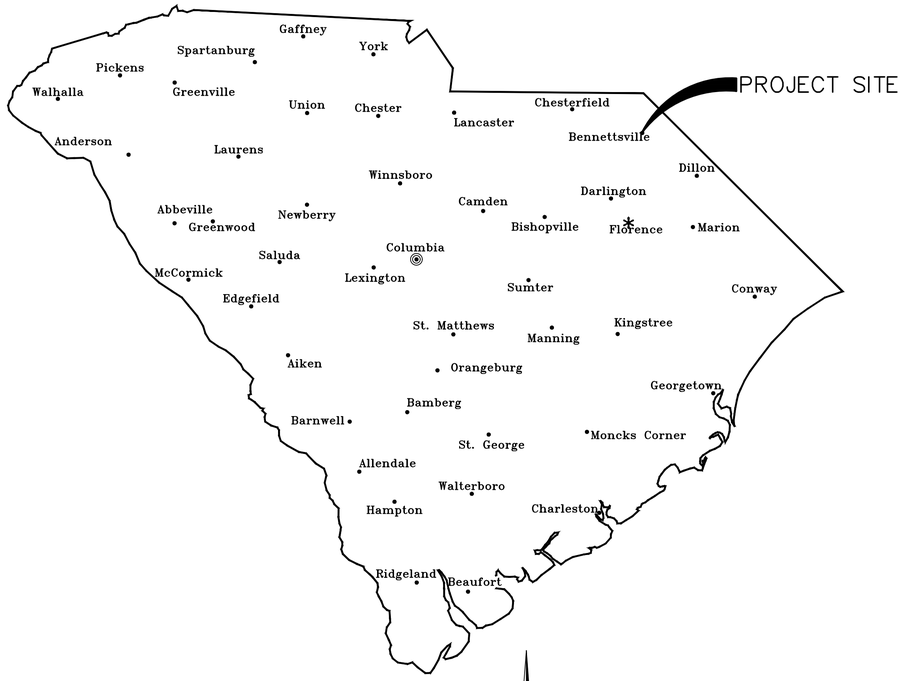
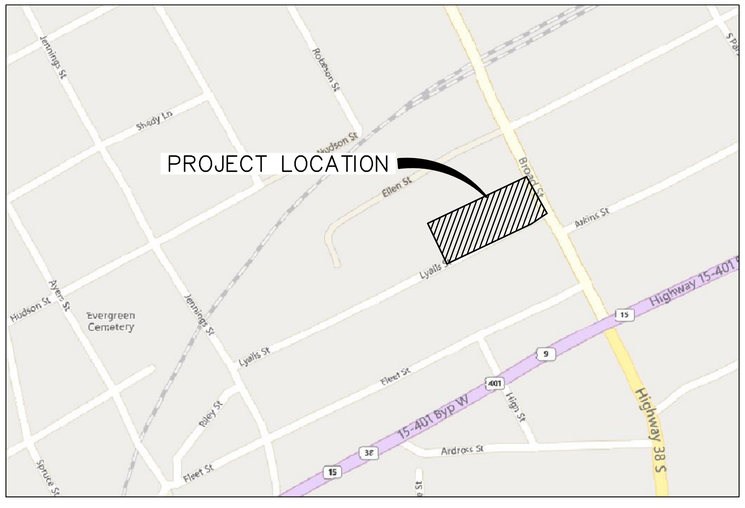


VICINITY MAP



LOCATION MAP
SCALE: 1" = 300'

NORTH

LIME SLURRY FEED SYSTEM
FOR THE
LYALL STREET
WATER TREATMENT PLANT

FOR THE
CITY OF BENNETTSVILLE

HUD/CDBG PROJECT NO.: 4-CI-24-001
PROJECT NO.: 60753190

WHERE HISTORY & CULTURE MEET
Bennettsville
SOUTH CAROLINA
1819

FEBRUARY 2026

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
AECOM TECHNICAL SERVICES, INC.
No. 1473

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 43039
KEIRAN RYAN

AECOM

BID DOCUMENTS
THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

AECOM

Lime Slurry Feed System for the Lyall Street Water Treatment Plant For the City of Bennettsville

501 E. Main Street, Bennettsville, SC 29512

Project No.: 60753190 HUD/CDBG Project No.: 4-CI-24-001

ABBREVIATION	WORD
A	
AFF	ABOVE FINISH FLOOR
ABS	ABSOLUTE
ACT.	ACTUAL
ADPT	ADAPTER
ADD.	ADDENDUM
ADJ	ADJUST
ADV	ADVANCE
AFT.	AFTER
AGGR	AGGREGATE
AIR COND	AIR CONDITION
ALY	ALLOY
ALT	ALTERATION
ALT	ALTERNATE
AC	ALTERNATING CURRENT
AL	ALUMINUM
AWG	AMERICAN WIRE GAGE
AM	AMMETER
AMT	AMOUNT
AMP	AMPERE
AB	ANCHOR BOLT
&	AND
ANT.	ANTENNA
APPX	APPENDIX
APPD	APPROVED
APPROX	APPROXIMATE
ARC/W	ARC WELD
A	AREA
ASPH	ASPHALT
ASSY	ASSEMBLY
@	AT
AUTH	AUTHORIZED
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH
B	
BP	BACK PRESSURE
B TO B	BACK TO BACK
BAL	BALANCE
BB	BALL BEARING
BAR	BAROMETER
BL	BASE LINE
BP	BASE PLATE
BAT.	BATTERY
BRG	BEARING
BM	BENCH MARK
BET.	BETWEEN
BEV	BEVEL
BD	BOARD
BLR	BOILER
BC	BOLT CIRCLE
BS	BOTH SIDES
BOT	BOTTOM
B/	BOTTOM OF
BC	BOTTOM CHORD
BDY	BOUNDARY
BRKT	BRACKET
BHP	BRAKE HORSEPOWER
BRS	BRASS
BRK	BREAK
BKR	BREAKER
BRDG	BRIDGE
BTU	BRITISH THERMAL UNITS
BRZ	BRONZE
BLDG	BUILDING
BHD	BULKHEAD
BUSH.	BUSHING
BUT.	BUTTON
BUZ	BUZZER
BYP	BY–PASS
BV	BALL VALVE
BFV	BUTTERFLY VALVE
C	
CAB.	CABINET
CALC	CALCULATE
CAL	CALIBRATE
CAP	CAPACITOR
CIP	CAST–IN–PLACE
CI	CAST IRON
CSTG	CASTING
CAT.	CATALOG
CEM	CEMENT
CTR	CENTER
CL	CENTERLINE
CG	CENTER OF GRAVITY
C to C	CENTER TO CENTER
C	CENTIGRADE
CM	CENTIMETER
CH	CHAIN
CHAM	CHAMFER
CO	CHANGE ORDER
CHAN	CHANNEL
CHK	CHECK
CV	CHECK VALVE
CHEM	CHEMICAL
CHD	CHORD
CIR	CIRCLE
CKT	CIRCUIT
CIR	CIRCULAR
CIRC	CIRCUMFERENCE
CO	CLEANOUT
CW	CLOCKWISE
CTD	COATED
COL	COLUMN
COMB.	COMBINATION
COMB	COMBUSTION
CO	COMPANY
CONC	CONCENTRIC
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
COND	CONDITION
CONN	CONNECT

ABBREVIATION	WORD
C (CONT)	
CJ	CONSTRUCTION JOINT
CONT	CONTACT
CONT	CONTINUOUS
CD	CORD
CORP	CORPORATION
CORR	CORRUGATE
CCW	COUNTERCLOCKWISE
CSK	COUNTERSINK
CPLG	COUPLING
CRK	CRANK
XSECT	CROSS SECTION
CU	CUBIC
CC	CUBIC CENTIMETER
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CU FT	CUBIC FOOT
CU IN.	CUBIC INCH
CU M	CUBIC METER
CU YD	CUBIC YARD
CUR	CURRENT
CYL	CYLINDER
D	
DEC	DECIMAL
DEG (OR °)	DEGREE
DEPT	DEPARTMENT
DSGN	DESIGN
DET	DETAIL
DEV	DEVELOP
DIAG	DIAGONAL
DIA (OR ø)	DIAMETER
DIM.	DIMENSION
DC	DIRECT CURRENT
DISCH	DISCHARGE
DIST	DISTANCE
DO	DITTO
DVTL	DOVETAIL
DWL	DOWEL
DN	DOWN
DFTG	DRAFTING
DWG	DRAWING
DR	DRIVE
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
E	
EA	EACH
EF	EACH FACE
ES	EACH SIDE
EW	EACH WAY
E	EAST
ECC	ECCENTRIC
EFF	EFFECTIVE
ELL	ELBOW
ELEC	ELECTRIC
ELEV	ELEVATION
ENGR	ENGINEER
EQ	EQUAL
EQUIP. (OR EQ)	EQUIPMENT
EQUIV	EQUIVALENT
EST	ESTIMATE
EXP	EXPANSION
EJ	EXPANSION JOINT
EXT	EXTERIOR
X HVY	EXTRA HEAVY
X STR	EXTRA STRONG
F	
FAB	FABRICATE
F to F	FACE TO FACE
F	FAHRENHEIT
FS	FAR SIDE
FT (OR ')	FEET
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FLD	FIELD
FIG.	FIGURE
FIL	FILLET
FLT	FILTER
FIN.	FINISH
FF	FINISH FLOOR
FH	FIRE HYDRANT
FLG	FLANGE
FL	FLUID
FWD	FORWARD
FDN	FOUNDATION
FDRY	FOUNDRY
FREQ	FREQUENCY
FR	FRONT
G	
GA	GAGE
GAL	GALLON
GALV	GALVANIZE
GS	GALVANIZED STEEL
GSKT	GASKET
GEN	GENERAL
GR	GRADE
GL	GRADE LINE
G	GRAM
G	GRAVITY
GRD	GRIND
GRV	GROOVE
GRD	GROUND
GYP	GYPSUM
GWB	GYPSUM WALL BOARD

ABBREVIATION	WORD
H	
HDL	HANDLE
HGR	HANGER
HDW	HARDWARE
HD	HEAD
HT	HEAT
HT TR	HEAT TREAT
HEX	HEXAGON
HDPE	HIGH DENSITY POLYETHYLENE
H.P.	HIGH POINT
HP	HIGH PRESSURE
HS	HIGH SPEED
HSS	HOLLOW STEEL SHAPE
HOR	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
I	
IN. (OR ")	INCH
IPS	INCHES PER SECOND
INCL	INCLUDE
IND	INDUSTRIAL
INFO	INFORMATION
ID	INSIDE DIAMETER
IF	INSIDE FACE
INST	INSTRUMENT
INS	INSULATE
INT	INTERIOR
INT	INTERNAL
INT	INTERSECT
INV	INVERT
I	IRON
IRREG	IRREGULAR
J	
JT	JOINT
JCT	JUNCTION
JB	JUNCTION BOX
K	
K	KEY
KST	KEYSEAT
KWY	KEYWAY
K	KIP (1000 LB)
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KN	KNOTS
L	
LAB	LABORATORY
LAM	LAMINATE
LAT	LATERAL
LAT	LATITUDE
L	LEFT
LH	LEFT HAND
LG	LENGTH/LONG
LT	LIGHT
L	LINE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
L.P.	LOW POINT
LUB	LUBRICATE
LBR	LUMBER
LWL	LOW WATER LEVEL
M	
MACH	MACHINE
MH	MANHOLE
MAN.	MANUAL
MFR	MANUFACTURE
MO	MASONRY OPENING
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MJ	MECHANICAL JOINT
MECH	MECHANISM
MED	MEDIAN
MET.	METAL
M	METER
MI	MILES
MPH	MILE PER HOUR
MM	MILLIMETER
MG	MILLION GALLON
MIN	MINIMUM
MIN (OR ')	MINUTE
MISC	MISCELLANEOUS
MIX.	MIXTURE
MOD	MODEL
MCC	MOTOR CONTROL CENTER
MULT	MULTIPLE
N	
NC	NORMALLY CLOSED
NS	NEAR SIDE
NEG	NEGATIVE
NEUT	NEUTRAL
NIP.	NIPPLE
NOM	NOMINAL
NOR	NORMAL
N	NORTH
NTS	NOT TO SCALE
NO. (OR #)	NUMBER
NWL	NORMAL WATER LEVEL
O	
Ω	OHM
OC	ON CENTER
OP'NG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OZ	OUNCE
OUT.	OUTLET
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE

ABBREVIATION	WORD
O (CONT)	
OR	OUTSIDE RADIUS
OA	OVERALL
OH	OVERHANG
OHP	OVERHEAD POWER
OVF	OVERFLOW
P	
PAR.	PARALLEL
PERM	PERMANENT
PERP	PERPENDICULAR
PC	PIECE
P	PITCH
PL	PLATE
POL	POLISH
PVC	POLYVINYL CHLORIDE
POS	POSITION
POS	POSITIVE
LB (OR #)	POUND
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PWR	POWER
PREFAB	PREFABRICATED
PFD	PREFERRED
PREP	PREPARE
PRESS.	PRESSURE
PCO	PRESSURE CLEANOUT
PS	PUMP STATION
PT	PRESSURE TREATED
PROC	PROCESS
PROD	PRODUCTION
PF	PROFILE
PROJ	PROJECT
Q	
QUAD	QUADRANT
QT	QUART
QTR	QUARTER
R	
RAD	RADIAL
R	RADIUS
RR	RAILROAD
RECD	RECEIVED
REC	RECORD
RECT	RECTANGLE
REF	REFERENCE
REF L	REFERENCE LINE
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCING
REL	RELIEF
REM	REMOVE
REQ	REQUIRE
REQD	REQUIRED
RJ	RESTRAINED JOINT
RET.	RETURN
REV	REVOLUTION
RPM	REVOLUTIONS PER MINUTE
RHEO	RHEOSTAT
R	RIGHT
RH	RIGHT HAND
RM	ROOM
RMS	ROOT MEAN SQUARE
RGH	ROUGH
RD	ROUND
RUB.	RUBBER
S	
SAF	SAFETY
SD BL	SANDBLAST
SCH	SCHEDULE
SCRN	SCREEN
SCR	SCREW
SL	SEA LEVEL
SEC (OR ")	SECOND
SECT	SECTION
SEP	SEPARATE
SFT	SHAFT
SD	SIDE
SIM	SIMILAR
SLV	SLEEVE
SL	SLIDE
SLOT.	SLOTTED
SOC	SOCKET
SLD	SOLDER
SOLN	SOLUTION
S	SOUTH
SP	SPACE
SPL	SPECIAL
SP GR	SPECIFIC GRAVITY
SQ	SQUARE
STN	STAINLESS
SST	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STK	STOCK
STR	STRAIGHT
STR	STRUCTURAL
SUB	SUBSTITUTE
SCADA	SUPERVISORY CONTROL AND DATA AQUISITION
SUP	SUPPLY
SUR	SURFACE
SYM	SYMBOL
SYM	SYMMETRICAL
SYS	SYSTEM
SW	SIDEWALK

ABBREVIATION	WORD
T	
TAN.	TANGENT
TPR	TAPER
TEMP	TEMPERATURE
TEMP	TEMPLATE
TS	TENSILE STRENGTH
TENS.	TENSION
THK	THICK
KIP	THOUSAND POUND
THD	THREAD
TOL	TOLERANCE
T&G	TONGUE AND GROOVE
T&B	TOP AND BOTTOM
T/	TOP OF
TOT	TOTAL
TRANS	TRANSFER
TYP	TYPICAL
U	
ULT	ULTIMATE
U	UNIT
UNIV	UNIVERSAL
UNO	UNLESS NOTED OTHERWISE
V	
VAC	VACUUM
V	VALVE
VAR	VARIABLE
VNT	VENT
VERT	VERTICAL
VCT	VINYL COMPOSITE TILE
V	VOLT
VOL	VOLUME
W	
WASH.	WASHER
W	WATT
WT	WEIGHT
W	WEST
W	WIDTH
W/	WITH
WD	WOOD
WSE	WATER SURFACE ELEVATION
Y	
YD	YARD
YH	YARD HYDRANT
YR	YEAR

DRAWING INDEX

GENERAL NOTES

1. PROJECT VERTICAL DATUM IS NAVD88. HORIZONTAL DATUM IS SCSPC NAD83.
2. COORDINATE WITH OWNER FOR THE SITE ACCESS REQUIREMENTS AND MOBILIZATION / STOCKPILE RESTRICTIONS.
3. REPLACE ALL PAVING, SIDEWALK, GRASSING, LANDSCAPING, ETC DAMAGED DURING CONSTRUCTION.

BID DOCUMENTS
THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT

103 LYALL STREET
BENNETTSVILLE, SC 29512

CLIENT

CITY OF BENNETTSVILLE
501 EAST MAIN STREET
BENNETTSVILLE, SC 29512
843.479.9001

CONSULTANT

AECOM
425 SOUTH CASHUA DRIVE
FLORENCE, SC 29501
843.665.9166
www.aecom.com

REGISTRATION

SOUTH CAROLINA — AECOM TECHNICAL SERVICES, INC. — No. 1473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 43039 — KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

ABBREVIATIONS, DRAWING INDEX, & GENERAL NOTES

SHEET NUMBER

G01.10

Last saved by: RYANK (2025-09-27) Last Plotted: 2025-09-25
Filename: C:\USERS\RYANK\AECOM\60753190 - LYALL ST LIME SLURRY - DESIGN\800_CAD_GIS\810_CAD\SHEETS\60753190-G.DWG
Project Management Initials: Project Eng.: ** fill in ** Designer: ** fill in ** Drafter: ** fill in ** Checked: ** fill in ** Approved: ** fill in ** ANSI D 22" x 34"

SYMBOLS

- EXISTING STRUCTURE/BUILDING
- TO BE REMOVED
- TO MILL & OVERLAY ASPHALT
- NEW STRUCTURE/BUILDING
- EXISTING SIDEWALK
- NEW SIDEWALK
- EXISTING ASPHALTIC CONCRETE PAVEMENT
- NEW ASPHALTIC CONCRETE PAVEMENT
- BENCHMARK/ELEVATION MARKER
- x(196.00) NEW SPOT ELEVATION
- 1001 STAKING POINT
- 606 EXISTING CONTOUR
- 606 NEW CONTOUR
- EXISTING PIPING
- YARD PIPING TO BE REMOVED
- YARD PIPING TO BE ABANDONED
- NEW PIPING
- EXISTING FENCE
- NEW FENCE
- SF SILT FENCE
- OHP OVERHEAD POWER LINE
- UGP UNDERGROUND POWER LINE
- UT TELEPHONE LINE (UNDERGROUND)
- FOC FIBER OPTIC CABLE
- TREE LINE
- EXISTING HANDRAIL
- NEW HANDRAIL
- CATV CABLE TV
- SANITARY SEWER
- PROPERTY LINE
- RIGHT-OF-WAY/EASEMENT
- LP EXISTING LIGHT POLE
- PP EXISTING POWER POLE
- YH EXISTING YARD HYDRANT
- YH NEW YARD HYDRANT
- FH EXISTING FIRE HYDRANT
- FH NEW FIRE HYDRANT
- MH EXISTING MANHOLE
- MH NEW MANHOLE
- EXISTING STOP GATE

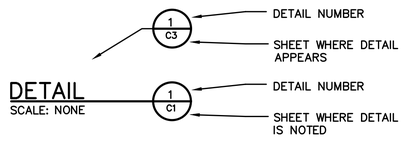
SYMBOLS (CONT.)

- DI EXISTING DROP INLET
- DI NEW DROP INLET
- JB EXISTING JUNCTION BOX
- JB NEW JUNCTION BOX
- CB EXISTING CATCH BASIN
- CB NEW CATCH BASIN
- EMH EXISTING ELECTRIC MANHOLE
- E.BOX EXISTING ELECTRIC BOX
- CO CLEAN OUT
- EXISTING VALVE
- NEW VALVE
- T PED EXISTING TELEPHONE PED
- BALL VALVE
- GATE VALVE
- REDUCER
- UNION
- STRAINER
- CHECK VALVE
- PRESSURE GAUGE
- FLOOR DRAIN
- L LEVEL SENSOR
- T TRANSMITTER

MATERIALS

- EARTH OR GRADE
- GRANULAR FILL (ROCK/GRAVEL)
- CONCRETE
- CMU (CONCRETE MASONRY UNIT)
- BRICK MASONRY
- GRATING
- GROUT FILL
- RIGID INSULATION
- RIP-RAP

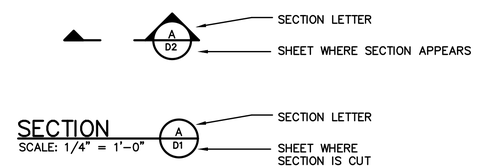
DETAIL REFERENCES



OPH USED TO INDICATE THAT DETAIL SHOWN IS OPPOSITE HAND.

SIM USED TO INDICATE THAT DETAIL SHOWN IS SIMILAR.

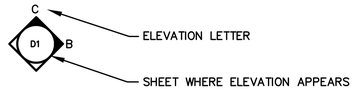
SECTION REFERENCES



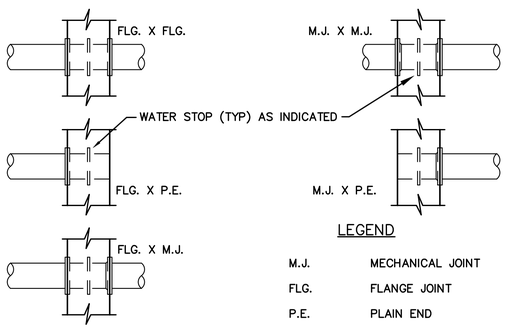
OPH USED TO INDICATE THAT SECTION SHOWN IS OPPOSITE HAND.

SIM USED TO INDICATE THAT DETAIL SHOWN IS SIMILAR.

