



**DALLAS WATER UTILITIES  
CITY OF DALLAS, TEXAS**



# EAST SIDE WATER TREATMENT PLANT

**540 MGD EXPANSION - PART B  
CONTRACT NO. 08-155**

**BASE - NE & SE CLEARWELLS & FLUMES  
ALTERNATE - NW & SW CLEARWELLS**

**APRIL 2008**

**100% SUBMITTAL**

PREPARED BY

**TCB | AECOM**

TCB, INC.

17300 DALLAS PARKWAY, SUITE 1010

DALLAS, TEXAS 75248-1157

WWW.TCB.AECOM.COM

IN ASSOCIATION WITH

JASTER-QUINTANILLA DALLAS, LLP

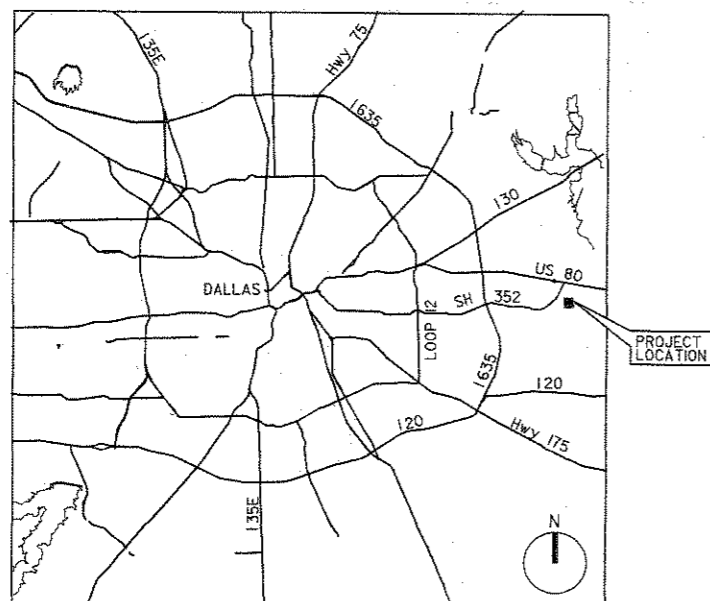
NATHAN D. MAIER CONSULTING ENGINEERS, INC.

GUPTA & ASSOCIATES, INC.

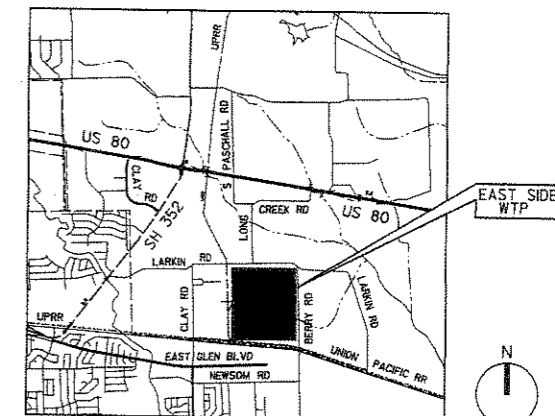
CAMP DRESSER & MCKEE, INC.

CORRPRO COMPANIES, INC.

CHIANG, PATEL & YERBY, INC.



**LOCATION MAP**  
N.T.S.



**PROJECT LOCATION MAP**  
N.T.S.



*Gregory G. Hooten 04-28-2008*



*Robert Osterman 04-28-2008*

NO.	DATE	REVISION	APPROV.
1		EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS COVER SHEET	
<b>DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS</b>			
<b>TCB   AECOM</b>		<small>TCB, INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM</small>	
DESIGN	US	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-000
CHECKED	JL	FILE NO.	1 OF 210
APPROVED	RO	620Q-400R.3	
DATE	APRIL 2008		

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>GENERAL (G)</b>		
1	C-G-000	COVER SHEET
2	C-G-001	DRAWING INDEX
3	C-G-002	GENERAL LEGEND AND DRAFTING SYMBOLS
4	C-G-003	ABBREVIATIONS
5	C-G-010	GENERAL NOTES
6	C-G-101	SURVEY CONTROL AND BORING LAYOUT
7	C-G-102	CONSTRUCTION LIMITS AND TEMPORARY STAGING
8	C-G-103	CONSTRUCTION PHASING - EXISTING CONDITIONS
9	C-G-104	CONSTRUCTION PHASING - PROPOSED CONDITIONS
10	C-G-105	CONSTRUCTION PHASING - EXISTING AND PROPOSED PIPING
11	C-G-106	CONSTRUCTION PHASING - DETAIL PLAN - PHASE A
12	C-G-107	CONSTRUCTION PHASING - DETAIL PLAN - PHASE B
13	C-G-108	CONSTRUCTION PHASING - DETAIL PLAN - PHASE C
14	C-G-109	CONSTRUCTION PHASING - DETAIL PLAN - PHASE D
15	C-G-110	CONSTRUCTION PHASING - DETAIL PLAN - PHASE E
16	C-G-111	CONSTRUCTION PHASING - DETAIL PLAN - PHASE F
17	C-G-112	CONSTRUCTION PHASING - AREA PLAN - PHASES A-F

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>CIVIL (C)</b>		
18	S-C-001	CIVIL SYMBOLS & NOTES
19	S-C-100	SITE PLAN GENERAL LAYOUT
20	S-C-101	SITE PLAN AREA 1
21	S-C-102	SITE PLAN AREA 2
22	S-C-103	SITE PLAN AREA 3
23	S-C-104	SITE PLAN AREA 4
24	S-C-105	SITE PLAN AREA 5
25	D-C-100	DEMOLITION PLAN GENERAL LAYOUT
26	D-C-101	DEMOLITION PLAN AREA 1
27	D-C-102	DEMOLITION PLAN AREA 2
28	D-C-103	DEMOLITION PLAN AREA 3
29	D-C-104	DEMOLITION PLAN AREA 4
30	D-C-105	DEMOLITION PLAN AREA 5
31	S-C-106	GRADING PLAN EXISTING GRADES
32	S-C-107	GRADING PLAN GENERAL LAYOUT
33	S-C-108	GRADING PLAN AREA 1
34	S-C-109	GRADING PLAN AREA 2
35	S-C-110	GRADING PLAN AREA 3
36	S-C-111	GRADING PLAN AREA 4
37	S-C-112	GRADING PLAN AREA 5
38	S-C-113	YARD PIPING GENERAL LAYOUT
39	S-C-114	YARD PIPING PLAN AREA 1
40	S-C-115	YARD PIPING PLAN AREA 2
41	S-C-116	YARD PIPING PLAN AREA 3
42	S-C-117	YARD PIPING PLAN AREA 4
43	S-C-118	YARD PIPING PLAN AREA 5
44	S-C-200	HYDRAULIC PROFILE
45	S-C-201	SUPPLY FLUME A1
46	S-C-202	SUPPLY FLUME A2
47	S-C-203	SUPPLY FLUME B AND C PROFILE
48	S-C-204	SUPPLY FLUME D1 PROFILE
49	S-C-205	SUPPLY FLUME D2 PROFILE
50	S-C-206	RETURN FLUME E1 PROFILE
51	S-C-207	RETURN FLUME E2, F1 AND F2 PROFILE
52	S-C-208	RETURN FLUME G1 AND G2 PROFILES
53	S-C-209	RETURN FLUME G2, H1 AND H2 PROFILES
54	S-C-231	HEADER 1 - TRANSMISSION LINE PROFILE - 1
55	S-C-232	HEADER 1 - TRANSMISSION LINE PROFILE - 2
56	S-C-233	HEADER 1 - TRANSMISSION LINE PROFILE - 3
57	S-C-234	HEADER 2 - TRANSMISSION LINE PROFILE - 1
58	S-C-235	HEADER 2 - TRANSMISSION LINE PROFILE - 2
59	S-C-241	CLEARWELL DEWATERING PROFILE
60	S-C-242	FLUME DEWATERING PROFILE
61	S-C-243	FLUME DEWATERING PROFILE
62	S-C-251	STAGE I FILTER EFFLUENT LINE PROFILE
63	S-C-252	STAGE II FILTER EFFLUENT LINE PROFILE
64	S-C-253	STAGE III FILTER EFFLUENT LINE PROFILE
65	S-C-254	72" BYPASS LINE NORTH PROFILE
66	S-C-262	STORM DRAIN PROFILE - 1
67	S-C-263	STORM DRAIN PROFILE - 2
68	S-C-301	TYPICAL SECTION NORTH-SOUTH
69	S-C-302	TYPICAL SECTION EAST-WEST
70	S-C-406	ENLARGED PLAN FILTER EFFLUENT LINES
71	S-C-407	ENLARGED PLAN FILTER EFFLUENT LINES
72	S-C-408	ENLARGED PLAN SUPPLY JUNCTION BOX
73	S-C-409	ENLARGED PLAN SOUTH RETURN JUNCTION BOX
74	S-C-501	CIVIL DETAILS - 1
75	S-C-502	CIVIL DETAILS - 2
76	S-C-503	CIVIL DETAILS - 3
77	S-C-504	CIVIL DETAILS - 4
78	S-C-505	CIVIL DETAILS - 5
79	S-C-506	TYPICAL CIVIL DETAILS - 1
80	S-C-701	EROSION CONTROL PLAN

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>STRUCTURAL (S)</b>		
79	D-S-101	TPS-I AND 2 DEMOLITION PLAN
80	D-S-102	TPS-I AND 2 DEMOLITION SECTIONS AND DETAILS I
81	D-S-103	TPS-I AND 2 DEMOLITION SECTIONS AND DETAILS II
82	D-S-104	TPS-I AND 2 DEMOLITION SECTIONS AND DETAILS III
83	D-S-105	JUNCTION BOX NO. 1 DEMOLITION PLAN AND SECTIONS
84	D-S-106	JUNCTION BOX NO. 2 DEMOLITION PLAN AND SECTIONS
85	D-S-107	GATE CONTROL STRUCTURE DEMOLITION PLAN AND SECTIONS
86	D-S-108	CLEARWELLS DEMOLITION PLAN AND SECTIONS
87	C-S-001	STRUCTURAL NOTES
88	C-S-002	STRUCTURAL NOTES AND ABBREVIATIONS
89	C-S-101	SOUTHEAST CLEARWELL FOUNDATION PLAN
90	C-S-102	NORTHEAST CLEARWELL FOUNDATION PLAN
91	C-S-103	SOUTHEAST CLEARWELL ROOF FRAMING PLAN
92	C-S-104	NORTHEAST CLEARWELL ROOF FRAMING PLAN
93	C-S-105	SUPPLY JUNCTION BOX FOUNDATION PLAN @ EL. 418.50
94	C-S-106	SUPPLY JUNCTION BOX SECTIONAL PLAN @ EL. 443.00
95	C-S-107	SUPPLY JUNCTION BOX UPPER PLAN @ EL. 463.00
96	C-S-108	SOUTH RETURN JUNCTION BOX FOUNDATION PLAN @ EL. 428.50
97	C-S-109	SOUTH RETURN JUNCTION BOX SECTIONAL PLAN @ EL. 445.00
98	C-S-110	SOUTH RETURN JUNCTION BOX UPPER PLAN @ EL. 463.00
99	C-S-111	NORTH RETURN JUNCTION BOX FOUNDATION PLAN @ EL. 417.00
100	C-S-112	NORTH RETURN JUNCTION BOX SECTIONAL PLAN @ EL. 443.00
101	C-S-113	NORTH RETURN JUNCTION BOX UPPER PLAN @ EL. 463.00
102	C-S-114	TPS-I AND 2 OVERALL MODIFICATION PLAN
103	C-S-115	NORTH FLUME CONNECTION TO TPS-2 PLAN
104	C-S-116	CHEMICAL FEED VAULT PLANS, SECTIONS AND DETAILS I
105	C-S-117	CHEMICAL FEED VAULT PLANS, SECTIONS AND DETAILS II
106	C-S-120	METER VAULT FOUNDATION AND ROOF PLANS
107	C-S-301	CLEARWELL SECTION
108	C-S-302	SUPPLY JUNCTION BOX SECTIONS I
109	C-S-303	SUPPLY JUNCTION BOX SECTIONS AND DETAILS II
110	C-S-304	SOUTH RETURN JUNCTION BOX SECTIONS AND DETAILS I
111	C-S-305	SOUTH RETURN JUNCTION BOX SECTIONS II
112	C-S-306	NORTH RETURN JUNCTION BOX SECTIONS I
113	C-S-307	NORTH RETURN JUNCTION BOX SECTIONS AND DETAILS II
114	C-S-309	NORTH FLUME CONNECTION TO TPS-2 SECTION
115	C-S-320	METER VAULT SECTIONS AND DETAILS
116	C-S-501	STRUCTURAL - TYPICAL DETAILS I
117	C-S-502	STRUCTURAL - TYPICAL DETAILS II
118	C-S-503	STRUCTURAL - TYPICAL DETAILS III
119	C-S-504	STRUCTURAL - TYPICAL DETAILS IV
120	C-S-505	STRUCTURAL - TYPICAL DETAILS V
121	C-S-506	STRUCTURAL - TYPICAL DETAILS VI
122	C-C-919	STRUCTURAL FLUME REFERENCE PLAN AND DETAILS
123	C-S-520	10X10 FLUME SECTIONS AND DETAILS
124	C-S-521	12X12 FLUME SECTIONS AND DETAILS
125	C-S-522	9X12 FLUME SECTIONS AND DETAILS
126	C-S-523	CONCRETE SECTIONS AND DETAILS I
127	C-S-524	CONCRETE SECTIONS AND DETAILS II
128	C-S-525	CONCRETE SECTIONS AND DETAILS III
129	C-S-526	CONCRETE SECTIONS AND DETAILS IV
130	C-S-527	CONCRETE SECTIONS AND DETAILS V
131	C-S-528	CONCRETE SECTIONS AND DETAILS VI
132	C-S-529	CONCRETE SECTIONS AND DETAILS VII
133	C-S-532	TPS-I AND 2 SECTIONS AND DETAILS I
134	C-S-533	TPS-I AND 2 SECTIONS AND DETAILS II
135	C-S-534	TPS-I AND 2 SECTIONS AND DETAILS III
136	C-S-535	TPS-I AND 2 SECTIONS AND DETAILS IV
137	C-S-601	PIER SCHEDULE AND DETAILS

