CITY OF PHOENIX

ENGINEERING & ARCHITECTURAL SERVICES
PROJECT MANAGEMENT

19th Avenue Landfill

CELL A-1
Carbon Adsorption System

LOCATION: PHOENIX, ARIZONA
3850 SOUTH 15TH AVENUE
PROJECT NO.: PW16810003

2014

MAYOR
GREG STANTON
CITY COUNCIL

DISTRICT NO. 1 THELDA WILLIAMS	DISTRICT NO. 5 DANIEL VALENZUELA
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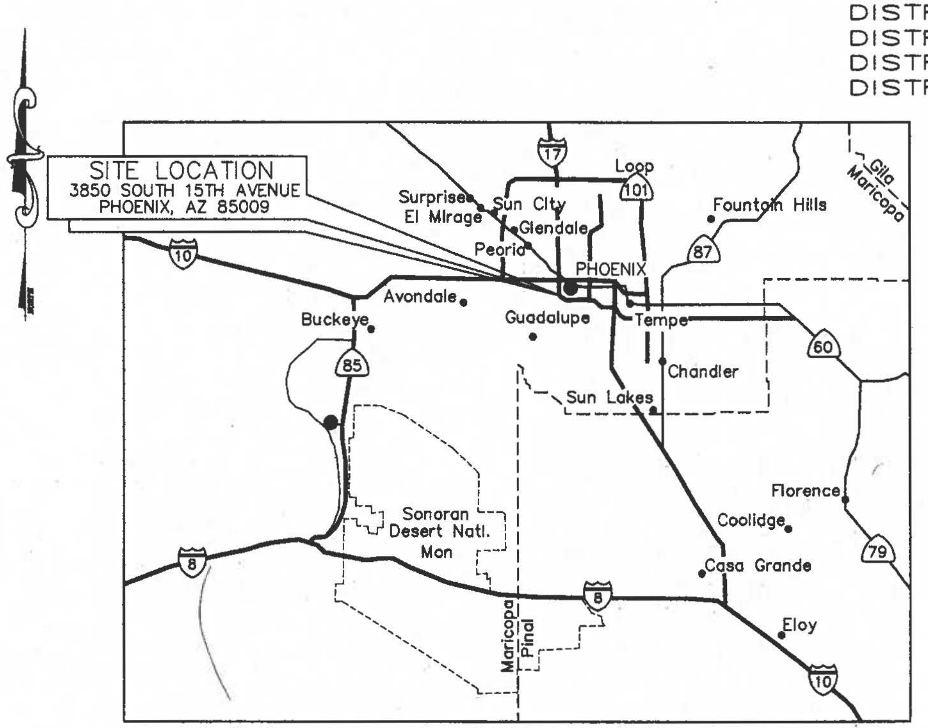
CITY ENGINEER WYLIE BEARUP, P.E.

APPROVALS

ENGINEERING SUPERVISOR ____ DATE ____
PUBLIC WORKS DIRECTOR ____ DATE ____



Vicinity Map

INDEX TO PLAN SHEETS

NOTE:
REFER TO SHEET 2 FOR GENERAL NOTES, ABBREVIATIONS, LEGENDS AND SURVEY INFORMATION.

Call at least two full working days before you begin excavation.
ARIZONA 811
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TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Exp. 3-31-15
Seal

Designed By:
K. JOHNSON
J. KONECNY

Drawn By:
J. KONECNY

Checked By:
K. JOHNSON

Date:
Jun-14

Title
19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
TITLE SHEET
PROJECT NUMBER:PW16810003

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

MISCELLANEOUS ABBREVIATIONS:

ADS	= AUTO DIALER SYSTEM
APPROX.	= APPROXIMATELY
B	= BLOWER
BV	= BALL VALVE
C	= COMPRESSOR
CA	= CANISTER
DIA	= DIAMETER
DPI	= DIFFERENTIAL PRESSURE INDICATOR
FA	= FLAME ARRESTOR
FAL	= FLOW ALARM LOW
FE	= FLOW ELEMENT (ORIFICE METER)
FNPT	= FEMALE NATIONAL PIPE THREAD
FT	= FLOW TRANSMITTER
FX	= FLEXIBLE TUBING
HP	= HORSE POWER
LAH	= LEVEL ALARM HIGH
LE	= HAND VALVE
LG	= LEVEL GAGE
LT	= LEVEL TRANSMITTER
LS	= LEVEL SWITCH
M	= MOTOR
MFG	= MANUFACTURING
MFR	= MANUFACTURER
MPT	= MALE PIPE THREAD
NO	= NUMBER
NPT	= NATIONAL PIPE THREAD
OC	= ON CENTER
PI	= PRESSURE INDICATOR
PT	= PRESSURE TRANSMITTER
PVC	= POLYVINYL CHLORIDE
QUA	= QUANITY
SCH	= SCHEDULE
SP	= SAMPLE PORT
T	= TANK
TAH	= TEMPERATURE ALARM HIGH
TEFC	= TOTALLY ENCLOSED, FAN COOLED
TI	= TEMPERATURE INDICATOR
TS	= TEMPERATURE SWITCH
TYP	= TYPICAL
SP	= SAMPLE PORT
V	= VESSEL
VFD	= VARIABLE FREQUENCY DRIVE
WC	= WATER COLUMN (PRESSURE)

GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL ALONG 15TH AVE. WHEN TRANSPORTING MATERIALS AND EQUIPMENT INTO FLARE STATION AREA.
2. EXISTING LANDSCAPING, HYDROSEEDING, GATES AND FENCING, LANDFILL MONITORING DEVICES (WELLS, LFG PROBES, PIEZOMETERS, UTILITY BOXES, ETC.) AND PRODUCTION WELLS SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. DAMAGE TO LANDSCAPING, HYDROSEEDING, GATES AND FENCES, LANDFILL MONITORING DEVICES, OR PRODUCTION WELLS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIAL PROVISION SECTION 01052.
3. CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF GAS LINES, LFG VAULTS, LFG PIPING AND OTHER UTILITIES ON AND AROUND THE PROJECT SITE. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING EXISTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION ACTIVITIES.
5. THE DRAWINGS ARE NOT A UTILITY OR WELL LOCATION MAP AND SHOULD NOT BE USED TO LOCATE OR DEFINE EXISTING UTILITIES OR WELLS. ALL UTILITY AND WELL LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE.
6. UNDERGROUND UTILITY LOCATION TO BE CONDUCTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR HAULING, EMBANKMENTS, EXCAVATIONS, GRADING, PLACING SURFACE MATERIAL AND DUST CONTROL AND/OR ANY OTHER IMPROVEMENTS WITHIN THE FLARE STATION AREA IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND THE TECHNICAL SPECIFICATIONS.
8. THE CONTRACTOR SHALL PROTECT ALL ON-SITE LFG COLLECTION STRUCTURES, ABOVE GROUND AND BURIED LINES AND FLARE STATION FACILITIES. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
9. IN THE EVENT THE CONTRACTOR DAMAGES AND/OR BREAKS ANY PORTION OF THE LFG SYSTEM OR ANY OTHER ON-SITE FACILITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND SHALL CEASE CONSTRUCTION ACTIVITIES AT THE SITE OF DAMAGE UNTIL SUCH TIME THE DAMAGE HAS BEEN REPAIRED TO THE SATISFACTION OF THE OWNER/ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL COORDINATE WATER SERVICES WITH THE CITY AND SHALL PAY ALL COST ASSOCIATED WITH METERING AND CONVEYANCE/TRANSPORT OF WATER TO THE POINT OF USE.
11. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING AND ENSURING THE SAFETY OF WORKERS EXPOSED TO LANDFILL GAS.
12. NO EXTRA MONETARY COMPENSATION OR ADDITIONAL TIME WILL BE AUTHORIZED FOR CLAIMS THAT SOIL CONDITIONS DIFFER FROM THOSE ANTICIPATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE HIS OWN DETERMINATION AS TO THE ACTUAL EXISTING CONDITIONS.
13. DUST CONTROL IS ABSOLUTELY CRITICAL ON THIS PROJECT. DUE TO BUSINESSES IN CLOSE PROXIMITY TO THIS LANDFILL, ITS OPERATIONS ARE UNDER PUBLIC SCRUTINY AT ALL TIMES. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE EXISTING CITY OF PHOENIX DUST CONTROL PERMIT FOR THE SITE, INCLUDING THE KEEPING OF WATER USE LOGS.
14. THE CONTRACTOR SHALL BE PREPARED TO SPEND AS MUCH TIME AS REQUIRED TO KEEP DUST CONTROLLED IN ACCORDANCE WITH REGULATORY REQUIREMENTS. THE AIR CONTAMINANT EMISSION AT THE WORK AREA SHALL NOT EXCEED 20 PERCENT OPACITY DURING THE CONTRACT PERIOD. LOCAL REGULATORY REQUIREMENTS MAY BE MORE STRINGENT THAN THE MAXIMUM ALLOWABLE STATED ABOVE. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND COMPLYING WITH ALL APPLICABLE REGULATORY LEVELS. IF DUST CLOUDS CAN BE SEEN BY THE NAKED EYE RISING FROM THE OPERATION, THE CONTRACTOR IS IN VIOLATION OF THESE SPECIFICATIONS. IF THE CONTRACTOR FAILS TO PROVIDE THE NECESSARY DUST CONTROL, TO THE ENGINEER'S SATISFACTION, THE PROJECT WILL BE SHUT DOWN, AT THE CONTRACTOR'S EXPENSE, UNTIL THE CONTRACTOR PRESENTS SATISFACTORY EVIDENCE TO THE ENGINEER THAT THEY CAN CONTINUE WORK AND PREVENT DUST AS REQUIRED.
15. ALL WORK SHALL BE PERFORMED DURING NORMAL DAYLIGHT HOURS UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER OR OTHERWISE STATED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF THE CONTRACTOR'S INTENDED REGULAR WORK HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT WORK ON CITY OF PHOENIX HOLIDAYS UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. NOTE THAT CITY HOLIDAYS MAY NOT MATCH NORMAL CONTRACTOR HOLIDAYS.
16. SMOKING IS NOT ALLOWED AT ANY CITY OF PHOENIX SOLID WASTE MANAGEMENT FACILITY. THERE SHALL BE NO SMOKING ON THE 19TH AVENUE LANDFILL. THE SMOKING PROHIBITION WILL BE STRICTLY ENFORCED ON THIS PROJECT DUE TO THE EXPLOSIVE NATURE OF LANDFILL GAS.
17. ANY TRASH GENERATED ON THE PROJECT SITE BY THE CONTRACTOR, OR HIS EMPLOYEES, SHALL BE CLEANED UP DAILY BY THE CONTRACTOR. MUD AND DIRT TRACKED OFF-SITE BY THE CONTRACTOR, HIS EQUIPMENT, OR HIS EMPLOYEES SHALL BE CLEANED UP DAILY BY THE CONTRACTOR. FACILITY ACCESS ROADS AND ANY OTHER OFF-SITE ROADS SHALL BE SCRAPED CLEAN DAILY AND WASHED DOWN AT LEAST ONCE PER WEEK AND AS NEEDED TO COMPLY WITH THE DUST CONTROL PERMIT.
18. THE CONTRACTOR'S SUPERINTENDENT SHALL BE EQUIPPED WITH A CELLULAR TELEPHONE THROUGH WHICH THE OWNER OR ENGINEER CAN REACH THE SUPERINTENDENT DURING WORKING HOURS.
19. THE CONTRACTOR IS TO HAVE ALL MATERIALS DELIVERED TO HIS WORK SITE AND/OR STAGING AREA. THE OWNER, OPERATOR, OR ENGINEER WILL NOT ACCEPT DELIVERY OR MATERIALS.
20. THE CONTRACTOR SHALL PROVIDE ADEQUATE CHEMICAL TOILET FACILITIES FOR PERSONNEL. THE NUMBER OF FACILITIES SHALL BE AS REQUIRED BY FEDERAL AND STATE SAFETY AND OCCUPATIONAL STANDARDS. CHEMICAL TOILETS SHALL BE KEPT IN A SANITARY CONDITION. THE CONTRACTOR SHALL REMOVE CHEMICAL TOILETS UPON COMPLETION OF THE WORK AND DISINFECT THE PREMISES.
21. THE CITY OF PHOENIX MAINTAINS THE EXISTING PERIMETER SYSTEM IN ORDER TO KEEP THE LANDFILL IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS. THIS SYSTEM MUST STAY IN OPERATION DURING THE INSTALLATION OF THE CARBON ADSORPTION SYSTEM. THE CONTRACTOR SHALL KEEP THE PERIMETER SYSTEM IN OPERATION. THE 19TH AVENUE LANDFILL GAS COLLECTION SYSTEM MAY BE OFF FOR A PERIOD OF NO MORE THAN EIGHT (8) HOURS PER DAY TO ALLOW THE CARBON ADSORPTION SYSTEM TO BE CONNECTED TO THE EXISTING HEADER. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO HAVE THE COLLECTION SYSTEM TURNED OFF AND ON AS NEEDED.
22. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL HAUL ROADS THAT ARE NOT IDENTIFIED ON DRAWINGS TO ORIGINAL CONDITIONS.
23. AN AS-BUILT SURVEY AND AN ACCURATE SET OF CONSTRUCTION RED-LINES IS THE RESPONSIBILITY OF THE CONTRACTOR AT NO COST TO THE OWNER.
24. THE CONTOURS AND SITE FEATURES SHOWN ON THESE PLANS ARE EXISTING ELEVATIONS BASED ON PREVIOUS TOPOGRAPHIC SURVEYS AS REFERENCED ON THIS SHEET.
25. ANY HAUL ROADS, ACCESS RAMPS, AND ACCESS ROADS NECESSARY FOR CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
26. THE CONTRACTOR SHALL PROTECT ALL EXISTING BRASS CAPS AND SURVEY CONTROL POINTS THAT ARE OUTSIDE THE LIMITS OF ANY EXCAVATION. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
27. MECHANICAL COMPACTION IS TO BE USED. BACKFILL MATERIAL SHALL BE PLACED IN 8-INCH (MAXIMUM) UNIFORM LIFT THICKNESS AND COMPACTED TO A UNIFORM DENSITY.
28. THE CONTRACTOR MAY ENCOUNTER WASTE DURING CONSTRUCTION OF THE SYSTEM. WASTE MAY CONTAIN BIOHAZARDS SUCH AS MEDICAL WASTE OR DEAD ANIMALS. THE CONTRACTOR'S HEALTH AND SAFETY PLAN SHALL ADDRESS THE POTENTIAL FOR CONTACT WITH BIOHAZARDS AND THE SPECIFIC MEASURES TO BE TAKEN TO PROTECT THE CONTRACTOR'S WORKERS AND THE PUBLIC. REFUSE EXCAVATED DURING TRENCHING SHALL BE CLASSIFIED AS NON-HAZARDOUS WASTE FOR THE PURPOSES OF HANDLING AND DISPOSAL. REFUSE EXCAVATED DURING TRENCHING MAY BE PLACED BACK IN THE TRENCH ABOVE OR BELOW THE SAND BEDDING, OR MAY BE DISPOSED OF IN THE SAME EXCAVATED AREA IT WAS REMOVED FROM. NO WASTE WILL BE PLACED WITHIN 18" OF THE SURFACE. THE ENGINEER ANTICIPATES THAT THE TOP 18" OF THE EXCAVATION WILL BE CLEAN SOIL. THE ENGINEER EXPECTS THAT ANY REFUSE EXCAVATED DURING TRENCHING CAN BE DISPOSED OF WITHIN THE EXCAVATED AREA ON-SITE AT PROJECT COMPLETION. WASTE DISPOSED OF ON-SITE SHALL ONLY BE PLACED BACK IN EXCAVATED AREA, AND THEN COMPACTED AND COVERED WITH 18" OF CLEAN SOIL. DURING EXCAVATION, CONTRACTOR SHALL SEPARATE CLEAN SOIL AND WASTE BY PLACING CLEAN SOIL ON ONE SIDE OF THE EXCAVATION AND WASTE ON THE OTHER. THE CONTRACTOR SHALL SAVE ALL CLEAN SOIL FOR BACKFILL. ALL REFUSE SHALL BE COMPACTED (CONTRACTORS BEST EFFORTS). IF ALL WASTE CANNOT GO BACK INTO TRENCH, CONTRACTOR IS TO DISPOSE OF WASTE ON-SITE AT THE LOCATION SPECIFIED BY THE ENGINEER (SHOWN ON SITE PLAN) AND COVER WITH 18" OF CLEAN SOIL.

