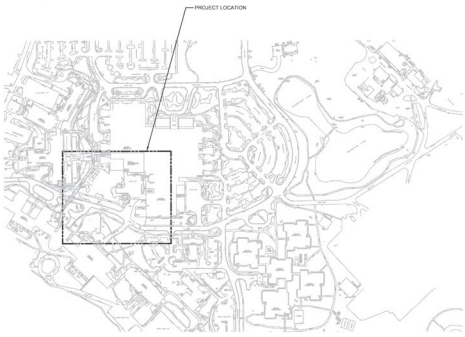


SITE LOCATION
(PARTIAL CAMPUS MAP - N.T.S.)

AS-BUILTS
* 8/24/12 Posted
* 11/21/12 Posted

Department of Veterans Affairs

BAY PINES VAMC - INPATIENT & OUTPATIENT IMPROVEMENTS

ALTERNATE STEAM AND CONDENSATE ROUTING

BAY PINES, FLORIDA
VA PROJECT NO. 516PR005

CONSTRUCTION DOCUMENTS - REVISION 1 **DATE: 06/19/2012**

Affiliated Engineers SE, Inc.
777 S. HARBOUR ISLAND BLVD., SUITE 450
TAMPA, FL 33602
TEL 813.405.3800 FAX 813.405.3801
www.aeieng.com
CA-5140

AEI PROJECT NO. 12250-00

CONSULTANTS:

WilsonMiller Stantec
800.643.4336 2200 North 20th Street, Tampa, FL 33605
+1 (813) 880-8000 www.WilsonMiller.com
WilsonMiller, Inc. is a Registered Professional Engineering Firm, Lic. # IC-C0000170
WilsonMiller, Inc. became a wholly-owned subsidiary of
Stantec Consulting Services, Inc. on July 23, 2010

DRAWING INDEX

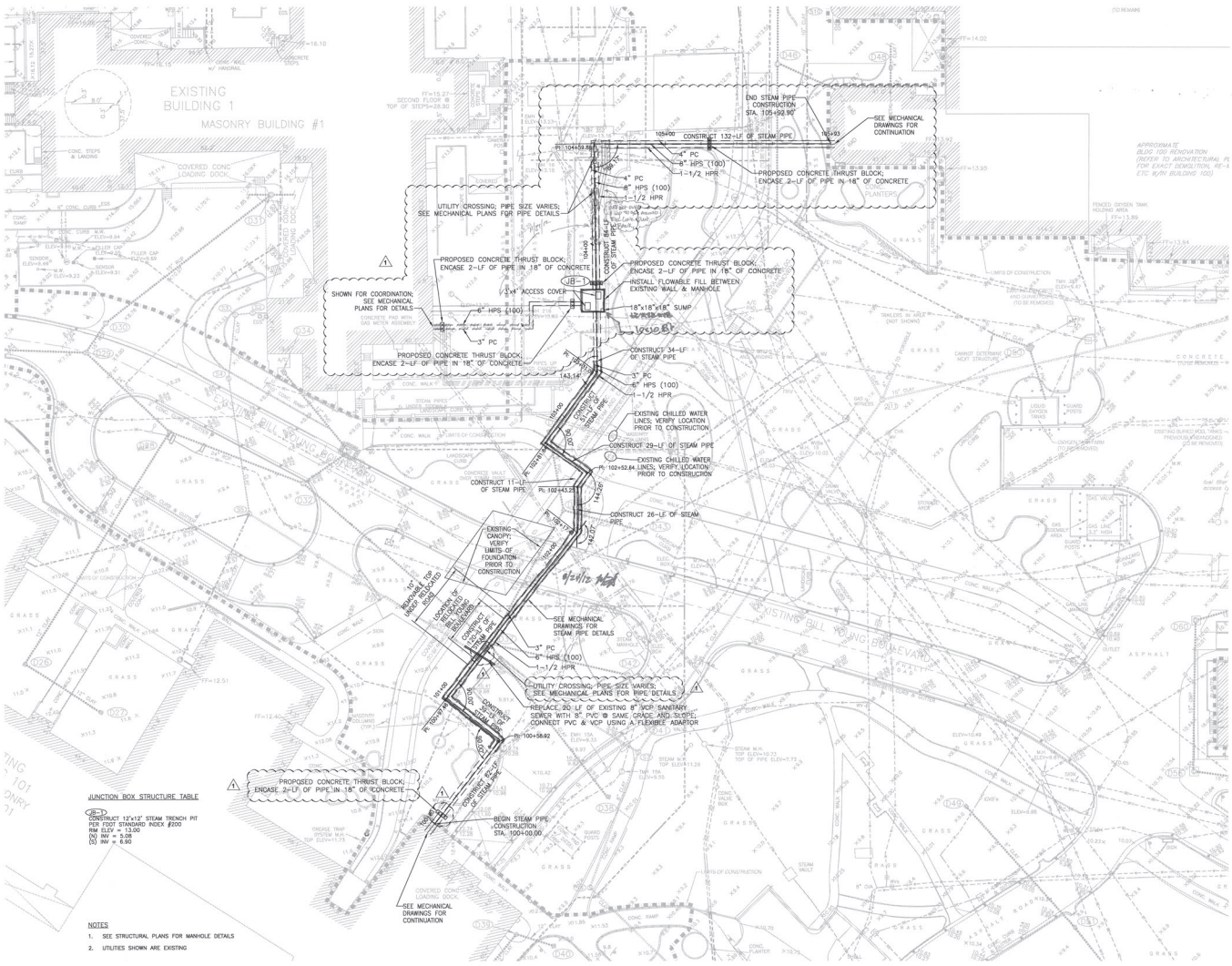
GENERAL
G001 COVER SHEET

CIVIL
C1/100 UTILITY PLAN
CP100 UTILITY PROFILE

STRUCTURAL
S100 STRUCTURAL DETAILS
S101 STRUCTURAL DETAILS

MECHANICAL
MP001 SYMBOLS AND ABBREVIATIONS
MS401 ENLARGED PLANS AND SECTIONS
MS100 SITE PLAN
MP101 INTERSTITIAL PIPING PLAN

Stamps & Approvals



AEI Affiliated Engineers

Affiliated Engineers GC, Inc.
5426 Bay Center Drive, Suite 450
Tampa, Florida 33609
Tel 813.405.3800 Fax 813.405.3801
www.aeinteg.com
FL EB-0000140

Wilson Miller Stantec

WILSON MILLER, INC. | STANTEC
2035 SOUTH TAMPA STREET, TAMPA, FL 33605
813-251-1000 FAX 813-251-1001 www.wilsonmiller.com
Wilson Miller, Inc. | Certificate of Authorization #27 - L.C.A. # LC-C000015
Stantec Consulting Services, Inc. | Certificate of Authorization #2673
Stantec Consulting Services, Inc. or Lic.CE, EB

ENGINEER OF RECORD
JOSE DE JESUS FIE
FL PE NO. 61652

Project Key Plan

Rev	Date	Description
1	06/19/2012	REVISION 1

Project Title

BAY PINES VAMC
Bay Pines, Florida

Inpatient & Outpatient Improvements

Project Phase
CONSTRUCTION DOCUMENTS

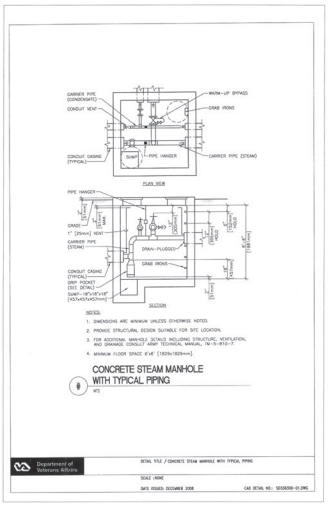
Date	Drawn By
06/06/2012	RC
Project No.	Checked By
215610911	RV