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>MECHANICAL (M)</b>		
138	C-M-001	P&ID - YARD PIPING
139	C-M-105	NORTH CHEMICAL FEED VAULT MECHANICAL PLAN, SECTION AND DETAILS
140	C-M-120	METER VAULT PLAN & SECTION VIEWS
141	C-M-130	AMMONIA PIPING PLAN
142	C-M-305	NORTH CHEMICAL FEED VAULT MECHANICAL PLAN, SECTION AND DETAILS
143	C-M-501	DETAILS - 1
144	C-M-502	DETAILS - 2
145	C-M-503	DETAILS - 3
146	C-M-504	DETAILS - 4
147	C-M-505	DETAILS - 5

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>ELECTRICAL (E)</b>		
148	C-E-001	ELECTRICAL LEGEND AND SYMBOLS
149	C-E-002	ELECTRICAL NOTES
150	C-E-101	OVERALL ELECTRICAL PLAN
151	C-E-102	ENLARGED ELECTRICAL PLAN
152	C-E-103	ELECTRICAL DUCTBANK SECTIONS AND DETAILS
153	C-E-104	ELECTRICAL BUILDING PLANS AND DETAILS
154	C-E-201	EXISTING MCC-1 PARTIAL ONE-LINE DIAGRAM & DETAIL
155	C-E-202	SUPPLY BOX, POWER PANEL HH ONE-LINE DIAGRAM
156	C-E-203	NORTH RETURN BOX, POWER PANEL HH ONE-LINE DIAGRAM
157	C-E-204	SOUTH RETURN BOX, POWER PANEL HG ONE-LINE DIAGRAM
158	C-E-205	METER VAULT, POWER PANEL HK ONE-LINE DIAGRAM
159	C-E-401	SUPPLY BOX - ELECTRICAL PLAN & DETAILS
160	C-E-402	NORTH RETURN JUNCTION BOX ELECTRICAL PLAN & DETAILS
161	C-E-403	SOUTH RETURN JUNCTION BOX ELECTRICAL PLAN & DETAILS
162	C-E-404	METER VAULT - ELECTRICAL DETAILS & PLAN
163	C-E-405	METER VAULT - DETAILS AND RISER DIAGRAM
164	C-E-501	ELECTRICAL DETAILS
165	C-E-502	ELECTRICAL DETAILS
166	C-E-503	ELECTRICAL DETAILS
167	C-E-504	ELECTRICAL DETAILS
168	C-E-505	ELECTRICAL DETAILS
169	C-E-601	ELECTRICAL SCHEMATIC
170	C-E-602	ELECTRICAL INTERFACE DIAGRAM
171	C-E-603	ELECTRICAL INTERFACE DIAGRAM

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>INSTRUMENTATION AND CONTROLS (N)</b>		
172	C-N-001	ABBREVIATIONS AND GENERAL NOTES
173	C-N-601	EXISTING SYSTEM ARCHITECTURE (1 OF 2)
174	C-N-602	EXISTING SYSTEM ARCHITECTURE (2 OF 2)
175	C-N-603	NORTHWEST AND SOUTHWEST CLEARWELL AND ASSOCIATED EQUIPMENT MONITORING
176	C-N-604	TRANSFER PUMP STATION 3 LOCAL CONTROL PANEL LAYOUT MODIFICATIONS
177	C-N-605	INSTRUMENTATION DETAILS I
178	C-N-606	INSTRUMENTATION DETAILS II

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>CATHODIC PROTECTION (T)</b>		
179	C-T-101	GALVANIC ANODE CATHODIC PROTECTION SYSTEM PROPOSED INSTALLATION LAYOUT
180	C-T-501	GALVANIC ANODE CATHODIC PROTECTION SYSTEM TEST STATION DETAILS
181	C-T-502	GALVANIC ANODE CATHODIC PROTECTION SYSTEM MISCELLANEOUS DETAILS
182	C-T-503	GALVANIC ANODE CATHODIC PROTECTION SYSTEM PCCP BONDING DETAILS

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>GENERAL (G)</b>		
183	C-G-102A	ADD ALT NO. 16 CONSTRUCTION LIMITS & TEMPORARY STAGING
<b>CIVIL (C)</b>		
184	S-C-100A	ADD ALT NO. 16 SITE PLAN GENERAL LAYOUT
185	S-C-101A	ADD ALT NO. 16 SITE PLAN AREA 1
186	S-C-102A	ADD ALT NO. 16 SITE PLAN AREA 2
187	S-C-103A	ADD ALT NO. 16 SITE PLAN AREA 3
188	S-C-104A	ADD ALT NO. 16 SITE PLAN AREA 4
189	S-C-105A	ADD ALT NO. 16 SITE PLAN AREA 5
190	S-C-120A	ADD ALT NO. 16 GRADING PLAN GENERAL LAYOUT
191	S-C-121A	ADD ALT NO. 16 GRADING PLAN AREA 1
192	S-C-122A	ADD ALT NO. 16 GRADING PLAN AREA 2
193	S-C-124A	ADD ALT NO. 16 GRADING PLAN AREA 4
194	S-C-125A	ADD ALT NO. 16 GRADING PLAN AREA 5
195	S-C-131A	ADD ALT NO. 16 YARD PIPING PLAN AREA 1
196	S-C-132A	ADD ALT NO. 16 YARD PIPING PLAN AREA 2
197	S-C-134A	ADD ALT NO. 16 YARD PIPING PLAN AREA 4
198	S-C-135A	ADD ALT NO. 16 YARD PIPING PLAN AREA 5
199	S-C-262A	ADD ALT NO. 16 STORM DRAIN PROFILE - 1
200	S-C-301A	ADD ALT NO. 16 TYPICAL SECTION NORTH-SOUTH
201	S-C-302A	ADD ALT NO. 16 TYPICAL SECTION EAST-WEST
202	S-C-408A	ADD ALT NO. 16 ENLARGED PLAN SUPPLY JUNCTION BOX
203	S-C-409A	ADD ALT NO. 16 ENLARGED PLAN SOUTH RETURN JUNCTION BOX
204	S-C-701A	ADD ALT NO. 16 EROSION CONTROL PLAN

**SHEET IDENTIFICATION LEGEND**

PROJECT AREA		DISCIPLINE	
CODE	DESCRIPTION	CODE	DESCRIPTION
P	PUMP STATION	G	GENERAL, SURVEYING AND MAPPING
S	SITE	C	CIVIL
C	CLEARWELL	A	ARCHITECTURAL
		L	LANDSCAPE
		S	STRUCTURAL
		M	MECHANICAL
		J	HVAC
		P	PLUMBING
		E	ELECTRICAL
		N	INSTRUMENTATION AND CONTROLS
		T	CATHODIC PROTECTION

SHEET TYPE	
CODE	DESCRIPTION
0	GENERAL (LEGENDS, NOTES, ETC.) PLANS
1	ELEVATIONS
2	SECTIONS
3	LARGE SCALE VIEWS (PLANS, SECTIONS) DETAILS
4	SCHEDULES AND DIAGRAMS
5	3D REPRESENTATIONS

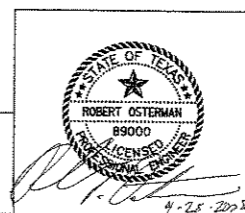
## ADDITIVE ALTERNATE

SHEET SEQUENCE	SHEET ID	DESCRIPTION
<b>STRUCTURAL (S)</b>		
204	C-S-101A	ADD ALT NO. 16 NORTHWEST CLEARWELL FOUNDATION PLAN
205	C-S-102A	ADD ALT NO. 16 SOUTHWEST CLEARWELL FOUNDATION PLAN
206	C-S-103A	ADD ALT NO. 16 NORTHWEST CLEARWELL ROOF FRAMING PLAN
207	C-S-104A	ADD ALT NO. 16 SOUTHWEST CLEARWELL ROOF FRAMING PLAN
208	C-S-523A	ADD ALT NO. 16 CONCRETE SECTIONS AND DETAILS I
<b>MECHANICAL (M)</b>		
209	C-M-001A	ADD ALT NO. 16 P&ID - YARD PIPING
<b>INSTRUMENTATION AND CONTROLS (N)</b>		
210	C-N-603A	NORTHWEST AND SOUTHWEST CLEARWELL AND ASSOCIATED EQUIPMENT MONITORING

REFERENCE: ATMOS GAS LINE AS-BUILTS

KEY  
A ADDITIVE ALTERNATE NO. 1 (WEST CLEARWELLS)

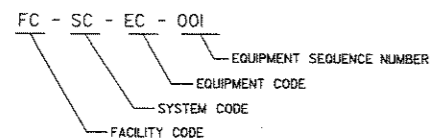
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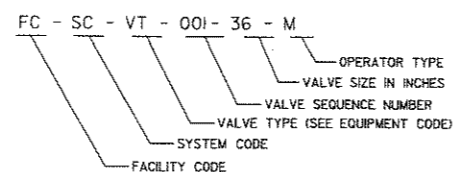
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NO.	DATE	REVISION	APPROV.				
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS							
DRAWING INDEX							
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS							
TCB AECOM		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM		CONTRACT NO. 08-155		DWG. NO. C-C-001	
DESIGN	US	CHECKED	FG	APPROVED	JL	DATE	FILE NO. 620Q-400R.3
	APRIL 2008						2 OF 210

### CIVIL/MECHANICAL IDENTIFICATION LEGEND

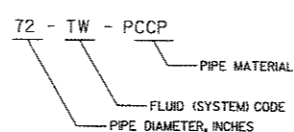
#### EQUIPMENT LEGEND



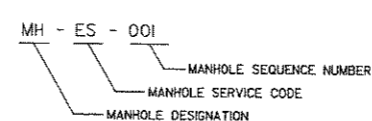
#### VALVE LEGEND



#### PIPE LEGEND



#### MANHOLE LEGEND



#### FACILITY CODES

CODE	DESCRIPTION
CL*	CLEARWELL
ED1	ELECTRICAL DISTRIBUTION BUILDING 1
ED2	ELECTRICAL DISTRIBUTION BUILDING 2
EM1	MAIN ELECTRICAL DISTRIBUTION BUILDING 1
EM2	MAIN ELECTRICAL DISTRIBUTION BUILDING 2
FT	FILTER/ADMIN COMPLEX
JB1	SUPPLY JUNCTION BOX
JB2	NORTH RETURN JUNCTION BOX
JB3	SOUTH RETURN JUNCTION BOX
LR	LAGOON RETURN PUMP STATION
MB	MAINTENANCE BUILDING
PT	PLANT WATER TANK
SU1	ELECTRICAL SUBSTATION NO. 1
SU2	ELECTRICAL SUBSTATION NO. 2
TP1	TRANSFER PUMP STATION NO. 1
TP2	TRANSFER PUMP STATION NO. 2
TP3	TRANSFER PUMP STATION NO. 3
WR	WASHWATER RECIRCULATION PUMP STATION
WW1	NORTH WASHWATER TANK
WW2	SOUTH WASHWATER TANK
YD	YARD

#### EQUIPMENT CODES

CODE	DESCRIPTION
A	AIR RELEASE VALVE
AC	AIR COMPRESSOR
AH	AIR HANDLER
AV	AIR & VACUUM VALVE
BA	BALL VALVE
BC	BALL CHECK VALVE
BD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTOR
BL	AIR BLOWER
BU	BUTTERFLY VALVE
BW	BACKWASH PUMP
CA	COMBINATION AIR VALVE
CK	CHECK VALVE
CV	CONE VALVE
DA	AIR DRYER
DAH	DEHUMIDIFICATION AIR HANDLER UNIT
DC	DUST COLLECTOR
DI	DIAPHRAGM VALVE
DS	DIAPHRAGM SEAL
EF	EXHAUST FAN
FA	AIR FILTER
FCU	FAN COIL UNIT
FE	FLOW ELEMENT
FG	FLAP GATE
FM	FLOW METER
FT	FILTER OR STRAINER
FU	FLUME
GL	GLOBE VALVE
GV	GATE VALVE
HP	HIGH SERVICE PUMP
IN	INJECTOR
KG	KNIFE GATE
LM	LEVEL METER
MCC	MOTOR CONTROL CENTER
MP	METERING PUMP
PI	PRESSURE INDICATOR
PL	MULTI-PORT PLUG VALVE
PR	PRESSURE AND VACUUM REGULATING VALVE
PRV	PRESSURE AND VACUUM RELIEF VALVE
PS	PRESSURE SUSTAINING VALVE
PU	PUMP
RA	AIR RECEIVER
SA	SAMPLE PUMP
SB	SUBMERSIBLE PUMP
SF	SUPPLY AIR FAN
SG	SLURGE GATE
SD	SOLENOID VALVE
SP	SUMP PUMP
SR	SURGE RELIEF
ST	Y STRAINER
SW	SWITCHGEAR
T	THERMOSTAT
TB	TRAVELING BRIDGE CRANE
TK	TANK
UH	UNIT HEATERS
VD	VOLUMETRIC DAMPER
VF	VOLUMETRIC FEEDER
VM	VENTURIMETER
AIT	ANALYZER INDICATING TRANSMITTER
PIT	PRESSURE INDICATING TRANSMITTER
FIT	FLOW INDICATING TRANSMITTER

#### PIPE MATERIAL CODES

CODE	DESCRIPTION
ABS	ACRYLONITRILE - BUTADIENE - STYRENE
BI	BLACK IRON
BWC	BAR WRAPPED CONCRETE
CI	CAST IRON
CIS	CAST IRON - SOIL
CMP	CORRUGATED METAL
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL
CSDL	CARBON STEEL, CEMENT LINED
CU	COPPER
DI	DUCTILE IRON
DRG	DOUBLE RUBBER GASKET REINFORCED CONCRETE PIPE
FRP	FIBER REINFORCED PLASTIC
GS	GALVANIZED CARBON STEEL
MH	METAL HOSE
PE	POLYETHYLENE
PP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
PCCE	PRESTRESSED CONCRETE CYLINDER; EMBEDDED CYLINDER
PCCL	PRESTRESSED CONCRETE CYLINDER; LINED CYLINDER
RC	REINFORCED CONCRETE
RCC	REINFORCED CONCRETE CYLINDER
RH	RUBBER HOSE
S	STEEL
SS	STAINLESS STEEL
VC	VITRIFIED CLAY

#### MANHOLE SERVICE CODES

CODE	DESCRIPTION
C	COMMUNICATIONS
D	DRAIN
EP	ELECTRICAL PRIMARY (460V)
ES	ELECTRICAL SECONDARY (<480V)
SL	SLUDGE
SS	SANITARY SEWER
ST	STORMWATER
V	VALVE
WW	WASHWATER

#### SYSTEM/FLUID CODES

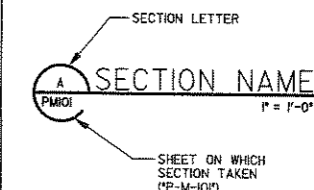
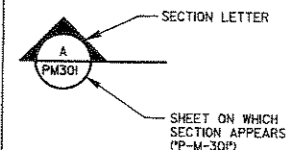
CODE	DESCRIPTION
CWR	COOLING WATER RETURN
CWS	COOLING WATER SUPPLY
D	DRAIN
FW	FILTERED WATER
PW	PLANT WATER
SD	SLUMP DISCHARGE
ST	STORM WATER
SS	SANITARY SEWER
TW	TREATED WATER
WW	WASHWATER / BACKWASH
RW	RAW WATER
AMS	AMMONIA
CLS	CHLORINE
CS	CAUSTIC

#### VALVE OPERATOR CODES

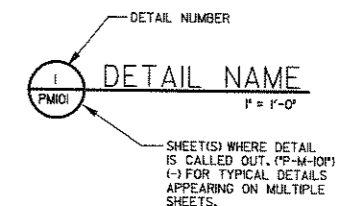
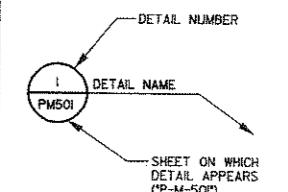
CODE	DESCRIPTION
M	MOTOR
PN	PNEUMATIC
HY	HYDRAULIC

NOTES:  
 1. NO DESIGNATION FOR MANUALLY OPERATED VALVES.  
 2. SIZE FOR RECTANGULAR GATES WILL BE SHOWN AS WIDTHxHEIGHT (24x36).

