Appendix H

Slope Stability Sections

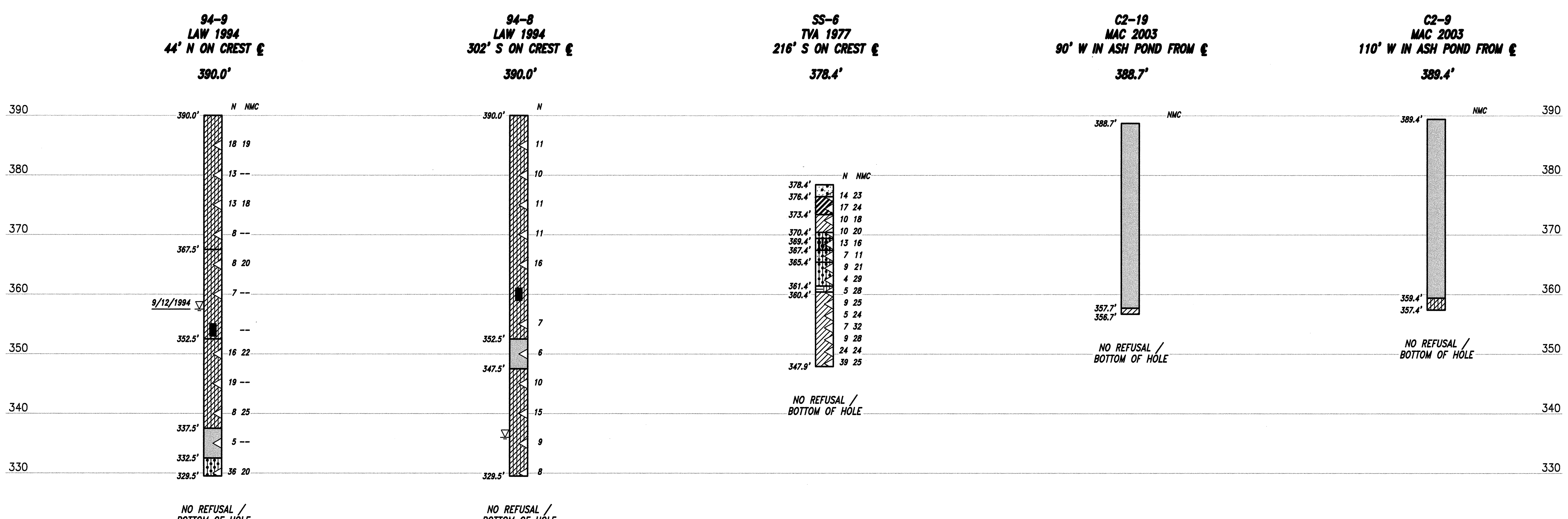
CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS

LOCATION	STN-AC		
DEPTH	45.6' - 46.1'	46.2' - 46.7'	46.8' - 47.3'
$\bar{\phi}$	31.9°		
$\bar{c}$	260 p.s.f.		
LOCATION	STN-AT-PZ		
DEPTH	19.0' - 19.5'	19.6' - 20.1'	20.2' - 20.7'
$\bar{\phi}$	31.4°		
$\bar{c}$	560 p.s.f.		
LOCATION	STN-AC-PZ	STN-BC-PZ	
DEPTH	5.0' - 5.5'	5.0' - 5.5'	10.0' - 10.5'
$\bar{\phi}$	22.9°		
$\bar{c}$	1,260 p.s.f.		

SUMMARY OF OFFSET PIEZOMETER BORINGS

BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-AT - PZ	368.4'	21.0'	10.0'-20.0'	19.0'-21.0'
STN-AC - PZ	391.6'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'
STN-AC - PZ(2)	391.8	25.0'	14.5'-24.5'	NO SAMPLES

STABILITY SECTION A-A'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION A-A'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

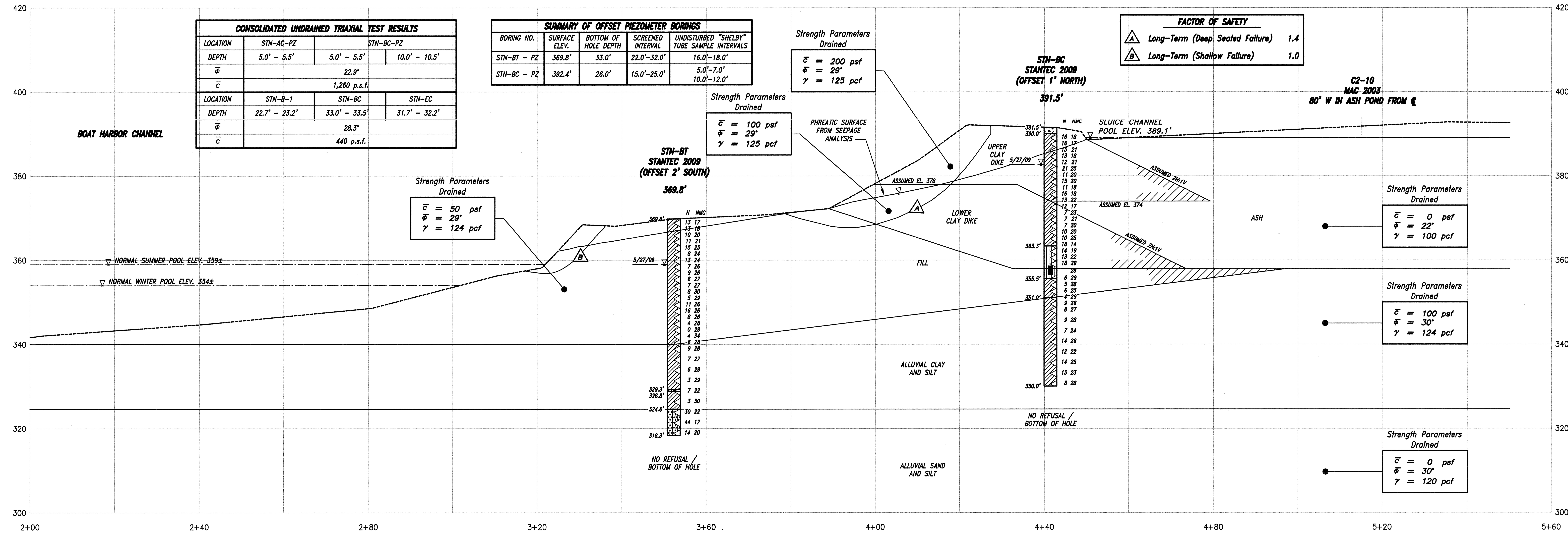
AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-03 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 04/14/2010



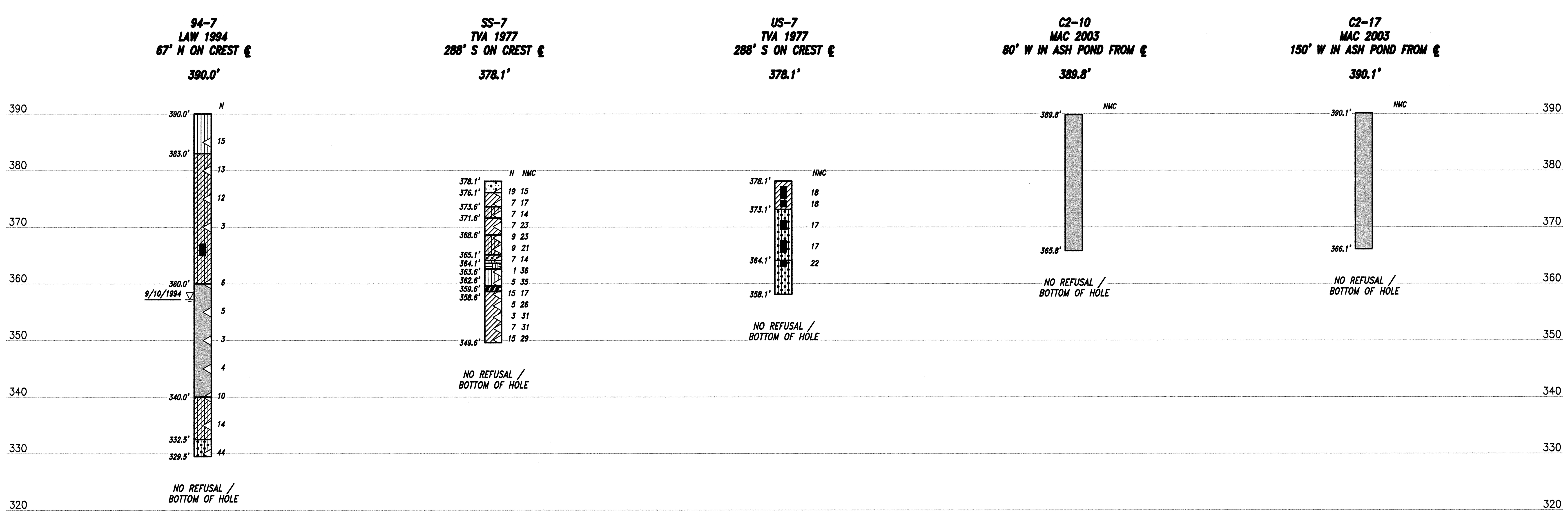
CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS

LOCATION	STN-AC-PZ	STN-BC-PZ	
DEPTH	5.0' - 5.5'	5.0' - 5.5'	10.0' - 10.5'
Φ̄	22.9°		
c̄	1,260 p.s.f.		
LOCATION	STN-B-1	STN-BC	STN-EC
DEPTH	22.7' - 23.2'	33.0' - 33.5'	31.7' - 32.2'
Φ̄	28.3°		
c̄	440 p.s.f.		