LINE & SIGNAL SYMBOLS

- = CHAIN LINK FENCE
- = HDPE LANDFILL GAS PIPE
- = 1/2" HDPE COMPRESSED AIR LINE
- = 1 1/2" HDPE CONDENSATE LINE
- = 2" PHONE CONDUIT
- = 2 1/2" SECONDARY ELECTRICAL CONDUIT

MISCELLANEOUS SYMBOLS

- (0) CONSTRUCTION NOTE
- (1/1) DETAIL NUMBER / SHEET NUMBER DETAIL IS DRAWN ON

INSTRUMENTATION DEVICES & PIPING SYMBOLS

- = BALL VALVE, HAND OPERATED
- = CHECK VALVE
- = FLEXIBLE TUBING
- = FLEXIBLE TUBING WITH FLANGE CONNECTION
- = FLUSH MOUNT PIPE STRAP
- = LAB COCK
- = ORIFICE PLATE
- = PIPE REDUCER
- = PIPE SUPPORT
- S.P. = SAMPLE PORT
- = SURFACE PIPE/CONDUIT
- = UNDERGROUND PIPE/CONDUIT

INSTRUMENT SYMBOLS

- = PLC CONTROLLED DEVICE

Revisions	Date

Seal

Designed By: K. JOHNSON, J. KONECNY

Drawn By: J. KONECNY

Checked By: K. JOHNSON

Date: Jun-14

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
ABBREVIATIONS, NOTES AND LEGEND
PROJECT NUMBER: PW16810003

Sheet 2 OF 18

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS, INC.
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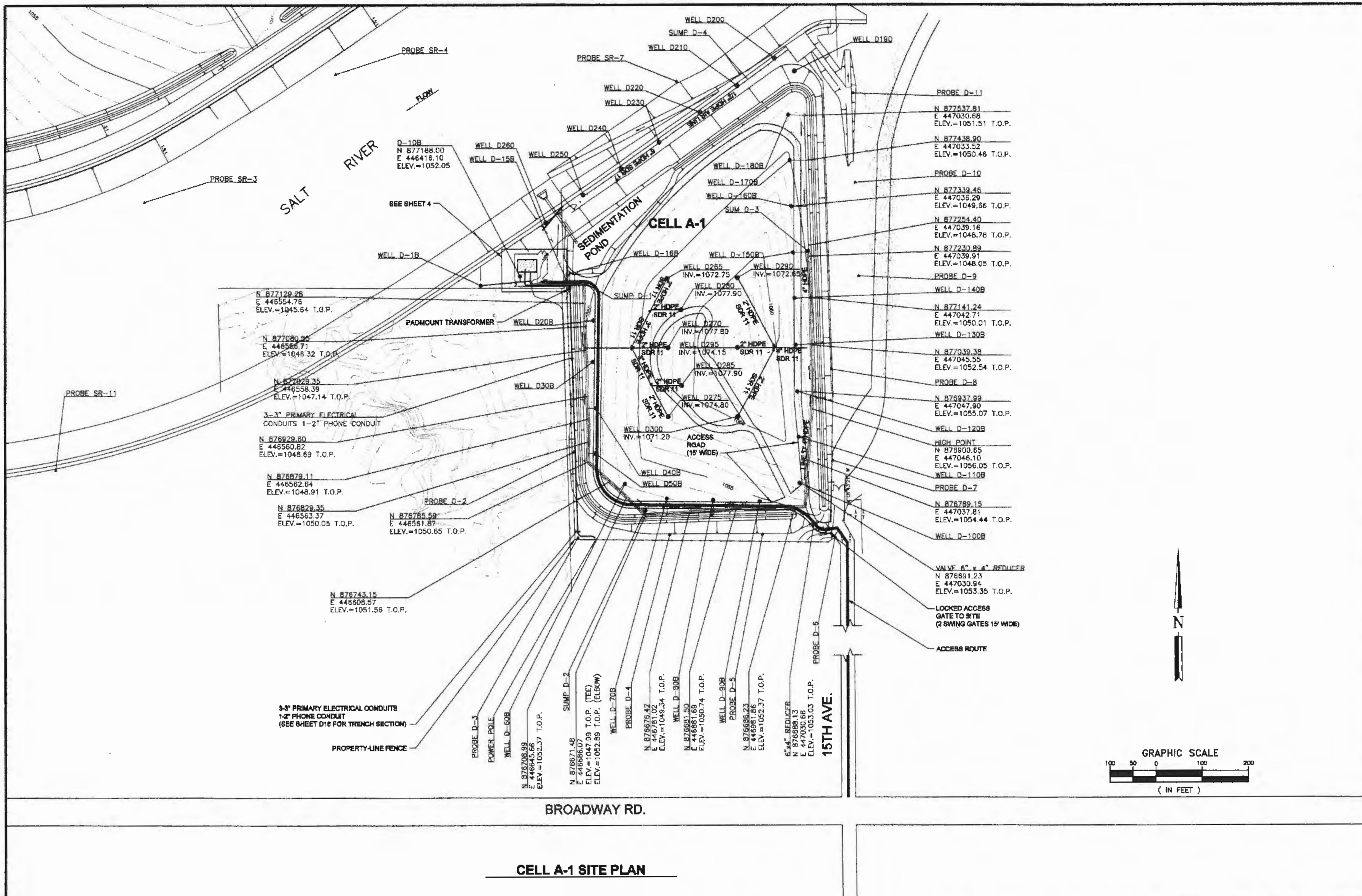
3822 E. UNIVERSITY DRIVE, SUITE 2

Call at least two full working days before you begin excavation. ARIZONA 811



CELL A-1 SITE PLAN

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TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

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Designed By: K. JOHNSON, J. KONECNY

Drawn By: J. KONECNY

Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1 CARBON ADSORPTION SYSTEM CELL A-1 SITE PLAN PROJECT NUMBER: PW16810003

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

GRAPHIC SCALE

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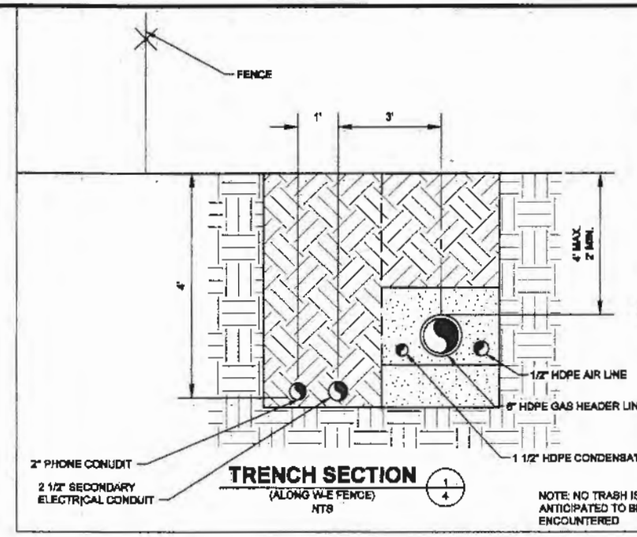
(IN FEET)



FLARE STATION EXISTING CONDITIONS

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS

TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

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Exp. 3-31-15

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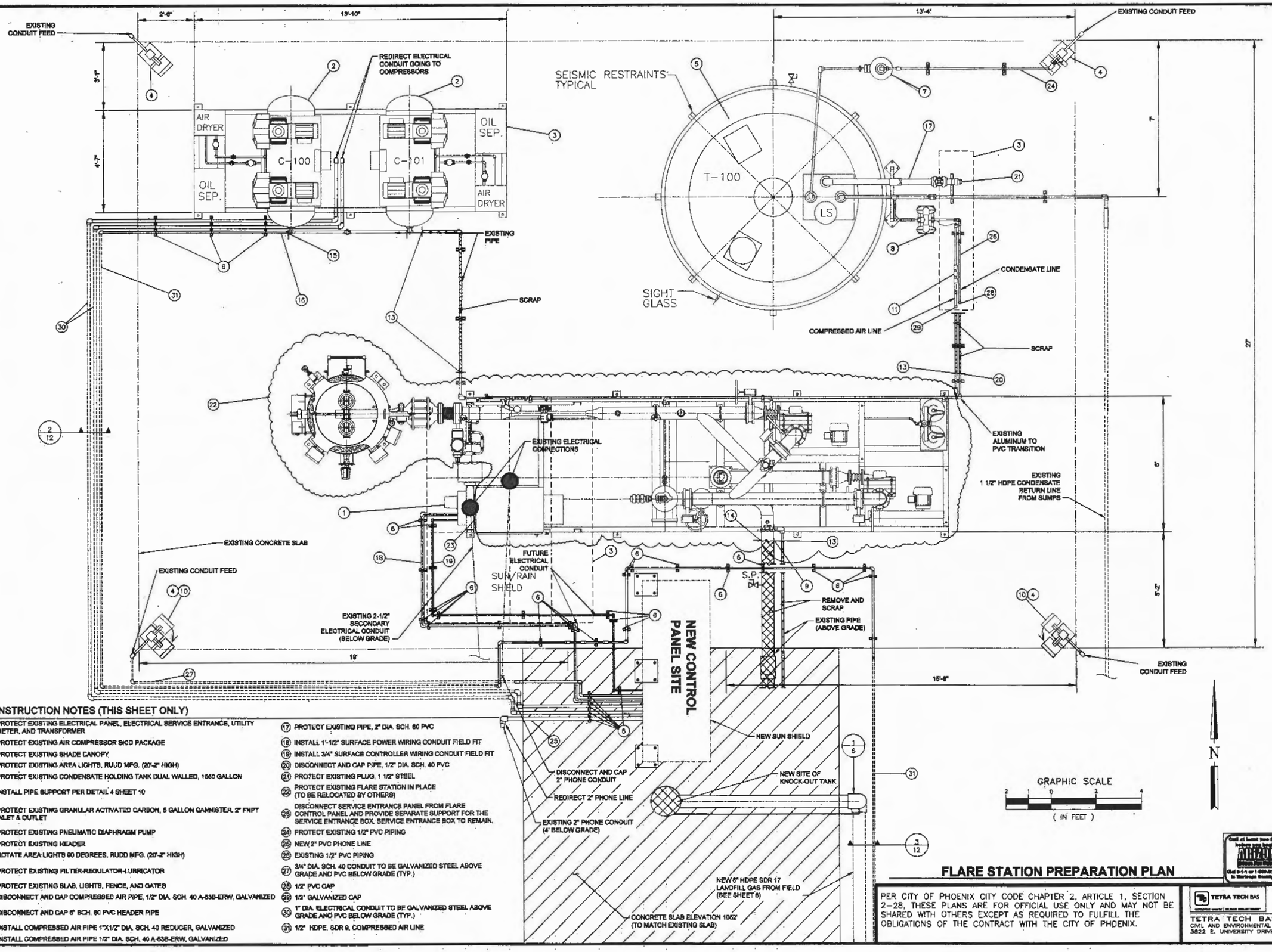
Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
FLARE STATION EXISTING CONDITIONS
PROJECT NUMBER: PW16810003

Sheet 4 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION



CONSTRUCTION NOTES (THIS SHEET ONLY)

1. PROTECT EXISTING ELECTRICAL PANEL, ELECTRICAL SERVICE ENTRANCE, UTILITY METER, AND TRANSFORMER
2. PROTECT EXISTING AIR COMPRESSOR SKID PACKAGE
3. PROTECT EXISTING SHADE CANOPY
4. PROTECT EXISTING AREA LIGHTS, RUUD MFG. (20'-2" HIGH)
5. PROTECT EXISTING CONDENSATE HOLDING TANK DUAL WALLED, 1560 GALLON
6. INSTALL PIPE SUPPORT PER DETAIL 4 SHEET 10
7. PROTECT EXISTING GRANULAR ACTIVATED CARBON, 6 GALLON CANNISTER, 2" FNPT INLET & OUTLET
8. PROTECT EXISTING PNEUMATIC DIAPHRAGM PUMP
9. PROTECT EXISTING HEADER
10. ROTATE AREA LIGHTS 90 DEGREES, RUDD MFG. (20'-2" HIGH)
11. PROTECT EXISTING FILTER-REGULATOR-LUBRICATOR
12. PROTECT EXISTING SLAB, LIGHTS, FENCE, AND GATES
13. DISCONNECT AND CAP COMPRESSED AIR PIPE, 1/2" DIA. SCH. 40 A-53B-ERW, GALVANIZED
14. DISCONNECT AND CAP 6" SCH. 80 PVC HEADER PIPE
15. INSTALL COMPRESSED AIR PIPE 1"X1/2" DIA. SCH. 40 REDUCER, GALVANIZED
16. INSTALL COMPRESSED AIR PIPE 1/2" DIA. SCH. 40 A-53B-ERW, GALVANIZED
17. PROTECT EXISTING PIPE, 2" DIA. SCH. 80 PVC
18. INSTALL 1"-1/2" SURFACE POWER WIRING CONDUIT FIELD FIT
19. INSTALL 3/4" SURFACE CONTROLLER WIRING CONDUIT FIELD FIT
20. DISCONNECT AND CAP PIPE, 1/2" DIA. SCH. 40 PVC
21. PROTECT EXISTING PLUG, 1 1/2" STEEL
22. PROTECT EXISTING FLARE STATION IN PLACE (TO BE RELOCATED BY OTHERS)
23. DISCONNECT SERVICE ENTRANCE PANEL FROM FLARE CONTROL PANEL AND PROVIDE SEPARATE SUPPORT FOR THE SERVICE ENTRANCE BOX. SERVICE ENTRANCE BOX TO REMAIN.
24. PROTECT EXISTING 1/2" PVC PIPING
25. NEW 2" PVC PHONE LINE
26. EXISTING 1/2" PVC PIPING
27. 3/4" DIA. SCH. 40 CONDUIT TO BE GALVANIZED STEEL ABOVE GRADE AND PVC BELOW GRADE (TYP.)
28. 1/2" PVC CAP
29. 1/2" GALVANIZED CAP
30. 1" DIA. ELECTRICAL CONDUIT TO BE GALVANIZED STEEL ABOVE GRADE AND PVC BELOW GRADE (TYP.)
31. 1/2" HDPE, SDR 9, COMPRESSED AIR LINE

FLARE STATION PREPARATION PLAN

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

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Designed By: K. JOHNSON J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title
19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
FLARE STATION PREPARATION PLAN
PROJECT NUMBER: PW16810003

Sheet 5 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

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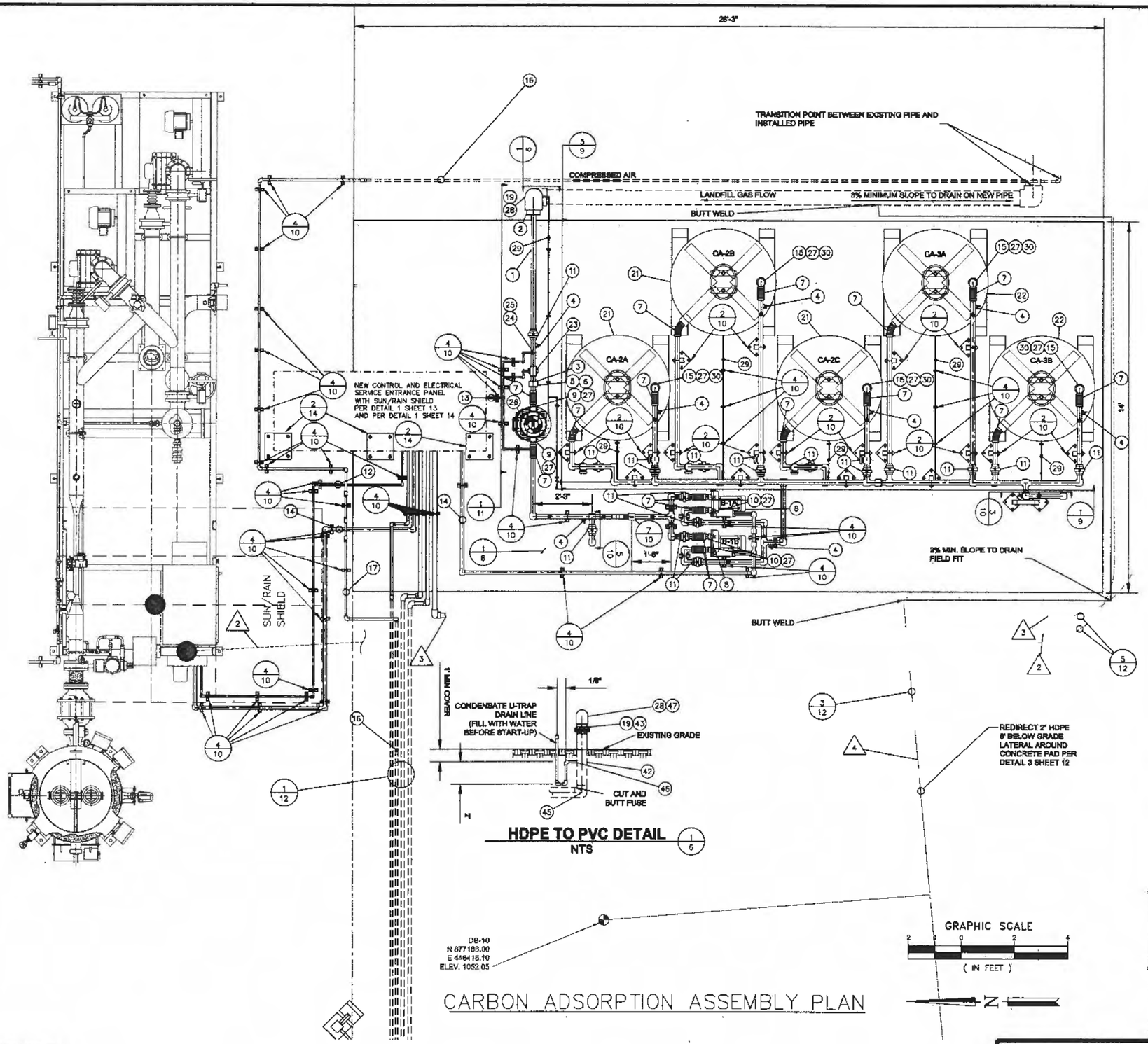


