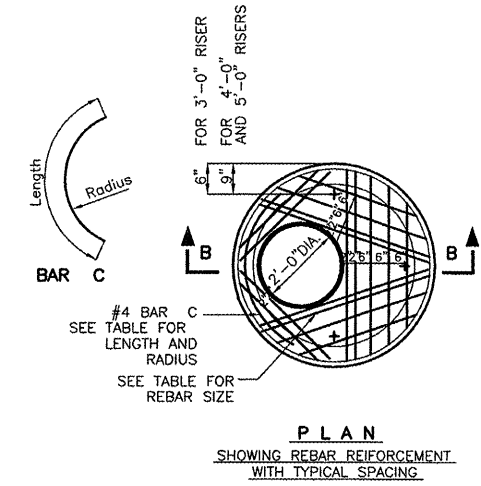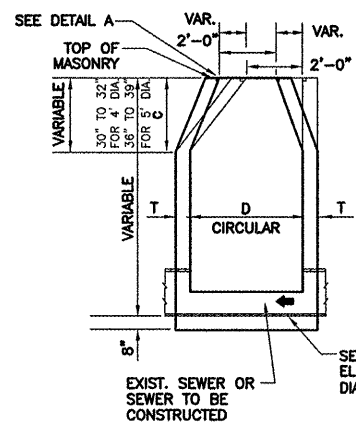   TO THE FRAME AND DO NOT REINSTALL.

MANHOLE FRAME AND LID

ALT. MATERIAL FOR WALLS	D	C	T
PRECAST REINFORCED CONCRETE RINGS	4'	2'-6"	5"
	5'	3'-0"	6"
MONOLITHIC CONCRETE	4'	2'-6"	6"
	5'	3'-0"	8"

FOR 6' DIAMETER MANHOLES, SEE IDOT STANDARD 602406.
MANHOLE FRAME LIP NOTCH OUT DETAIL AND ADDITIONAL
BEDDING REQUIREMENTS THAT ARE SHOWN ON THIS SHEET
SHALL BE APPLIED TO IDOT STANDARD 602406.

SEE DETAIL A
VAR.
2'-0"
TOP OF
MASONRY
VAR.
2'-0"
CIRCULAR
D   T
VARIABLE
30" TO 32" DIA.
FOR 4' DIA.
36" TO 39" DIA.
FOR 5' DIA.
8"
EXIST. SEWER OR
SEWER TO BE
CONSTRUCTED

NOTES :
PRECAST REINFORCED CONCRETE
RINGS AND MANHOLE FRAMES
SHALL BE LAID IN FULL MOTAR
BEDS WITH FLUSH JOINTS.

MOTAR MIX SHALL CONSIST OF
1 PART PORTLAND CEMENT
& 3 PARTS SAND.

ALL CONCRETE SHALL HAVE A
MIN. STRENGTH AT 28 DAYS OF
3500 P.S.I.

THE CONTRACT UNIT PRICE FOR
MANHOLE SHALL INCLUDE
INSTALLATION OF THE
FRAME AND LID.
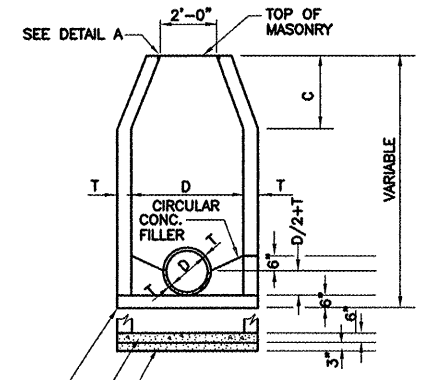
SEE PLAN SHEETS FOR
ELEVATION OF INVERT AND
DIAMETER OF SEWER

SEE DETAIL A
2'-0"
TOP OF
MASONRY
C
T   T
CIRCULAR
CONC.
FILLER
VARIABLE
D/2+T
6"
6"
3"

BOTTOM TO BE EITHER
PLAIN CONCRETE
OR
PRECAST REINFORCED CONCRETE SLAB
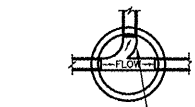IDOT CA-14 OR -16

FLOW
CONC. FILLET CURVED
SMOOTHLY INTO MAIN
FLOW LINE

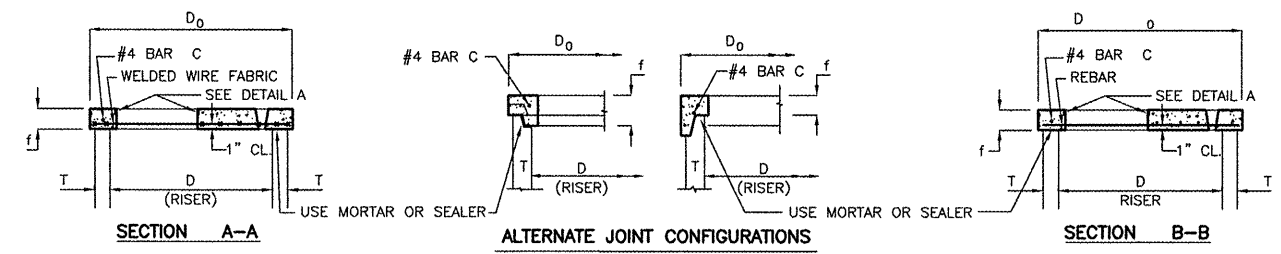| DIAMETER OF MAIN SEWER	D
30 INCHES AND UNDER	4'-0"
36 TO 60 INCHES INCLUSIVE	5'-0"

FURNISHING AND INSTALLING SAND CUSHION,
FRAME, AND LID TO BE INCLUDED IN THE
CONTRACT UNIT PRICE

NOTE :
THE CONE OF THE MANHOLE SHALL
BE CONSTRUCTED AS SHOWN BY THE
DOTTED LINES ONLY WHEN THERE IS
INTERFERENCE WITH UNDERGROUND
CONDITIONS AND THESE CONDITIONS
CAN NOT BE ALTERED.

