SCHEDULE OF REINFORCEMENT - PART OF ITEM_____

BASES FOR TYPE "A" MANHOLES (Precast)

STRUCTURE	REINFORCEMENT BAR MARK	SIZE NO.	TYPE	LENGTH	NO. REQD.	WEIGHT - LBS EACH	WEIGHT - LBS TOTAL	A	B	C	D	E	F	G	H	J	K	O	R
120" DIA.	120A1	8	T3	35'-4¾"	6	94.51	567										2'-8"	10'-5"	
	120A2	7	9	22'-5"	5	45.82	229		22'-5"						8'-0"			8'-7½"	5'-2½"
	120A3	6	12	14'-4⅝"	5	21.61	108			9'-6⅝"	4'-10"				4'-3½"		2'-2½"		
	120A4	7	D10	19'-0½"	12	38.86	466	4'-6"	5'-11½"	4'-10½"	3'-8⅜"	3'-10½"	2'-3¾"		3'-5½"		3'-5½"		
	120A5	8	12	17'-10⅝"	5	47.76	239		3'-6"	9'-6⅝"	4'-10"				4'-3½"		2'-2½"		
	120A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	120A7	4	STR.	5'-8"	66	3.79	250												
	120A8	5	12	10'-9"	4	11.21	45			9'-9"	1'-0"				10¼"		6¼"		
	TOTAL						1951												
108" DIA.	108A1	7	T3	31'-11"	6	65.24	391										2'-4"	9'-5"	
	108A2	6	9	20'-2⅝"	5	30.37	152		20'-2⅝"						7'-2½"			7'-9⅝"	4'-8½"
	108A3	6	12	12'-9"	5	19.15	96			8'-5"	4'-4"				3'-8½"		2'-2¾"		
	108A4	7	D10	17'-0⅝"	12	34.81	418	4'-1"	5'-6¼"	4'-5¼"	2'-11⅞"	3'-6"	2'-1⅛"		3'-1⅝"		3'-1⅝"		
	108A5	7	12	16'-0"	5	32.70	163		3'-3"	8'-5"	4'-4"				3'-8½"		2'-2¾"		
	108A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	108A7	4	STR.	5'-8"	62	3.79	234												
	108A8	5	12	9'-8"	4	10.09	40			8'-8"	1'-0"				10¼"		6¼"		
	TOTAL						1541												
102" DIA.	102A1	7	T3	30'-3"	6	61.83	371										2'-4"	8'-10¾"	
	102A2	6	9	19'-0"	5	28.54	143		19'-0"						6'-9½"			7'-4½"	4'-5½"
	102A3	6	12	12'-3"	5	18.40	92			8'-0"	4'-3"				3'-7½"		2'-2"		
	102A4	7	D10	16'-0½"	12	32.79	393	3'-9"	5'-5½"	4'-1⅝"	2'-8⅜"	3'-2½"	23"		2'-11½"		2'-11½"		
	102A5	7	12	15'-4"	5	31.34	157		3'-1"	8'-0"	4'-3"				3'-7⅛"		2'-2"		
	102A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	102A7	4	STR.	5'-8"	58	3.79	220												
	102A8	5	12	9'-3"	4	9.65	39			8'-3"	1'-0"				10¼"		6¼"		
	TOTAL						1462												
96" DIA.	96A1	7	T3	28'-8"	6	58.38	352										2'-4"	8'-5"	
	96A2	6	9	17'-11¼"	5	26.94	135		17'-11¼"						6'-4"			7'-2½"	4'-2½"
	96A3	6	12	11'-6"	5	17.27	86			7'-5"	4'-1"				3'-6"		2'-1¼"		
	96A4	7	D10	4'-10⅝"	12	30.38	365	3'-8"	5'-0"	3'-11½"	2'-2⅞"	3'-1¾"	22½"		2'-9⅝"		2'-9⅝"		
	96A5	7	12	13'-5"	5	27.43	137		2'-10¾"	7'-5"	4'-1"				3'-6"		2'-1¼"		