SUMMARY OF OFFSET PIEZOMETER BORINGS

BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-BT - PZ	369.8'	33.0'	22.0'-32.0'	16.0'-18.0'
STN-BC - PZ	392.4'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'

STABILITY SECTION B-B'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- ▽ WATER LEVEL AND DATE RECORDED
- ▮ UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- ◁ STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE 1 2 3 4

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION STABILITY SECTION B-B'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

STEPHEN H. BICKEL REGISTERED ENGINEER AGRICULTURE COMMERCE STATE OF TENNESSEE

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TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-04 | R 0

STANTEC 0
TASK COMPLETED BY: REV NO.

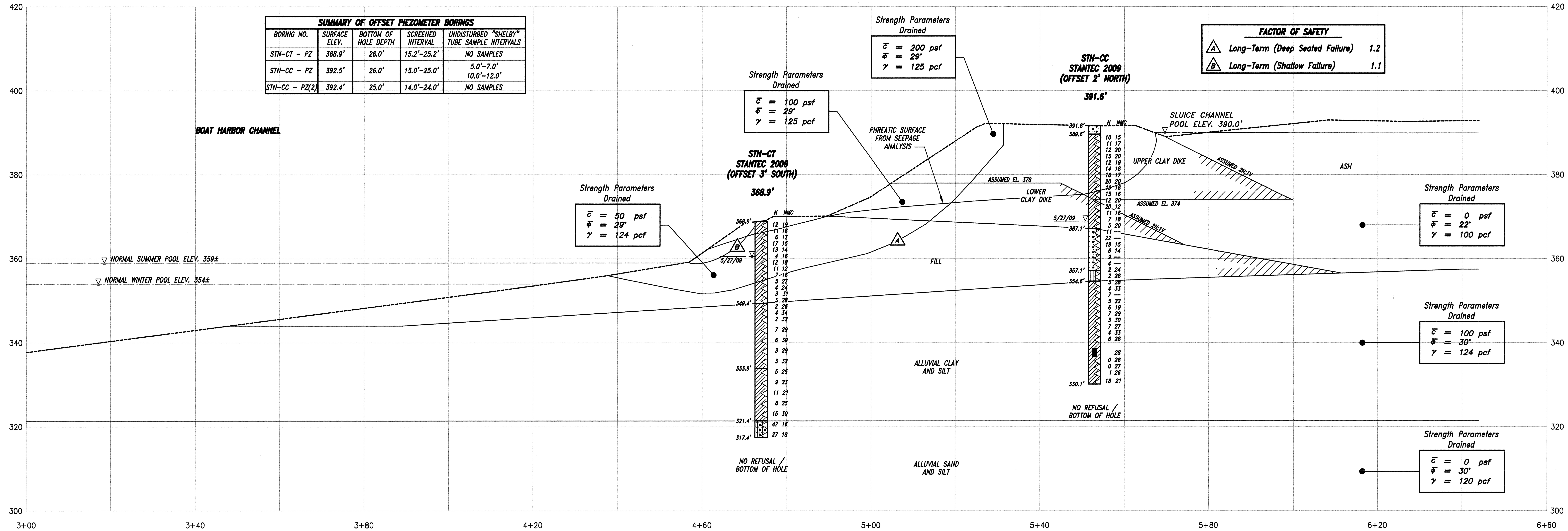
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

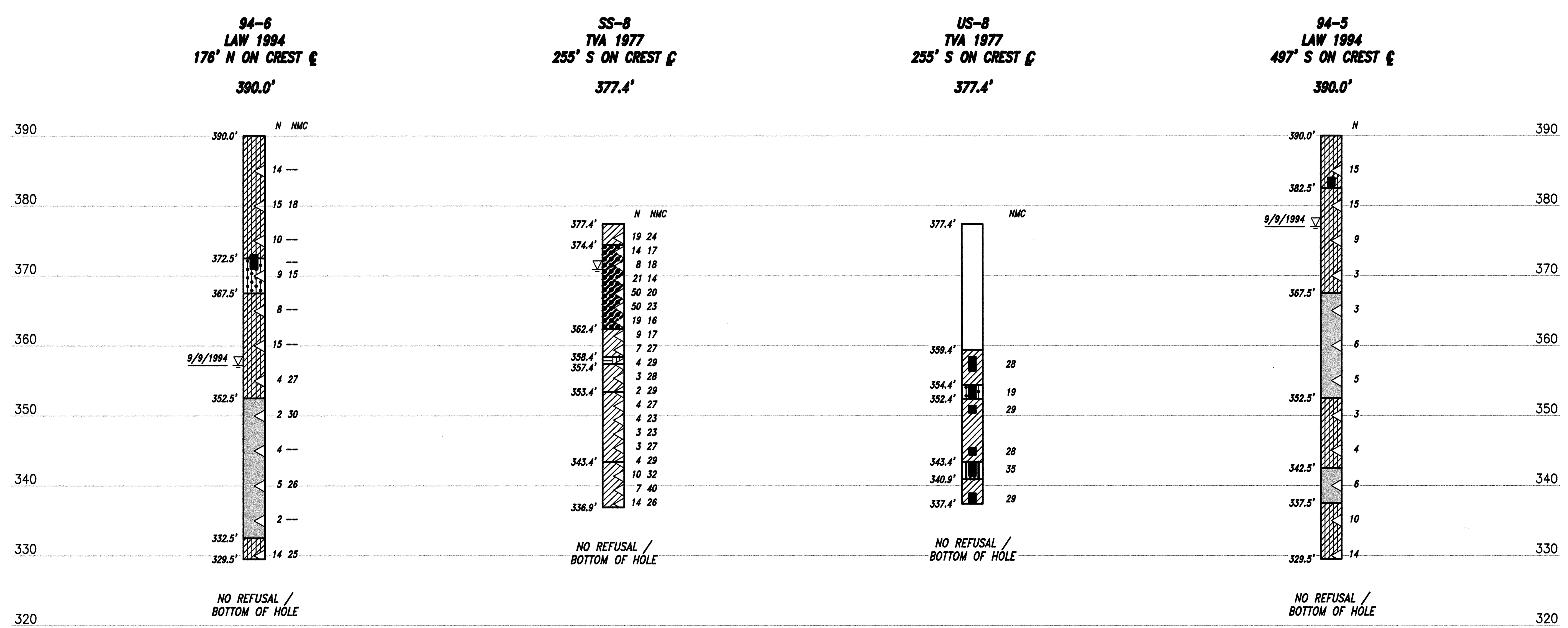
PLOT DATE: 04/14/2010

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-CT - PZ	368.9'	26.0'	15.2'-25.2'	NO SAMPLES
STN-CC - PZ	392.5'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'
STN-CC - PZ(2)	392.4'	25.0'	14.0'-24.0'	NO SAMPLES

FACTOR OF SAFETY	
A Long-Term (Deep Seated Failure)	1.2
B Long-Term (Shallow Failure)	1.1



STABILITY SECTION C-C'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R -	-	-	-	-	-	-	-	-	-	-	-
R 0	01/27/10	PC	RP	SHB	SHB	SHB	-	TJ	-	-	-

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION C-C'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
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STEPHEN H. BICKEL REGISTERED ENGINEER No. 113134 STATE OF TENNESSEE

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AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-05 | R 0

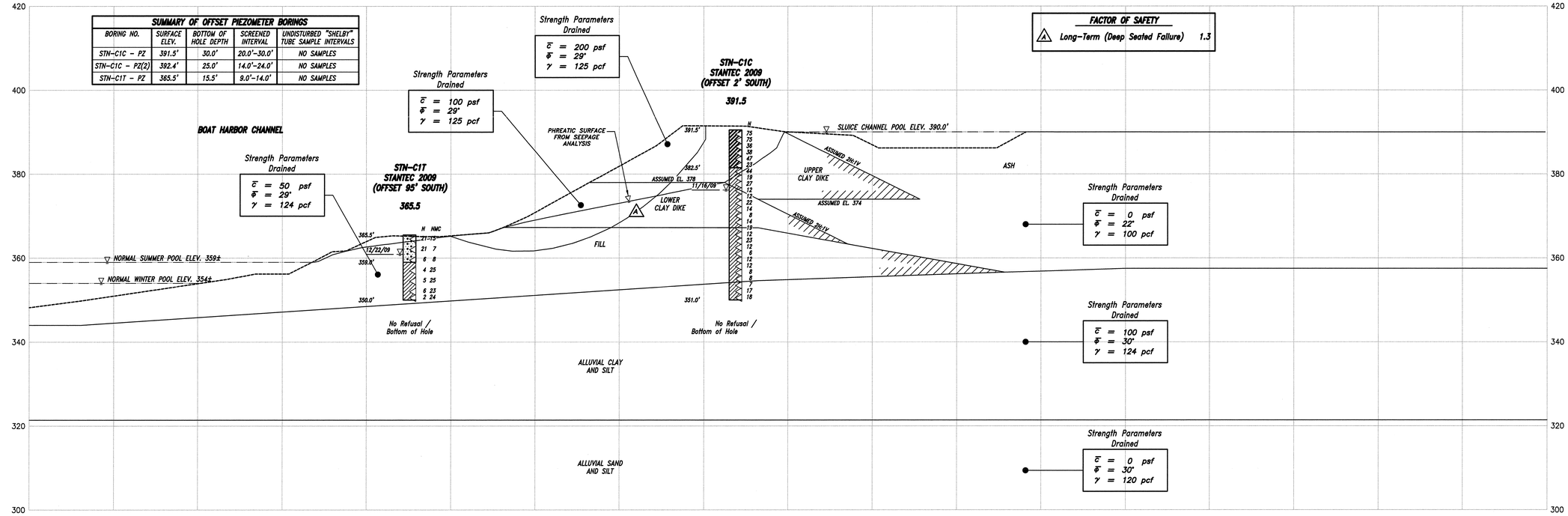
STANTEC 0
TASK COMPLETED BY: REV NO.