ELEVATION REFERENCES



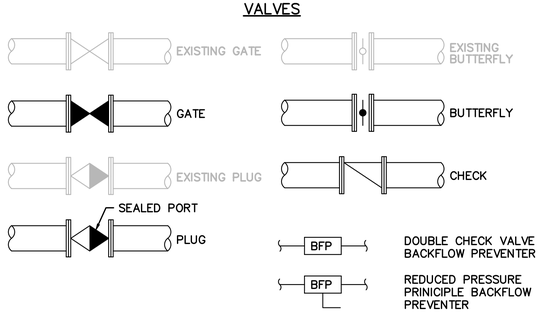
WALL PIPES



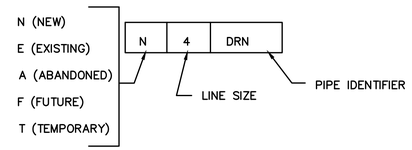
LEGEND

M.J.	MECHANICAL JOINT
FLG.	FLANGE JOINT
P.E.	PLAIN END

VALVES



PIPING



IDENTIFIER	DESCRIPTION	IDENTIFIER	DESCRIPTION
BYP	BYPASS	RAW	RAW WATER
CAS	CAUSTIC SOLUTION	SD	STORM DRAIN
CLG	CHLORINE GAS	SS	SANITARY SEWER
CLS	CHLORINE SOLUTION	VNT	VENT
DRN	DRAIN	W	WATER
EFF	EFFLUENT	WST	WASTE
FLS	FLUORIDE SOLUTION		
FINW	FINISHED WATER		
INF	INFLUENT		
LS	LIME SOLUTION		
MW	MIXED WATER		
NHG	AMMONIA GAS		
NHS	AMMONIA SOLUTION		
NPW	NON POTABLE WATER		
OVF	OVERFLOW		
PHS	PHOSPHATE SOLUTION		
PW	POTABLE WATER		

VALVE, GATE, AND DAMPER ACTUATOR SYMBOLS

- HW MANUAL HANDWHEEL
- HW/EB MANUAL HANDWHEEL W/EXTENDED BONNET
- CW MANUAL CHAINWHEEL
- L LEVER
- N MANUAL OPERATING NUT (W/BOX FOR BURIED SERVICE)
- E ELECTRIC
- S SOLENOID
- H HYDRAULIC
- P PNEUMATIC

SCHEDULE REFERENCES

MARK	DESCRIPTION
2001	DOOR
2001	WINDOW
2001	LOUVER
2001	ROOM FINISH

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 43039 KIERAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

GENERAL LEGEND AND SYMBOLS

SHEET NUMBER

G01.20

E & S CAPITAL LLC
TMS 039-06-03-063

LOD
N: 1012677.6327
E: 2396797.6948

LOD
N: 1012738.9834
E: 2396920.8062

NOTE 10

DEMOLISH 70 LF OF CHAIN LINK FENCE (NOTE 8)

RELOCATE YARD HYDRANT (SEE SHEET C01.20)

DEMOLISH 58 LF OF E2PW

DEMOLISH 28 LF OF E2CAS

CHEMICAL CONTAINMENT AREA (SEE SHEET D01.10 FOR MODIFICATIONS) (NOTE 7)

DEMOLISH 30 LF OF E6DRN

NOTE 6

NOTE 9

PROPANE TANK

CHEMICAL INJECTION VAULT (SEE SHEET D01.40 FOR MODIFICATIONS)

CHEMICAL FEED FACILITY (SEE SHEET D01.20 FOR MODIFICATIONS)

CHEMICAL LINES SPACED 4" O.C. FROM TOP TO BOTTOM:
E3/4NHS
E3/4FLS
E3/4CLS
E3/4CAS
E1/2RAW

CONCRETE LOADING DOCK

PROTECT CONCRETE LOADING DOCK IN PLACE

CONTRACTOR LAYDOWN AREA

2 C99.20 SILT FENCE (TYP.)

3 C99.20 CONCRETE WASHOUT PIT

1 C99.20 GRAVEL CONSTRUCTION ENTRANCE/EXIT

GRAVEL CONSTRUCTION ENTRANCE/EXIT 1 C99.20

CLEARWELL

MONITORING WELL

STATIC MIXER

FINISHED WATER METER VAULT

HIGH SERVICE PUMP BUILDING

GENERATOR

SITE ACCESS GATE

CITY OF BENNETTSVILLE
TMS 039-06-03-062

BENNETTSVILLE ELECTR & WATER BUILDING

LIMITS OF DISTURBANCE (0.48 AC.)

LOD
N: 1012603.1617
E: 2396988.4909

LOD
N: 1012541.8110
E: 2396865.3794

PK NAIL
N: 1012582.12
E: 2397032.04
ELEV: 150.18

LYALL ST (S-154)
(R/W VARIES)

EXISTING SITE & DEMOLITION PLAN

SCALE: 1" = 10'

0 10' 20'
GRAPHIC SCALE

NORTH

BID DOCUMENTS
THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

NOTES:

1. LOCATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. FIELD VERIFY ALL DEPTHS, LOCATIONS, AND MATERIALS PRIOR TO CONSTRUCTION.
2. PROVIDE DRAINAGE INLET PROTECTION AT ALL CULVERT PIPES, DROP INLETS, ETC. DOWNSTREAM FROM PROJECT.
3. PERIMETER CONTROLS WILL BE REQUIRED FOR ANY/ALL STOCK/WASTE/BORROW PILES THAT MAY BE REQUIRED DURING WORK. ALL STOP/WASTE/BORROW PILES WILL BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
4. ELEVATIONS AND LOCATIONS OF EXISTING PIPING AND UTILITIES ARE BASED UPON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ALL BURIED UTILITIES AND PROCESS PIPING PRIOR TO THE ONSET OF CONSTRUCTION. HAND EXCAVATION ONLY WILL BE PERMITTED IN THE VICINITY OF EXISTING PIPES AND OR SP. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY REGARDING ANY CONFLICTS BETWEEN WHAT IS SHOWN HEREIN AND ACTUAL CONDITIONS ENCOUNTERED IN THE FIELD.
5. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL SUSTAIN IN THEIR PLACES, AND PROTECT FROM DIRECT OR INDIRECT DAMAGE, ALL PIPES, SP, UTILITY POLES, FOUNDATIONS, AND OTHER STRUCTURES. ALL BURIED PIPES AND CONDUITS EXPOSED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE ADEQUATELY SUPPORTED ALONG THEIR ENTIRE EXPOSED LENGTHS. ANY RELOCATION (TEMPORARY OR OTHERWISE) OF EXISTING UTILITIES REQUIRED TO ACCESS THE SITE OR PERFORM THE WORK SHALL BE COORDINATED AND PAID FOR BY THE CONTRACTOR.
6. COORDINATE WITH OWNER FOR THE REMOVAL AND/OR RELOCATION OF THE EXISTING PROPANE TANK DURING CONSTRUCTION.
7. COORDINATE WITH OWNER FOR REMOVAL OF CAUSTIC BULK TANK, AND TRANSFER PUMP. REMOVE BULK TANK, TRANSFER PUMP, EQUIPMENT, AND ALL ASSOCIATED PIPING, VALVES, AND FITTINGS. CAP PIPES TO THE EXTENTS SHOWN. TANK AND EQUIPMENT NO LONGER IN SERVICE.
8. REMOVE 70 LF OF FENCE AND INTERFERING TREES FOR LIME SLURRY CONTAINMENT INSTALLATION. SEE SHEET C01.20 FOR NEW FENCE EXTENTS.
9. CONTRACTOR SHALL MAINTAIN A MINIMUM 10-FOOT HORIZONTAL CLEARANCE FROM ALL OVERHEAD POWER (OHP) LINES FOR ALL STAGING AREAS, EQUIPMENT STORAGE, AND MATERIAL STOCKPILING. COORDINATE WITH THE UTILITY OWNER PRIOR TO CONSTRUCTION.
10. REMOVE AND REPLACE ONE (1) 18-INCH DIAMETER OAK TREE, INCLUDING STUMP AND ROOT SYSTEM TO A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE. BACKFILL WITH SUITABLE TOPSOIL AND RESTORE DISTURBED AREA.

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT
103 LYALL STREET
BENNETTSVILLE, SC 29512

CLIENT

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REGISTRATION

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION AECOM TECHNICAL SERVICES, INC. No. 1473

LICENSED PROFESSIONAL ENGINEER SOUTH CAROLINA No. 43039 KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

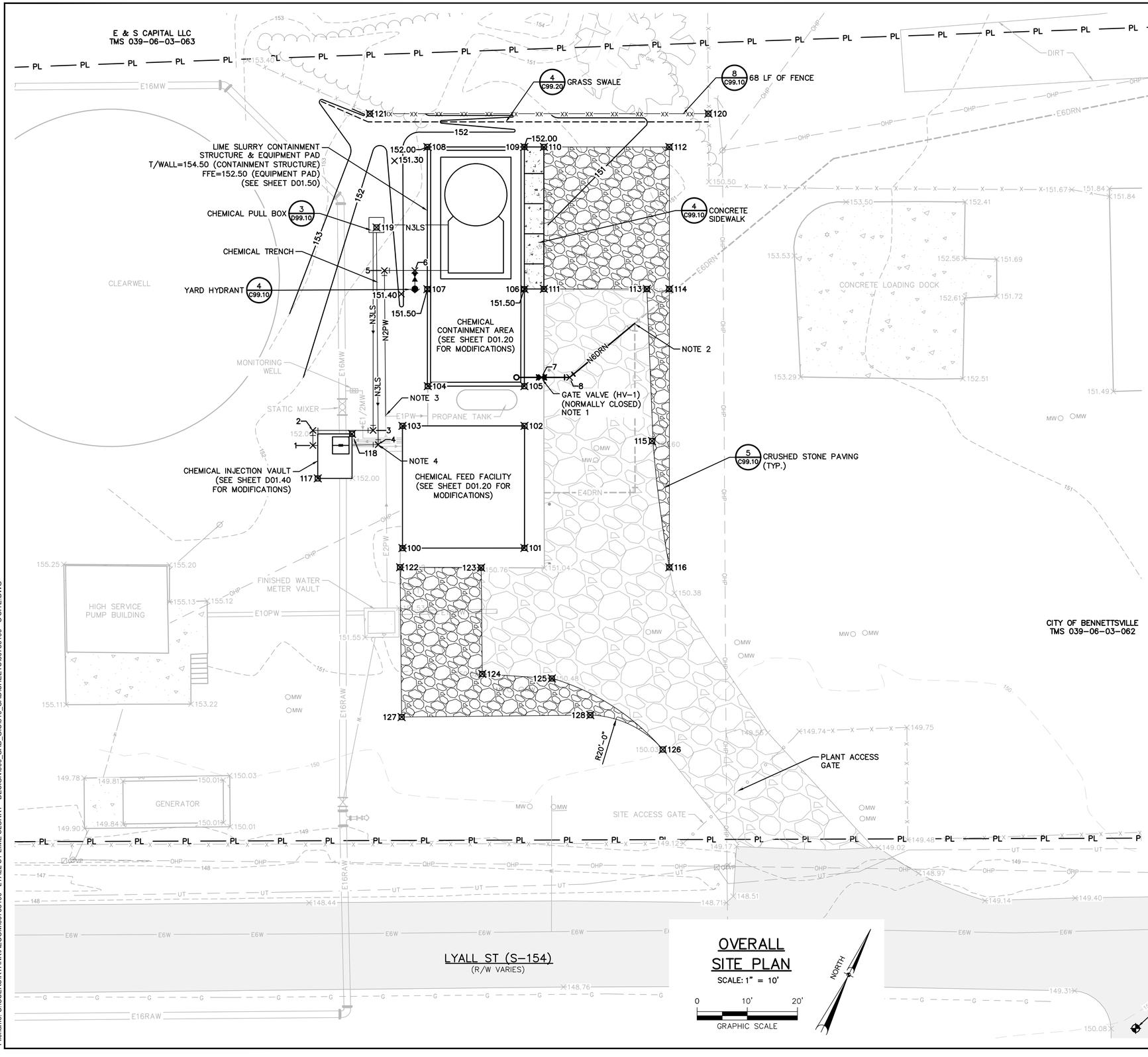
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

EXISTING SITE & DEMOLITION PLAN

SHEET NUMBER

C01.10



OVERALL SITE PLAN

SCALE: 1" = 10'

0 10' 20'

GRAPHIC SCALE

NORTH

NOTES:

1. CONTAINMENT AREA DRAIN VALVE WITH VALVE BOX. VALVE TO BE NORMALLY CLOSED.
2. CONNECT N6DRN TO E6DRN WYE FITTING. FIELD VERIFY EXACT LOCATION OF EXISTING WYE PRIOR TO CONNECTION.
3. CONNECT N2PW TO EXISTING 2"X1" E1PW TEE.
4. REMOVE AND DISPOSE OF EXISTING 2" CAUSTIC LINE (E2CAS). INSTALL NEW 3" LIME SLURRY LINE (N3LS) IN THE SAME ALIGNMENT USING SCH 80 PVC PIPE. SEE SHEET C01.10 FOR DEMOLITION EXTENTS OF E2CAS.

STAKING TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
100	1012602.64	2396858.59	CHEMICAL FEED FACILITY CORNER
101	1012613.49	2396880.32	CHEMICAL FEED FACILITY CORNER
102	1012635.28	2396869.49	CHEMICAL FEED FACILITY CORNER
103	1012624.43	2396847.73	CHEMICAL FEED FACILITY CORNER
104	1012633.77	2396848.71	CHEMICAL CONTAINMENT AREA CORNER
105	1012642.35	2396865.94	CHEMICAL CONTAINMENT AREA CORNER
106	1012659.65	2396857.32	CHEMICAL CONTAINMENT AREA CORNER
107	1012651.03	2396840.01	CHEMICAL CONTAINMENT AREA CORNER
108	1012676.39	2396827.38	LIME SLURRY CONTAINMENT STRUCTURE CORNER
109	1012685.01	2396844.68	LIME SLURRY CONTAINMENT STRUCTURE CORNER
110	1012686.74	2396848.16	SIDEWALK
111	1012661.42	2396860.78	SIDEWALK
112	1012697.90	2396870.53	GRAVEL DRIVEWAY
113	1012670.57	2396879.15	GRAVEL DRIVEWAY
114	1012672.57	2396883.16	GRAVEL DRIVEWAY
115	1012643.92	2396893.59	GRAVEL DRIVEWAY
116	1012622.92	2396907.90	GRAVEL DRIVEWAY
117	1012607.54	2396837.29	CHEMICAL INJECTION VAULT
118	1012618.52	2396839.45	CHEMICAL INJECTION VAULT
119	1012657.51	2396825.46	CHEMICAL PULL BOX
120	1012707.31	2396874.54	FENCE CORNER
121	1012677.21	2396814.15	FENCE CORNER
122	1012599.00	2396859.87	GRAVEL DRIVEWAY
123	1012606.14	2396874.37	GRAVEL DRIVEWAY
124	1012587.28	2396884.01	GRAVEL DRIVEWAY
125	1012592.66	2396896.83	GRAVEL DRIVEWAY
126	1012589.84	2396922.91	GRAVEL DRIVEWAY
127	1012572.42	2396873.46	GRAVEL DRIVEWAY
128	1012589.55	2396906.94	GRAVEL DRIVEWAY

FITTING & VALVE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
1	1012612.98	2396833.50	3" RJ PVC 90 BEND
2	1012615.66	2396832.17	3" RJ PVC 90 BEND
3	1012621.02	2396842.91	3" RJ PVC 90 BEND
4	1012618.92	2396845.08	2" RJ PVC 90 BEND
5	1012650.53	2396830.70	2" RJ PVC 90 BEND
6	1012653.24	2396836.13	YARD HYDRANT
7	1012645.44	2396868.22	6" RJ DI GATE VALVE
8	1012647.93	2396873.22	6" RJ DI 45 BEND

BID DOCUMENTS
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KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

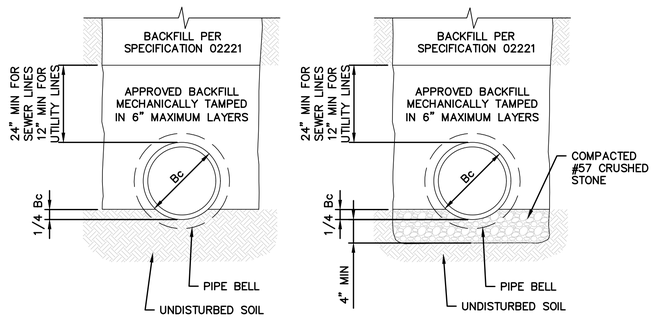
SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

C01.20

ANSI D 22" x 34"
Approved: ** fill in **
Checked: ** fill in **
Drafter: ** fill in **
Designer: ** fill in **
Project Management Initials: Project Eng.: ** fill in **
Last saved by: KOSTTUCHENKOL (2026-09-27) Last Plotted: 2026-09-25
Filename: C:\USERS\RYAN\KAECOM60753190 - LYALL ST LIME SLURRY - DESIGN\900_CAD_GIS\910_CADSHEETS\60753190 - C SITE.DWG

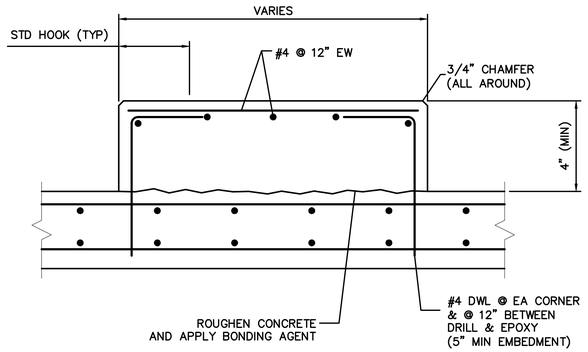


NOTES:
1. HAND SHAPED BOTTOM – SHAPE BELL HOLES FOR USE IN DRY EARTH TRENCHES ONLY. APPLICABLE TO BOTH EARTH AND ROCK TRENCHES.

TYPE 1 (NOT FOR GRAVITY LINES) TYPE 2

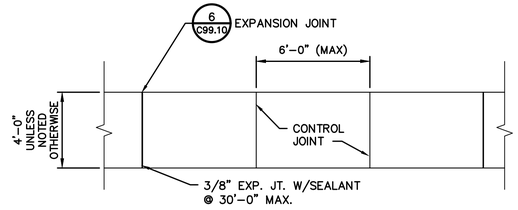
CLASS "C" BEDDING DETAIL

SCALE: NONE — 1 / C99.10



CONCRETE PAD DETAIL

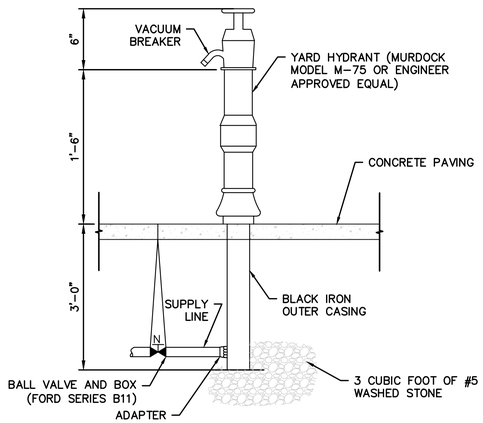
SCALE: NONE — 2 / C99.10



NOTES:
1. MIN. THICKNESS = 4".
2. PROVIDE EXPANSION JOINTS @ INTERSECTIONS OF WALKS AND WHERE WALK ABUTTS OTHER STRUCTURES OR AS SPECIFIED.
3. 3000 PSI CONCRETE WITH FIBER REINFORCING AS SPECIFIED.
4. SIDEWALKS TO HAVE LIGHT BROOM FINISH.
5. ALL EDGES TO BE TOOLED.
6. CONTROL JOINTS TO BE TOOLED TO A MIN. DEPTH OF 1".

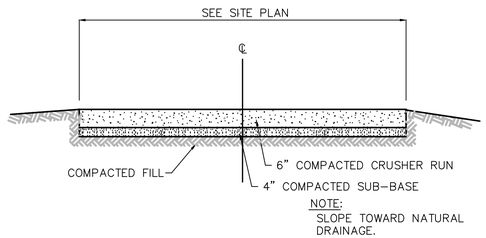
SIDEWALK DETAIL

SCALE: NONE — 3 / C99.10



YARD HYDRANT DETAIL

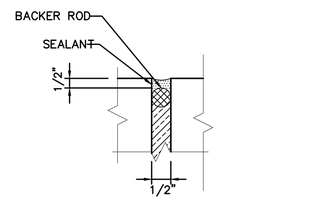
SCALE: NONE — 4 / C99.10



NOTE:
SLOPE TOWARD NATURAL DRAINAGE.

CRUSHED STONE DRIVEWAY DETAIL

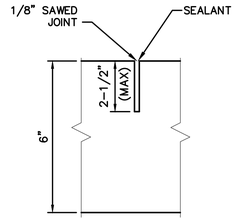
SCALE: NONE — 5 / C99.10



NOTES:
1. PROVIDE EXPANSION JOINTS WHERE CONCRETE PAVING ABUTS PRECAST STRUCTURES AND CONCRETE PADS.