	96A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	96A7	4	STR.	5'-8"	54	3.79	204												
	96A8	5	12	8'-8"	4	9.04	36			7'-8"	1'-0"				10"		6⅝"		
	TOTAL						1362												
90" DIA.	90A1	6	T3	26'-6"	6	39.80	239										2'-0"	7'-10½"	
	90A2	5	9	16'-7¼"	5	17.32	87		16'-7¼"						5'-10¼"			6'-9⅝"	3'-11¼"
	90A3	6	12	11'-0"	5	16.52	83			7'-0"	4'-0"				3'-5"		2'-0¾"		
	90A4	6	D10	13-9⅝"	12	20.70	248	3'-6"	4'-7½"	3'-9½"	22⅝"	3'-0"	21½"		2'-8⅛"		2'-8⅛"		
	90A5	6	12	13'-9"	5	20.65	103		2'-9"	7'-0"	4'-0"				3'-5"		2'-0¾"		
	90A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	90A7	4	STR.	5'-8"	50	3.79	189												
	90A8	5	12	8'-2"	4	8.51	34			7'-2"	1'-0"				9¾"		7"		
	TOTAL						1030												
84" DIA.	84A1	6	T3	25'-3"	6	37.93	228										2'-0"	7'-4½"	
	84A2	5	9	15'-5½"	5	16.12	81		15'-5½"						5'-1¼"			8'-2¼"	3'-8¼"
	84A3	5	12	9'-10"	5	10.26	51			6'-4"	3'-6"				3'-0"		2 1½"		
	84A4	6	D10	12-6⅛"	12	18.79	225	3'-2"	4'-4⅝"	3'-4½"	1'-6⅞"	2'-8½"	19½"		2'-4⅝"		2'-4⅝"		
	84A5	6	12	12'-5"	5	18.65	93		2'-7"	6'-4"	3'-6"				3'-0"		2 1½"		
	84A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	84A7	4	STR.	5'-8"	46	3.79	174												
	84A8	5	12	7'-6"	4	7.82	31			6'-6"	1'-0"				10¼"		6¼"		
	TOTAL						930												
78" DIA.	78A1	6	T3	23'-7"	6	35.42	213										2'-0"	6'-10½"	
	78A2	5	9	14'-3¾"	5	14.93	75		14'-3¾"						5'-0"			7'-9¾"	3'-5¼"
	78A3	5	12	9'-3"	5	9.65	48			6'-1"	3'-2"				2'-8½"		19⅝"		
	78A4	6	D10	11-5⅛"	12	17.26	207	3'-1"	4'-0"	3'-3"	1'-1⅞"	2'-7⅜"	19⅛"		2'-3⅝"		2'-3⅝"		
	78A5	6	12	11'-9"	5	17.65	88		2'-6"	6'-1"	3'-2"				2'-8½"		19⅝"		
	78A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	78A7	4	STR.	5'-8"	42	3.79	159												
	78A8	5	12	7'-3"	4	7.56	30			6'-3"	1'-0"				9¾"		7"		
	TOTAL						867												
72" DIA.	72A1	6	T3	22'-0"	6	33.04	198										2'-0"	6'-4½"	
	72A2	5	9	13'-3"	5	13.82	69		13'-3"						4'-8"			5'-6"	3'-2"
	72A3	5	12	8'-6"	5	8.87	44			5'-6"	3'-0"				2'-6¾"		18¾"		
	72A4	6	D10	9'-11⅜"	12	14.94	179	2'-6"	3'-8¼"	3'-0"	9½"	2'-1¾"	15½"		2'-1⅜"		2'-1⅜"		
	72A5	6	12	10'-9"	5	16.15	81		2'-3"	5'-6"	3'-0"				2'-6¾"		18¾"		
	72A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	72A7	4	STR.	5'-8"	38	3.79	144												
	72A8	5	12	6'-9"	4	7.04	28			5'-9"	1'-0"				10¼"		6¼"		
	TOTAL						790												