PLOT FACTOR:XX
W_TVA

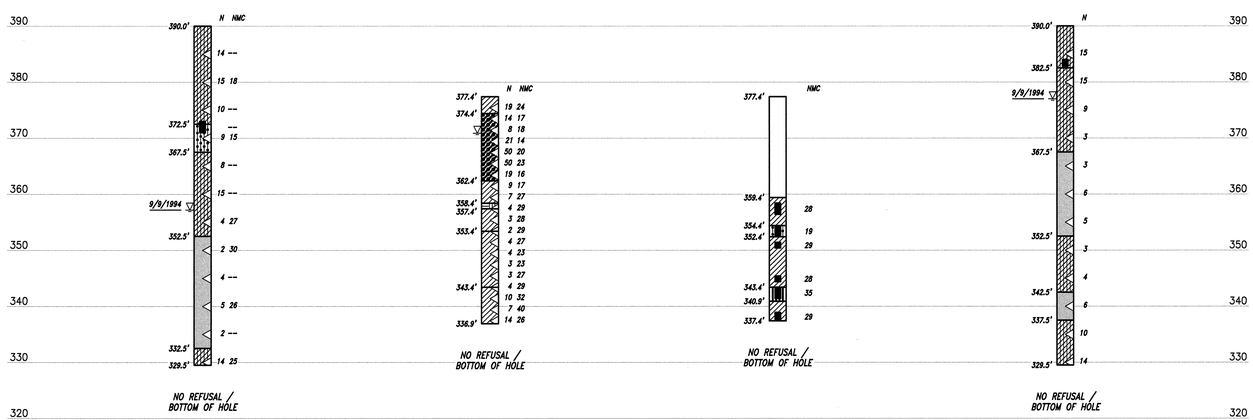
C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 04/14/2010

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-C1C - PZ	391.5'	30.0'	20.0'-30.0'	NO SAMPLES
STN-C1C - PZ(2)	392.4'	25.0'	14.0'-24.0'	NO SAMPLES
STN-C1T - PZ	365.5'	15.5'	9.0'-14.0'	NO SAMPLES



STABILITY SECTION C1-C1'



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

R	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. NO.

DISCIPLINE INTERFACE
1
2
3
4

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION C1-C1'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
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AUTOCAD R 2008	DATE 01/27/10	34	C	XXWXXX-06	R 0

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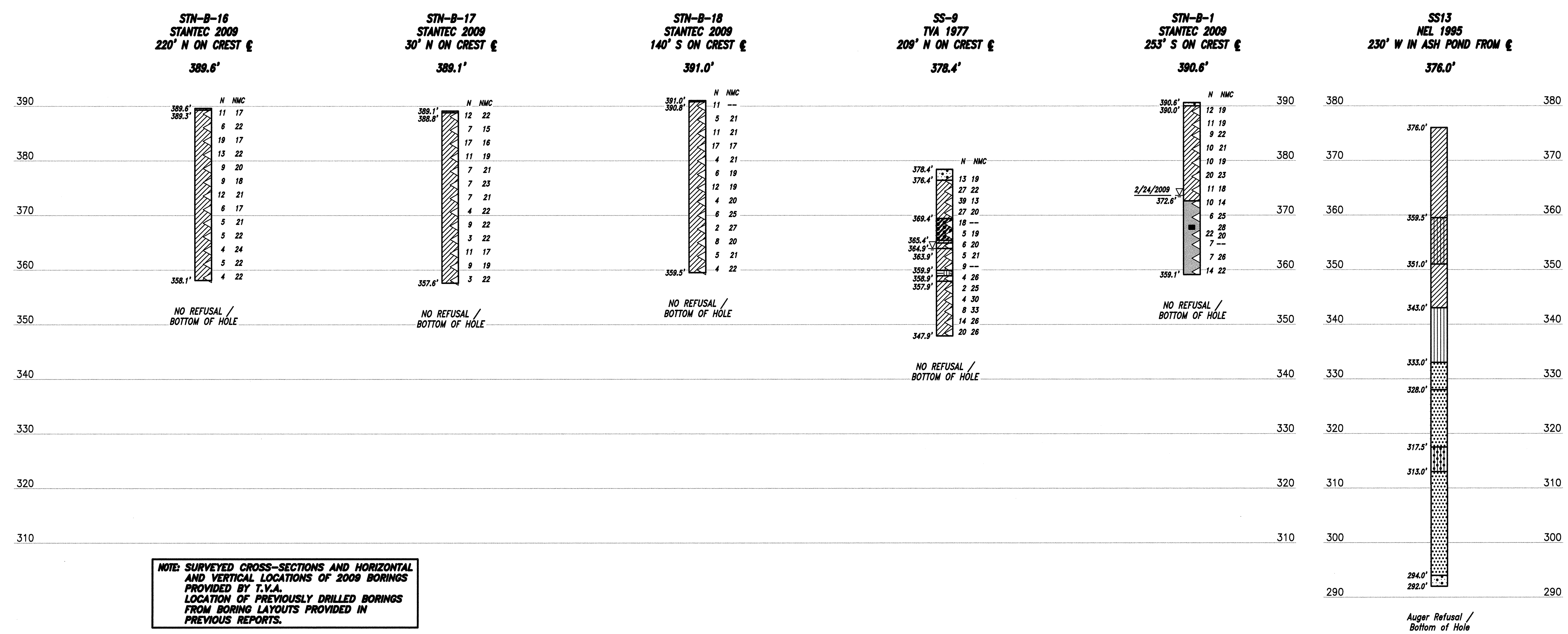
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STABILITY SECTION D-D'

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-DT – PZ	365.3'	26.0'	15.4'–25.4'	NO SAMPLES
STN-DC – PZ	391.2'	26.0'	15.0'–25.0'	5.0'–7.0' 10.0'–12.0'
STN-DC – PZ(2)	391.0'	25.0'	14.0'–24.0'	NO SAMPLES



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- ▽ WATER LEVEL AND DATE RECORDED
- ■ UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- ◁ STANDARD PENETRATION TEST INTERVAL

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION D-D'

STEPHEN H. BICKEL REGISTERED ENGINEER AGRICULTURE COMMERCE No. 113134 STATE OF TENNESSEE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

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TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-07 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

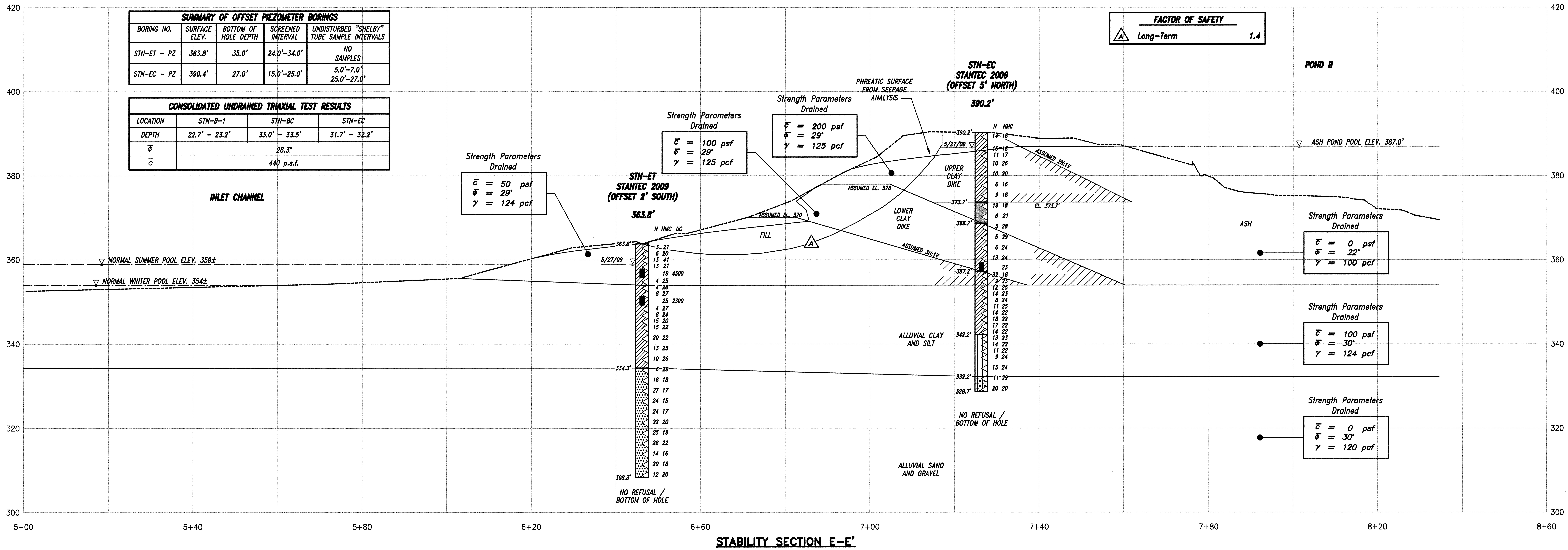
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

