SET NO.

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM
IMPROVEMENTS
JULY, 2021 - REVISED JUNE, 2022

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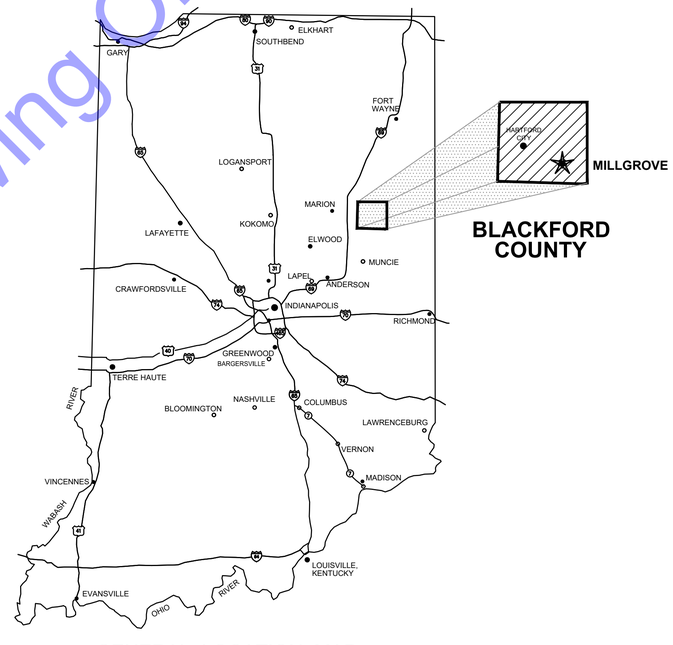

GENERAL LOCATION MAP

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APPROVED BY : _____ 7-27-21
ROBERT M. BELLUCCI
INDIANA P.E. No. 10000127
DATE :

ROBERT M. BELLUCCI REGISTERED No. 10000127 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY : _____ 7-27-21
CHRIS A. LIMCACO, P.E.
INDIANA P.E. No. 19700338
DATE :

CHRIS A. LIMCACO REGISTERED No. 19700338 STATE OF INDIANA PROFESSIONAL ENGINEER

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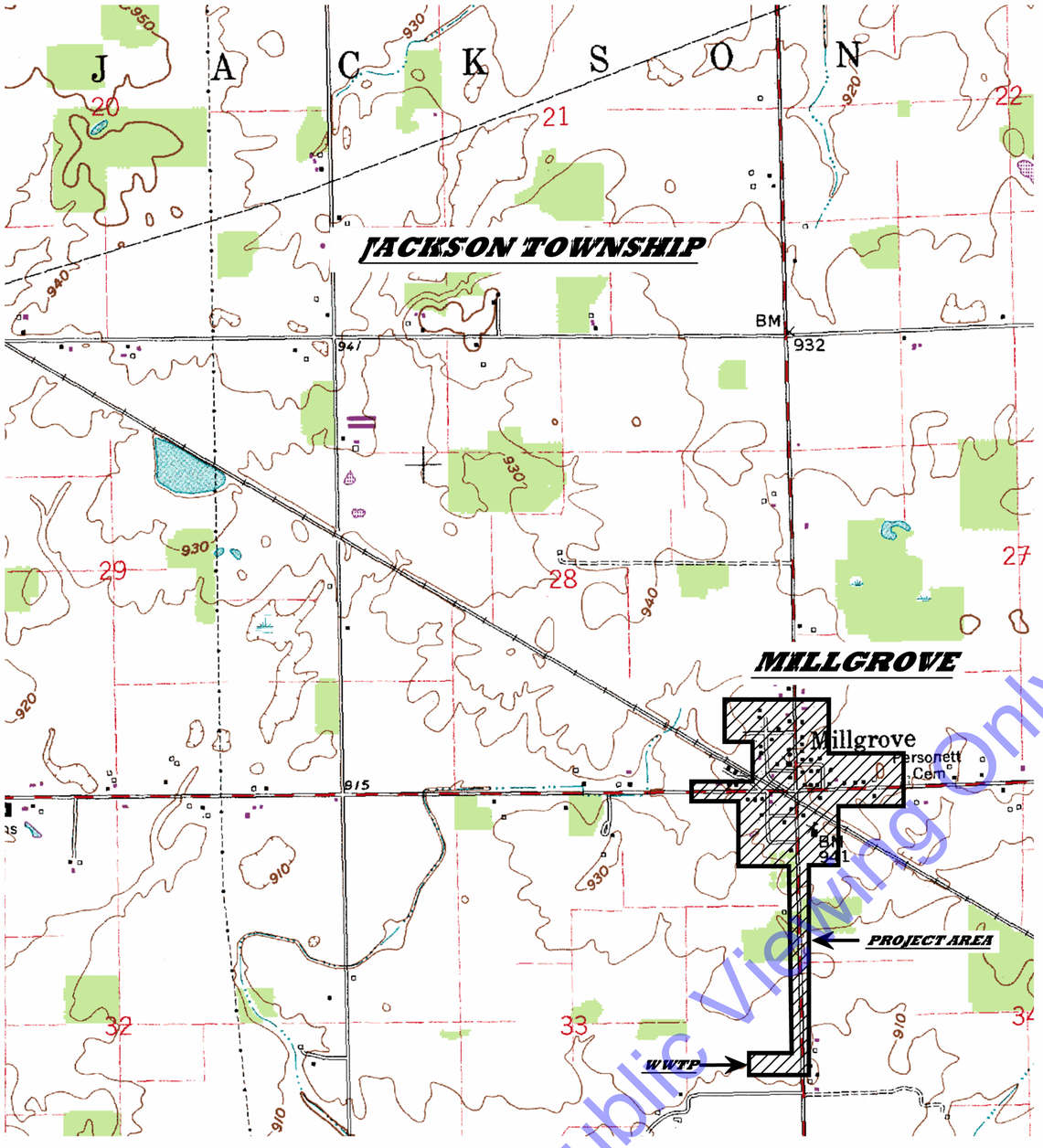

PROJECT LOCATION MAP
SCALE: 1"=800'

SCALE: 1"=800'
800' 0 800'

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OVERALL LOCATION MAP AND SHEET INDEX

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ABBREVIATIONS

AB	ANCHOR BOLT
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
@	AT
ATT	AERATION TANK TRANSFER
AUTO	AUTOMATIC
AVG	AVERAGE
BLDG	BUILDING
BM	BENCH MARK
BOT	BOTTOM
BRG	BEARING
CFM	CUBIC FEET PER MINUTE
CL	CENTERLINE
CO	CLEAN OUT
COL/C	COLUMN
CONC	CONCRETE
COP	COPPER
CJ	CONSTRUCTION JOINT
CY	CUBIC YARD
DIA	DIAMETER
DIM	DIMENSION
DI	DUCTILE IRON PIPE
DL	DEAD LOAD
DS	DOWN SPOUT
DWG	DRAWING
EA	EACH
EF	EACH FACE
EFFL	EFFLUENT
EL	ELEVATION
EW	EACH WAY
EXF	EXHAUST FAN
EX,EXIST	EXISTING
EXP JP	EXPANSION JOINT
FCA	FLANGED COUPLING ADAPTER
FCAR	FLANGED COUPLING ADAPTER, RESTRAINED
FD	FLOOR DRAIN
FDN	FOUNDATION
FH	FIRE HYDRANT
FLD	FILTRATE DRAIN
FLG	FLANGE
FL	FLUSHING LINE
FLR	FLOOR
FRP	FIBER REINFORCED PLASTIC
FT	FEET OR FOOT
FTG	FOOTING
GALV	GALVANIZED
GEN	GENERAL
GRD	GROUND OR GRADE
HB	HOSE BIBB
HORIZ	HORIZONTAL
HP	HORSEPOWER
ID	INSIDE DIAMETER
IJ	ISOLATION JOINT
INV	INVERT
IP	IRON PIN
LAV	LAVATORY
LB	POUND
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LTG	LIGHTING
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MGD	MILLIONS GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM, MINUTE
MJ	MECHANICAL JOINT
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTACT
NO	NORMALLY OPEN
NO.	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPP	OPPOSITE
PB	PULL BOX
PE	POLYETHYLENE EXP. JT. MATERIAL
POJ	PUSH ON JOINT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS OR RISER
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REINF	REINFORCING
REQ'D	REQUIRED
R/W	RIGHT-OF-WAY
SAN	SANITARY
SAS	SANITARY SEWER
SCH	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SL	SAMPLE LINE
SQ	SQUARE
STD	STANDARD
S STL, SS	STAINLESS STEEL
STL	STEEL
SUP	SUPERNATANT
SY	SQUARE YARD
TOS	TOP OF SLAB
TOW	TOP OF WALL
TW	TERTIARY WATER
TYP	TYPICAL
V	VACUUM OR VALVE
VAR	VARIES
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WH	WATER HEATER
WWF	WELDED WIRE FABRIC
YH	YARD HYDRANT

GENERAL SCHEMATIC LEGEND, ABBREVIATIONS, AND SYMBOLS

- QUICK DISCONNECT
- FLANGED SPOOL SECTION
- PRV — PRESSURE REDUCER VALVE
- FLANGED COUPLING ADAPTER
- BALL CHECK VALVE
- M — MOTOR ACTUATOR
- FLEXIBLE CONNECTION
- SCR — FLANGE FILLER & S.S. MESH SCREEN
- W V90 — 90° V-NOTCH WEIR
- M — MAGNETIC FLOW METER
- ULTRASONIC SENSOR
- SUBMERSIBLE PUMP
- BOOSTER PUMP
- ARV — AIR RELIEF VALVE
- FM — FLOW METER
- GV — GATE VALVE
- FCV — FLOW CONTROL VALVE
- VALVE
- ECCENTRIC PLUG VALVE
- CHECK VALVE
- INCREASER / REDUCER
- BV — BUTTERFLY VALVE
- PIPE THROUGH FLOOR / WALL
- BALL VALVE
- BLIND FLANGE OR PLUG
- HOSE BIBB
- STOP PLATE
- W — WEIR

PROCESS PIPE AND EQUIPMENT ABBREVIATIONS

A	AIR
AV	AIR VENTS
B	BAFFLE
BW	BACKWASH
CS	CHLORINE SOLUTION
CW	COLD WATER
D OR DL	DRAIN LINE
DEC	DECANT
DSPT	DOWN SPOUT
E	ELECTRICAL CONDUIT
EA	EXHAUST AIR
EAL	EXISTING / ABANDONED LINE
F	FILTER
FCAR	FLANGED COUPLING ADAPTER RESTRAINED
FDL	FILTRATE DRAIN LINE
FL	FLUSHING LINE
FM	FORCE MAIN
FW	FINISHED WATER
GL	GAS LINE (NATURAL)
HW	HOT WATER
NPW	NON-POTABLE WATER
PD	PUMP DISCHARGE
PPE	PACKAGE PLANT EFFLUENT
PP	POLYPHOSPHATE
PW	POTABLE WATER
R	RECIRCULATION
RD	ROOF DRAIN
RW	RAW WATER
SAS	SANITARY SEWER
SEW	SEAL WATER
SL	SAMPLE LINE
SOS	STORM SEWER
SP	STOP PLATE
SPD	SUMP PUMP DISCHARGE
SR	SURGE RETURN
SS	SLUDGE SUCTION
SUP	SUPERNATANT
SV	SOLENOID VALVE
SWM	SUBMERGED WITHDRAWAL MANIFOLD
V	VENTS
W	WEIR
WL	WATER LINE

PIPING SCHEMATIC LINE TYPES

- NEW PIPING AND EQUIPMENT
- EXISTING PIPING AND EQUIPMENT
- FUTURE PIPING AND EQUIPMENT

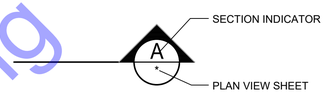
TWO LINE PIPING SYMBOLS

- FLANGED JOINT
- MECHANICAL JOINT
- VALVE (PLUG, GATE, ETC.)
- CHECK VALVE
- BUTTERFLY VALVE
- M — VALVE WITH MOTOR ACTUATOR
- FLANGED COUPLING ADAPTER, RESTRAINED

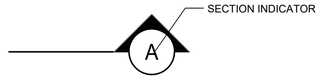
HATCHING SYMBOLS

- -CMU WALL (PLAN VIEW) -GRANULAR BACKFILL (PROFILE VIEW)
- - DEMOLITION (CONTRACTOR SHALL REFER TO DETAILED SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND SCHEDULES.
- - GROUT
- - CONCRETE
- - STEEL
- - COMPACTED GRANULAR BACKFILL OR COMPACTED FOUNDATION
- - ABANDONED IN PLACE

TYPICAL SECTION CUTS



SECTION CUT ON DIFFERENT SHEET



SECTION CUT ON SAME SHEET

SITE PLAN LEGEND

EXISTING TELEPHONE LINE	
EXISTING GAS LINE	
EXISTING GAS VALVE	
EXISTING WATER LINE	
EXISTING WATER VALVE	
EXISTING FIBER OPTIC LINE	
EXISTING OVERHEAD ELECTRIC LINE	
EXISTING BURIED ELECTRIC	
EXISTING NON-POTABLE WATER LINE	
EXISTING POTABLE WATER LINE	
EXISTING BURIED TELEPHONE LINE	
EXISTING FENCE	
APPARENT RIGHT-OF-WAY	
APPARENT PROPERTY LINE	
EDGE OF DRIVE	
EDGE OF DRIVE WITH CURB	
EXISTING MAJOR CONTOUR LINE	
EXISTING MINOR CONTOUR LINE	
NEW CONCRETE SIDEWALK	
NEW WATER LINE	
PROPOSED MAJOR CONTOUR LINE	
PROPOSED MINOR CONTOUR LINE	
MONUMENT	
CONTROL POINT	
FLAG POLE	
POST	
STUMP	
BUSH / HEDGE	
DECIDUOUS TREE	
CONIFEROUS TREE	
SIGN	
LARGE ROCK	
UTILITY LOCATE FLAG	
GAS METER	
GAS LINE MARKER	
POWER/LIGHT POLE	
ELECTRIC METER	
GUY WIRE	
ELECTRIC PANEL	
TEL/TV PEDESTAL	
WATER METER	
VALVE	
FIRE HYDRANT	
FLUSH HYDRANT	
EXISTING PIPE PLUG	
EXISTING STORM MANHOLE/INLET	
EXISTING SANITARY MH	
TOP OF PIPE	
CURB INLET	
STORM INLET SQUARE	
STORM INLET ROUND	
NEW VALVE	
NEW FIRE HYDRANT	
NEW FLUSH HYDRANT	
NEW WET SADDLE AND VALVE BODY	
NEW PLUG	
NEW LINE STOP	
NEW SANITARY MH	

GENERAL NOTES:

1. ALL PROPERTY AND RIGHT-OF-WAY LINES SHOWN ARE APPARENT AND SHALL NOT BE DEEMED AS EXACT LOCATIONS, UNLESS OTHERWISE NOTED. INFORMATION WAS OBTAINED THROUGH INDIANA ON-LINE GIS WEBSITE.
2. CONTRACTOR SHALL MAINTAIN 10'-0" HORIZONTAL AND 1'-6" VERTICAL SEPARATION BETWEEN SEWERS (INCLUDING SERVICE LATERALS & WATER MAINS IN ACCORDANCE WITH IDEM REQUIREMENTS, UNLESS SPECIFICALLY NOTED IN THE PLANS OTHERWISE.) MANHOLES AND WATER MAINS SHALL HAVE MIN. 8'-0" SEPARATION, UNLESS OTHERWISE NOTED IN PLANS.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING LOCATIONS OF ALL EXISTING UTILITIES NEAR ALL PROPOSED WORK ACTIVITIES. IF UTILITY CONFLICTS OCCUR, CONTRACTOR SHALL NOTIFY RPR PRIOR TO PROCEEDING WITH WORK.
4. ALL EXPOSED PROCESS PIPING (EXCLUDING AIR PIPING) SHALL BE HEAT TRACED AND INSULATED. REFER TO ELECTRICAL DRAWINGS AND DETAILED SPECIFICATIONS FOR ADDITIONAL DETAILS.
5. EXISTING UTILITY INFORMATION SHOWN IN DRAWINGS, MEETS "ASCE 38-02" QUALITY LEVEL C, UNLESS OTHERWISE NOTED.

UTILITY COLLECTION AND PROJECT DIRECTION OF EXISTING SUBSURFACE UTILITY DATA:
UTILITY QUALITY DESCRIPTIONS:

UTILITY QUALITY LEVEL A: PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. ACCURACY OF LOCATION MATCHES PROJECT SURVEY TOLERANCE.

UTILITY QUALITY LEVEL B: INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION SUBSURFACE UTILITIES. THE RELIABILITY OF THIS INFORMATION IS SURVEYED TO PROJECT CONTROL AND SUBJECT TO ACCURACY LEVELS OF THE GEOPHYSICAL TOLERANCE DEFINED BY THE PROJECT

UTILITY LEVEL C: INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND CORRELATING QUALITY LEVEL D INFORMATION.

UTILITY LEVEL D: INFORMATION DERIVED FROM EXISTING RECORDS OR VERBAL RECOLLECTIONS.

DISCLAIMER NOTE:
THIS DRAWING REFLECTS TYPICAL INFORMATION, SOME MAY NOT BE APPLICABLE TO THIS PROJECT.

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CHRIS A. LIMCACO REGISTERED No. 19700338 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT BLACKFORD COUNTY, INDIANA

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GENERAL NOTES AND ABBREVIATIONS, LEGENDS AND SYMBOLS

Drawing No: **G3**

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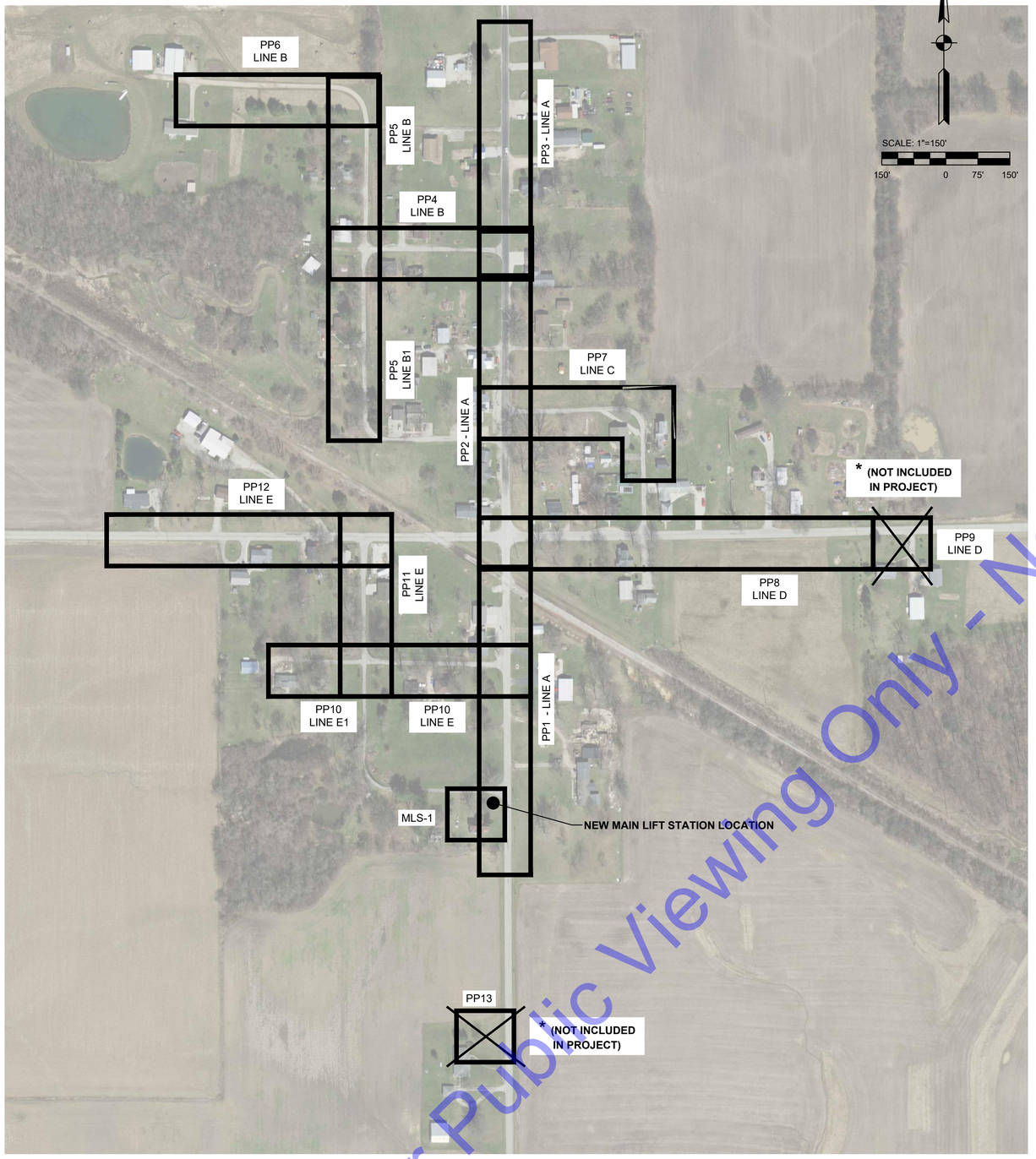

DRAWING INDEX

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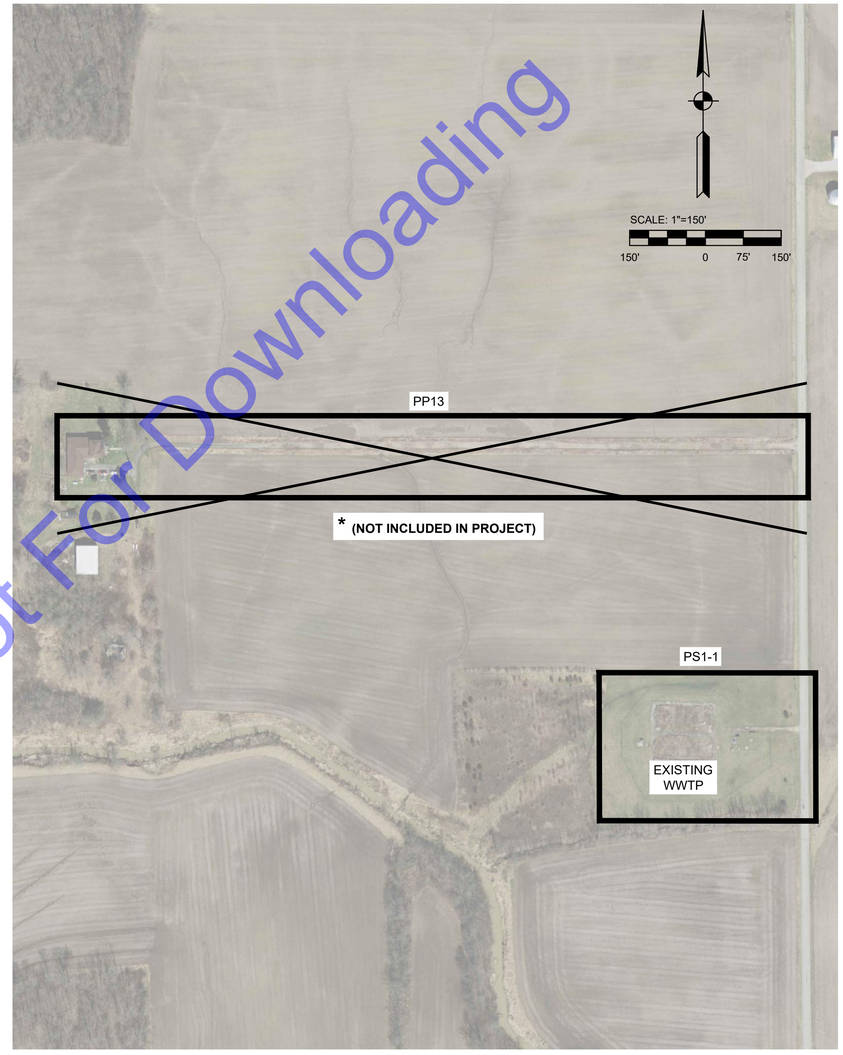

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PROJECT LOCATION MAP AND DRAWING INDEX