EXPANSION JOINT DETAIL

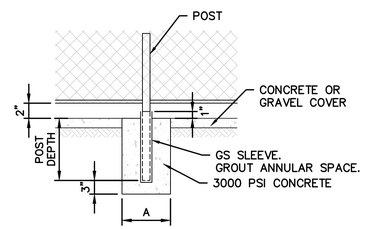
SCALE: NONE — 6 / C99.10



CONTROL JOINT DETAIL

SCALE: NONE — 7 / C99.10

FOOTING DIMENSIONS		
POST LOCATION	A ø	DEPTH
LINE POST	1'–2"	3'–0"
CORNER POST	1'–4"	4'–0"
GATE POST	2'–0"	4'–0"
GATE STOP	1'–2"	4'–0"



FENCE POST FOOTING DETAIL

SCALE: NONE — 8 / C99.10

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CIVIL DETAILS

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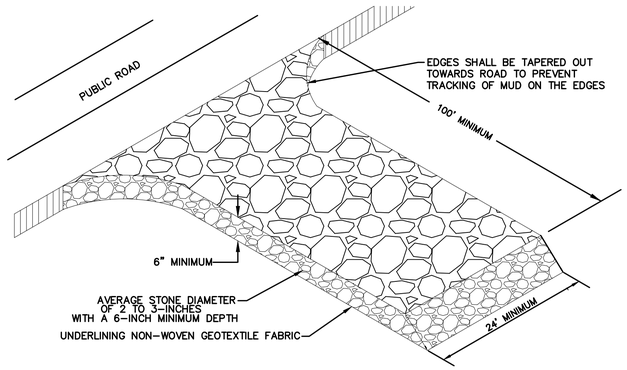
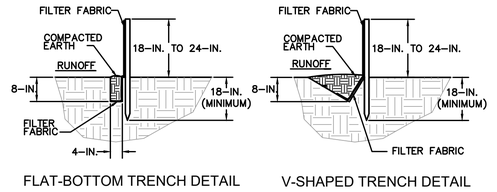


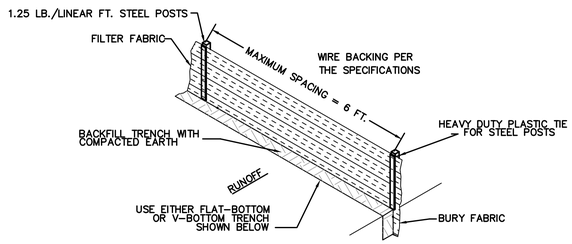
GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL

SCALE: NONE — 1 / C99.20



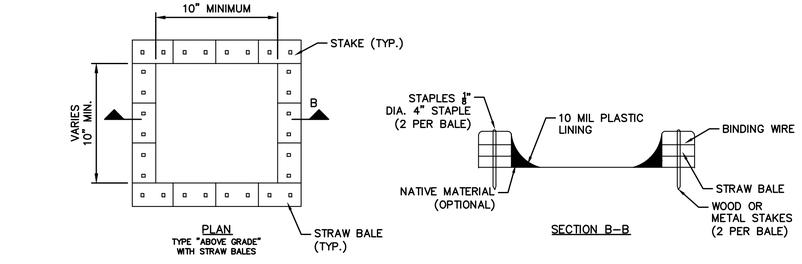
FLAT-BOTTOM TRENCH DETAIL

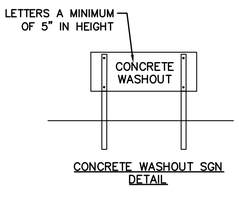
V-SHAPED TRENCH DETAIL



SILT FENCE DETAIL

SCALE: NONE — 2 / C99.20





CONCRETE WASHOUT SGN DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

CONCRETE WASHOUT DETAIL

SCALE: NONE — 3 / C99.20

GRASSING & FERTILIZER SCHEDULE

TEMPORARY GRASS:

JANUARY 1 – APRIL 30

RYE (GRAIN)	120 LB./ACRE
ANNUAL LESPEDEZA	50 LB./ACRE
MULCH (STRAW)	4000 LB./ACRE
AGRICULTURAL LIMESTONE	2000 LB./ACRE
FERTILIZER 10-10-10	500 LB./ACRE

MAY 1 – AUGUST 15

GERMAN MILLET	40 LB./ACRE
MULCH (STRAW)	4000 LB./ACRE
AGRICULTURAL LIMESTONE	2000 LB./ACRE
FERTILIZER 10-10-10	500 LB./ACRE

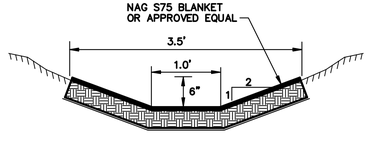
AUGUST 15 – DECEMBER 31

RYE (GRAIN)	120 LB./ACRE
MULCH (STRAW)	4000 LB./ACRE
AGRICULTURAL LIMESTONE	2000 LB./ACRE
FERTILIZER 10-10-10	500 LB./ACRE

PERMANENT GRASS:

MARCH 1 – AUGUST 15

RYE GRAIN	45 LBS./ACRE
*BERMUDA (HULLED)	30 LBS./ACRE
SERICEN LESPENDZA (CLAY SOILS)	45 LBS./ACRE
WEEPING LOVE GRASS (SANDY SOILS)	45 LBS./ACRE
FERTILIZER 10-10-10	1000LBS./ACRE
AGRICULTURAL LIMESTONE	3000 LBS./ACRE
MULCH (STRAW)	4000 LBS./ACRE



NOTES:

1. PREPARE THE SUBGRADE FOR RIPRAP AND FILTER TO THE REQUIRED LINES AND GRADES SHOWN ON PLANS. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROX. THAT OF SURROUNDING UNDISTURBED MATERIAL.
2. SPREAD GRAVEL UNIFORMLY TO A DEPTH OF 3" OVER THE SUBGRADE.
3. PLACE RIPRAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. PLACE RIPRAP TO ITS FULL THICKNESS IN ONE OPERATION.
4. THE FINISH GRADE OF THE RIPRAP SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF RIPRAP SHOULD BE APPARENT.

GRASS SWALE DETAIL

SCALE: NONE — 4 / C99.20

STANDARD NOTES:

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
   - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
   - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH\HIGHDISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
4. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
5. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
6. TEMPORARY DIVERSION BERMS AND/OR DITCHES SHALL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
7. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50 FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10 FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
8. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
9. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
10. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
11. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
12. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
13. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
14. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
   - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
   - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
   - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
15. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
16. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
17. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES.

CONSTRUCTION SEQUENCE

1. INSTALL EROSION CONTROL STRUCTURES.
2. INSTALL PIPELINES & APPURTENACES.
3. MAINTAIN EROSION CONTROL STRUCTURES DURING CONSTRUCTION.
4. GRASS ALL DISTURBED AREAS.
5. REMOVE EROSION CONTROL STRUCTURES AFTER STABILIZATION.

(FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY IS RECOMMENDED.)

BID DOCUMENTS
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103 LYALL STREET
BENNETTSVILLE, SC 29512

CLIENT

CITY OF BENNETTSVILLE
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REGISTRATION

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 43039 — KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

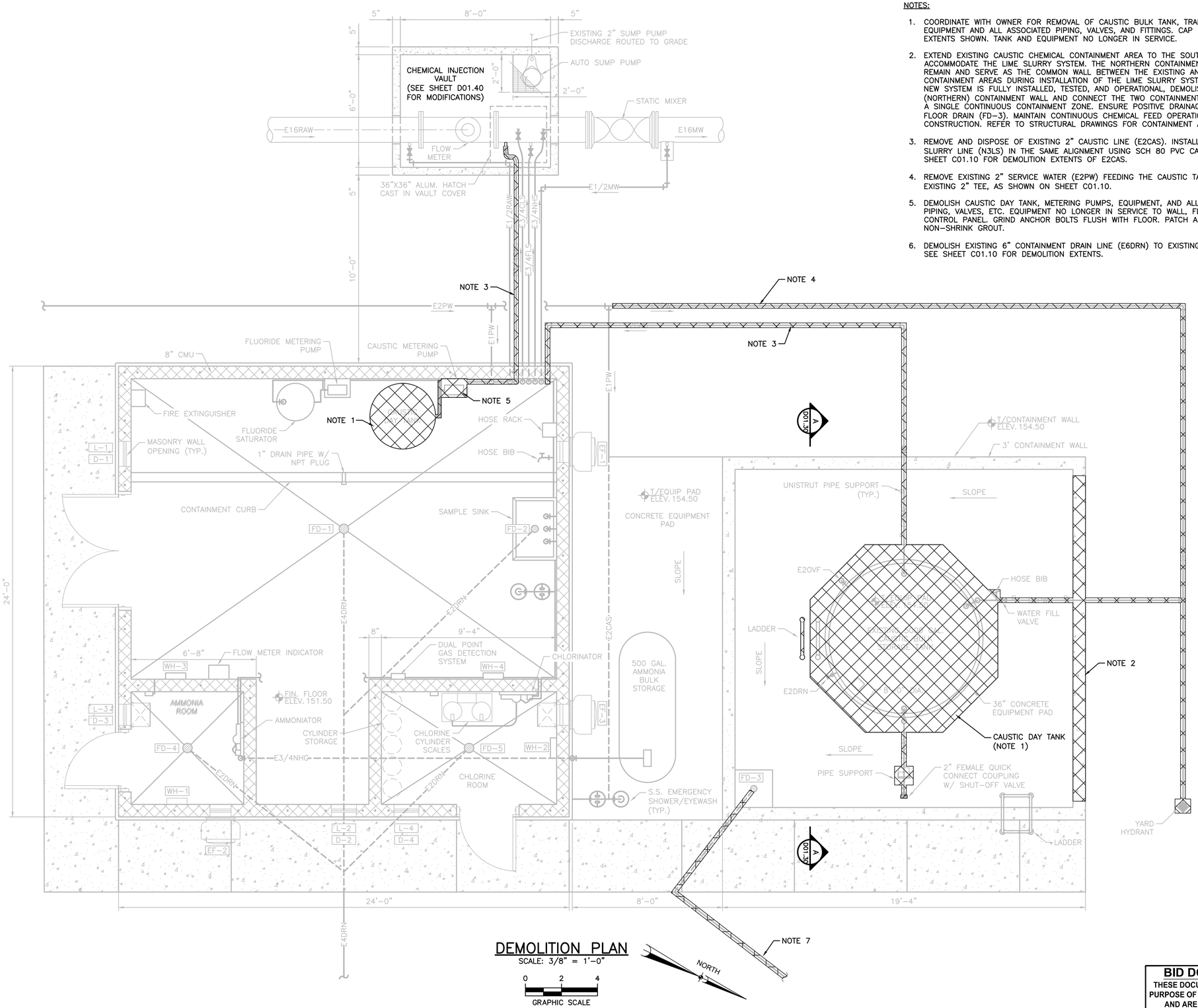
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

SEDIMENT & EROSION CONTROL NOTES & DETAILS

SHEET NUMBER

C99.20



DEMOLITION PLAN

SCALE: 3/8" = 1'-0"

0 2 4

GRAPHIC SCALE

NORTH

NOTES:

1. COORDINATE WITH OWNER FOR REMOVAL OF CAUSTIC BULK TANK, TRANSFER PUMP, EQUIPMENT AND ALL ASSOCIATED PIPING, VALVES, AND FITTINGS. CAP PIPES TO THE EXTENTS SHOWN. TANK AND EQUIPMENT NO LONGER IN SERVICE.
2. EXTEND EXISTING CAUSTIC CHEMICAL CONTAINMENT AREA TO THE SOUTH TO ACCOMMODATE THE LIME SLURRY SYSTEM. THE NORTHERN CONTAINMENT WALL SHALL REMAIN AND SERVE AS THE COMMON WALL BETWEEN THE EXISTING AND NEW CONTAINMENT AREAS DURING INSTALLATION OF THE LIME SLURRY SYSTEM. ONCE THE NEW SYSTEM IS FULLY INSTALLED, TESTED, AND OPERATIONAL, DEMOLISH THE COMMON (NORTHERN) CONTAINMENT WALL AND CONNECT THE TWO CONTAINMENT AREAS TO FORM A SINGLE CONTINUOUS CONTAINMENT ZONE. ENSURE POSITIVE DRAINAGE TO EXISTING FLOOR DRAIN (FD-3). MAINTAIN CONTINUOUS CHEMICAL FEED OPERATIONS THROUGH CONSTRUCTION. REFER TO STRUCTURAL DRAWINGS FOR CONTAINMENT AREA DESIGN.
3. REMOVE AND DISPOSE OF EXISTING 2" CAUSTIC LINE (E2CAS). INSTALL NEW 3" LIME SLURRY LINE (N3LS) IN THE SAME ALIGNMENT USING SCH 80 PVC CARRIER PIPE. SEE SHEET C01.10 FOR DEMOLITION EXTENTS OF E2CAS.
4. REMOVE EXISTING 2" SERVICE WATER (E2PW) FEEDING THE CAUSTIC TANK TO THE EXISTING 2" TEE, AS SHOWN ON SHEET C01.10.
5. DEMOLISH CAUSTIC DAY TANK, METERING PUMPS, EQUIPMENT, AND ALL ASSOCIATED PIPING, VALVES, ETC. EQUIPMENT NO LONGER IN SERVICE TO WALL, FLOOR, AND CONTROL PANEL. GRIND ANCHOR BOLTS FLUSH WITH FLOOR. PATCH ALL HOLES WITH NON-SHRINK GROUT.
6. DEMOLISH EXISTING 6" CONTAINMENT DRAIN LINE (E6DRN) TO EXISTING 6" WYE FITTING. SEE SHEET C01.10 FOR DEMOLITION EXTENTS.

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KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

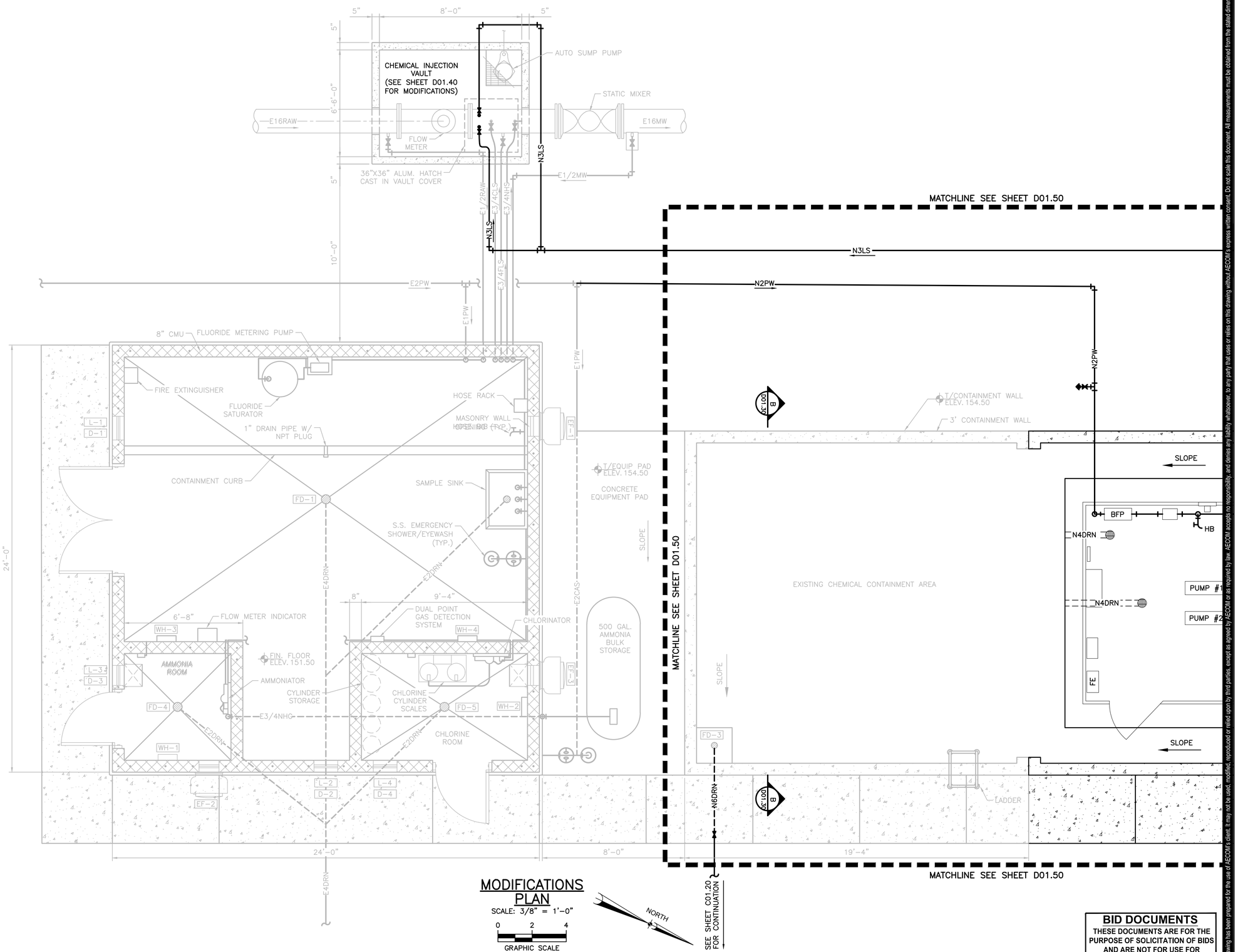
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

CHEMICAL CONTAINMENT AREA DEMOLITION PLAN

SHEET NUMBER

D01.10



MODIFICATIONS PLAN

SCALE: 3/8" = 1'-0"

0 2 4

GRAPHIC SCALE

NORTH

SEE SHEET C01.20 FOR CONTINUATION

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KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

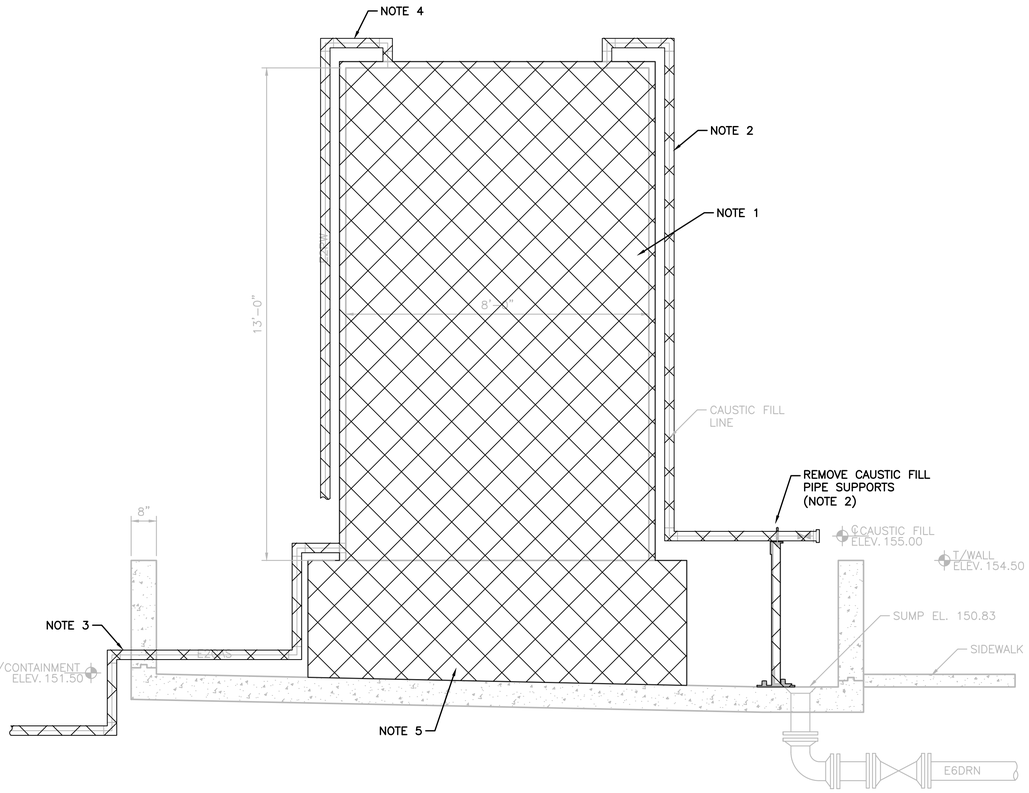
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

CHEMICAL CONTAINMENT AREA MODIFICATIONS PLAN

SHEET NUMBER

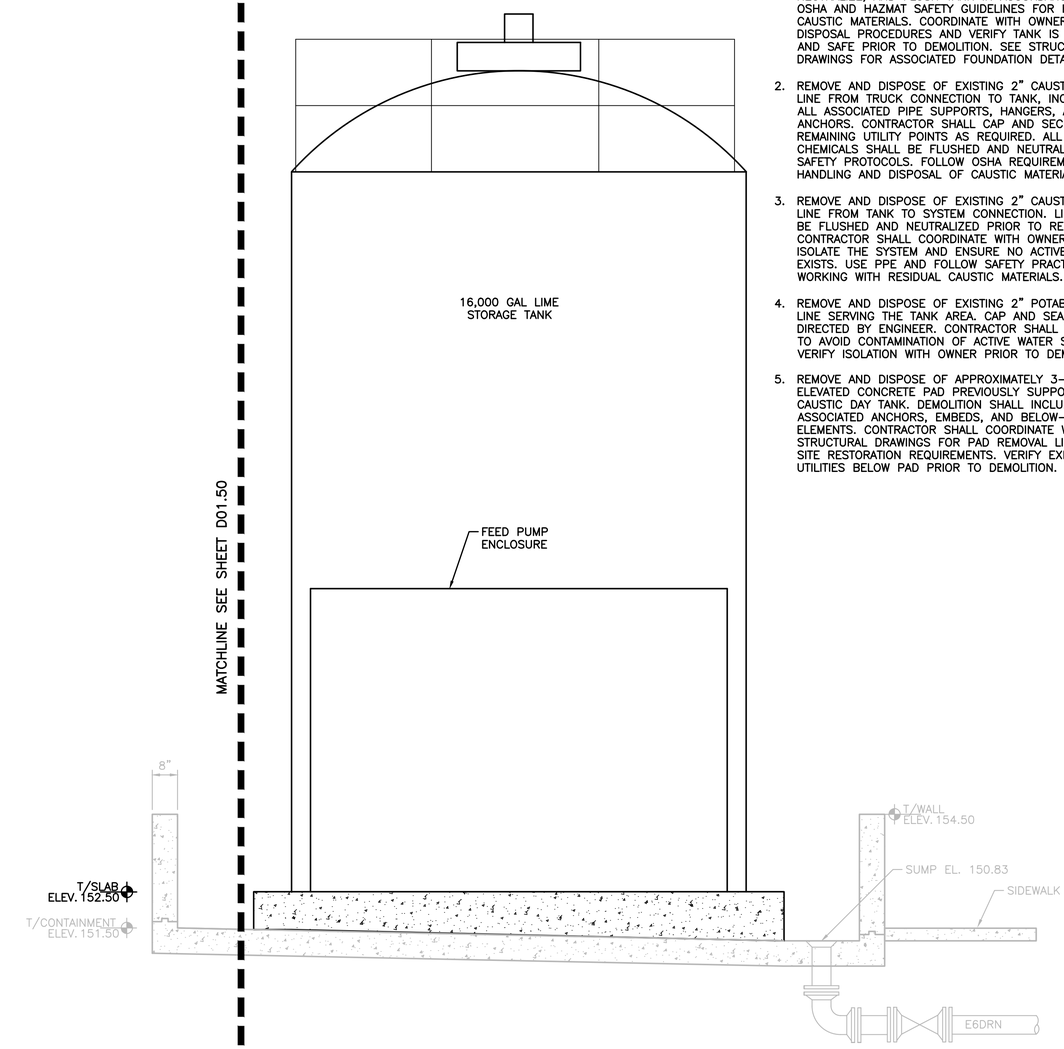
D01.20



DEMOLITION SECTION (A / D01.30)
SCALE: 1/2" = 1'-0"

0 2 4
GRAPHIC SCALE

MATCHLINE SEE SHEET D01.50



MODIFICATIONS SECTION (B / D01.30)
SCALE: 1/2" = 1'-0"

0 2 4
GRAPHIC SCALE

NOTES:

1. REMOVE AND DISPOSE OF ONE (1) 8–FOOT DIAMETER, 13–FOOT HIGH CAUSTIC DAY TANK, INCLUDING ALL ASSOCIATED APPURTENANCES. CONTRACTOR SHALL DRAIN, NEUTRALIZE, AND FLUSH TANK IN ACCORDANCE WITH OSHA AND HAZMAT SAFETY GUIDELINES FOR HANDLING CAUSTIC MATERIALS. COORDINATE WITH OWNER FOR DISPOSAL PROCEDURES AND VERIFY TANK IS EMPTY AND SAFE PRIOR TO DEMOLITION. SEE STRUCTURAL DRAWINGS FOR ASSOCIATED FOUNDATION DETAILS.
2. REMOVE AND DISPOSE OF EXISTING 2" CAUSTIC FILL LINE FROM TRUCK CONNECTION TO TANK, INCLUDING ALL ASSOCIATED PIPE SUPPORTS, HANGERS, AND ANCHORS. CONTRACTOR SHALL CAP AND SECURE REMAINING UTILITY POINTS AS REQUIRED. ALL RESIDUAL CHEMICALS SHALL BE FLUSHED AND NEUTRALIZED PER SAFETY PROTOCOLS. FOLLOW OSHA REQUIREMENTS FOR HANDLING AND DISPOSAL OF CAUSTIC MATERIALS.
3. REMOVE AND DISPOSE OF EXISTING 2" CAUSTIC FEED LINE FROM TANK TO SYSTEM CONNECTION. LINE SHALL BE FLUSHED AND NEUTRALIZED PRIOR TO REMOVAL. CONTRACTOR SHALL COORDINATE WITH OWNER TO ISOLATE THE SYSTEM AND ENSURE NO ACTIVE FLOW EXISTS. USE PPE AND FOLLOW SAFETY PRACTICES WHEN WORKING WITH RESIDUAL CAUSTIC MATERIALS.
4. REMOVE AND DISPOSE OF EXISTING 2" POTABLE WATER LINE SERVING THE TANK AREA. CAP AND SEAL LINE AS DIRECTED BY ENGINEER. CONTRACTOR SHALL TAKE CARE TO AVOID CONTAMINATION OF ACTIVE WATER SYSTEMS. VERIFY ISOLATION WITH OWNER PRIOR TO DEMOLITION.
5. REMOVE AND DISPOSE OF APPROXIMATELY 3–FOOT HIGH ELEVATED CONCRETE PAD PREVIOUSLY SUPPORTING THE CAUSTIC DAY TANK. DEMOLITION SHALL INCLUDE ASSOCIATED ANCHORS, EMBEDS, AND BELOW–GRADE ELEMENTS. CONTRACTOR SHALL COORDINATE WITH STRUCTURAL DRAWINGS FOR PAD REMOVAL LIMITS AND SITE RESTORATION REQUIREMENTS. VERIFY EXISTING UTILITIES BELOW PAD PRIOR TO DEMOLITION.