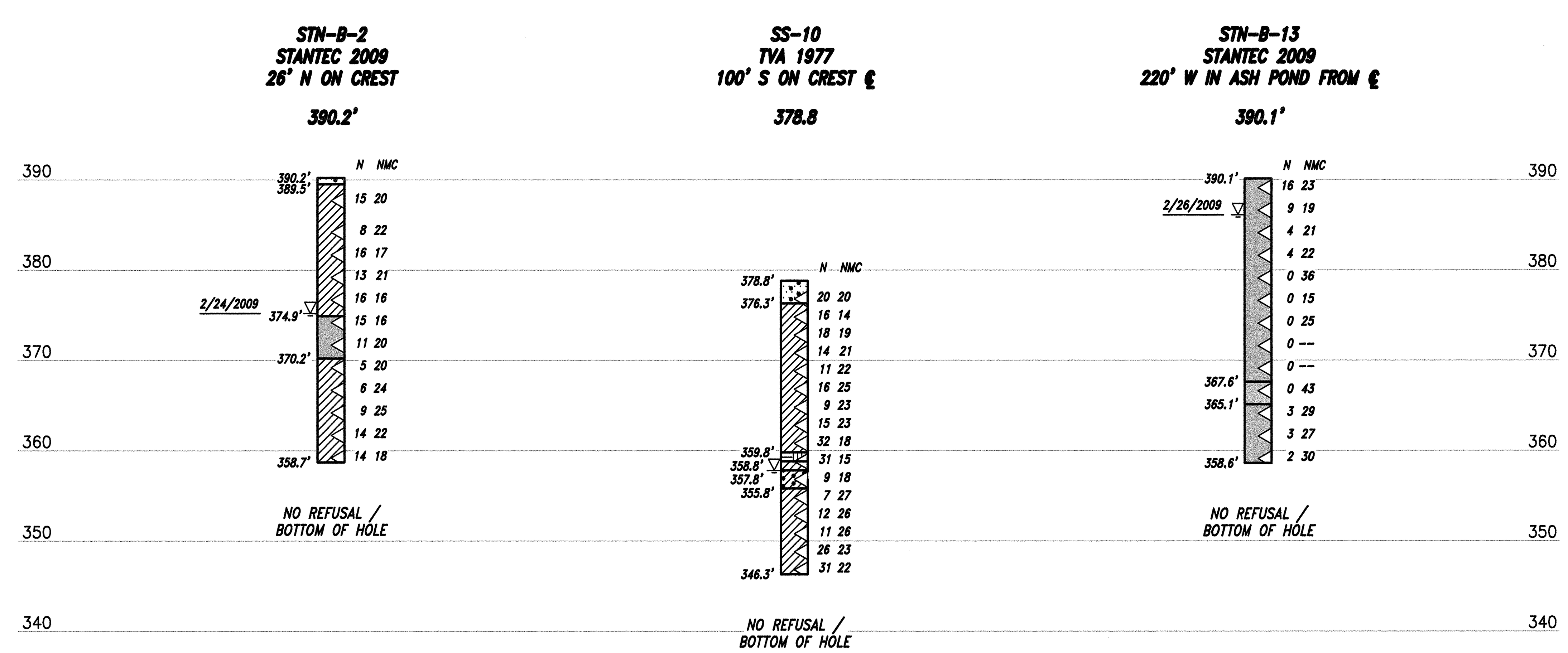
SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-ET – PZ	363.8'	35.0'	24.0'–34.0'	NO SAMPLES
STN-EC – PZ	390.4'	27.0'	15.0'–25.0'	5.0'–7.0' 25.0'–27.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-B-1	STN-BC	STN-EC
DEPTH	22.7' – 23.2'	33.0' – 33.5'	31.7' – 32.2'
$\bar{\phi}$	28.3°		
$\bar{c}$	440 p.s.f.		

FACTOR OF SAFETY	
Long-Term	1.4



STABILITY SECTION E–E'



NOTE
DATA FOR BORING STN-EC, SHOWN ABOVE, COMBINES DATA FROM BORINGS STN-EC AND STN-EC-A.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION E–E'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008	DATE 01/27/10	34	C	XXWXXX–08	R 0

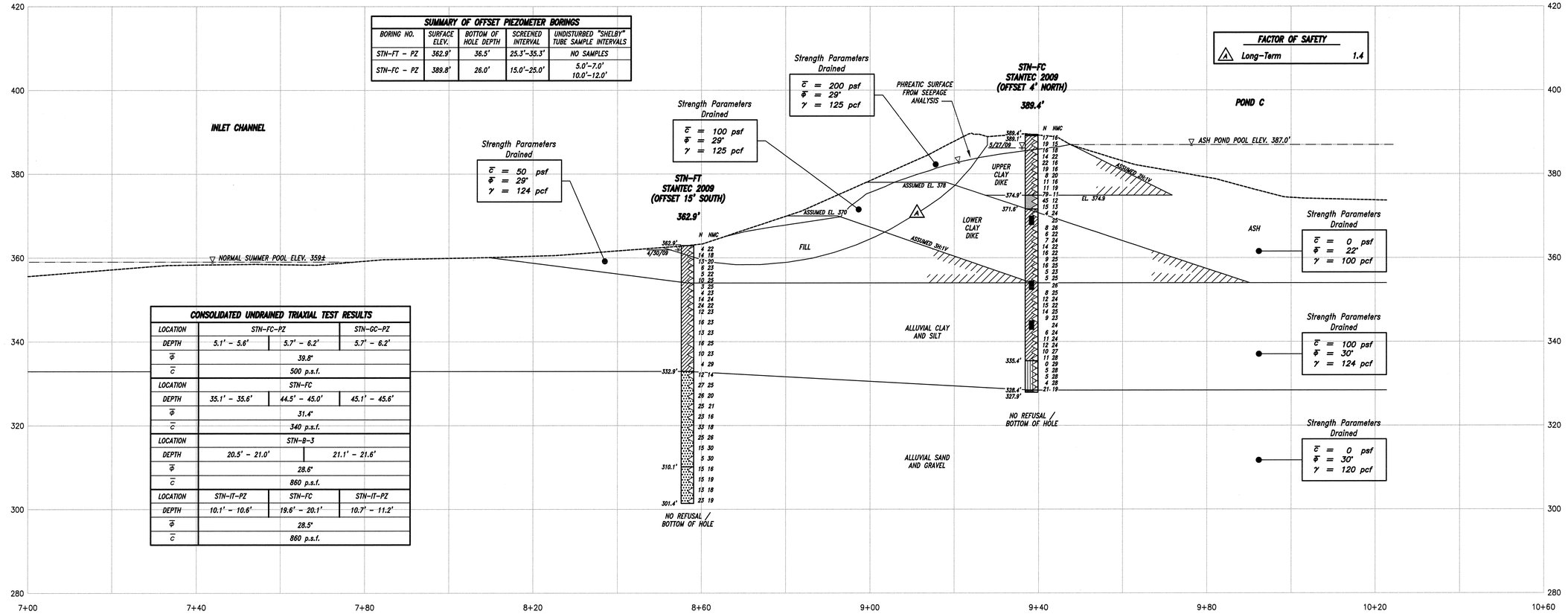
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

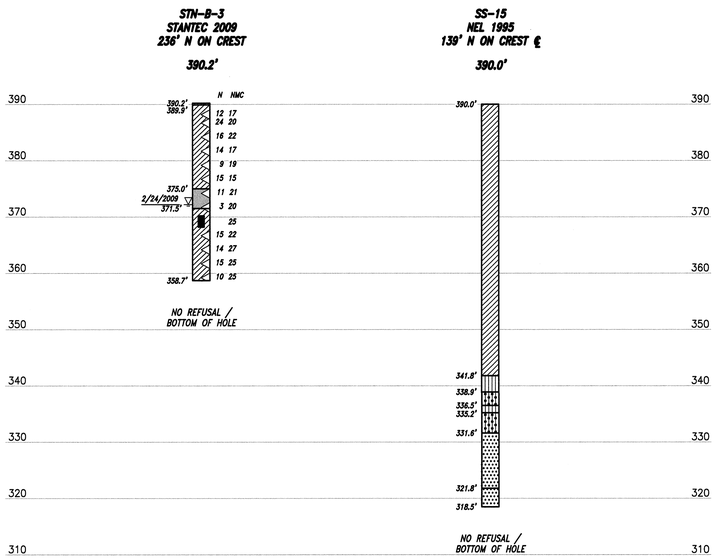
STANTEC | 0
TASK COMPLETED BY: | REV NO.

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-FT - PZ	362.9'	36.5'	25.3'-35.3'	NO SAMPLES
STN-FC - PZ	389.8'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-FC-PZ		STN-GC-PZ
DEPTH	5.1' - 5.6'	5.7' - 6.2'	5.7' - 6.2'
$\bar{\Phi}$	39.8°		
$\bar{c}$	500 p.s.f.		
LOCATION	STN-FC		
DEPTH	35.1' - 35.6'	44.5' - 45.0'	45.1' - 45.6'
$\bar{\Phi}$	31.4°		
$\bar{c}$	340 p.s.f.		
LOCATION	STN-B-3		
DEPTH	20.5' - 21.0'	21.1' - 21.6'	
$\bar{\Phi}$	28.6°		
$\bar{c}$	860 p.s.f.		
LOCATION	STN-IT-PZ	STN-FC	STN-IT-PZ
DEPTH	10.1' - 10.6'	19.6' - 20.1'	10.7' - 11.2'
$\bar{\Phi}$	28.5°		
$\bar{c}$	860 p.s.f.		