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G4
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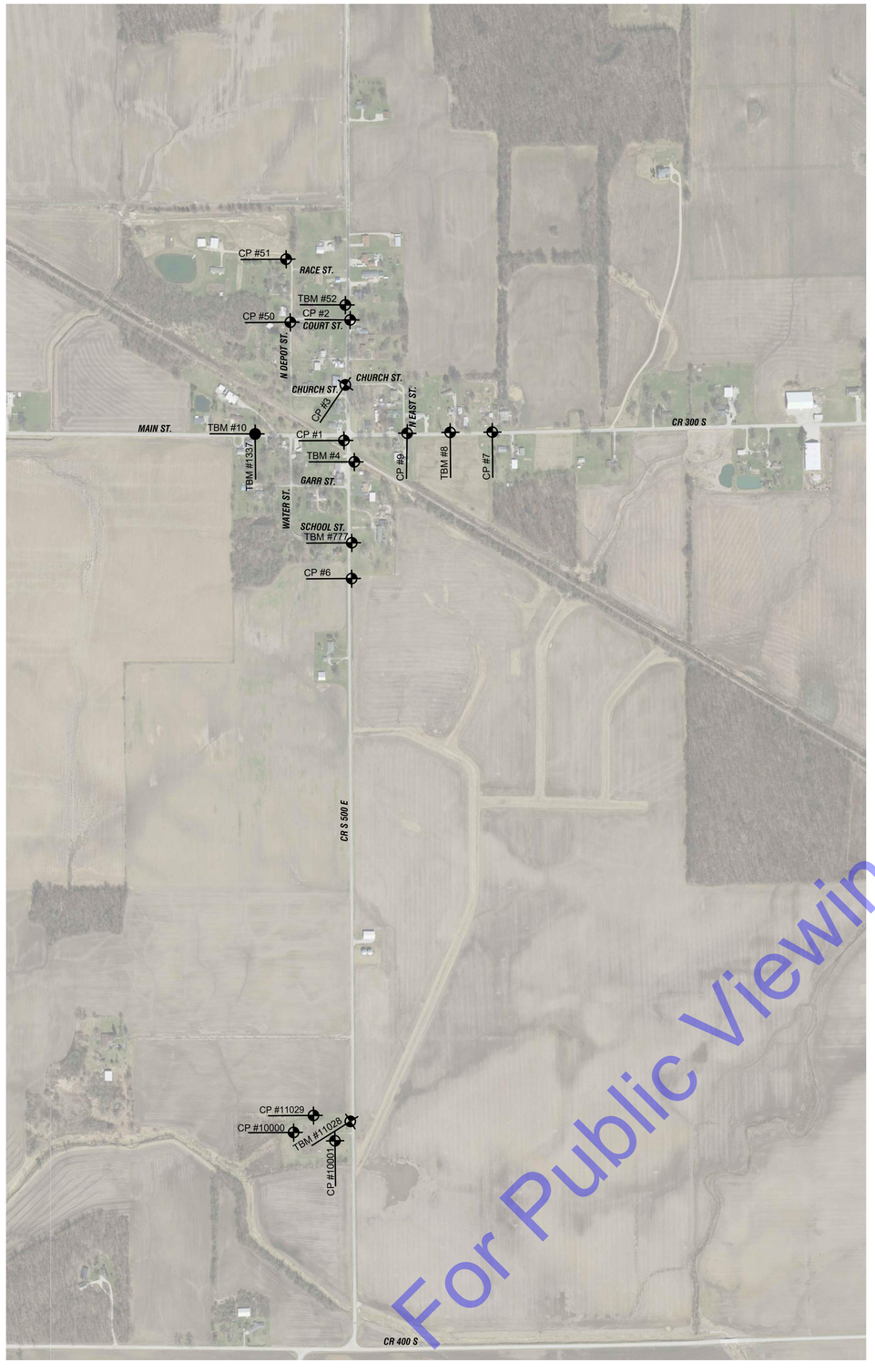

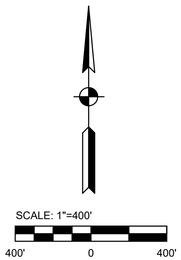

BENCH MARKS		
IDENTIFIER	ELEVATION	DESCRIPTION
TBM#4	938.23	CUT "X" NORTHWEST ANCHOR BOLT CONTROL PANEL
TBM#8	941.31	BOAT SPIKE APPROX 1' UP SOUTH SIDE PP#3030843
TBM#10	934.80	BOAT SPIKE APPROX 1' UP SOUTHWEST SIDE PP#BL40232
TBM#52	937.50	BOAT SPIKE APPROX 1' UP ON EAST SIDE PP#BL40-306
TBM#777	932.34	BOAT SPIKE APPROX 1' UP ON NORTHWEST SIDE PP#BL40171
TBM#1337	934.80	BOAT SPIKE APPROX 1' UP ON SOUTHWEST SIDE PP#30300205
TBM#11028	903.92	BOAT SPIKE APPROX 1' UP ON WEST SIDE PP#BL40-268

CONTROL POINTS			
IDENTIFIER	NORTHING	EASTING	DESCRIPTION
CP#1	1878881.20	436701.83	CAPPED REBAR
CP#2	1879580.22	436737.67	CAPPED REBAR
CP#3	1879203.31	436710.22	MAGSPIKE
CP#6	1878080.35	436746.40	CAPPED REBAR
CP#7	1878929.35	437561.97	CAPPED REBAR
CP#9	1878922.53	437068.00	CAPPED REBAR
CP#50	1879566.68	436390.90	MAGSPIKE
CP#51	1879932.56	436366.44	CAPPED REBAR
CP#10000	1874868.63	436409.82	CAPPED REBAR
CP#10001	1874820.20	436649.43	CAPPED REBAR
CP#11029	1874967.21	436525.21	CAPPED REBAR

SURVEY CONTROL COORDINATES:

HORIZONTAL-US STATE PLANE COORDINATES: NAD83 (NORTH AMERICAN DATUM)

VERTICAL- USGS 1988 NAVD (NORTH AMERICAN VERTICAL DATUM)

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REGISTERED
No. 19700338
STATE OF INDIANA
PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT BLACKFORD COUNTY, INDIANA

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SURVEY DATA DRAWING

Drawing No: **G5**

Sheet: 05 OF 65

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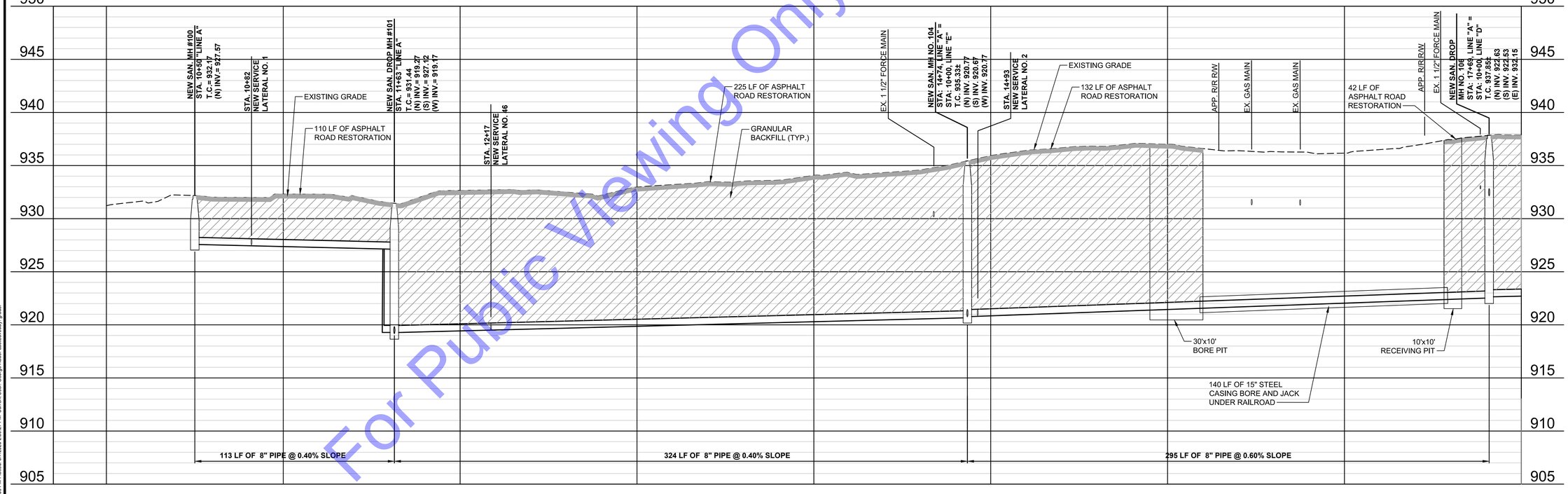
FOR CONTINUATION SEE SHEET PP10

BULLOCK, JUSTIN J
05-04-33-100-005.000-003
EXISTING TREE LINE

SARGENT, CARL
05-04-33-101-038.000-003
3126 S 500 E

CONNECT NEW LATERAL TO EXISTING LATERAL UPSTREAM OF EXISTING SEPTIC TANK
NEW LIFT STATION (SEE SHEET MLS-2)
NEW LIFT STATION SITE (SEE SHEET MLS-1)
SCHOOL ST. (ASPHALT)
EXISTING 1 1/2" FORCEMAIN (TO BE ABANDONED IN PLACE)
SARGENT, RUTH L
05-04-33-101-025.000-003
S 500 E
SARGENT, RUTH L
05-04-33-101-025.000-003
104 GARR ST.
W. GARR ST. (ASPHALT)
LINE "E"
DYER, AMELIA D
05-04-33-101-018.000-003
3044 S 500 E
EXISTING 2" FORCEMAIN (TO BE ABANDONED IN PLACE)
30'x10' BORE PIT
10'x10' RECEIVING PIT
PENNSYLVANIA LINES, LLC
C/O NORFOLK SOUTHERN RAILROAD
05-04-33-101-039.000-003
CR E 300 S (ASPHALT)
NEW 6" LATERAL (CONNECT TO EXISTING LINE)
LINE "A"
CR S 500 E (ASPHALT)
NEW SAN. MH #100
T.C.= 932.17
N: 1878165.88
E: 436727.89
NEW SAN. DROP MH #101
T.C.= 931.44
N: 1878278.70
E: 436727.89
CONNECT NEW LATERAL TO EXISTING LATERAL UPSTREAM OF EXISTING SEPTIC TANK
EXISTING SEPTIC TANK TO BE ABANDONED (TYP.)
(no shots closer to house)
TIMMONS, PAUL A.
05-04-34-202-004.000-003
3089 S 500 E
NEW SAN. DROP MH #104
T.C.= 935.43
N: 1878602.67
E: 436724.89
CONNECT NEW LATERAL TO EXISTING LATERAL UPSTREAM OF EXISTING SEPTIC TANK
SARGENT, JERRY L. & BETTY L.
05-04-34-202-003.000-003
3047 S 500 E
140 LF OF 18" STEEL CASING BORE AND JACK UNDER RAILROAD
NEW SAN. DROP MH #106
T.C.= 937.87
N: 1878897.67
E: 436724.89
PENNSYLVANIA LINES, LLC
C/O NORFOLK SOUTHERN RAILROAD
05-04-34-900-008.000-003
FOR CONTINUATION SEE SHEET PP2

PLAN VIEW
SCALE: 1"=30'



PROFILE VIEW
HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES
1. ANY NEW SEWER LATERAL OR MAIN WITHIN RADIUS (50') OF A PRIVATE WELL WILL BE CONSTRUCTED WITH WATER GRADE PIPE.

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7-27-2021
Signature Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "A"

Drawing No:
PP1
Sheet: 06 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPRV\S05 CAD\01-CURRENT FILES\DRAWINGS\07 S18018-PLN-PROD.DWG
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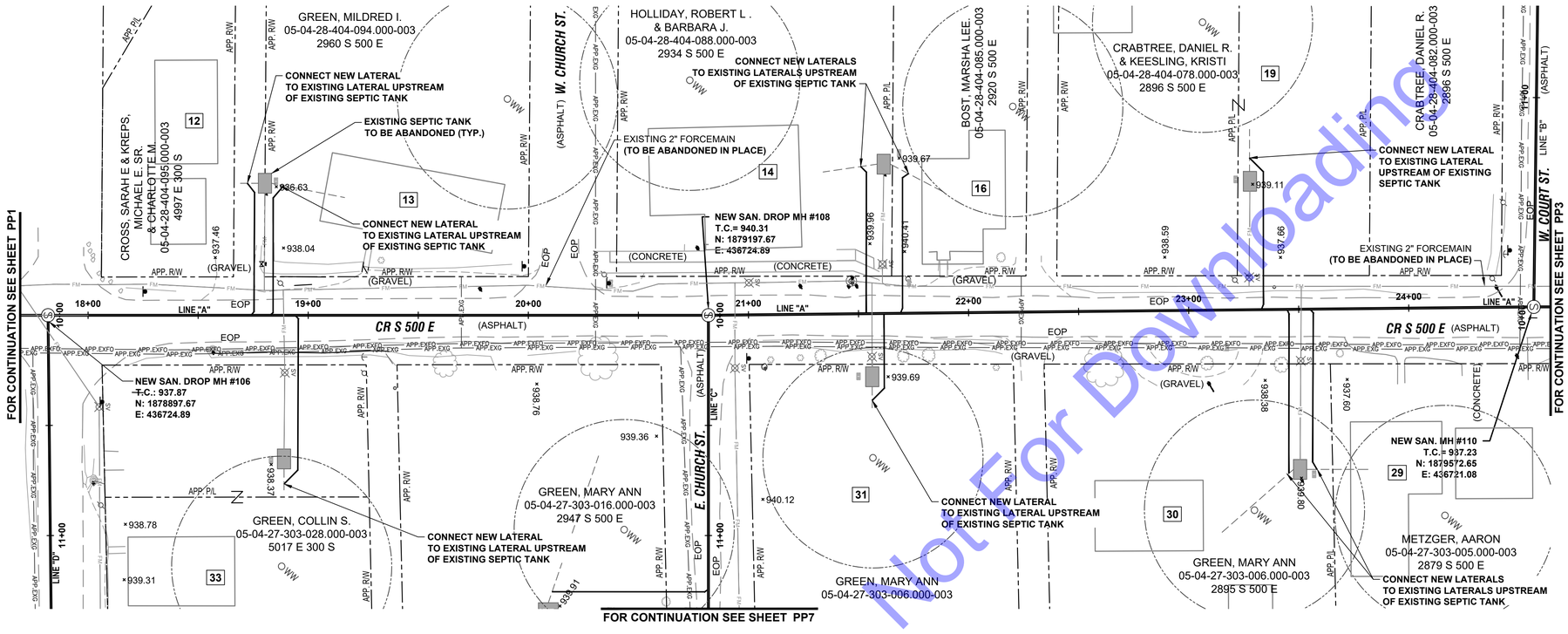
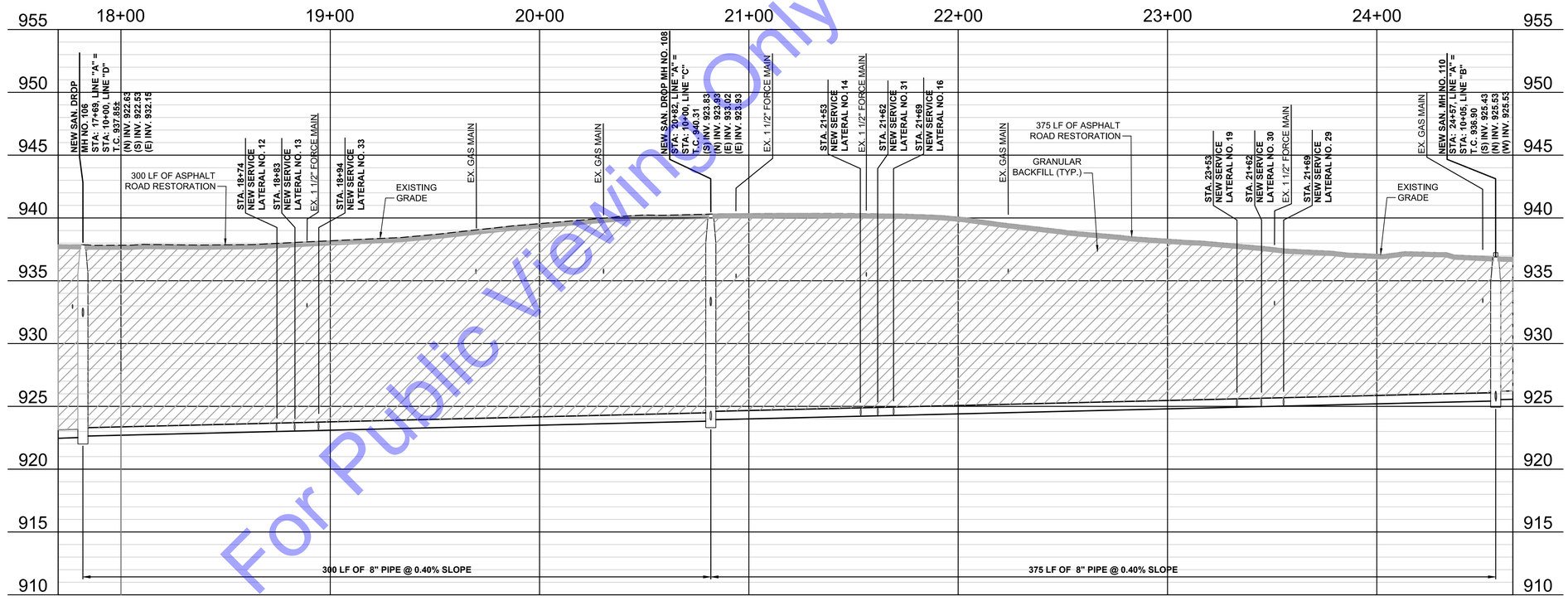


PLAN VIEW

SCALE: 1"=30'



PROFILE VIEW

HORIZ. SCALE: 1"=30'-0"

VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "A"

Drawing No:

PP2

Sheet: 07 OF 65

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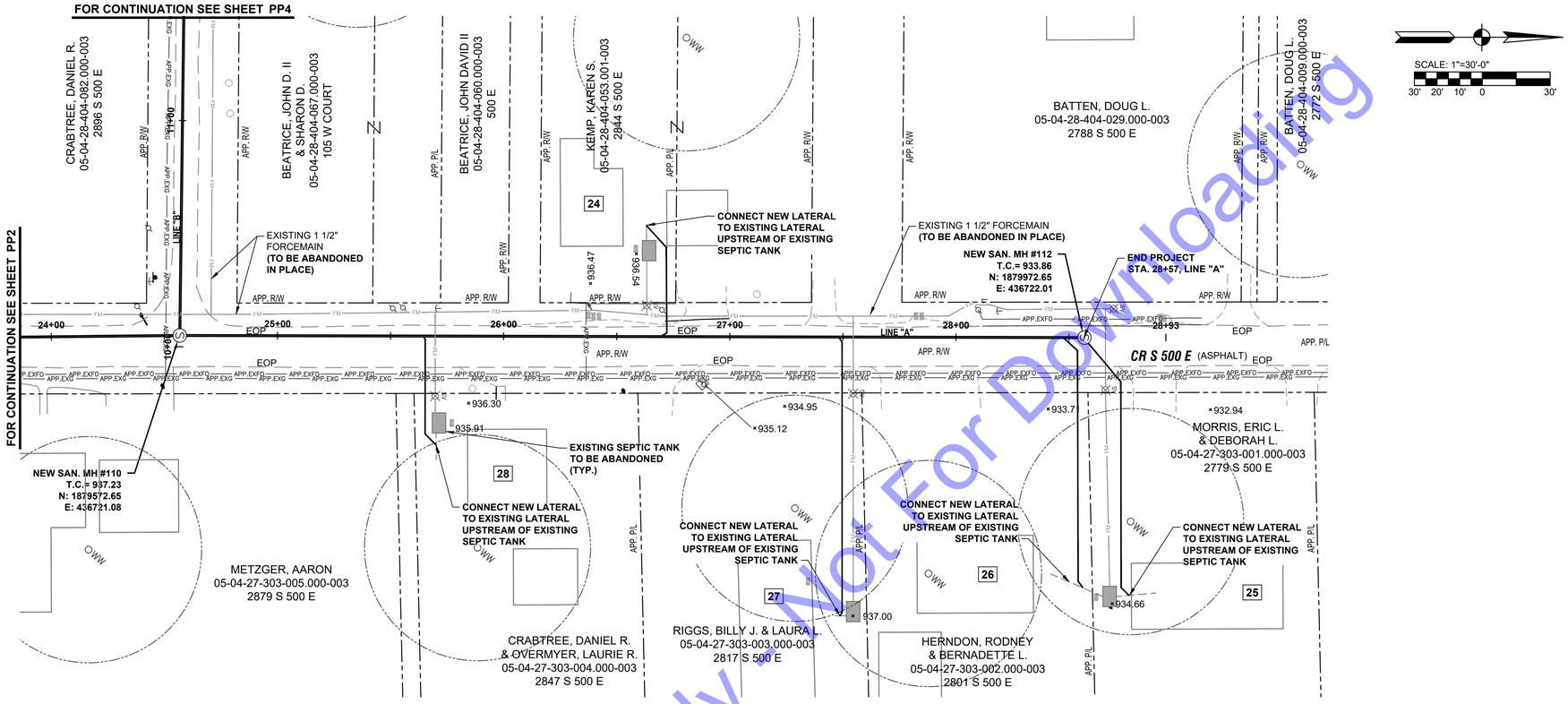
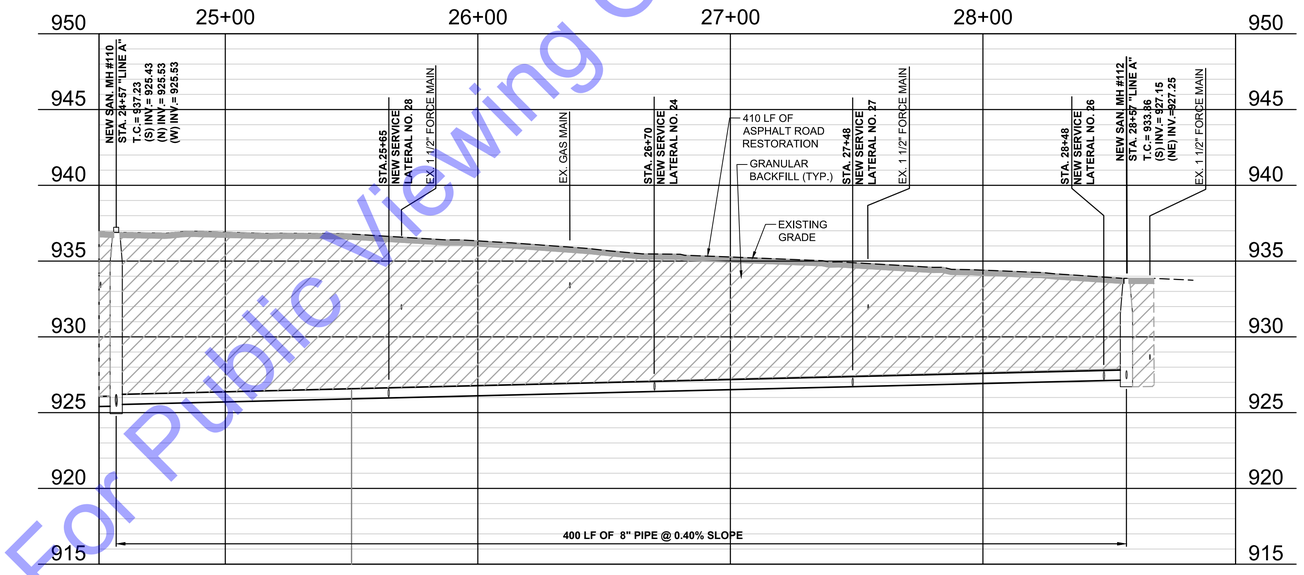


PLAN VIEW

SCALE: 1"=30'



PROFILE - LINE "A"

HORIZ. SCALE: 1"=30'-0"

VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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CHRIS A. LIMCACO REGISTERED No. 19700338 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "A"