BID DOCUMENTS
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 43039 — KEIRAN RYAN

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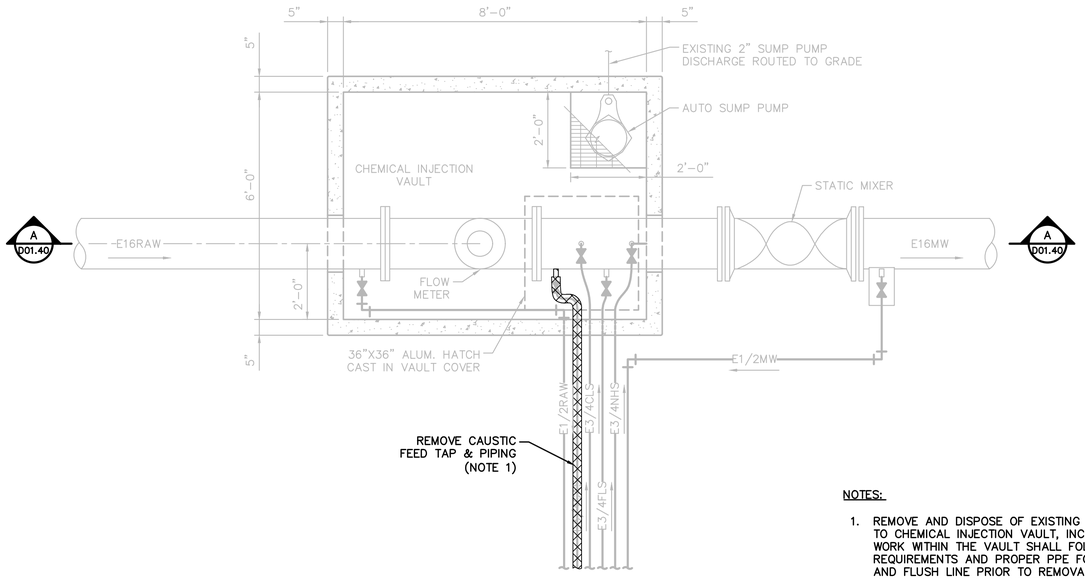
KEY PLAN
SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE
CHEMICAL CONTAINMENT AREA DEMOLITION & MODIFICATIONS SECTION

SHEET NUMBER
D01.30

Last saved by: KOSTUCHENKOL (2025-11-26) Last Plotted: 2026-02-04
Filename: C:\USERS\RYAN\KAECOM\60753190 - LYALL ST LIME SLURRY - DESIGN\900_CAD_GIS\910_CAD\SHEETS\60753190 - D-PROCESS.DWG
Project Management Initials: Project Eng.: ** fill in ** Designer: ** fill in ** Drafter: ** fill in ** Checked: ** fill in ** Approved: ** fill in ** ANSI D 22" x 34"



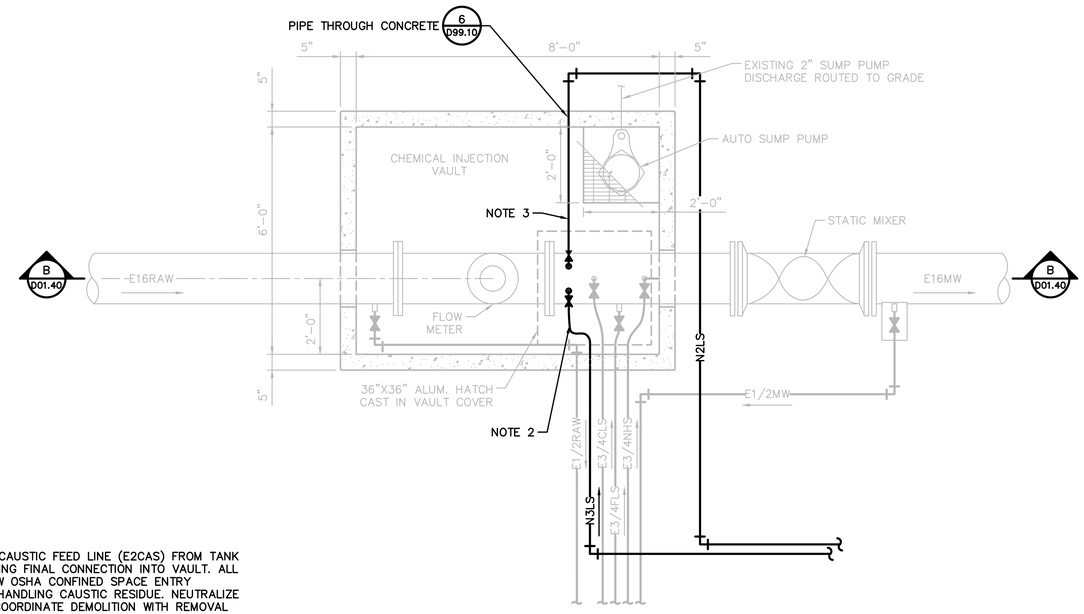
DEMOLITION PLAN

SCALE: 1/2"=1'-0"

0 2 4

GRAPHIC SCALE

NORTH



MODIFICATIONS PLAN

SCALE: 1/2"=1'-0"

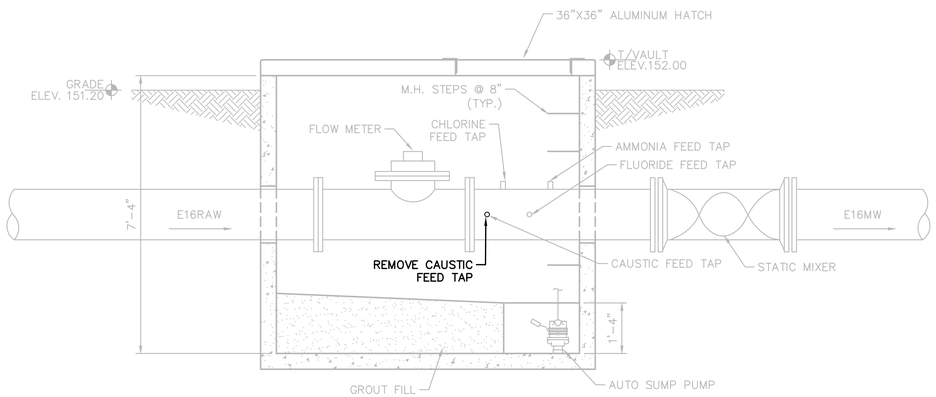
0 2 4

GRAPHIC SCALE

NORTH

NOTES:

1. REMOVE AND DISPOSE OF EXISTING 2" CAUSTIC FEED LINE (E2CAS) FROM TANK TO CHEMICAL INJECTION VAULT, INCLUDING FINAL CONNECTION INTO VAULT. ALL WORK WITHIN THE VAULT SHALL FOLLOW OSHA CONFINED SPACE ENTRY REQUIREMENTS AND PROPER PPE FOR HANDLING CAUSTIC RESIDUE. NEUTRALIZE AND FLUSH LINE PRIOR TO REMOVAL. COORDINATE DEMOLITION WITH REMOVAL OF HARD-TAPPED CONNECTIONS TO AVOID DAMAGE TO EXISTING STRUCTURE AND PIPING.
2. INSTALL NEW 2" LIME SLURRY LINE (N2LS) ALONG ALIGNMENT OF REMOVED E2CAS LINE AND TERMINATE AT EXISTING CHEMICAL INJECTION VAULT. FIELD VERIFY EXISTING HARD-TAPPED PORT LOCATION AND MODIFY AS REQUIRED TO ACCOMMODATE NEW PIPE SIZE AND MATERIAL. ALL NEW CONNECTIONS INTO VAULT SHALL BE WATERTIGHT AND CORROSION-RESISTANT. PROVIDE NEW SUPPORTS AS REQUIRED AND ENSURE LINE IS SLOPED FOR PROPER DRAINAGE OR FLUSHING.
3. PROVIDE ONE (1) SPARE 2" THREADED TAP ON WEST SIDE OF EXISTING VAULT, FOR FUTURE CHEMICAL INJECTION USE. LOCATION SHALL BE FIELD VERIFIED AND COORDINATED TO AVOID INTERFERENCE WITH EXISTING CONNECTIONS.



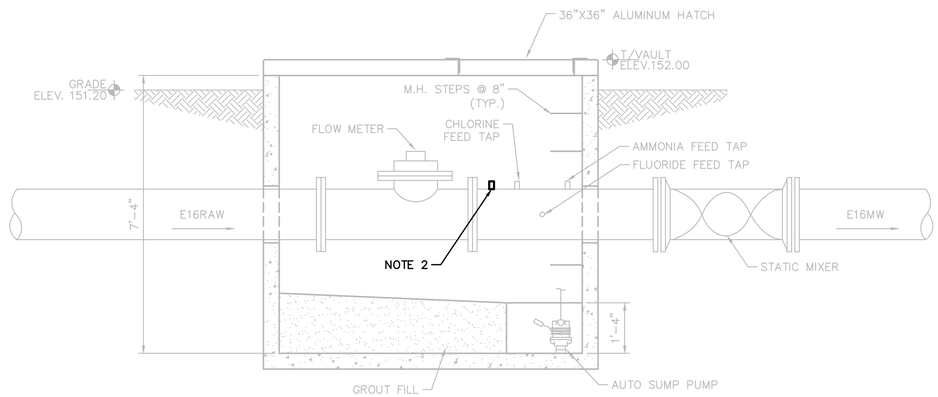
DEMOLITION SECTION

SCALE: 1/2" = 1'-0"

A D01.40

0 2 4

GRAPHIC SCALE



MODIFICATIONS SECTION

SCALE: 1/2" = 1'-0"

B D01.40

0 2 4

GRAPHIC SCALE

BID DOCUMENTS

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AECOM

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No. 43039
KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

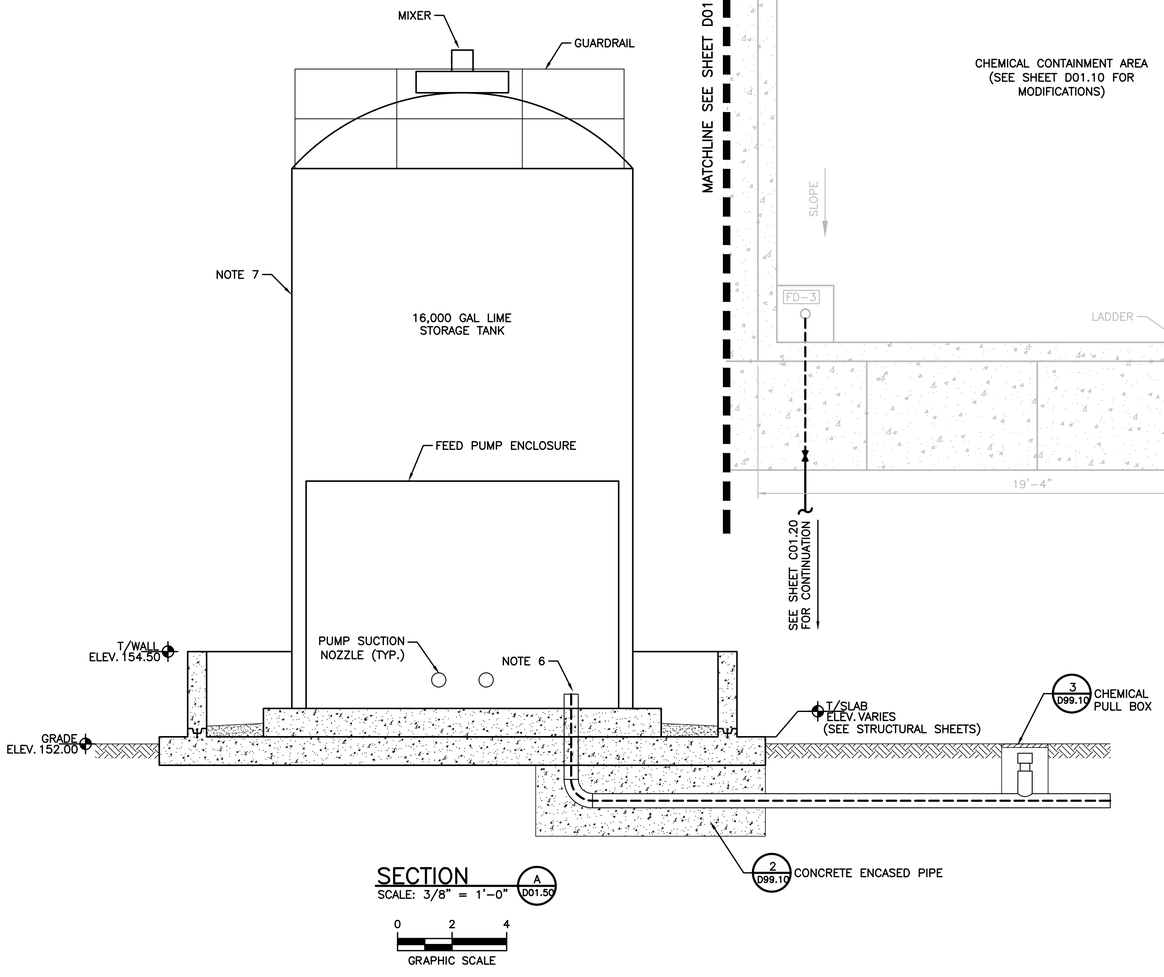
CHEMICAL INJECTION VAULT DEMOLITION & MODIFICATIONS

SHEET NUMBER

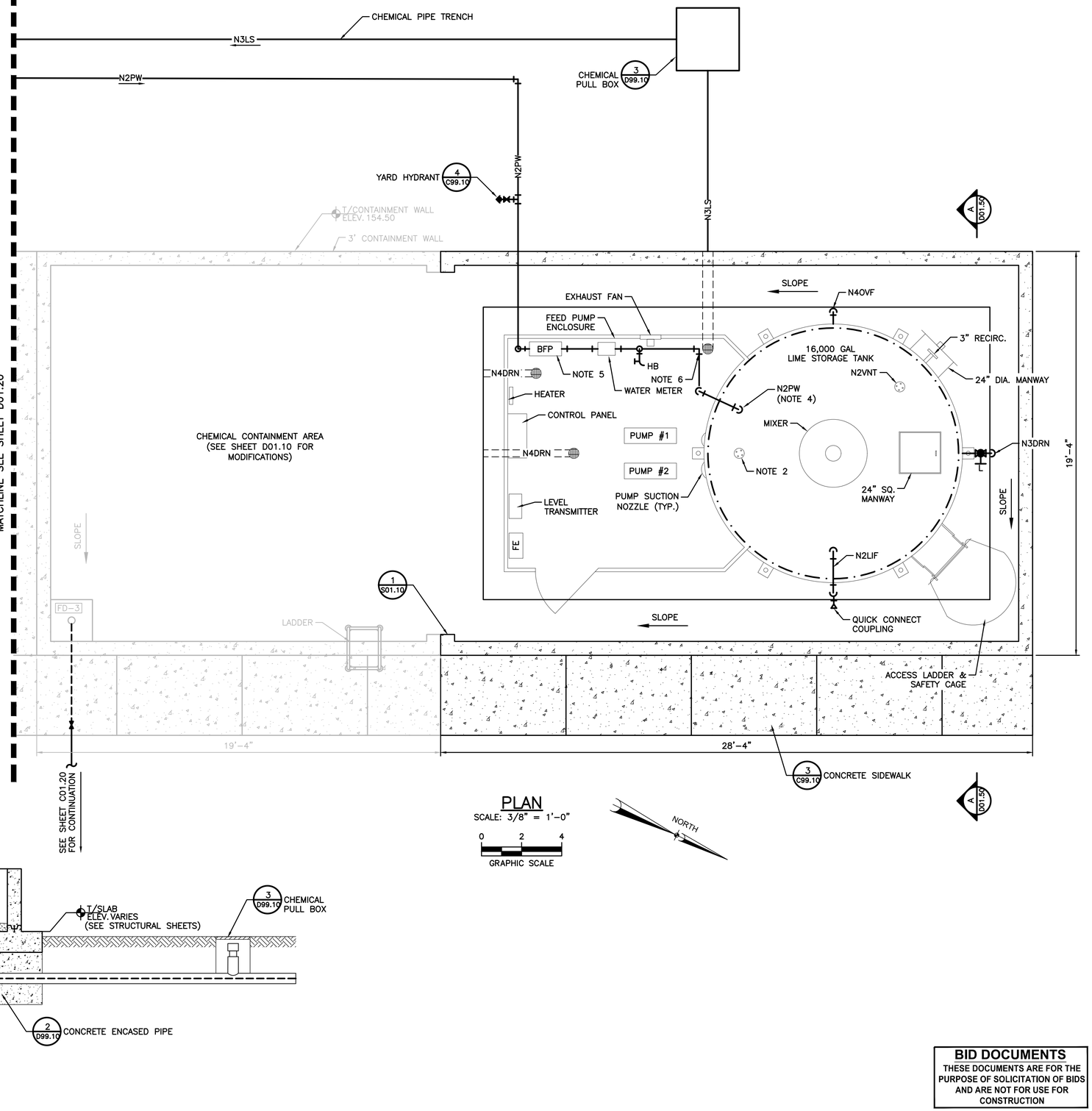
D01.40

NOTES:

1. SMITH FLOOR DRAIN MODEL 3610T04 OR APPROVED EQUAL. LOCATE FUNNEL DIRECTLY BELOW BACKFLOW PREVENTER. ROUTE 4" DRAIN PIPING WITH P-TRAP TO CONTAINMENT AREA.
2. ULTRASONIC LEVEL SENSOR MOUNTING FLANGE.
3. MOUNT PUMPS ON SST FLOOR STANDS.
4. INSULATE ALL EXPOSED PIPING.
5. 2" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH UNIONS 2'-0" AFF.
6. STUB UP 6" SCH 80 PVC CONDUIT 12" AFF MINIMUM FOR CHEMICAL FEED TUBING. PROVIDE LONG RADIUS BENDS AT ALL BENDS.
7. THE EXTERIOR OF THE TANK DOME, WALL, AND APPURTENANCES SHALL BE PREPARED BY MANUFACTURER. FIELD PAINTING OF THE EXTERIOR DOME AND WALL BY GENERAL CONTRACTOR, AS SPECIFIED IN SPECIFICATION 11245.
8. EXTEND EXISTING CAUSTIC CHEMICAL CONTAINMENT AREA TO THE SOUTH TO ACCOMMODATE THE LIME SLURRY SYSTEM. THE NORTHERN CONTAINMENT WALL SHALL REMAIN AND SERVE AS THE COMMON WALL BETWEEN THE EXISTING AND NEW CONTAINMENT AREAS DURING INSTALLATION OF THE LIME SLURRY SYSTEM. ONCE THE NEW SYSTEM IS FULLY INSTALLED, TESTED, AND OPERATIONAL, DEMOLISH THE COMMON (NORTHERN) CONTAINMENT WALL AND CONNECT THE TWO CONTAINMENT AREAS TO FORM A SINGLE CONTINUOUS CONTAINMENT ZONE. ENSURE POSITIVE DRAINAGE TO EXISTING FLOOR DRAIN (FD-3). MAINTAIN CONTINUOUS CHEMICAL FEED OPERATIONS THROUGH CONSTRUCTION. REFER TO STRUCTURAL DRAWINGS FOR CONTAINMENT AREA DESIGN.



SECTION A D01.50
SCALE: 3/8" = 1'-0"
0 2 4
GRAPHIC SCALE



PLAN
SCALE: 3/8" = 1'-0"
0 2 4
GRAPHIC SCALE

NORTH

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SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

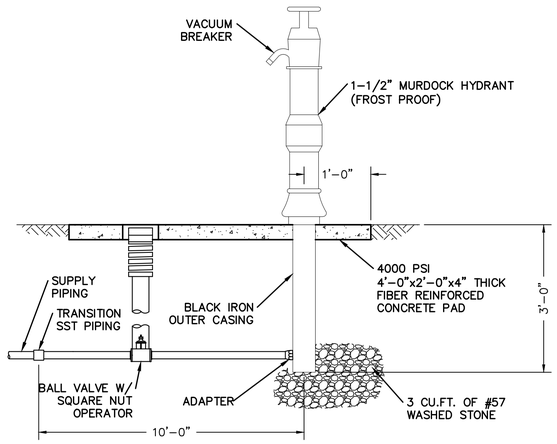
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

LIME SLURRY CONTAINMENT STRUCTURE PLAN AND SECTION

SHEET NUMBER

D01.50

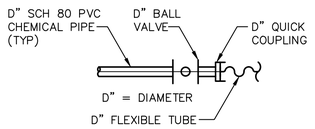


NOTES:

1. PROVIDE CAUTION SIGN "NON-POTABLE DO NOT DRINK" PER SPECIFICATION 10400.

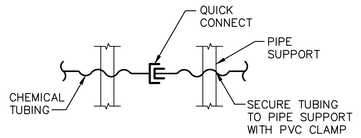
POST HYDRANT DETAIL

SCALE: NONE — 1 / D99.10



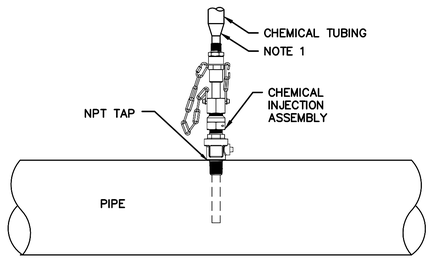
HARD PIPE TO FLEX TUBE TRANSITION DETAIL

SCALE: NONE — 4 / D99.10



JUNCTION BOX TUBING CONNECTION DETAIL

SCALE: NONE — 5 / D99.10

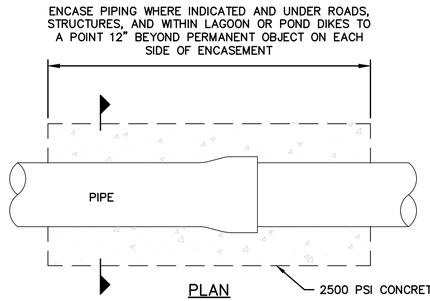


NOTES:

1. PROVIDE REDUCER, COUPLINGS, AND MISCELLANEOUS PIPE FITTINGS AS REQUIRED TO CONNECT CHEMICAL INJECTION LINES TO THE PIPE TAP.