STABILITY SECTION F-F'



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV NO.
R -	-	-	-	-	-	-	-	-	-	-	-
R 0	01/27/10	PC	RP	SHB	SHB	SHB	-	TJ	-	-	-

DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION F-F'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-09 | R 0

STEPHEN H. BICKEL — REGISTERED PROFESSIONAL ENGINEER — 113131 — STATE OF TENNESSEE

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STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:XX
W_TVA

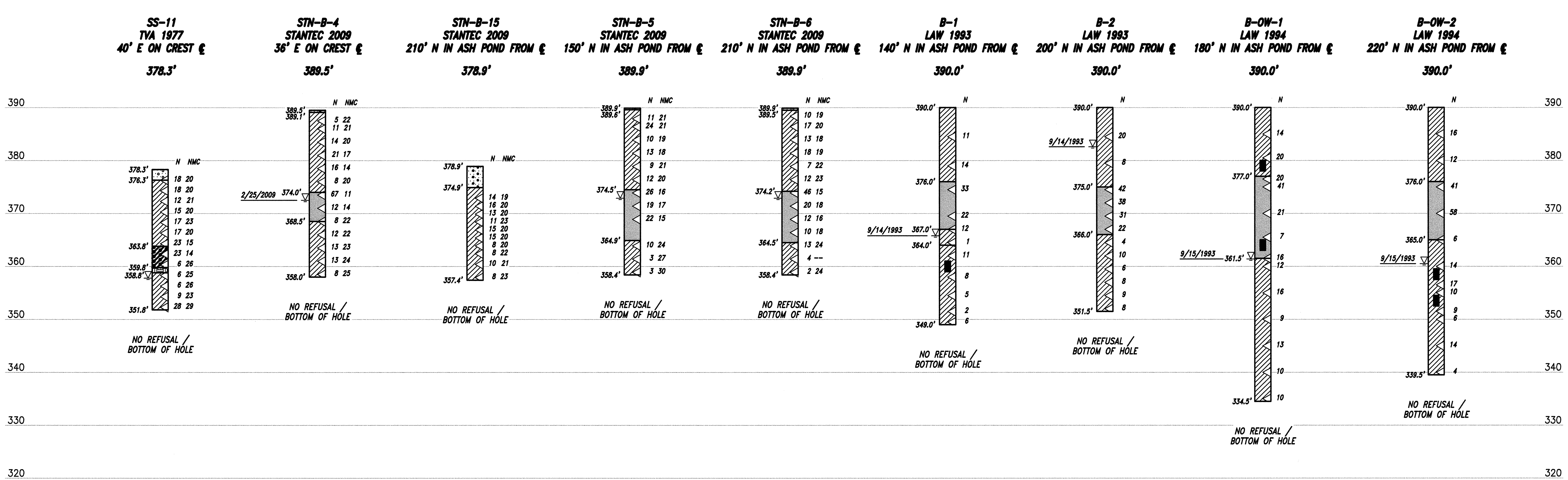
C.A.D. DRAWING
DO NOT ALTER MANUALLY

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-GT		
DEPTH	12.0' – 12.5'	12.5' – 13.0'	13.0' – 13.5'
$\bar{\phi}$	29.4°		
$\bar{c}$	440 p.s.f.		
LOCATION	STN-GC-PZ	STN-HC-PZ	STN-IC-PZ
DEPTH	5.1' – 5.6'	5.1' – 5.6'	10.2' – 10.7'
$\bar{\phi}$	25.6°		
$\bar{c}$	900 p.s.f.		
LOCATION	STN-GC	STN-IC-PZ	
DEPTH	22.6' – 23.1'	30.1' – 30.6'	
$\bar{\phi}$	30.9°		
$\bar{c}$	320 p.s.f.		
LOCATION	STN-FC-PZ		STN-GC-PZ
DEPTH	5.1' – 5.6'	5.7' – 6.2'	5.7' – 6.2'
$\bar{\phi}$	39.8°		
$\bar{c}$	500 p.s.f.		

SUMMARY OF OFFSET PIEZOMETER BORINGS

BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-GT – PZ	360.8'	31.5'	20.4'–30.4'	NO SAMPLES
STN-GC – PZ	389.8'	27.0'	15.0'–25.0'	5.0'–7.0' 25.0'–27.0'

STABILITY SECTION G-G'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- ∇ WATER LEVEL AND DATE RECORDED
- ■ UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- ◁ STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

NOTE

FOR CLARITY PURPOSES, BORINGS B-5, B-7, B-8 AND US-6B IN THE VICINITY OF STABILITY SECTION G FROM THE LAW ENGINEERING AND ENVIRONMENTAL SERVICES REPORT DATED JANUARY 17, 1994 AND TVA ASH POND EXPLORATION DATED SEPTEMBER 17, 1969 WERE NOT INCLUDED IN THE SECTION G PROFILE. LOGS OF THESE BORINGS CAN BE FOUND IN THEIR RESPECTIVE REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION STABILITY SECTION G-G'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

STEPHEN H. BICKEL, REGISTERED ENGINEER, No. 113134, STATE OF TENNESSEE

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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008	DATE 01/27/10	34	C	XXWXXX–10	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

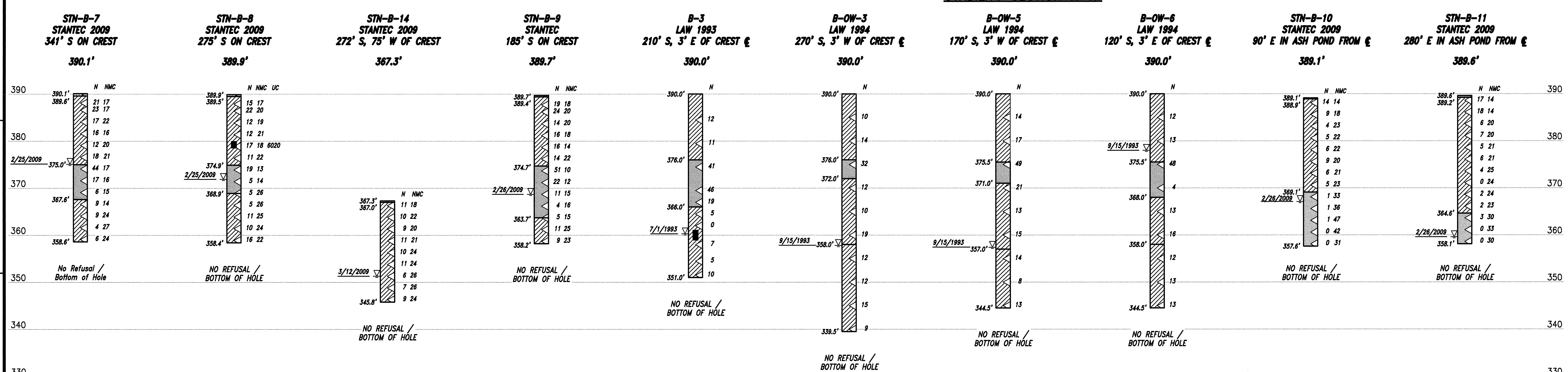
C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 04/14/2010

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-GC-PZ	STN-HC-PZ	STN-IC-PZ
DEPTH	5.1' - 5.6'	5.1' - 5.6'	10.2' - 10.7'
$\bar{\phi}$	25.6°		
$\bar{c}$	900 p.s.f.		

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-HT - PZ	363.1'	48.0'	27.0'-47.0'	NO SAMPLES
STN-HC - PZ	390.0'	27.0'	14.2'-24.2'	5.0'-7.0' 25.0'-27.0'

STABILITY SECTION H-H'



NOTE

FOR CLARITY PURPOSES, BORINGS B-6, B-9, AND B-OW-4 IN THE VICINITY OF STABILITY SECTION H FROM THE LAW ENGINEERING AND ENVIRONMENTAL SERVICES REPORT DATED JANUARY 17, 1994 WERE NOT INCLUDED IN THE SECTION H PROFILE. LOGS OF THESE BORINGS CAN BE FOUND IN THEIR RESPECTIVE REPORTS.