Drawing No: **PP3**

Sheet: 08 OF 65

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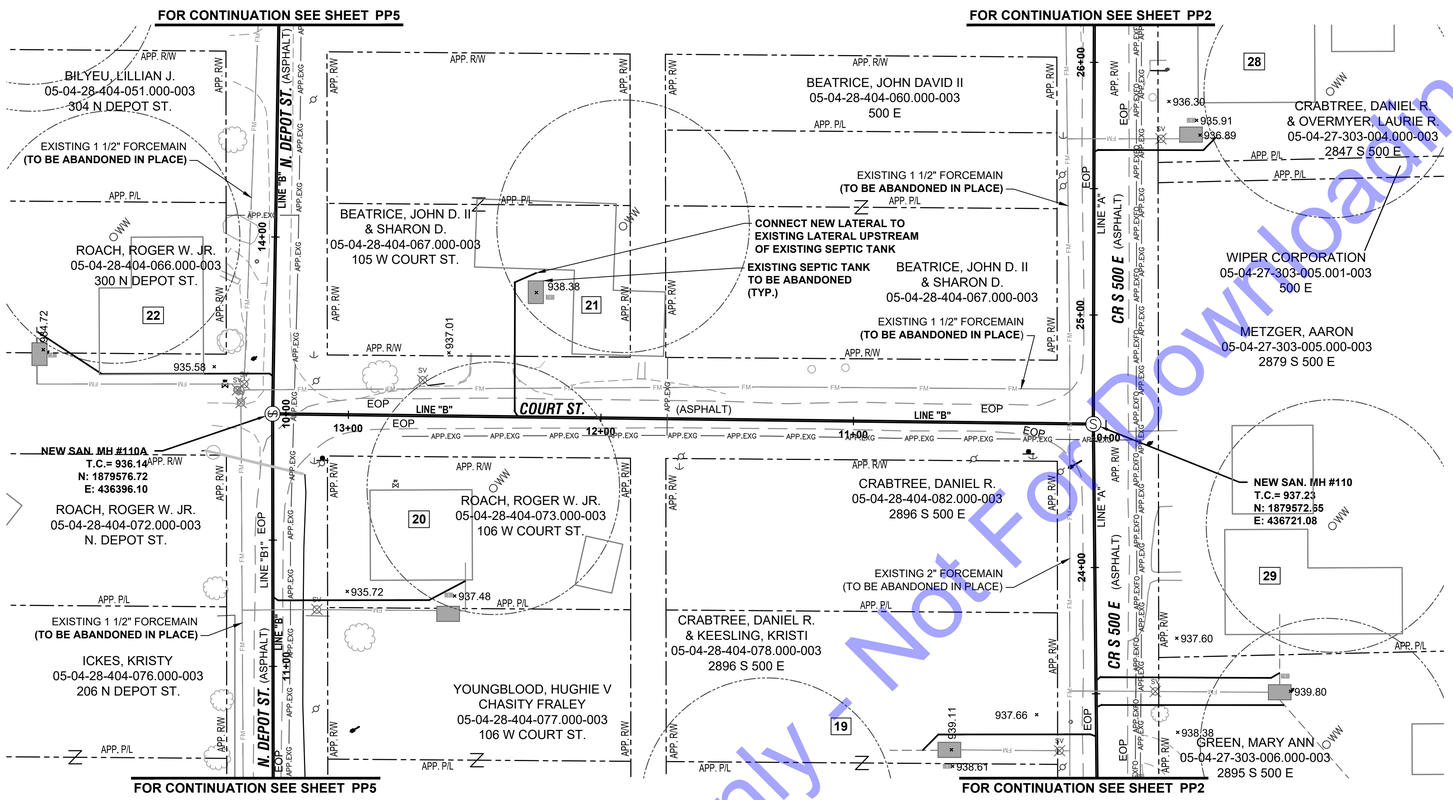
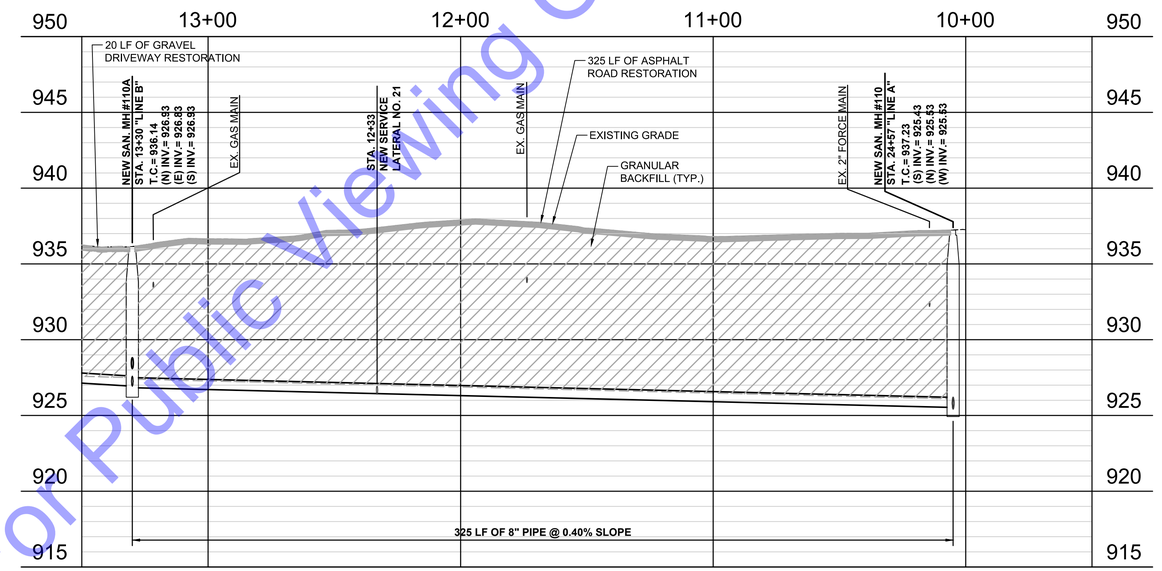


PLAN VIEW

SCALE: 1"=30'



PROFILE - LINE "B"

HORIZ. SCALE: 1"=30'-0"

VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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SCALE: 1"=30'-0"

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STATE OF INDIANA
PROFESSIONAL ENGINEER

7-27-2021
Signature Date

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "B"

Drawing No:

PP4

Sheet: 09 OF 65

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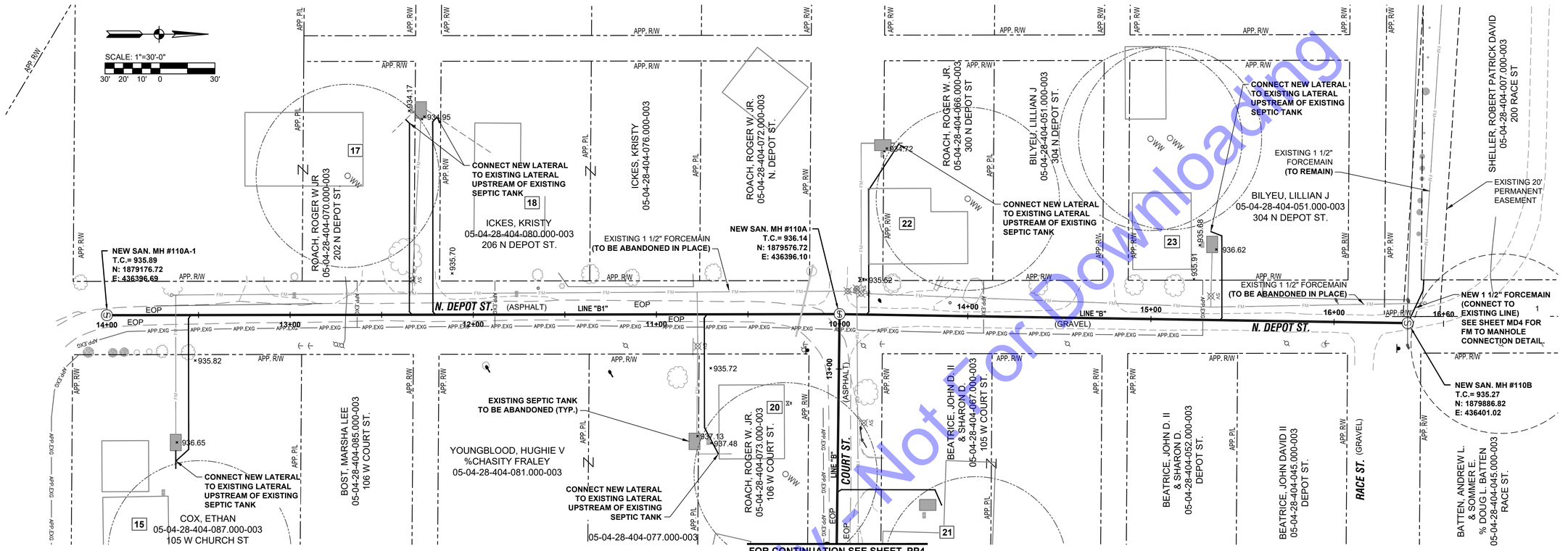
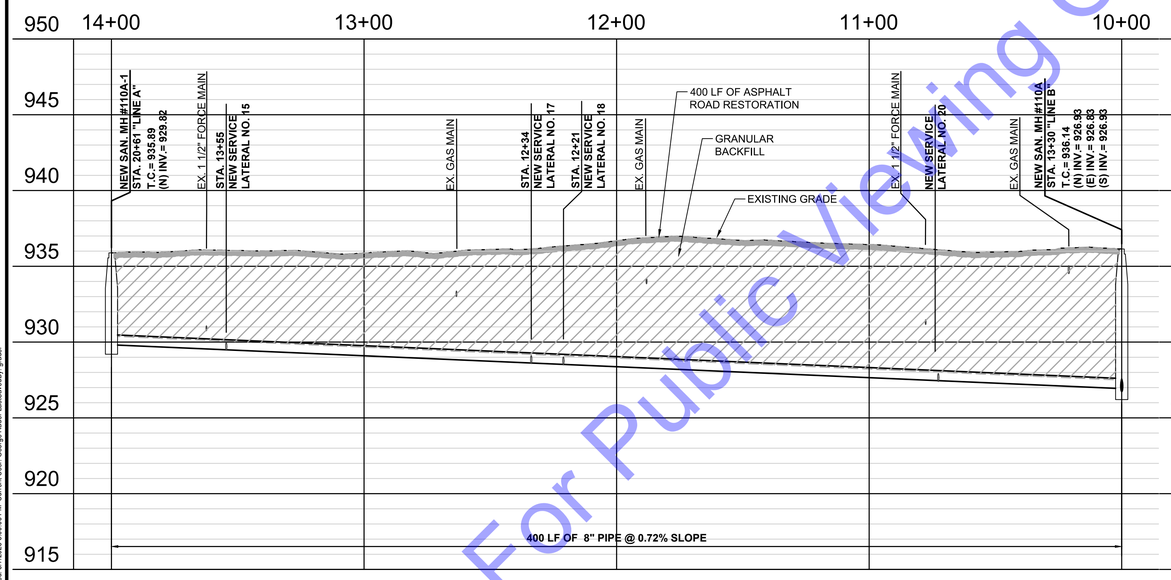
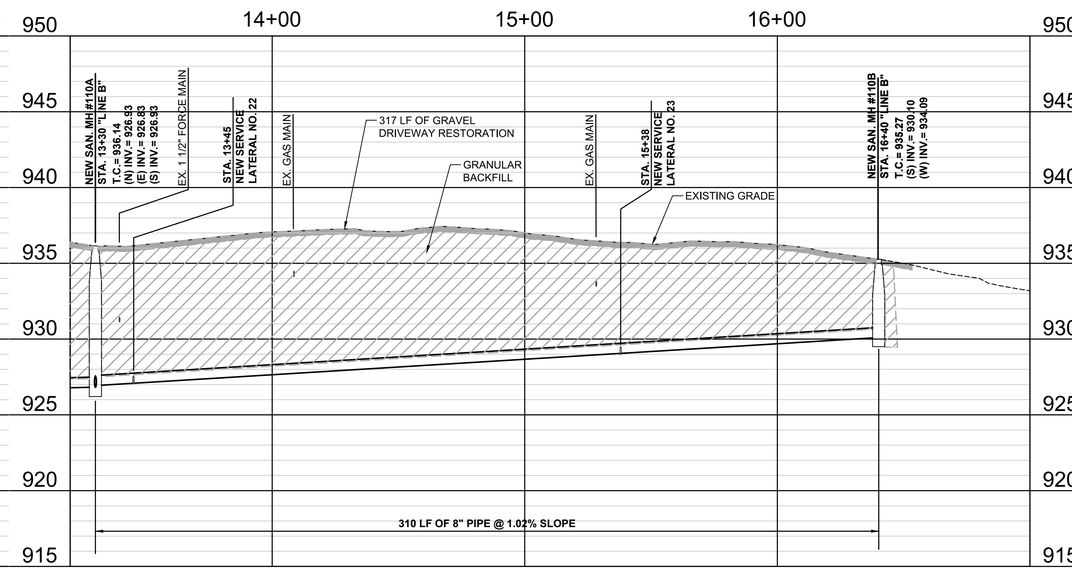


PLAN VIEW
SCALE: 1"=30'



PROFILE - LINE "B1"
HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"



PROFILE - LINE "B" CONTINUED
HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "B" AND LINE "B1"

Drawing No:
PP5
Sheet: 10 OF 65

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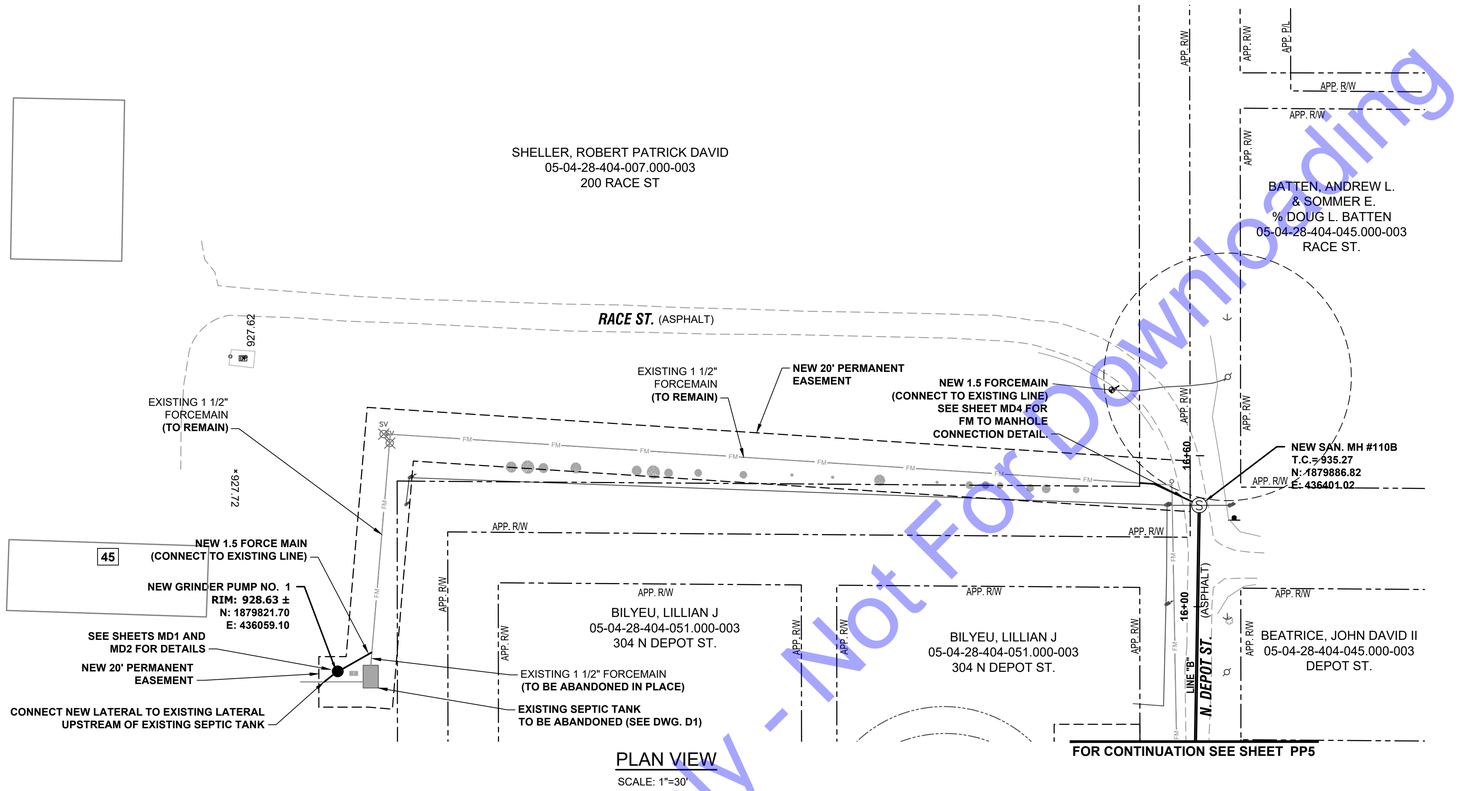
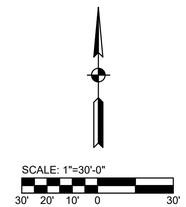


PLAN VIEW

SCALE: 1"=30'



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Signature 7-27-2021 Date

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "B"

Drawing No:
PP6
Sheet: 11 OF 65

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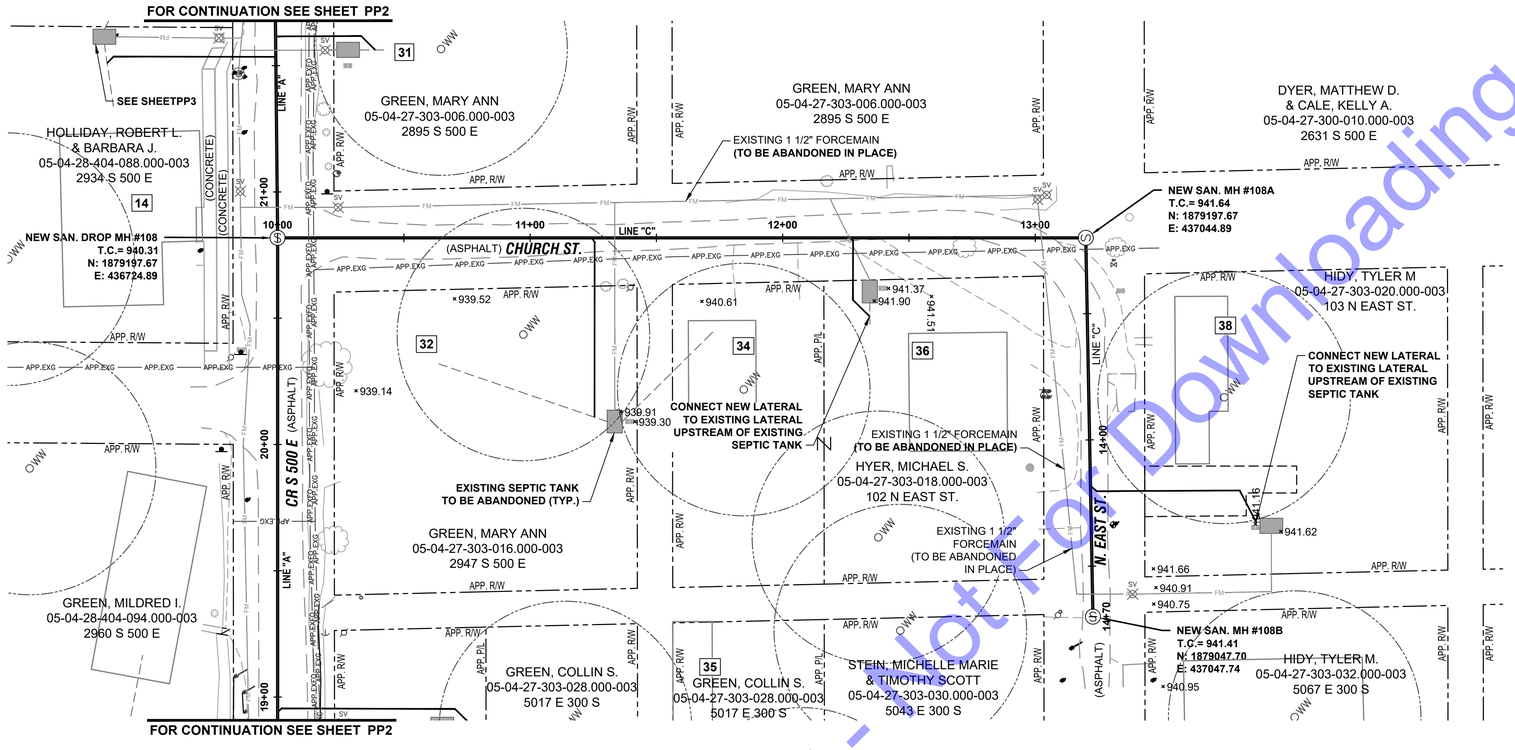
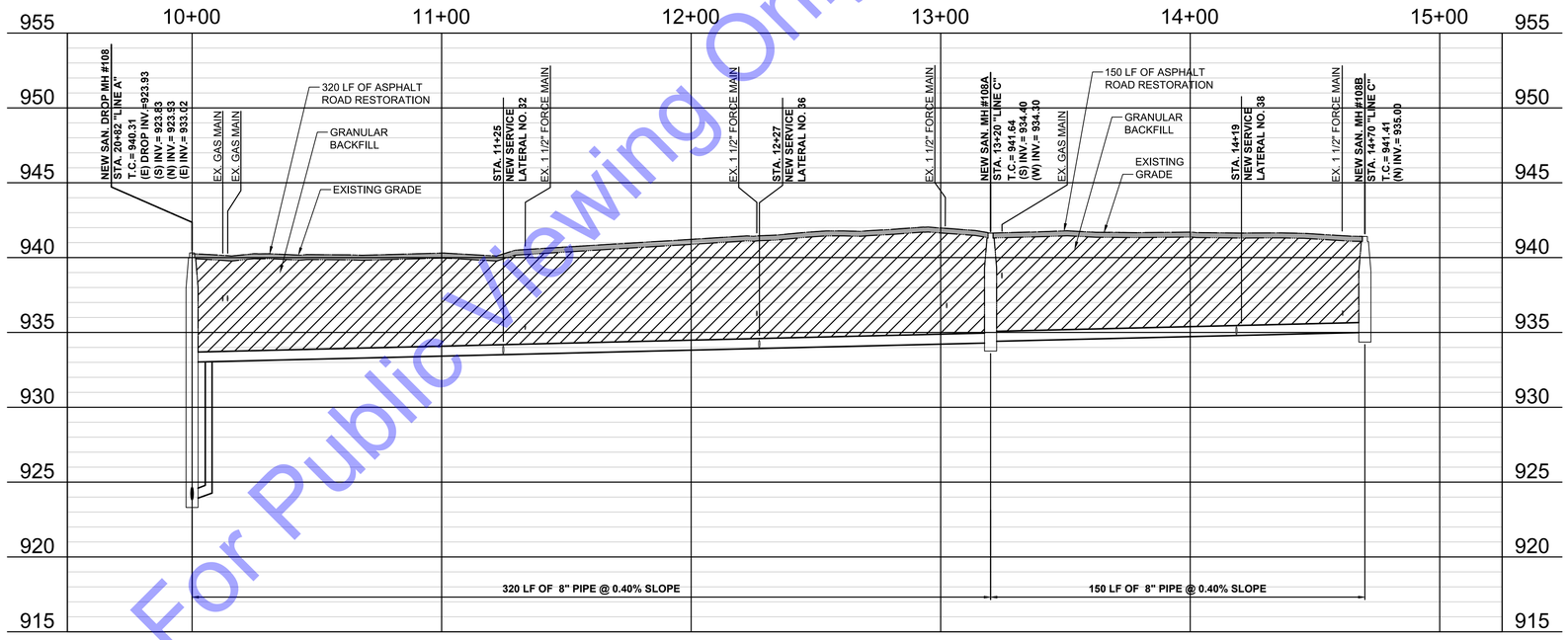


PLAN
SCALE: 1"=30'



PROFILE
HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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SCALE: 1"=30'-0"
30' 20' 10' 0 30'