#### SECTIONS



#### DETAILS



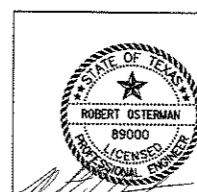
NO.	DATE	REVISION	APPROV.

EAST SIDE WTP 540 MGD EXPANSION - PART B  
 BASE - NE & SE CLEARWELLS & FLUMES  
 ALTERNATE - NW & SW CLEARWELLS  
**GENERAL LEGEND**  
**AND DRAFTING SYMBOLS**  
**DALLAS WATER UTILITIES**  
 CITY OF DALLAS, TEXAS

**TCB AECOM**

TCB INC.  
 17300 DALLAS PARKWAY, SUITE 1010  
 DALLAS, TEXAS 75248-1157  
 WWW.TCB.AECOM.COM

DESIGN	US	CONTRACT NO.	DRG. NO.
DRAWN	EG	08-155	C-G-002
CHECKED	JL	FILE NO.	3 of 210
APPROVED	RD	6200-400R.3	
DATE	APRIL 2008		



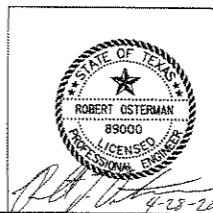


**GENERAL**

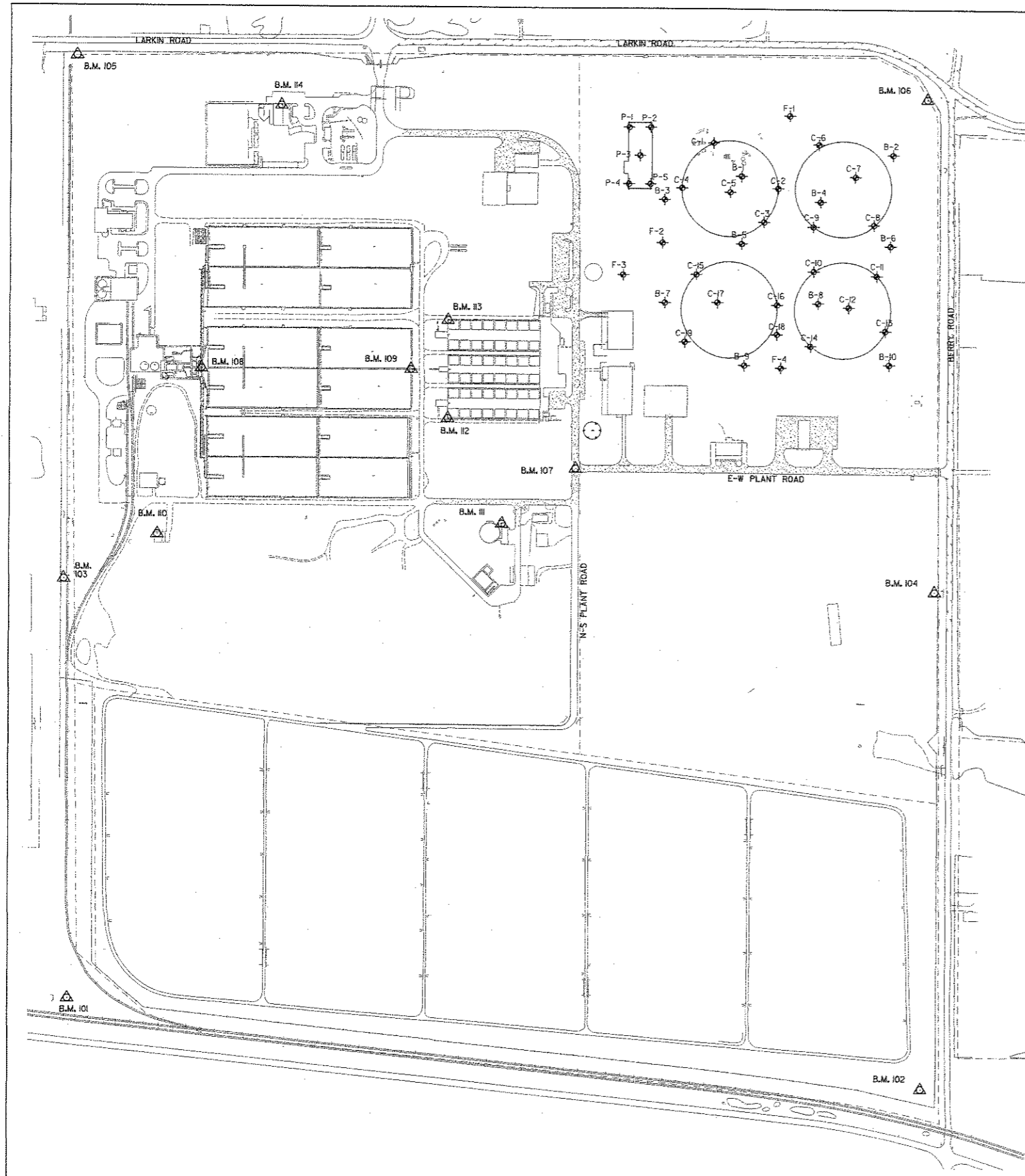
1. CONTRACTS 3&4 ARE PART OF FOUR CONSTRUCTION CONTRACTS REQUIRED FOR THE EAST SIDE WATER TREATMENT PLANT 540-MGD EXPANSION - PART B. THE CONTRACTS ARE LISTED BELOW IN THE ANTICIPATED CONSTRUCTION SEQUENCE:  
 CONTRACT 1 - EARTHWORK AND SITE PREPARATION  
 CONTRACT 2 - TRANSFER PUMP STATION NO.3  
 CONTRACT 3 (BASE) - EAST CLEARWELLS, FLUMES AND YARD PIPING  
 CONTRACT 4 (ALTERNATE) - WEST CLEARWELLS
2. THESE PLANS, PREPARED BY TCB INC, DO NOT EXTEND TO INCLUDE THE DESIGN OF SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF TCB'S REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HERE AFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE HOUSE BELLS 662 AND 665 ENACTED BY THE LEGISLATURE IN THE 70TH LEGISLATURE REGULAR SESSION.
3. PRESERVE ALL EXISTING MONUMENTS, PROPERTY PINS, OR IRON RODS. IF ANY OF THESE ITEMS NEEDS TO BE REMOVED OR DISRUPTED TO ACCOMMODATE CONSTRUCTION, REPLACE BACK TO ITS ORIGINAL LOCATION AND/OR ELEVATION AT THE CONTRACTOR'S EXPENSE.
4. PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING IS TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFER TO THE 'NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES').
5. COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
6. RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. REMOVE CONTAMINATED SOIL RESULTING FROM AN ACCIDENTAL SPILL AND DISPOSED OF PROPERLY.
7. REMOVE ALL MUD, DIRT, AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY FROM EXISTING PUBLIC AND PLANT ROADS DAILY.
8. DO NOT OPERATE ANY EXISTING VALVES, PLANT APPURTENANCES, OR PLANT EQUIPMENT. PROVIDE SUFFICIENT LEAD TIME FOR PLANT OPERATOR WHERE IT BECOMES NECESSARY TO ACTUATE OR DE-ACTUATE VALVES, PLANT APPURTENANCES, OR PLANT EQUIPMENT. NOTIFY THE PLANT OPERATOR 48 HOURS IN ADVANCE OF ANY EXISTING PROCESS EQUIPMENT OR PUMP 'SHUT DOWN'.
9. TO PROVIDE FLEXIBILITY FOR 'TIE-IN' TO EXISTING BELOW GROUND PIPING, SUBMIT FITTING SCHEDULE AND METHOD OF JOINT RESTRAINT WHERE FIRST BELOW GROUND FITTING WILL NOT BE FLANGED.
10. IF CONSTRUCTION ACTIVITIES REQUIRE DEWATERING, SUBMIT DEWATERING PLAN TO OWNER FOR APPROVAL. DEWATERING ACTIVITIES SHALL CONFORM TO SWPPP REQUIREMENTS.
11. PROTECT ALL TREES ADJACENT TO WORK AREA. NO TREES SHALL BE REMOVED WITHOUT PERMISSION OF OWNER.
12. WHERE WELL POINT SYSTEM(S) ARE USED, MAINTAIN WELL POINT SYSTEM(S) FOR A MINIMUM OF 48 HOURS AFTER TRENCH BACKFILL WHERE CEMENT STABILIZED SAND HAS BEEN USED FOR BEDDING IN THE PIPE ZONE.
13. INTERRUPTION OF EAST SIDE TREATMENT PLANT OPERATION IS NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF OWNER. SUBMIT FOR APPROVAL CONSTRUCTION PLAN WHICH DETAILS SCHEDULE AND TECHNIQUES TO BE USED PRIOR TO ANY CONNECTIONS TO EXISTING PIPES OR STRUCTURES. PARTIAL INTERRUPTION OF FLOWS MUST BE SCHEDULED DURING LOW DEMAND PERIODS (AS SHORT A DURATION AS PRACTICAL - SEE SPEC 01310 FOR ALLOWABLE SHUTDOWN TIMES.) OWNER AND PLANT SUPERINTENDENT SHALL BE NOTIFIED WHEN ANY INTERRUPTIONS ARE TO BE MADE.
14. PLANT COORDINATES SHOWN FOR PROPOSED STRUCTURE LOCATIONS ARE REFERENCED TO INSIDE FACE OF EXTERIOR WALL OR TO CENTERLINE OF STRUCTURE, UNLESS OTHERWISE NOTED ON PLANS.

**GENERAL**

15. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF CONSTRUCTION, ASSURE THAT DRAINAGE OF STORMWATER RUNOFF IS NOT BLOCKED. LEVEL WASHES, RUTS, DEPRESSIONS, AND MOUNDS TO GIVE THE AREA A SMOOTH FINISH.
16. UNLESS OTHERWISE NOTED, RESTORE ANY EXISTING FENCING WHICH IS DISTURBED BY CONSTRUCTION TO ITS ORIGINAL CONDITION. NO SEPARATE PAY ITEM.
17. PROTECT ALL EXISTING UTILITIES AND STRUCTURES DURING CONSTRUCTION FROM DAMAGE OR SETTLEMENT. ANY DAMAGE TO THESE EXISTING ITEMS RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITIONS, AT NO ADDITIONAL EXPENSE TO THE OWNER.
18. SUPPORT EXISTING PIPES, ELECTRICAL CONDUITS, AND STRUCTURES AS REQUIRED TO MAINTAIN SERVICES AT ALL TIMES.
19. PERMISSIBLE EQUIPMENT WHEEL LOAD OVER THESE LINES IS 4,000 LBS WITHOUT PRESSURE DISTRIBUTION MATS. CAUTION: EXISTING STORM SEWER AND DRAIN PIPING MIGHT HAVE LESS THAN 2 FT OF COVER IN AREAS.
20. EQUIPMENT LOADS ON EXISTING 24-PW LINE ARE LIMITED TO AN H-20 LOAD AND ON EXISTING T2-TW-BYPASS ARE LIMITED TO AN HS-20 LOAD.
21. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES POTENTIALLY AFFECTED BY CONSTRUCTION FOR THIS PROJECT AND ARRANGING SUPPORT OR TEMPORARY/PERMANENT RELOCATIONS AS NEEDED IN ORDER TO AVOID DAMAGING THOSE UTILITIES. THIS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES AND THE CONTRACTOR SHALL PAY FOR SUCH REPAIRS.
22. ATMOS ENERGY HAS RELOCATED THE 20" GAS LINE IN A SEPARATE CONSTRUCTION CONTRACT CONCURRENT TO CONTRACT 1. CONTACT KY VARTEVAN, (214) 206-2720, TO COORDINATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OWNER AND ALL OTHER CONTRACTORS ON SITE FOR ANY CONCURRENT WORK AT THE PLANT.