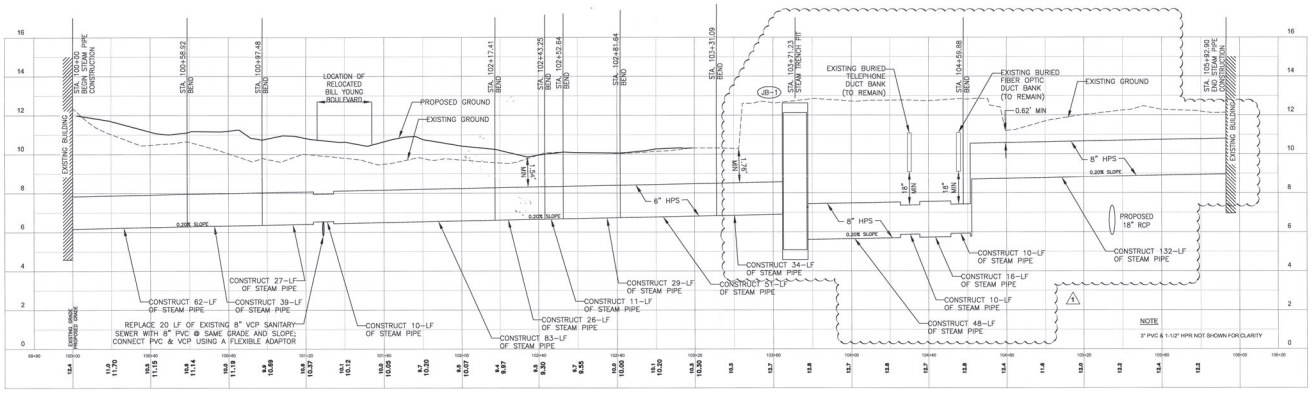
Sheet Title
UTILITY PLAN

Sheet No.
CU100

NOTES

1. SEE CIVIL PLANS BY CARDNOTBE FOR EXISTING UTILITIES TO REMAIN & TO BE DEMOLISHED.
2. CONTRACTOR TO REMOVE AND/OR RELOCATE UTILITIES IN CONFLICT WITH STEAM PIPE CONSTRUCTION.
3. PROPOSED CONDITIONS INCLUDING GRADING & DRAINAGE, UTILITIES & GEOMETRY PER THE CIVIL PLANS BY CARDNOTBE.
4. SEE STRUCTURAL PLANS FOR MANHOLE CONSTRUCTION DETAILS.
5. EXISTING ELEVATIONS BASED ON SURVEY INFORMATION IN CONSTRUCTION PLANS AND LIMITED FIELD INVESTIGATION.
6. PROPOSED GRADES BASED ON CIVIL PLANS PART OF THE CONSTRUCTION DOCUMENTS.
7. CONNECT PROPOSED PVC SANITARY SEWER PIPE TO EXISTING VCP WITH A FLEXIBLE ADAPTOR.
8. BACKFILL EXCAVATION WITH APPROVED SOIL MATERIAL AS DEFINED IN THE SPECIFICATIONS.
9. COMPACT BACKFILL MATERIAL AS REQUIRED UNDER SPECIFICATIONS FOR STORMWATER STRUCTURES.
10. SEE MECHANICAL PLANS FOR PIPING AND FITTINGS IN MANHOLES.
10. ACCESS FRAMES & COVERS TO BE 3'x4' TYPE IV, SIZE 28 & TYPE E, SIZE 28, CAST IDENTIFICATION "STEAM."





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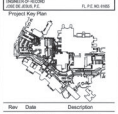
Affiliated Engineers GC, Inc.
5426 Bay Center Blvd., Suite 450
Tampa, Florida 33609
Tel 813.405.3800 Fax 813.405.3801
www.aeieng.com
FL EB-0000140

WilsonMiller Stantec
9428 BAYMEADOWS ROAD, JACKSONVILLE, FLORIDA 32256
904.363.8000 | WWW.WILSONMILLER.COM | WWW.STANTEC.COM

ENGINEER OF RECORD
JOSE DE JESUS, P.E. FL PE NO. 61650

Project Key Plan



Rev	Date	Description
1	06/19/2012	REVISION 1

Project Title
BAY PINES VAMC
Bay Pines, Florida

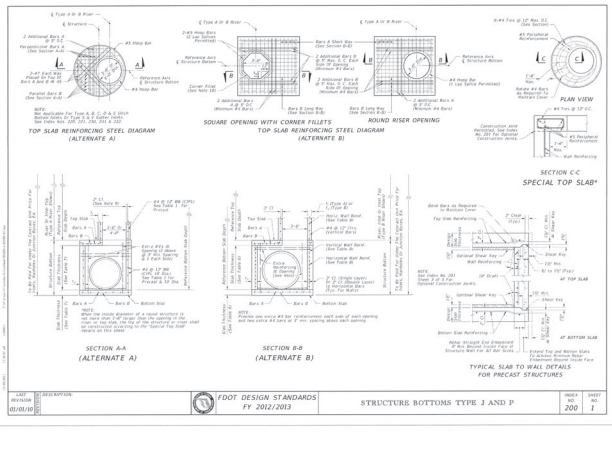
Inpatient & Outpatient Improvements

Project Phase
CONSTRUCTION DOCUMENTS

Date	Drawn By
06/06/2012	RC
Project No.	**Checked By**
215610911	RV

Sheet Title
UTILITY PROFILE

Sheet No.
CP100



LAST REVISION 01/01/10 | DESCRIPTION: | FDOT DESIGN STANDARDS FY 2012/2013 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 1

GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (dia. A) and 7'-0" square (dia. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures. Round risers are designated Type A, square risers are designated Type B.
2. Walls of circular structures (dia. A) constructed in place may be of brick or reinforced concrete. Precast and rectangular structures (dia. B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with ASTM C478 (see modified wall thicknesses in Table 1).
4. Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. All concrete shall be of Class II concrete, except use Class IV concrete when shown in the Plans, for special applications of structures located in extremely aggressive environments. Concrete as specified in ASTM C478 (4000 psi) may be used in lieu of Class II concrete for precast items manufactured in accordance with Specifications Section 449.
5. All reinforcement shown is ASTM A615/A615M Grade 60 steel, deformed bar. Equivalent area Grade 40 steel or equivalent area ASTM A185 (smooth) or ASTM A497 (deformed welded wire fabric) may be substituted according to Index No. 350, unless otherwise noted.
6. All A or AB, B structure bottoms may be used in conjunction with curb inlet tops Types J, J, J, J, J, J, J, J, J, and J8, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. All, B structure bottoms may be used in conjunction with curb inlet Types P, P, P, P, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, reinforcement in top and bottom slab shall be straight embedment.
9. All reinforcement must have 2" minimum cover except for 3'-0" diameter precast circular units manufactured under ASTM C478, layout construction otherwise shown. Additional bars used to contain hold formers for precast structures shall be supplemented as required to meet the cover requirements. Bars used for temporary support shall meet the minimum cover. Exposed ends of reinforcing at precast pipe openings and grouted joints must be removed to 1" below the concrete surface and sealed with a Type F epoxy in accordance with Specification Section 926. Horizontal cover in rectangular structures shall be lapped a minimum of 36 bar diameters or by standard hooks at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats, and when used on base with rectangular risers, inlets and inlet throats. Fillets will be required in the top slab of the AB, A structure bottoms when used with the AB, B risers. Each fillet shall be reinforced with two #5 bars.
11. Inlet walls, throats, risers or manhole tops shall be secured to structures as shown on Index No. 201 (Sheet 3 of 5) Optional Construction Joints.
12. Structures with depths over 14' below the mean high water table are to be checked for flotation by the designer at the drainage project.
13. Inch larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger AB, A units cannot replace AB, B units without approval of the Engineer. This rule applies to this Index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details and notes see Index No. 201.
15. Type J structure bottoms must have a minimum 8'-0" wall height when possible, for maintenance access.