BASES FOR TYPE "A" MANHOLES (Precast)

STRUCTURE	REINFORCEMENT BAR MARK	SIZE NO.	TYPE	LENGTH	NO. REQD.	WEIGHT - LBS EACH	WEIGHT - LBS TOTAL	A	B	C	D	E	F	G	H	J	K	O	R
66" DIA.	66A1	6	T3	20'-5"	6	30.73	184										2'-0"	5'-10½"	
	66A2	5	9	11'-10"	5	12.35	62		11'-10"						4'-2½"			5'-1¾"	2'-11⅛"
	66A3	5	12	8'-2"	5	8.52	43			5'-2"	3'-0"				2'-7"		18½"		
	66A4	5	D10	9'-1⅜"	12	9.51	114	2'-6"	3'-5"	2'-9½"	4⅞"	2'-2"	15"		23⅝"		23⅝"		
	66A5	6	12	10'-4"	5	15.50	78		2'-2"	5'-2"	3'-0"				2'-7"		18½"		
	66A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	66A7	4	STR.	5'-8"	36	3.79	136												
	66A8	5	12	6'-5"	4	6.69	27			5'-5"	1'-0"				10¼"		6¼"		
	TOTAL						691												
60" DIA.	60A1	6	T3	18'-11"	6	28.41	170										2'-0"	5'-4½"	
	60A2	5	9	10'-9"	5	11.21	56		10'-9"						3'-9½"			5'-11½"	2'-8"
	60A3	5	12	7'-4"	5	7.65	38			4'-7"	2'-9"				2'-4⅜"		17"		
	60A4	5	D10	8'-1⅜"	12	8.46	102	2'-3"	3'-6"	23½"	4⅞"	23½"	14"		16⅝"		16⅝"		
	60A5	5	12	9'-4"	5	9.74	49		2'-0"	4'-7"	2'-9"				2'-4⅜"		17"		
	60A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	60A7	4	STR.	5'-8"	27	3.79	102												
	TOTAL						564												
54" DIA.	54A1	6	T3	17'-4"	6	26.04	156										2'-0"	4'-10½"	
	54A2	5	9	9'-5½"	5	9.87	49		9'-5½"						3'-3¾"			4'-5½"	2'-5"
	54A3	5	12	6'-8"	5	6.95	28			4'-2"	2'-6"				2'-1¾"		15½"		
	54A4	5	D10	7'-2¾"	12	7.55	91	2'-0"	3'-7"	4⅞"	20⅝"	12⅜"			10⅝"		10⅝"		
	54A5	5	12	8'-8"	5	9.04	45		2'-0"	4'-2"	2'-6"				2'-1¾"		15½"		
	54A6	5	T3	15'-1"	3	15.74	47										20"	4'-3¼"	
	54A7	4	STR.	5'-8"	25	3.79	95												
	TOTAL						511												
48" DIA.	48A1	6	T3	15'-9"	6	23.66	142										2'-0"	4'-4½"	
	48A2	5	9	8'-0½"	5	8.39	42		8'-0½"						2'-9½"			4'-2"	2'-2"
	48A3	5	12	5'-9"	5	6.00	30			3'-8"	2'-1"				21⅝"		12¾"		
	48A4	5	D10	6'-5½"	12	6.74	81	2'-0"	3'-7½"	5⅛"	4⅞"	17"	17"		3⅝"		3⅝"		
	48A5	5	12	7'-6"	5	7.82	39		21"	3'-8"	2'-1"				21⅜"		12¾"		
	48A6	5	T3	15'-1"	3	17.74	47										20"	4'-3¼"	
	48A7	4	STR.	5'-8"	22	3.79	83												
	TOTAL						464												
42" DIA.	42A1	6	T3	14'-2"	6	21.28	128										2'-0"	3'-10½"	
	42A2	5	9	7'-6"	4	7.82	31		7'-6"						2'-9"			3'-3"	23"
	42A3	5	12	5'-4"	4	5.56	22			3'-3"	2'-1"				22½"		13½"		
	42A4	5	12	6'-4"	5	6.61	33		14"	3'-6"	20"				17½"		10½"		
	42A5	5	12	7'-1"	5	7.39	37		21"	3'-3"	2'-1"				21½"		12⅞"		
	42A6	5	T3	11'-11"	3	12.43	37										20"	3'-3¼"	
	42A7	5	12	6'-8"	5	6.95	35		18"	3'-6"	20"				17½"		10½"		
	42A8	4	STR.	4'-8"	21	3.12	66												
	TOTAL						389												
36" DIA.	36A1	6	T3	12'-7"	6	18.90	113										2'-0"	3'-4½"	
	36A2	5	9	6'-0"	4	6.26	25		6'-0"						2'-2"			3'-0"	20"
	36A3	5	12	4'-6"	4	4.69	19			2'-9"	21"				18"		10¾"		
	36A4	5	12	5'-0"	5	5.22	26			3'-0"	17"				14½"		8¾"		
	36A5	5	12	5'-0"	5	6.00	30		15"	2'-9"	21"				18"		10¾"		
	36A6	5	T3	11-11"	3	12.43	37										20"	3'-3¼"	
	36A7	5	12	5'-8"	5	5.91	30		15"	3'-0"	17"				14½"		8¾"		
	36A8	4	STR.	4'-8"	18	3.12	56												
	TOTAL						336												
30" DIA.	30A1	6	T3	11'-1"	6	16.65	100										2'-0"	2'-10½"	
	30A2	5	9	4'-4"	4	4.52	18		4'-4"						18"			2'-10"	17"
	30A3	5	12	4'-0"	4	4.17	17			2'-3"	21"				18"		10¾"		
	30A4	5	12	3'-10"	5	4.00	20			2'-7"	15"				12¾"		7¾"		
	30A5	5	12	5'-3"	5	5.48	27		15"	2'-3"	21"				18"		10¾"		
	30A6	5	T3	11'-11"	3	12.43	37										20"	3'-3¼"	
	30A7	5	12	5'-1"	5	5.30	26		15"	2'-7"	15"				12¾"		7¾"		
	30A8	4	STR	4'-8"	15	3.12	47												
	TOTAL						292												
24" DIA.	24A1	6	9	3'-5"	6	5.13	31		3'-5"						13"			2'-3½"	14½"
	24A2	6	T3	9'-4"	7	14.02	98										22"	2'-4½"	
	24A3	5	12	3'-6"	10	3.65	37			2'-1"	17"				14½"		8¾"		
	24A4	5	12	4'-9"	10	4.96	50		15"	2'-1"	17"				14½"		8¾"		
	24A5	5	T3	11'-11"	3	12.43	37										20"	3'-3¼"	
	24A6	4	STR.	4'-8"	12	3.12	37												
	TOTAL						290												