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

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REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE 1 2 3 4

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION STABILITY SECTION H-H'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

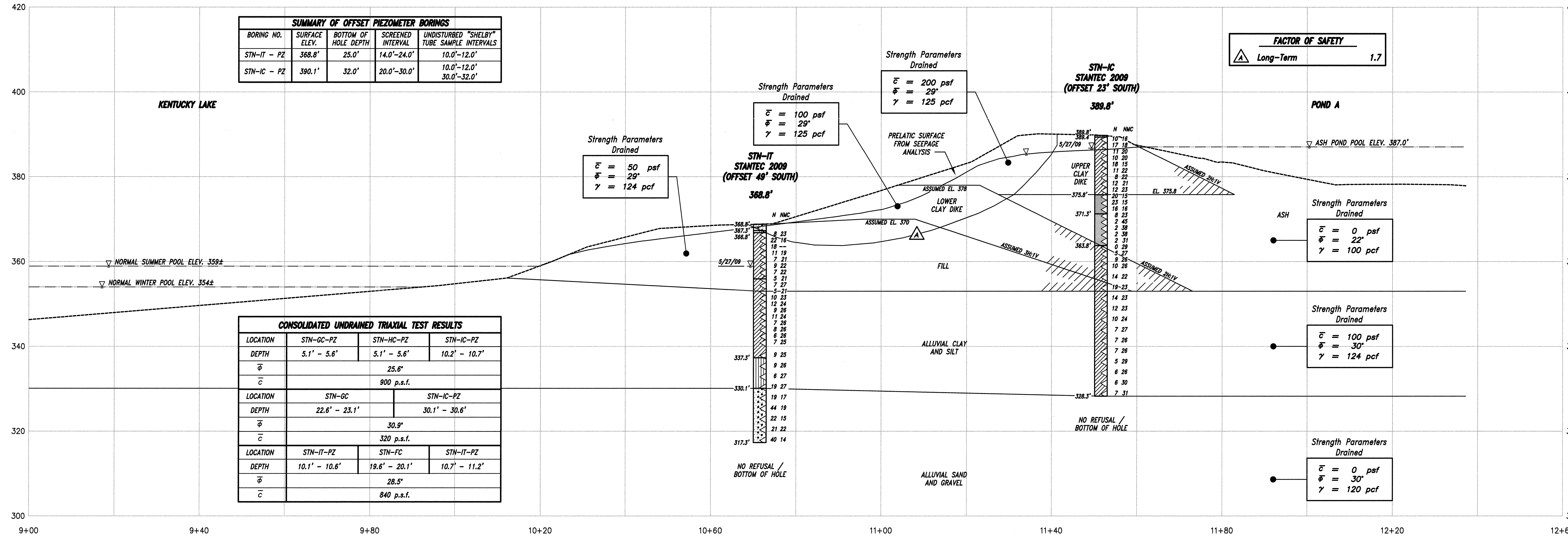
AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX-11 | R 0

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT DATE: 04/14/2010

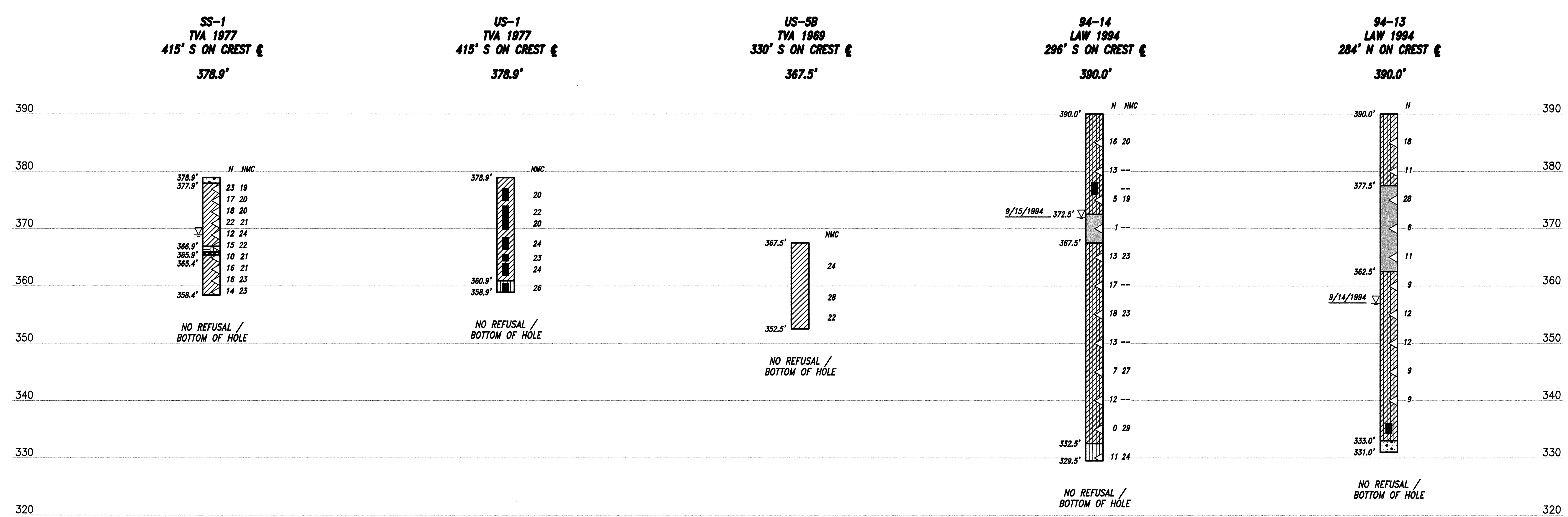


FACTOR OF SAFETY	
Long-Term	1.7

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-IT – PZ	368.8'	25.0'	14.0'–24.0'	10.0'–12.0'
STN-IC – PZ	390.1'	32.0'	20.0'–30.0'	10.0'–12.0' 30.0'–32.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-GC-PZ	STN-HC-PZ	STN-IC-PZ
DEPTH	5.1' – 5.6'	5.1' – 5.6'	10.2' – 10.7'
$\bar{\phi}$	25.6°		
$\bar{c}$	900 p.s.f.		
LOCATION	STN-GC	STN-IC-PZ	
DEPTH	22.6' – 23.1'	30.1' – 30.6'	
$\bar{\phi}$	30.9°		
$\bar{c}$	320 p.s.f.		
LOCATION	STN-IT-PZ	STN-FC	STN-IT-PZ
DEPTH	10.1' – 10.6'	19.6' – 20.1'	10.7' – 11.2'
$\bar{\phi}$	28.5°		
$\bar{c}$	840 p.s.f.		

STABILITY SECTION I–I'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTIONS I–I'

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

STEPHEN H. BICKEL REGISTERED ENGINEER STATE OF TENNESSEE

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FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX–12 | R 0

PLOT FACTOR:XX
W_TVA

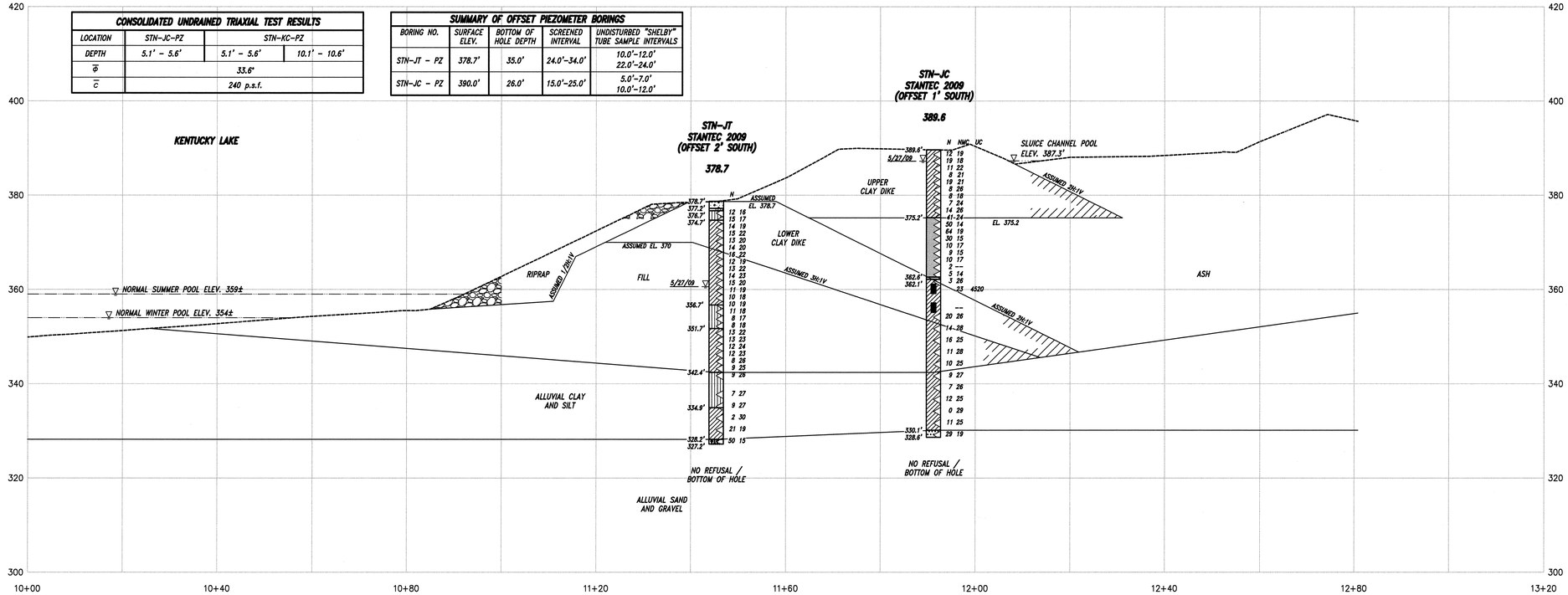
C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC | 0
TASK COMPLETED BY: | REV NO.