ROUND STRUCTURE BOTTOMS (ALTERNATE A) & ROUND RISERS- TABLE 1

Wall Thickness (t), & (a) and Vertical & Horizontal Areas of Reinforcement (A)

Type	Structure/Riser Diameter (ft)	Cast-In-Place Items Class II Concrete: Riser (in.)	Riser (in.)	A_v (in²/ft)	Precast Items Class II Concrete: Bottom (in.)	Bottom (in.)	A_v (in²/ft)	ASTM C478: t, or t₁	t₂ or t₃	A_v *** (in²/ft)
P	3'-0"	6	8	0.20	6	8	0.20	4**		0.105
P	4'-0"	6	8	0.20	6	8	0.20	5**		0.120
J	5'-0"	-	8	0.20	-	8	0.20	6**		0.150
J	6'-0"	-	8	0.20	-	8	0.20	6		0.180
J	7'-0"	-	8	0.20	-	8	0.20	7		0.210
J	8'-0"	-	8	0.20	-	8	0.20	8		0.240
J	10'-0"	-	10	0.60#	-	10	0.60#	10		0.300
J	12'-0"	-	10	0.60#	-	12	0.60#	12		0.360

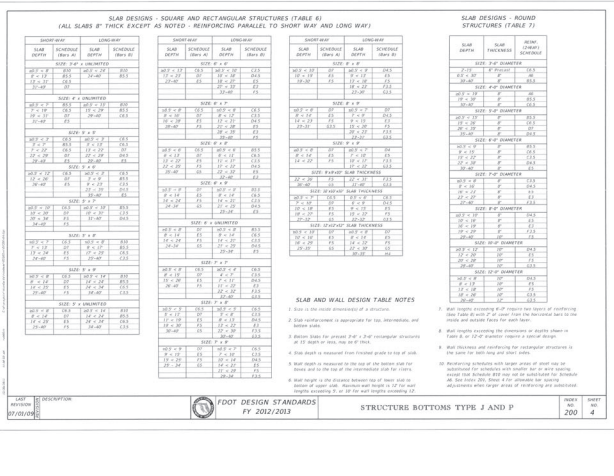
TABLE 1 NOTES:
*Minimum 0.20 sq. in/ft. at each face, 12" max. bar spacing.
**Modified minimum wall thickness.
***Min. total circumferential reinforcement for continuous steel hoops:
$A_v = 0.24$ sq. in. for riser section height less than 2'-0" (2 hoop min.);
$A_v = 0.15$ sq. in. for riser section height more than 2'-0" up to 8'-0" (2 hoop min.)
Areas of reinforcing for precast items are based on Grade 60 reinforcing.
No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1.
Area of vertical reinforcing may be reduced in accordance with ASTM C478.

SQUARE & RECTANGULAR STRUCTURES (ALTERNATE B) - TABLE 2

Type	Wall Length (ft)	Max Depth (ft)	Wall Thickness (t): CIP & Precast G Riser	Precast B Bottom
P	≤ 3'-0"	4ft	5	6
J	4'-0"	40	5	6
J	5'-0"	22		6
J	6'-0"	15		6
J	7'-0" to 9'-0"	40	6	8
J	10'-0"	36	8	8
J	10'-0" to 12'-0"	40	10	9
J	10'-0"	15		9
J	10'-0"	40	10	10
J	10'-0"	25		9
J	10'-0"	30	10	10

TABLE 2 NOTES:
See Table 6 for Reinforcing Schedule.

LAST REVISION 01/01/09 | DESCRIPTION: | FDOT DESIGN STANDARDS FY 2012/2013 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 2



SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES (TABLE 6)
(ALL SLABS 8" THICK EXCEPT AS NOTED - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

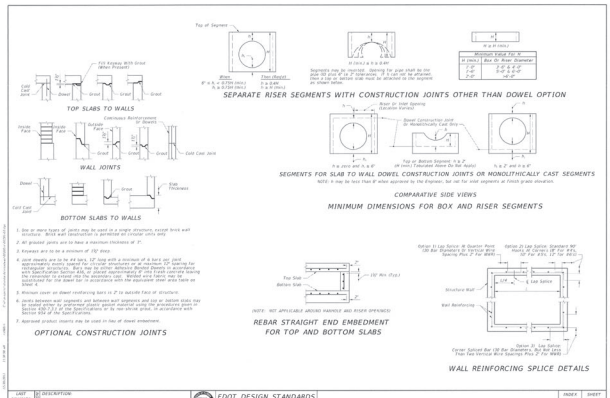
SHORT-WAY: SLAB DEPTH	SHORT-WAY: SCHEDULE (Bars A)	LONG-WAY: SLAB DEPTH	LONG-WAY: SCHEDULE (Bars B)
SIZE: 3'-0" x UNLIMITED			
w3.0 x 9	D10	w3.0 x 16	D10
9 < 12	#5.5	16-40	#5.5
12 < 17	#6.5		
17-40	D7		
SIZE: 4 x UNLIMITED			
w3.0 x 9	#5.5	w3.0 x 12	D10
9 < 18	D6.5	12 < 20	#5.5
18 < 31	D7	20-40	D6.5
31-40	#5		
SIZE: 5 x 5			
w3.0 < 7	#5.5	w3.0 < 7	D6.5
7 < 12	#6.5	7 < 12	D7
12 < 19	#7	12 < 19	#6.5
19-40	#5	19-40	#5
SIZE: 5 x 6			
w3.0 < 7	D7	w3.0 < 7	#5.5
7 < 12	#6.5	7 < 12	D6.5
12 < 19	#7	12 < 19	D7
19-40	#5	19-40	#5
SIZE: 5 x 7			
w3.0 < 10	D7	w3.0 < 10	#5.5
10 < 20	#6.5	10 < 20	D6.5
20-40	#5	20-40	D7
SIZE: 5 x 8			
w3.0 < 12	D7	w3.0 < 12	#5.5
12 < 20	#6.5	12 < 20	D6.5
20-40	#5	20-40	D7
SIZE: 5 x 9			
w3.0 < 12	D7	w3.0 < 12	#5.5
12 < 20	#6.5	12 < 20	D6.5
20-40	#5	20-40	D7
SIZE: 5 x 10			
w3.0 < 10	D7	w3.0 < 10	#5.5
10 < 20	#6.5	10 < 20	D6.5
20-40	#5	20-40	D7
SIZE: 5 x UNLIMITED			
w3.0 < 9	D7	w3.0 < 9	#5.5
9 < 18	#6.5	9 < 18	D6.5
18 < 31	#7	18 < 31	D7
31-40	#5	31-40	#5
SIZE: 6 x 6			
w3.0 < 12	D7	w3.0 < 12	#5.5
12 < 24	#6.5	12 < 24	D6.5
24-40	#5	24-40	D7
SIZE: 6 x 7			
w3.0 < 9	D7	w3.0 < 9	D7
9 < 18	#6.5	9 < 18	#6.5
18 < 24	#7	18 < 24	#7
24-40	#5	24-40	#5
SIZE: 6 x 8			
w3.0 < 9	D7	w3.0 < 9	D7
9 < 18	#6.5	9 < 18	#6.5
18 < 24	#7	18 < 24	#7
24-40	#5	24-40	#5
SIZE: 6 x 9			
w3.0 < 9	D7	w3.0 < 9	D7
9 < 18	#6.5	9 < 18	#6.5
18 < 24	#7	18 < 24	#7
24-40	#5	24-40	#5
SIZE: 6 x 10			
w3.0 < 9	D7	w3.0 < 9	D7
9 < 18	#6.5	9 < 18	#6.5
18 < 24	#7	18 < 24	#7
24-40	#5	24-40	#5
SIZE: 6 x UNLIMITED			
w3.0 < 8	D7	w3.0 < 8	#5.5
8 < 16	#6.5	8 < 16	D6.5
16 < 24	#7	16 < 24	D7
24-40	#5	24-40	#5
SIZE: 7 x 7			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 8			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 9			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 10			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 11			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 12			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 13			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x 14			
w3.0 < 8	D6.5	w3.0 < 8	D6.5
8 < 14	D7	8 < 14	D7
14 < 21	#6.5	14 < 21	#6.5
21-40	#5	21-40	#5
SIZE: 7 x UNLIMITED			
w3.0 < 7	D6.5	w3.0 < 7	D6.5
7 < 12	D7	7 < 12	D7
12 < 19	#6.5	12 < 19	#6.5
19-40	#5	19-40	#5
SIZE: 8 x 8			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 9			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 10			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 11			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 12			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 8 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 9			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 10			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 11			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 12			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 9 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 10			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 11			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 12			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 10 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 11			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 12			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 11 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 12			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 12 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 13			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 14			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 15			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 16			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 17			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 18			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 19			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x 20			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5
SIZE: 13 x UNLIMITED			
w3.0 < 7	D7	w3.0 < 7	D7
7 < 12	#6.5	7 < 12	#6.5
12 < 19	#7	12 < 19	#7
19-40	#5	19-40	#5