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CHRIS A. LIMCACO
REGISTERED
No. 19700338
STATE OF INDIANA
PROFESSIONAL ENGINEER
7-27-2021
Signature Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "C"

Drawing No:
PP7
Sheet: 12 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPRV\SIS CAD\01-CURRENT FILES\DRAWINGS\07-S18018-PLN-PRO.DWG
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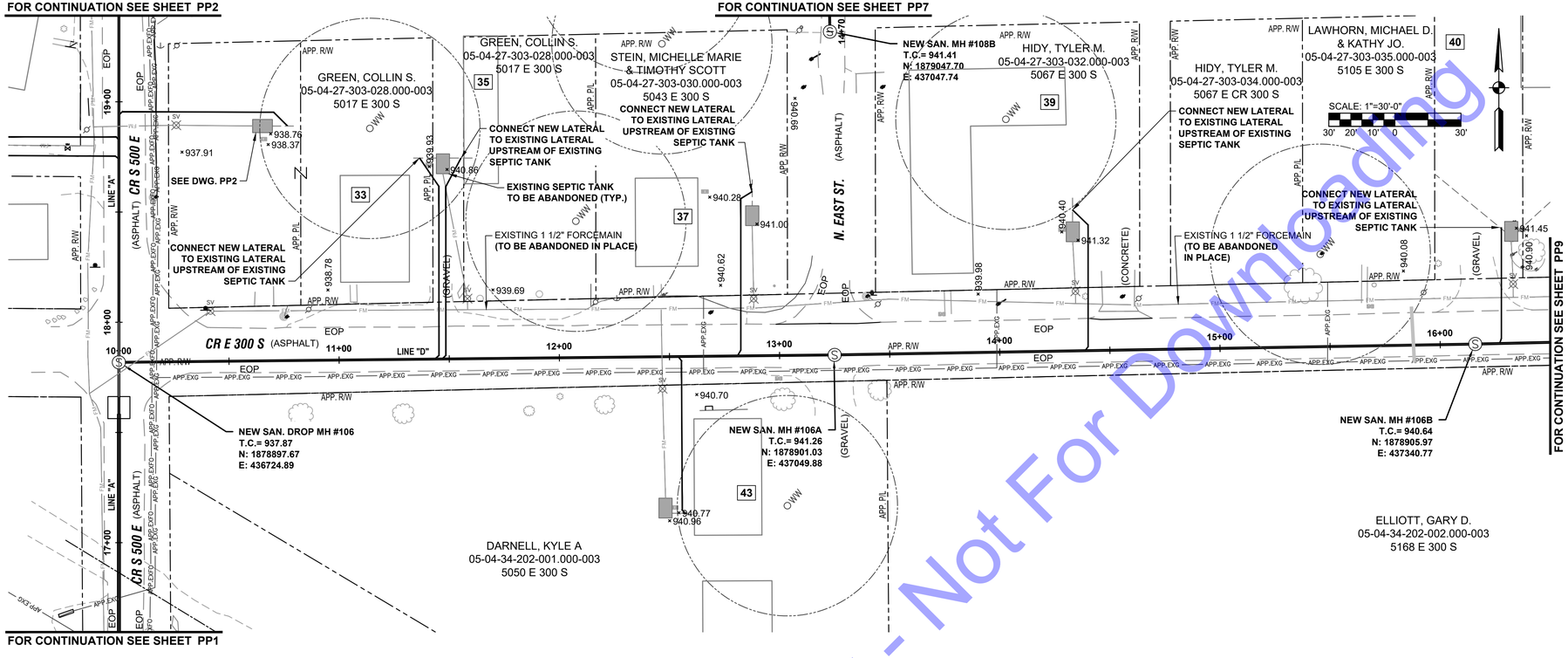
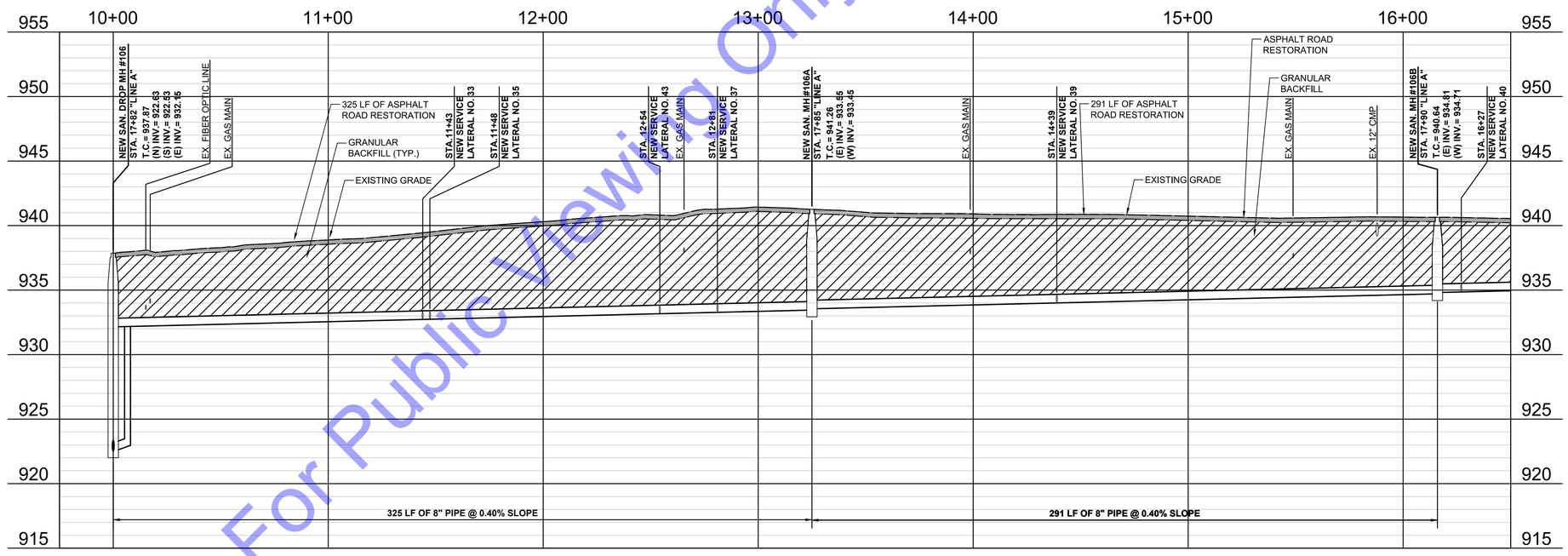


PLAN VIEW

SCALE: 1"=30'



PROFILE VIEW

HORIZ. SCALE: 1"=30'-0"

VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

1. ANY NEW SEWER LATERAL OR MAIN WITHIN RADIUS (50') OF A PRIVATE WELL WILL BE CONSTRUCTED WITH WATER GRADE PIPE.

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "D"

Drawing No:

PP8

Sheet: 13 OF 65

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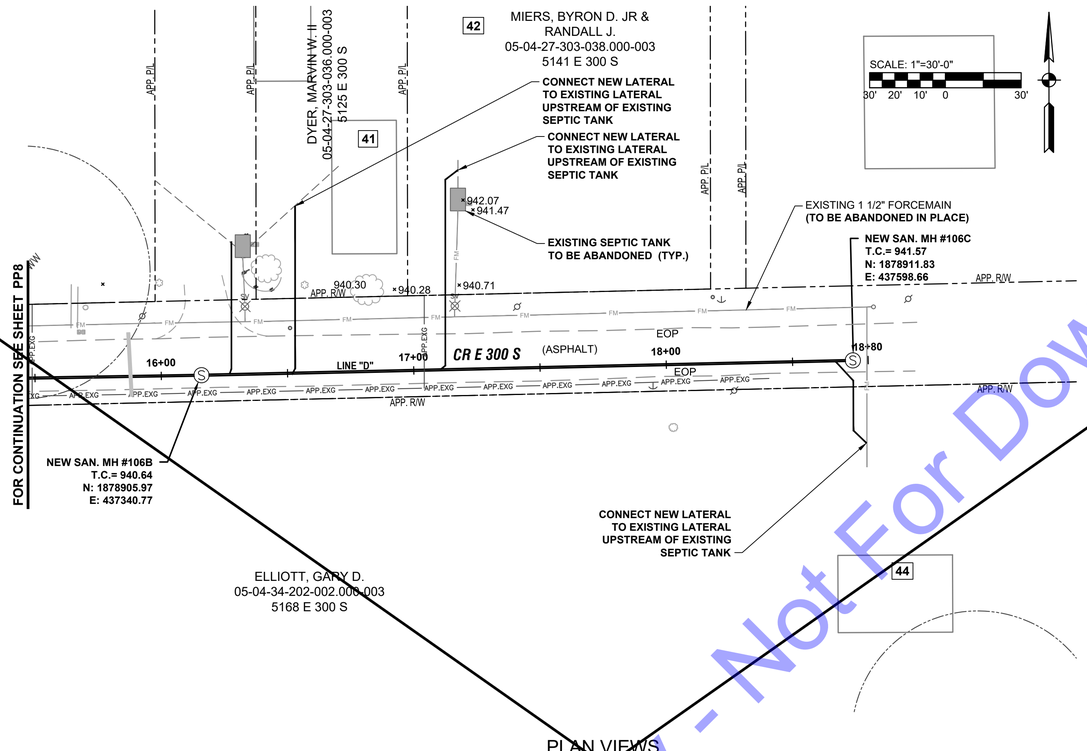
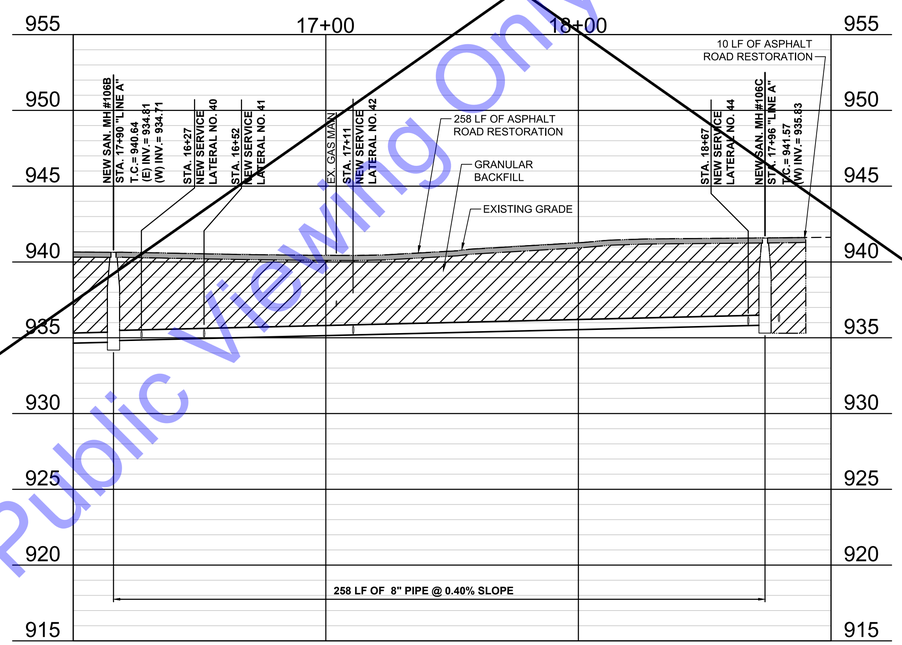


PLAN VIEWS
SCALE: 1"=30'



PROFILE VIEW
HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

REMOVED FROM BID SET

GENERAL NOTES

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "D"

Drawing No:
PP9
Sheet: 14 OF 65

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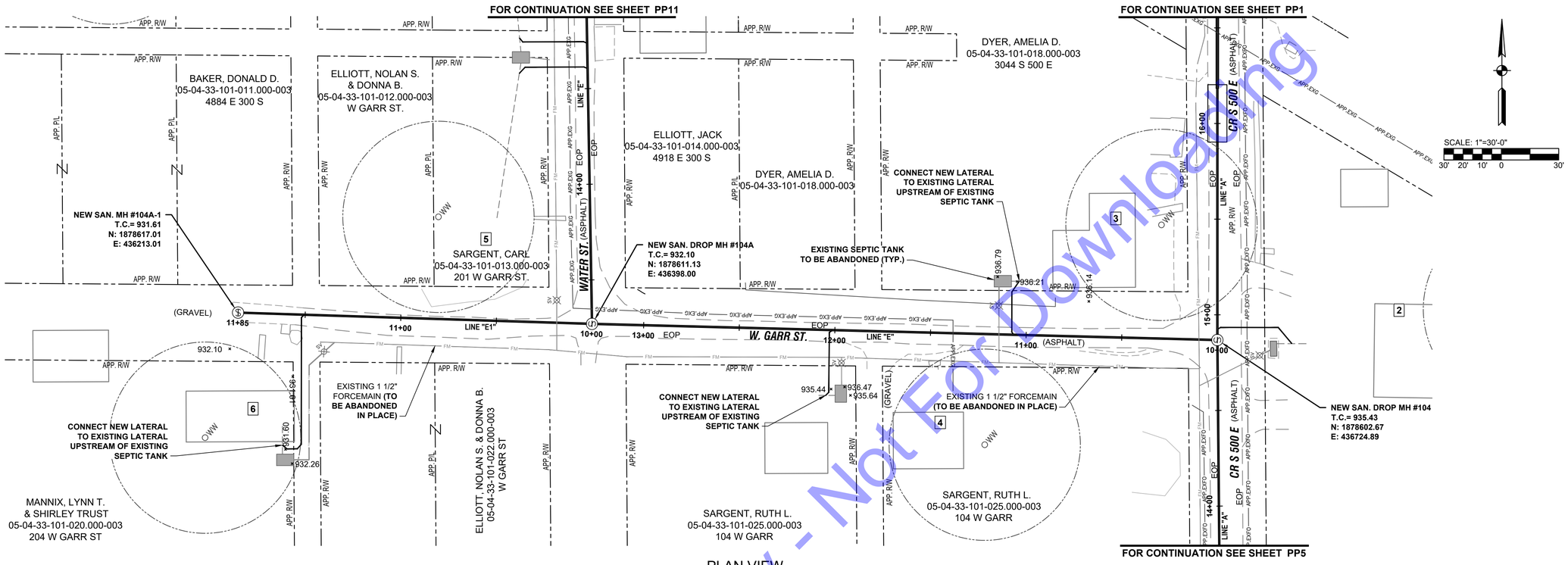
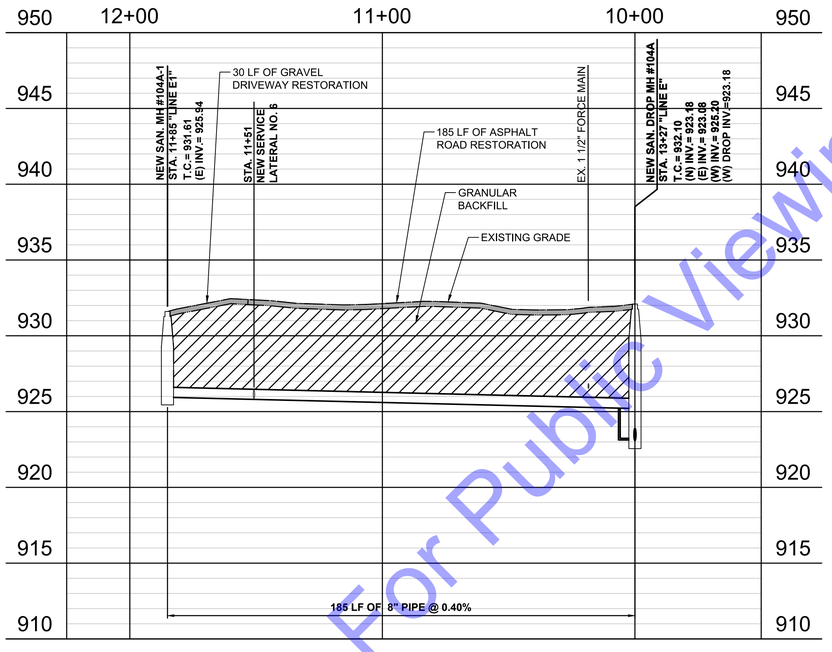


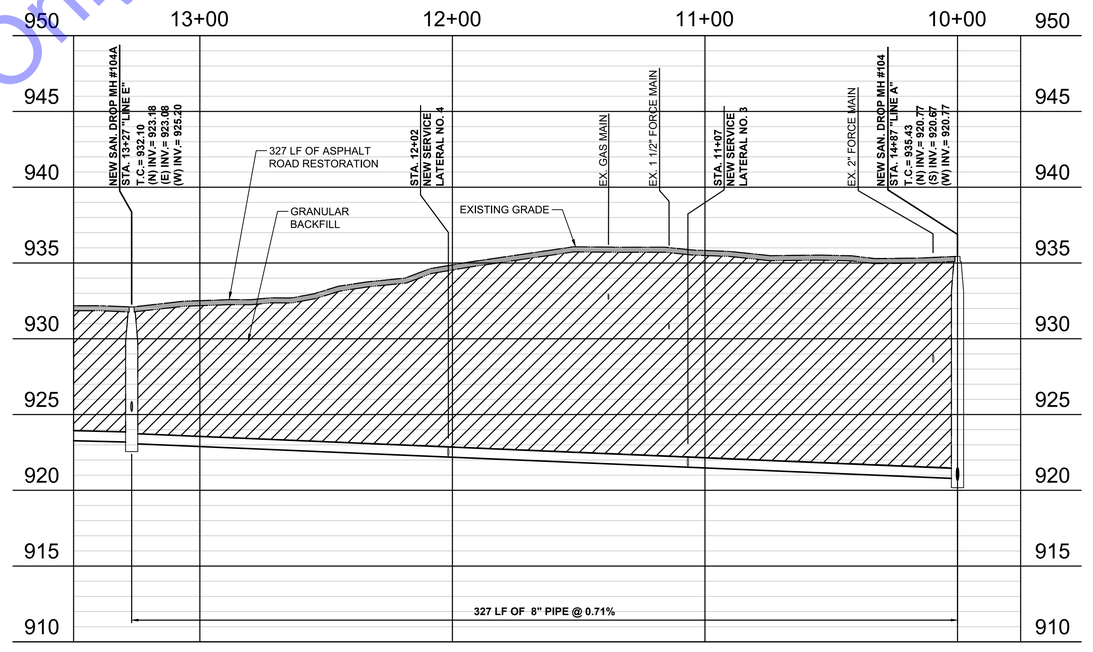
PLAN VIEW

SCALE: 1"=30'



PROFILE - LINE "E1"

HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"



PROFILE - LINE "E"

HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "E" AND LINE "E1"

Drawing No: **PP10**

Sheet: 15 OF 65

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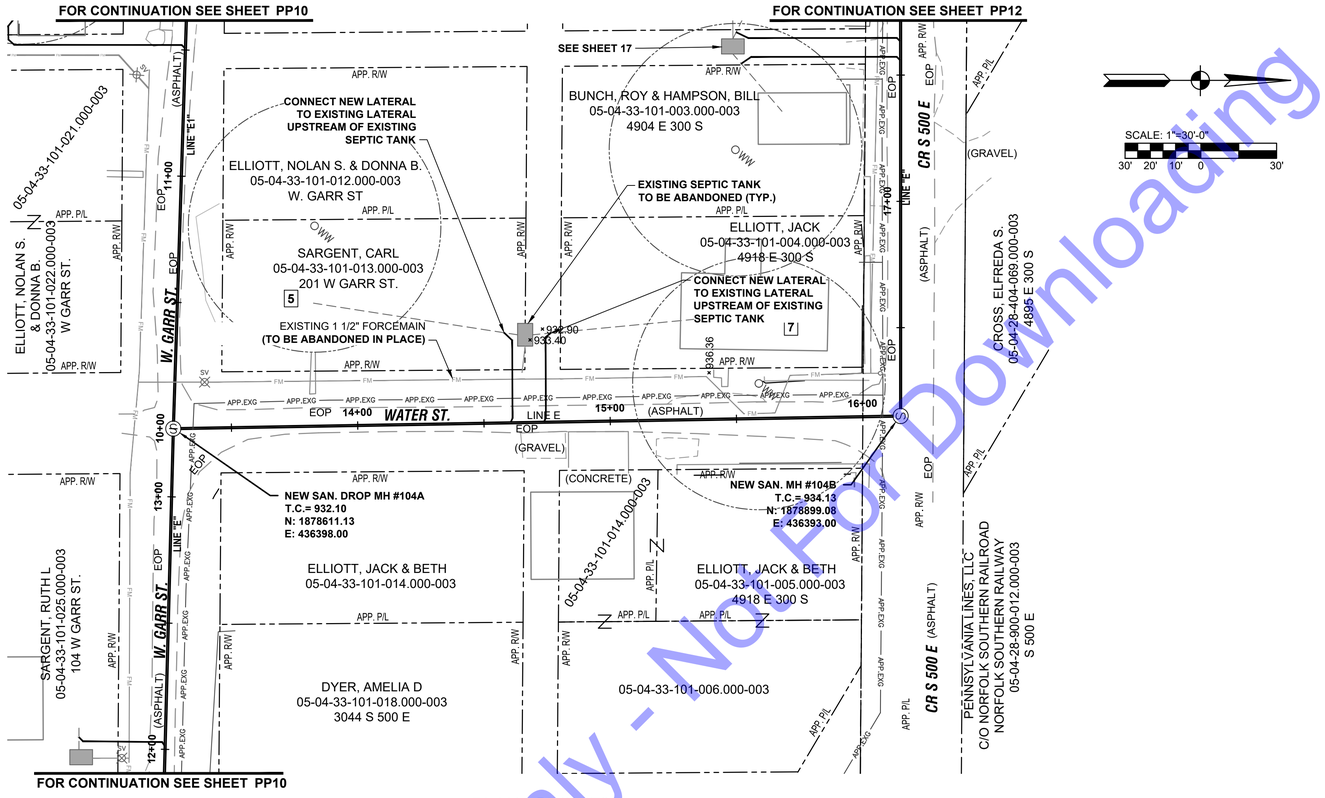
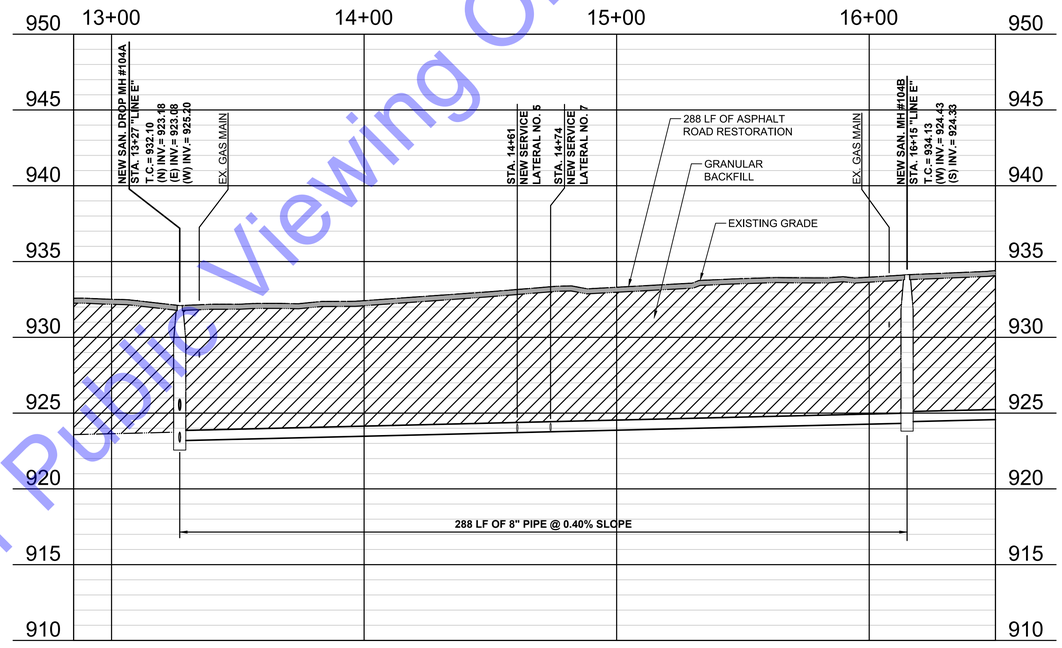


PLAN - LINE "E"

SCALE: 1"=30'



PROFILE - LINE "E"