4			
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2			
1			
NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS			
<b>GENERAL NOTES</b>			
<b>DALLAS WATER UTILITIES</b> CITY OF DALLAS, TEXAS			
<b>TCB   AECOM</b>		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	US	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-010
CHECKED	JL	FILE NO.	
APPROVED	RD	6200-400R.3	5 of 210
DATE	APRIL 2008		



**GEO TECHNICAL**

- ◆ BORING LOCATION
- B = SITE BORING
- C = CLEARWELL BORING
- F = FLUME BORING
- P = PUMP STATION BORING

**SURVEY**

- ▲ BENCH MARK

- B.M. 101 UNABLE TO LOCATE 2004 AT S.W. OF PLANT
- B.M. 102 UNABLE TO LOCATE 2004 AT S.E. OF PLANT
- B.M. 103 5/8" REBAR WITH 11/2" ALUMINUM CAP STAMPED '103' APPROX. 500' S.W. OF GATE AT WEST SIDE OF PLANT  
N 2251.9234  
E 189.3502  
EL 477.320
- B.M. 104 DISTURBED 2004 - DO NOT USE APPROX. 430' SOUTH OF GATE AT WEST SIDE OF PLANT
- B.M. 105 5/8" REBAR WITH 11/2" ALUMINUM CAP STAMPED '105' AT N.W. CORNER OF PLANT  
N 4101.9716  
E 237.3942  
EL 467.580
- B.M. 106 DISTURBED 2004 - DO NOT USE AT N.E. CORNER OF PLANT
- B.M. 107 BRASS DISC  
N 2654.0824  
E 2000.0000  
EL 462.340

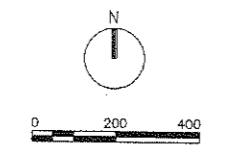
**NOTES:**

1. SOIL BORING INFORMATION WILL BE MADE AVAILABLE ON CD DURING PRE-BID CONFERENCE. GEOTECHNICAL REPORT WAS PERFORMED BY FUGRO CONSULTANTS LP, DATED JUNE 3, 2005 FOR PROJECT 0702-1233 BF.
2. THE SOIL BORINGS AND REPORT ARE NOT PART OF THIS CONTRACT AND ARE MADE AVAILABLE FOR INFORMATION ONLY AND ARE NOT WARRANTED TO BE ACCURATE IN ANY WAY.

- B.M. 108 BRASS CAP  
N 3000.0000  
E 676.4971  
EL 482.700
- B.M. 109 BRASS CAP  
N 2999.9740  
E 1421.7468  
EL 476.550
- B.M. 110 BRASS CAP SET AT LAGOON RETURN  
N 248.4050  
E 525.8591  
EL 487.028
- B.M. 111 BRASS CAP SET AT SLUDGE PUMP STATION  
N 2455.3338  
E 1741.4130  
EL 466.930
- B.M. 112 BRASS CAP SET AT SOUTH FILTER COMPLEX  
N 2827.5090  
E 1851.2914  
EL 473.968
- B.M. 113 BRASS CAP SET AT NORTH FILTER COMPLEX  
N 3172.5885  
E 1551.4589  
EL 474.021
- B.M. 114 BRASS CAP SET AT OZONE FACILITY  
N 3929.4340  
E 958.0413  
EL 473.430

BORING NUMBER	NORTHING	EASTING
B-1	3688.61	2581.97
B-2	3765.99	343.99
B-3	3605.06	231.00
B-4	3599.99	2860.00
B-5	3449.99	2582.82
B-6	3443.98	3105.99
B-7	3239.99	2313.40
B-8	3239.98	2853.40
B-9	3021.78	2593.88
B-10	3025.98	3103.40
C-1	3805.08	2481.98
C-2	3646.78	2710.20
C-3	3524.56	2664.33
C-4	3647.04	2371.78
C-5	3663.01	2542.99
C-6	3801.46	2852.82
C-7	3688.03	2982.03
C-8	3519.05	3049.01
C-9	3512.04	3834.99

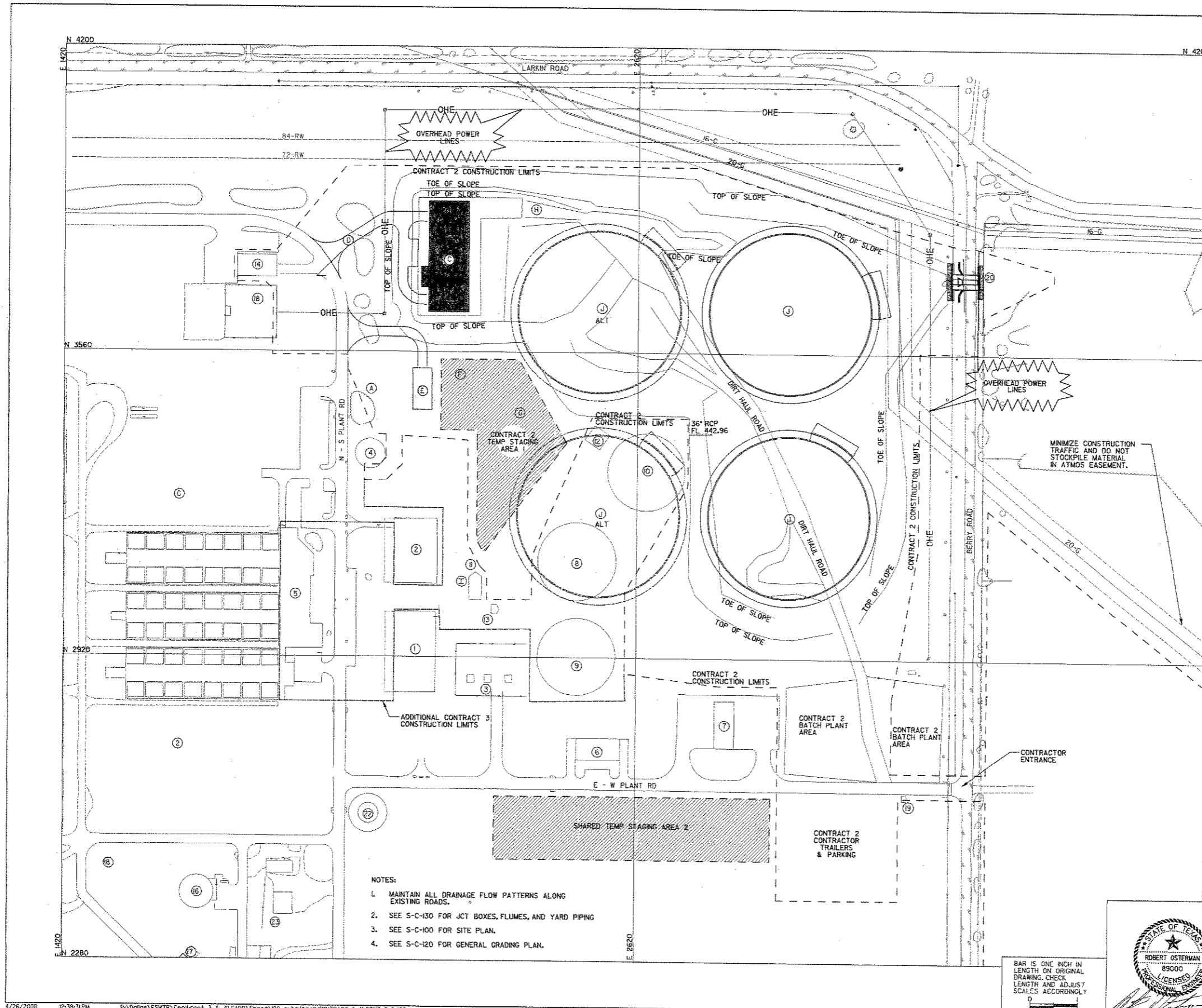
BORING NUMBER	NORTHING	EASTING
C-10	3353.01	2836.00
C-11	3337.09	3058.03
C-12	3226.10	2960.57
C-13	3444.05	3091.09
C-14	3089.97	2827.05
C-15	3339.91	2422.97
C-16	3234.21	2708.90
C-17	3241.11	2498.93
C-18	3130.01	2709.14
C-19	3101.92	2384.04
F-1	3902.85	2751.43
F-2	3451.35	2302.71
F-3	3336.77	2165.00
F-4	3012.96	2722.08
P-1	3860.00	2185.00
P-2	6860.00	2261.00
P-3	3760.00	2223.00
P-4	3660.00	2185.00
P-5	3660.00	2261.00



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY



NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS <b>SURVEY CONTROL &amp; BORING LAYOUT</b> <b>DALLAS WATER UTILITIES</b> CITY OF DALLAS, TEXAS <b>TCB AECOM</b> <small>TCB INC. 17900 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1187 WWW.TCB.AECOM.COM</small>			
DESIGN	US	CONTRACT NO.	DRG. NO.
DRAWN	FG	08-155	C-G-101
CHECKED	JL	FILE NO.	6 OF 210
APPROVED	RD	620Q-400R.3	
DATE	APR 2008		



**EXISTING STRUCTURES**

- ① TRANSFER PUMP STATION NO 1
- ② TRANSFER PUMP STATION NO 2
- ③ ELECTRICAL SUBSTATION
- ④ WASHWATER TANK (ELEVATED)
- ⑤ ADMINISTRATION/CONTROL BUILDING
- ⑥ MAIN ELECTRICAL BUILDING NO 1
- ⑦ FACILITIES MAINTENANCE BUILDING
- ⑧ STAGE I CLEARWELL
- ⑨ STAGE II CLEARWELL
- ⑩ STAGE III CLEARWELL
- ⑪ JUNCTION BOX 1
- ⑫ JUNCTION BOX 2
- ⑬ GATE CONTROL STRUCTURE
- ⑭ MAIN ELECTRICAL BUILDING NO 2
- ⑮ WASHWATER RECIRCULATION PUMP STATION
- ⑯ SLUDGE PUMP STATION
- ⑰ WASHWATER MANHOLES
- ⑱ ELECTRICAL SUBSTATION (DWU OWNED)
- ⑲ GUARD POST
- ⑳ BOX CULVERT
- ㉑ STAGE IV FILTER
- ㉒ WASHWATER TANK (ELEVATED)
- ㉓ OWNERS CONSTRUCTION FIELD OFFICE

**FUTURE STRUCTURES (BY OTHERS)**

- Ⓐ WASHWATER TANK (ELEVATED)
- Ⓑ STAGE V FILTER

**PROPOSED STRUCTURES (BY OTHERS)**

- Ⓒ TRANSFER PUMP STATION NO. 3
- Ⓓ ACCESS DRIVE
- Ⓔ ELECTRICAL TRANSFER YARD

**PROPOSED STRUCTURES (THIS CONTRACT)**

- Ⓕ METER VAULT
- Ⓖ SUPPLY JUNCTION BOX
- Ⓗ NORTH RETURN JUNCTION BOX
- Ⓖ SOUTH RETURN JUNCTION BOX
- Ⓙ CLEARWELL

**LEGEND**

- FUTURE
- EXISTING
- - - CURRENT CONSTRUCTION LIMITS DURING CONTRACT 2.
- PART B CONSTRUCTION LIMITS DURING CONTRACT 3 (SAME AS CONTRACT 2, WITH ADJUSTMENTS SHOWN)

- NOTES:**
1. MAINTAIN ALL DRAINAGE FLOW PATTERNS ALONG EXISTING ROADS.
  2. SEE S-C-130 FOR JCT BOXES, FLUMES, AND YARD PIPING
  3. SEE S-C-100 FOR SITE PLAN.
  4. SEE S-C-120 FOR GENERAL GRADING PLAN.

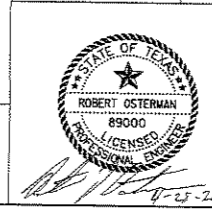
NO.	DATE	REVISION	APPROV.
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EAST SIDE WTP 540 MGD EXPANSION - PART B  
 BASE - NE & SE CLEARWELLS & FLUMES  
 ALTERNATE - NW & SW CLEARWELLS  
**CONSTRUCTION LIMITS  
 & TEMPORARY STAGING**  
**DALLAS WATER UTILITIES**  
 CITY OF DALLAS, TEXAS

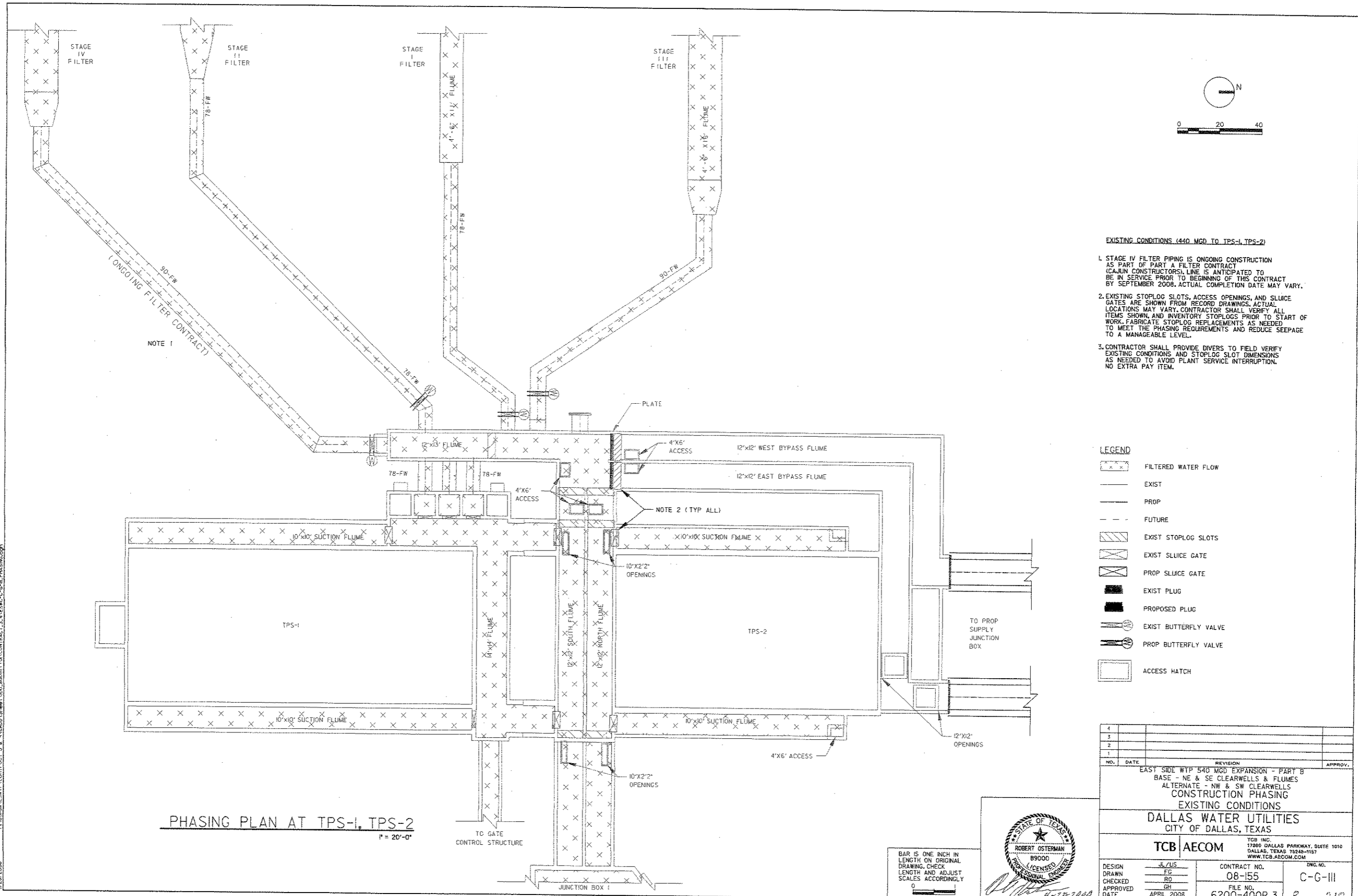
**TCB | AECOM**

TCB INC.  
 17300 DALLAS PARKWAY, SUITE 1010  
 DALLAS, TEXAS 75248-1157  
 WWW.TCB.AECOM.COM

DESIGN	US	CONTRACT NO.	08-155	DWG. NO.	C-G-102
DRAWN	US/EG	CHECKED	JL	FILE NO.	6200-400R.3
APPROVED	RO	DATE	APRIL 2008		7 of 210



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.