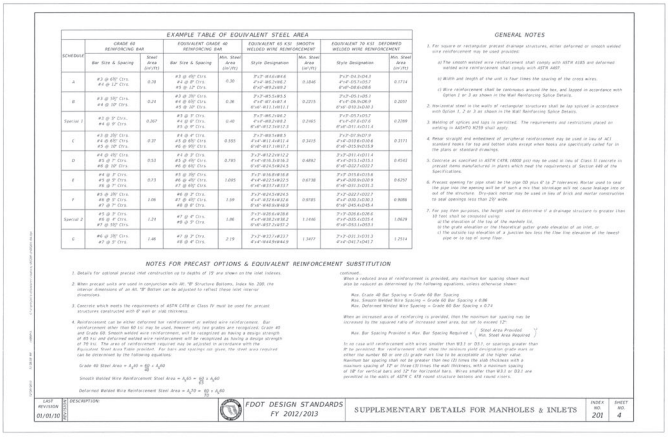
SLAB DESIGNS - ROUND STRUCTURES (TABLE 7)

SLAB DEPTH	SLAB THICKNESS	REINF. (2#4#7 SCHEDULE)
SIZE: 3'-0" DIAMETER		
7'-0"	8"	D6.5
8'-0" < 30'	8"	#6
30-40'	8"	#6.5
SIZE: 4'-0" DIAMETER		
7'-0"	8"	#5
8'-0" < 30'	8"	#5.5
30-40'	8"	D6.5
SIZE: 4'-0" DIAMETER		
7'-0"	8"	#5
8'-0" < 30'	8"	#5.5
30-40'	8"	D6.5
SIZE: 5'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 6'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 7'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 8'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 9'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 10'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5
SIZE: 12'-0" DIAMETER		
7'-0"	8"	D5.5
8'-0" < 30'	8"	D6
30-40'	8"	D6.5

SLAB AND WALL DESIGN TABLE NOTES

1. Size is the inside breadth(s) of a structure.
2. Slab reinforcement is appropri





EXAMPLE TABLE OF EQUIVALENT STEEL AREA

SCHEDULE	GRADE 60 REINFORCING BAR: Bar Size & Spacing	GRADE 60 REINFORCING BAR: Steel Area (in²/ft)	EQUIVALENT GRADE 40 REINFORCING BAR: Bar Size & Spacing	EQUIVALENT GRADE 40 REINFORCING BAR: Min. Steel Area (in²/ft)	EQUIVALENT 65 KSI SMOOTH WELDED WIRE REINFORCEMENT: Style Designation	EQUIVALENT 65 KSI SMOOTH WELDED WIRE REINFORCEMENT: Min. Steel Area (in²/ft)	EQUIVALENT 70 KSI DEFORMED WELDED WIRE REINFORCEMENT: Style Designation	EQUIVALENT 70 KSI DEFORMED WELDED WIRE REINFORCEMENT: Min. Steel Area (in²/ft)
A	#3 @ 450° Ctrs. #4 @ 12" Ctrs.	0.38	#3 @ 450° Ctrs. #4 @ 12" Ctrs. #5 @ 19" Ctrs.	0.30	7x7-W4.0xW4.0 4x4-W6.0xW6.0 4x4-W8.0xW8.0	0.1840	7x7-D4.0xD4.0 4x4-D6.0xD6.0 4x4-D8.0xD8.0	0.1774
B	#3 @ 350° Ctrs. #4 @ 10" Ctrs.	0.44	#3 @ 350° Ctrs. #4 @ 10" Ctrs. #5 @ 16" Ctrs.	0.36	7x7-W5.0xW5.0 4x4-W7.0xW7.0 4x4-W11.0xW11.0	0.2215	7x7-D5.0xD5.0 4x4-W7.0xW7.0 4x4-W11.0xW11.0	0.2057
Special 1	#3 @ 3" Ctrs. #4 @ 9" Ctrs.	0.267	#3 @ 3" Ctrs. #4 @ 9" Ctrs. #5 @ 14" Ctrs.	0.40	7x7-W5.0xW5.0 4x4-W8.0xW8.0 4x4-W11.0xW11.0	0.2465	7x7-D5.0xD5.0 4x4-W8.0xW8.0 4x4-W11.0xW11.0	0.2299
C	#3 @ 250° Ctrs. #4 @ 450° Ctrs. #5 @ 10" Ctrs.	0.37	#3 @ 4" Ctrs. #5 @ 450° Ctrs. #6 @ 9½" Ctrs.	0.555	7x7-W8.0xW8.0 4x4-W11.0xW11.0 4x4-W17.0xW17.0	0.3415	7x7-D7.0xD7.0 4x4-D10.0xD10.0 4x4-D15.0xD15.0	0.3171
D	#3 @ 150° Ctrs. #5 @ 7" Ctrs. #8 @ 18" Ctrs.	0.53	#3 @ 2" Ctrs. #5 @ 450° Ctrs. #8 @ 450° Ctrs.	0.795	7x7-W12.0xW12.0 4x4-W16.0xW16.0 4x4-W24.0xW24.0	0.4867	7x7-D11.0xD11.0 4x4-D15.0xD15.0 4x4-D22.0xD22.0	0.4541
E	#4 @ 9" Ctrs. #5 @ 12" Ctrs. #6 @ 7" Ctrs.	0.73	#3 @ 150° Ctrs. #5 @ 7" Ctrs. #7 @ 450° Ctrs.	1.095	7x7-W18.0xW18.0 4x4-W24.0xW24.0 4x4-W31.0xW31.0	0.6738	7x7-D15.0xD15.0 4x4-D22.0xD22.0 4x4-D31.0xD31.0	0.6292
F	#3 @ 150° Ctrs. #6 @ 7" Ctrs. #7 @ 7" Ctrs.	1.06	#6 @ 2" Ctrs. #7 @ 450° Ctrs. #8 @ 6" Ctrs.	1.59	7x7-W24.0xW24.0 4x4-W32.0xW32.0 4x4-W40.0xW40.0	0.8785	7x7-D22.0xD22.0 4x4-D30.0xD30.0 4x4-D40.0xD40.0	0.8086
Special 2	#3 @ 7" Ctrs. #6 @ 6" Ctrs. #7 @ 150° Ctrs.	1.29	#7 @ 4" Ctrs. #8 @ 7" Ctrs.	1.86	7x7-W30.0xW30.0 4x4-W38.0xW38.0 4x4-W47.0xW47.0	1.0496	7x7-D30.0xD30.0 4x4-D40.0xD40.0 4x4-D51.0xD51.0	1.0629
G	#6 @ 150° Ctrs. #7 @ 7" Ctrs.	1.46	#7 @ 3" Ctrs. #8 @ 4" Ctrs.	2.19	7x7-W37.0xW37.0 4x4-W44.0xW44.0	1.3417	7x7-D37.0xD37.0 4x4-D47.0xD47.0	1.2914