ITEM	QUA	DESCRIPTION	PART#/MODEL NO.	MANUFACTURER OR EQUAL
1		2" SCH 80 CPVC PIPE AND FITTINGS	800C-020	HARRINGTON PLASTICS
2	1	SCH 80 CPVC 6"X2" REDUCER BUSHING	837C-828	HARRINGTON PLASTICS
3	1	2" STAINLESS STEEL CHECK VALVE	2.0-DPW-38-36-S-36-A16-RF	CAMERON INTERNATIONAL CORPORATION
4	9	1/4" PVC LABCOCK VALVE (1/4" HOSE X MALE PIPE THREAD DRILL & TAP 2" PIPE)	1078002	HARRINGTON PLASTICS
5	1	2"X1" ORIFICE FLANGE ASSEMBLY	79618793	CAMERON INTERNATIONAL CORPORATION
6	1	2"X1" ORIFICE PLATE	9A-DPZ2101000A8S3	CAMERON INTERNATIONAL CORPORATION
7		FLEXIBLE TUBING LANDFILL GAS TYPE (WITH CLAMPS)		HARRINGTON PLASTICS
8	2	1 HP BLOWER	EN404AR72ML	ROTRON
9	7	2" CPVC SXFPT ADAPTOR	839C-020	HARRINGTON PLASTICS
10	9	2" CPVC SXMPT ADAPTOR	838C-020	HARRINGTON PLASTICS
11	21	2" CPVC BALL VALVES	163546347	HARRINGTON PLASTICS
12		3/4" SCH40 A53A ERW GALVINIZED PIPE (CONTROL WIRING CONDUIT)	800-007	
13		1" SCH40 A53A ERW GALVINIZED PIPE (ELECTRICAL CONDUIT)	800-010	
14		1 1/2" SCH40 A53A ERW GALVINIZED PIPE (ELECTRICAL CONDUIT)	800-015	
15	9	4" CPVC SXFPT ADAPTOR	839C-040	HARRINGTON PLASTICS
16		1/2" DIA. SDR 9 HDPE PIPE		
17		1/2" SCH 80 CPVC PIPE	800C-005	HARRINGTON PLASTICS
18		SEE SHEET 11		
19	1	6" HDPE FLANGED ADAPTER WITH VAN STONE BACK-UP RING		BOARDER STATES
20		SEE SHEET 11		
21	3	CANISTER FILLED WITH 1000 LBS OF GRANULAR ACTIVATED CARBON	1000S	BAKER CORP
22	2	CANISTER FILLED WITH 2000 LBS OF POTASSIUM PERMANGANATE	1000S	BAKER CORP
23	1	PRESSURE TRANSDUCER	3051CD1A22A1J	ROSEMOUNT
24	1	TEMPERATURE TRANSMITTER	TTD25N-20-0300F-H	AUTOMATION DIRECT
25	1	SCH 80 CPVC 3/8" X 1/4" REDUCER BUSHING	839C-082	HARRINGTON PLASTICS
26	1	KNOCK-OUT TANK WITH PRESSURE DIFFERENTIAL GAUGE AND LEVEL GAUGE	7060-SRS-01	SOLBERG MANUFACTING INC.
27	16	2" SCH 80 CPVC UNION	857C-020	HARRINGTON PLASTICS
28		6" SCH 80 CPVC PIPE	800C-060	HARRINGTON PLASTICS
29		3/4" SCH 80 CPVC PIPE AND FITTINGS	800C-007	HARRINGTON PLASTICS
30	1	SCH 80 CPVC 4"X2" REDUCER COUPLING	829C-420	HARRINGTON PLASTICS
31		SEE SHEET 10		
32		SEE SHEET 10		
33		SEE SHEET 10		
34		SEE SHEET 10		
35		SEE SHEET 10		
36		SEE SHEET 10		
37		SEE SHEET 10		
38		SEE SHEET 10		
39		SEE SHEET 10		
40		SEE SHEET 10		
41		SEE SHEET 10		
42		6" HDPE SDR 17 PIPE		BOARDER STATES
43		VITON GASKET		
44		SEE SHEET 10		
45		6" SDR 17 HDPE 90° ELBOW		BOARDER STATES
46		DRILL AND TAP 3/4" DIA. THREADED FITTING	438031	HARRINGTON PLASTICS
47		6" SCH 80 CPVC ELBOW	806C-060	HARRINGTON PLASTICS
48		SEE SHEET 10		
49		SEE SHEET 10		
50		SEE SHEET 10		
51		SEE SHEET 10		

CONSTRUCTION NOTES

1. EXISTING 6" HDPE, 6' BELOW GRADE
2. EXISTING 2 1/2" ELECTRICAL CONDUIT
3. EXISTING 2" PHONE CONDUIT TO FLARE STATION
4. EXISTING 4" HDPE WELL LATERAL, 6' BELOW GRADE

Revisions	Date

Exp. 9-30-15

Seal

Designed By: K. JOHNSON J. KONECNY

Drawn By: J. KONECNY

Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1 CARBON ADSORPTION SYSTEM PLAN VIEW PROJECT NUMBER: PW16810003

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

F:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\100% - Issuance - 6-18-2014\08_Plan-View_100%-X.dwg 6/20/14 12:19:20 john.konecny

Call at least two full working days before you begin excavation. ARIZONA 811

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Sheet 6 OF 18

V-1

FUEL FILTER/KNOCK-OUT VESSEL
MFR: SOLBERG MANUFACTURING INC.
DESIGN FLOW RATE = 0-200 SCFM LFG
MAX. ΔP AT MAX. FLOW = 4" W.C. CLEAN STAGE
99.7% REMOVAL EFFICIENCY OF SOLID
PARTICLES 5 MICRONS IN DIAMETER & LARGER IN SIZE
KNOCK-OUT TANK PART #: 7080-SRS-01
FILTER MFR: SOLBERG MANUFACTURING INC.
FILTER ELEMENT #: 35Q
FILTER MATERIAL: POLYESTER

B-1A/B-1B

GAS BLOWER
MFR: ROTRON
MODEL NO.: EN404AR72ML
FLOW RATE = 100 SCFM MAX.
1 H.P. TEFC MOTOR
ROTRON VFD PART# M103AL72

PT-1

PRESSURE TRANSMITTER
ROSEMOUNT
MODEL NO.: 3051CD2A22A1A

TI-1

PRESSURE TRANSMITTER
ROSEMOUNT
MODEL NO.: 3144P.

CA-2A/CA-2B/CA-2C

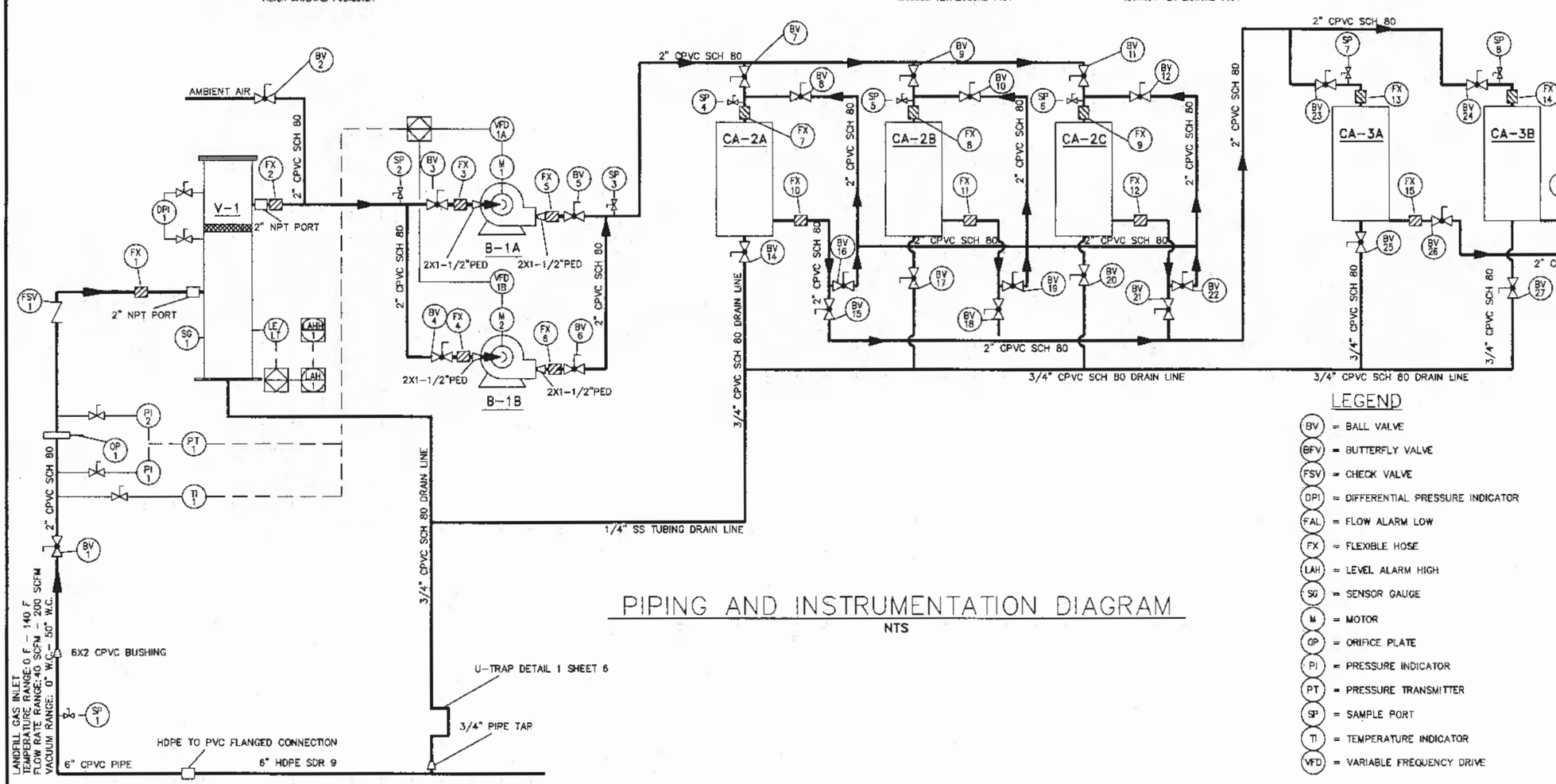
GRANULAR ACTIVATED CARBON (GAC)
TREATMENT SYSTEM - LEAD AND LAG
MFR: BAKER CORP
MODEL NO.: VENT-SCRUB (1000 LB. UNITS)
3'-10"ø x 5'-6" HIGH
ENAMEL VESSELS WITH EPOXY
INTERNAL COATING AND ENAMEL EXTERNAL FINISH
DESIGN FLOW RATE: 0-600 CFM LFG
4" FNPT INLET & 4" FNPT OUTLET
MAXIMUM TEMPERATURE 140°F

CA-3A/CA-3B

POTASSIUM PERMANGANATE (KMN MEDIA)
TREATMENT SYSTEM - ONE LEAD
MFR: BAKER CORP
MODEL NO.: VENT-SCRUB (2000 LB. UNITS)
3'-10"ø x 5'-6" HIGH
ENAMEL VESSELS WITH EPOXY
INTERNAL COATING AND ENAMEL EXTERNAL FINISH
DESIGN FLOW RATE: 0-600 CFM LFG
4" FNPT INLET & 4" FNPT OUTLET
MAXIMUM TEMPERATURE 140°F

FA-1

VERTICAL FLAME ARRESTER
MFR: VAREC
MODEL#: 5200-6-2
2" DIAMETER
316 STAINLESS STEEL ELEMENT
2" TAPS
MAXIMUM FLOW 200 SCFM



PIPING AND INSTRUMENTATION DIAGRAM

NTS

LEGEND

- (BV) = BALL VALVE
- (BFV) = BUTTERFLY VALVE
- (FSV) = CHECK VALVE
- (DPI) = DIFFERENTIAL PRESSURE INDICATOR
- (FAL) = FLOW ALARM LOW
- (FX) = FLEXIBLE HOSE
- (LAH) = LEVEL ALARM HIGH
- (SG) = SENSOR GAUGE
- (M) = MOTOR
- (OP) = ORIFICE PLATE
- (PI) = PRESSURE INDICATOR
- (PT) = PRESSURE TRANSMITTER
- (SP) = SAMPLE PORT
- (TI) = TEMPERATURE INDICATOR
- (VFD) = VARIABLE FREQUENCY DRIVE

Revisions	Date

Exp. 3-31-15

Seal:

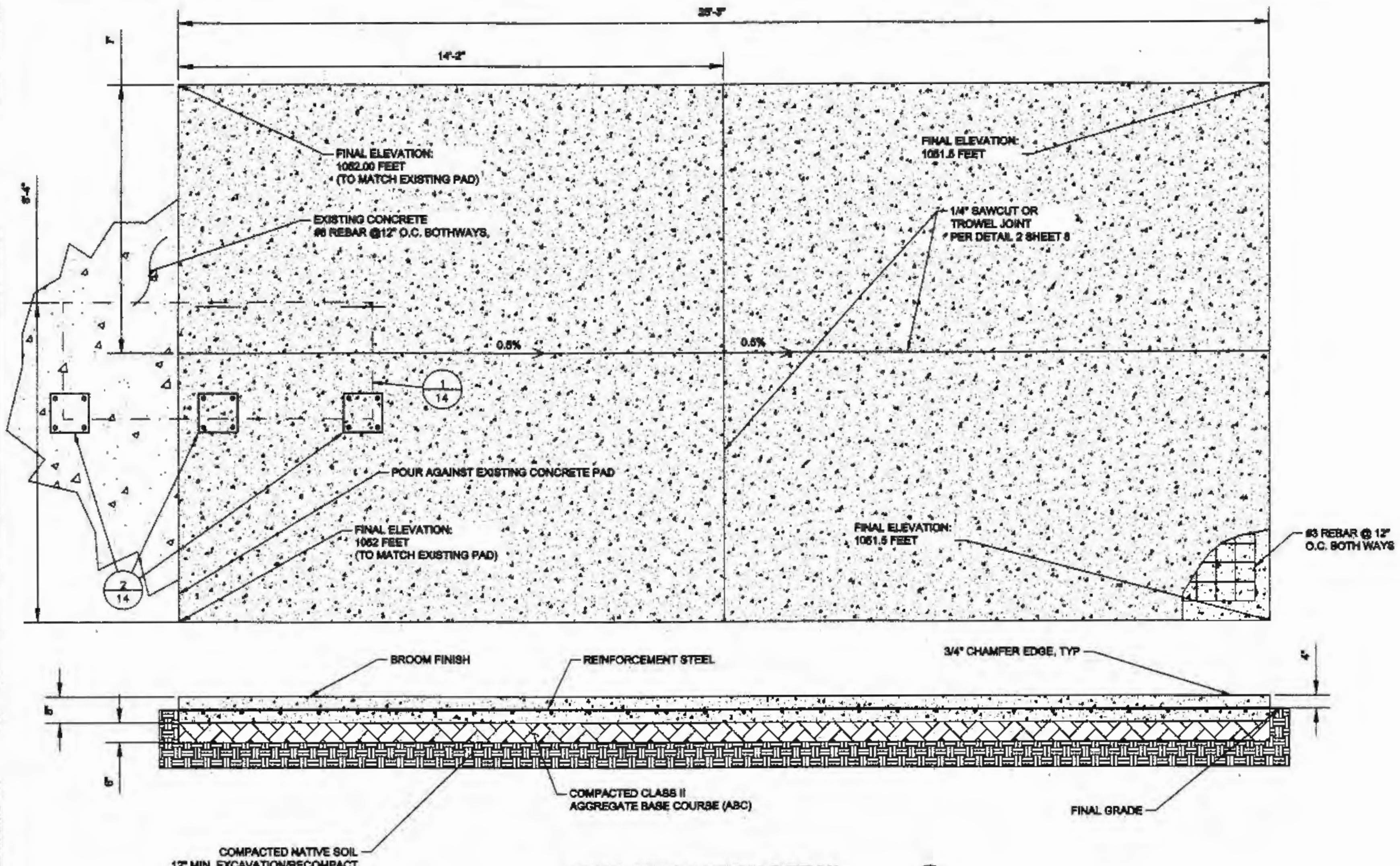
Designed By: K. JOHNSON, J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
PIPING AND INSTRUMENTATION DIAGRAM
PROJECT NUMBER: PW16810003