4/26/2008 P:\Dallas\ESRTP\Contract\_3\_B\_A\ADD\Sheet1.dwg CONTRACT\_3\_4\_ESRTP\_C-6-B\_Phasing.dwg

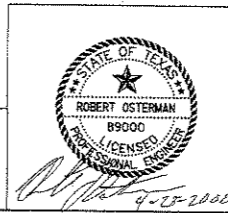
PHASING PLAN AT TPS-1, TPS-2  
 1" = 20'-0"

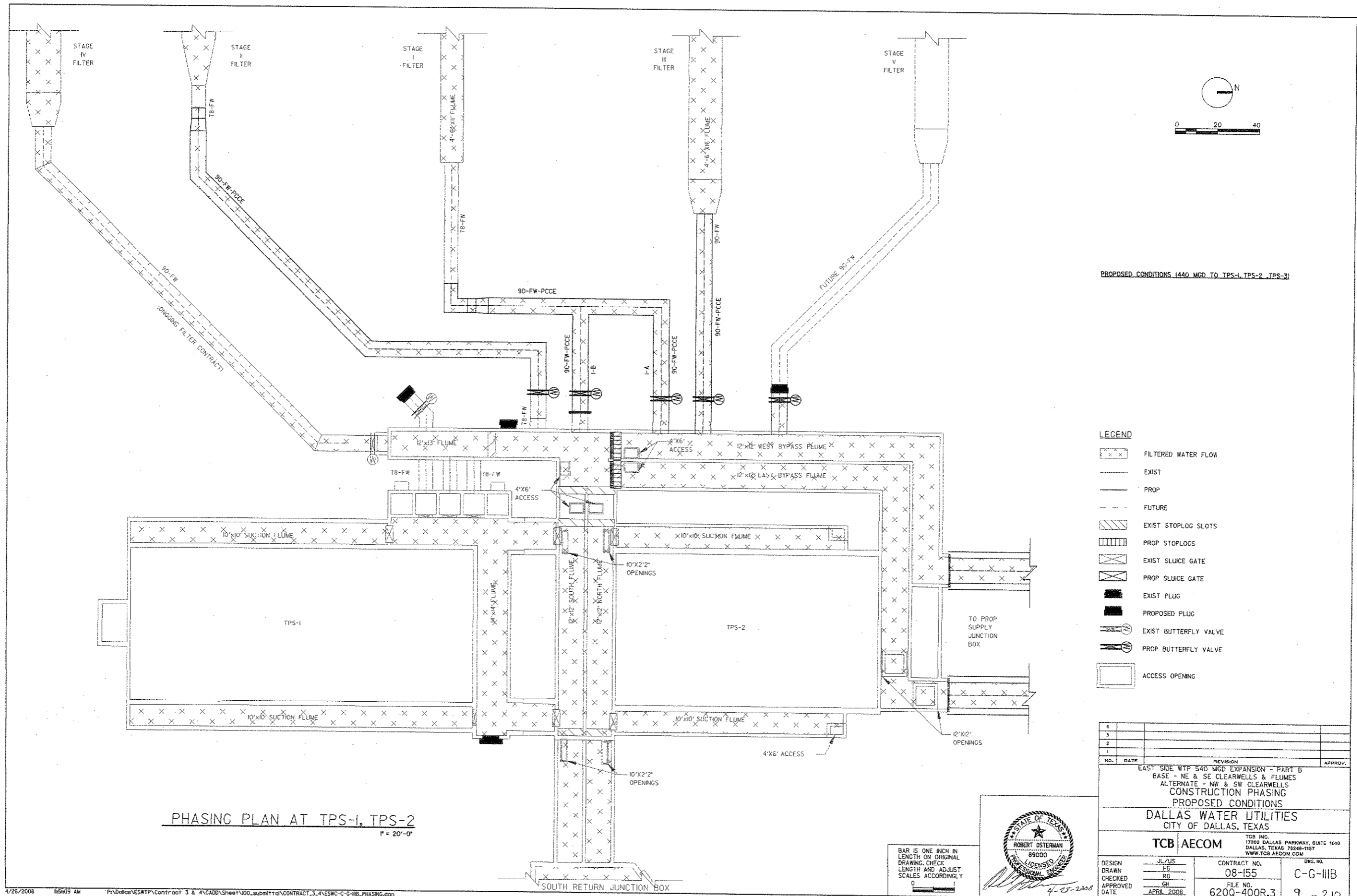
- EXISTING CONDITIONS (440 MGD TO TPS-1, TPS-2)
- STAGE IV FILTER PIPING IS ONGOING CONSTRUCTION AS PART OF PART A FILTER CONTRACT (CAJUN CONSTRUCTORS). LINE IS ANTICIPATED TO BE IN SERVICE PRIOR TO BEGINNING OF THIS CONTRACT BY SEPTEMBER 2008. ACTUAL COMPLETION DATE MAY VARY.
  - EXISTING STOPLOG SLOTS, ACCESS OPENINGS, AND SLUICE GATES ARE SHOWN FROM RECORD DRAWINGS. ACTUAL LOCATIONS MAY VARY. CONTRACTOR SHALL VERIFY ALL ITEMS SHOWN, AND INVENTORY STOPLOGS PRIOR TO START OF WORK. FABRICATE STOPLOG REPLACEMENTS AS NEEDED TO MEET THE PHASING REQUIREMENTS AND REDUCE SEEPAGE TO A MANAGEABLE LEVEL.
  - CONTRACTOR SHALL PROVIDE DIVERS TO FIELD VERIFY EXISTING CONDITIONS AND STOPLOG SLOT DIMENSIONS AS NEEDED TO AVOID PLANT SERVICE INTERRUPTION. NO EXTRA PAY ITEM.

- LEGEND
- FILTERED WATER FLOW
  - EXIST
  - PROP
  - FUTURE
  - EXIST STOPLOG SLOTS
  - EXIST SLUICE GATE
  - PROP SLUICE GATE
  - EXIST PLUG
  - PROPOSED PLUG
  - EXIST BUTTERFLY VALVE
  - PROP BUTTERFLY VALVE
  - ACCESS HATCH

4			
3			
2			
1			
NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING EXISTING CONDITIONS DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS <b>TCB AECOM</b> <small>TCB INC.          17800 DALLAS PARKWAY, SUITE 1010          DALLAS, TEXAS 75248-1157          WWW.TCB.AECOM.COM</small>			
DESIGN	JL/US	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-III
CHECKED	RD	FILE NO.	
APPROVED	GH	620Q-400R.3	2 of 210
DATE	APRIL 2008		

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.





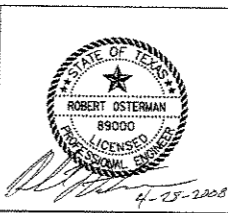
PROPOSED CONDITIONS (440 MGD TO TPS-1, TPS-2, TPS-3)

LEGEND

- FILTERED WATER FLOW
- EXIST
- PROP
- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOGS
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- ACCESS OPENING

PHASING PLAN AT TPS-1, TPS-2  
1" = 20'-0"

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.



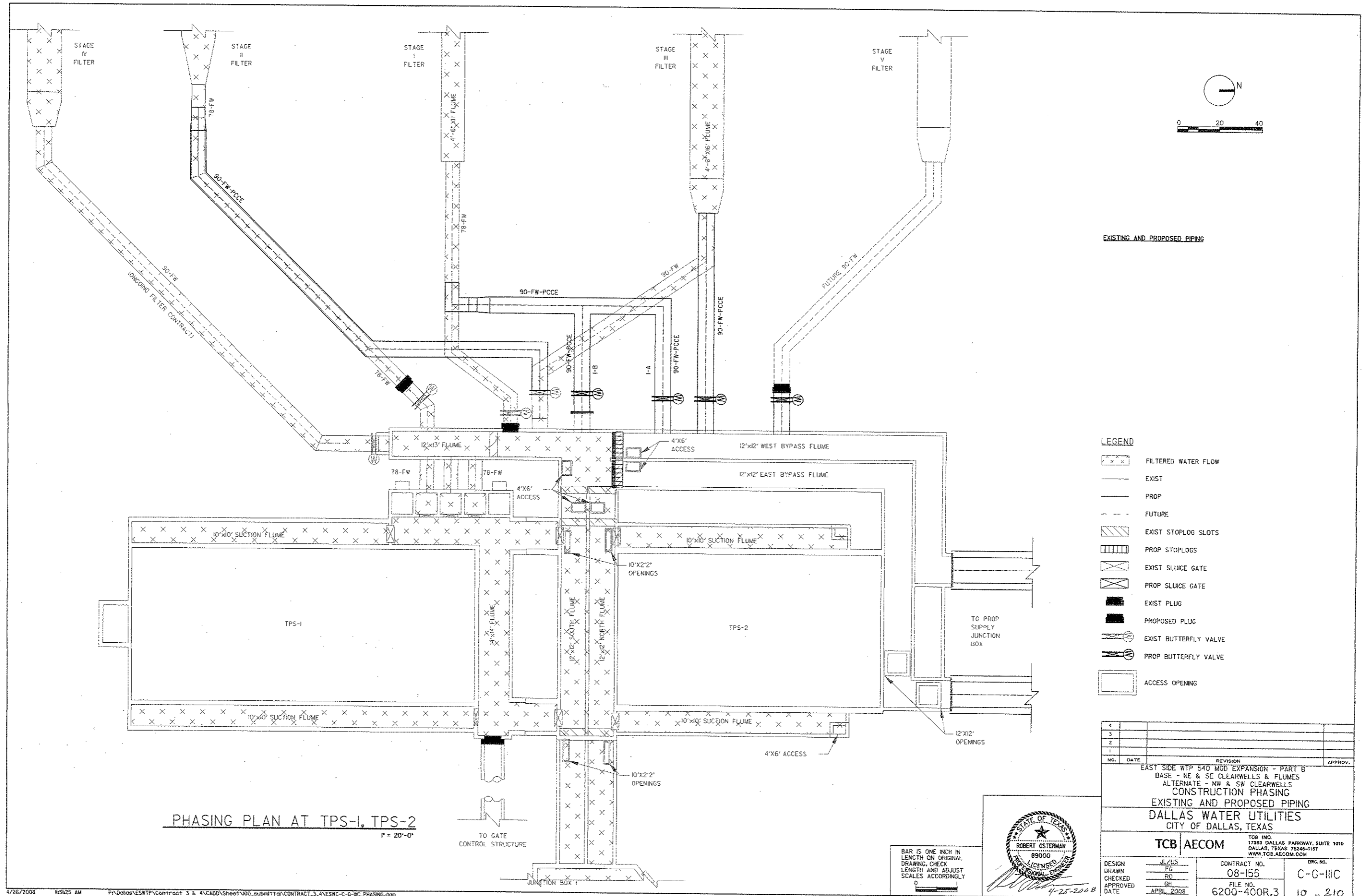
NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

EAST SIDE WTP 540 MGD EXPANSION - PART B  
BASE - NE & SE CLEARWELLS & FLUMES  
ALTERNATE - NW & SW CLEARWELLS  
CONSTRUCTION PHASING  
PROPOSED CONDITIONS  
DALLAS WATER UTILITIES  
CITY OF DALLAS, TEXAS

TCB | AECOM

TDB INC.  
17300 DALLAS PARKWAY, SUITE 1010  
DALLAS, TEXAS 75248-1157  
WWW.TCB.AECOM.COM

DESIGN	JL/JUS	CONTRACT NO.	08-155	DWG. NO.	C-G-IIIIB
DRAWN	RD	FILE NO.	620Q-400R.3	9	of 2.10
CHECKED	GH	DATE	APRIL 2008		
APPROVED					
DATE					



PHASING PLAN AT TPS-1, TPS-2  
1" = 20'-0"