TOP OF
MASONRY
OUTSIDE OF
MANHOLE
1 1/2"
13/16"

DETAIL A
NOTCH OUT FOR FRAME LIP

DETAIL OF STORM MANHOLE
ITEMS AR751540, AR751550, & AR751560

MODIFIED IDOT
STANDARD 602401

#4 BAR C FOR
LENGTH AND RADIUS
FOR 3'-0" RISER
FOR 4'-0" AND 5'-0" RISERS
6"
9"

WELDED WIRE FABRIC
SEE TABLE FOR "As"
IN EACH DIRECTION

#4 BARS
x 2'-6"
LONG

PLAN
SHOWING WELDED WIRE FABRIC

PLUG AND SEAL WITH
MASTIC AFTER
INSTALLATION
1 1/2" DIA.
(MIN.)
LIFTING HOLE

OR

#4 BAR LOOP
BURN OFF AFTER INSTALLATION
WHEN NECESSARY
4"
4"
4" HOOK
LIFTING LOOP

TYPICAL
(3 REQUIRED PER SLAB)

Length
Radius
BAR C

FOR 3'-0" RISER
FOR 4'-0" AND 5'-0" RISERS
6"
9"

#4 BAR C
SEE TABLE FOR
LENGTH AND
RADIUS

SEE TABLE FOR
REBAR SIZE

PLAN
SHOWING REBAR REINFORCEMENT
WITH TYPICAL SPACING

TABLE

D	T	D₀ (MIN)	f	REINFORCEMENT		#4 BAR C	
				"As" W.W.F. EACH DIRECTION	OR BAR SIZE	LENGTH	RADIUS
3'-0"	See Standards 1514, 1526, 1527, and 1886		6"	.20 sq.in./lin.ft.	#4	4'-0"	1'-7"
4'-0"		D₀ + 2T	6"	.35 sq.in./lin.ft.	#5	4'-6"	2'-2"
5'-0"			8"	.35 sq.in./lin.ft.	#5	5'-0"	2'-8"

#4 BAR C
WELDED WIRE FABRIC
SEE DETAIL A
1" CL
T   T
D
(RISER)
USE MORTAR OR SEALER
SECTION A-A

#4 BAR C
D₀
f
D₀
#4 BAR C
f
T   T
D
(RISER)
USE MORTAR OR SEALER
ALTERNATE JOINT CONFIGURATIONS

D
#4 BAR C
REBAR
SEE DETAIL A
1" CL
T   T
D
RISER
SECTION B-B

NOTES:
1. PRECAST FLAT SLAB TOPS SHALL CONFORM TO SECTION 602 OF THE
   STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. REINFORCEMENT BARS OR WELDED WIRE FABRIC SHALL BE IN
   ACCORDANCE WITH ARTICLE 1006.04 OF THE STANDARD
   SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. JOINT CONFIGURATION AND DIMENSIONS SHALL MATCH AND FIT
   THE RISER JOINT DETAIL.
4. LIFTING DEVICES OTHER THAN SHOWN MAY BE USED SUBJECT
   TO APPROVAL BY THE ENGINEER.
5. THE FLAT SLAB TOP MAY BE USED IN LIEU OF THE TAPERED TOPS SHOWN ON
   STANDARDS 602001, 602011,602306, 602401, OR 602501 AT THE OPTION OF
   THE CONTRACTOR OR WHEN FIELD CONDITIONS PROHIBIT THE USE OF TAPERED TOPS.
6. THE COST OF FURNISHING AND INSTALLING THE FLAT SLAB TOP SHALL
   BE INCLUDED IN THE UNIT PRICE FOR CATCH BASINS, MANHOLES, OR VALVE VAULTS.

PRECAST REINFORCED CONCRETE
FLAT SLAB TOP
FOR MANHOLES, CATCH BASINS
AND VALVE VAULTS

MODIFIED I.D.O.T.
STANDARD 602601

TOP OF
SLAB
1 1/2"
13/16"
SIDE OF
OPENING
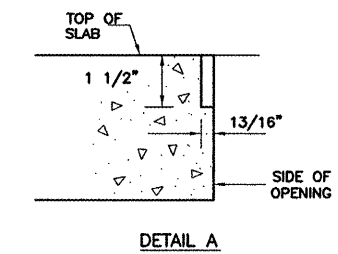
DETAIL A

FOR 6' DIAMETER MANHOLES, SEE IDOT STANDARD 602406. MANHOLE FRAME LIP NOTCH OUT
DETAIL AND ADDITIONAL BEDDING REQUIREMENTS THAT ARE SHOWN ON THIS SHEET SHALL BE
APPLIED TO IDOT STANDARD 602406.

DRAINAGE DETAILS

37/82