HORIZ. SCALE: 1"=30'-0"

VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "E"

Drawing No: **PP11**

Sheet: 16 OF 65

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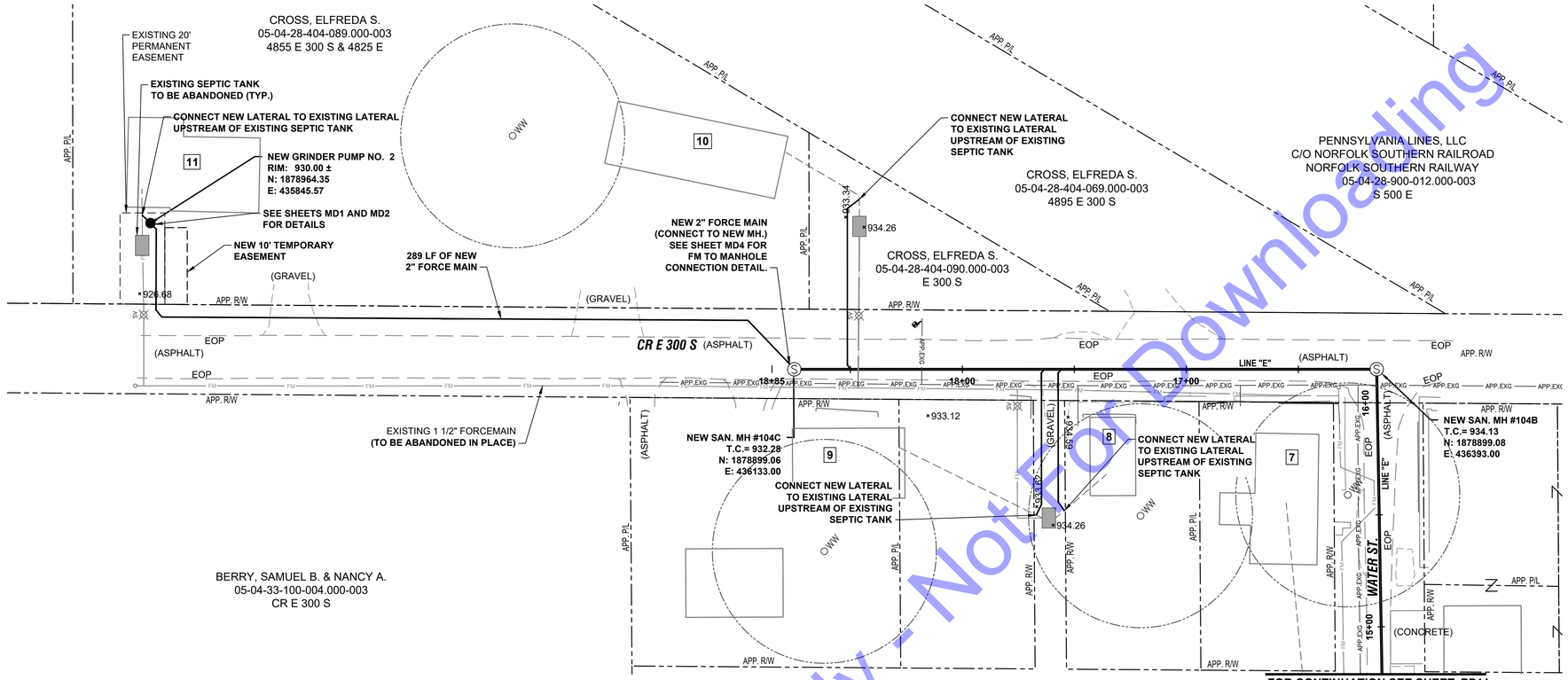
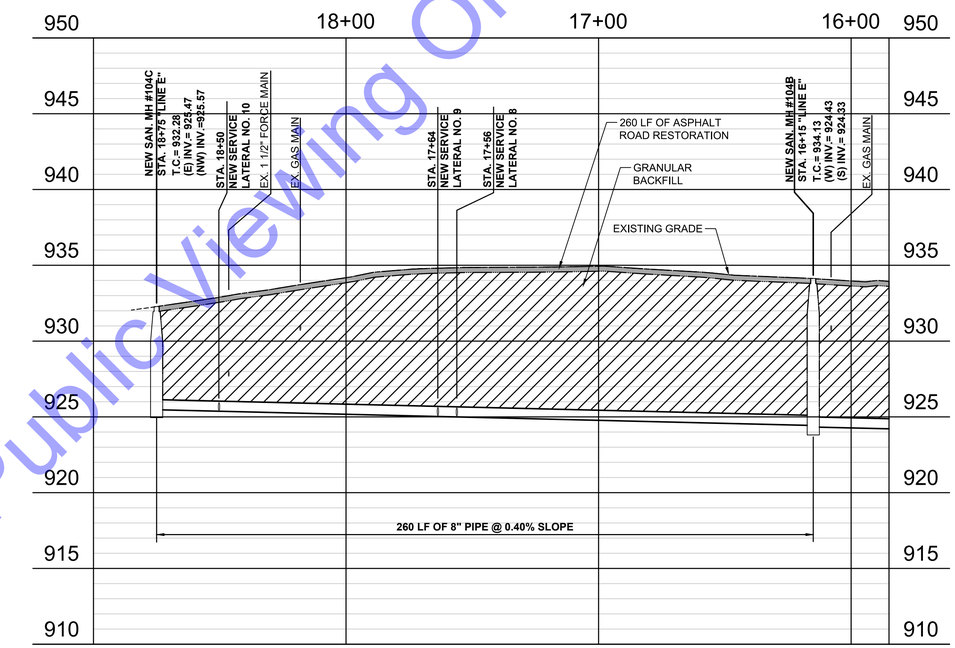


PLAN VIEW

SCALE: 1"=30'



PROFILE VIEW

HORIZ. SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"

GENERAL NOTES

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Signature 7-27-2021 Date

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NEW GRAVITY SEWER PLAN AND PROFILE VIEW - LINE "E"

Drawing No: **PP12**

Sheet: 17 OF 65

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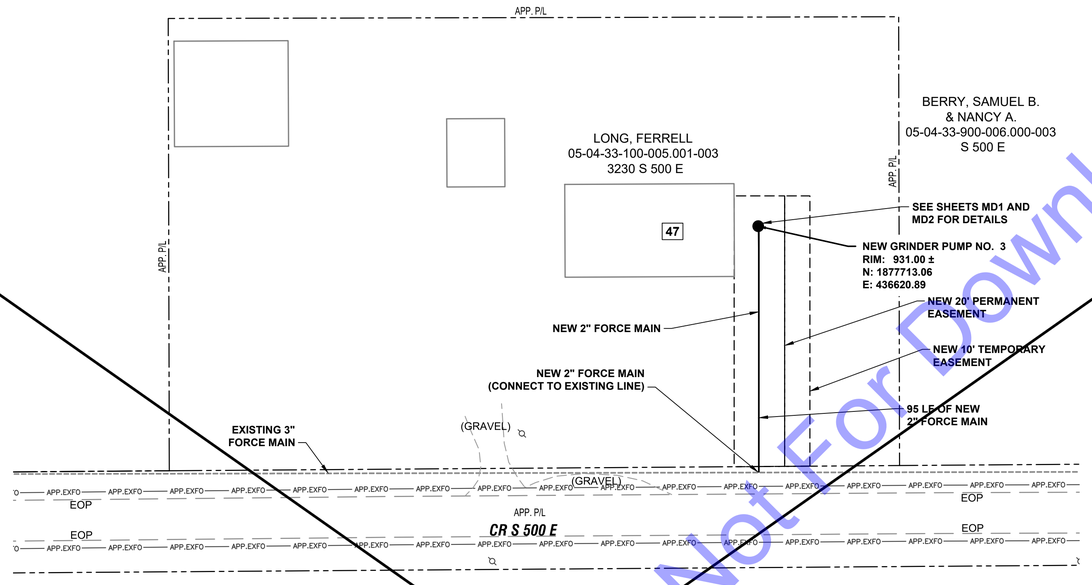

PLAN VIEW
SCALE: 1"=30'

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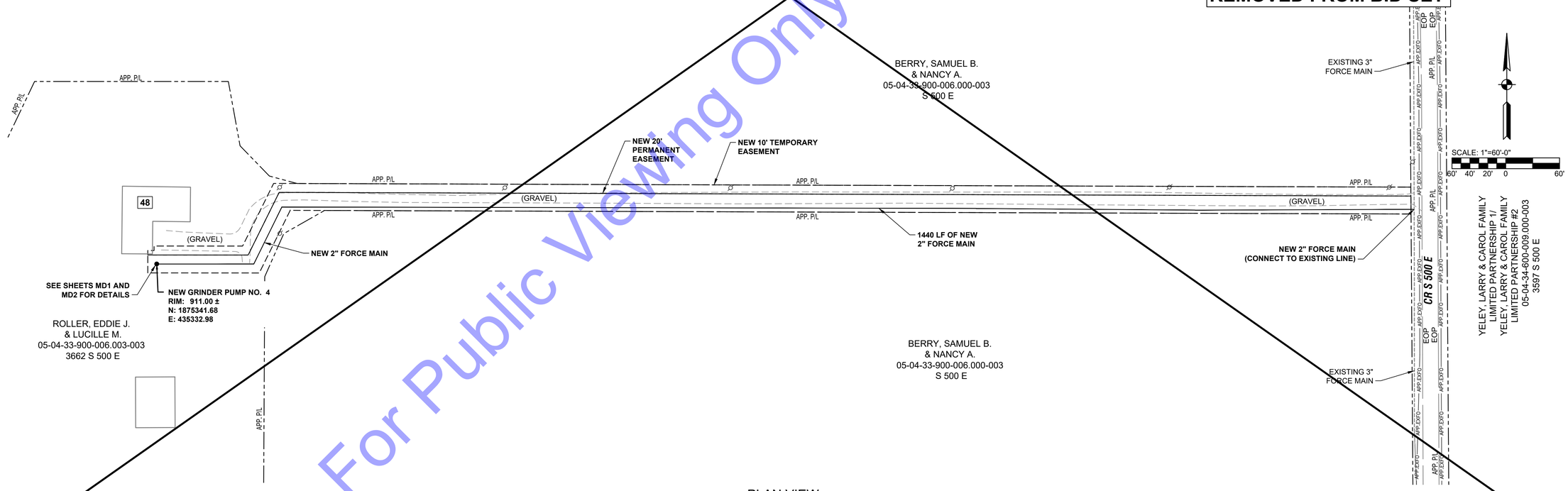

PLAN VIEW
SCALE: 1"=60'

GENERAL NOTES

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NEW GRINDER PUMP STATION AND FORCE MAIN PLAN VIEWS

Drawing No:
PP13
Sheet: 18 OF 65

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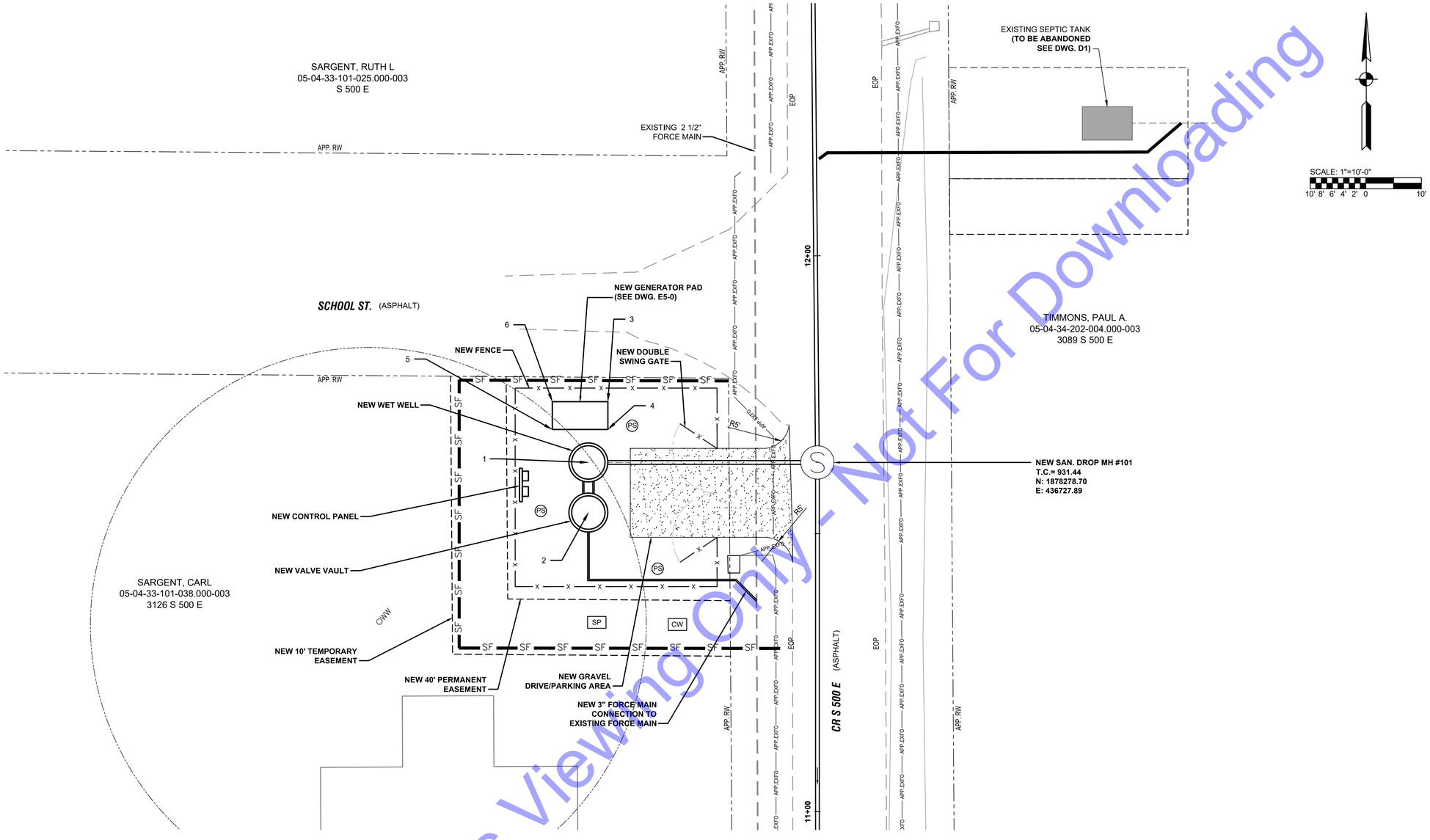

NEW STRUCTURE COORDINATE TABLE

NUMBER IDENTIFIER #	DESCRIPTION	NORTHING	EASTING
1	CENTER OF NEW LIFT STATION WET WELL	1878278.69	436686.69
2	CENTER OF NEW LIFT STATION VALVE VAULT	1878269.68	436686.69
3	NORTHEAST CORNER OF NEW GENERATOR PAD	1878289.63	436690.19
4	SOUTHEAST CORNER OF NEW GENERATOR PAD	1878284.63	436690.19
5	SOUTHWEST CORNER OF NEW GENERATOR PAD	1878284.63	436680.19
6	NORTHWEST CORNER OF NEW GENERATOR PAD	1878289.63	436680.19

GENERAL NOTE:

1. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL MEASURES AS SPECIFIED IN THE DETAILED SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO CONCRETE WASHOUT STATIONS, TEMPORARY CONSTRUCTION ENTRANCES, TEMPORARY SEEDING, ETC.
2. SEE MD7 AND MD8 DRAWINGS FOR EROSION CONTROL DETAILS.

LEGEND:

- (PS) PERMANENT SEEDING/MULCHING
- SF SILT FENCE
- CW CONCRETE WASHOUT STATION (SEE SHEET MD3)
- SP STOCK PILE

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NEW MAIN LIFT
STATION SITE PLAN

Drawing No:
MLS-1
Sheet: 19 OF 65

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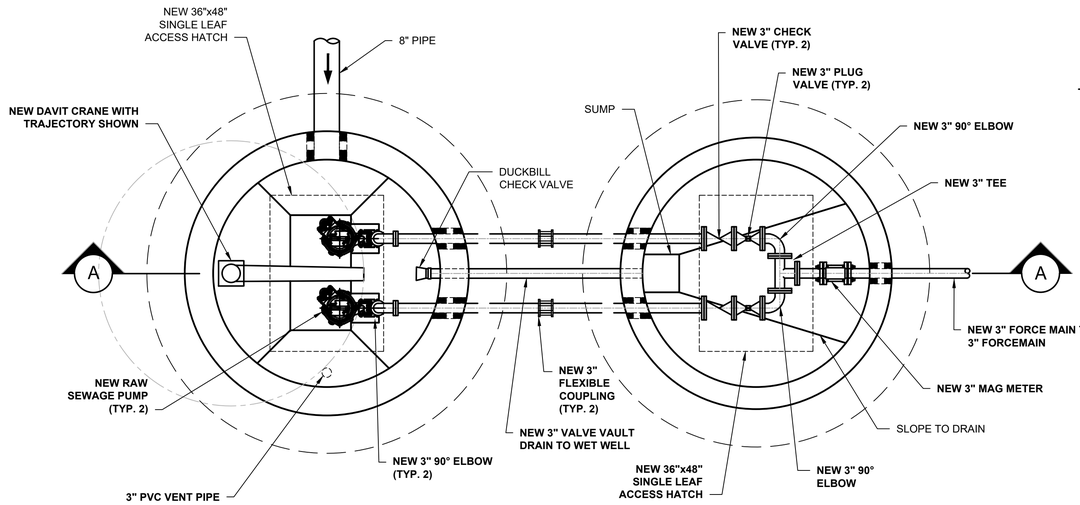
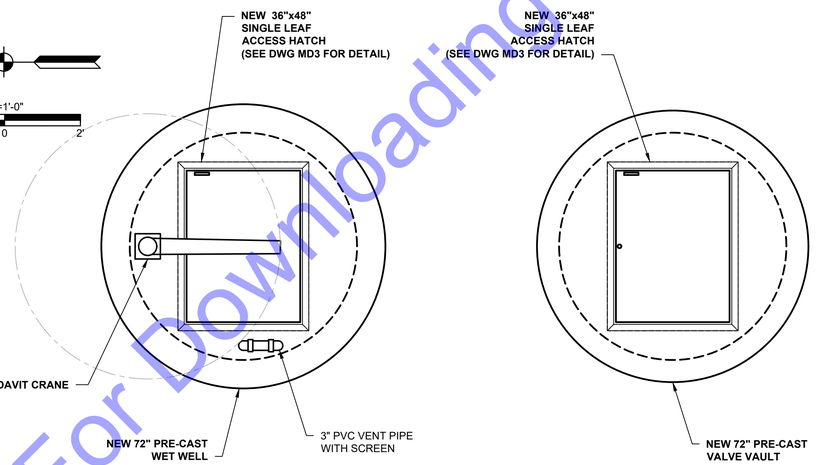


LOWER PLAN VIEW

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

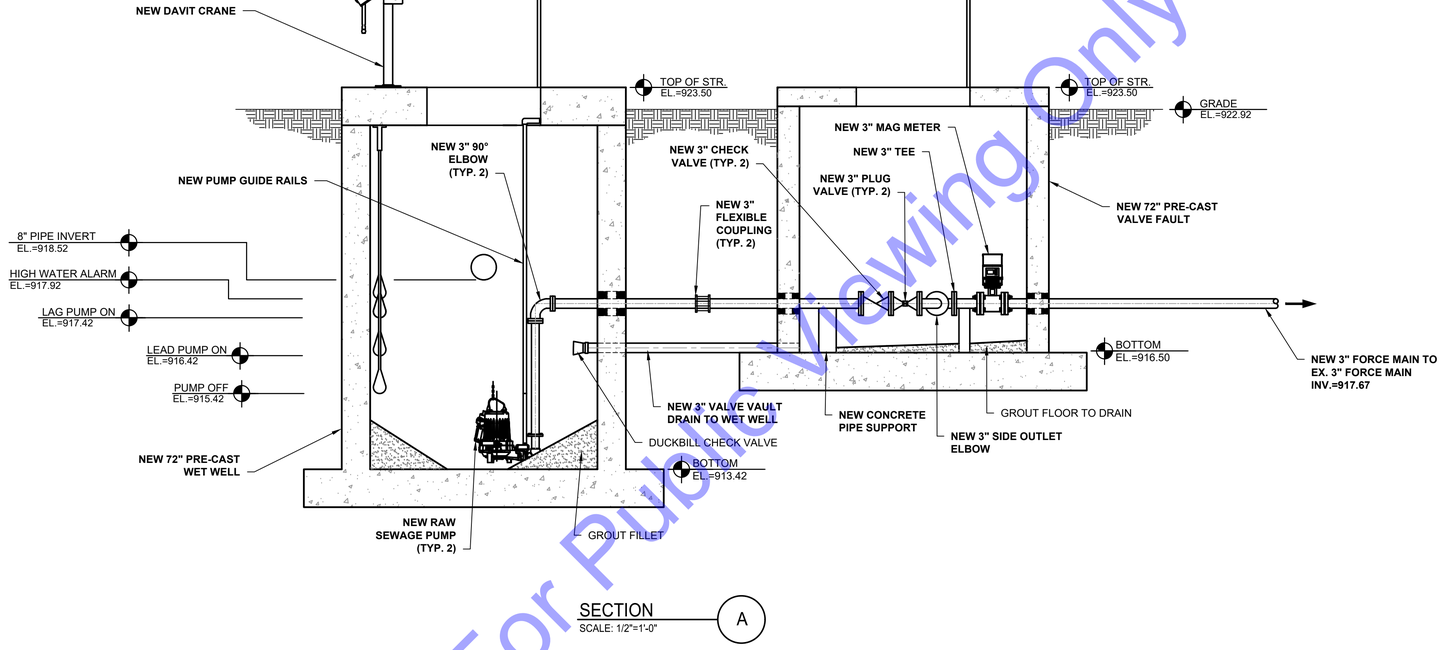
SCALE: 1/2"=1'-0"

2' 1' 0 2'



UPPER PLAN VIEW

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



SECTION A

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

GENERAL NOTES:

1. ALL PIPING SHALL BE PVC SDR 21. SEE SPECIFICATIONS.

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NEW PLANT LIFT STATION PLAN AND SECTION VIEWS

Drawing No:

MLS-2

Sheet: 20 OF 65

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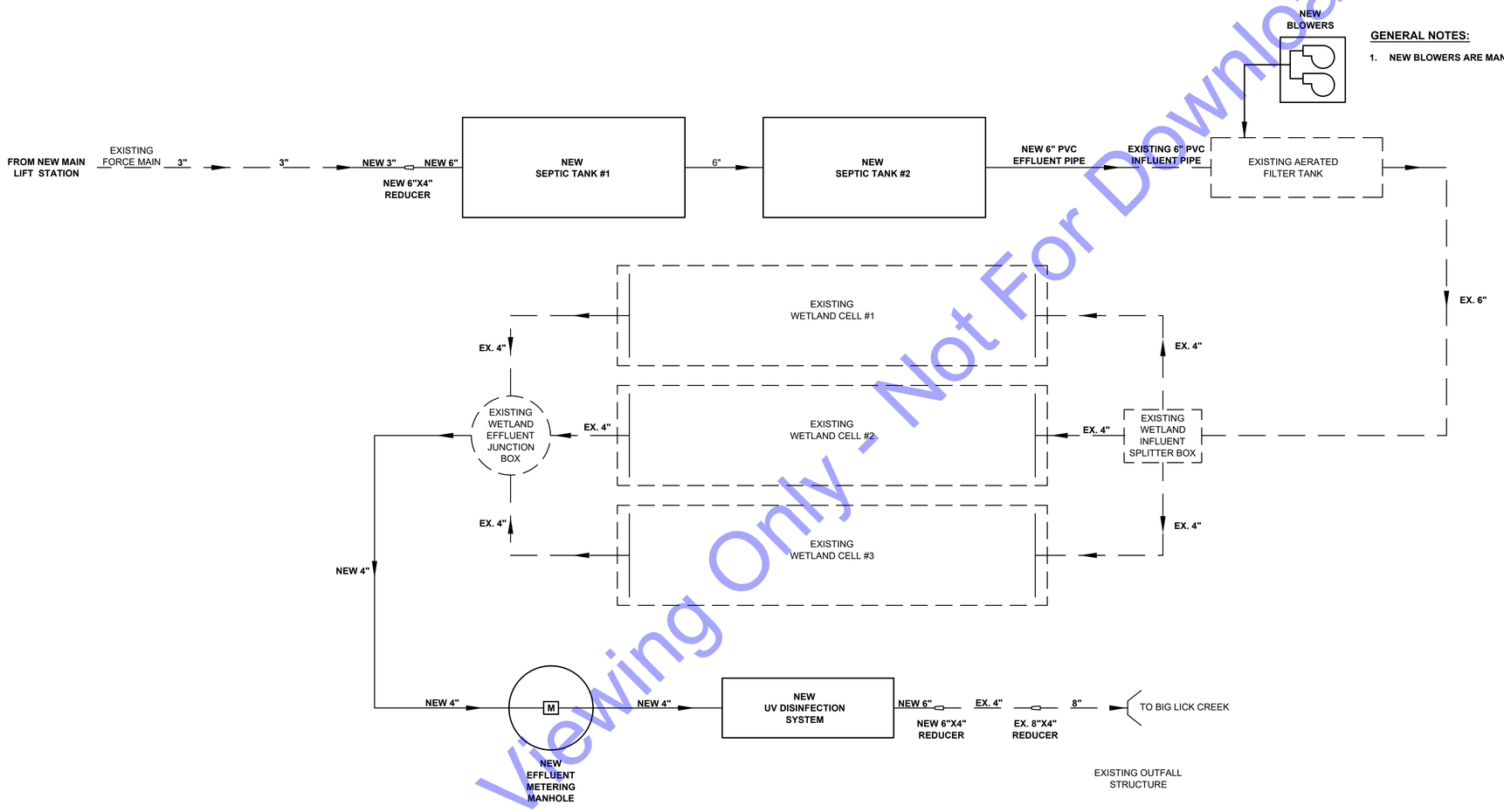