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

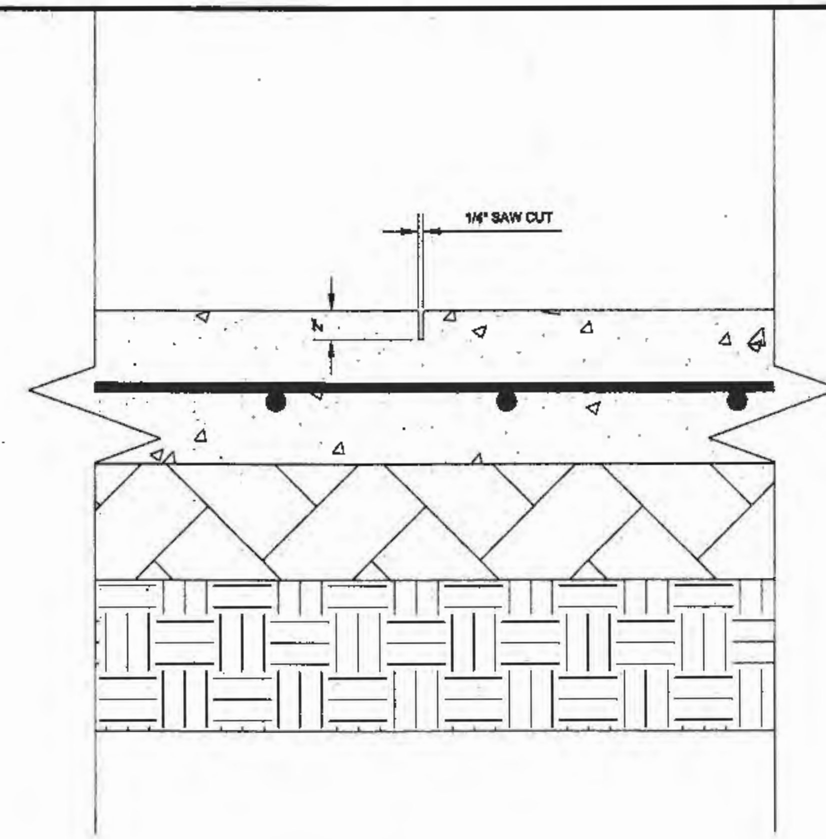
Call at least two full working days before you begin excavation
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County (602) 263-1100

TETRA TECH BAS
TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2



NEW FOUNDATION DETAIL (2/8)

GRAPHIC SCALE
2 1 0 2 4
(IN FEET)



TYPICAL CONSTRUCTION JOINT DETAIL (2/8)

GRAPHIC SCALE
5 2.5 0 5 10
(IN INCHES)

STRUCTURAL SPECS:

GENERAL NOTES:

1. PORTLAND CEMENT CONCRETE SHALL BE 3000 PSI AT 28 DAYS CONFORMING TO ASTM C150 AND MAG SPEC. 725, PORTLAND CEMENT CONCRETE, CLASS A, UNLESS OTHERWISE NOTED.
2. CONCRETE SHALL HAVE NORMAL WEIGHT (145 pcf) UNLESS OTHERWISE NOTED.
3. REINFORCEMENT, STEEL ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SECURED IN PLACE AND SHALL HAVE SPECIAL INSPECTION.
4. SPECIAL INSPECTION IS REQUIRED FOR CONCRETE PLACEMENT.
5. EXPOSED EDGES SHALL BE CHAMFERED 3/4-INCH UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES FOR PIPES/CONDUITS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

STRUCTURE AND MISC. METALWORK:

1. REINFORCEMENT STEEL SHALL BE A 615 GRADE 60 DEFORMED BARS UNLESS NOTED OTHERWISE
2. REINFORCEMENTS STEEL SHALL HAVE A MINIMUM OF 3-INCHES OF CONCRETE COVER UNLESS NOTED OTHERWISE
3. ANCHOR BOLTS SHALL BE INSTALLED UTILIZING EPOXY ANCHORS, RAWL "FOIL-FAST" TYPE OR APPROVED EQUAL FOR MOUNTING MAJOR EQUIPMENT, PIPE SUPPORTS, AND SMALL EQUIPMENT SHALL BE INSTALLED UTILIZING CONCRETE FERRULE LOOP ANCHORS, RAWL-STUD ANCHOR OR APPROVED EQUAL.
4. ANCHOR BOLTS AND ASSEMBLY FOR EQUIPMENT AND MACHINERY SHALL BE INSTALLED WITH SELF LOCKING NUTS OR WITH LOCK WASHERS AND PLAIN NUTS AND SHALL BE STAINLESS STEEL
5. THE CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES FOR PIPES/CONDUITS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

GROUT

1. GROUT SHALL BE NON-SHRINK GROUT UNLESS OTHERWISE NOTED. USE SIKAGROUT 212 (LARR 24764) BY SIKA CORPORATION OR APPROVED EQUAL.

HATCHING KEY

(concrete hatch)	CONCRETE
(cross hatch)	COMPACTED CLASS II ABC
(line hatch)	COMPACTED NATIVE EARTH

ARIZONA 811

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TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

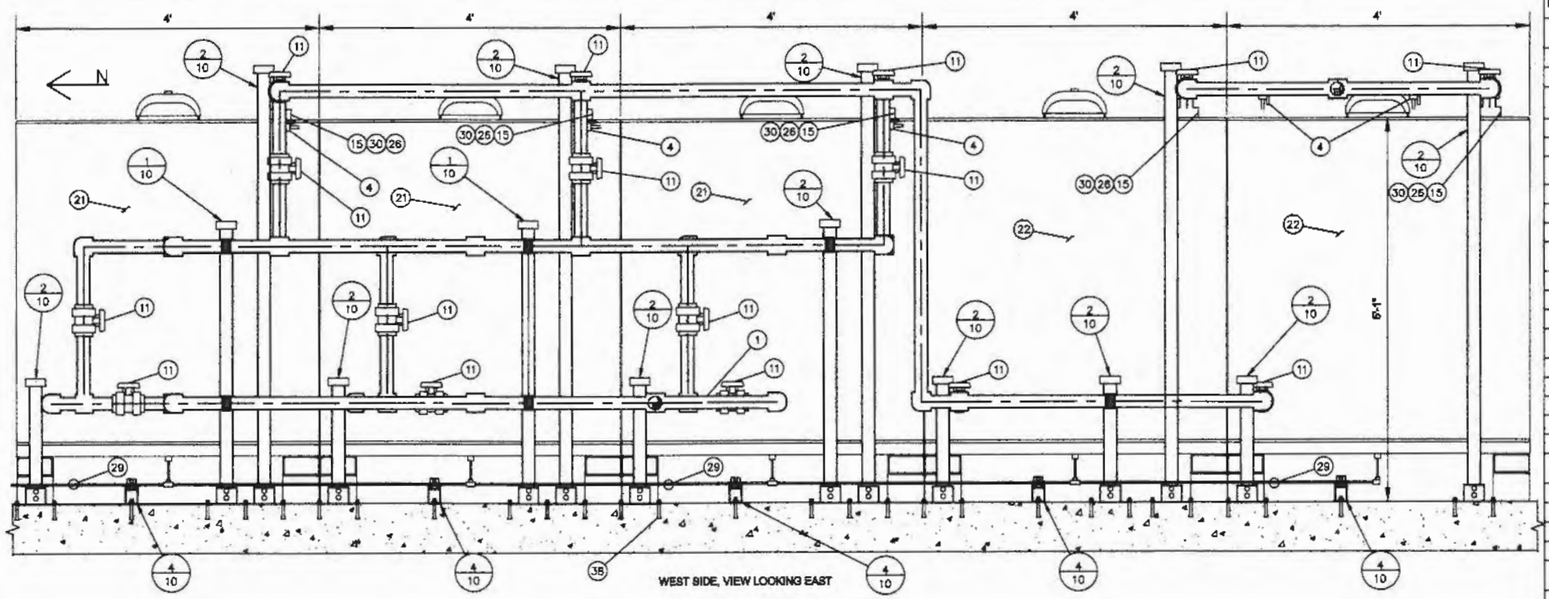
Revisions	Date

Seal

Designed By: K. JOHNSON, J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1 CARBON ADSORPTION SYSTEM FOUNDATION DETAILS PROJECT NUMBER:PW16810003

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

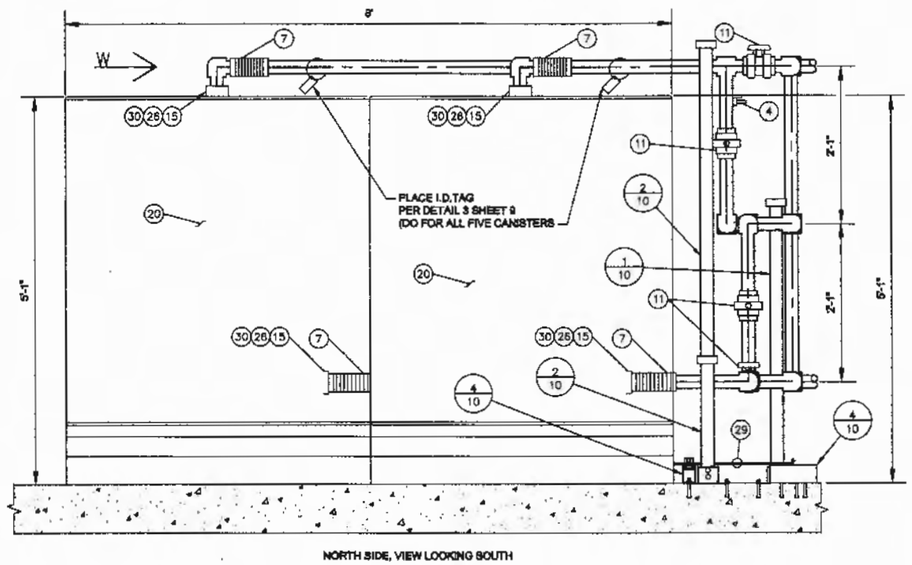


CANISTER PIPING (1/9)

GRAPHIC SCALE

1 0.5 0 1 2

(IN FEET)



CA-2A PIPING (2/9)

GRAPHIC SCALE

1 0.5 0 1 2

(IN FEET)

ITEM	QUANTITY	DESCRIPTION	PART/MODEL NO.	MANUFACTURER OR EQUAL
1		2" SCH 80 CPVC PIPE AND FITTINGS	800C-020	HARRINGTON PLASTICS
2		SEE SHEET 6		
3		SEE SHEET 6		
4	9	1/4" PVC LABCOCK VALVE 1/4" HOSE X MALE PIPE THREAD DRILL & TAP 2" PIPE)	1078002	HARRINGTON PLASTICS
5		SEE SHEET 6		
6		SEE SHEET 6		
7		FLEXIBLE TUBING LANDFILL GAS TYPE (WITH CLAMPS)		HARRINGTON PLASTICS
8		SEE SHEET 6		
9		SEE SHEET 6		
10		SEE SHEET 6		
11	21	2" CPVC BALL VALVES	153546347	HARRINGTON PLASTICS
12		SEE SHEET 6		
13		SEE SHEET 6		
14		SEE SHEET 6		
15	9	2" CPVC SXFPT ADAPTOR	835C-040	HARRINGTON PLASTICS
16		SEE SHEET 6		
17		SEE SHEET 6		
18		SEE SHEET 11		
19		SEE SHEET 6		
20		SEE SHEET 11		
21	3	CANISTER FILLED WITH 1000 LBS OF GRANULAR ACTIVATED CARBON	1000S	BARKER CORP
22	2	CANISTER FILLED WITH 2000 LBS OF POTASSIUM PERMANGANATE	1000S	SIEMENS
23		SEE SHEET 6		
24		SEE SHEET 6		
25		SEE SHEET 6		
26	16	2" SCH 80 CPVC UNION	857C-020	HARRINGTON PLASTICS
27		SEE SHEET 6		
28		1/4" STAINLESS STEEL DRAIN LINE		
29		3/4" SCH 80 CPVC PIPE AND FITTINGS	800C-007	HARRINGTON PLASTICS
30	1	SCH 80 CPVC 4"X2" REDUCER COUPLING	829C-420	HARRINGTON PLASTICS
31		SEE SHEET 10		
32		SEE SHEET 10		
33		SEE SHEET 10		
34		SEE SHEET 10		
35		SEE SHEET 10		
36		SEE SHEET 10		
37		SEE SHEET 10		
38		3/8" DIA. x 4" LONG RAWL-DRILLED ANCHOR OR CAST IN FERRULE LOOP ANCHOR (OR EQUAL) 2 PLACES EACH SUPPORT		
39		SEE SHEET 10		
40		SEE SHEET 10		
41		SEE SHEET 10		
42		SEE SHEET 6		
43		SEE SHEET 11		
44		SEE SHEET 10		
45		SEE SHEET 6		
46		SEE SHEET 6		
47		SEE SHEET 6		
48		SEE SHEET 10		
49		SEE SHEET 10		
50		SEE SHEET 10		
51		SEE SHEET 10		

3/32" STAINLESS STEEL WIRE ROPE
WITH OVAL SLEEVE CLAMP, McMASTER CARR

1 1/2" x 3" ALUMINUM WITH ONE SIDE BLACK
ENGRAVED ON BLACK SIDE OF PLATE
McMASTER CARR (ENGRAVE ONLY, DO NOT STAMP)

CANISTER I.D. "CA-##-CELLA1-KMN/GAC-####"

- CANISTER
- CANISTER NUMBER AND LETTER
- CELL A1
- TYPE (ACTIVATED CARBON (GAC)
- OR POTASSIUM PERMANGANATE (KMN))
- POUNDS OF MATERIAL

CANISTER I.D. TAG DETAIL (3/9)

NTS

Revisions	Date

Exp. 2-31-15

Seal

Designed By:
K. JOHNSON
J. KONECNY

Drawn By:
J. KONECNY

Checked By:
K. JOHNSON

Date:
Jun-14

Title
19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
ADSORPTION CANISTER DETAILS
PROJECT NUMBER: PW16810003

CITY OF PHOENIX • ENGINEERING • DESIGN DIVISION

P:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\10DS - Resubmit - 6-16-2014\09_Adsorption-Landfill_10DS_X.dwg 6/26/14 12:11:22 john.konecny