GENERAL NOTES

1. For square or rectangular precast drainage structures, either deformed or smooth welded wire reinforcement may be used provided:
   a) The smooth welded wire reinforcement shall comply with ASTM A185 and deformed welded wire reinforcement shall comply with ASTM A497.
   b) Width and length of the unit is four times the spacing of the cross wires.
   c) Wire reinforcement shall be continuous around the box, and lapped in accordance with Option 1 or 2 as shown in the Wall Reinforcing Splice Details.
2. Horizontal steel in the walls of rectangular structures shall be lap spliced in accordance with Option 1, 2 or 3 as shown in the Wall Reinforcing Splice Details.
3. Welding of splices and tags is permitted. The requirements and restrictions placed on welding in AASHTO M259 shall apply.
4. Prime straight and embedment of peripheral reinforcement may be used in lieu of 90° standard hooks for top and bottom slabs except when hooks are specifically called for in the plans or standard drawings.
5. Concrete as specified in ASTM C478 (M000) pipe may be used in lieu of Class III concrete in precast units manufactured in plants which meet the requirements of Section 448 of the Specifications.
6. Precast opening for pipe shall be the pipe OD plus 6" to 2" tolerance. Mortar used to seal the pipe into the opening will be of such a mix that shrinkage will not cause leakage into or out of the structure. Dry-pack mortar may be used in lieu of brick and mortar construction to seal openings less than 24" wide.
7. For pay item purposes, the height used to determine if a drainage structure is greater than 10 feet shall be measured along:
   a) the elevation of the top of the manhole lid,
   b) the grate elevation or the theoretical gutter grate elevation of an inlet, or
   c) the outside top elevation of a junction box less the flow line elevation of the lowest pipe or in lieu of sump floor.

NOTES FOR PRECAST OPTIONS & EQUIVALENT REINFORCEMENT SUBSTITUTION

1. Details for optional precast inlet construction up to depths of 19' are shown on the inlet indexes.
2. When precast units are used in conjunction with 48" "B" Structure Bottoms, Index No. 200, the interior dimensions of an 48" "B" Bottom can be adjusted to reflect those inlet interior dimensions.
3. Concrete which meets the requirements of ASTM C478 or Class IV must be used for precast structures constructed with 8" wall or slab thickness.
4. Reinforcement can be either deformed bar reinforcement or welded wire reinforcement. Bar reinforcement other than 60 ksi may be used, however only two grades are recognized. Grade 40 and Grade 60. Smooth welded wire reinforcement, will be recognized as having a design strength of 65 ksi and deformed welded wire reinforcement will be recognized as having a design strength of 70 ksi. The area of reinforcement required may be adjusted in accordance with the following equations. Where the bar sizes, spacings and splices are given, the steel area required can be determined by the following equations.

   Grade 40 Steel Area = $A_s 40 = \frac{60}{40} \times A_s 60$

   Smooth Welded Wire Reinforcement Steel Area = $A_s 65 = \frac{60}{65} \times A_s 60$

   Deformed Welded Wire Reinforcement Steel Area = $A_s 70 = \frac{60}{70} \times A_s 60$

   Optional:
   When a reduced area of reinforcement is provided, any maximum bar spacing shown must also be reduced as determined by the following equations, unless otherwise shown:

   Max. Grade 40 Bar Spacing = Grade 60 Bar Spacing
   Max. Smooth Welded Wire Spacing = Grade 60 Bar Spacing x 0.90
   Max. Deformed Welded Wire Spacing = Grade 60 Bar Spacing x 0.74

   When an increased area of reinforcing is provided, then the maximum bar spacing may be increased by the squared ratio of increased steel area, but not to exceed 12":

   $$\text{Max. Bar Spacing Provided} = \text{Max. Bar Spacing Required} \times \left(\frac{\text{Steel Area Provided}}{\text{Min. Steel Area Required}}\right)^2$$

   In no case will reinforcement with wires smaller than W3.3 or D3.1, or spacings greater than 6" be used in the walls of inlets. Wires smaller than W3.3 or D3.1 may be used in lieu of or either the number 60 or one (1) grade mark line to be acceptable at the higher value. Maximum bar spacing shall not be greater than two (2) times the slab thickness with a maximum spacing of 12" or three (3) times the wall thickness, with a minimum spacing of 18" for vertical bars and 12" for horizontal bars. Wires smaller than W3.3 or D3.1 are permitted in the walls of AEPH C 478 round structural laterals and round risers.

LAST REVISION 01/01/10
DESCRIPTION:
FDOT DESIGN STANDARDS FY 2012/2013
SUPPLEMENTARY DETAILS FOR MANHOLES & INLETS
INDEX NO. 201
SHEET NO. 4

AEI Affiliated Engineers
Affiliated Engineers Inc.
777 S. Harbor Island Blvd., Suite 450
Tampa, Florida 33602
Tel: 813.223.3308 Fax:813.405.3801
www.aeiinc.com
FL CER-0000140

Wilson Miller Stantec
2035 South 48th Street, Suite 1 Tempe
480.345.4300 • F 2125130000 • F 2125130300 | www.WilsonMiller.com
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ENGINEER OF RECORD
JOB TF JERUD P.E.
FL P.E. NO. 61950

Project Key Plan

Rev	Date	Description

Project Title

BAY PINES VAMC
Bay Pines, Florida

Inpatient & Outpatient Improvements

Project Phase
CONSTRUCTION DOCUMENTS

Date 06/06/2012	Drawn By RC
Project No. 215610911	Checked By RV

Sheet Title
STRUCTURAL DETAILS

Sheet No.
S101

SYMBOLS AND ABBREVIATIONS

GENERAL

FT	-	FEET
HDPE	-	HIGH DENSITY POLYETHYLENE
NTS	-	NOT TO SCALE
OC	-	ON CENTER
PSI	-	POUNDS PER SQUARE INCH

PIPING SPECIALTIES

- FLANGE
- 2" AND SMALLER, CAP OR PLUG
  2-1/2" AND LARGER, BLIND FLANGE
- INVERTED BUCKET TRAP
- ECCENTRIC REDUCER
- DIRECTION OF FLOW
- PIPE GUIDE
- ANCHOR