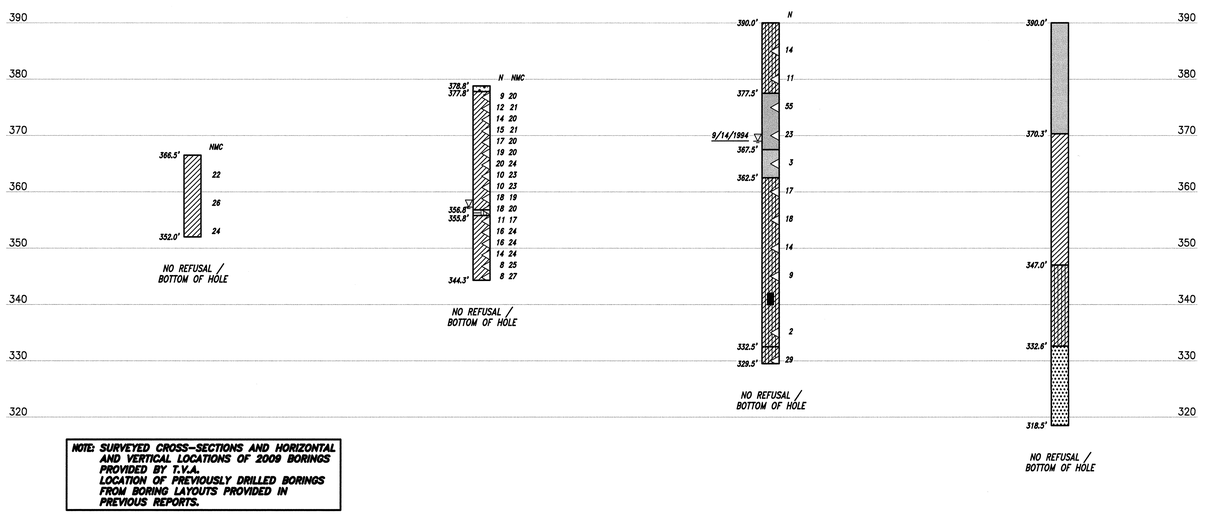
34 C XXWXXX–12

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-JC-PZ	STN-KC-PZ	
DEPTH	5.1' - 5.6'	5.1' - 5.6'	10.1' - 10.6'
$\bar{\Phi}$	33.6°		
$\bar{c}$	240 p.s.f.		

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-JT - PZ	378.7'	35.0'	24.0'-34.0'	10.0'-12.0' 22.0'-24.0'
STN-JC - PZ	390.0'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'



STABILITY SECTION J-J'



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

PLOT DATE: 04/13/2010 USER: PETTY, RICHARD
V:\1755\ACTIVE\175599001\GEOTECHNICAL\DRAWING\STABILITY_DWGS\KEY_RECORD\599JB-JOF-313-SK12.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV ID
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION J-J'

STEPHEN H. BICKEL REGISTERED ENGINEER AGRICULTURE No. 113131 STATE OF TENNESSEE

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P. COOPER	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008	DATE 01/27/10	34	C	XXWXXX-13	R 0

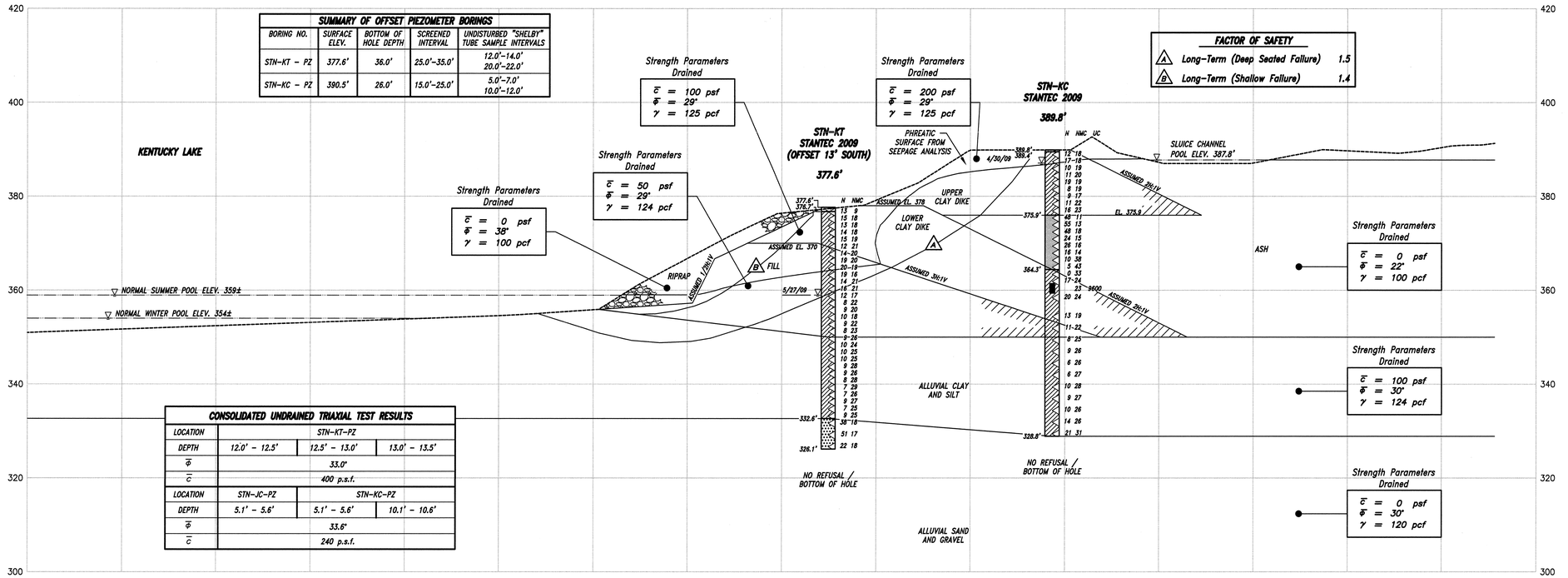
STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

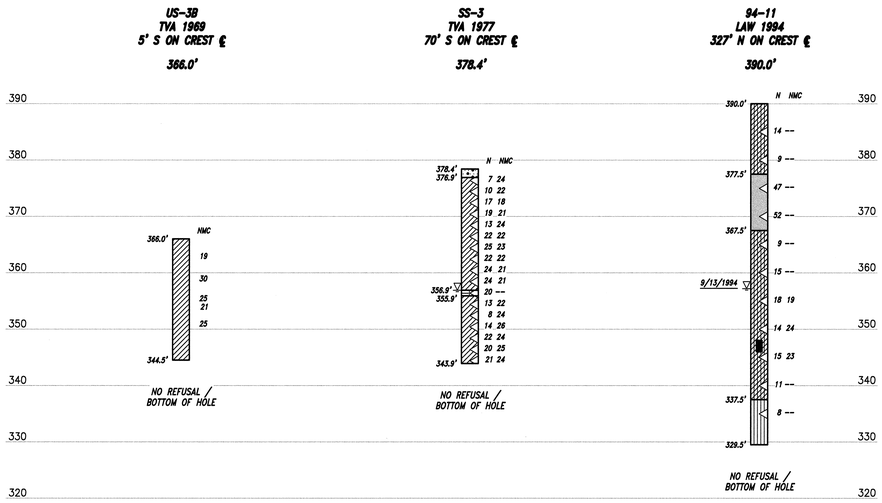
C.A.D. DRAWING
DO NOT ALTER MANUALLY

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-KT - PZ	377.6'	36.0'	25.0'-35.0'	12.0'-14.0' 20.0'-22.0'
STN-KC - PZ	390.5'	26.0'	15.0'-25.0'	5.0'-7.0' 10.0'-12.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-KT-PZ		
DEPTH	12.0' - 12.5'	12.5' - 13.0'	13.0' - 13.5'
$\bar{\Phi}$	33.0°		
$\bar{c}$	400 p.s.f.		
LOCATION	STN-JC-PZ	STN-KC-PZ	
DEPTH	5.1' - 5.6'	5.1' - 5.6'	10.1' - 10.6'
$\bar{\Phi}$	33.6°		
$\bar{c}$	240 p.s.f.		



STABILITY SECTION K-K'



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	DISCIPLINE INTERFACE
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION K-K'

STEPHEN H. BICKEL REGISTERED ENGINEER A SEAL OF PROFESSIONAL ENGINEERS AND ARCHITECTS NO. 113729 STATE OF TENNESSEE

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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008	DATE 01/27/10	34	C	XXWXXX-14	R 0

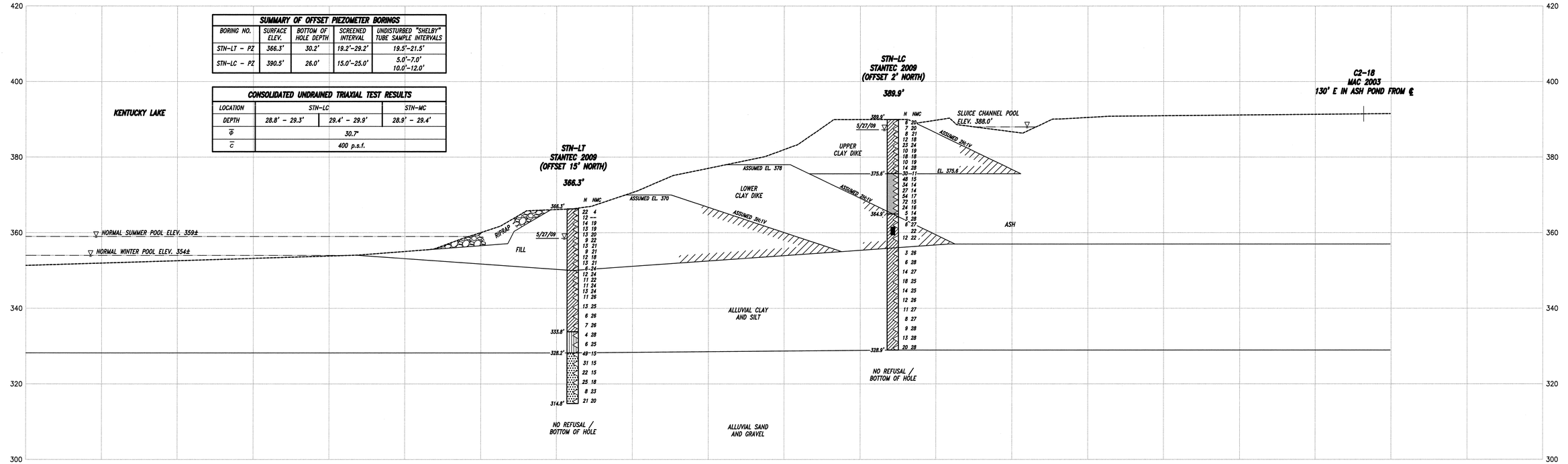
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING DO NOT ALTER MANUALLY