Call at least two full working days before you begin excavation
ARIZONA811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
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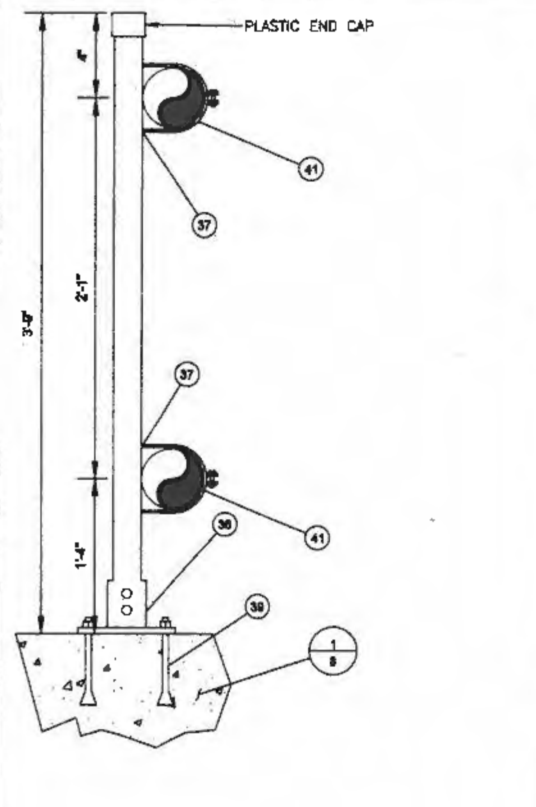
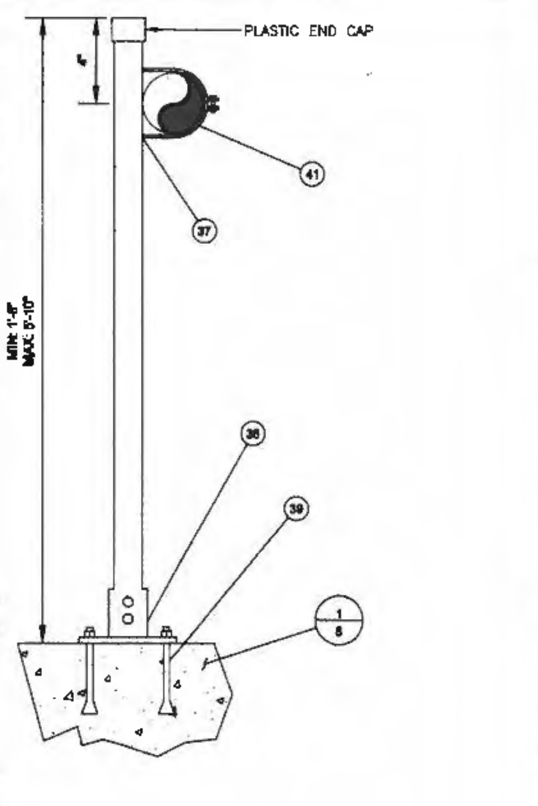
TETRA TECH BAS
TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Sheet
9 OF 18



PIPE SUPPORT DETAIL
NTS

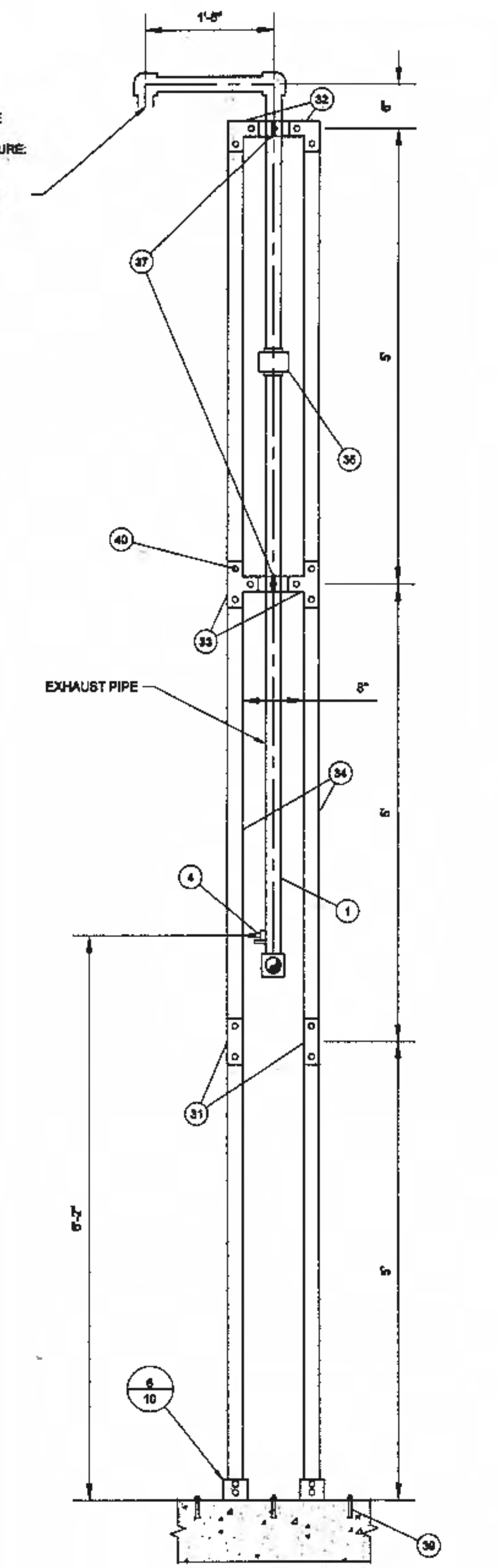
1
10



PIPE SUPPORT DETAIL
NTS

2
10

MAX FLOW RATE
200 SCFM
MAX TEMPERATURE:
130°F
MAX CH4:
18% BY VOLUME



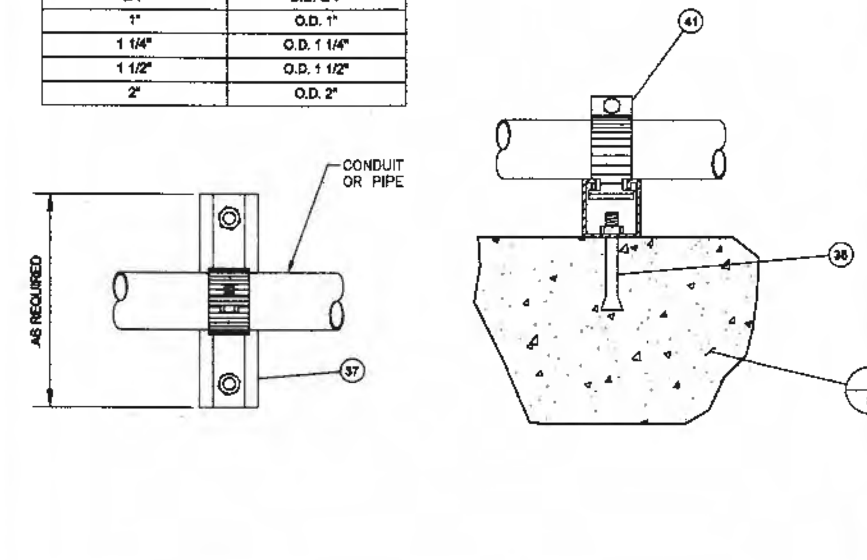
EXHAUST STACK DETAIL

3
10

GRAPHIC SCALE
1 0.5 0 1 2
(IN FEET)

ITEM	QUAN	DESCRIPTION	PART/MODEL NO.	MANUFACTURER OR EQUAL
1		2" SCH 80 CPVC PIPE AND FITTINGS	800C-020	HARRINGTON PLASTICS
2		SEE SHEET 6		
3		SEE SHEET 6		
4	9	1/4" PVC LABCOCK VALVE 1/4" HOSE X MALE PIPE THREAD DRILL & TAP 2" PIPE)	1078002	HARRINGTON PLASTICS
5		SEE SHEET 6		
6		SEE SHEET 6		
7		SEE SHEET 6		
8		SEE SHEET 6		
9		SEE SHEET 6		
10		SEE SHEET 6		
11	21	2" CPVC BALL VALVES	183546347	HARRINGTON PLASTICS
12		SEE SHEET 6		
13		SEE SHEET 6		
14		SEE SHEET 6		
15		SEE SHEET 6		
16		SEE SHEET 6		
17		SEE SHEET 6		
18		SEE SHEET 11		
19		SEE SHEET 5		
20		SEE SHEET 11		
21		SEE SHEET 6		
22		SEE SHEET 5		
23		SEE SHEET 6		
24		SEE SHEET 6		
25		SEE SHEET 6		
26		SEE SHEET 6		
27		SEE SHEET 6		
28		SEE SHEET 6		
29		SEE SHEET 6		
30		SEE SHEET 6		
31		FOUR HOLE SPLICE PLATE	B341	COOPER INDUSTRIES
32		FOUR HOLE CORNER PLATE	B143	COOPER INDUSTRIES
33		FOUR HOLE TEE PLATE	B133	COOPER INDUSTRIES
34		14 GAUGE SH TYPE CHANNEL	B24SH	COOPER INDUSTRIES
35	1	2" NPT LOW PRESSURE FLAME CHECK WITH STAINLESS STEEL ELEMENT	5200-6-2	COLUMBINE CONTROL COMPANY
36		TOLSTRUT P-11 POST BASE		TOLCO
37		TOLSTRUT A-12 1-5/8" CHANNEL HOT-DIPPED GALVANIZED		TOLCO
38		3/8" DIA. x 4" LONG RAWL-DRILLED ANCHOR OR CAST IN FERRULE LOOP ANCHOR (OR EQUAL) 2 PLACES EACH SUPPORT		
39		1/2" DIA. x 5" LONG RAWL-DRILLED ANCHOR OR CAST IN FERRULE LOOP ANCHOR (OR EQUAL) 4 PLACES EACH SUPPORT		
40		GALV-KROM GRADE 8 BOLTS		
41		PIPE CLAMP (SIZE AS REQUIRED)		TOLCO
42		SEE SHEET 6		
43		SEE SHEET 11		
44		1/2" THICK X18"X12" STEEL PLATE		
45		SEE SHEET 6		
46		SEE SHEET 6		
47		SEE SHEET 6		
48		VACUUM GAUGE	529428	ROTRON
49		VACUUM RELIEF VALVE	561026	ROTRON
50		REDUCER BUSHING	837C-247	HARRINGTON PLASTICS
51		REDUCER BUSHING	838C-072	HARRINGTON PLASTICS

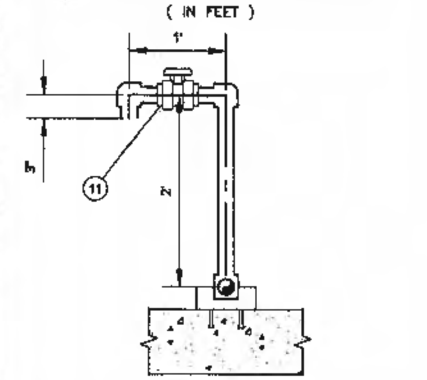
PIPE SIZE CONDUIT SIZE	TOLSTRUT PART NO.
1/2"	O.D. 1/2"
3/4"	O.D. 3/4"
1"	O.D. 1"
1 1/4"	O.D. 1 1/4"
1 1/2"	O.D. 1 1/2"
2"	O.D. 2"



CONDUIT/PIPE ANCHOR DETAIL
NTS (LOCATE AT 5'-0" O.C. AND AT ALL PIPE BENDS)

4
10

GRAPHIC SCALE
1 0.5 0 1 2
(IN FEET)



DILUTION VALVE DETAIL

5
10

GRAPHIC SCALE
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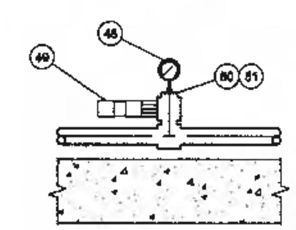
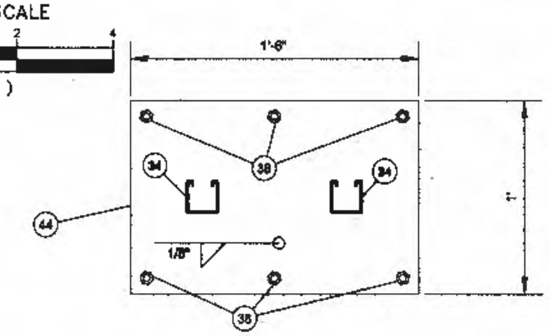
(IN FEET)



VACUUM RELIEF VALVE

7
10

GRAPHIC SCALE
2 1 0 2 4
(IN FEET)



BASE PLATE DETAIL

8
10

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ARIZONA811

TETRA TECH BAS
TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Seal
Exp 2-31-15

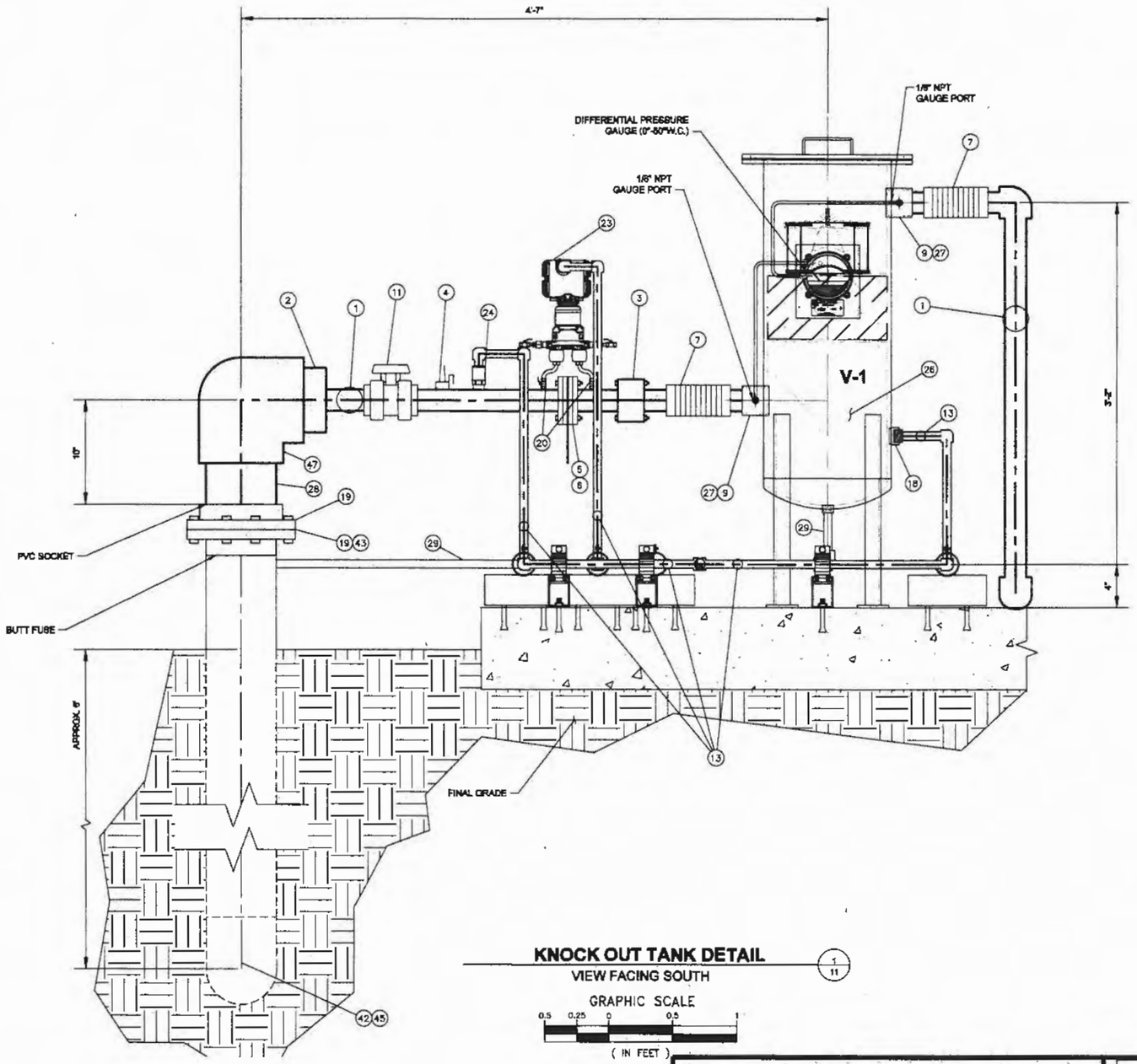
Designed By: K. JOHNSON, J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title
19TH AVENUE LANDFILL CELL A-1 CARBON ADSORPTION SYSTEM PIPE SUPPORT DETAILS
PROJECT NUMBER: PW16810003