GENERAL NOTES:

1. NEW BLOWERS ARE MANDATORY BID ITEM.

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CHRIS A. LIMCACO REGISTERED No. 19700338 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

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NEW WWTP PROCESS FLOW SCHEMATIC

Drawing No: **P1**

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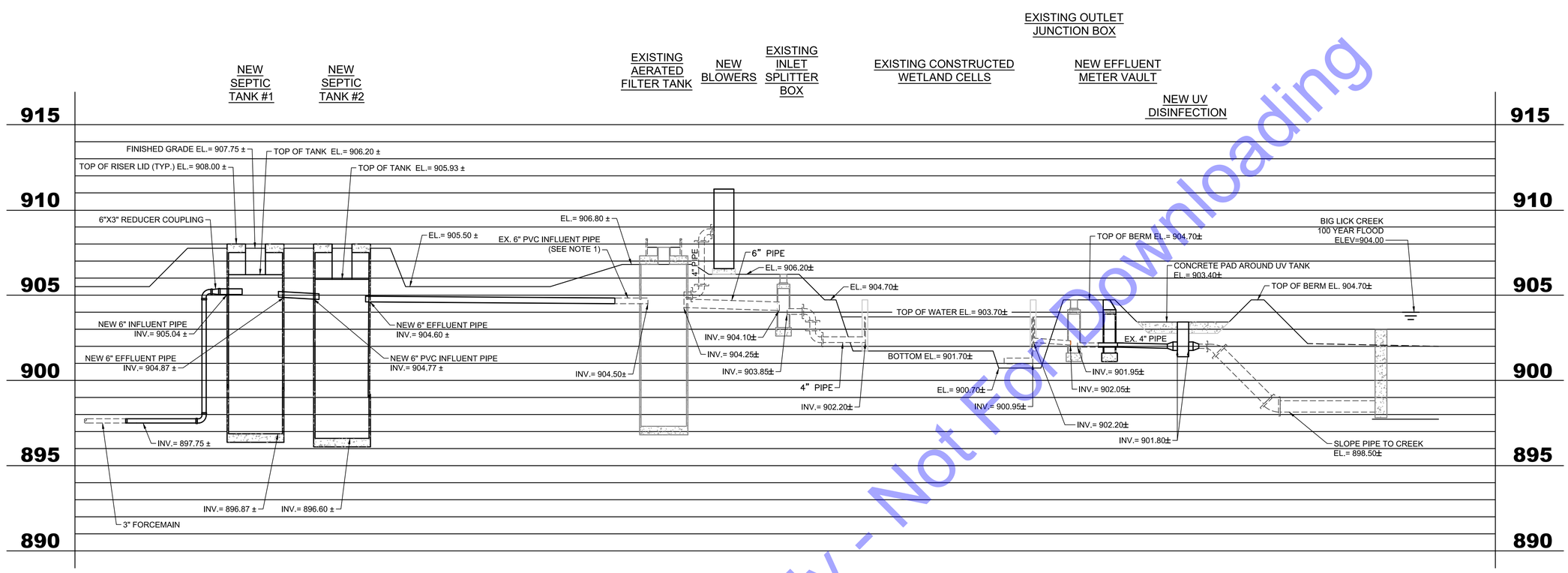

GENERAL NOTES:

1. **CONTRACTOR SHALL VERIFY AERATED FILTER TANK INFLUENT PIPE ELEVATION PRIOR TO SETTING NEW SEPTIC TANKS. CONATRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IF THERE IS A DISCREPENCY IN THE ELEVATION SHOWN ON THESE PLANS.**

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NEW WWTP
HYDRAULIC PROFILE

Drawing No:
P2
Sheet: 22 OF 65

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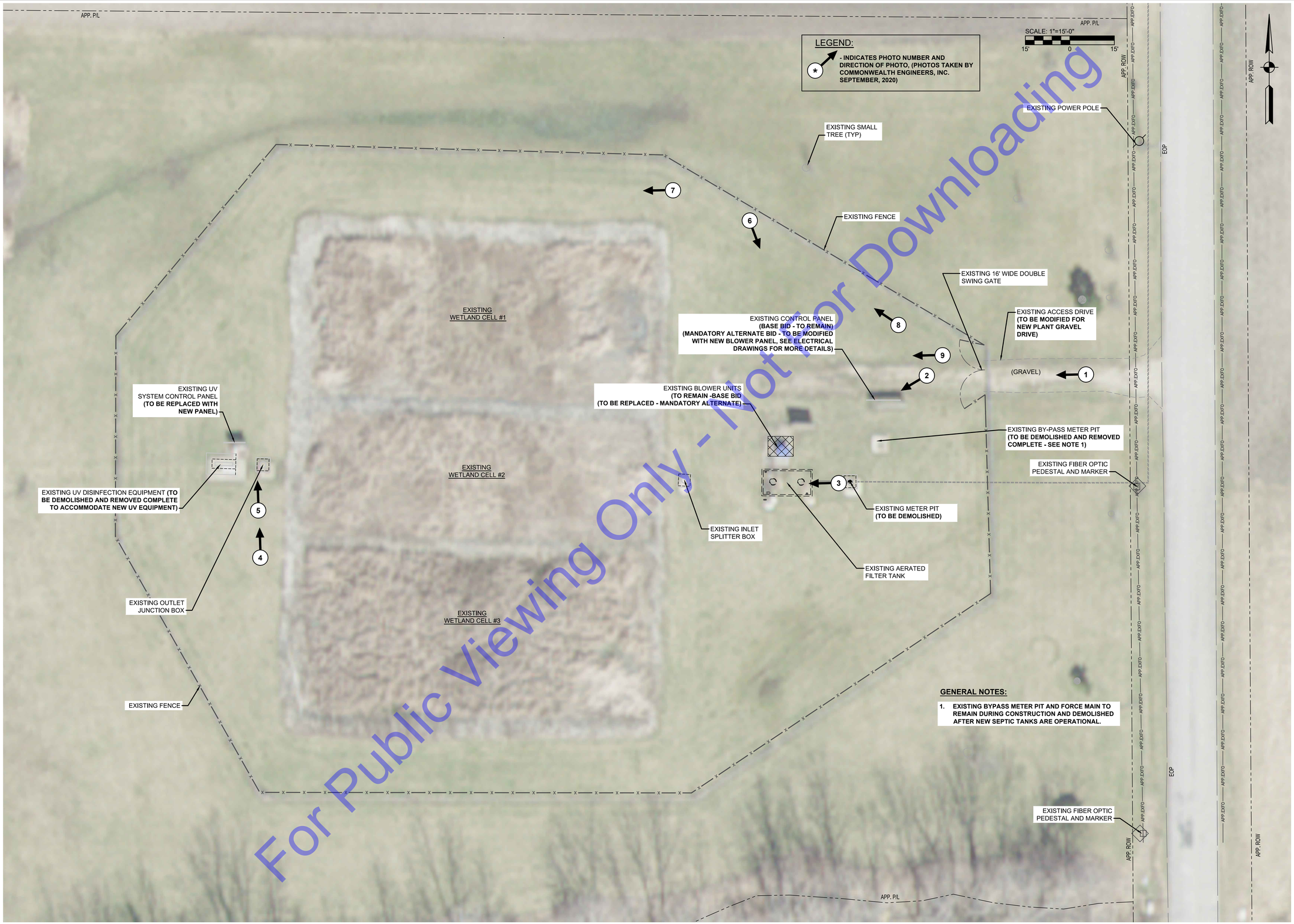

GENERAL NOTES:

1. **EXISTING BYPASS METER PIT AND FORCE MAIN TO REMAIN DURING CONSTRUCTION AND DEMOLISHED AFTER NEW SEPTIC TANKS ARE OPERATIONAL.**

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EXISTING WWTP SITE PLAN AND PHOTO LOG INDEX

Drawing No: **PS1**

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PHOTO #1

PHOTO #2

PHOTO #3

PHOTO #4

PHOTO #5

PHOTO #6

PHOTO #7

PHOTO #8

PHOTO #9

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PHOTO LOG

Drawing No:
PS2
Sheet: 24 OF 65

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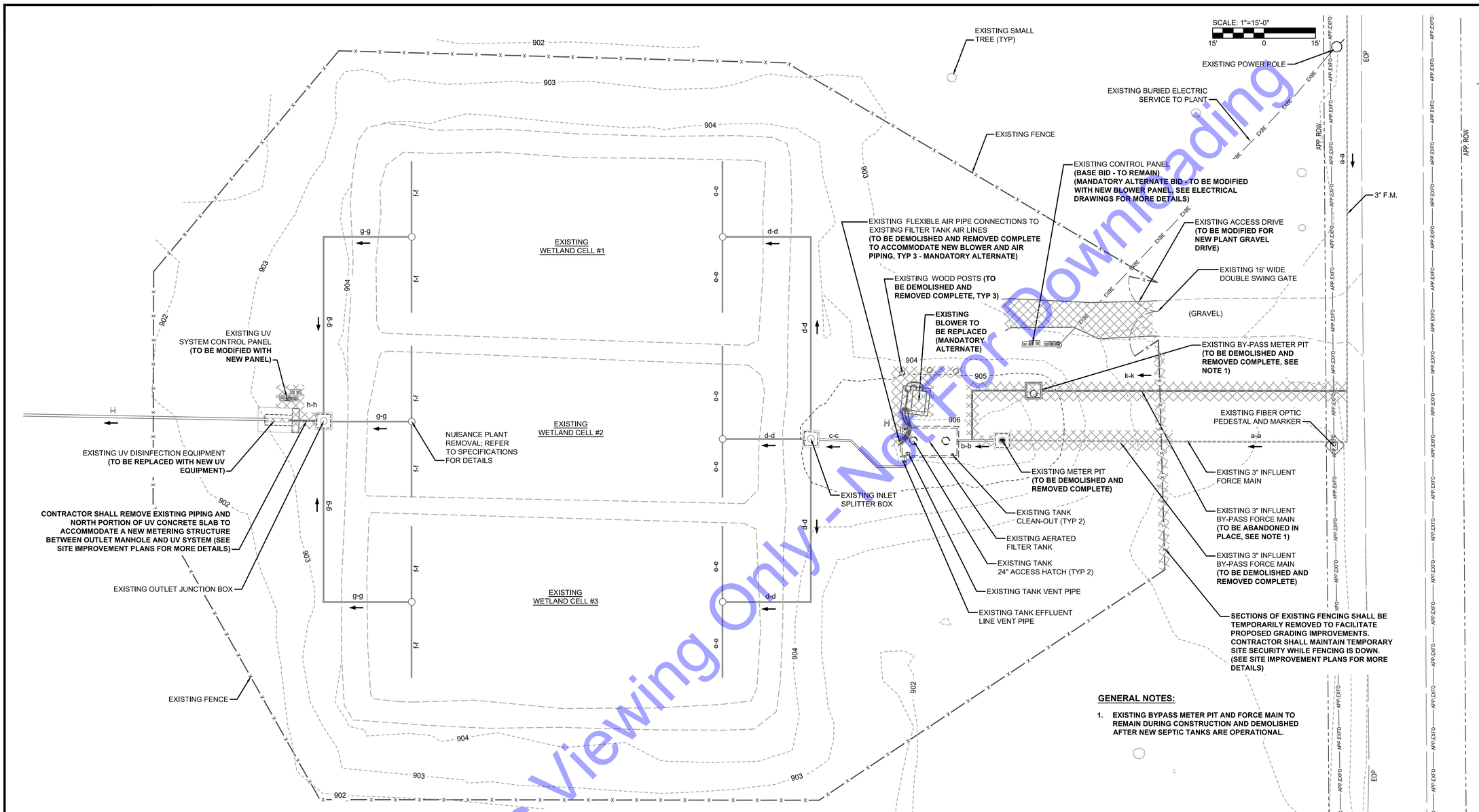

EXISTING SITE PIPING TABLE

EXISTING PIPE IDENTIFIER	PIPE SIZE	DESCRIPTION	PROPOSED IMPROVEMENTS
a-a	3"	INFLUENT FORCE MAIN FROM MILLGROVE TO EXISTING INFLUENT METERING MANHOLE	MODIFY AS SHOWN
b-b	3"	INFLUENT FORCE MAIN FROM EXISTING METERING MANHOLE TO EXISTING AERATED FILTER TANK	MODIFY AS SHOWN
c-c	6"	GRAVITY SEWER FROM EXISTING AERATED FILTER TANK TO EXISTING WETLAND INLET SPLITTER BOX	N/A
d-d	4"	GRAVITY SEWER FROM EXISTING WETLAND INLET SPLITTER BOX TO EXISTING WETLANDS	N/A
e-e	4"	EXISTING WETLAND PERFORATED INFLUENT MANIFOLD	N/A
f-f	4"	EXISTING WETLAND PERFORATED EFFLUENT MANIFOLD	N/A
g-g	4"	GRAVITY SEWER FROM EXISTING WETLANDS TO EXISTING WETLAND OUTLET JUNCTION BOX	N/A
h-h	4"	GRAVITY SEWER FROM EXISTING WETLAND OUTLET JUNCTION BOX TO EXISTING UV STRUCTURE	DEMOLISH AND REMOVE COMPLETE TO ACCOMMODATE NEW METERING STRUCTURE AND PIPING
i-i	4" TO 8"	4" GRAVITY SEWER LEAVING EXISTING UV STRUCTURE AND INCREASING TO 8" FOR PLANT EFFLUENT LINE TO BIG LICK CREEK	N/A
j-j	2.5"	EXISTING FLEXIBLE AIR SUPPLY LINES	DEMOLISH AND REMOVE COMPLETE TO ACCOMMODATE NEW BLOWERS AND PIPING
k-k	3"	INFLUENT BY-PASS FORCE MAIN	DEMOLISH, REMOVE, AND PLUG COMPLETE

GENERAL NOTES:

1. **EXISTING BYPASS METER PIT AND FORCE MAIN TO REMAIN DURING CONSTRUCTION AND DEMOLISHED AFTER NEW SEPTIC TANKS ARE OPERATIONAL.**

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EXISTING SITE AND SITE PIPING DEMOLITION PLAN

Drawing No: **PS3**

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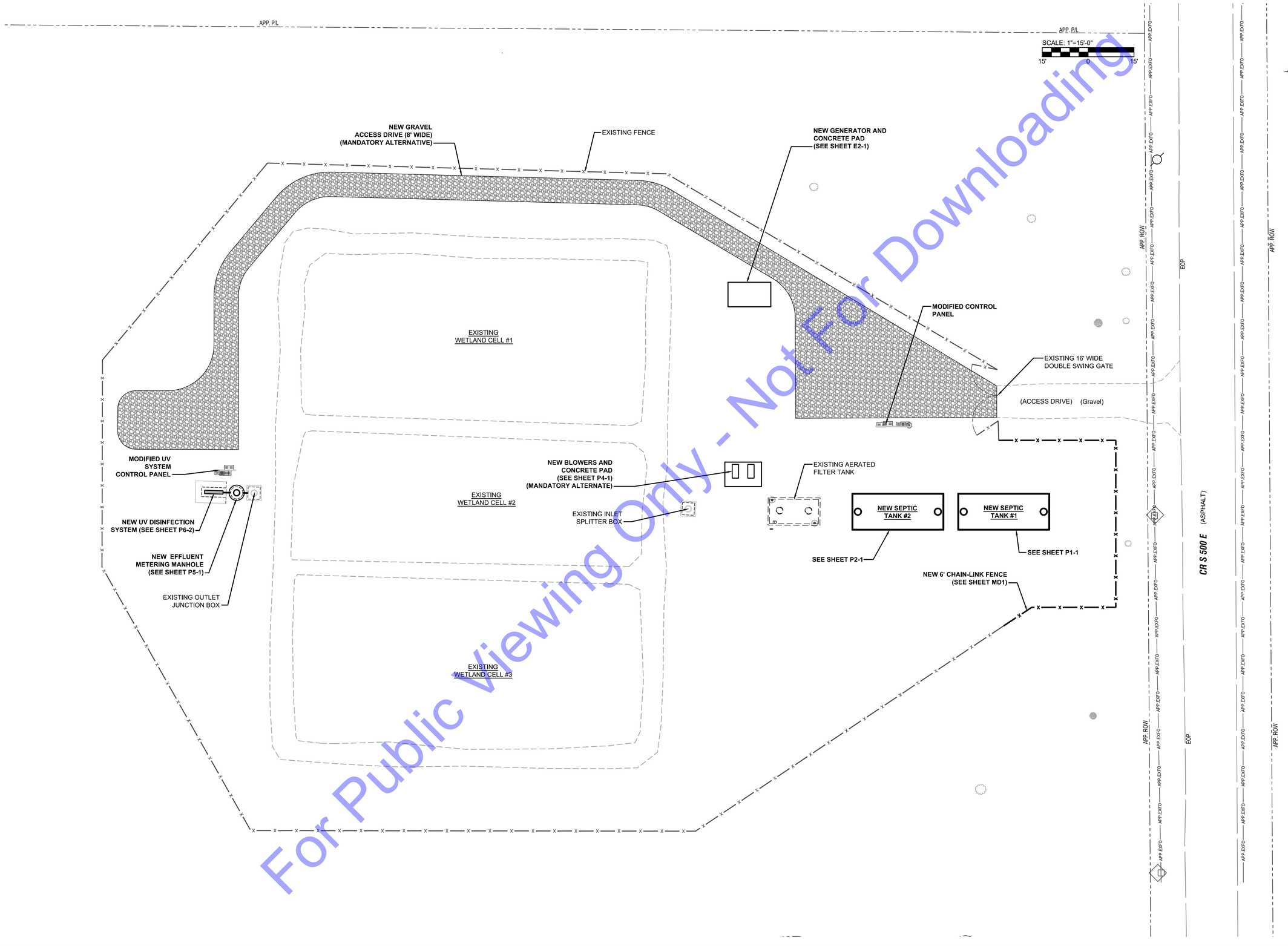

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EXISTING SITE
IMPROVEMENTS PLAN

Drawing No:
PS4
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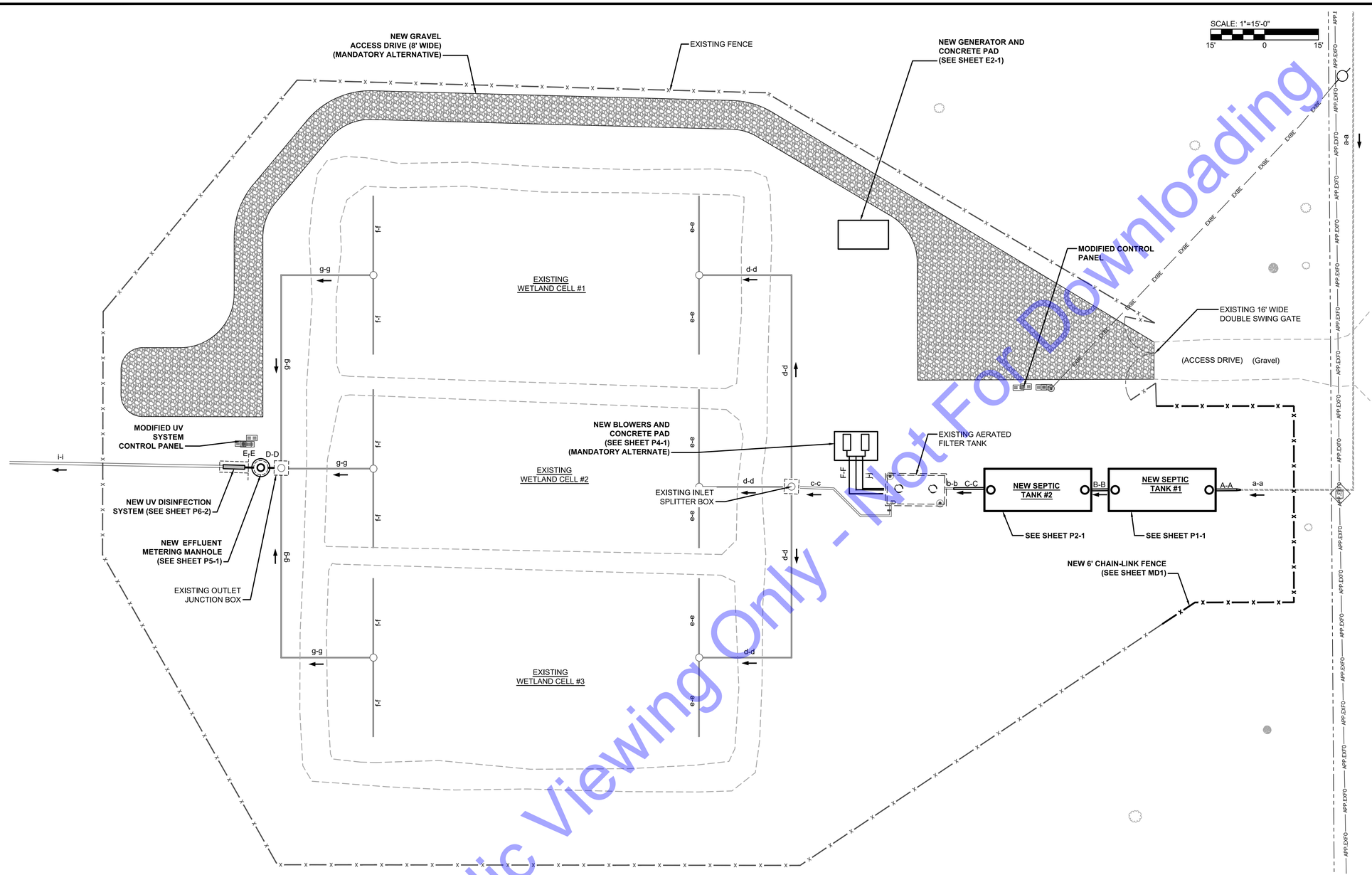

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EXISTING SITE PIPING TABLE

EXISTING PIPE IDENTIFIER	PIPE SIZE	DESCRIPTION
a-a	3"	INFLUENT FORCE MAIN FROM MILLGROVE TO EXISTING INFLUENT METERING MANHOLE
b-b	6"	INFLUENT FORCE MAIN FROM EXISTING METERING MANHOLE TO EXISTING AERATED FILTER TANK
c-c	6"	GRAVITY SEWER FROM EXISTING AERATED FILTER TANK TO EXISTING WETLAND INLET SPLITTER BOX
d-d	4"	GRAVITY SEWER FROM EXISTING WETLAND INLET SPLITTER BOX TO EXISTING WETLANDS
e-e	4"	EXISTING WETLAND PERFORATED INFLUENT MANIFOLD
f-f	4"	EXISTING WETLAND PERFORATED EFFLUENT MANIFOLD
g-g	4"	GRAVITY SEWER FROM EXISTING WETLANDS TO EXISTING WETLAND OUTLET JUNCTION BOX
i-i	4" TO 8"	4" GRAVITY SEWER LEAVING EXISTING UV STRUCTURE AND INCREASING TO 8" FOR PLANT EFFLUENT LINE TO BIG LICK CREEK
j-j	**2 1/2"**	EXISTING AIR HOSE (TYP. 3)