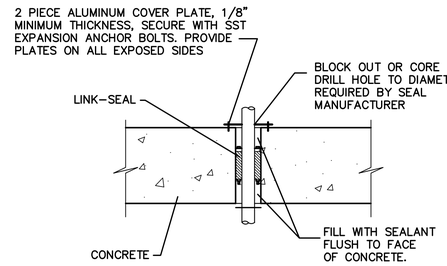
CHEMICAL INJECTION ASSEMBLY DETAIL

SCALE: NONE — 7 / D99.10



CONCRETE ENCASED PIPE DETAIL

SCALE: NONE — 2 / D99.10

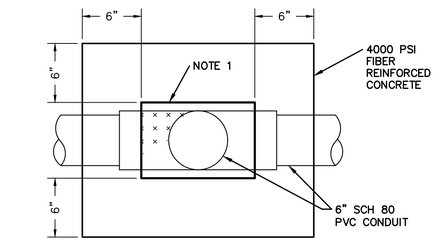


NOTES:

1. IF REINFORCEMENT IS CUT, PAINT ENDS PRIOR TO SEALING

PIPE THROUGH CONCRETE DETAIL

SCALE: NONE — 6 / D99.10

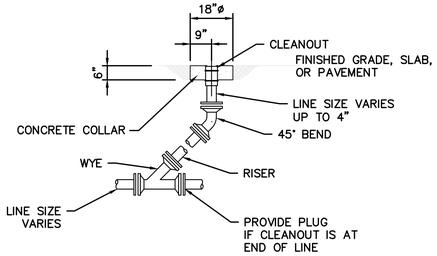


NOTES:

1. PLASTIC DRAIN BOX WITH CAST IRON LID BY EAST JORDAN IRON WORKS MODEL 1118-26 OR APPROVED EQUAL. PROVIDE BITUMASTIC COATING ON UNDERSIDE OF LID.

PULL BOX DETAIL

SCALE: NONE — 3 / D99.10



NOTES:

1. PROVIDE ADDITIONAL BENDS IN RISER IF REQUIRED TO AVOID CONFLICT WITH OTHER PIPING OR UTILITIES.
2. CLEANOUT AND PIPING MUST BE CAPABLE OF SUSTAINING AIR PRESSURE TEST.

EXTERIOR GRAVITY CLEANOUT DETAIL

SCALE: NONE — 8 / D99.10

BID DOCUMENTS
THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT
103 LYALL STREET
BENNETTSVILLE, SC 29512

CLIENT

CITY OF BENNETTSVILLE
501 EAST MAIN STREET
BENNETTSVILLE, SC 29512
843.479.9001

CONSULTANT

AECOM
425 SOUTH CASHUA DRIVE
FLORENCE, SC 29501
843.665.9166
www.aecom.com

REGISTRATION

SOUTH CAROLINA — AECOM TECHNICAL SERVICES, INC. — No. 1473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 43039 — KEIRAN RYAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

MISCELLANEOUS DETAILS I

SHEET NUMBER

D99.10

GENERAL NOTES:

1. CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE AND ALL OTHER APPLICABLE BUILDING CODES HAVING JURISDICTION.
2. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE PROJECT SITE PRIOR TO STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR EXISTING CONDITIONS THAT ARE NOT CONSISTENT WITH THE DRAWINGS.
3. LOCATE EXISTING UNDERGROUND OR OVERHEAD UTILITIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF PERSONS OR PROPERTY ON OR ADJACENT TO THE PROJECT SITE.
5. COORDINATE ALL WORK WITH THE SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND DRAWINGS OF OTHER TRADES BEFORE STARTING WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES, INCONSISTENCIES OR CONFLICTS PRIOR TO STARTING FABRICATION OR CONSTRUCTION OF THE WORK.
6. REFER TO GENERAL ARRANGEMENT, MECHANICAL, ELECTRICAL DRAWINGS, AND/OR DRAWING OF OTHER TRADES, AND APPROVED SHOP DRAWINGS FOR SIZES AND LOCATIONS OF OPENINGS, INSERTS, SLEEVES, SLAB DEPRESSIONS, EMBEDDED ITEMS, AND OTHER NON-STRUCTURAL ITEMS. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR SIZE AND LOCATION OF ALL OPENINGS FOR DUCTS, PIPING, CONDUITS, ETC. NOT SHOWN.
7. SUBMIT SHOP DRAWINGS TO ENGINEER FOR ALL STRUCTURAL COMPONENTS PRIOR TO FABRICATION. SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR FOR ALL DIMENSIONS, ELEVATIONS, AND ERECTION PROCEDURE PRIOR TO SUBMITTING TO THE ENGINEER. PROVIDE AMPLE TIME FOR SHOP DRAWING REVIEW TO TAKE PLACE. REFER TO THE PROJECT SPECIFICATIONS FOR OTHER SUBMITTAL REQUIREMENTS.
8. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS FOR OVERALL CONFORMANCE WITH THE DESIGN INTENT AND GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER'S APPROVAL OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR DEVIATIONS, ERRORS, OR OMISSIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REMAIN SOLELY RESPONSIBLE FOR COORDINATION OF DIMENSIONS, SIZES, AND DETAILS IN THE SHOP DRAWINGS.
9. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN UNLESS OTHERWISE APPROVED BY THE ENGINEER.
10. WHERE THERE IS A CONFLICT BETWEEN SPECIFIC DETAILS OR NOTES AND TYPICAL DETAILS OR GENERAL NOTES, THE SPECIFIC DETAILS AND NOTES SHALL TAKE PRECEDENCE UNLESS OTHERWISE INDICATED BY THE ENGINEER.
11. MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCES OF CONSTRUCTION, JOBSITE SAFETY, AND SUPERVISION OF THE WORK ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
12. PROVIDE AND INSTALL ALL TEMPORARY BRACING, SHORING, SHEETING, ETC. REQUIRED FOR SUPPORT AND STABILITY OF THE STRUCTURE OR EXCAVATIONS UNTIL ALL STRUCTURAL WORK IS COMPLETE. THE DESIGN, ERECTION, INSTALLATION, ADEQUACY, AND SAFETY OF TEMPORARY SHORING OR SUPPORT DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
13. PROTECT ALL EXISTING AND IN-PLACE WORK, STRUCTURES, AND UTILITIES FORM DAMAGE DURING CONSTRUCTION.
14. WORK NOT INDICATED ON THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT AT SIMILAR LOCATIONS SHALL BE REPEATED. UNLESS NOTED OTHERWISE, SECTIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE TYPICAL AT SIMILAR LOCATIONS AND CONDITIONS.
15. USE THE DIMENSIONS INDICATED ON THE DRAWINGS; DO NOT SCALE THE DRAWINGS. DO NOT PULL UNLABELLED DIMENSIONS FROM ELECTRONIC DATA FILES UNLESS OTHERWISE APPROVED BY THE ARCHITECT.
16. WHERE DIMENSIONS OF EXISTING STRUCTURES ARE INDICATED, THEY ARE APPROXIMATE AND FOR INFORMATION ONLY. FIELD VERIFY DIMENSIONS, SIZES, AND LOCATIONS OF PERTINENT EXISTING STRUCTURES PRIOR TO STARTING CONSTRUCTION.

FOUNDATIONS AND GEOTECHNICAL:

1. SUBGRADE PREPARATION, EXCAVATION, AND BACKFILL SHALL BE IN ACCORDANCE WITH THESE NOTES, THE DRAWINGS, PROJECT SPECIFICATIONS, AND THE GEOTECHNICAL REPORT OR WRITTEN GEOTECHNICAL RECOMMENDATIONS FOR THE PROJECT. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY, UNLESS APPROVED OTHERWISE BY THE ENGINEER.
2. THE FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF.
3. THE CONTRACTOR SHALL ENGAGE A GEOTECHNICAL ENGINEER/ TESTING COMPANY TO VERIFY ADEQUATE FOUNDATION AND SLAB SUPPORT.
4. FOUNDATION CONDITIONS WHICH VARY SIGNIFICANTLY FROM THOSE INDICATED IN THE GEOTECHNICAL REPORT OR DESIGN CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
5. ALL FOOTINGS SHALL BEAR ON UNDISTURBED RESIDUAL SOIL OR PROPERLY COMPACTED STRUCTURAL FILL.
6. DO NOT PLACE FOOTINGS IN EXCAVATIONS HOLDING WATER OR ON FROZEN SUBGRADE.
7. FOOTINGS SHALL EXTEND DOWN TO A LOWER ELEVATION THAN INDICATED ON THE DRAWINGS IF NECESSARY TO REACH ADEQUATE BEARING MATERIAL.
8. BOTTOM OF ALL FOOTINGS TO BE A MINIMUM OF 1'-0" BELOW FINISHED GRADE UNLESS NOTED OTHERWISE.
9. SLOPE SIDES OF EXCAVATIONS, OR SHORE, SHEET, AND BRACE SIDE SLOPES TO ENSURE SLOPE STABILITY AND SAFETY. ADEQUATELY PROTECT ALL EXCAVATION SLOPES.
10. EXCAVATION SHORING, SHEETING, BRACING, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE PROJECT STATE, HIRED BY THE CONTRACTOR.
11. STRIP AND REMOVE ALL TOPSOIL AND ORGANIC MATERIAL TO A MINIMUM 4" DEPTH. STOCKPILE TOPSOIL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS OR AS DIRECTED BY THE OWNER.
12. REMOVE ALL MATERIAL CONTAINING ROOTS, DEBRIS, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIAL FROM THE SITE.
13. REMOVE ANY EXISTING FOUNDATIONS, RUBBLE, ABANDONED UTILITIES, UNDERGROUND TANKS, ETC. WITHIN THE BUILDING FOOTPRINT, AND BACKFILL WITH COMPACTED SUITABLE SOIL OR CRUSHED STONE.
14. AFTER STRIPPING TOPSOIL, PROOFROLL THE BUILDING SITE WITH A LOADED DUMP TRUCK OF NOT LESS THAN 20 TONS, MAKING AT LEAST TWO PASSES IN EACH PERPENDICULAR DIRECTION. LOCATE AND REMOVE ANY SOFT AREAS, AND REPLACE WITH PROPERLY COMPACTED SUITABLE MATERIAL.
15. PLACE ALL FILL MATERIAL IN LIFTS NOT EXCEEDING 8" IN DEPTH, AND COMPACT TO THE FOLLOWING PROCTOR DENSITIES:
    STANDARD PROCTOR (ASTM-D698):
    UNDER FOUNDATIONS: 98%
    UNDER SLABS ON GRADE: 98%
    OTHER AREAS OUTSIDE BLDG. FOOTPRINT: 95%
16. ALL FILL MATERIAL UNDER FOUNDATIONS AND SLABS SHALL BE SUITABLE MATERIAL AS APPROVED BY THE GEOTECHNICAL ENGINEER. SUITABLE ON SITE MATERIAL MAY BE USED AS BACKFILL IF APPROVED BY THE GEOTECHNICAL ENGINEER. SLOPE FILL MATERIAL FOR ADEQUATE DRAINAGE.
17. ALL UTILITY TRENCHES OR OTHER EXCAVATIONS WITHIN THE BUILDING FOOTPRINT SHALL BE BACKFILLED AND COMPACTED AS INDICATED HEREIN.
18. TEST ALL FILL FOR COMPACTION WITH ONE TEST PER EVERY 2500 SQUARE FEET OF FILL PER FOOT OF DEPTH. TEST LOCATIONS SHALL BE LOCATED RANDOMLY AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER.
19. PROVIDE ADEQUATE DRAINAGE OR DEWATERING TO ALLOW PROPER FINISHING OF EXCAVATIONS AND TO KEEP WATER FROM COLLECTING IN THE BOTTOM OF EXCAVATIONS. FOUNDATIONS SHALL BE PLACED IN THE DRY. DO NOT PLACE FOOTINGS IN WATER.

FOUNDATIONS AND GEOTECHNICAL (CONT'D):

20. REMOVE WATER SOFTENED SOILS FROM FOOTING EXCAVATIONS AND REPLACE WITH COMPACTED FILL, GRAVEL, FLOWABLE FILL, OR CONCRETE, AS APPROVED BY THE ENGINEER, PRIOR TO PLACING CONCRETE.
21. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER. PROVIDE NOTICE AND ALLOW SUFFICIENT TIME FOR FOOTING EXCAVATIONS TO BE INSPECTED PRIOR TO PLACING FOUNDATIONS.
22. ANCHOR BOLTS CAST IN CONCRETE FOUNDATIONS SHALL BE SET USING TEMPLATES PROPERLY SECURED TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
23. REFER TO GEOTECHNICAL REPORT BY TERRACON CONSULTANTS DATED MAY 8, 2025 FOR OTHER GEOTECHNICAL REQUIREMENTS AND RECOMMENDATIONS.

CONCRETE:

1. ALL CONCRETE AND REBAR AND THEIR INSTALLATION SHALL COMPLY WITH THE STANDARDS OF ACI-318-19, ACI-350-20, AND ACI-301-20.
2. SUBMITALS:
   REINFORCING STEEL SHOP DRAWINGS PREPARED IN ACCORDANCE WITH THE ACI DETAILING MANUAL.
   CONCRETE MIX DESIGNS FOR EACH DIFFERENT CONCRETE MIX PREPARED IN COMPLIANCE WITH ACI 318-19
   TEST DATA FOR EACH PROPOSED MIX MEETING THE REQUIREMENTS OF ACI 301-20 SECTION 4.2.3.
   MANUFACTURER'S INFORMATION ON CONCRETE ADMIXTURES, CURING COMPOUNDS, BONDING AGENTS, AND OTHER PROPRIETARY MATERIALS
3. CONCRETE TESTING:
   MAKE ONE SET OF FIVE TEST 4-INCH DIAMETER CYLINDERS FOR EACH 50 CUBIC YARDS, OR PORTION THEREOF, OF CONCRETE PLACED. A QUALIFIED TESTING LAB SHALL PERFORM ALL TESTING. FOR EACH SET OF CYLINDERS, BREAK 1 CYLINDER AT 7 DAYS, 3 CYLINDERS AT 28 DAYS, AND HOLD 1 RESERVE CYLINDER.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-1064. WHERE REINFORCING IS TO BE WELDED, IT SHALL CONFORM TO ASTM A-706 GRADE 60.
5. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH AND EXPOSURE CLASS OF CONCRETE SHALL BE AS FOLLOWS:

LOCATION	f'c	EXPOSURE CLASS
NORMAL WEIGHT CONCRETE:		
ALL STRUCTURAL CONCRETE:		
EXTERIOR EXPOSURE:	4000 PSI	EF0, EC1, ECA0
INTERIOR EXPOSURE:	4000 PSI	EF0, EC0, ECA0
CONC. FILL & TOPPINGS:	4000 PSI	EF0, EC1, ECA0
BURIED PIPE ENCASEMENT:	3000 PSI	EF0, EC1, ECA0

   ALL CONCRETE SHALL BE EXPOSURE CATEGORIES ES0, AND EE0 UNLESS NOTED OTHERWISE ABOVE.
6. CONCRETE MIXES SHALL BE DESIGNED IN ACCORDANCE WITH ACI 301 AND THE FOLLOWING:

	MAX W/C RATIO	SLUMP
4000 PSI	0.45	3" TO 5"
3000 PSI	0.53	3" TO 5"
2500 PSI	0.65	3" TO 6"

   CONCRETE SHALL BE READY MIXED IN ACCORDANCE WITH ASTM C-94. SUBMIT CONCRETE MIX DESIGNS TO THE ENGINEER FOR APPROVAL.
7. CONCRETE MATERIALS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
   PORTLAND CEMENT: ASTM C-150 TYPE I, II, OR I-P
   FLY ASH: ASTM C-618
   AGGREGATE (NORMAL WT.): ASTM C-33
   AGGREGATE (LIGHT WEIGHT): ASTM C-330
   ADMIXTURES: ASTM C-494, C-260, C989, & C-1017
8. FLY ASH SHALL BE NOT MORE THAN 25% OF TOTAL CEMENTITIOUS MATERIALS. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE.
9. CONCRETE DENSITY SHALL BE AS FOLLOWS:
   NORMAL WEIGHT CONCRETE: 145 PCF
10. PEA GRAVEL MIX (WHERE INDICATED OR NECESSARY) TO BE NORMAL WEIGHT WITH 789 STONE COARSE AGGREGATE.
11. PROVIDE AIR ENTRAINMENT AS FOLLOWS FOR ALL CONCRETE EXPOSED TO WEATHER OR EXTERIOR CONDITIONS, UNLESS NOTED OTHERWISE:
    EXPOSURE CATEGORY EF0 OR EF1: 4½% ± 1½%
    EXPOSURE CATEGORY EF2: 6% ± 1½%

CONCRETE (CONT'D):

12. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE SITE UNLESS APPROVED BY THE ENGINEER OR STRUCTURAL ENGINEER.
13. REINFORCEMENT SHALL BE ADEQUATELY SUPPORTED AND TIED IN PLACE PRIOR TO CONCRETE PLACEMENT. PROVIDE ANY STANDEES, CHAIRS, BOLSTERS, CARRYING BARS, OR ADDITIONAL BARS AS MAY BE NECESSARY TO ADEQUATELY SUPPORT THE REINFORCEMENT IN ITS PROPER POSITION.
14. SUPPORT ALL SLAB REINFORCING ON CONTINUOUS CHAIRS. REINFORCING FOR SLABS ON GRADE MAY BE SUPPORTED ON CONCRETE BRICK.
15. UNLESS NOTED OTHERWISE ON THE DRAWINGS, REINFORCING STEEL SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
    CONCRETE CAST AGAINST EARTH: 3"
    CONCRETE EXPOSED TO EARTH, LIQUID, OR WEATHER:
    BEAM STIRRUPS: 2"
    BEAM PRIMARY REINFORCING: 2½"
    ALL OTHER REINFORCING: 2"
    CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
    SLABS, SHELLS, WALLS, AND JOISTS: ¾"
    BEAMS AND COLUMNS STIRRUPS & TIES: 1½"
    BEAM PRIMARY REINFORCEMENT: 2"
16. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL REINFORCING SPLICES SHALL BE ACI CLASS B TENSION LAPS FOR TOP BARS OR OTHER BARS AS APPLICABLE. TOP BARS ARE TO BE ANY BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS PLACED IN THE MEMBER BELOW THE BAR, EXCEPT THAT HORIZONTAL BARS IN WALLS NEED NOT BE CONSIDERED AS TOP BARS. THE LAP LENGTH SHALL BE DETERMINED BY THE SIZE OF THE LARGER BAR PLACED.
17. UNLESS NOTED OTHERWISE ON THE DRAWINGS, DOWELS SHALL MATCH CORRESPONDING MAIN REINFORCING.
18. DOWEL BAR SUBSTITUTES AND MECHANICAL BAR SPLICING DEVICES THAT DEVELOP 125% OF THE REINFORCING YIELD STRENGTH ARE PERMITTED.
19. LAP WELDED WIRE FABRIC A MINIMUM OF 9".
20. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
21. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS OF CONTINUOUS FOOTINGS AND WALLS NOT OTHERWISE SHOWN ON THE DRAWINGS. LAP CORNER BARS WITH CLASS B LAP EACH LEG.
22. UNLESS NOTED OR SPECIFIED OTHERWISE, TOLERANCES FOR CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 117-10.
23. PROVIDE, DESIGN, CONSTRUCT AND ERECT ALL FORMWORK AND SHORING IN ACCORDANCE WITH ACI 347.
24. FORMWORK, SHORING, AND RE-SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
25. SHORING FOR ELEVATED SLABS AND/OR BEAMS SHALL REMAIN IN UNTIL CONCRETE HAS REACHED 75% OF ITS REQUIRED 28 DAY STRENGTH.
26. PROVIDE FORM TIES WITH INTEGRAL WATERSTOP IN ALL LIQUID CONTAINING STRUCTURES AND WET WELLS. PATCH ALL TIE HOLES.
27. CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS ARE REQUIRED AND MAY NOT BE OMITTED OR RELOCATED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
28. LOCATION OF ADDITIONAL CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CONSTRUCTION JOINTS SHALL BE INDICATED ON THE REINFORCING STEEL PLACING DRAWINGS, AND ALL NECESSARY REBAR SPLICES SHALL BE DETAILED ACCORDINGLY.
29. CONSTRUCTION JOINTS IN WALL FOOTINGS SHALL BE FORMED VERTICALLY. PROVIDE A KEYWAY AND REINFORCING DOWELS WITH THE REQUIRED LAP LENGTH.
30. WHERE NEW CONCRETE IS CAST AGAINST EXISTING CONCRETE, CLEAN AND ROUGHEN THE ADJOINING SURFACE OF THE EXISTING CONCRETE PRIOR TO PLACING NEW CONCRETE AGAINST IT.
31. REFER TO PROCESS, PLUMBING, MECHANICAL, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES FOR ANY ADDITIONAL OPENINGS OR PENETRATIONS IN THE CONCRETE, AND FOR DRAINS, SLEEVES, PIPES, CONDUIT, ANCHORS, ETC. EMBEDDED IN THE CONCRETE.
32. CONDUITS EMBEDDED IN CONCRETE SLABS SHALL HAVE A MAXIMUM OUTSIDE DIAMETER OF 40% OF THE SLAB THICKNESS OR FOR SLABS ON METAL DECK, 40% OF THE SLAB COVER OVER THE HIGH DECK RIBS. PARALLEL CONDUITS SHALL HAVE A CLEAR SPACING OF 4 X THE CONDUIT DIAMETER BUT NOT LESS THAN 4", EXCEPT THAT 2 CONDUITS MAY BE GROUPED TOGETHER (SIDE BY SIDE) IN A PAIR.
33. IN HOT WEATHER, PLACE CONCRETE IN ACCORDANCE WITH THE PROVISIONS OF ACI 305. IN COLD WEATHER PLACE CONCRETE ACCORDING TO ACI 306.