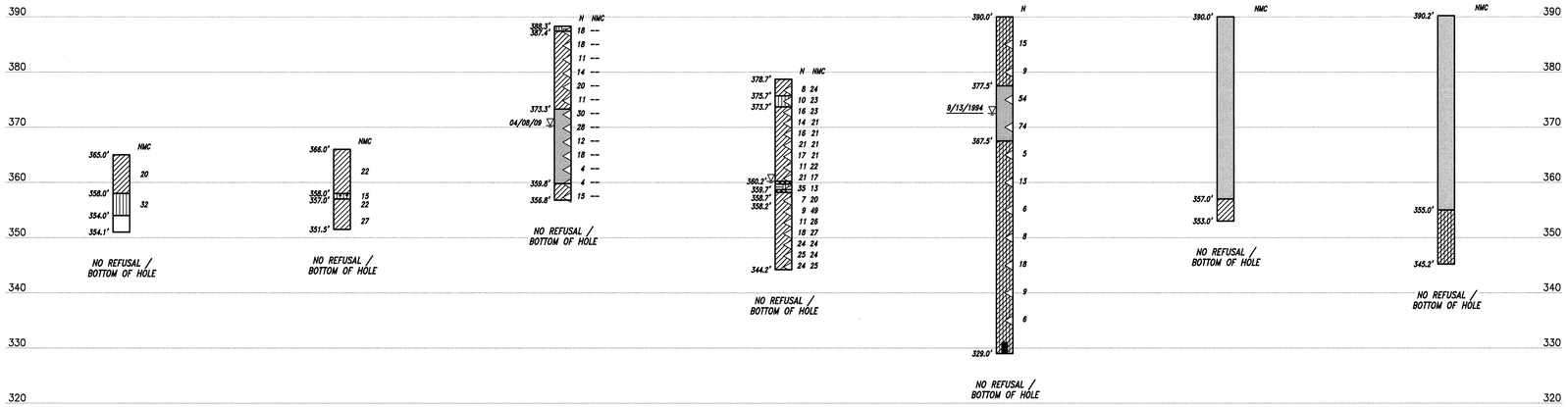
STANTEC	0
TASK COMPLETED BY:	REV NO.

SUMMARY OF OFFSET PIEZOMETER BORINGS				
BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-LT – PZ	366.3'	30.2'	19.2'–29.2'	19.5'–21.5'
STN-LC – PZ	390.5'	26.0'	15.0'–25.0'	5.0'–7.0', 10.0'–12.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS			
LOCATION	STN-LC		STN-MC
DEPTH	28.8' – 29.3'	29.4' – 29.9'	28.9' – 29.4'
$\bar{\phi}$	30.7°		
$\bar{c}$	400 p.s.f.		



STABILITY SECTION L–L'



NOTE: SURVEYED CROSS-SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- WATER LEVEL AND DATE RECORDED
- UNDISTURBED THIN-WALL (SHELBY) TUBE SAMPLE
- STANDARD PENETRATION TEST INTERVAL

PLOT DATE: 04/08/2010 USER: PETTY, RICHARD
I:\TVA\ACTIVE\1755000\GEOTECHNICAL\DRAWING\STABILITY_DWG\STAB1.DGN

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. ID
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	DISCIPLINE INTERFACE

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION
STABILITY SECTION L–L'

STEPHEN H. BICKEL REGISTERED ENGINEER STATE OF TENNESSEE No. 113104

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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2008	DATE: 01/27/10	34	C	XXWXXX–15	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

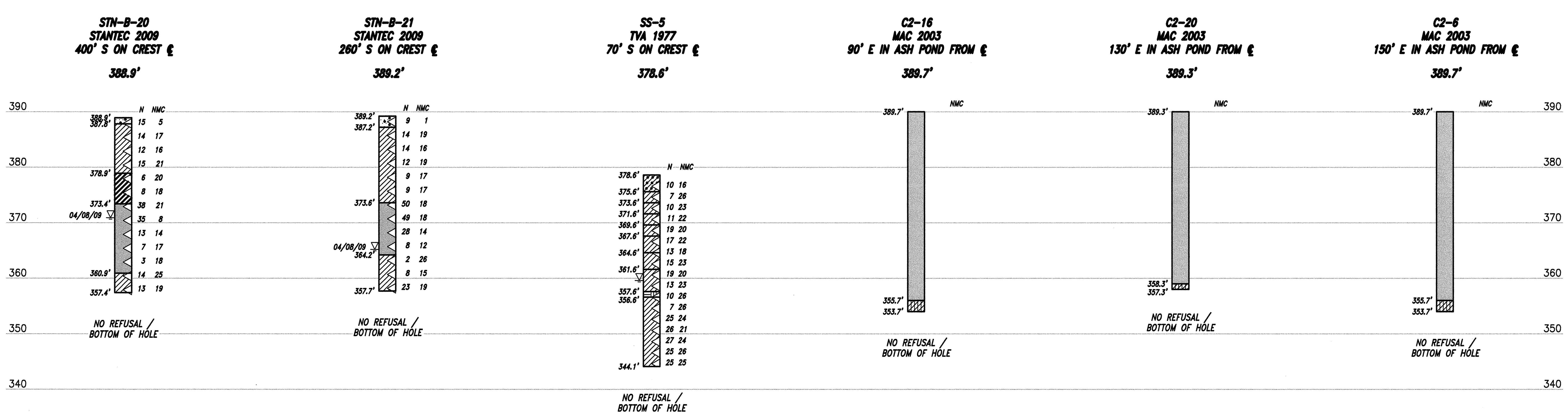
SUMMARY OF OFFSET PIEZOMETER BORINGS

BORING NO.	SURFACE ELEV.	BOTTOM OF HOLE DEPTH	SCREENED INTERVAL	UNDISTURBED "SHELBY" TUBE SAMPLE INTERVALS
STN-MT – PZ	365.6'	32.5'	21.8'–31.8'	NO SAMPLES
STN-MC – PZ	391.1'	26.0'	15.0'–25.0'	5.0'–7.0' 10.0'–12.0'

CONSOLIDATED UNDRAINED TRIAXIAL TEST RESULTS

LOCATION	STN-LC		STN-MC
DEPTH	28.8' – 29.3'	29.4' – 29.9'	28.9' – 29.4'
$\bar{\Phi}$	30.7°		
$\bar{c}$	400 p.s.f.		

STABILITY SECTION M–M'



LEGEND

- LEAN CLAY, SANDY LEAN CLAY, SANDY LEAN CLAY WITH GRAVEL, LEAN CLAY WITH GRAVEL, LEAN CLAY WITH SAND
- FAT CLAY
- CLAYEY SAND, CLAYEY SAND WITH GRAVEL
- CLAYEY GRAVEL
- SILT, SANDY SILT, SILT WITH GRAVEL, SILT WITH SAND
- ELASTIC SILT
- SILTY CLAY, SILTY CLAY WITH GRAVEL
- SILTY SAND, POORLY GRADED SAND WITH SILT AND GRAVEL, SILTY SAND WITH GRAVEL
- SILTY GRAVEL
- WELL GRADED SAND WITH SILT, WELL GRADED SAND WITH SILT AND GRAVEL
- POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL, POORLY GRADED SAND WITH SILT
- POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SILT AND SAND, POORLY GRADED GRAVEL WITH SAND
- TOPSOIL
- FLY ASH
- BOTTOM ASH
- N STANDARD PENETRATION TEST BLOW COUNT (blows/ft)
- NMC NATURAL MOISTURE CONTENT (%)
- UC UNCONFINED COMPRESSIVE STRENGTH TEST (PSF)
- ▽ WATER LEVEL AND DATE RECORDED
- ▮ UNDISTURBED THIN–WALL (SHELBY) TUBE SAMPLE
- ◁ STANDARD PENETRATION TEST INTERVAL

NOTE: SURVEYED CROSS–SECTIONS AND HORIZONTAL AND VERTICAL LOCATIONS OF 2009 BORINGS PROVIDED BY T.V.A. LOCATION OF PREVIOUSLY DRILLED BORINGS FROM BORING LAYOUTS PROVIDED IN PREVIOUS REPORTS.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	01/27/10	PC	RP	SHB	SHB	SHB	–	TJ	–	–	–

DISCIPLINE INTERFACE 1 2 3 4

SCALE: 1" = 10' EXCEPT AS NOTED

YARD
ASH DISPOSAL AREAS 2 AND 3

GEOTECHNICAL EXPLORATION STABILITY SECTION M–M'

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AUTOCAD R 2008 | DATE 01/27/10 | 34 | C | XXWXXX–16 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
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PLOT DATE: 04/14/2010 USER: PETTY, RICHARD