Sheet
10 OF 18

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

ITEM	QUANTITY	DESCRIPTION	PART/MODEL NO.	MANUFACTURER OR EQUAL
1		2" SCH 80 CPVC PIPE AND FITTINGS	800C-020	HARRINGTON PLASTICS
2	1	SCH 80 CPVC 6"x2" REDUCER BUSHING	837C-628	HARRINGTON PLASTICS
3	1	2" STAINLESS STEEL CHECK VALVE	2.0-DPW-36-36-B-36-A15-RF	CAMERON INTERNATIONAL CORPORATION
4	9	1/4" PVC LABCOK VALVE 1/4" HOSE X MALE PIPE THREAD DRILL & TAP 2" PIPE)	1078002	HARRINGTON PLASTICS
5	1	2"X1" ORIFICE FLANGE ASSEMBLY	76618793	CAMERON INTERNATIONAL CORPORATION
6	1	2"X1" ORIFICE PLATE	9A-OP22101000A6S	CAMERON INTERNATIONAL CORPORATION
7		FLEXIBLE TUBING LANDFILL GAS TYPE (WITH CLAMPS)		HARRINGTON PLASTICS
8	2	1 HP BLOWER	EN404AR72ML	ROTRON
9	7	2" PVC SXFPT ADAPTOR	835C-020	HARRINGTON PLASTICS
10		SEE SHEET 6		
11	21	2" CPVC BALL VALVES	163646347	HARRINGTON PLASTICS
12		SEE SHEET 6		
13		1" SCH40 A53A ERW GALVINIZED PIPE (ELECTRICAL CONDUIT)	800-010	BOARDER STATES
14		SEE SHEET 6		
15		SEE SHEET 6		
16		SEE SHEET 6		
17		SEE SHEET 6		
18		FLOAT SWITCH		
19	1	6" HDPE FLANGED ADAPTER WITH SS BACK-UP RING		BOARDER STATES
20		INSTALL 1/4" STAINLESS STEEL BALL VALVE		
21		SEE SHEET 6		
22		SEE SHEET 6		
23	1	PRESSURE TRANSDUCER	3061CD1A22A1J	ROSEMOUNT
24	1	TEMPERATURE TRANSMITTER	TTD25N-20-0300F-H	AUTOMATION DIRECT
25	1	SCH 80 CPVC 3/8" X 1/4" REDUCER BUSHING	839C-052	HARRINGTON PLASTICS
26	1	KNOCK-OUT TANK WITH PRESSURE DIFFERENTIAL GAUGE AND LEVEL GAUGE	7080-SRS-01	SOLBERG MANUFACTURING INC.
27	16	2" SCH 80 CPVC UNION	857C-020	HARRINGTON PLASTICS
28		6" SCH 80 CPVC PIPE	800C-060	HARRINGTON PLASTICS
29		3/4" SCH 80 CPVC PIPE AND FITTINGS	800C-007	HARRINGTON PLASTICS
30		SEE SHEET 6		
31		SEE SHEET 10		
32		SEE SHEET 10		
33		SEE SHEET 10		
34		SEE SHEET 10		
35		SEE SHEET 10		
36		SEE SHEET 10		
37		SEE SHEET 10		
38		SEE SHEET 10		
39		SEE SHEET 10		
40		SEE SHEET 10		
41		SEE SHEET 10		
42		6" HDPE SDR 17 PIPE		BOARDER STATES
43		VITON GASKET		BOARDER STATES
44		SEE SHEET 10		
45		6" SDR 17 HDPE 90° ELBOW		BOARDER STATES
46		SEE SHEET 6		
47		6" SCH 80 CPVC ELBOW	806C-060	HARRINGTON PLASTICS
48		SEE SHEET 10		
49		SEE SHEET 10		
50		SEE SHEET 10		
51		SEE SHEET 10		



KNOCK OUT TANK DETAIL (1/11)
VIEW FACING SOUTH

GRAPHIC SCALE
0.5 0.25 0 0.5 1
(IN FEET)

NOTE: LINE WORK FOR KNOCK-OUT TANK PROVIDED BY SOLBERG MANUFACTURING INC.

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CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Seal

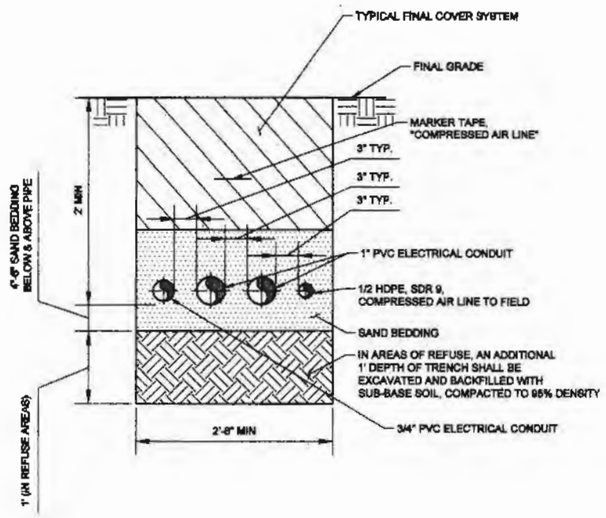
Designed By: K. JOHNSON, J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
KNOCK-OUT TANK DETAILS
PROJECT NUMBER: PW16810003

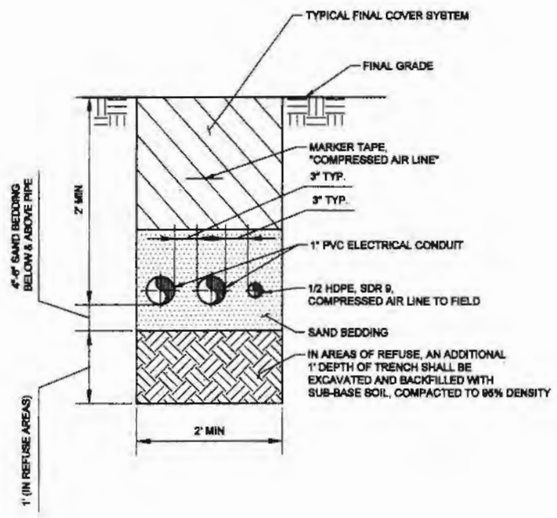
Sheet 11 OF 18

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

F:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\10CE - Resubmit - 6-18-2014\11_Knock-Out-Tank-Detail_10CE_X.dwg 6/20/14 12:11:42 john.konecny

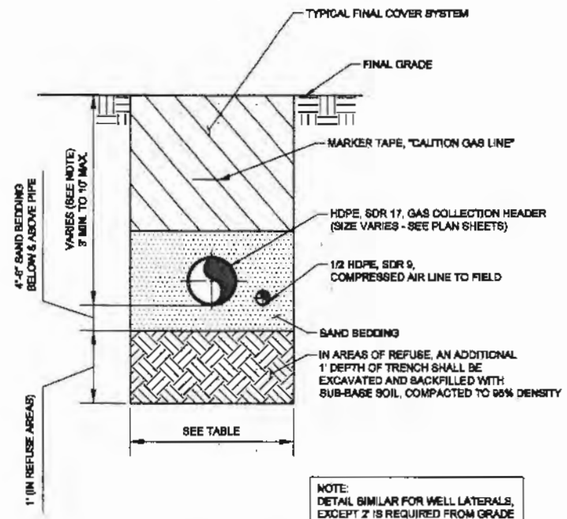


TYPICAL ELECTRICAL/COMPRESSED AIR LINE SECTION (1/12)
NTS



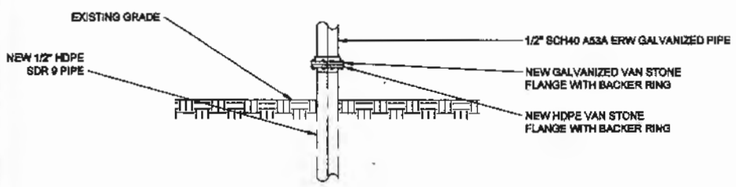
TYPICAL ELECTRICAL/COMPRESSED AIR LINE SECTION (2/12)
NTS

TRENCH WIDTH TABLE	
HEADER/ LATERAL SIZE	MINIMUM TRENCH WIDTH
2"	1'-0"
4"	1'-6"
6"	1'-6"
8"	2'-0"
10"	2'-2"
12"	2'-4"

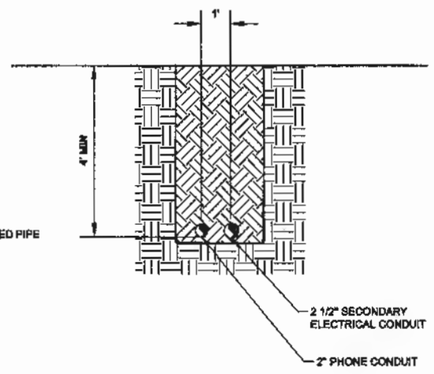


NOTE:
DETAIL SIMILAR FOR WELL LATERALS, EXCEPT 2' IS REQUIRED FROM GRADE TO INVERT OF PIPE AND THERE IS NO AIR LINE

TYPICAL HEADER/LATERAL TRENCH SECTION (3/12)
NTS



HDPE TO GALVANIZED PIPE DETAIL (4/12)
NTS



PHONE AND CONDUIT TRENCH (6/12)
NTS

Call at least two full working days before you dig, excavate or demolish
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County (602) 263-1100

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS
TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Seal
8/22/14

Designed By: K. JOHNSON J. KONECNY
Drawn By: J. KONECNY
Checked By: K. JOHNSON
Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
PIPE TRENCH DETAILS
PROJECT NUMBER:PW16810003

Sheet 12 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

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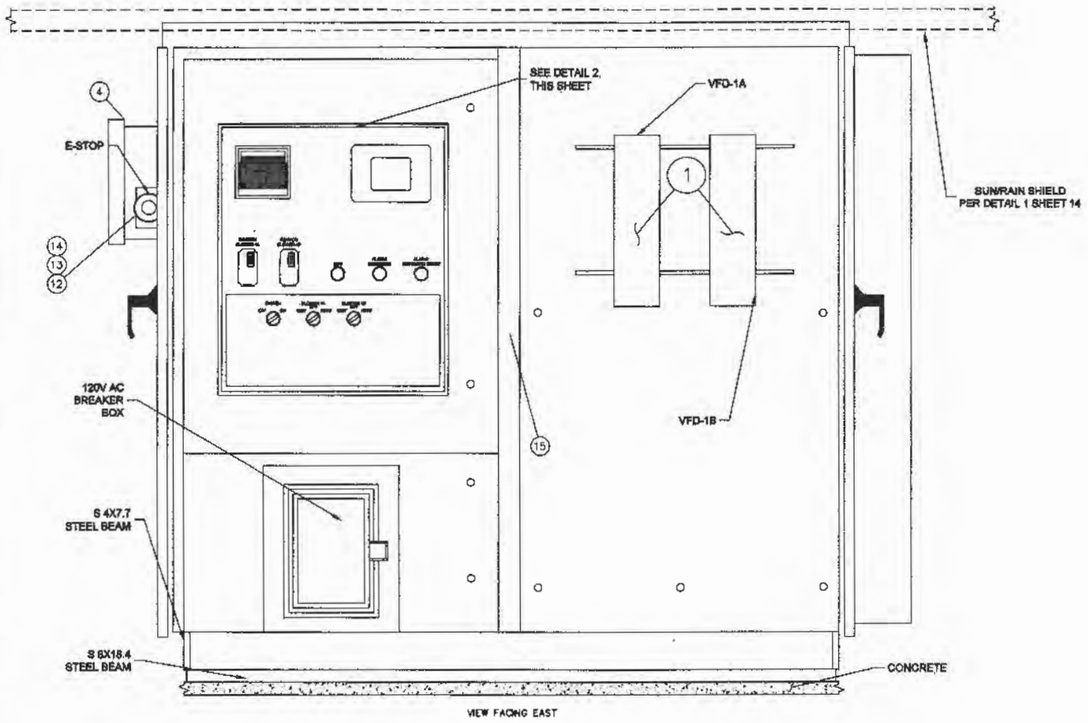
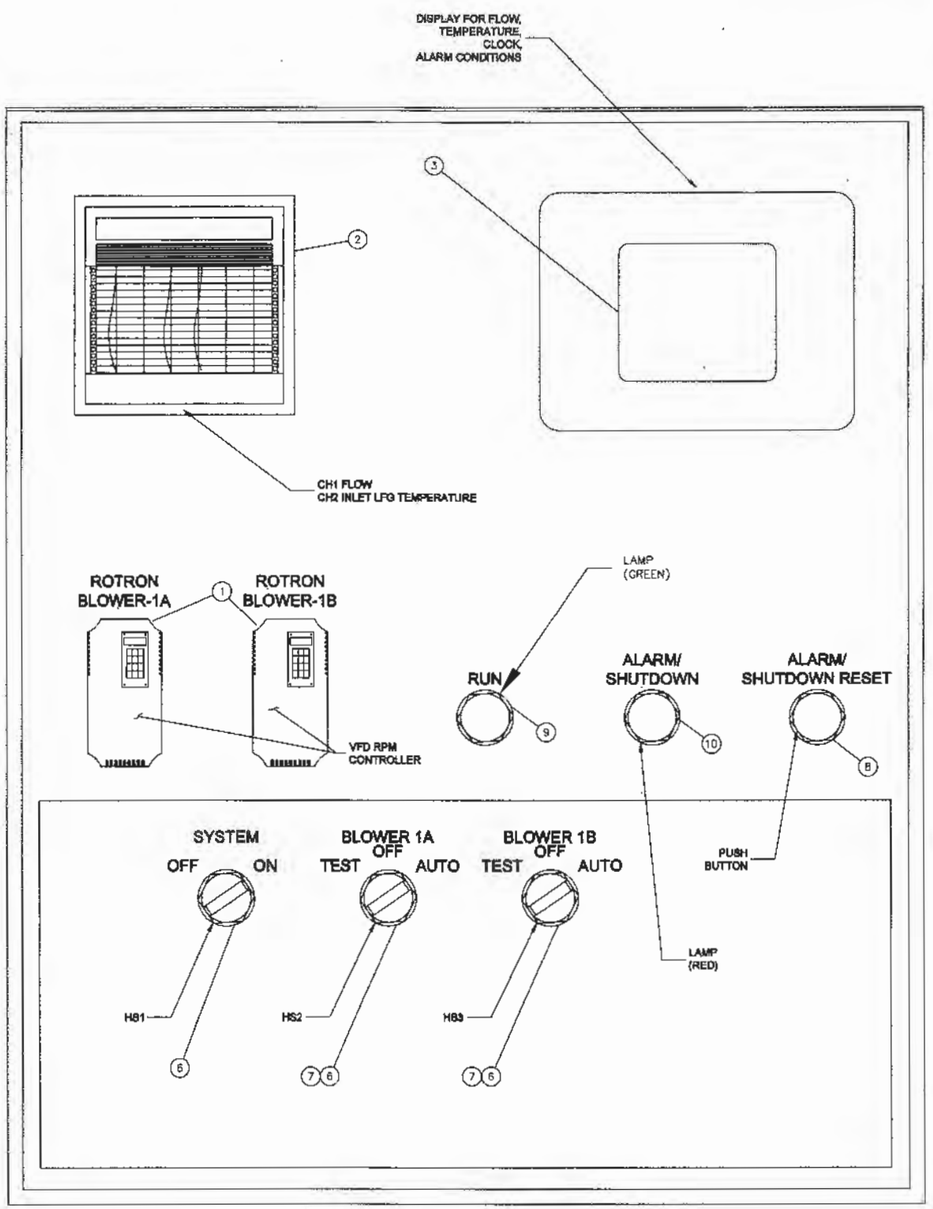


CARBON ADSORPTION SYSTEM CONTROL PANEL– DOOR OPEN (1/13)

NTS



CONTROL PANEL LEGEND (2/13)

NTS

ITEM	QUA	DESCRIPTION	PART/MODEL# NO.	MANUFACTURER OR EQUAL
1	2	ROTRON VARIABLE FREQUENCY DRIVE	PART: IV102AL58 MODEL: 551532	ROTRON
2	1	JOHNSON/YOKOGAWA CHART RECORDER (DAW STATION, 12 CHANNEL, COMPACT FLASH MEMORY CARD, ENGLISH LANGUAGE)	DX112-3-2	YOKOGAWA
3	1	C-MORE TOUCH SCREEN-6 INCH COLOR	EA7-16C	KOYO
4	1	AUTODIALER VERBATIM, 16 CHANNEL AND VERBATIM NEMA 4X LOCKING ENCLOSURE		RACO
5	1	HS 1 SELECTOR SWITCH, 2 POS. MAINTAINED, 60° THROW, BLACK	10250T1311	CUTLER-HAMMER
6	4	HS 1 CONTACT BLOCK (2 FOR HS1 AND 1 EACH FOR HS2 AND HS3)	10250T2	CUTLER-HAMMER
7	2	HS2, HS3 SELECTOR SWITCH	10250T21KB	CUTLER-HAMMER
8	1	PUSH BUTTON, FLUSH, BLACK, 1NO	10250T3B	CUTLER-HAMMER
9	1	LENS-GREEN	10250TC14N	CUTLER-HAMMER
10	1	LENS-RED	10250TC13N	CUTLER-HAMMER
11	2	LAMP BASE	10250T231N	CUTLER-HAMMER
12	1	EMERGENCY STOP CH	BWFB76	CUTLER-HAMMER
13	1	EMERGENCY STOP EXT	EXF5-2V	CUTLER-HAMMER
14	1	EMERGENCY STOP CUR BWF, GREY BLACK VOER OUTDOOR	BC-1V	CUTLER-HAMMER
15	1	PANOC LAMP AMERICAN FLUORESCENT (INSIDE CONTROL PANEL)	2V832	CUTLER-HAMMER
16	1	DIRECT LOGIC PLC-DL06AR	DL06 PLC	KOYO
17	1	PLC DIGITAL INPUT MODULE	FC-08ADH	KOYO
18	1	PLC ANALOG OUTPUT MODULE	FC-4AD2DA	KOYO
19	1	PLC THERMOCOUPLE MODULE	FC-04THM	KOYO
20	1	PLC RELAY OUTPUT MODULE	DO-08TR	KOYO
21	1	ENCLOSED AIR CONDITIONER	3302110	GRAINGER
22	1	ENCLOSURE THERMOSTAT (COOL ONLY FAHRENHEIT SCALE)	ETR201F	GRAINGER