PIPING

SINGLE	DOUBLE	
		ELBOW DOWN
		ELBOW UP
		BOTTOM CONNECTION (45° OR 90°)
		TOP CONNECTION (45° OR 90°)
		45° PIPE RISE(R) /DROP(D)
	N/A	TEE (REFER TO SPECIFICATION FOR SIDE, TOP OR BOTTOM TEE)
		EXISTING PIPING TO REMAIN
		FLOW DIRECTION DESIGNATION
		LINE CONTINUATION BREAK

PIPING SYSTEM LABELS

- HPR — HIGH PRESSURE RETURN
- HPS(XX) — HIGH PRESSURE STEAM, (XX) = SYSTEM PRESSURE IN PSIG
- PC — PUMPED CONDENSATE
- V — VENT

SPECIAL DESIGNATION

- REFER M-1 — PLAN CONTINUATION REFERENCE
- 1 M-1 — DETAIL REFERENCE (TOP=DETAIL NO., BOTTOM=DRAWING NO. SHOWN ON)
- 1 M-1 — SECTION DESIGNATION (TOP DESIGNATES SECTION NUMBER, BOTTOM DESIGNATES ON WHICH SHEET SECTION APPEARS)
- A158-6 OR 158-6 — DETAIL REFERENCE (TOP= DETAIL NO., BOTTOM=SHEET NO. IN DETAIL MANUAL)
- MATCHLINE DESIGNATION
- 1 — GENERAL OR SPECIAL NOTES REFERENCE

AEI Affiliated Engineers

Affiliated Engineers SE, Inc.
777 S. Harbor Island Blvd., Suite 450
Tampa, Florida 33602
Tel: 813.405.3800 Fax: 813.405.3801
www.aeiseng.com
CA-5140

WilsonMiller Stantec

Stantec
888.640.4286 or 772.335.8851 or 772.335.8300 | www.WilsonMiller.com
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MANAGER OF RECORD
MICHAEL ADAM JUDGE — FL P.E. NO. 72046

Project Key Plan

Rev	Date	Description

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Bay Pines, Florida

Inpatient & Outpatient Improvements

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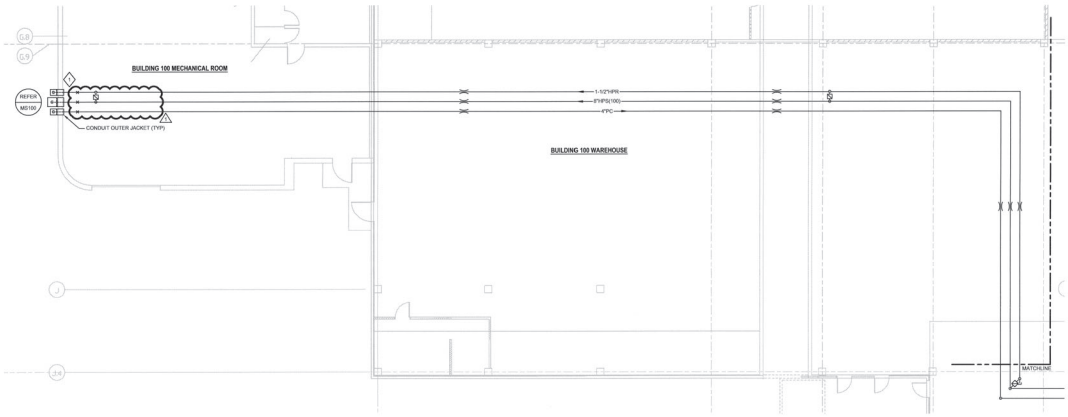
12250-00	JPM

Sheet Title

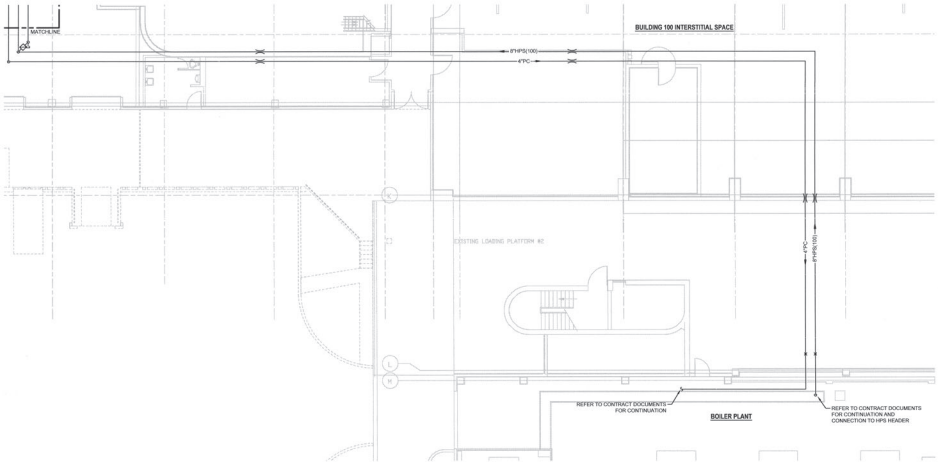
SYMBOLS AND ABBREVIATIONS

Sheet No.

MP001



1 **INTERSTITIAL PIPING PLAN - NORTH**
SCALE: 1/8" = 1'-0"



2 **INTERSTITIAL PIPING PLAN - SOUTH**
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. PROTECT ALL EXISTING UTILITIES, STRUCTURES, ETC. DURING INSTALLATION OF NEW UTILITIES. EXISTING STRUCTURES AND FACILITIES THAT ARE DAMAGED OR REMOVED DUE TO CONTRACTOR'S OPERATIONS SHALL BE PATCHED, REPAIRED, OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, THE OWNER OF SUCH STRUCTURES, AND AUTHORITIES HAVING JURISDICTION.
2. DUE TO THE SENSITIVE NATURE OF MAINTAINING UTILITIES TO THIS CAMPUS, ALL WORK SHALL BE PERFORMED AT NIGHT, REQUIRING THE SHUTDOWN OF EXISTING, OR STARTUP OF NEW UTILITIES PRIOR TO START OF WORK. WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT, ON WEEKENDS AND/OR OVER HOLIDAYS.
3. WORK SHOWN HEREIN IS INTENDED TO SHOW END RESULT AND DOES NOT IMPLY SEQUENCING OF WORK. CONTRACTOR TO ESTABLISH WORK SEQUENCE VIA COORDINATION WITH OWNER AND REVIEW OF EXISTING CONDITIONS.
4. DO NOT DRILL INTO EXISTING BUILDING STRUCTURE. UTILIZE EXISTING HOLES IN STRUCTURE FOR NEW ATTACHMENTS.
5. REFER TO ELLERBE BECKETVOA DRAWINGS FOR ANCHOR, DRIP LEG, AND OTHER APPROPRIATE DETAILS.

SHEET KEYNOTES

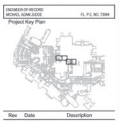
1. SEAL END OF CONDUIT SYSTEMS USING MANUFACTURER'S SLOTTED END SEAL. INSTALL WITH VOIMT LINES PER SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.