CONCRETE (CONT'D):

34. CONTINUOUSLY CURE CONCRETE FOR NOT LESS THAN 7 DAYS AFTER PLACEMENT BY MEANS OF A CONTINUOUS WET CURE; CONTINUOUS FOGGING, PONDING, CONTINUOUS SPRINKLING, APPLICATION OF DAMPENED MATERIAL; OR USE OF A SUITABLE CURING COMPOUND.
35. USE CURING COMPOUND COMPLYING WITH ASTM C309 AND/OR C1315, HAVING A MINIMUM OF 25% SOLIDS. ON SURFACES THAT WILL RECEIVE NO FURTHER CONCRETE, TOPPING, OR APPLIED FINISH, USE A CURE AND SEALING COMPOUND. ON SURFACES TO RECEIVE ADDITIONAL CONCRETE, TOPPING OR FINISHES, USE AN DISSIPATING COMPOUND.
36. REFER TO THE SPECIFICATIONS FOR CONCRETE FINISHING REQUIREMENTS. WHERE FINISH IS NOT OTHERWISE SPECIFIED, FINISH CONCRETE IN ACCORDANCE WITH ACI 301 AND THE FOLLOWING:
    FORMED SURFACES NOT EXPOSED TO VIEW: SF-2 FINISH
    FORMED SURFACES EXPOSED TO VIEW: SF-3
    BASIN AND WET WELL BOTTOM SLABS: FLOAT FINISH
    EXTERIOR WALKWAYS & SLABS: BROOM FINISH
    INTERIOR SLABS: TROWEL FINISH
    SURFACES TO RECEIVE TOPPING OR ADDITIONAL CONCRETE: SCRATCH FINISH OR ROUGHEN SURFACE
37. PROVIDE CONTROL JOINTS IN INTERIOR SLABS ON GROUND AS INDICATED ON THE DRAWINGS. SAW CUT CONTROL JOINTS IN SLABS AS SOON AS PRACTICAL AFTER PLACING SLABS.
38. SEE CIVIL DRAWING FOR CONTROL AND/OR EXPANSION JOINTS IN EXTERIOR PAVEMENT AND SIDEWALKS.
39. SEE CIVIL, MECHANICAL, AND/OR ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF EXTERIOR CONCRETE PADS. SEE CIVIL DRAWINGS FOR EXTERIOR CONCRETE SIDEWALKS, PAVEMENTS, AND CURBS.
40. PROVIDE 3/4" CHAMFER AT ALL EXPOSED EDGES OF CONCRETE WORK UNLESS NOTED OTHERWISE.

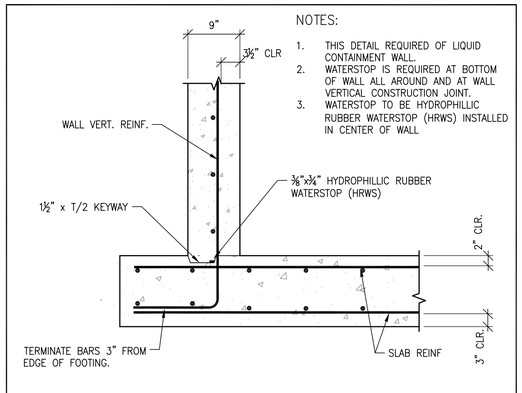
TENSION LAP SPLICE LENGTHS FOR GRADE 60 REINFORCING

BAR SIZE	3000 PSI CONCRETE				BAR SIZE	4000 PSI CONCRETE			
	TOP BARS		OTHER BARS			TOP BARS		OTHER BARS	
	A	B	A	B		A	B	A	B
3	22	28	17	22	3	19	24	15	19
4	29	37	22	29	4	25	32	19	25
5	36	47	28	36	5	31	40	24	31
6	43	56	33	43	6	37	48	29	37
7	63	81	48	63	7	54	70	42	54
8	72	93	55	72	8	62	80	48	62
9	81	105	62	81	9	70	91	54	70

DESIGN CRITERIA

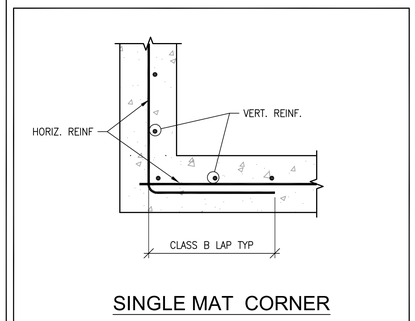
RISK CATEGORY:	III
DEAD LOADS:	
ACTUAL DEAD LOAD OF STRUCTURE	
LIVE LOADS:	
SLABS & WALKWAYS	100 P.S.F.
SNOW LOADS:	
GROUND SNOW:	10 P.S.F.
WIND LOADS:	
BASIC WIND SPEED: (3 SECOND GUST)	130 MPH
EXPOSURE:	C
SEISMIC LOADS:	
IMPORTANCE FACTOR:	1.25
SITE CLASS:	D
MAPPED SPECTRAL RESPONSE, S_S:	0.24
MAPPED SPECTRAL RESPONSE, S_1:	0.09
S_{DS}:	0.26
S_{D1}:	0.15
SEISMIC DESIGN CATEGORY:	C

ALL DESIGN CRITERIA PER ASCE 7-16



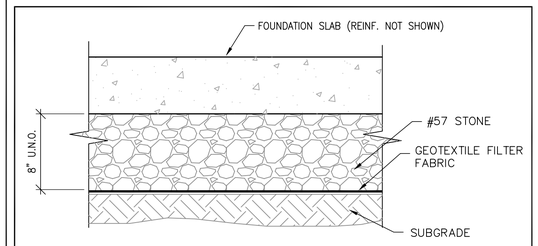
TYPICAL WALL-SLAB JOINT DETAIL

DETAIL 11 TYP. SCALE: NONE



TYPICAL WALL CORNER REINFORCING

DETAIL 12 TYP. SCALE: NONE



FOUNDATION STABILITY

DETAIL 13 TYP. SCALE: NONE

BID DOCUMENTS

THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT
103 LYALL STREET
BENNETSVILLE, SC 29512

CLIENT

City of Bennetsville
501 EAST MAIN STREET
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REGISTRATION

SOUTH CAROLINA K&P ENGINEERING, INC. No. 1491 CERTIFICATE OF AUTHORIZATION

REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA No. 12295 11/24/25 CHRISTIES F. KHOBLOCH

SHEET SCALE: AS SHOWN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT & FILE NUMBER

PROJECT NUMBER: 60721978
HUD/CDBG PROJECT NUMBER: 4-CI-24-001
K&P JOB NUMBER: 25-123

SHEET TITLE

TYPICAL DETAILS AND STRUCTURAL NOTES

SHEET NUMBER

S00.10

Filename: Z:\KP JOB FILES\2025-JOBS\25-123 BENNETTSVILLE WTPS LIME SILOS\S-CAD DRAWINGS\LYALL STREET\25-123AS0010.DWG
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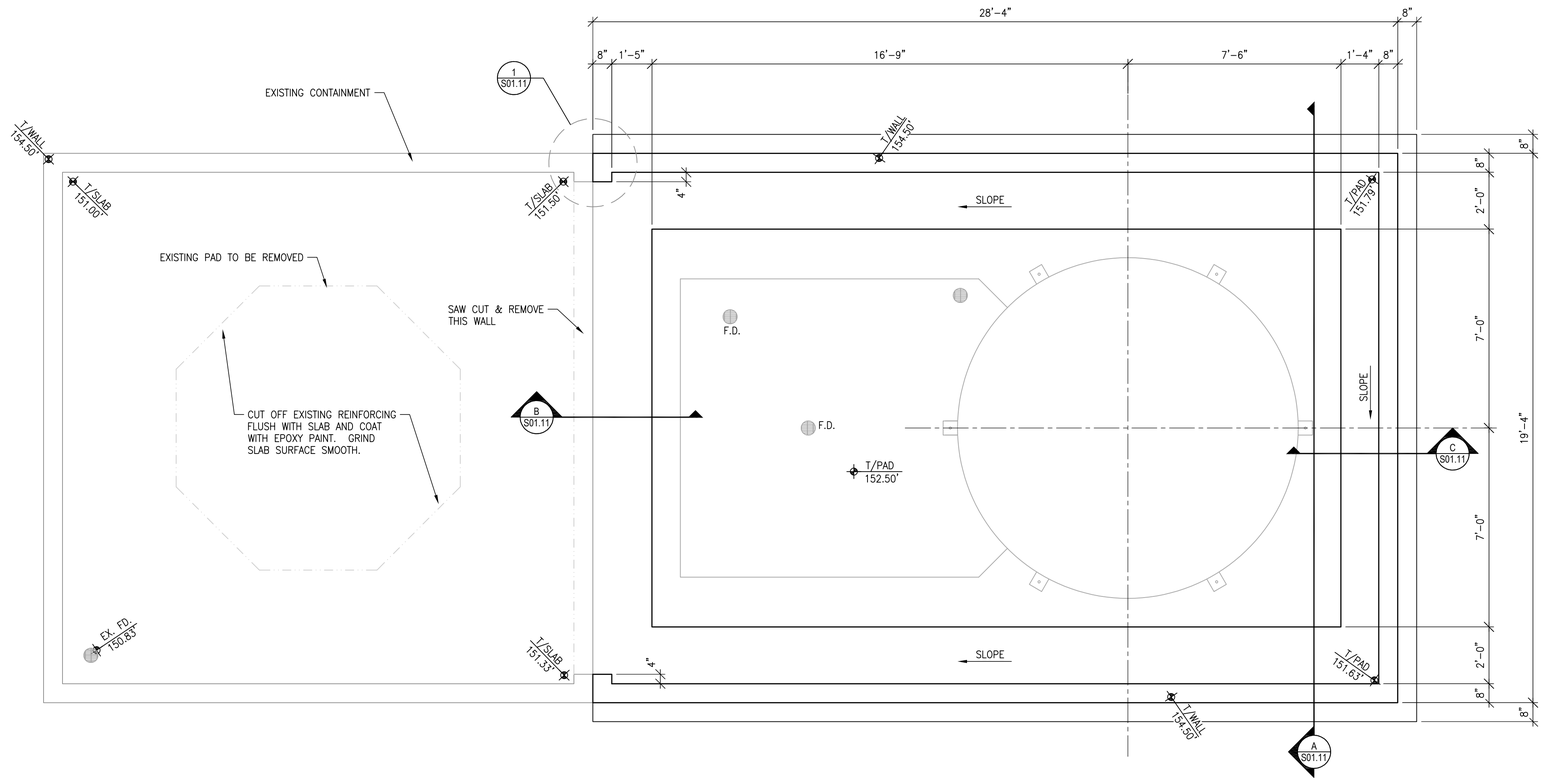

LIME SILO FOUNDATION PLAN

SCALE: 3/8" = 1'-0"

AECOM

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REGISTRATION

SOUTH CAROLINA K&P ENGINEERING, INC. No. 1491 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER CHARLES R. KNOBELOCH No. 12295 11/24/25

SHEET SCALE: AS SHOWN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT & FILE NUMBER

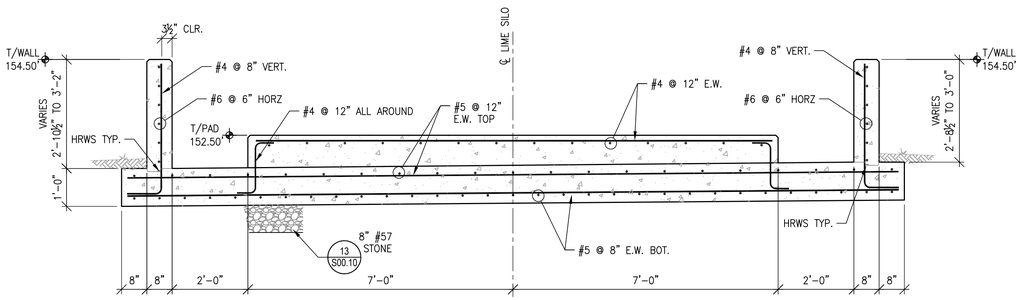
PROJECT NUMBER: 60721978
HUD/CDBG PROJECT NUMBER: 4-CI-24-001
K&P JOB NUMBER: 25-123

SHEET TITLE

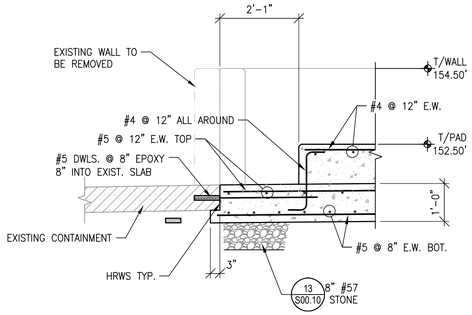
LIME SILO FOUNDATION PLAN

SHEET NUMBER

S01.10



SECTION A
SCALE: 1/2" = 1'-0" S01.10



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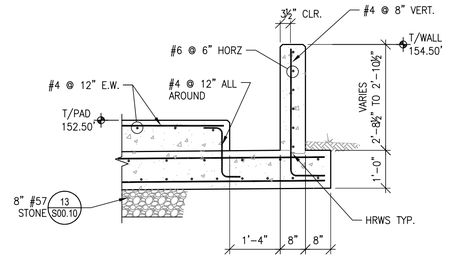

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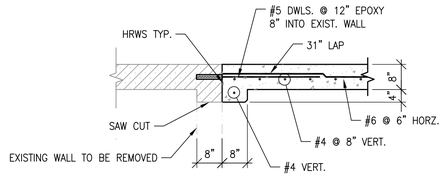

DETAIL 1
SCALE: 1/2" = 1'-0" S01.10

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT
103 LYALL STREET
BENNETSVILLE, SC 29512

CLIENT

City of Bennetsville
501 EAST MAIN STREET
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REGISTRATION

SOUTH CAROLINA K&P ENGINEERING, INC. No. 1491 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER CHARLES F. KNOBELOCH No. 12295 11/24/25

SHEET SCALE: AS SHOWN

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT & FILE NUMBER

PROJECT NUMBER: 60721978
HUD/CDBG PROJECT NUMBER: 4-CI-24-001
K&P JOB NUMBER: 25-123

SHEET TITLE

LIME SILO SECTIONS AND DETAILS

SHEET NUMBER

S01.11

Last saved by: CKNOBELOCH (2025-11-24) Last Plotted:
Filename: Z:\KP JOB FILES\2025-JOBS\25-123 BENNETTSVILLE WTPS LIME SILOS\3-CAD DRAWINGS\LYALL STREET\25-123AS0111.DWG

PIPING AND VALVE SYMBOLS

- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- BALL VALVE (TRUE UNION)
- CHECK VALVE
- TWIN DISC CHECK VALVE
- CUSHIONED SWING CHECK VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- CONE VALVE
- DIAPHRAGM
- ANGLE VALVE
- THREE WAY VALVE
- FOUR WAY VALVE
- PRESSURE REDUCING VALVE
- BACKFLOW PREVENTER
- SOLENOID OPERATED VALVE
- BACK PRESSURE VALVE
- PRESSURE RELIEF OR SAFETY VALVE
- AIR RELEASE VALVE
- KNIFE GATE VALVE
- NEEDLE VALVE
- ROTARY VALVE
- FOOT VALVE
- POST INDICATING VALVE
- HYDRAULIC ACTUATED VALVE
- HYDRAULIC ACTUATED VALVE
- PINCH VALVE
- DIAPHRAM WEIR VALVE
- PNEUMATIC DIAPHRAGM OPERATED VALVE
- CYLINDER OPERATED VALVE
- ELECTRIC MOTOR OPERATED VALVE
- FLOAT VALVE
- PRESSURE CONTROL VALVE (PCV)
- TEMPERATURE CONTROL VALVE (TCV)
- AUTOMATIC AIR VENT (AAV)
- MANUAL AIR VENT (MAV)
- THERMOWELL
- WEIR GATE (WG)
- SLIDE GATE (SG)
- SLUICE GATE (SLG)
- TELESCOPING VALVE (TV)
- STEAM TRAP
- MANUAL VOLUME DAMPER
- ACTUATED VOLUME DAMPER
- FLEXIBLE CONNECTION
- EXPANSION JOINT

- PIPE GUIDE
- PIPE ANCHOR
- REDUCER
- UNION
- WYE STRAINER
- BASKET STRAINER
- COUPLING (TRANSITION)
- QUICK COUPLING
- CALIBRATION CHAMBER
- WATER HAMMER ARRESTOR
- ROTAMETER
- PULSATION DAMPER
- EDUCTOR
- INJECTOR
- STATIC METER
- STATIC MIXER
- MIXER
- V-NOTCH WEIR
- DRAIN
- DIAPHRAGM OR LOAD CELL
- AIR SET
- INSERTION INSTRUMENT
- AUTOMATIC CONDENSATE TRAP
- PRESS/VAC RELIEF VALVE W/O FLAME ARRESTOR
- PRESS/VAC RELIEF WITH FLAME ARRESTOR
- FLAME ARRESTOR WITH COVER
- FLAME ARRESTER
- SPACE HEATER/HEAT TRACING
- ELECTRIC MOTOR
- CAP
- RUPTURE DISK (ON PRESSURE)
- RUPTURE DISK (ON VACUUM)
- FLEXIBLE HOSE WITH QUICK COUPLINGS
- FLANGES
- PRESSURE INSTRUMENT PROTECTOR
- PARTICULATE FILTER
- DESSICANT DRYER
- SEPARATOR
- BASKET STRAINER
- BUBBLER SYSTEM
- OPEN CHANNEL OR OPENINGS BETWEEN TANKS (NON-PIPED FLOW)
- PRESSURE RELIEF AND FLAME TRAP

PUMP SYMBOLS

- CENTRIFUGAL PUMP (SHOWN WITH MOTOR)
- SPLIT CASE PUMP (SHOWN WITH MOTOR)
- GEAR PUMP (SHOWN WITH MOTOR)
- SUBMERSIBLE OR SUMP PUMP (SHOWN WITH MOTOR)
- METERING PUMP (SHOWN WITH MOTOR)
- PROGRESSIVE CAVITY PUMP (SHOWN WITH MOTOR)
- DIAPHRAGM PUMP (SHOWN WITH MOTOR)
- VERTICAL TURBINE PUMP (SHOWN WITH MOTOR)
- ROTARY LOBE PUMP (SHOWN WITH MOTOR)
- BARGE PUMP (SHOWN WITH MOTOR)
- GENERAL POSITIVE DISPLACEMENT PUMP (SHOWN WITH MOTOR)

LINE SYMBOLS

- PRIMARY PROCESS LINE
- SECONDARY PROCESS LINE
- EXISTING
- EXISTING TO BE REMOVED
- EXISTING TO BE ABANDONED
- FUTURE
- PIPE SPEC CHANGE (DIP / PVC)
- SHEET CONTINUATION (LINE ONE / LINE TWO / SHEET)
- CONTINUATION ELSEWHERE, SAME SHEET (XX)

EQUIPMENT SYMBOLS

NEW EQUIPMENT | EXIST. EQUIPMENT | FUTURE EQUIPMENT

FLOW ELEMENT SYMBOLS

- VORTEX FLOW METER
- CORIOLIS FLOW METER
- PROPELLER FLOW METER
- ORIFICE PLATE
- PARSHALL FLUME
- MAGNETIC FLOW METER
- FLOW TUBE (VENTURI)
- DISC FLOW METER
- ULTRASONIC FLOW METER

AGITATOR SYMBOLS

- RADIAL
- PROPELLER
- TURBINE

BLOWER/COMPRESSOR SYMBOLS

- CENTRIFUGAL BLOWER OR COMPRESSOR (SHOWN WITH MOTOR)
- PD BLOWER OR COMPRESSOR (SHOWN WITH MOTOR)

NOTE:

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BID DOCUMENTS
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REGISTRATION

SOUTH CAROLINA — AECOM TECHNICAL SERVICES, INC. — No. 1473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 44247 — LARA MAHER MEHAELKA — 12/29/25

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

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PROJECT & FILE NUMBER

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HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

P&ID LEGENDS

SHEET NUMBER

P01.10

ELECTRICAL AND CONTROL SYMBOLS

- INDIVIDUAL STARTER OR CONTROLLER
- STARTER OR CONTROLLER IN MOTOR CONTROL CENTER
- STARTER OR CONTROLLER (FURNISHED WITH EQUIPMENT)
- GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED
- GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED (FURNISHED WITH EQUIPMENT)
- GENERAL INTERLOCK OR CONTROL FUNCTION (HARDWIRED)
- GENERAL INTERLOCK OR CONTROL FUNCTION (PLC OR SOFTWARE)
- INDICATING LIGHT
- ALARM LIGHT/ANNUNCIATOR
- T — TELEMETERED
- T — TELEPHONE
- ZC / M — MODULATING OR POSITIONING MOTOR (CONTROLLER FURNISHED WITH MOTOR)
- ZSO / ZSC — OPEN/CLOSE MOTOR (CONTROLLER FURNISHED WITH MOTOR)
- VFD — VARIABLE FREQUENCY DRIVE (AC)
- VSD — VARIABLE SPEED DRIVE (DC)
- AUDIBLE DEVICE
- CAMERA
- LEVEL ELEMENT (ULTRASONIC)

HAND SWITCH SYMBOLS AND LEGEND

- XXX / XXX — FIELD MOUNTED
- XXX / XXX — FRONT MCC MOUNTED
- XXX / XXX — REAR MCC MOUNTED
- XXX / XXX — FIELD MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — FRONT OF LOCAL PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — REAR OF PANEL MOUNTED (FURNISHED WITH EQUIPMENT)

AB	—	FUNCTION SELECTOR
EO	—	EMERGENCY OFF
ES	—	EMERGENCY STOP
FOR	—	FORWARD/OFF/REVERSE (MAINTAINED)
FSR	—	FORWARD/STOP/REVERSE (MAINTAINED)
HOA	—	HAND/OFF/AUTO
LOR	—	LOCAL/OFF/REMOTE
LR	—	LOCAL/REMOTE
MA	—	MANUAL/AUTO
OC	—	OPEN/CLOSE
OCA	—	OPEN/CLOSE/AUTO
OCR	—	OPEN/CLOSE/REMOTE
OO	—	ON/OFF
OS	—	OPERATION SWITCH
R	—	RESET
RS	—	RUN/STOP (AUTO RESET/RUN @ POWER INTERRUPTION)
RSJ	—	RUN/STOP/JOG
S	—	SILENCE
SR	—	SAFE/RUN
SS	—	START/STOP (MANUAL RESET @ POWER INTERRUPTION)
T	—	TEST
UD	—	UP/DOWN

ABBREVIATIONS

CP	CONTROL PANEL
FCP	FACTORY CONTROL PANEL
FWE	FURNISHED WITH EQUIPMENT
LCP	LOCAL CONTROL PANEL
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
VIB	VIBRATION
VHC	VOLATILE HYDROCARBONS
TOR	TORQUE