EXISTING AND PROPOSED PIPING

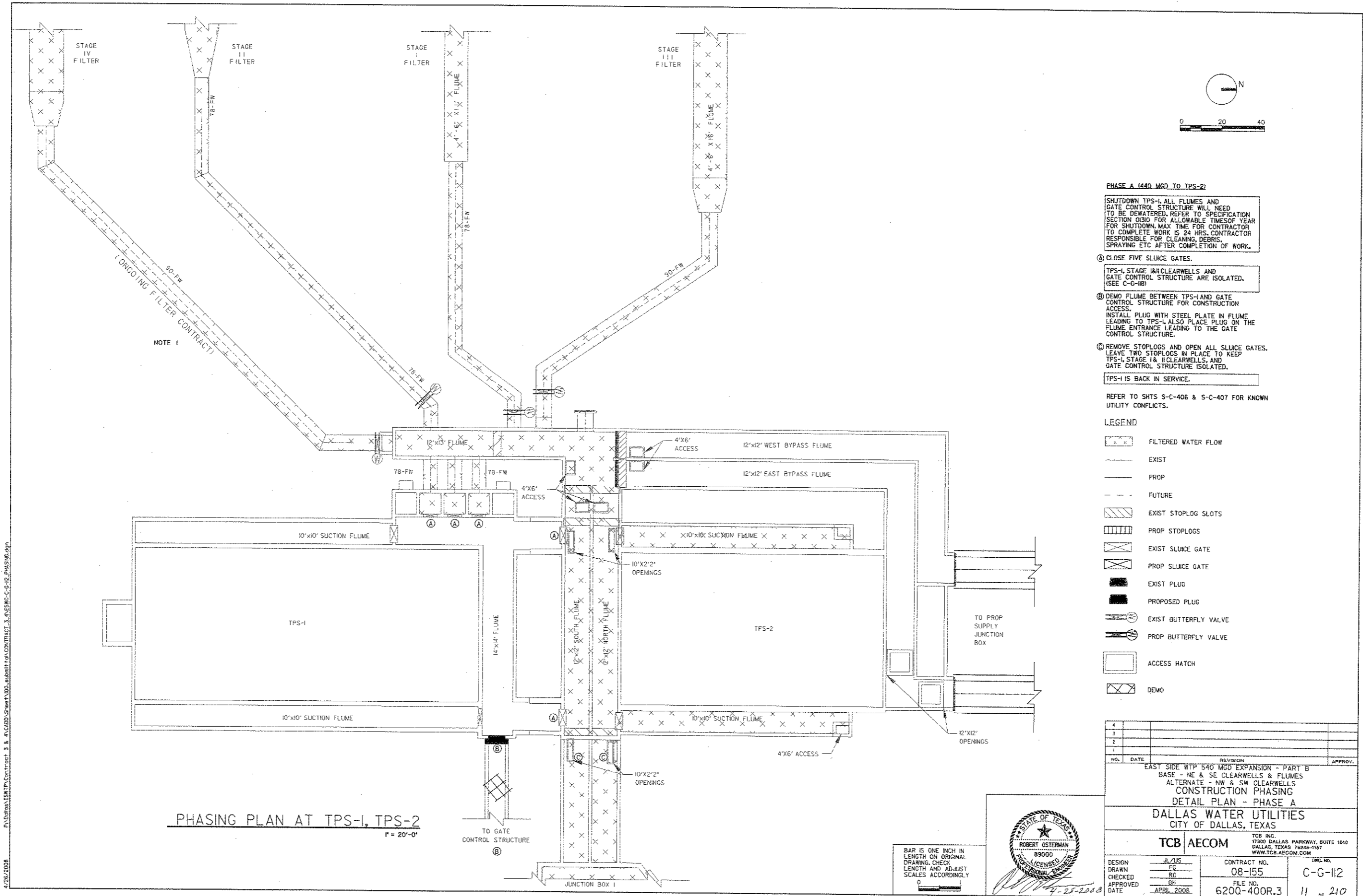
LEGEND

- FILTERED WATER FLOW
- EXIST
- PROP
- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOGS
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING EXISTING AND PROPOSED PIPING DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17389 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1187 WWW.TCB.AECOM.COM	
DESIGN	JL/AJS	CONTRACT NO.	ENG. NO.
DRAWN	FC	08-155	C-G-IIIIC
CHECKED	RD	FILE NO.	
APPROVED	GH	6200-400R.3	10 of 210
DATE	APRIL 2008		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING, CHECK LENGTH AND ADJUST SCALES ACCORDINGLY



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NOTE 1

**PHASING PLAN AT TPS-1, TPS-2**  
 1" = 20'-0"

**PHASE A (440 MGD TO TPS-2)**

SHUTDOWN TPS-1. ALL FLUMES AND GATE CONTROL STRUCTURE WILL NEED TO BE DEWATERED. REFER TO SPECIFICATION SECTION 0130 FOR ALLOWABLE TIMES OF YEAR FOR SHUTDOWN. MAX TIME FOR CONTRACTOR TO COMPLETE WORK IS 24 HRS. CONTRACTOR RESPONSIBLE FOR CLEANING, DEBRIS, SPRAYING ETC AFTER COMPLETION OF WORK.

Ⓐ CLOSE FIVE SLUCE GATES.

TPS-1, STAGE I & II CLEARWELLS AND GATE CONTROL STRUCTURE ARE ISOLATED. (SEE C-6-11B)

Ⓑ DEMO FLUME BETWEEN TPS-1 AND GATE CONTROL STRUCTURE FOR CONSTRUCTION ACCESS. INSTALL PLUG WITH STEEL PLATE IN FLUME LEADING TO TPS-1. ALSO PLACE PLUG ON THE FLUME ENTRANCE LEADING TO THE GATE CONTROL STRUCTURE.

Ⓒ REMOVE STOPLOGS AND OPEN ALL SLUCE GATES. LEAVE TWO STOPLOGS IN PLACE TO KEEP TPS-1, STAGE I & II CLEARWELLS, AND GATE CONTROL STRUCTURE ISOLATED.

TPS-1 IS BACK IN SERVICE.

REFER TO SHTS S-C-406 & S-C-407 FOR KNOWN UTILITY CONFLICTS.

**LEGEND**

- FILTERED WATER FLOW
- EXIST
- PROP
- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOGS
- EXIST SLUCE GATE
- PROP SLUCE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- ACCESS HATCH
- DEMO

NO.	DATE	REVISION	APPROV.
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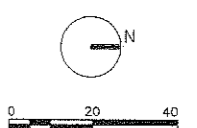
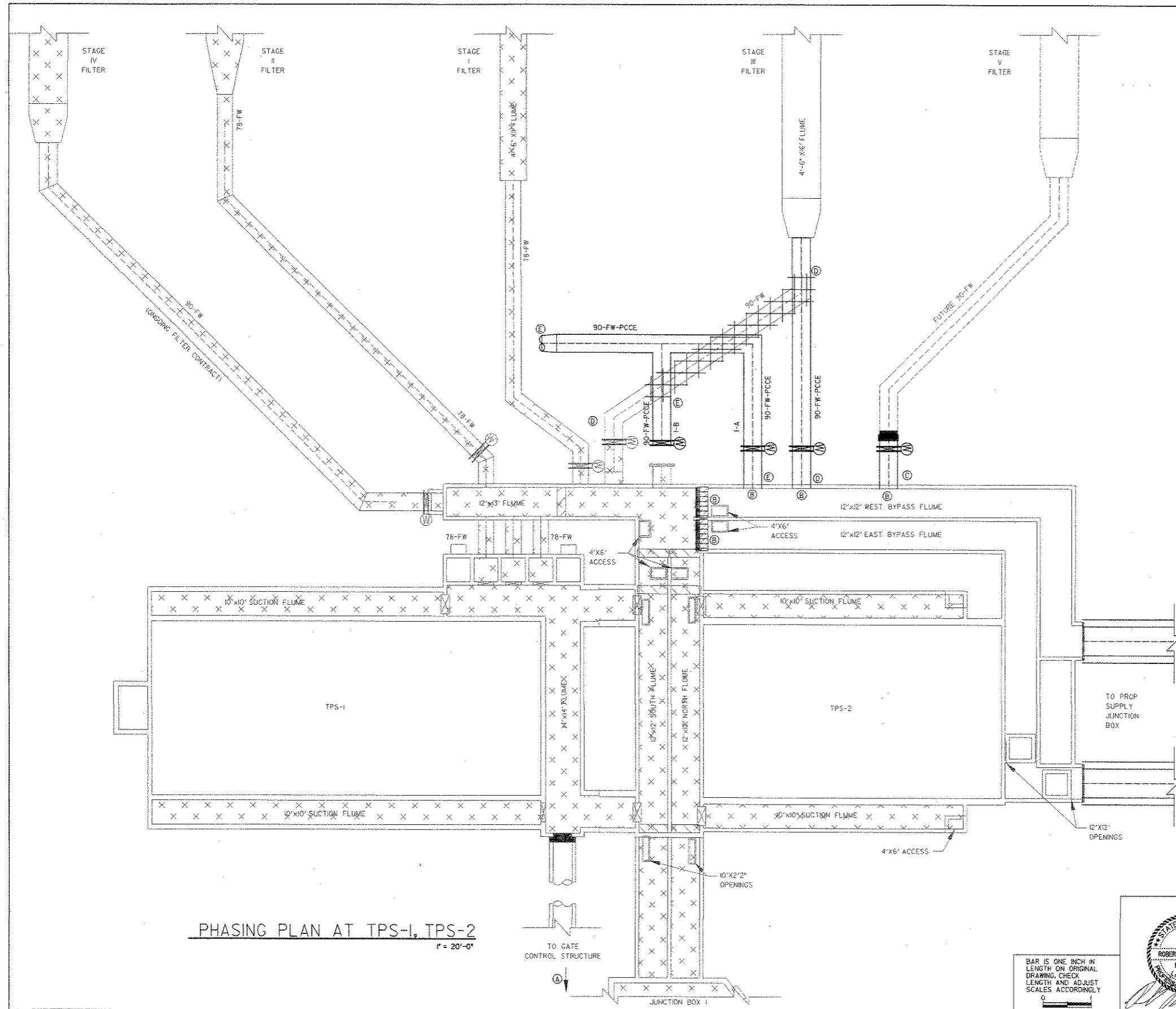
EAST SIDE WTP 540 MGD EXPANSION - PART B  
 BASE - NE & SE CLEARWELLS & FLUMES  
 ALTERNATE - NW & SW CLEARWELLS  
 CONSTRUCTION PHASING  
 DETAIL PLAN - PHASE A  
 DALLAS WATER UTILITIES  
 CITY OF DALLAS, TEXAS

**TCB AECOM**  
 TCB INC.  
 17300 DALLAS PARKWAY, SUITE 1010  
 DALLAS, TEXAS 75248-1157  
 WWW.TCB.AECOM.COM

DESIGN	JL/JS	CONTRACT NO.	08-155	DWG. NO.	C-G-112
DRAWN	FG	FILE NO.	6200-400R.3	11	of 210
CHECKED	RO	DATE	APRIL 2008		
APPROVED	GH				

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.





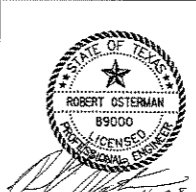
- PHASE B (440 MGD TO TPS-1, TPS-2)**
- (A) ISOLATE STAGE III CLEARWELL, DEMO CLEARWELL II AND ALL ASSOCIATED PIPING, FLUMES AND ANCILLARY ITEMS. BEGIN TWO EAST CLEARWELLS AND ALL FLUMES, PIPING OR OTHER ITEMS THAT DO NOT CONFLICT WITH EXISTING STRUCTURES OR ACCESS. COMPLETE EAST TPS-3 DISCHARGE HEADER TO BVV SOUTH OF METER VAULT. ALSO COMPLETE NORTH BYPASS CONNECTION TO 96-FW JIM MILLER PIPELINE TO ALLOW TPS-3 TO PUMP TO THAT PIPELINE AS BACKUP FOR TPS-2. (SEE C-6-11B)
  - (B) CONSTRUCT THREE 90-INCH FLUME WALL PENETRATIONS IN WEST BYPASS FLUME. INSTALL TWO STOPLOGS ON EXISTING STOPLOG SLOTS IN BYPASS FLUMES.
  - (C) CONSTRUCT STAGE V STUBOUT, COMPLETE TO THE PLUG.
  - (D) ISOLATE, DEMO, AND COMPLETE STAGE III PIPING. STAGES I, II & IV FILTERS MUST BE IN SERVICE BEFORE STAGE III FILTER IS TAKEN OUT OF SERVICE.
  - (E) CONSTRUCT AS MUCH OF STAGE I (INCLUDING IA, IB) PIPING AS POSSIBLE.

- NOTES**
1. DO NOT DEMO PIPE IMMEDIATELY ADJACENT TO VALVE TO PREVENT SEPARATION OF POTENTIALLY UNRESTRAINED EXISTING VALVE.
  2. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING PLATE PLUG INSTALLATION WITH DIVERS AND SUBMIT A PHASING PLAN THAT ALLOWS THE EXISTING PLATES TO BE REMOVED AND THE PROPOSED STOPLOGS TO BE INSTALLED IN THE SAME SLOTS WITHOUT LOSS OF SERVICE.
  3. REFER TO SHTS S-C-406 & S-C-407 FOR KNOWN UTILITY CONFLICTS.

**LEGEND**

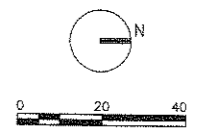
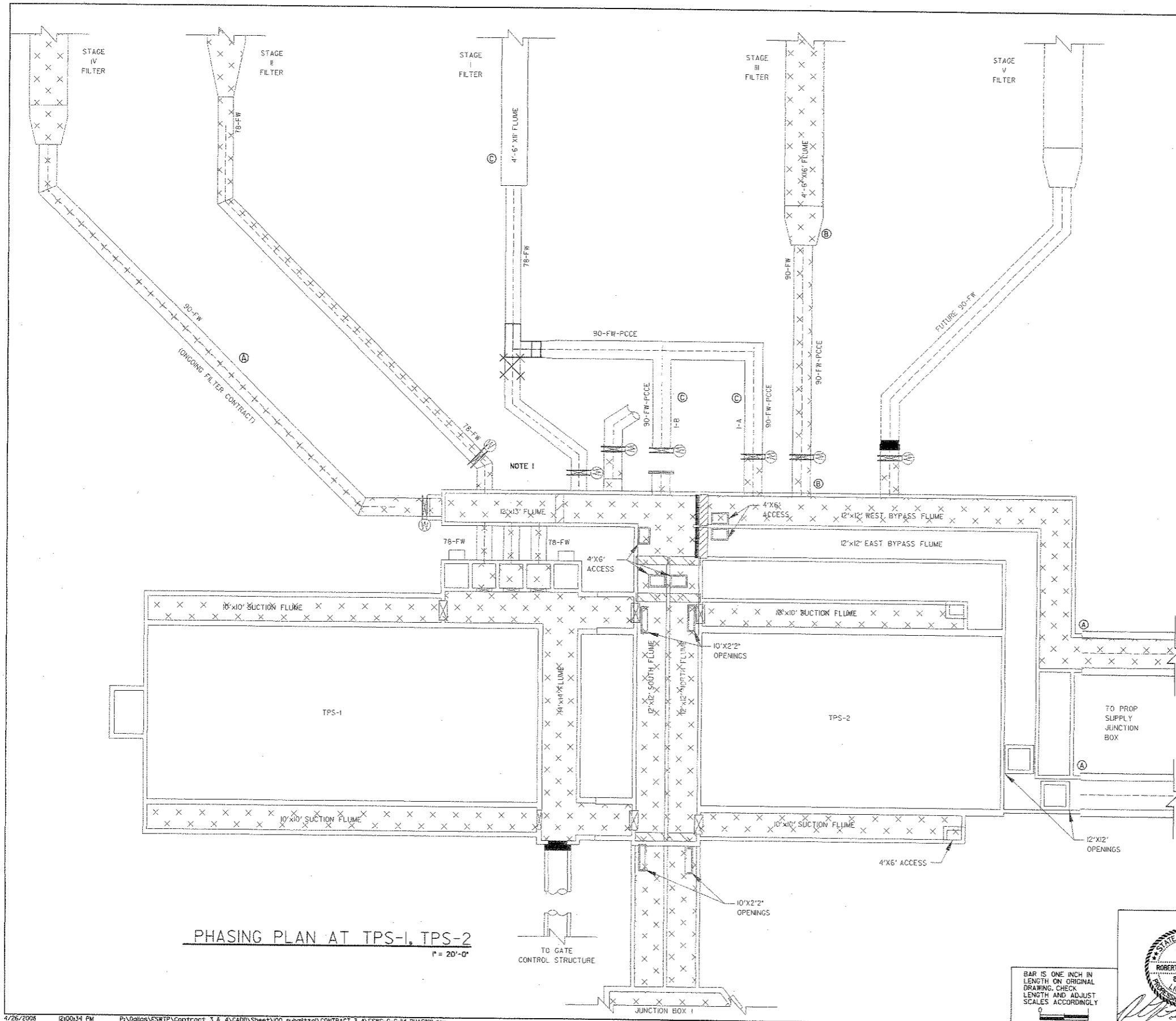
- FILTERED WATER FLOW
- EXIST
- PROP
- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOGS
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- DEMO
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING DETAIL PLAN - PHASE B			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17500 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	JL/JUS	CONTRACT NO.	BNG. NO.
DRAWN	FG	08-155	C-G-113
CHECKED	RG	FILE NO.	12 of 210
APPROVED	GH	6200-400R.3	
DATE	APRIL 2008		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