Affiliated Engineers, Inc.
7777 S. Hebner Island Blvd., Suite 450
Tampa, Florida 33637
Tel 813.405.3800 Fax 813.405.3801
www.aeinc.com
CA-5140

WilsonMiller Stantec
3035 Island Blvd, Suite 1000
North Palm Beach, Florida 33408-5413
Tel 561.478.5558 Fax 561.478.5559
Registration No. a Certificate of Authorization #AE a-26 Lic. #LC-C000016
Stantec Consulting Services Inc. or Lic.EB-0005

MANAGER OF RECORD
MICHAEL ADAM JOZSI FL P.E. NO. 73844

Project Key Plan



Rev	Date	Description
1	06/19/2012	REVISION 1

Project Title
BAY PINES VAMC
Bay Pines, Florida

Inpatient & Outpatient Improvements

Project Phase
CONSTRUCTION DOCUMENTS

Date	Drawn By
06/06/2012	MAJ
Project No.	Checked By
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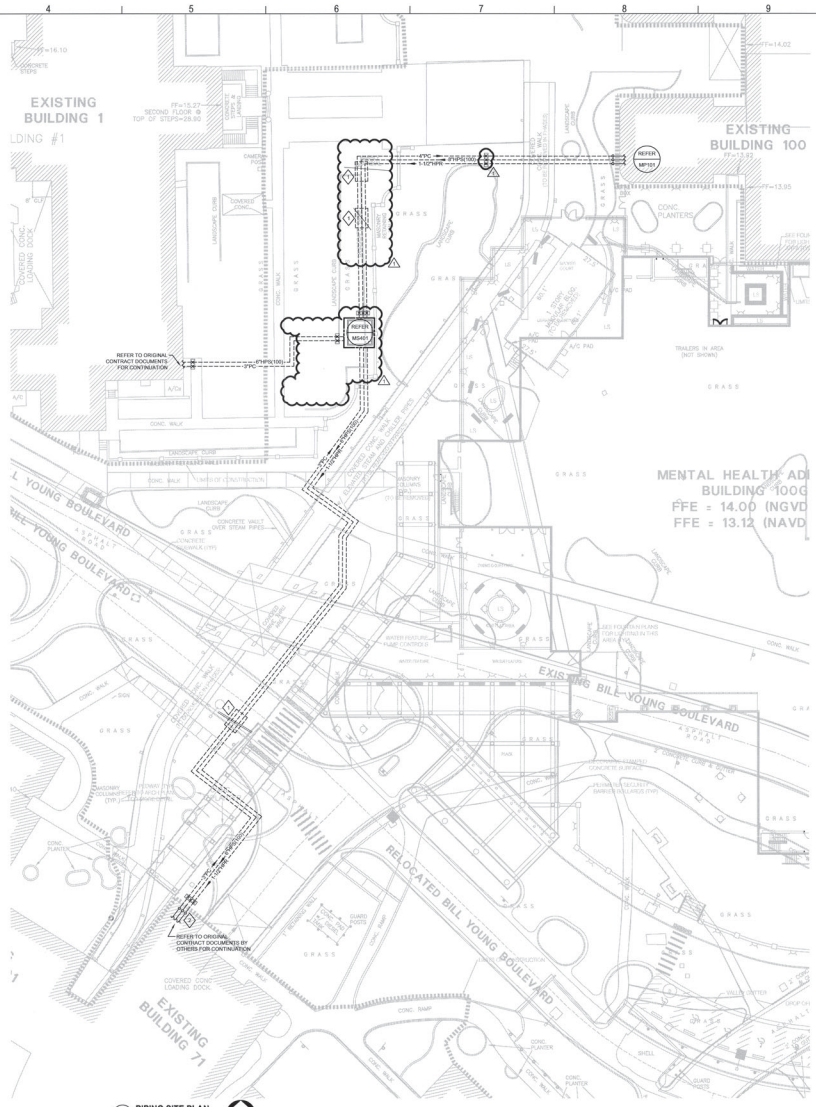
Sheet Title
INTERSTITIAL PLAN

Sheet No.
MP101



1 **PIPING SITE PLAN**
SCALE: 1" = 30'-0"

GENERAL NOTES

1. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND ARE NOT ENTIRELY FIELD VERIFIED. THEREFORE, THE ENGINEER CAN NOT GUARANTEE THE ACCURACY OF SAME, NOR THAT ALL UTILITIES ARE SHOWN. CONTRACTOR SHALL EXPOSE ALL UNDERGROUND UTILITY LINES TO HIS SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION.
2. PROTECT ALL EXISTING UTILITIES, STRUCTURES, ETC. DURING EXCAVATION AND INSTALLATION OF NEW UTILITIES. EXISTING STRUCTURES AND FACILITIES, INCLUDING BUT NOT LIMITED TO BUILDINGS, UTILITIES, TOPOGRAPHY, STREETS, CURBS, WALKS, LANDSCAPE MATERIALS, AND OTHER IMPROVEMENTS THAT ARE DAMAGED OR REMOVED DUE TO CONTRACTOR'S OPERATIONS OR CONTRACTOR'S WORK, SHALL BE PATCHED, REPAIRED, OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, THE OWNER OF SUCH STRUCTURES AND FACILITIES, AND AUTHORITIES HAVING JURISDICTION. HAND EXCAVATION MAY BE REQUIRED IN SOME AREAS.
3. CONTRACTOR IS TO COORDINATE ALL WORK WITH OWNER AND OUTSIDE UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND MAKING OF ADJUSTMENTS TO SAME.
4. DUE TO THE SENSITIVE NATURE OF MAINTAINING UTILITIES TO THIS CAMPUS, COORDINATE WITH OWNER ALL WORK REQUIRING THE SHUTDOWN OF EXISTING, OR STARTUP OF NEW UTILITIES PRIOR TO START OF WORK. WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT, ON WEEKENDS AND/OR OVER HOLIDAYS.
5. PROVIDE REMOVAL AND REPLACEMENT/RELOCATION OF ALL SURFACE OBJECTS INCLUDING, BUT NOT LIMITED TO SIGNS, TREES, PLANTERS, BIKE RACKS, UTILITY POLES, ETC. AS NECESSARY TO INSTALL NEW UNDERGROUND PIPING AND MANHOLES.
6. WORK SHOWN HEREIN IS INTENDED TO SHOW END RESULT AND DOES NOT IMPLY SEQUENCING OF WORK. CONTRACTOR TO ESTABLISH WORK SEQUENCE VIA COORDINATION WITH OWNER AND REVIEW OF EXISTING CONDITIONS.
7. PRE-INSULATED PIPING CONDUIT SYSTEM (PIPING CONDUIT SYSTEM) IS RESPONSIBLE FOR FINAL EXPANSION AND STRESS CALCULATIONS, ANCHOR, AND PENETRATION DETAILS.
8. REFER TO ELLERBE BECKET/VOA DRAWINGS FOR ANCHOR, DRIP LEG, AND OTHER APPROPRIATE DETAILS.
9. SLOPE ALL HORIZONTAL PIPING AT 1 INCH PER 40 FEET OF RUN.

SHEET KEYNOTES

1. PROVIDE 10 FT SECTION OF HPS PIPING SYSTEM WITH AEROGEL INSULATION AT EXPANSION JOINT OR EXPANSION LOCATED. PROVIDE 4 FT SECTION WITH FUSION BONDED EPOXY COATING ON INNER STEEL CONDUIT AND HDPE SHRINK WRAP IN LIEU OF STANDARD HDPE JACKET
2. SEAL ENDS OF CONDUIT SYSTEMS WITH MANUFACTURER'S STANDARD END SEALS. INSTALL WITH VENT LINES PER SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.