PLC, DCS OR COMPUTER INPUTS/OUTPUTS

DIGITAL INPUT — DIGITAL OUTPUT — ANALOG INPUT — ANALOG OUTPUT

INSTRUMENT SYMBOLS AND DESIGNATIONS

- LISA 21289 — FIELD MOUNTED
- XXXX / WZZZQ — FRONT OF MAIN PANEL MOUNTED
- XXXX / WZZZQ — REAR OF MAIN PANEL MOUNTED
- XXX / XXX — FRONT OF LOCAL PANEL MOUNTED
- XXX / WZZZQ — REAR OF LOCAL PANEL MOUNTED
- XXXX / WZZZQ — FIELD MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — FRONT PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / WZZZQ — REAR PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXXX / WZZZQ — SOFTWARE DEVICE DISPLAYED (FLAT PANEL)
- XXX / XXX — SOFTWARE DEVICE NOT DISPLAYED

INSTRUMENT IDENTIFICATION

XXXX / ZZZQ

XXXX — FUNCTIONAL IDENTIFICATION

ZZZQ
- MULTIPLE UNITS (A, B, ETC.)
- SEQUENCE NUMBER OR LOOP NUMBER

INSTRUMENT SYMBOLS

XXXX / WZZZQ — NEW INSTRUMENT

XXXX — EXISTING INSTRUMENT

LINE SYMBOLS

- ELECTRICAL SIGNAL
- E — EXISTING WIRING
- F — WIRING (FURNISHED WITH EQUIPMENT)
- P — POWER OR EQUIPMENT CONNECTION
- ES 120/1 — ELECTRIC SUPPLY – VOLTAGE/PHASE
- SIGNAL LINES NOT CONNECTED
- SIGNAL LINES CONNECTED
- PNEUMATIC SIGNAL
- SOFTWARE OR DATA LINK
- HYDRAULIC

NOTE:

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	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS				
B	BURNER FLAME				
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL	DELAY		
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY	MOMENTARY			MIDDLE OR INTERMEDIATE
N	UNCLASSIFIED				
O	UNCLASSIFIED		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT OR TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED			UNCLASSIFIED	
Y	UNCLASSIFIED			RELAY, COMPUTE OR CONVERT	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

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SOUTH CAROLINA — AECOM TECHNICAL SERVICES, INC. — No. 1473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 44247 — SARA MAHER MICHAEL — 12/29/25

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

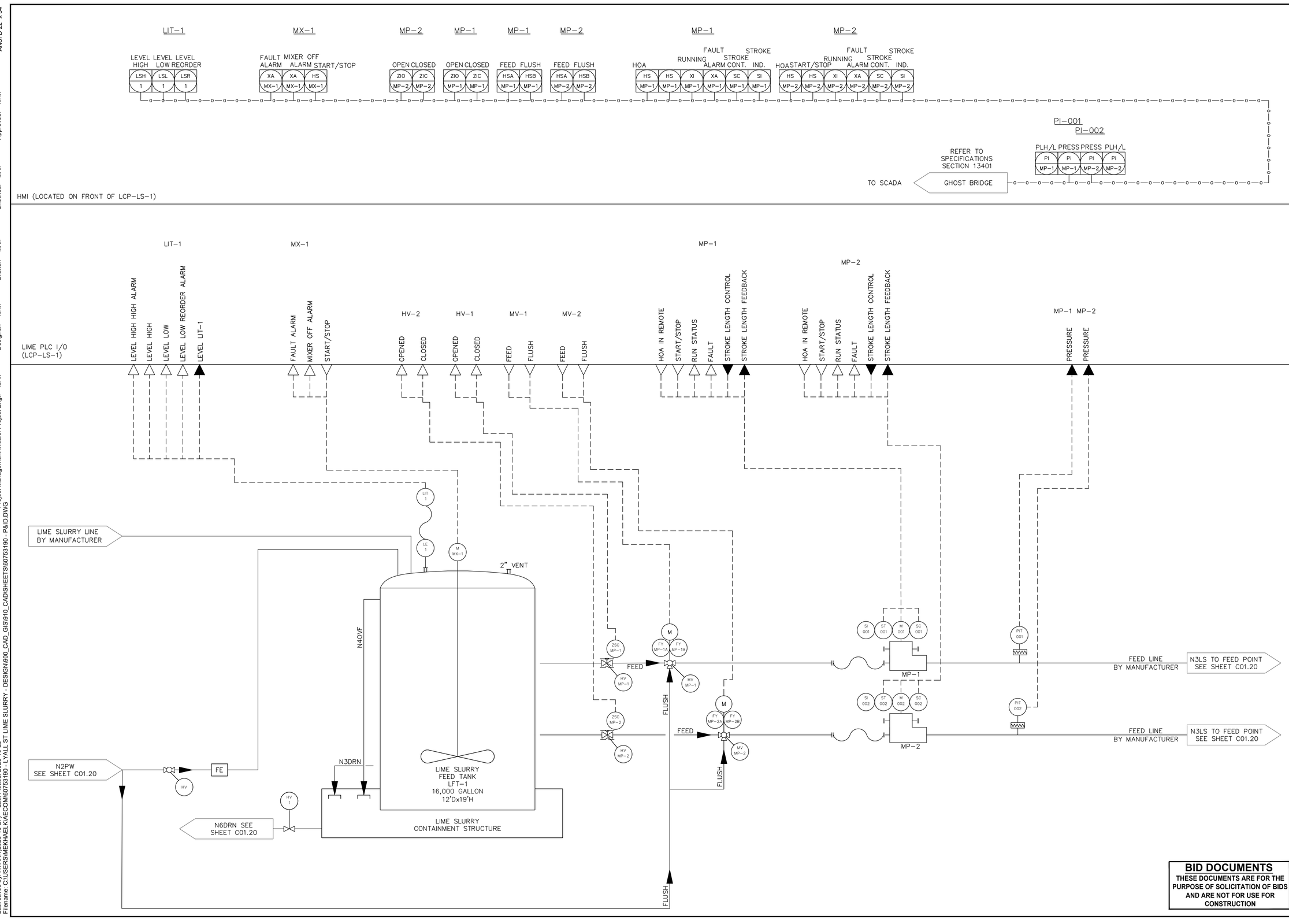
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

P&ID SYMBOLS

SHEET NUMBER

P01.20



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SOUTH CAROLINA
No. 44247
MAHER MEHAEL
REGISTERED PROFESSIONAL ENGINEER
12/29/25

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SHEET TITLE

PROCESS AND INSTRUMENTATION DIAGRAM

SHEET NUMBER

P01.30

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
BWE	BAKED WHITE ENAMEL
C	CONTACTOR/CONDUIT/COIL
CB	CIRCUIT BREAKER
CKT, CCT	CIRCUIT
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
DISC	DISCONNECT
DWG	DRAWING
EP	EXPLOSION PROOF
ETM	ELAPSED TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
I&C	INSTRUMENTATION & CONTROL
J	JUNCTION BOX
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
LCP	LOCAL CONTROL PANEL
LP	LIGHTING PANEL
M	METER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MTR, M	MOTOR
MTD	MOUNTED
MTG	MOUNTING
NA	NON–AUTOMATIC
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE (ANSI/NFPA–70)
NEUT, N	NEUTRAL
NF	NON FUSED
NO	NORMALLY OPEN
OL	OVERLOAD RELAY
PB	PUSHBUTTON/PULLBOX
PC	PHOTOCELL
PNL	PANEL
PP	POWER PANEL
PVC	POLY VINYL CHLORIDE
RVSS	REDUCED VOLTAGE SOLID STATE
SB	SPLICEBOX
SEL	SELECTOR SWITCH
SOL	SOLENOID VALVE
SPD	SURGE PROTECTION DEVICE
SW	SWITCH
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
XFMR	TRANSFORMER

PLAN SYMBOLS

A — LED FIXTURE – RECESSED
(LETTER DENOTES TYPE)

A — LED FIXTURE – SURFACE OR SUSPENDED
(LETTER DENOTES TYPE)

A — LED FIXTURE – WALL MOUNTED
(LETTER DENOTES TYPE)

A — LED OR HID FIXTURE – WALL MOUNTED
(LETTER DENOTES TYPE)

A — POLE MOUNTED FIXTURE
(LETTER DENOTES TYPE)

EMERGENCY BATTERY LIGHT

REMOTE HEAD FOR EMERGENCY BATTERY LIGHT

EXIT LIGHT WITH INDICATING
DIRECTIONAL ARROW

SINGLE POLE SWITCH

2 — TWO POLE SWITCH

3 — 3–WAY SWITCH

4 — 4–WAY SWITCH

MC — MOMENTARY CONTACT SWITCH – CENTER OFF

P — SWITCH / PILOT LIGHT

DS — DOOR SWITCH

DUPLEX GROUNDED RECEPTACLE – 120V

CH — DUPLEX GROUNDED RECEPTACLE – 120V
MOUNTED 6" ABOVE COUNTER

DUPLEX GROUNDED RECEPTACLE FURNISHED
UNDER DIVISION 11. INSTALL AND WIRED
UNDER DIVISION 16

CONNECTION TO EQUIPMENT

SPECIAL PURPOSE RECEPTACLE, NEMA TYPE
AND AMPERE RATING AS INDICATED

TELEPHONE OUTLET, WALL MOUNT WITH
3/4" CONDUIT TO TELEPHONE TERMINAL CABINET
(W – INDICATES 54" MOUNTING HEIGHT FOR PHONE)
(B – INDICATES 96" MOUNTING HEIGHT FOR BELL
UNLESS NOTED OTHERWISE)

AUDIBLE DEVICE

MANUAL STARTER WITH PILOT LIGHT

THREE PHASE MAGNETIC STARTER

THREE PHASE COMBINATION MAGNETIC
STARTER AND DISCONNECT SWITCH

SINGLE PHASE MAGNETIC STARTER

30 — NON–FUSED DISCONNECT SWITCH
(NUMERAL INDICATES SWITCH RATING)

F — 60/40 — FUSED DISCONNECT SWITCH – 3 POLE
UNLESS OTHERWISE INDICATED
(UPPER NUMERAL INDICATES SWITCH RATING)
(LOWER NUMERAL INDICATES FUSE RATING)

LIGHTING PANEL

T — TRANSFORMER

POWER PANEL

TERMINAL CABINET
(ITC – INDICATES INSTRUMENTATION)
(TTC – INDICATES TELEPHONE)

M — MOTOR

D — DAMPER MOTOR

J — JUNCTION BOX

HH — HANDHOLE

MH — MANHOLE

GROUND ROD

GROUND TEST WELL

GROUND CONNECTION

CONDUIT STUB

CONDUIT TURNING UP OR TO OBSERVER

CONDUIT TURNING DOWN OR AWAY FROM OBSERVER

GND — GROUND WIRE

E — DIRECT BURIAL CABLE

UGE — UNDERGROUND ELECTRICAL DUCT,
CONCRETE ENCASED.

SUPPORT STAND. SEE DETAIL

ONE-LINE SYMBOLS

15 / M (OR) CL 600 / 500 — MOLDED CASE CIRCUIT BREAKER
(UPPER NUMERAL INDICATES FRAME SIZE)
(LOWER NUMERAL INDICATES TRIP SETTING)
(CL – INDICATES CURRENT LIMITING CIRCUIT BREAKER)
(M – INDICATES MOTOR CIRCUIT PROTECTOR)

300/5 3 — CURRENT TRANSFORMER
(300/5 – INDICATES TURNS RATIO)
(3 – INDICATES QUANTITY)

3 — 4/1 — POTENTIAL TRANSFORMER
(4/1 – INDICATES TURNS RATIO)
(3 – INDICATES QUANTITY)

52 — DRAWOUT CIRCUIT BREAKER

FVNR 2a 1b 2 — MAGNETIC STARTER AND MOLDED CASE CIRCUIT BREAKER
(FVNR – INDICATES FULL VOLTAGE NON–REVERSING)
(RVNR – INDICATES REDUCED VOLTAGE NON–REVERSING)
(2SPD – INDICATES TWO SPEED)
(AUXILIARY CONTACTS – (2a TWO N.O.)(1b ONE N.C.)
(NUMERAL INDICATES NEMA SIZE)

POWER FACTOR CORRECTION CAPACITOR
SIZE AS INDICATED

TRANSFORMER

FVNR 2a 1b 2 — COMBINATION MAGNETIC STARTER WITH
MOLDED CASE CIRCUIT BREAKER

GROUND

75 — MOTOR
(NUMERAL INDICATES HORSEPOWER)

GENERATOR

THREE PHASE WYE CONNECTION

THREE PHASE DELTA CONNECTION

AS — AMMETER SELECTOR SWITCH

VS — VOLTMETER SELECTOR SWITCH

A — AMMETER

V — VOLTMETER

HOA — CONTROL STATION
SOME ABBREVIATIONS THAT MAY BE USED:

AM	——	AUTO–MANUAL
CAM	——	COMPUTER–AUTO–MANUAL
CM	——	COMPUTER–MANUAL
DS	——	DOOR SWITCH
ETM	——	ELAPSED TIME METER
FR	——	FORWARD–REVERSE
HLO	——	HIGH–LOW–OFF SWITCH
HOA	——	HAND–OFF–AUTO
HOR	——	HAND–OFF–REMOTE
LOS	——	LOCK–OUT–STOP
LR	——	LOCAL–REMOTE
MA	——	MANUAL–REMOTE
OC	——	OPEN–CLOSED
OCA	——	OPEN–CLOSED–AUTO
OCS	——	OPEN–CLOSED–STOP
OO	——	ON–OFF MAINTAINED CONTACT
OOA	——	ON–OFF–AUTO
PB	——	PUSHBUTTON
SF	——	SLOWER–FASTER
SS	——	START–STOP MOMENTARY CONTACT
USG	——	ULTRA SONIC GENERATOR
ZS	——	LIMIT SWITCH

MOTOR CONTROL CENTER

10MCC–1
BUILDING NO.
MCC NO.

PANEL BOARDS

10LP1:4
BUILDING NO.
LIGHTING OR POWER
PANEL AS INDICATED
PANEL NO.
CIRCUIT NO.

NOTE:

1. THIS LIST OF ABBREVIATIONS SHOWN IS A STANDARD LIST. NOT ALL ABBREVIATIONS AND SYMBOLS ARE USED IN THESE CONTRACT DRAWINGS.

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SOUTH CAROLINA — No. 44247 — REGISTERED PROFESSIONAL ENGINEER — MARK MEKHAEL
12/29/25

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

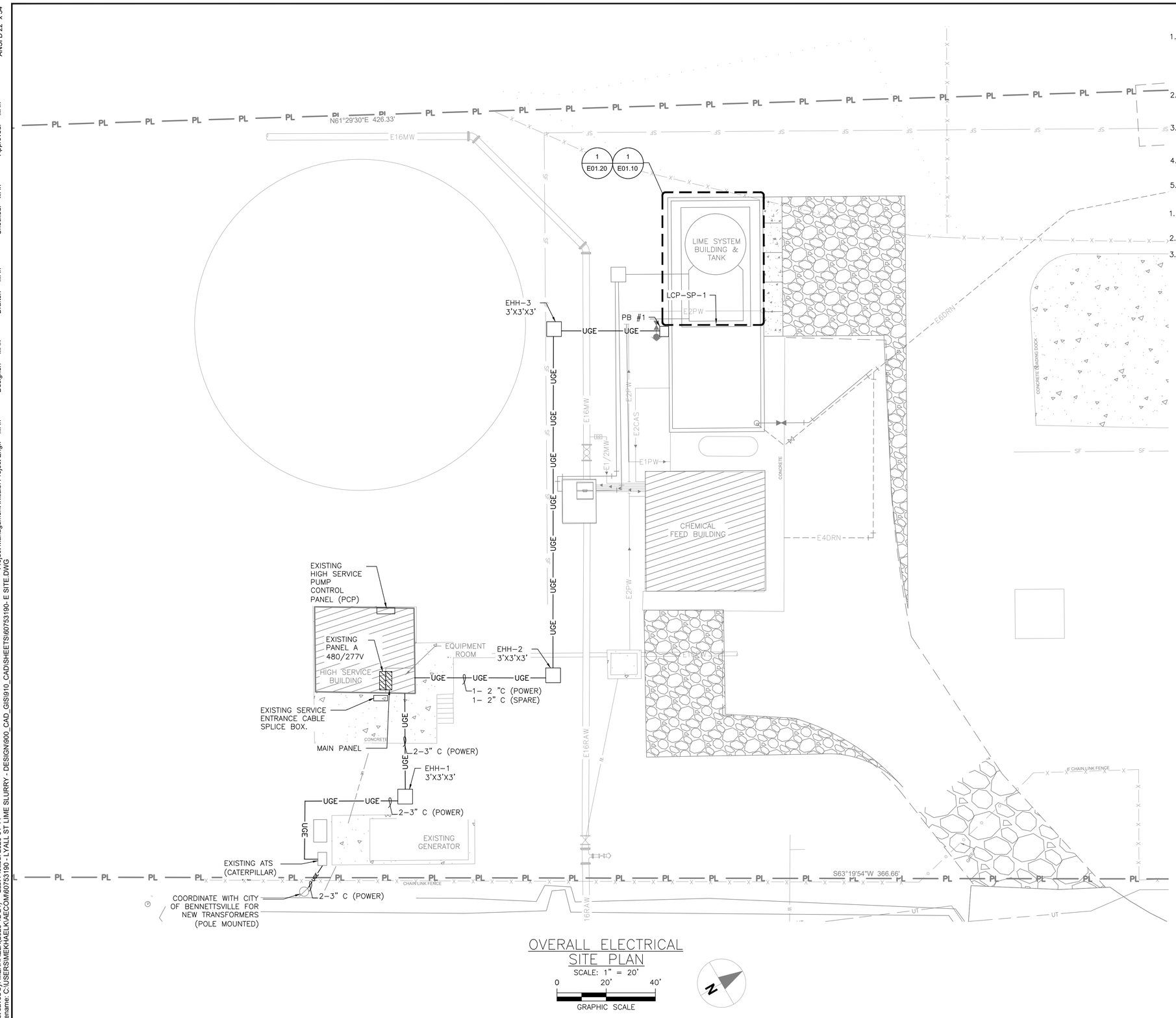
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

ELECTRICAL LEGEND AND ABBREVIATIONS

SHEET NUMBER

E00.01



OVERALL ELECTRICAL SITE PLAN

SCALE: 1" = 20'

0 20' 40'

GRAPHIC SCALE

N

GENERAL NOTES:

1. ALL ELECTRICAL SERVICE REQUIREMENTS TO BE COORDINATED WITH LOCAL ELECTRIC UTILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES ASSOCIATED WITH PROVIDING NEW OR UPGRADED ELECTRIC SERVICE TO THE SITE. THE WORK RELATED TO THE ELECTRIC SERVICE UPGRADE IS ESTIMATED TO BE $14,540.
2. PLAN SHOWS PROPOSED ROUTING FOR DUCTBANKS AND PROPOSED LOCATIONS FOR HANDHOLES. REFER TO CIVIL PLANS FOR SITE UTILITIES.
3. PLAN INDICATES CONDUIT COUNTS FOR POWER. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR CONDUCTORS SIZES. SEE SHEET E01.30.
4. CONCRETE ENCASE ALL DUCT BANKS UNLESS OTHERWISE NOTES.
5. PROVIDE A PULL CORD IN EACH SPARE CONDUIT.

ELECTRICAL KEY NOTES:

1. ROUTE RACEWAYS OVER CONTAINMENT WALL. ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID STEEL. ALL SUPPORTING MATERIAL SHALL BE STAINLESS STEEL.
2. REMOVE EXISTING SPLICE BOX CABLES AND RACEWAYS. PLUG CONDUIT OPENINGS.
3. DEMO EXISTING FUSED DISCONNECT SWITCH. PLACE NEW MAIN PANEL AT THE SAME LOCATION. REFER TO ONE-LINE DIAGRAM ON SHEET E01.30.

BID DOCUMENTS
THESE DOCUMENTS ARE FOR THE PURPOSE OF SOLICITATION OF BIDS AND ARE NOT FOR USE FOR CONSTRUCTION

AECOM

PROJECT

LIME SLURRY FEED SYSTEM FOR THE LYALL STREET WATER TREATMENT PLANT
103 LYALL STREET
BENNETTSVILLE, SC 29512

CLIENT

CITY OF BENNETTSVILLE
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REGISTRATION

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — AECOM TECHNICAL SERVICES, INC. — No. 1473

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 44247 — MARK MAHER MERHAELIK — 12/29/25

ISSUE/REVISION

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PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

OVERALL ELECTRICAL SITE PLAN

SHEET NUMBER

E01.00

Last saved by: MERHAELIK(2025-12-24) Last Plotted: 2026-01-14
Filename: C:\USERS\MERHAELIK\AECOM\60753190 - LYALL ST LIME SLURRY - DESIGN\900_CAD_GIS\910_CAD\SHEETS\60753190- E SITE.DWG
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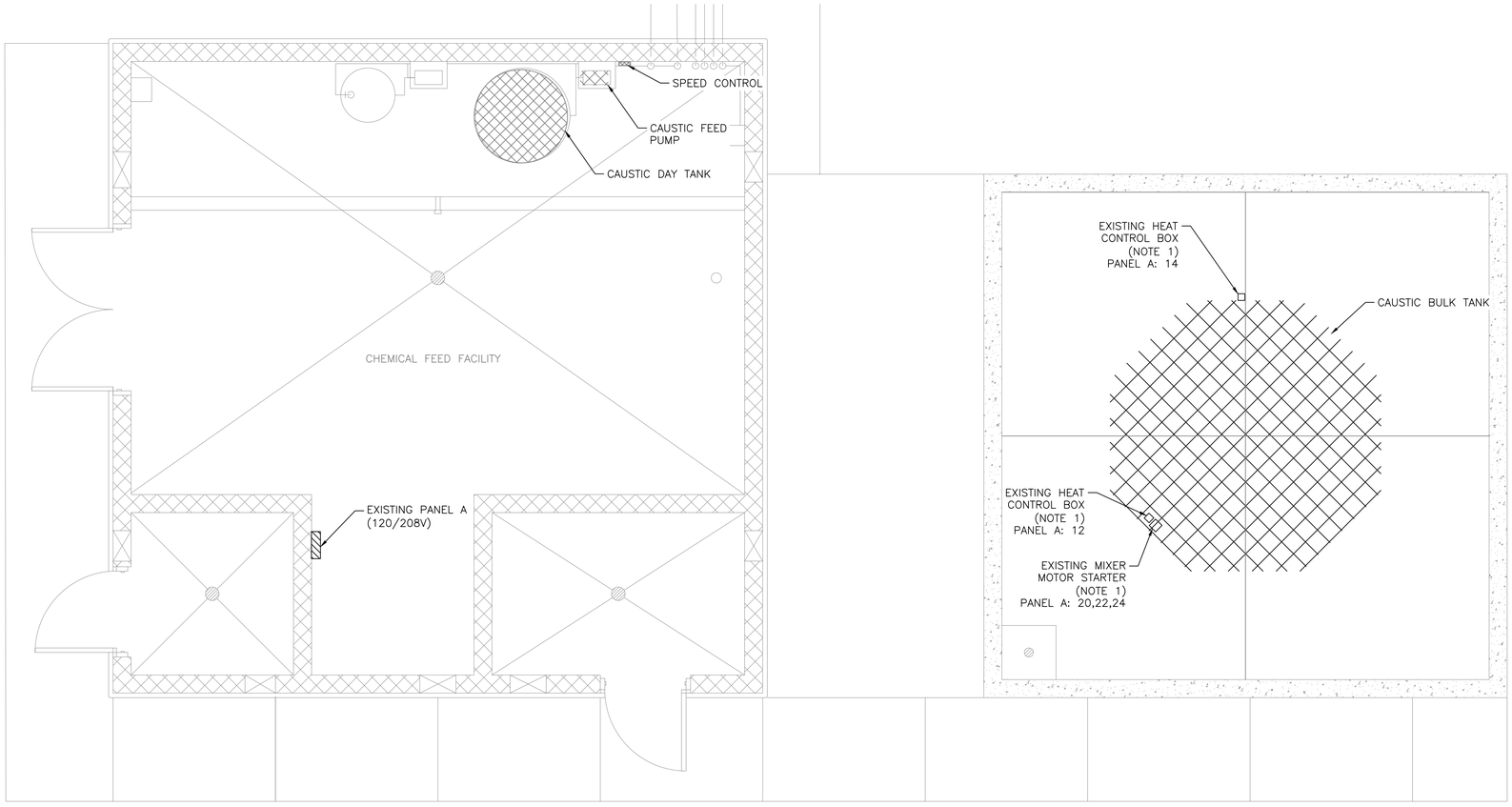

NOTES:

1. COORDINATE WITH OWNER FOR REMOVAL OF CAUSTIC BULK TANK, MIXER, HEAT TRACE CONTROLLER, CAUSTIC DAY TANK, CAUSTIC METERING PUMP AND ALL ASSOCIATED ELECTRICAL DEVICES AND CONDUITS BACK TO THE ORIGINATING PANEL OR JUNCTION BOX IN THE CHEMICAL BUILDING. PLUG IN USED OPENINGS. TAG CIRCUIT BREAKERS SPARE.