INSIDE CAB

LOCATION TBD

NOTE: PLC PROGRAMMING BY OTHER

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County (602) 263-1100

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS

TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Exp 3-31-15

Seal

Designed By: K. JOHNSON, J. KONECNY

Drawn By: J. KONECNY

Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
CONTROLS DETAILS
PROJECT NUMBER:PW16810003

Sheet 13 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

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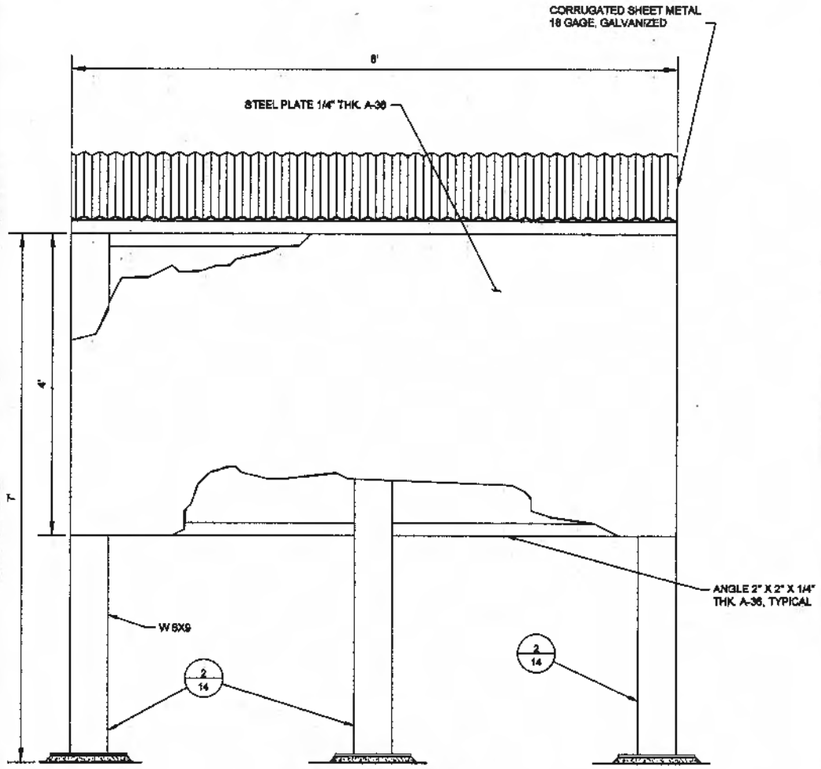
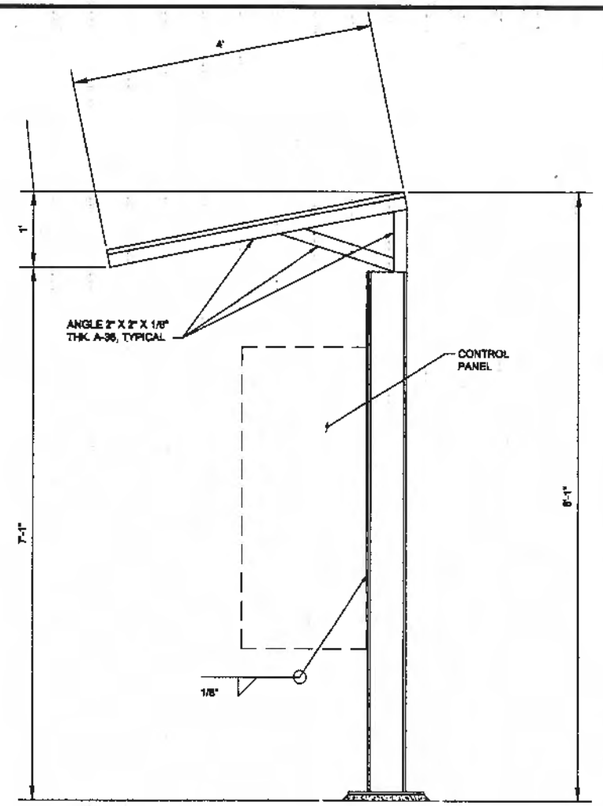


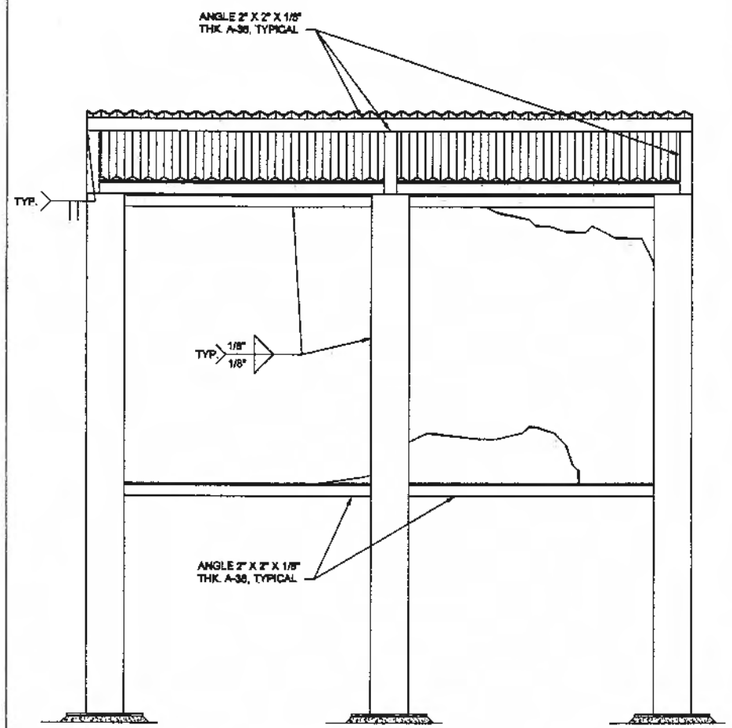
FRONT VIEW
CONTROL PANEL BACKBOARD
1/14

GRAPHIC SCALE
1 0.5 0 1 2
(IN FEET)



RIGHT SIDE VIEW
CONTROL PANEL BACKBOARD

GRAPHIC SCALE
1 0.5 0 1 2
(IN FEET)



BACK VIEW
CONTROL PANEL BACKBOARD

GRAPHIC SCALE
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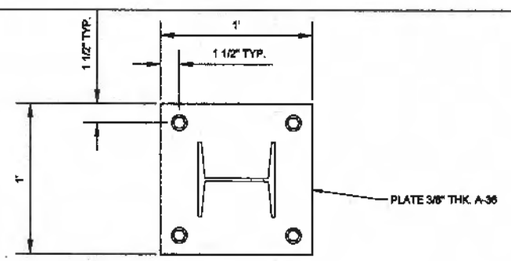
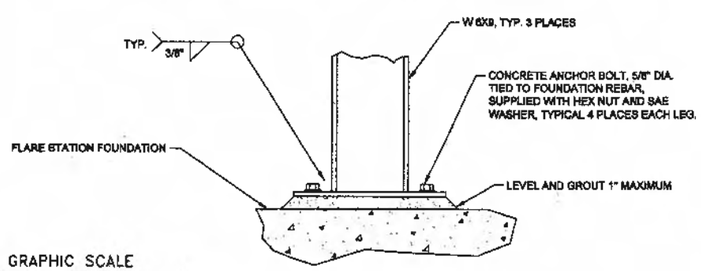
(IN FEET)





GRAPHIC SCALE
0.50 0.25 0 0.50 1
(IN FEET)

LEG DETAIL
2/14

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

TETRA TECH BAS

TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3622 E. UNIVERSITY DRIVE, SUITE 2

Revisions	Date

Exp. 3-31-15

Seal

Designed By:
K. JOHNSON
J. KONECNY

Drawn By:
J. KONECNY

Checked By:
K. JOHNSON

Date:
Jun-14

Title
19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
SUN SHIELD DETAILS
PROJECT NUMBER: PW16810003

Sheet
14 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

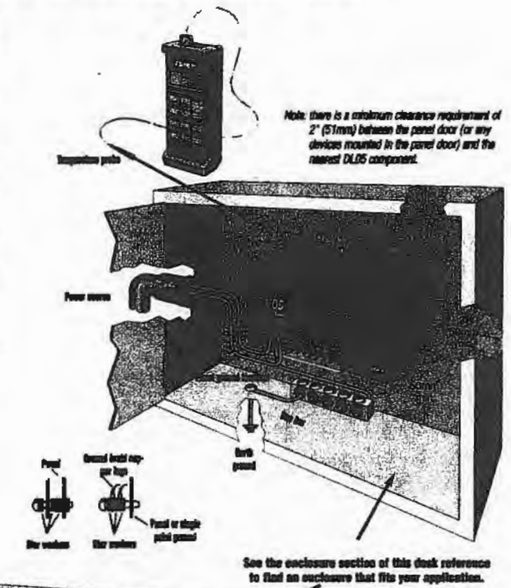
P:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\T002E - Resubmit - 5-11-2014\14_Sun-Shield-Detail_T002E.dgn 6/19/14 11:55:48 john.konecny

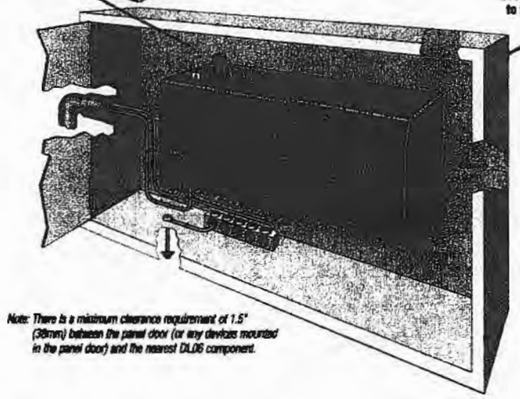
Product Dimensions and Installation

It is important to understand the installation requirements for your DL05 or DL06 system. Your knowledge of these requirements will help ensure that your system operates within its environmental and electrical limits.

Plan for safety

This desk reference should never be used as a replacement for the user manual. You can purchase, download free, or view online the user manuals for these products. The D0-USER-M is the publication for the DL05 PLCs, and the D0-06USER-M is the publication for the DL06 PLCs. The D0-OPTIONS-M is the user manual for the option cards. These user manuals contain important safety information that must be followed. The system installation should comply with all appropriate electrical codes and standards.





Environmental Specifications for DL05 and DL06	
Storage Temperature	-4° F-158°F (-20°C to 70°C)
Ambient Operating Temperature	32°F-131°F (0° to 55°C)
Ambient Humidity	5 to 95% relative humidity (non-condensing)
Vibration Resistance	MIL STD 810C Method 514.2
Shock Resistance	MIL STD 810C Method 516.2
Noise Immunity	NEMA (ICS3-304)
Atmosphere	No corrosive gases

PLC DIGITAL INPUT MODULE			DI #
TERM	ADDRESS	DESCRIPTION	RUNG
##	####	ALARM SHUTDOWN RESET	##
##	####	B-1A VFD RUN	##
##	####	B-1A FAULT	##
##	####	B-1A AUTO ON	##
##	####	B-1B VFD RUN	##
##	####	B-1B FAULT	##
##	####	B-1B AUTO ON	##
##	####	***ADD/REVISE AS NEEDED***	##

PLC RELAY OUTPUT MODULE			RM #
TERM	ADDRESS	DESCRIPTION	RUNG
##	####	SYSTEM RUN LAMP	##
##	####	SYSTEM ALARM/SHTDN LAMP	##
##	####	VFD 1 START/STOP CONTACTS	##
##	####	VFD 2 START/STOP CONTACTS	##
##	####	AUTO DIAL- HI TEMP	##
##	####	AUTO DIAL- LOW TEMP	##
##	####	SYSTEM ALARM	##
##	####	SYSTEM SHUTDWN	##
##	####	***ADD/REVISE AS NEEDED***	##

PLC THERMOCOUPLE INPUT MODULE-E TYPE			AI #
TERM	ADDRESS	DESCRIPTION	RUNG
##	####	LFG INLET TEMPERATURE	##
##	####	LFG GAC INLET TEMPERATURE	##
##	####	***ADD/REVISE AS NEEDED***	##

PLC ANALOG INPUT MODULE			AI #
TERM	ADDRESS	DESCRIPTION	RUNG
##	####	PRESSURE INDICATOR	##
##	####	PRESSURE TRANSMITTER	##
##	####	PRESSURE INDICATOR	##
##	####	***ADD/REVISE AS NEEDED***	##

PLC ANALOG OUTPUT MODULE			AO #
TERM	ADDRESS	DESCRIPTION	RUNG
##	####	B-1A VFD-1 SPEED CONTROL	##
##	####	B-1B VFD-1 SPEED CONTROL	##
##	####	INLET VOLUMETRIC FLOW RATE	##
##	####	***ADD/REVISE AS NEEDED***	##

Revisions	Date

Exp. 3-31-15

Seal

Designed By: K. JOHNSON, J. KONECNY

Drawn By: J. KONECNY

Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
CONTROL CARDS
PROJECT NUMBER: PW16810003

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION

F:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\100% - Reasonal - 6-11-2014\15_Control-Cards_100%.dwg 6/19/14 11:56:15 johnk.konecny

TETRA TECH BAS
TETRA TECH BAS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
3822 E. UNIVERSITY DRIVE, SUITE 2

Sheet 15 OF 18

ELECTRICAL SYMBOL SCHEDULE

PLEASE NOTE:
THIS IS A MASTER ELECTRICAL SYMBOL SCHEDULE. ALL SYMBOLS MAY NOT APPLY DIRECTLY TO THIS JOB. ALL MOUNTING HEIGHTS SHOWN TO CENTERLINE OF DEVICE, UNLESS NOTED OTHERWISE

- POLE MOUNTED AREA LIGHT FIXTURE WITH CONCRETE BASE
- POST TOP MOUNTED AREA LIGHT FIXTURE WITH CONCRETE BASE
- (J) JUNCTION BOX (4" SQUARE UNO) STEEL CITY OR EQUAL. DEPTH AS REQUIRED
- $ ^{3} TOGGLE SWITCHES – SINGLE POLE/SINGLE THROW, THREE WAY, +44" UNO
- ^{M} MANUAL MOTOR STARTING SWITCH WITH OVERLOAD PROTECTION
- ^E_M CONTACTOR – SQUARE D CLASS 8903 (UNO). NUMBER INDICATES QUANTITY OF POLES. (E = ELECTRICALLY HELD, M = MECHANICALLY HELD)
- MAGNETIC STARTER AND CONTROLS FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR
- ^{3} MAGNETIC STARTER AND CONTROLS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. NUMBER INDICATES RECOMMENDED NEMA SIZE, VERIFY WITH EQUIPMENT MANUFACTURER
- ^{2} COMBINATION FUSIBLE SWITCH AND MAGNETIC STARTER WITH CONTROLS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. NUMBER INDICATES RECOMMENDED NEMA SIZE, VERIFY WITH EQUIPMENT MANUFACTURER
- 30/3 DISCONNECT SWITCH (HEAVY DUTY) FUSED PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS (NUMBERS INDICATE SWITCH AMPACITY/NUMBER OF POLES)
- MOTOR
- 'A' SURFACE MOUNTED PANEL. LETTER INDICATES PANEL DESIGNATION