NEW SITE PIPING TABLE

EXISTING PIPE IDENTIFIER	PIPE SIZE	DESCRIPTION
A-A	**6"**	**NEW INFLUENT FORCE MAIN FROM EXISTING FORCE MAIN TO NEW INFLUENT METERING MANHOLE**
B-B	**6"**	**NEW EFFLUENT/INFLUENT GRAVITY SEWER FROM SEPTIC TANK #1 TO SEPTIC TANK #2**
C-C	**6"**	**NEW SEPTIC TANK #2 EFFLUENT GRAVITY SEWER TO SEPTIC TANK EFFLUENT LIFT STATION**
D-D	**4"**	**NEW GRAVITY SEWER FROM EXISTING WETLAND OUTLET JUNCTION BOX TO NEW EFFLUENT METERING MANHOLE**
E-E	**4"**	**NEW GRAVITY SEWER FROM NEW EFFLUENT METERING MANHOLE TO NEW UV SYSTEM**
F-F	**2 1/2"**	**NEW AIR HOSE (TYP. 3) (MANDATORY** ALTERNATE)

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EXISTING SITE PIPING IMPROVEMENTS PLAN

Drawing No: **PS5**

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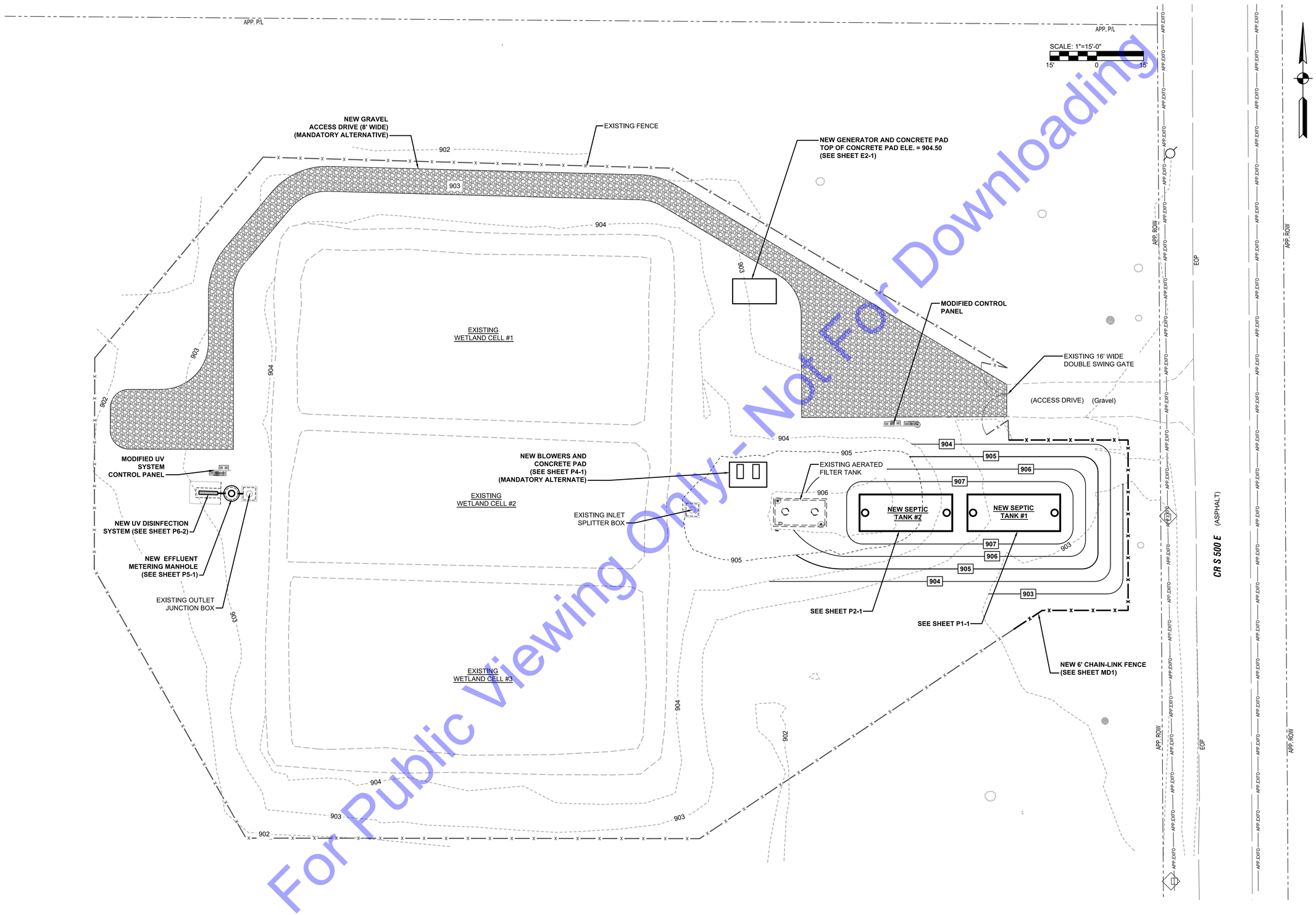

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EXISTING SITE GRADING IMPROVEMENTS PLAN

Drawing No:

PS6

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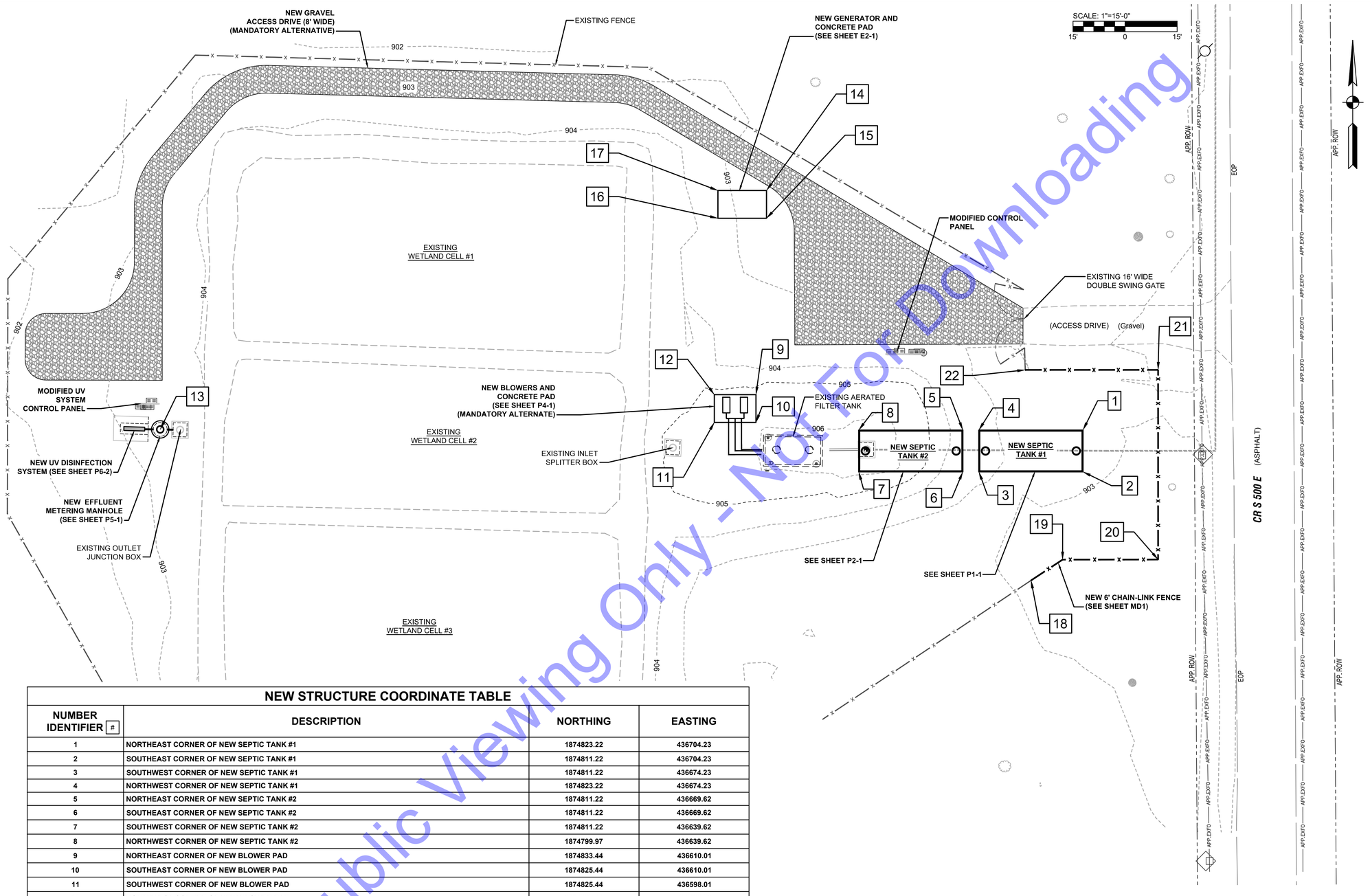

NEW STRUCTURE COORDINATE TABLE

NUMBER IDENTIFIER #	DESCRIPTION	NORTHING	EASTING
1	NORTHEAST CORNER OF NEW SEPTIC TANK #1	1874823.22	436704.23
2	SOUTHEAST CORNER OF NEW SEPTIC TANK #1	1874811.22	436704.23
3	SOUTHWEST CORNER OF NEW SEPTIC TANK #1	1874811.22	436674.23
4	NORTHWEST CORNER OF NEW SEPTIC TANK #1	1874823.22	436674.23
5	NORTHEAST CORNER OF NEW SEPTIC TANK #2	1874811.22	436669.62
6	SOUTHEAST CORNER OF NEW SEPTIC TANK #2	1874811.22	436669.62
7	SOUTHWEST CORNER OF NEW SEPTIC TANK #2	1874811.22	436639.62
8	NORTHWEST CORNER OF NEW SEPTIC TANK #2	1874799.97	436639.62
9	NORTHEAST CORNER OF NEW BLOWER PAD	1874833.44	436610.01
10	SOUTHEAST CORNER OF NEW BLOWER PAD	1874825.44	436610.01
11	SOUTHWEST CORNER OF NEW BLOWER PAD	1874825.44	436598.01
12	NORTHWEST CORNER OF NEW BLOWER PAD	1874833.44	436598.01
13	CENTER OF NEW EFFLUENT METERING MANHOLE	1874823.42	436438.34
14	NORTHEAST INTERIOR CORNER OF NEW GENERATOR PAD	1874892.25	436613.45
15	SOUTHEAST INTERIOR CORNER OF NEW GENERATOR PAD	1874884.25	436613.45
16	SOUTHWEST INTERIOR CORNER OF NEW GENERATOR PAD	1874884.25	436599.05
17	NORTHWEST INTERIOR CORNER OF NEW GENERATOR PAD	1874892.25	436599.05
18	NEW FENCE CORNER	1874779.92	436689.27
19	NEW FENCE CORNER	1874785.91	436698.36
20	NEW FENCE CORNER	1874785.93	436725.89
21	NEW FENCE CORNER	1874840.56	436725.89
22	NEW FENCE CORNER	1874840.56	436687.60

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EXISTING SITE IMPROVEMENTS DIMENSIONING PLAN

Drawing No: **PS7**

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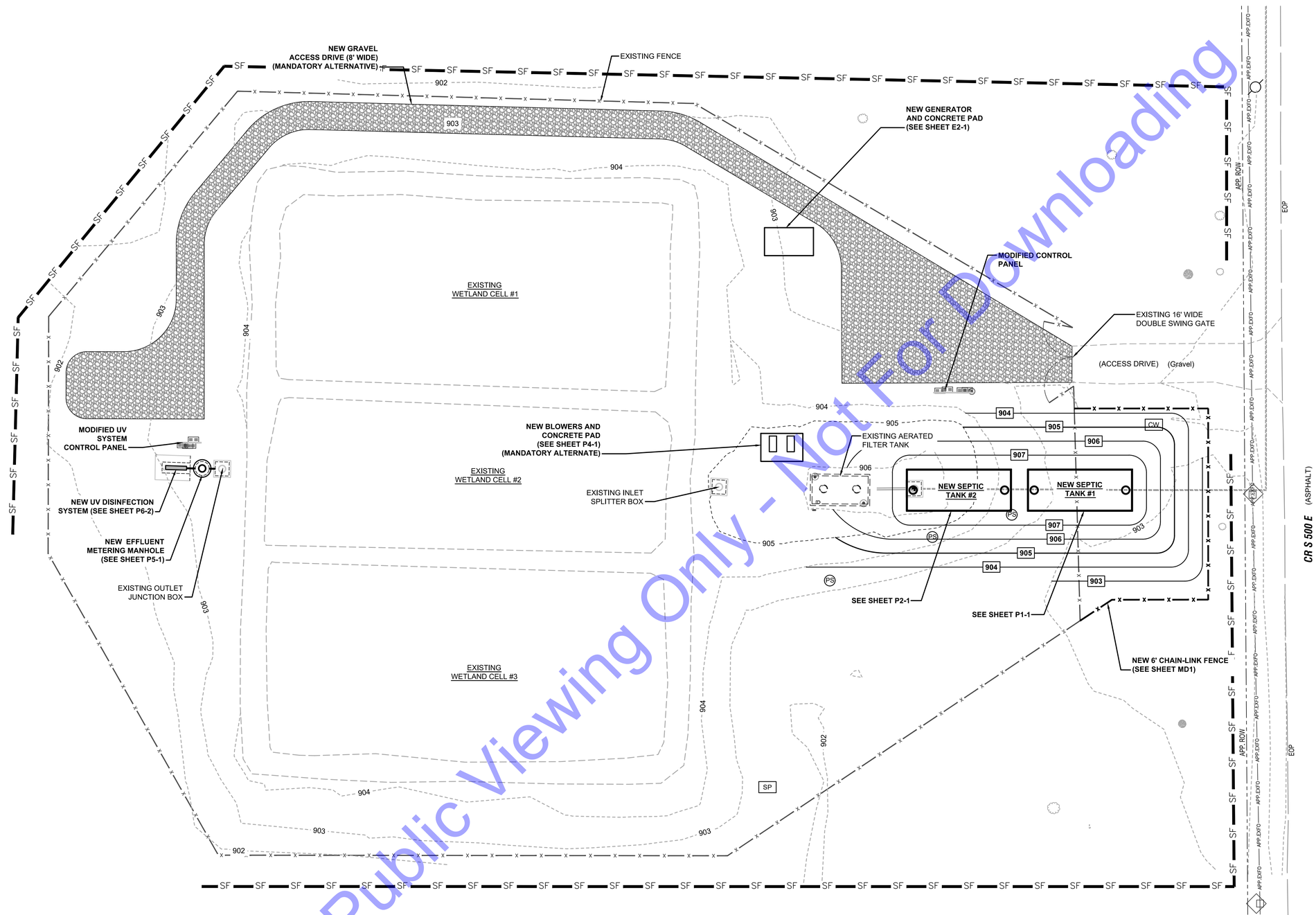

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GENERAL NOTE:

1. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL MEASURES AS SPECIFIED IN THE DETAILED SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO CONCRETE WASHOUT STATIONS, TEMPORARY CONSTRUCTION ENTRANCES, TEMPORARY SEEDING, ETC.
2. SEE MD7 AND MD8 DRAWINGS FOR EROSION CONTROL DETAILS.

LEGEND:

PS	PERMANENT SEEDING/MULCHING
SF	SILT FENCE
CW	CONCRETE WASHOUT STATION (SEE SHEET MD3)
SP	STOCK PILE

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Signature 7-27-2021 Date

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EXISTING SITE EROSION CONTROL PLAN

Drawing No: **PS8**

Sheet: 30 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D.S18018 WASTEWATER UTILITIES IMPRV\S05 CAD\01-CURRENT FILES\DRAWINGS\03-S18018-SITE PLANS.DWG
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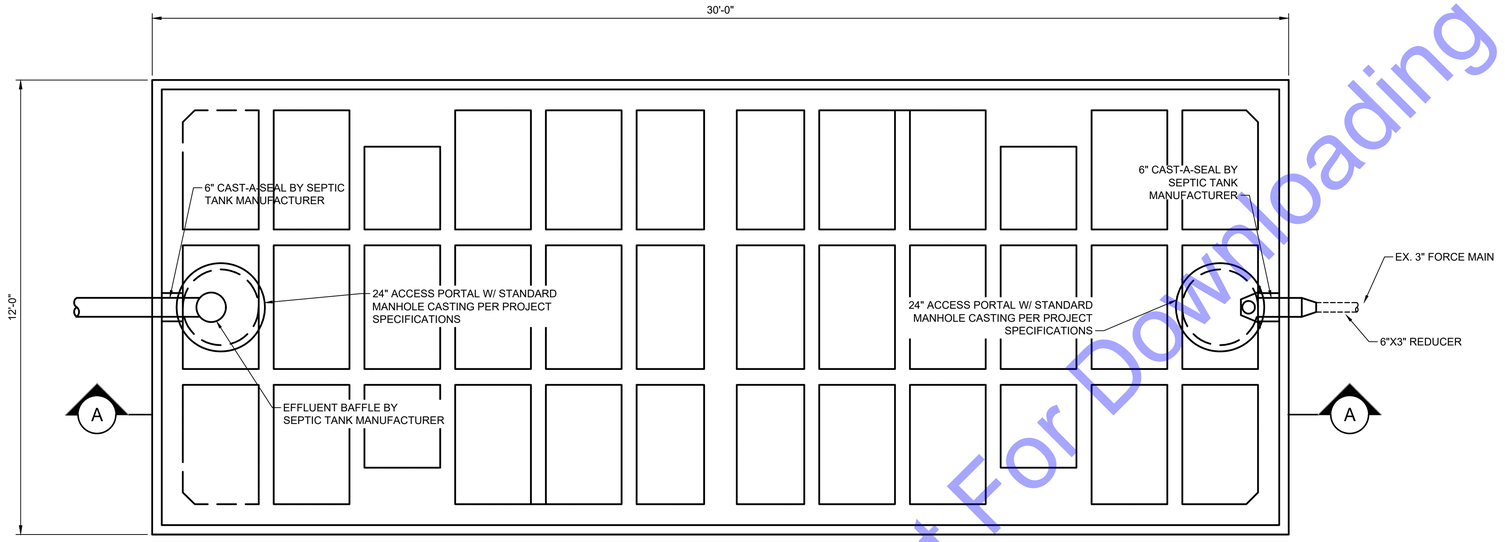
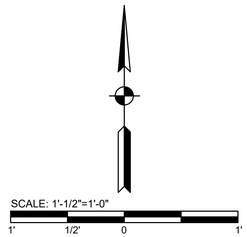
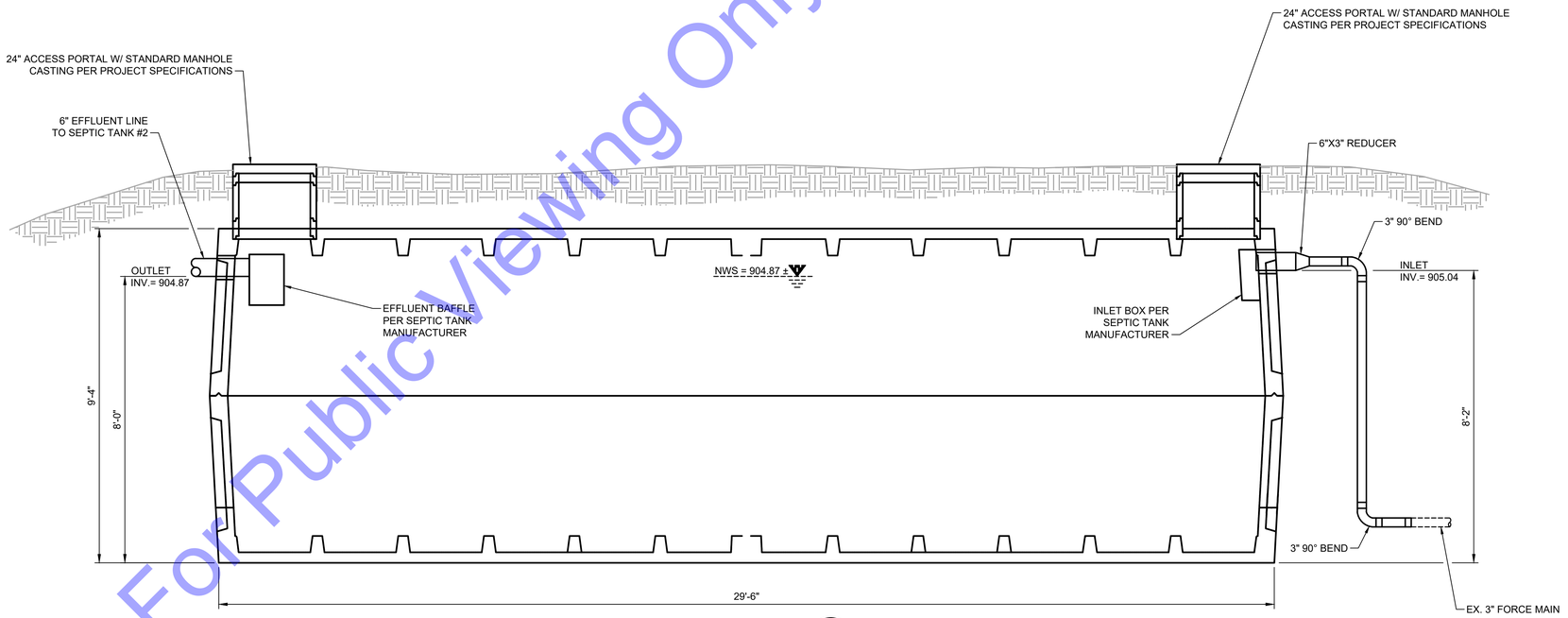


NEW 18,000 GAL. SEPTIC TANK #1 PLAN VIEW

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





SECTION VIEW (A)

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

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NEW SEPTIC TANK #1 PLAN AND SECTION VIEW