Affiliated Engineers

Affiliated Engineers SE, Inc.
777 S. Harbour Island Blvd., Suite 450
Tampa, Florida 33602
Tel 813.405.3800 Fax 813.405.3801
www.aeinc.com
CA-5140

WilsonMiller Stantec
1900 Glades Road, Suite 351
Boca Raton, Florida 33432
561.361.4230 JTN CERTIFICATE OF AUTHORIZATION # 00000970 www.wilsonmiller.com
Stantec
Stantec Consulting Services Inc. 5720 Corporate Blvd., Suite 400
Boca Raton, FL 33486-1010 Tel. (561) 226-7000 Fax. (561) 226-7299
Stantec Consulting Services Inc. or Lee Co. 3410

ENGINEER OF RECORD
MICHAEL ADAM AIRDO FL P.E. NO. 70846

Project Bay Plan

Rev	Date	Description
1	06/19/2012	REVISION 1

Project Title
BAY PINES VAMC
Bay Pines, Florida

Inpatient & Outpatient Improvements

Project Phase:
CONSTRUCTION DOCUMENTS

Date	Drawn By
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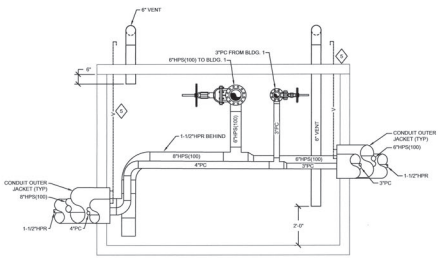
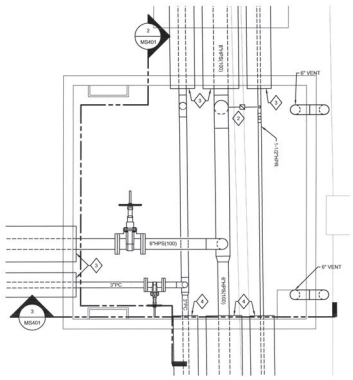
Project No.	Checked By
12250-00	JPM

Sheet Title
SITE PLAN

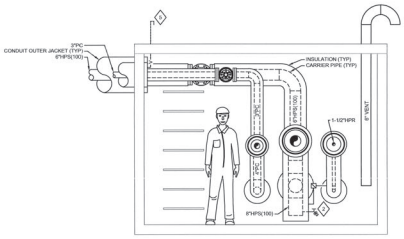
Sheet No.
MS100



2 **SECTION THROUGH MANHOLE**
SCALE: 1/2" = 1'-0"



1 **ENLARGED MANHOLE FINAL PIPING PLAN - JB-1**
SCALE: 1/2" = 1'-0"



3 **SECTION THROUGH MANHOLE**
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND ARE NOT ENTIRELY FIELD VERIFIED. THEREFORE, THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF SAME. MORE OVER, ALL THE LINES ARE SHOWN. THE CONTRACTOR SHALL EXPOSE ALL UNDERGROUND UTILITY LINES TO HIS SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION.
2. PROTECT ALL EXISTING UTILITIES, STRUCTURES, ETC. DURING EXCAVATION AND INSTALLATION OF NEW UTILITIES. EXISTING STRUCTURES AND FACILITIES, INCLUDING BUT NOT LIMITED TO BUILDINGS, UTILITIES, TOPOGRAPHY, STREETS, CURBS, WALKS, LANDSCAPE MATERIALS, AND OTHER IMPROVEMENTS THAT ARE DAMAGED OR REMOVED DUE TO CONSTRUCTION OPERATIONS OF CONTRACTOR'S WORK, SHALL BE PATCHED, REPAIRED, OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, THE OWNER OF SUCH STRUCTURES AND FACILITIES, AND AUTHORITIES HAVING JURISDICTION. HAND EXCAVATION MAY BE REQUIRED IN SOME AREAS.
3. CONTRACTOR IS TO COORDINATE ALL WORK WITH OWNER AND OUTSIDE UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND MAKING OF ADJUSTMENTS TO SAME.
4. DUE TO THE SENSITIVE NATURE OF MAINTAINING UTILITIES TO THIS CAMPUS, COORDINATE WITH OWNER ALL WORK REQUIRING THE SHUTDOWN OF EXISTING, OR STARTUP OF NEW UTILITIES PRIOR TO START OF WORK. WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT, ON WEEKENDS AND/OR OVER HOLIDAYS.
5. PROVIDE REMOVAL AND REPLACEMENT/RELOCATION OF ALL SURFACE OBJECTS INCLUDING, BUT NOT LIMITED TO SIGNS, TREES, PLANTERS, BIKE RACKS, UTILITY POLES, ETC. AS NECESSARY TO INSTALL NEW UNDERGROUND PIPING AND MANHOLES.
6. WORK SHOWN HEREIN IS INTENDED TO SHOW END RESULT AND DOES NOT IMPLY SEQUENCING OF WORK. CONTRACTOR TO ESTABLISH WORK SEQUENCE VIA COORDINATION WITH OWNER AND REVIEW OF EXISTING CONDITIONS.
7. REFER TO ELLERBE BECKET/VIGA DRAWINGS FOR ANCHOR, DRIP LEG, AND OTHER APPROPRIATE DETAILS.
8. PRE-INSULATED PIPING CONDUIT SYSTEM MANUFACTURER SHALL BE RESPONSIBLE FOR FINAL EXPANSION AND STRESS CALCULATIONS, ANCHOR, AND PENETRATION DETAILS.

SHEET KEYNOTES

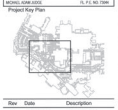
1. NOT USED
2. STEAM CONDENSATE DRIP LEG/TRAP ASSEMBLY - REFER TO VOATLLERBE BECKET DRAWINGS FOR DETAILS.
3. SEAL END OF CONDUIT SYSTEM USING MANUFACTURER'S STANDARD END SEAL. INSTALL PER SPECIFICATIONS AND MANUFACTURERS' RECOMMENDATIONS. PIPING WITHIN MANHOLE SHALL BE FIELD INSULATED PER SPECIFICATIONS.
4. SEAL END OF CONDUIT SYSTEM USING MANUFACTURER'S SLIND SEAL INSTALL PER SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS. PIPING WITHIN MANHOLE SHALL BE FIELD INSULATED PER SPECIFICATIONS.
5. INSTALL CONDUIT VENT LINES PER SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS.

Affiliated Engineers
Affiliated Engineers SE, Inc.
5110 E. Hillsborough Blvd., Suite 450
Tampa, Florida 33610
Tel 813.406.3800 Fax 813.405.3801
www.aeiengs.com
CA-5140

Wilson Miller Stantec
Wilson Miller, Inc. 2115 Ashley Park Drive, Tampa, FL 33602
Stantec Inc. Certificate of Authorization #CA-5, Ch. 61, F.S.C.O. #0001
Stantec Consulting Services Inc. Certificate of Authorization #CA-8
Stantec Consulting Services Inc. as of July 2010

MANAGER OF RECORD
MICHAEL ADAM JOSSE FL P.E. NO. 73044

Project Key Plan



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Project Title
BAY PINES VAMC
Bay Pines, Florida

Inpatient & Outpatient Improvements

Project Phase
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Sheet Title
ENLARGED PLANS AND SECTIONS

Sheet No.
MS401