- CONDUIT RUN CONCEALED IN CEILING OR WALL
- CONDUIT TURNED UP OR TOWARDS OBSERVER. SEE APPROPRIATE PLAN FOR CONTINUATION
- CONDUIT TURNED DOWN OR AWAY FROM OBSERVER. SEE APPROPRIATE PLAN FOR CONTINUATION
- CONDUIT RUN UNDER RAISED COMPUTER FLOOR OR UNDERGROUND
- E CONDUIT STUB OUT – CAP AND MARK WITH APPROVED MARKER
- CONDUIT HOME RUN TO PANEL OR AS NOTED. HASH MARKS INDICATE QUANTITY OF CONDUCTORS. NO HASH MARKS INDICATE TWO CONDUCTORS, PLUS GROUND(S). (NOTE: WIRE SIZE AND CONDUIT SHOWN AT HOME RUN IS MINIMUM SIZE FOR ENTIRE CIRCUIT: #12 MINIMUM). ALL CIRCUITS SHALL HAVE AN INSULATED GROUND WIRE SIZED PER N.E.C. 250.122, #12 MINIMUM. EACH ISOLATED CIRCUIT SHALL HAVE A SEPARATE INSULATED GROUND WIRE SIZED PER 250.122 OF THE N.E.C. AND A SEPARATE NEUTRAL. GROUND WIRE(S) ARE NOT SHOWN ON DRAWINGS

- GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE OUTLET. HUBBELL # GF5362 OR EQUAL, +17" UNO

ABBREVIATIONS

A	AMPERE	KVA	KILOVOLT AMPERE
AFC	AVAILABLE FAULT CURRENT	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AFG	ABOVE FINISHED GRADE	MBJ	MAIN BONDING JUMPER
AIC	AMPERE INTERRUPTING CAPACITY	MH	MANHOLE
AL	ALUMINUM	N	NEUTRAL
C	CONDUIT	NF	NON-FUSED
CB	CIRCUIT BREAKER	NL	NIGHT LIGHT
CKT	CIRCUIT	PNL	PANEL
CT	CURRENT TRANSFORMER	SES	SERVICE ENTRANCE SWITCHBOARD
CU	COPPER	SW	SWITCH
CWB	COLD WATER BOND	SWBD	SWITCHBOARD
DISC	DISCONNECT SW	UC	UNDER COUNTER
DN	DOWN	UNO	UNLESS NOTED OTHERWISE
EC	EMPTY CONDUIT	VP	VANDALPROOF
EDF	ELECTRIC DRINKING FOUNTAIN	WH	WATER HEATER
EF	EXHAUST FAN	WP	WEATHERPROOF
FBO	FURNISHED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR	X	EXISTING TO REMAIN
GF	GROUND FAULT CIRCUIT INTERRUPTER	XR	EXISTING TO BE REMOVED
GND	GROUND	XRR	EXISTING TO BE REMOVED AND RELOCATED
G	GROUND		

SCOPE OF WORK

PROVIDE ELECTRICAL DOCUMENTS FOR CARBON ABSORPTION REMODEL. DISCONNECT FLARE STATION SKID ASSEMBLY CONTROL PANEL MODULE, EMERGENCY STOP STATION, PUMPS AND BLOWER UNITS AND WEATHERPROOF GFCI RECEPTACLE. AND RECONNECT EXISTING COMPRESSORS, NEW BLOWERS, A/C UNIT, SITE LIGHTING & RECEPTACLE TO NEW CARBON ABSORPTION CONTROL PANEL.

ELECTRICAL DRAWING INDEX

Revisions	Date

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Seal

Designed By: M. JOHNSON

Drawn By: M. JOHNSON

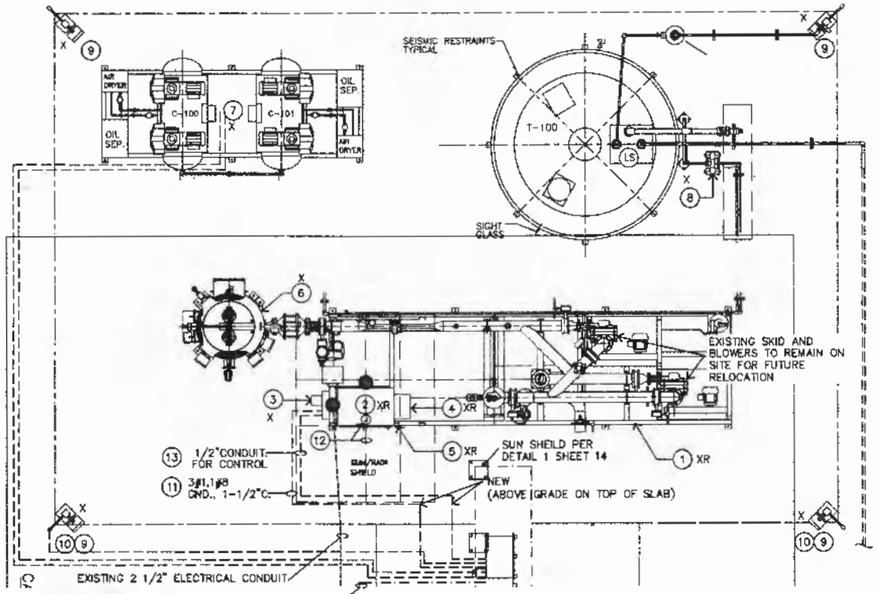
Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
ELECTRICAL SYMBOLS LEGEND & SHEET INDEX
PROJECT NUMBER: PW16810003

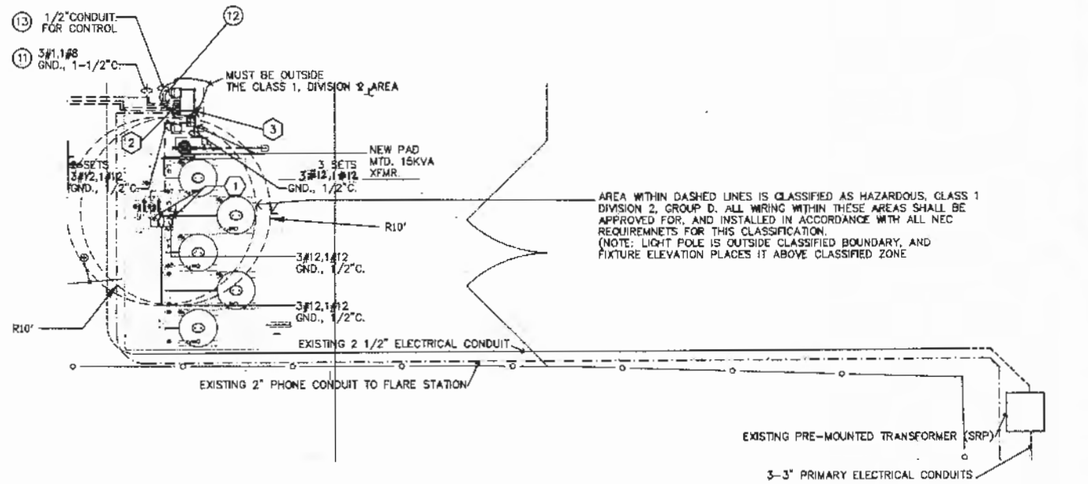
Sheet 16 OF 18

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION



ELECTRICAL DEMOLITION PLAN

SCALE: 1/4"=1'-0" FEET 2 1 0 4' 8' NORTH



ELECTRICAL REMODEL PLAN

SCALE: 1/8"=1'-0" FEET 4 2 0 8' 16' NORTH

ELECTRICAL DEMOLITION KEY NOTES:

1. EXISTING GAS HANDLING SKID ASSEMBLY TO BE DISCONNECTED.
2. ELECTRICAL CONTRACTOR SHALL INTERCEPT EXISTING TELEPHONE LINE AT EXISTING FLARE ASSEMBLY CONTROL PANEL AND ROUTE OVER TO NEW CARBON ABSORPTION CONTROL PANEL IN NEW 1/2" EMPTY CONDUIT AND MAKE FINAL CONNECTION.
3. EXISTING POWER COMPANY METER MAIN TO REMAIN.
4. EXISTING A/C UNIT TO BE DISCONNECTED.
5. EXISTING EMERGENCY STOP TO BE DISCONNEDTED BUT REMAINS, KEEP WITH FLARE
6. EXISTING FLARE TOP ASSEMBLY TO REMAIN.
7. EXISTING AIR COMPRESSOR SKID PACKAGE TO REMAIN.
8. EXISTING PNEUMATIC DIAPHRAGM PUMP TO REMAIN.
9. EXISTING POLE MOUNTED LIGHT FIXTURE TO REMAIN.
10. EXISTING POLE MOUNTED LIGHT FIXTURE SHALL BE ADJUSTED AND AIMED AT THE NEW CARBON HANDLING SKID ASSEMBLY. VERIFY EXACT LOCATION WITH ENGINEER.
11. ROUTE TO NEW CARBON ADSORPTION SYSTEM CONTROL PANEL FOR POWER FEED.
12. PROVIDE NEMA 4X JUNCTION BOX AT EXISTING FLARE SKID ASSEMBLY AND INTERCEPT EXISTING CIRCUITING FOR AIR COMPRESSORS AND EXTEND EXISTING CIRCUITS OVER TO NEW CARBON ABSORPTION CONTROL PANEL AND RECONNECT.
13. ROUTE TO NEW CARBON ADSORPTION SYSTEM CONTROL PANEL FOR CONTROL.

ELECTRICAL REMODEL KEY NOTES:

1. NEW 1 HP ROTRON SEALED BLOWER (2). (230V, 3ø, 6 AMPS)
2. NEW EMERGENCY STOP PUSH BUTTON. (WEATHERPROOF NEMA 4) MOUNTED ON CARBON ABSORTION CONTROL PANEL.
3. NEW CARBON ABSORPTION CONTROL PANEL (CACP) AND NEW PANEL 'B' INSIDE A NEMA 4 ENCLOSURE PROVIDED BY ELECTRICAL CONTRACTOR WITH NEW WEATHER RESISTANT SHIELD.

Revisions	Date

Seal

Expires 9/30/14

Designed By: M. JOHNSON

Drawn By: M. JOHNSON

Checked By: K. JOHNSON

Date: Jun-14

Title: 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
ELECTRICAL DEMOLITION AND REMODEL PLAN
PROJECT NUMBER: PW16810003

Sheet 17 OF 18

CITY OF PHOENIX ● ENGINEERING DEPARTMENT ● DESIGN DIVISION

F:\Data\CLIENTS\City of Phoenix\19th Ave LF\Cell A-1 Carbon System\Drawing Files\100% - Resubmit - 6-11-2014\17_Electrical-Demolition-and-Remodel-Plan_100%_R.dwg 6/19/14 11:56:38 John.Kennedy

DASHED LINES INDICATE EXISTING EQUIPMENT TO REMAIN
SOLID LINES INDICATES NEW

CODE LOAD CALCULATION

(SRP METER #2325570 HIGH DEMAND LAST 12 MONTHS)
6.8 KW / .8pf = 8.5 KVA
8.5 KVA X 1.25 sf = 10.625 KVA
10.625 KVA / .831 = 12.8 AMPS

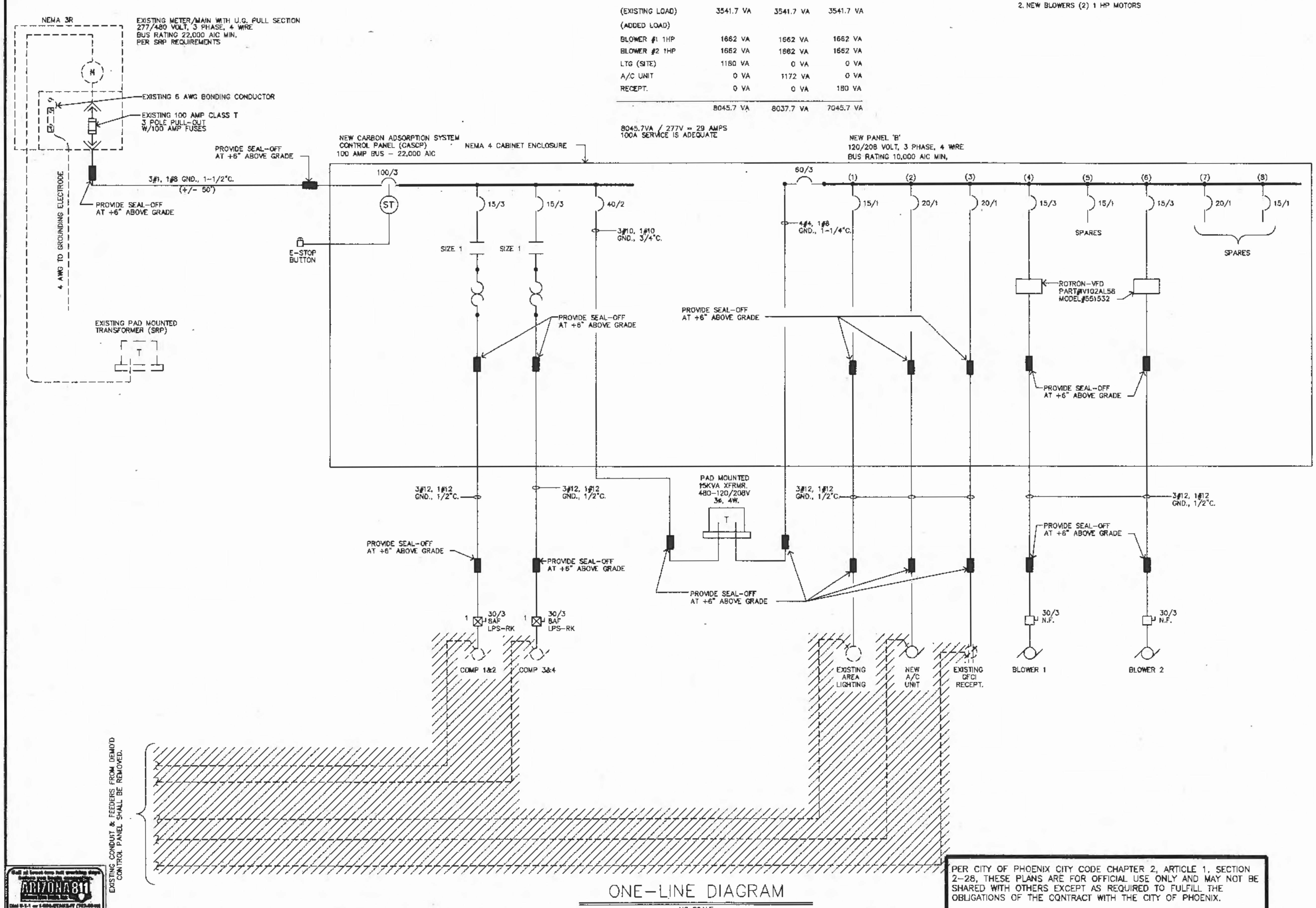
	Aφ	Bφ	Cφ
(EXISTING LOAD)	3541.7 VA	3541.7 VA	3541.7 VA
(ADDED LOAD)			
BLOWER #1 1HP	1662 VA	1662 VA	1662 VA
BLOWER #2 1HP	1662 VA	1662 VA	1662 VA
LTG (SITE)	1180 VA	0 VA	0 VA
A/C UNIT	0 VA	1172 VA	0 VA
RECEPT.	0 VA	0 VA	180 VA
	8045.7 VA	8037.7 VA	7045.7 VA

8045.7VA / 277V = 29 AMPS
100A SERVICE IS ADEQUATE

NOTES

1. EACH EXISTING PREWIRED COMPRESSOR PACKAGE INCLUDES (2) 5 HP MOTORS INTERLOCKED TO ALLOW ONLY (1) ONE TO OPERATE AT A TIME.
2. NEW BLOWERS (2) 1 HP MOTORS

AVAILABLE SHORT CIRCUIT CURRENT: 10,000 AMPS



ONE-LINE DIAGRAM

NO SCALE

PER CITY OF PHOENIX CITY CODE CHAPTER 2, ARTICLE 1, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACT WITH THE CITY OF PHOENIX.

ARIZONA811

Revisions	Date

Expires 9/30/15
Seal

Designed By: M. JOHNSON
Drawn By: M. JOHNSON
Checked By: K. JOHNSON
Date: Jun-14

Title 19TH AVENUE LANDFILL CELL A-1
CARBON ADSORPTION SYSTEM
ONE LINE DIAGRAM AND CODE LOAD SUMMARY
PROJECT NUMBER: PW16810003

CITY OF PHOENIX • ENGINEERING DEPARTMENT • DESIGN DIVISION