**PHASING PLAN AT TPS-1, TPS-2**  
1" = 20'-0"

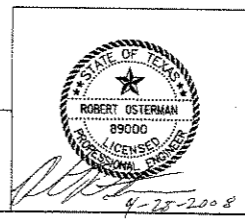


- PHASE C (440 MGD TO TPS-1, TPS-2, TPS-3)**
- Ⓐ KNOCK OUT WALL AT NORTH END OF TPS-2 FLUME AFTER NORTHEAST CLEARWELL IS IN SERVICE. SEE SHEET C-G-11B.
  - Ⓑ PLACE STAGE III FILTER/PIPE IN SERVICE.
- TPS-1 AND TPS-2 ARE NOW OPERATING IN "FLOAT" MODE FROM NE/SE, STAGE I AND STAGE III CLEARWELLS.
- Ⓒ ISOLATE, DEMO PART OF STAGE I TO COMPLETE PROPOSED STAGE I CONNECTION.
- NOTES**
1. DO NOT DEMO PIPE IMMEDIATELY ADJACENT TO VALVE TO PREVENT SEPARATION OF POTENTIALLY UNRESTRAINED EXISTING VALVE.
  2. REFER TO SHTS S-C-406 & S-C-407 FOR KNOWN UTILITY CONFLICTS.

**LEGEND**

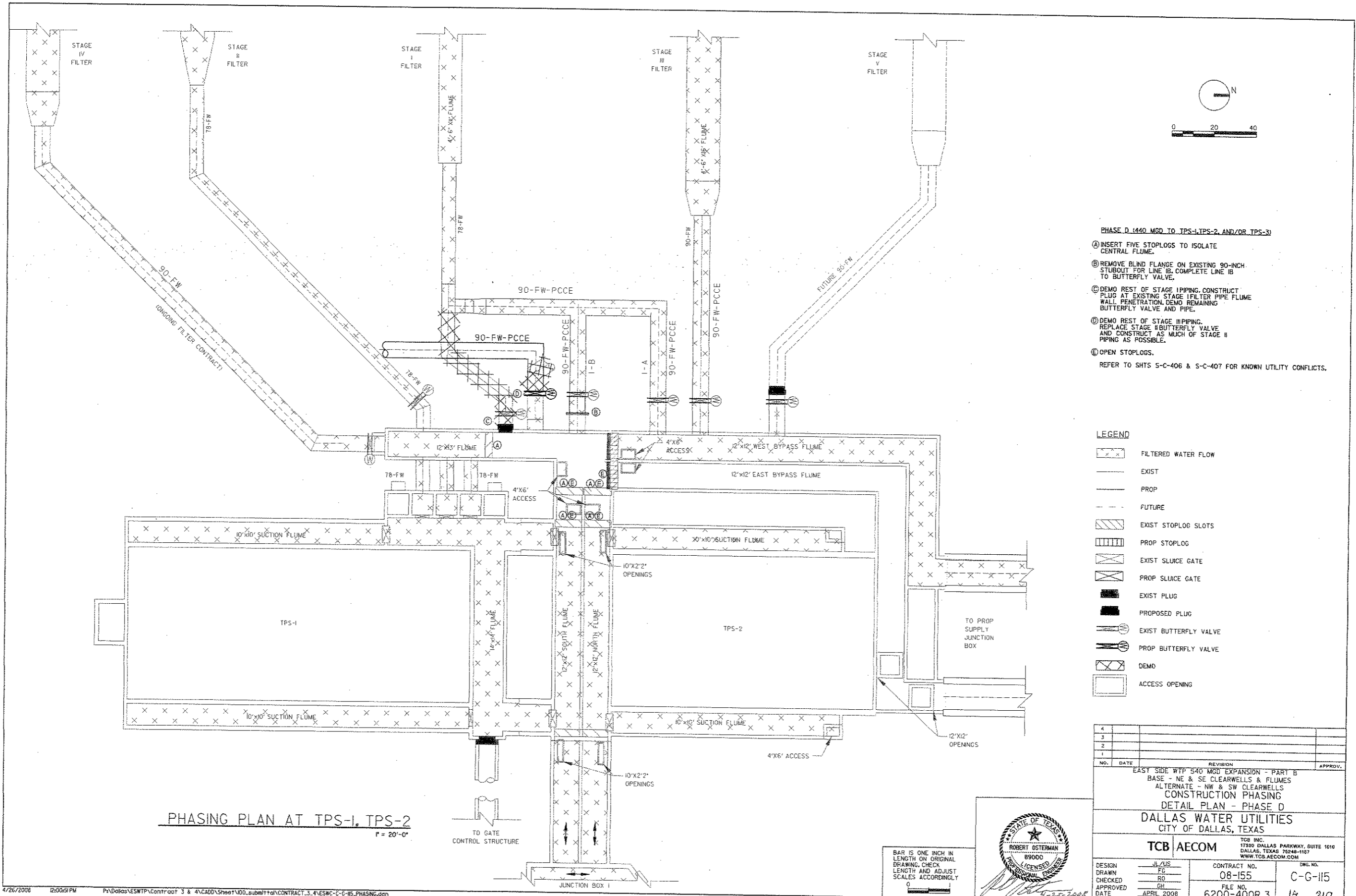
- FILTERED WATER FLOW
- EXIST
- PROP
- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOG
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- DEMO
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING DETAIL PLAN - PHASE C			
DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS			
TCB AECOM		TCB INC. 17800 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM	
DESIGN	JL/US	CONTRACT NO.	08-155
DRAWN	FG	FILE NO.	620Q-400R.3
CHECKED	RG	DATE	APRIL 2008
APPROVED	GH		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

**PHASING PLAN AT TPS-1, TPS-2**  
1" = 20'-0"



- PHASE D (440 MGD TO TPS-1, TPS-2, AND/OR TPS-3)
- Ⓐ INSERT FIVE STOPLOGS TO ISOLATE CENTRAL FLUME.
  - Ⓑ REMOVE BLIND FLANGE ON EXISTING 90-INCH STUBOUT FOR LINE 1B, COMPLETE LINE 1B TO BUTTERFLY VALVE.
  - Ⓒ DEMO REST OF STAGE I PIPING, CONSTRUCT PLUG AT EXISTING STAGE I FILTER PIPE FLUME WALL, PENETRATION, DEMO REMAINING BUTTERFLY VALVE AND PIPE.
  - Ⓓ DEMO REST OF STAGE II PIPING, REPLACE STAGE II BUTTERFLY VALVE AND CONSTRUCT AS MUCH OF STAGE II PIPING AS POSSIBLE.
  - Ⓔ OPEN STOPLOGS.
- REFER TO SHTS 5-C-406 & 5-C-407 FOR KNOWN UTILITY CONFLICTS.

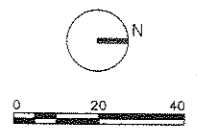
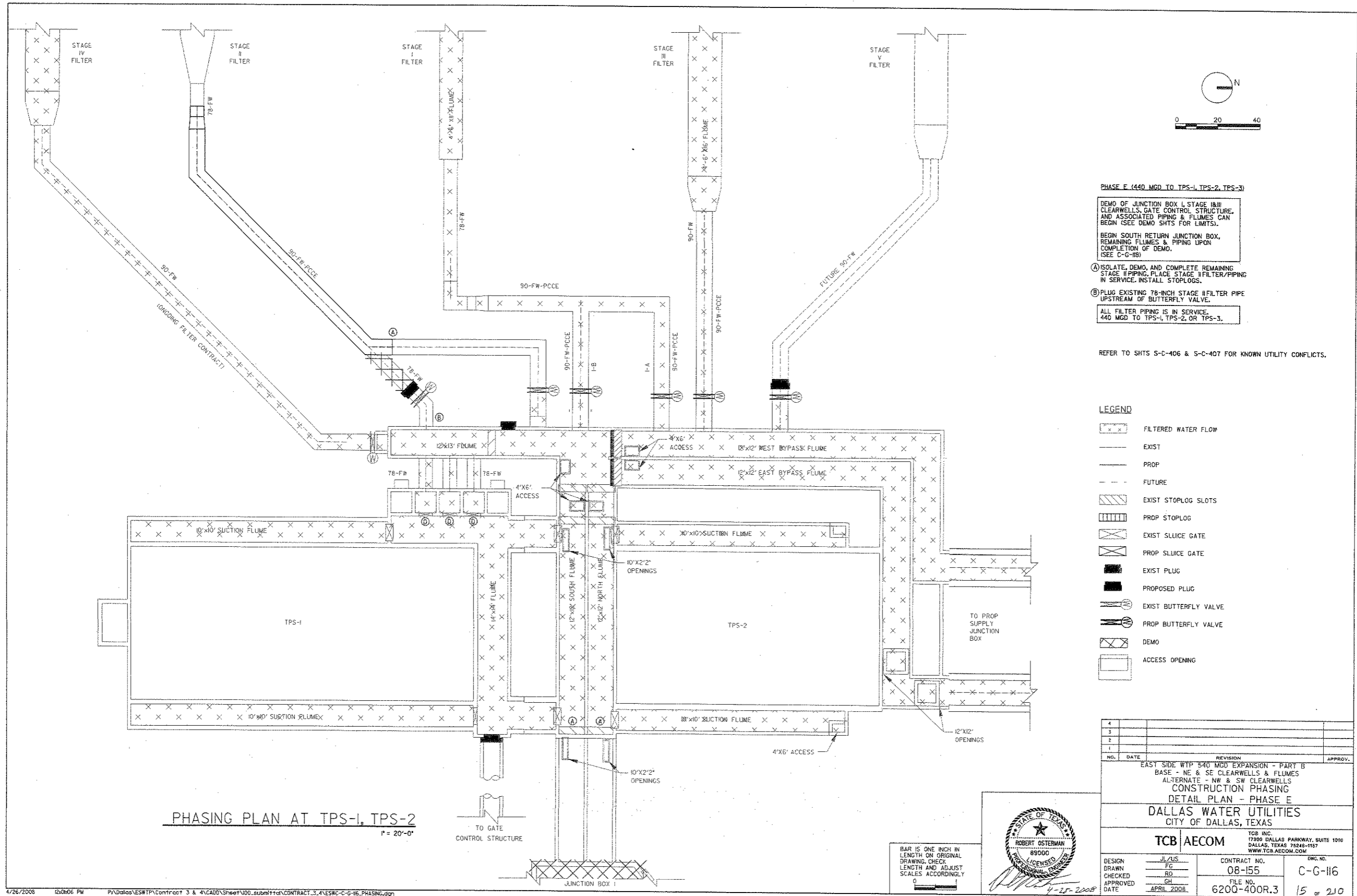
**LEGEND**

- FILTERED WATER FLOW
- EXIST
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- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOG
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- DEMO
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING DETAIL PLAN - PHASE D			
<b>DALLAS WATER UTILITIES</b> CITY OF DALLAS, TEXAS			
<b>TCB   AECOM</b>		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	JL/ZLS	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-115
CHECKED	RO	FILE NO.	14 of 210
APPROVED	GH	6200-400R.3	
DATE	APRIL 2008		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.



**PHASE E (440 MGD TO TPS-1, TPS-2, TPS-3)**

DEMO OF JUNCTION BOX I, STAGE I & III CLEARWELLS, GATE CONTROL STRUCTURE, AND ASSOCIATED PIPING & FLUMES CAN BEGIN (SEE DEMO SHTS FOR LIMITS).

BEGIN SOUTH RETURN JUNCTION BOX, REMAINING FLUMES & PIPING UPON COMPLETION OF DEMO. (SEE C-G-118)

Ⓐ ISOLATE, DEMO, AND COMPLETE REMAINING STAGE II PIPING. PLACE STAGE II FILTER/PIPING IN SERVICE. INSTALL STOPLOGS.

Ⓑ PLUG EXISTING 78-INCH STAGE II FILTER PIPE UPSTREAM OF BUTTERFLY VALVE.

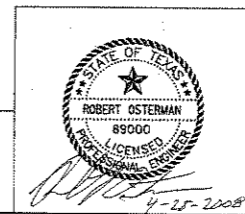
ALL FILTER PIPING IS IN SERVICE. 440 MGD TO TPS-1, TPS-2, OR TPS-3.

REFER TO SHTS S-C-406 & S-C-407 FOR KNOWN UTILITY CONFLICTS.