STRUCTURAL NOTES:

PLACING OF CONCRETE- CONCRETE MUST BE PLACED IN ACCORDANCE WITH THE METHOD OUTLINED IN THE CITY OF CHICAGO STANDARD SPECIFICATIONS.
CONSTRUCTION JOINTS - JOINTS NOT INDICATED ON THE DRAWINGS MUST BE SO MADE AND LOCATED AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE AND MUST BE APPROVED BY THE COMMISSIONER. JOINTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE METHOD OUTLINED IN THE SPECIFICATIONS.

CONCRETE PROTECTION FOR REINFORCEMENT- ALL REINFORCING STEEL MUST HAVE CLEAR CONCRETE COVERING AS FOLLOWS (UNLESS OTHERWISE NOTED) :
3" AT EXTERIOR SURFACES WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND;
2.5" AT SURFACES WHERE CONCRETE IS FORMED BUT SUBSEQUENTLY WILL BE IN CONTACT WITH SEWAGE; 2" AT ALL OTHER SURFACES.

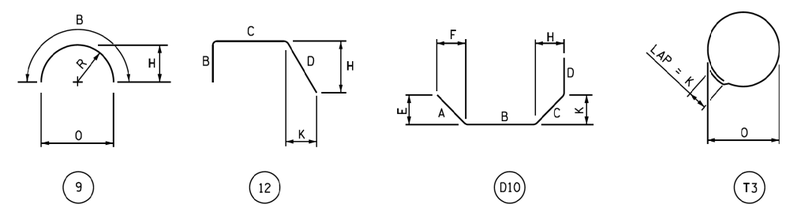
REINFORCING STEEL- ALL REINFORCING BARS MUST BE ACCURATELY PLACED AND SECURELY SUPPORTED BY BAR SUPPORTS, SPACERS OR HIGH CHAIRS.
ALL LAPS IN REINFORCING STEEL MUST BE BASED UPON THE 1989, ACI BUILDING CODE.
UNLESS OTHERWISE NOTED. HOOKS AND BENDS ON BARS MUST CONFORM TO RECOMMENDED DETAILS AS GIVEN IN THE "MANUAL OF STANDARD PRACTICE", C.R.S.I. 1990.

THE FOLLOWING ABBREVIATIONS ARE USED TO INDICATE THE LOCATION OF REINFORCING BARS:

T.	DENOTES	TOP	N.F.	DENOTES	NEAR FACE
BOT.	DENOTES	BOTTOM	F.F.	DENOTES	FAR FACE
I.F.	DENOTES	INSIDE FACE	E.F.	DENOTES	EACH FACE
O.F.	DENOTES	OUTSIDE FACE	E.W.	DENOTES	EACH WAY

PLACING BAR SUPPORTS- ALL REINFORCING BARS MUST BE SUPPORTED, ANCHORED AND TIED AND MUST CONFORM TO THE "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS", 1986, PREPARED BY THE CONCRETE REINFORCING STEEL INSTITUTE.

FOR ADDITIONAL DETAILS OF MANHOLES SEE SHEET NOS.



9 12 D10 T3

NOTES:
ALL DIMENSIONS ARE OUT TO OUT OF BAR.

BENDING RADII "R" TO OUTSIDE OF BAR.

NUMBERS IN CIRCLES DENOTE BAR TYPE.

STANDARD REVISIONS	
DATE	DESCRIPTION
06/25/10	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

REINFORCEMENT BER LIST FOR TYPE "A" PRECAST MANHOLE BASES

DRAWN: SBW
DESIGNED:
CHECKED:
REVIEWED:

A.4

___ OF ___

PN _____

$FILE$
8/9/2013

FILE PATH = c:\pwworking\secom00\klorenz\d0204536\D160W26-Sht-CDWM-DETAIL-03.dgn

D160W26-Sht-CDWM-DETAIL-03.dgn	DESIGNED - CDWM	REVISED -	
USER NAME = kalorenz	DRAWN - CDWM	REVISED -	
PLOT SCALE = 1.0000 ' / in.	CHECKED - CDWM	REVISED -	
PLOT DATE = 9/12/2013	DATE - 9/15/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT

SCALE: N.T.S. | SHEET 3 OF 9 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	511
		CONTRACT NO. 60W26		
		ILLINOIS FED. AID PROJECT		