DEMOLITION PLAN
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE

NORTH

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No. 1473

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 44247
KLARA MAHER MEKHAEL
12/29/2025

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

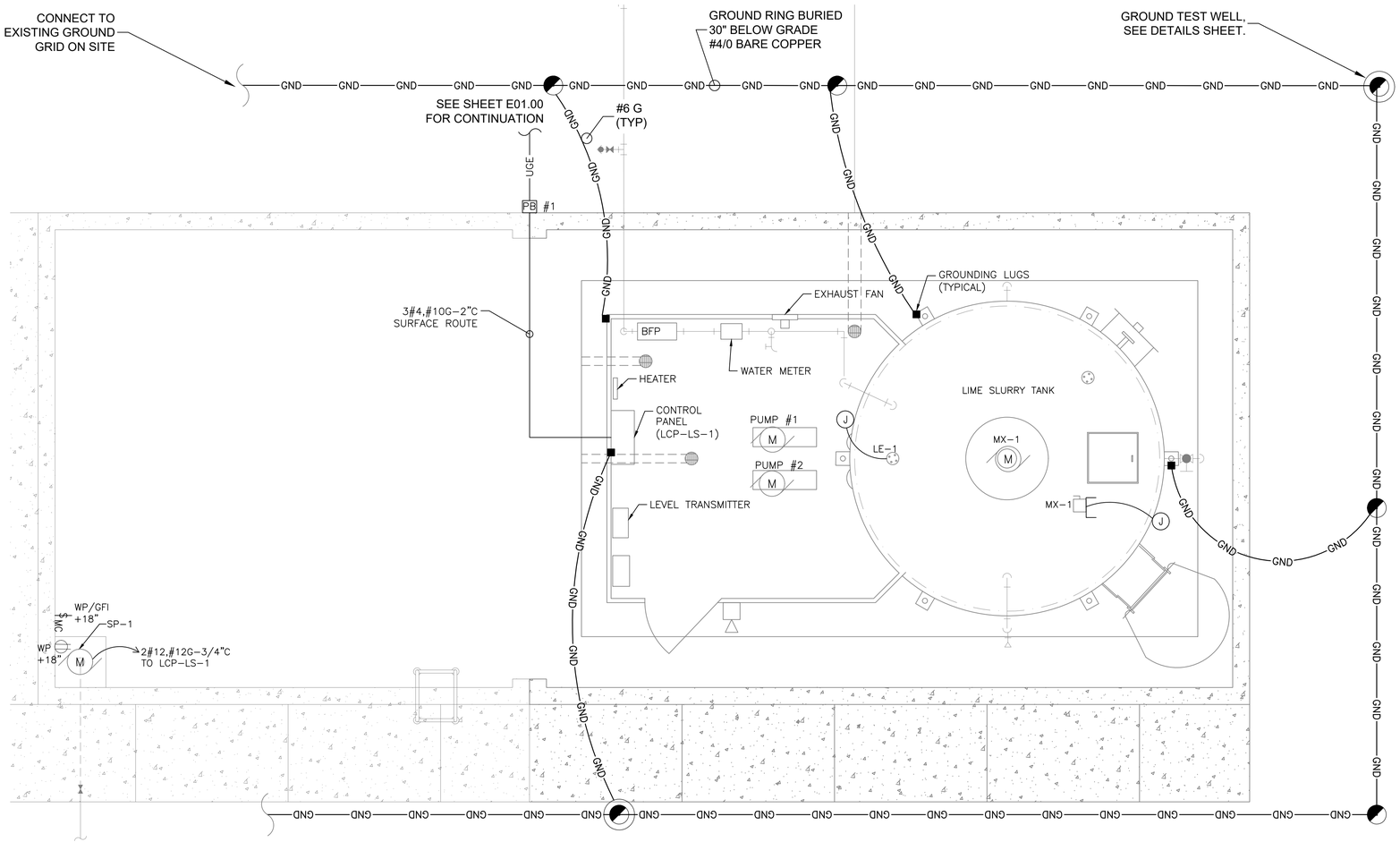
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

ELECTRICAL DEMOLITION PLAN

SHEET NUMBER

E01.10



PLAN
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE

NORTH

GENERAL NOTES:

1. COORDINATE WITH LIQUID LIME SYSTEM VENDOR CABLING REQUIREMENTS FOR PROCESS EQUIPMENT AND INSTRUMENTS, AND HVAC EQUIPMENT.
2. INTERIOR LIGHTING, SWITCHES AND RECEPTACLES ARE ALL PREWIRED AND WILL BE FED THROUGH THE SYSTEM CONTROL PANEL.
3. THE EQUIPMENT ARRANGEMENT IS DEPICTED IN A GENERAL ARRANGEMENT. ALL ELECTRICAL CIRCUITING AND CABLING IS PROVIDED BY THE EQUIPMENT VENDOR. COORDINATE WITH THE REQUIREMENTS OF SPECIFICATION SECTION 11245.
4. CONTRACTOR TO PROVIDE TEMPORARY POWER TO MIXER HEATER AT INSTALLATION IN CASE POWER TO CONTROL PANEL WAS NOT YET AVAILABLE AT THE TIME THE MIXER IS DELIVERED TO THE SITE.

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REGISTRATION

SOUTH CAROLINA AECOM TECHNICAL SERVICES, INC. No. 1473 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 44247 MIKHAEL MEKHAEL 12/29/2025

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

LIME SLURRY CONTAINMENT ELECTRICAL PLAN

SHEET NUMBER

E01.20

Last saved by: MEKHAELK (2025-12-24) Last Plotted: 2026-01-14
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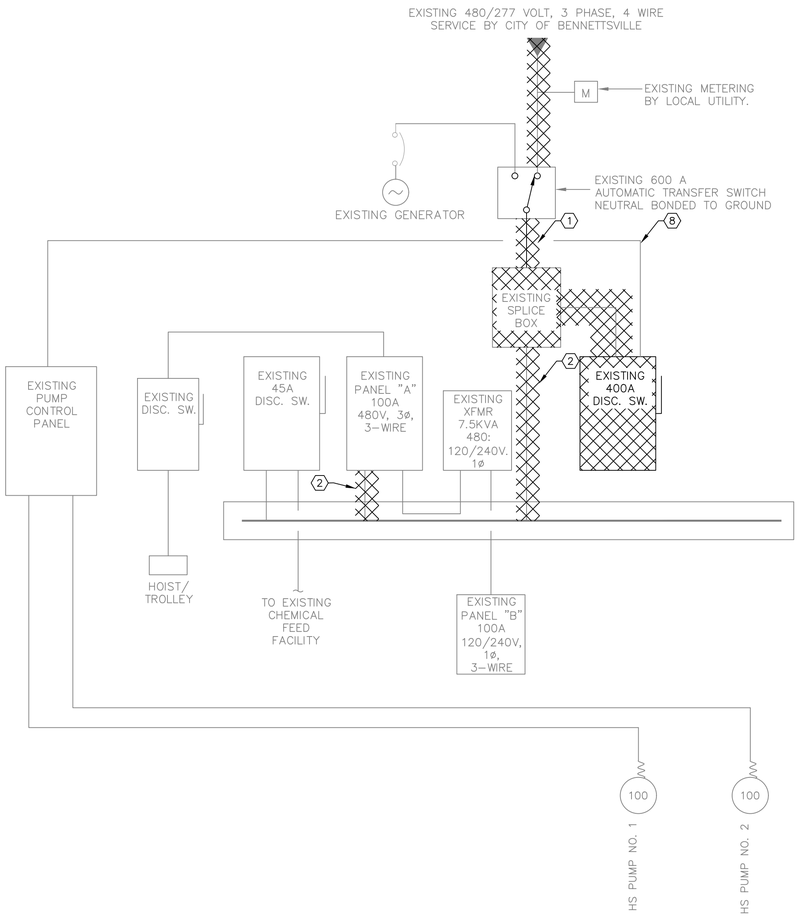
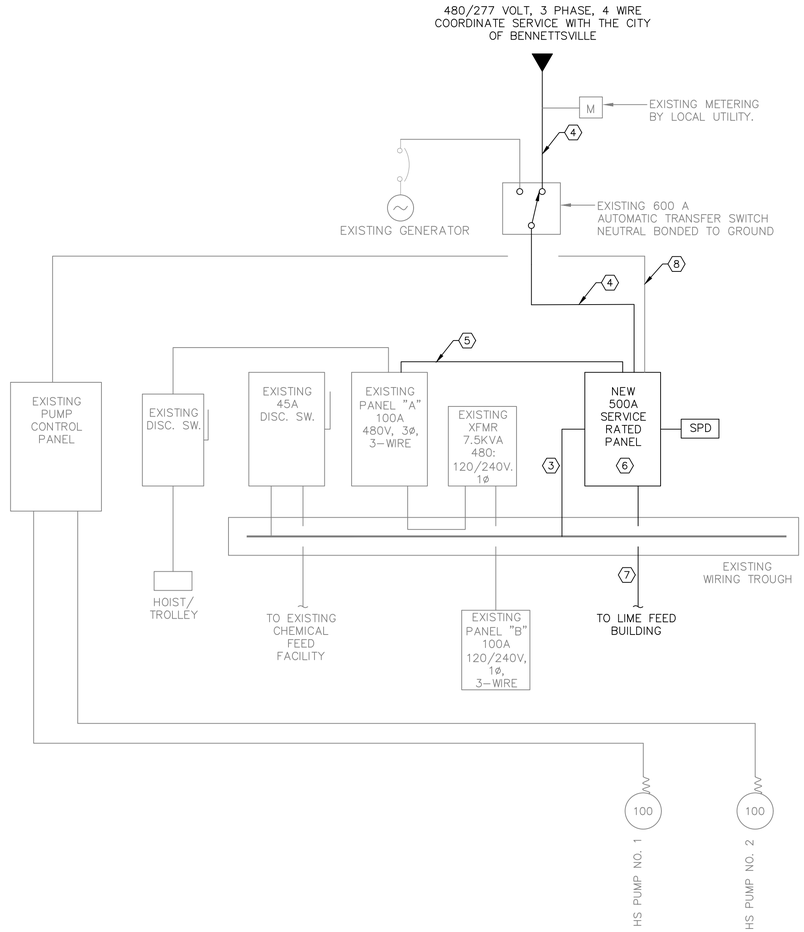


EXISTING DISTRIBUTION RISER DIAGRAM

SCALE: NONE

TAG:	MAIN PANEL									NEMA 12	AIC:	42 KAIC
MAINS:	500 MCB									TOP ENTRY	SPD:	YES
SERVICE:	480/277V,3p,4W									* = GFCI CIRCUIT BREAKER	TRIM:	SURFACE
CKT	C/B	LOAD	Type	kVA	A PHASE	B PHASE	C PHASE	kVA	Type	LOAD	C/B	CKT
1	400/3	HIGH SERVICE PCP		34.4	62.7			28.3		PANEL A	100/3	2
3	-	-		34.4		62.7		28.3		-	-	4
5	-	-		34.4			40.5	6.1		-	-	6
7	60/3	LCP-LS-1 LIME SYSTEM		5.8	12.3			6.5		EXISTING CHEMICAL BUILDING	45/3	8
9	-	-		5.8		12.3		6.5		-	-	10
11	-	-		5.8			12	6.2		-	-	12
13	30/3	SPARE			0					SPARE	30/3	14
15	-	-				0				-	-	16
17	-	-					0			-	-	18
19	30/3	SPARE			0					SPARE	30/3	20
21	-	-				0				-	-	22
23	-	-					0			-	-	24
25	30/3	SPARE			0					SPARE	30/3	26
27	-	-				0				-	-	28
29	-	-					0			-	-	30
		TOTAL:		120.60	75.00	75.00	52.50	81.90				
		TOTAL KVA:		202.50								
		A ph Amps		270.76								
		B ph Amps		270.76								
		C ph Amps		189.53								



MODIFIED DISTRIBUTION RISER DIAGRAM

SCALE: NONE

ELECTRICAL SERVICE LOAD SUMMARY			
BUILDING OCCUPANCY TYPE: I	SERVICE DESCRIPTION:		
BUILDING SQUARE FOOTAGE: 1	480Y/277V, 3PH		
LOAD DESCRIPTION	Connected KVA	Demand FACTOR	Demand KVA
HVAC - SUMMER	1.60	100%	0.00
HVAC - WINTER	19.13	100%	19.13
LIGHTING	1.50	125%	1.88
RECEPTACLES	2.40	100%;50%	2.40
MOTOR LOADS	30.86	100%	30.86
LARGEST MOTOR LOAD	103.09	125%	128.87
MISCELLANEOUS EQUIPMENT	45.24	100%	45.24
TOTAL LOAD	203.82	KVA	228.37
TOTAL AMPACITY	245.16	AMPS	274.69

ELECTRICAL KEY NOTES:

1. DEMOLISH CONDUIT FROM EXISTING ATS TO SPLICE BOX LOCATED ON THE EXTERIOR OF THE HIGH SERVICE PUMPS BUILDING.
2. DEMOLISH CONDUCTORS FROM THE SPLICE BOX TO 480V PANEL A ROUTED THROUGH THE WIREWAY INSIDE THE HIGH SERVICE BUILDING.
3. 3#6,#10G–1"C.
4. 2x4–250KCMIL,#2G– 3"C.
5. 3#1,#8G–1 1/2"C
6. REFER TO PANEL SCHEDULE BELOW.
7. LIME FEED CONTROL BUILDING, 3#4,#10G–2"C. REFER TO ELECTRICAL SITE PLAN.
8. EXITSING TO REMAIN CONDUCTORS AND 4" CONDUIT TO HIGH SERVICE PUMPS CONTROL PANEL (PCP). DISCONNECT FROM FUSED DISCONNECT BEING DEEMOLISHED AND RECONNECT TO NEW MAIN PANEL.

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REGISTRATION

SOUTH CAROLINA — AECOM TECHNICAL SERVICES, INC. — No. 1473 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 44247 — KASHI MAHER MEKHAEL — 12/29/25

ISSUE/REVISION

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KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

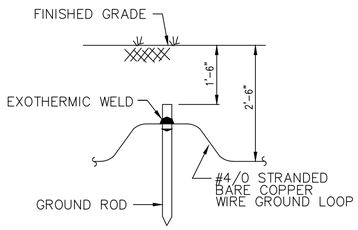
PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

ELECTRICAL ONE-LINE DIAGRAM &SCHEDULES

SHEET NUMBER

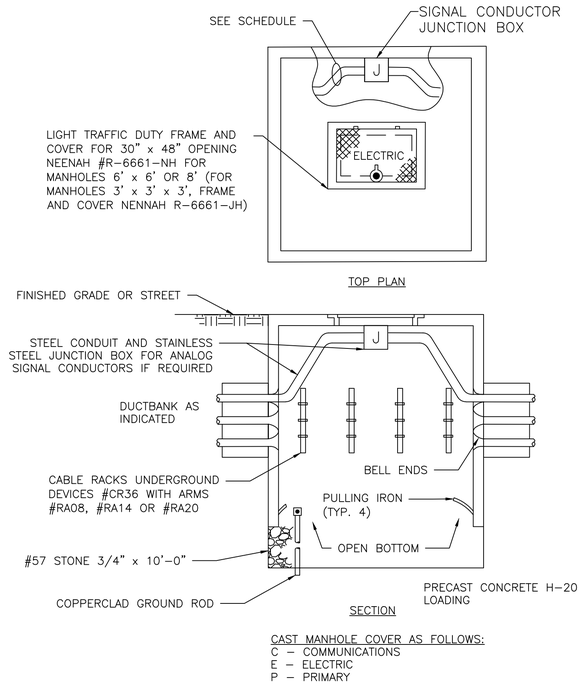
E01.30



TYPICAL EXOTHERMIC WELD CABLE TO ROD CONNECTION

DETAIL 1

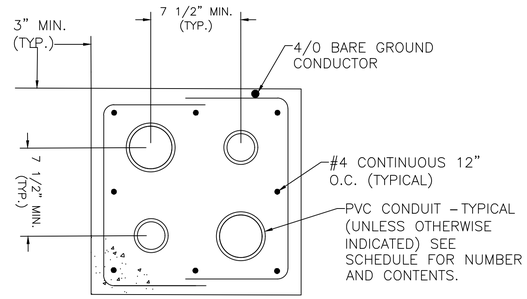
SCALE: NONE



ELECTRICAL MANHOLE/HANDHOLE

DETAIL 2

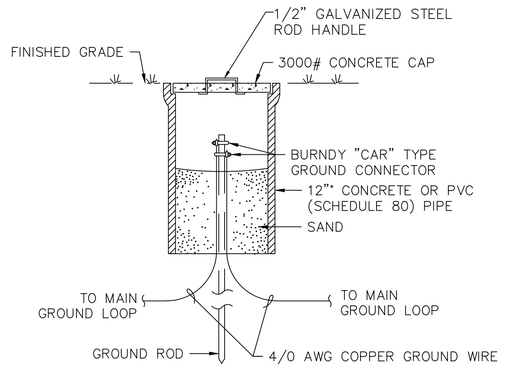
SCALE: NONE



TYPICAL DUCTBANK

DETAIL 3

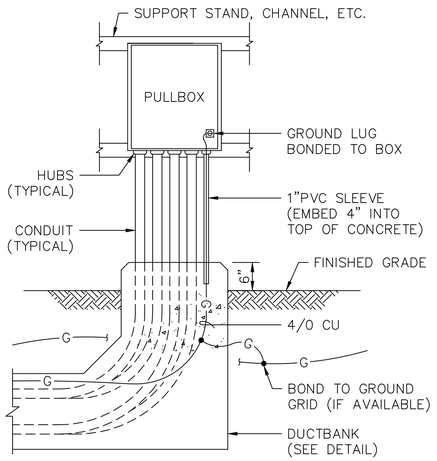
SCALE: NONE



GROUND TEST WELL

DETAIL 4

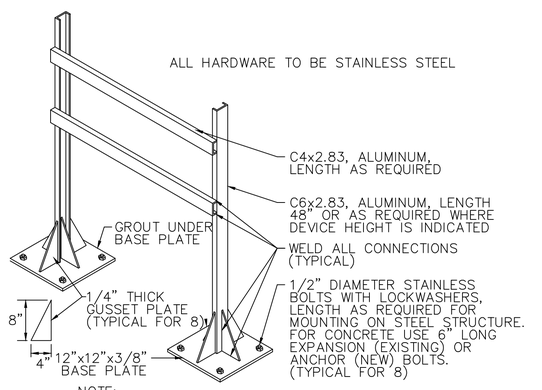
SCALE: NONE



DUCTBANK TERMINATION AND PULLBOX GROUNDING

DETAIL 5

SCALE: NONE

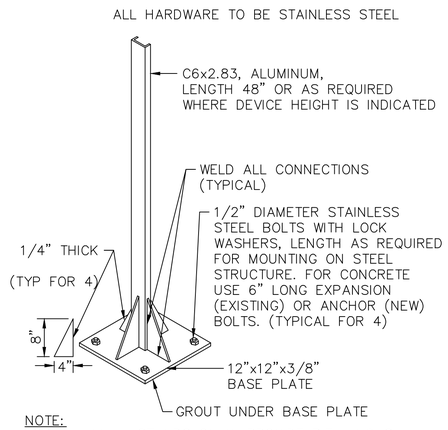


NOTE:
FOR ALUMINUM STANDS ONLY, PROVIDE BITUMINOUS PROTECTIVE COATING WHERE STAND COMES IN CONTACT WITH CONCRETE.

DUAL SUPPORT SYSTEM

DETAIL 6

SCALE: NONE



NOTE:
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SINGLE SUPPORT STAND

DETAIL 7

SCALE: NONE

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No. 44247
ILIANA IAHER ISKHAKOVA
12/29/25

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KEY PLAN

SHEET SCALE: AS SHOWN

PROJECT & FILE NUMBER

PROJECT NUMBER: 60753190
HUD/CDBG PROJECT NUMBER: 4-CI-24-001

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E01.40

Last saved by: MEKHAELK(2025-10-28) Last Plotted: 2025-10-28
Filename: C:\USERS\MEKHAELK\AECOM\60753190 - LYALL ST LIME SLURRY - DESIGN\900_CAD_GIS\910_CAD\SHEETS\60753190 - E-ELECTRICAL(REVOVER 2).DWG
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