**LEGEND**

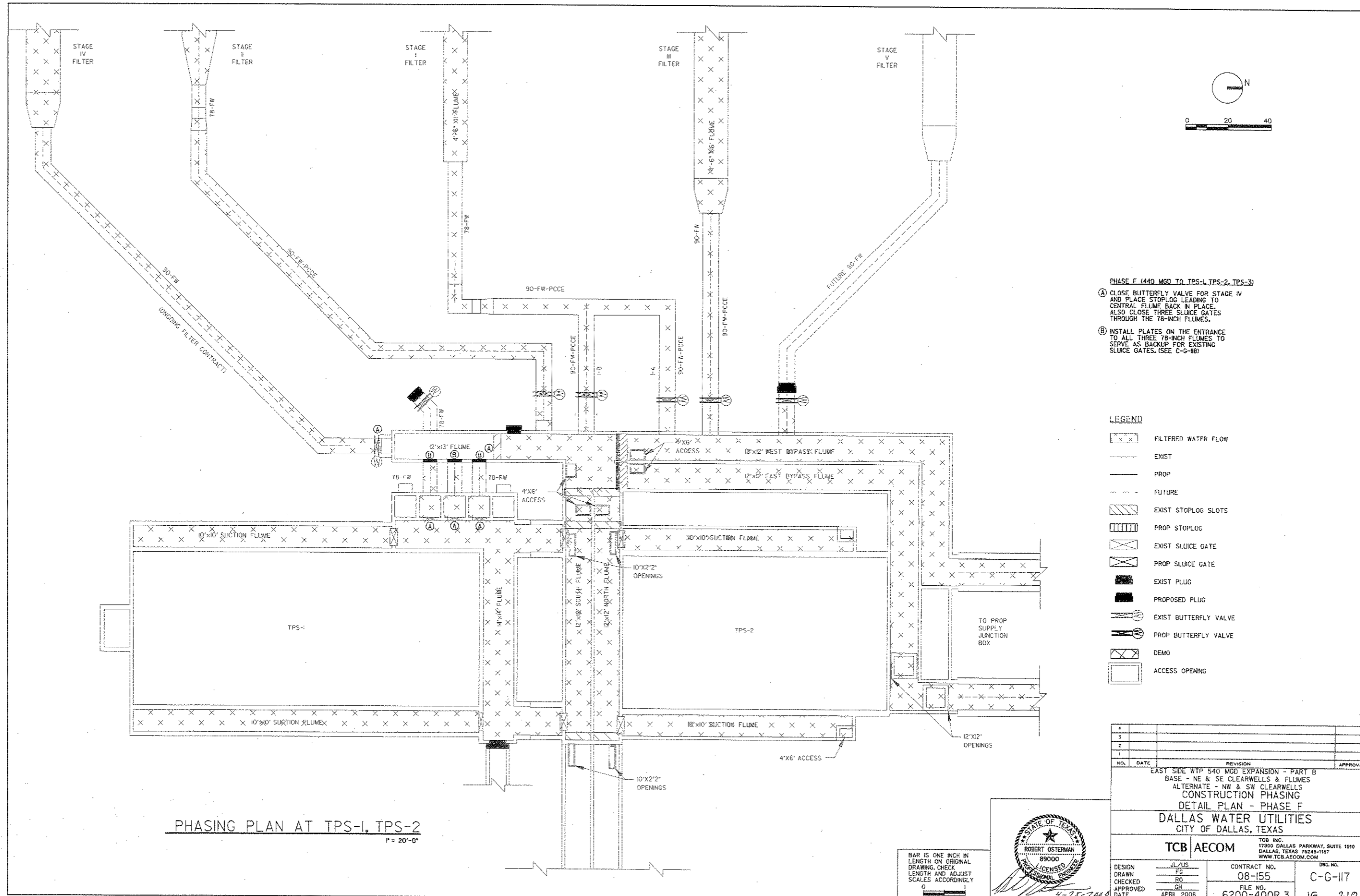
- FILTERED WATER FLOW
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- FUTURE
- EXIST STOPLOG SLOTS
- PROP STOPLOG
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- DEMO
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING DETAIL PLAN - PHASE E			
<b>DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS</b>			
<b>TCB   AECOM</b>		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM	
DESIGN	JL/JLS	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-116
CHECKED	RO	FILE NO.	
APPROVED	GH	620Q-400R.3	15 of 210
DATE	APRIL 2008		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

**PHASING PLAN AT TPS-1, TPS-2**  
P = 20'-0"



**PHASE F (440 MGD TO TPS-1, TPS-2, TPS-3)**

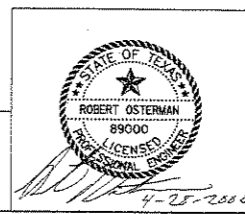
**(A)** CLOSE BUTTERFLY VALVE FOR STAGE IV AND PLACE STOPLOG LEADING TO CENTRAL FLUME BACK IN PLACE. ALSO CLOSE THREE SLUICE GATES THROUGH THE 78-INCH FLUMES.

**(B)** INSTALL PLATES ON THE ENTRANCE TO ALL THREE 78-INCH FLUMES TO SERVE AS BACKUP FOR EXISTING SLUICE GATES. (SEE C-G-116)

**LEGEND**

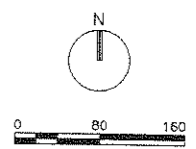
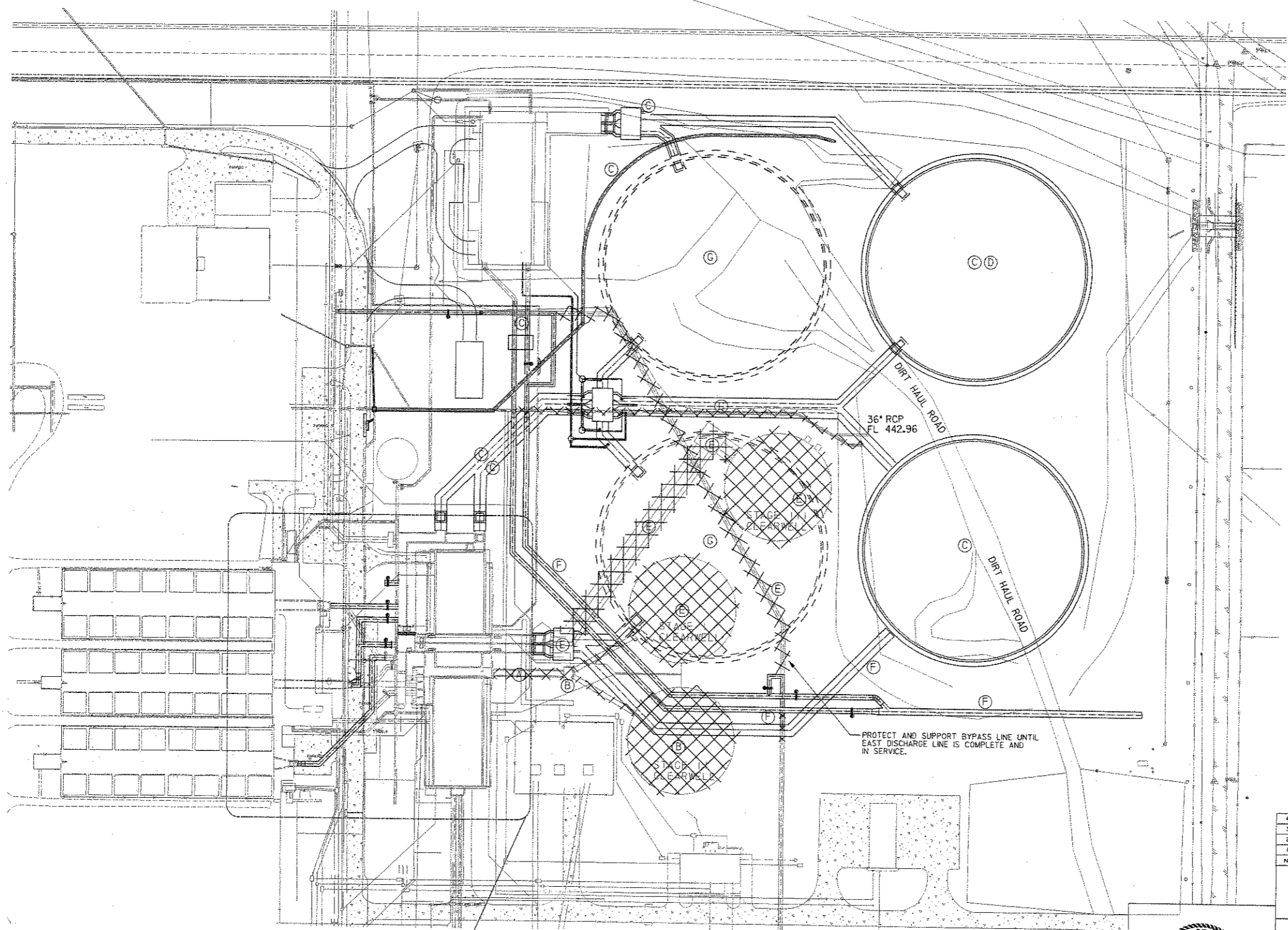
- FILTERED WATER FLOW
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- EXIST STOPLOG SLOTS
- PROP STOPLOG
- EXIST SLUICE GATE
- PROP SLUICE GATE
- EXIST PLUG
- PROPOSED PLUG
- EXIST BUTTERFLY VALVE
- PROP BUTTERFLY VALVE
- DEMO
- ACCESS OPENING

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NO.	DATE	REVISION	APPROV.
EAST SIDE WTP 540 MGD EXPANSION - PART B BASE - NE & SE CLEARWELLS & FLUMES ALTERNATE - NW & SW CLEARWELLS CONSTRUCTION PHASING DETAIL PLAN - PHASE F			
<b>DALLAS WATER UTILITIES CITY OF DALLAS, TEXAS</b>			
<b>TCB AECOM</b>		TCB INC. 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1157 WWW.TCB.AECOM.COM	
DESIGN	JL/ZUS	CONTRACT NO.	DWG. NO.
DRAWN	FG	08-155	C-G-117
CHECKED	RO	FILE NO.	
APPROVED	GH	620Q-400R.3	16 OF 210
DATE	APRIL 2008		



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY.

**PHASING PLAN AT TPS-1, TPS-2**  
1" = 20'-0"



- PHASE A**
- Ⓐ ISOLATE GATE CONTROL STRUCTURE, STAGE I AND CLEARWELLS, AND TPS-1.
  - DEMO PORTION OF FLUME BETWEEN TPS-1 AND GATE CONTROL STRUCTURE, PLUG AND INSTALL PLATE AT BOTH ENDS OF FLUME. PLACE EVERYTHING BUT PLUGGED FLUME BACK IN SERVICE.
- PHASE B**
- Ⓑ ISOLATE AND DEMO STAGE II CLEARWELL AND ALL ASSOCIATED FLUMES AND ALL STAGE II PIPING EAST OF GATE CONTROL STRUCTURE. DEMOLISH 36-INCH STORM DRAIN AND TEMPORARILY PROVIDE DRAINAGE TILL NEW LINE IS CONSTRUCTED IN PHASE C.
  - Ⓒ CONSTRUCT EAST CLEARWELLS, FLUMES, PIPING, STRUCTURES, ETC WHERE NO CONFLICT WITH EXISTING FACILITIES EXISTS. SUPPORT 24-INCH PLANTWATER LINE DURING CONSTRUCTION.
  - CONTRACTOR TO REROUTE ACCESS HALL ROAD TO MINIMIZE CONFLICTS WITH CONSTRUCTION.
  - KEEP EXISTING BYPASS IN SERVICE AND SUPPORT THE CONFLICTING PORTION WHILE CONSTRUCTING THE SUPPLY FLUMES.
  - COMPLETE EAST TPS-3 DISCHARGE HEADER TO BVV SOUTH OF METER VALVE. ALSO COMPLETE NORTH BYPASS CONNECTION TO 96-TW JIM MILLER PIPELINE TO ALLOW TPS-3 TO PUMP TO THAT PIPELINE IN PHASE B AS BACKUP FOR TPS-2.
- PHASE C**
- Ⓓ PLACE NORTHEAST CLEARWELL IN SERVICE. CONSTRUCT RELOCATED 48-INCH STORM DRAIN.
- PHASE D**
- Ⓔ ISOLATE FLUMES LEADING TO JUNCTION BOX I.
  - Ⓕ DEMO STAGE I AND III CLEARWELLS, ALL ASSOCIATED PIPING AND ANCLLARY ITEMS INCLUDING 72-INCH BYPASS.
  - Ⓖ BEGIN SOUTH RETURN BOX, FLUMES AND EAST DISCHARGE HEADERS UPON COMPLETION OF DEMO. PLACE SE CLEARWELL IN SERVICE.
  - Ⓗ WEST CLEARWELLS CAN BEGIN SUBJECT TO CONSTRAINT THAT MAINTAIN ACCESS FOR TPS-3 (CONTRACT 2) CONTRACTOR WITH PROPOSED PHASING PLAN.
  - Ⓘ PLACE ALL CLEARWELLS IN SERVICE UPON COMPLETION (SEE C-G-116).

**LEGEND**

- EXIST
- PROP
- - - FUTURE
- XXXXX DEMOLITION

PROTECT AND SUPPORT BYPASS LINE UNTIL EAST DISCHARGE LINE IS COMPLETE AND IN SERVICE.

SEE C-G-111 THROUGH C-G-117 FOR ADDITIONAL PHASING DETAIL

NO.	DATE	REVISION	APPROV.
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EAST SIDE WTP 540 MGD EXPANSION - PART B  
 BASE - NE & SE CLEARWELLS & FLUMES  
 ALTERNATE - NW & SW CLEARWELLS  
 CONSTRUCTION PHASING  
 AREA PLAN - PHASES A-F  
 DALLAS WATER UTILITIES  
 CITY OF DALLAS, TEXAS



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING. CHECK LENGTH AND ADJUST SCALES ACCORDINGLY

TCB AECOM		TCB INC. 17800 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248-1167 WWW.TCB.AECOM.COM	
DESIGN	JL/JUS	CONTRACT NO.	08-155
DRAWN	FC	DWG. NO.	C-G-118
CHECKED	RO	FILE NO.	620Q-400R.3
APPROVED	GH	DATE	APRIL 2008
			17 of 210