Drawing No: **P1-1**

Sheet: 31 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D.S18018 WASTEWATER UTILITIES IMPRV\S05 CAD\01-CURRENT FILES\DRAWINGS\05-S18018-PROCESS DRAWINGS.DWG
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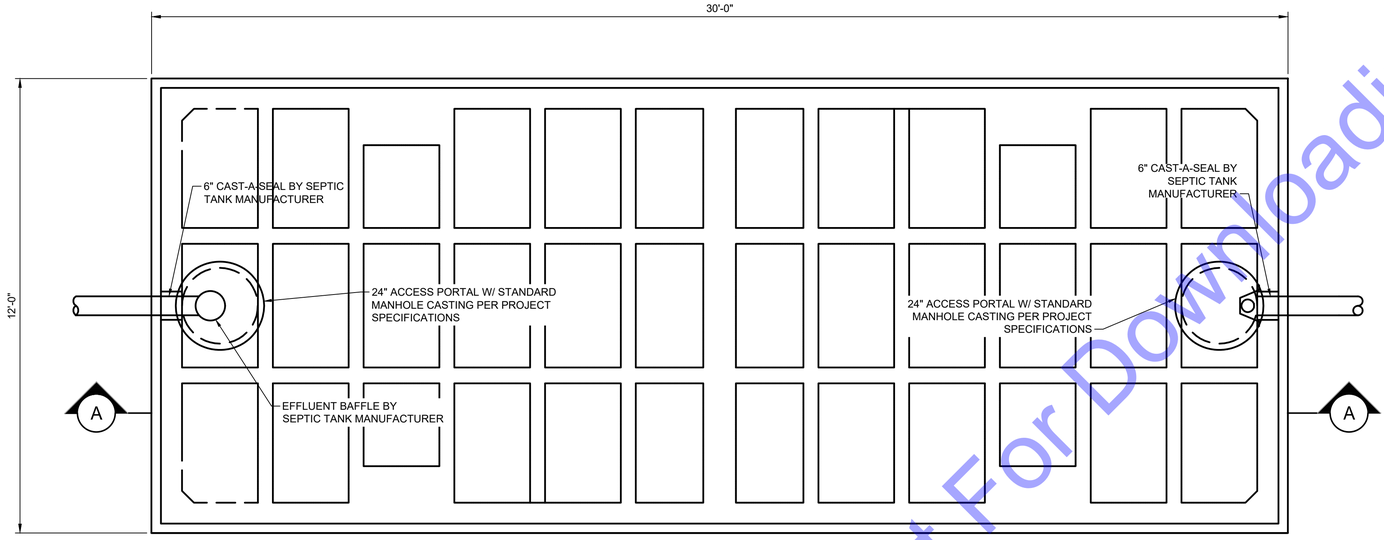
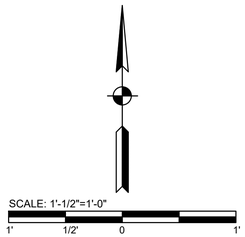
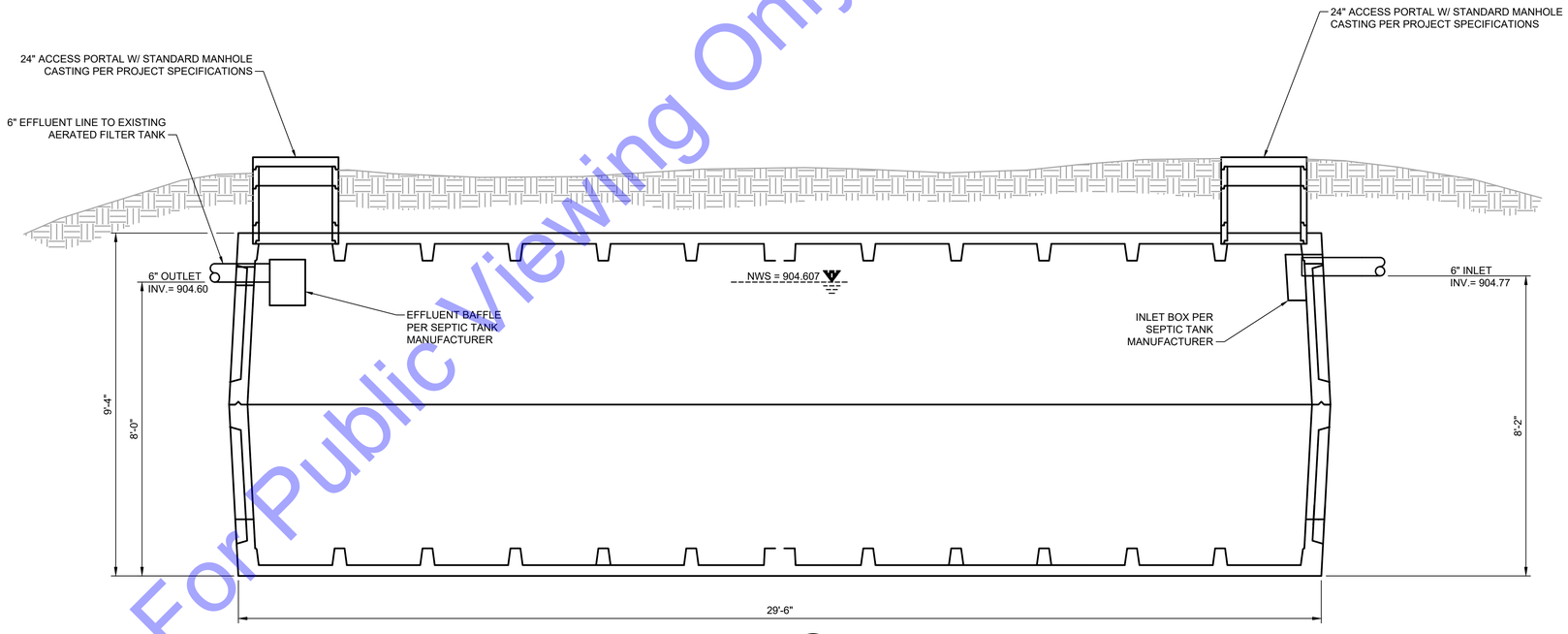


NEW 18,000 GAL. SEPTIC TANK #2 PLAN VIEW

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





SECTION VIEW A

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

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STATE OF INDIANA
PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

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NEW SEPTIC TANK #2 PLAN AND SECTION VIEW

Drawing No: **P2-1**

Sheet: 32 OF 65

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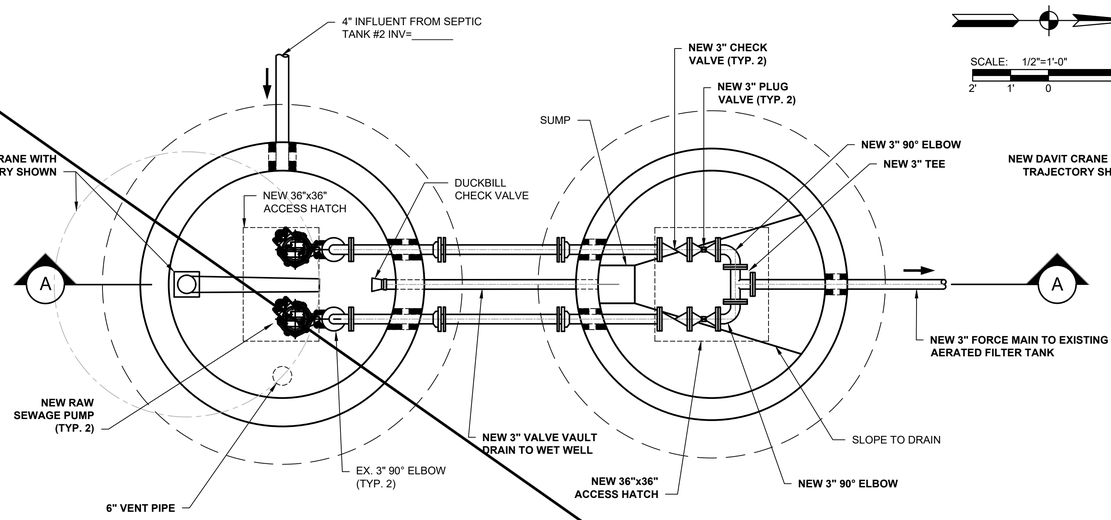
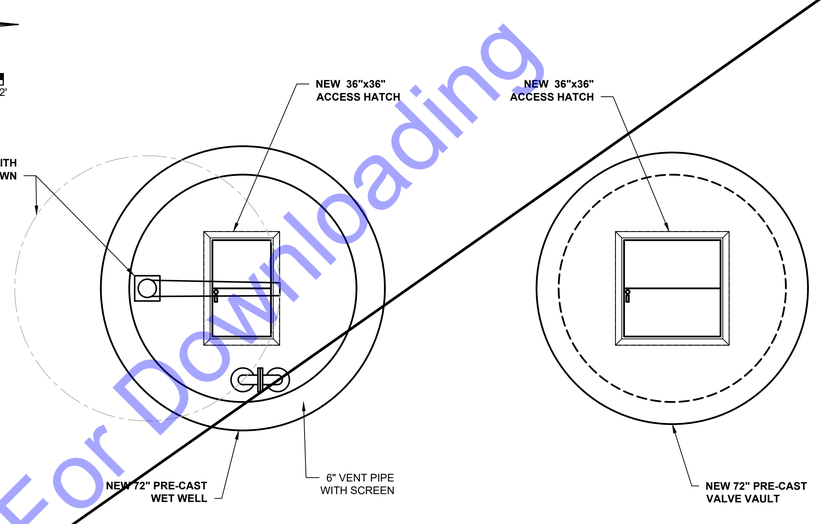


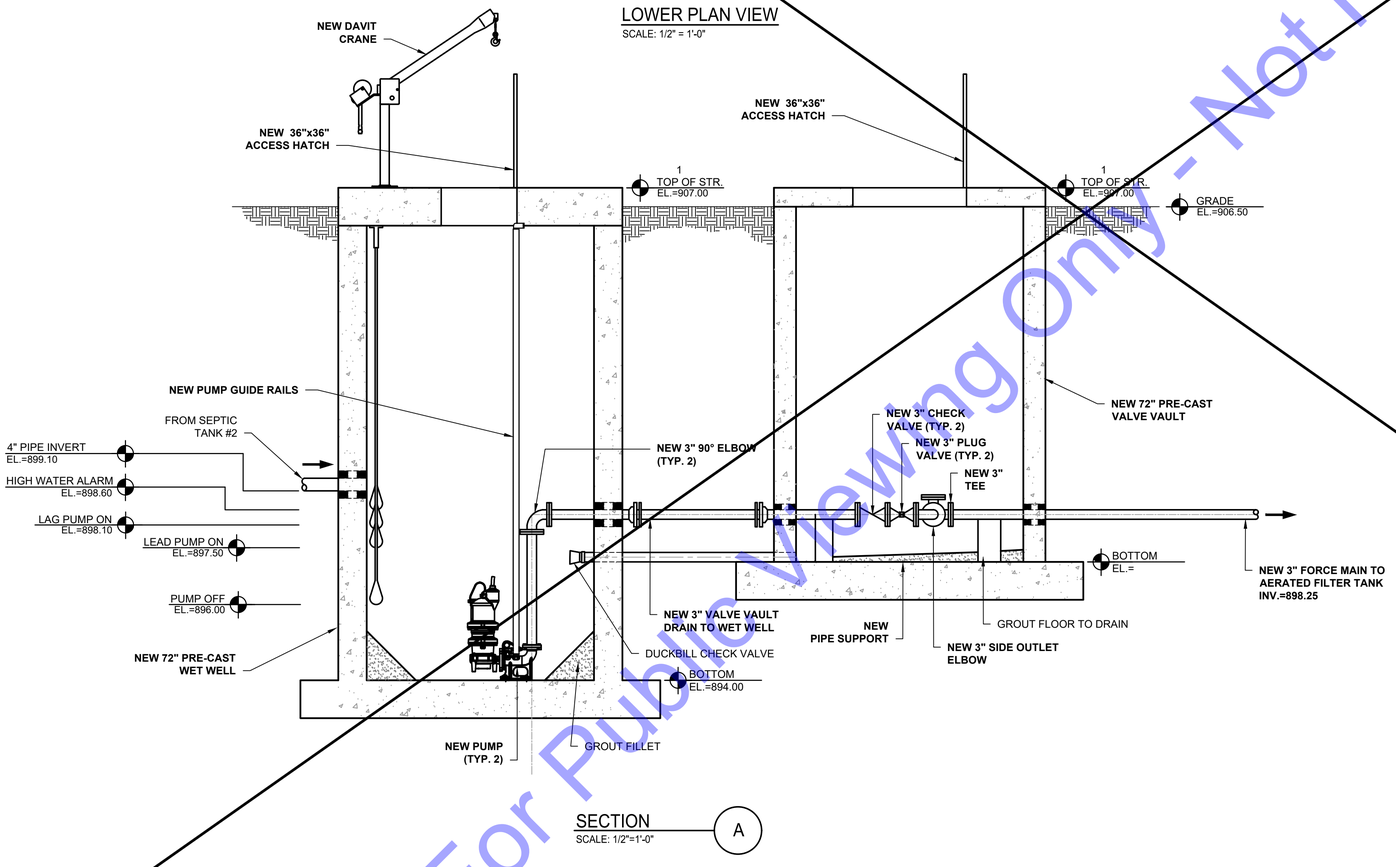
LOWER PLAN VIEW
SCALE: 1/2" = 1'-0"



UPPER PLAN VIEW
SCALE: 1/2" = 1'-0"

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

REMOVED FROM BID SET



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

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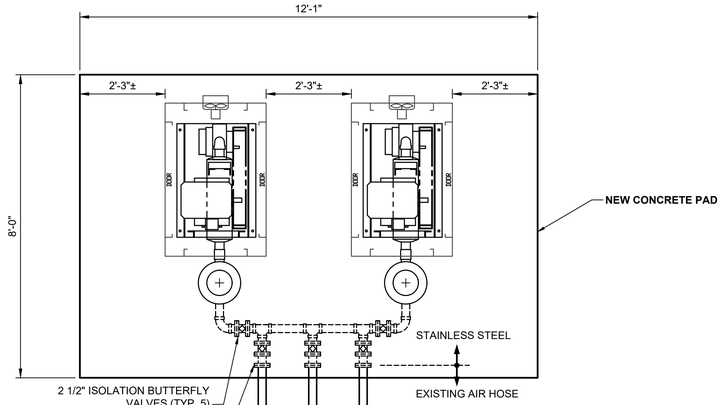
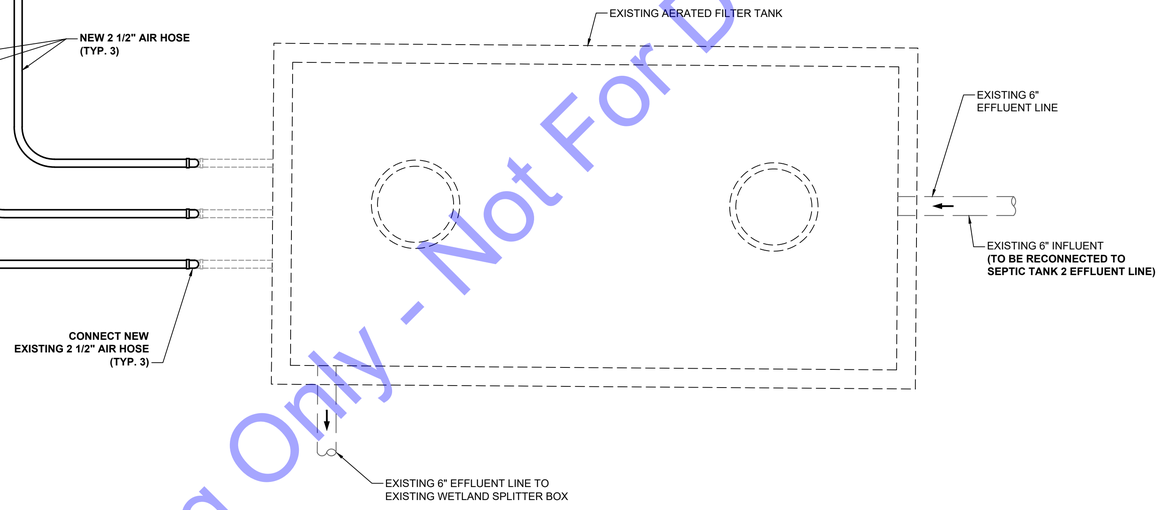
NEW SEPTIC TANK EFFLUENT PUMP STATION PLAN AND SECTION VIEWS

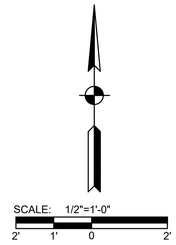
Drawing No:
P3-1
Sheet: 33 OF 65

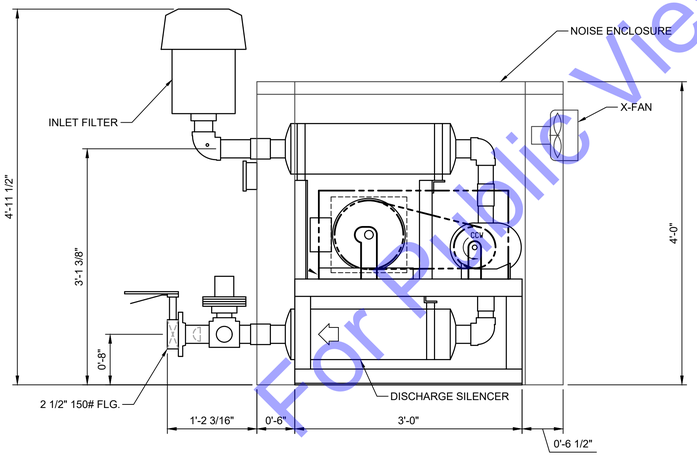
File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPRV\S05 CAD\01-CURRENT FILES\DRAWINGS\S6-S18018-NEW LIFTSTATION.DWG
Saved: 5/7/2025 2:34:10 PM Plotted: 5/7/2025 3:06:45 PM Current User: George Rader LastSavedBy: grader





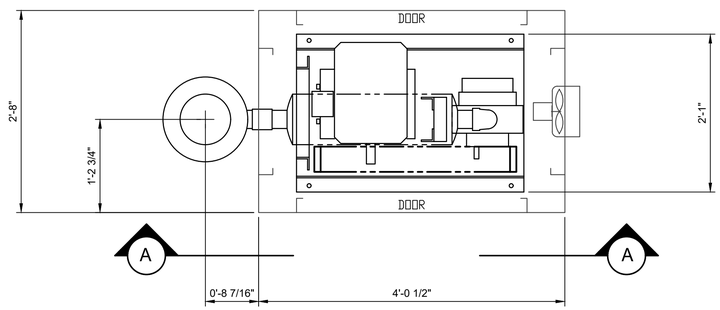
PLAN VIEW
SCALE: 1/2"=1'-0"





SECTION A
SCALE: 1"=1'-0"

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



BLOWER PLAN VIEW
SCALE: 1"=1'-0"

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

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NEW BLOWER PLAN AND SECTION VIEWS MANDATORY ALTERNATE BID ITEM

Drawing No:
P4-1
Sheet: 34 OF 65

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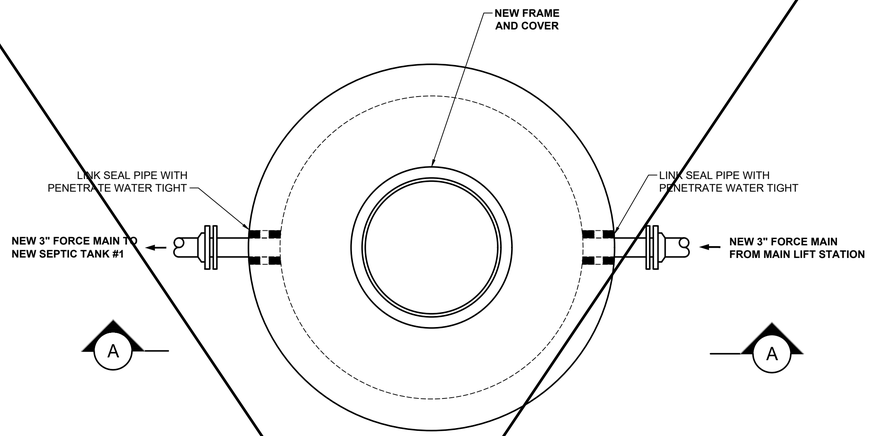
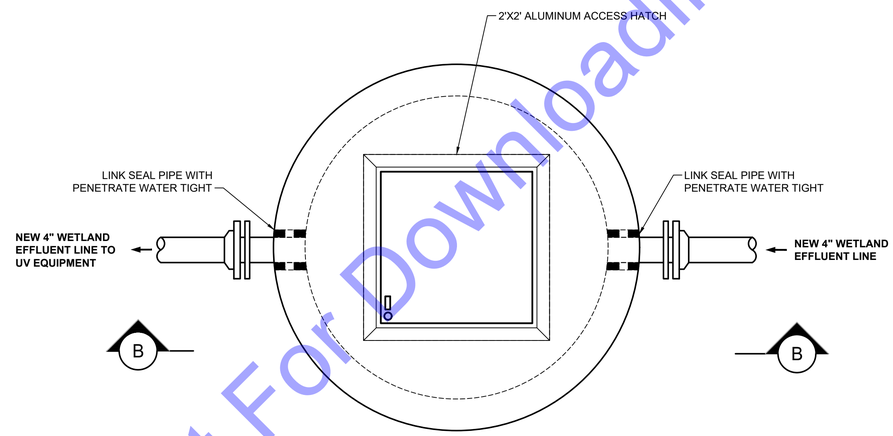
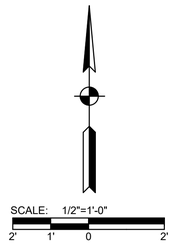


NEW INFLUENT METER VAULT PLAN VIEW
SCALE: 1"=1'-0"



NEW EFFLUENT METER VAULT PLAN VIEW
SCALE: 1"=1'-0"



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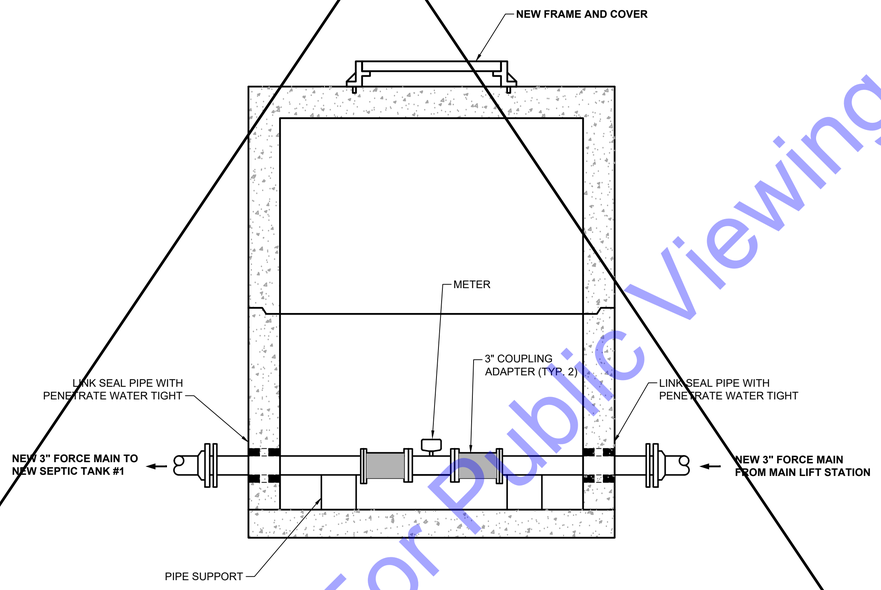
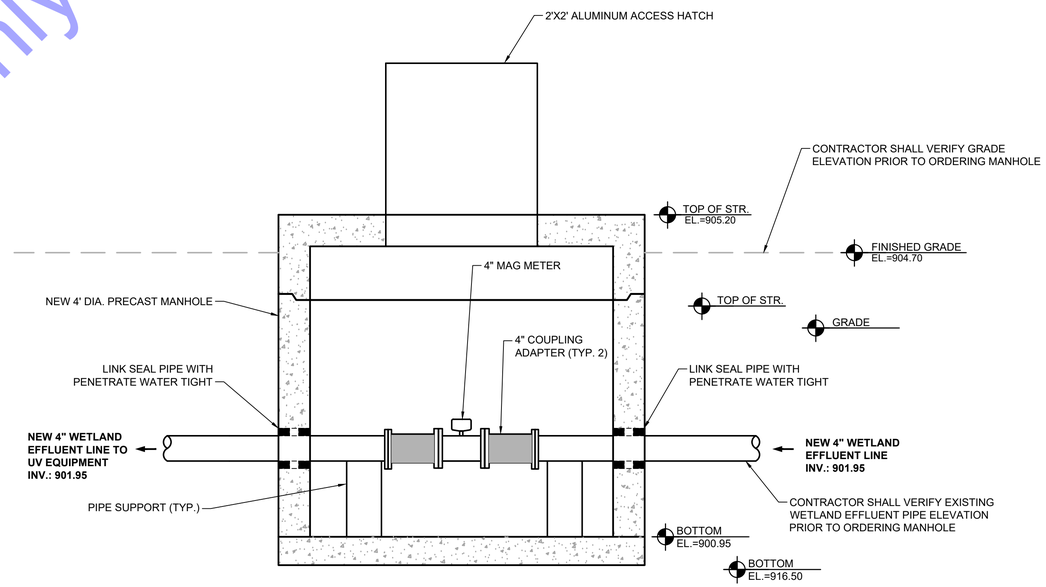


SECTION VIEW
SCALE: 1" = 1'-0"
A



SECTION VIEW
SCALE: 1" = 1'-0"
B

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NEW METERING MANHOLE PLAN AND SECTION VIEWS

Drawing No:
P5-1
Sheet: 35 OF 65

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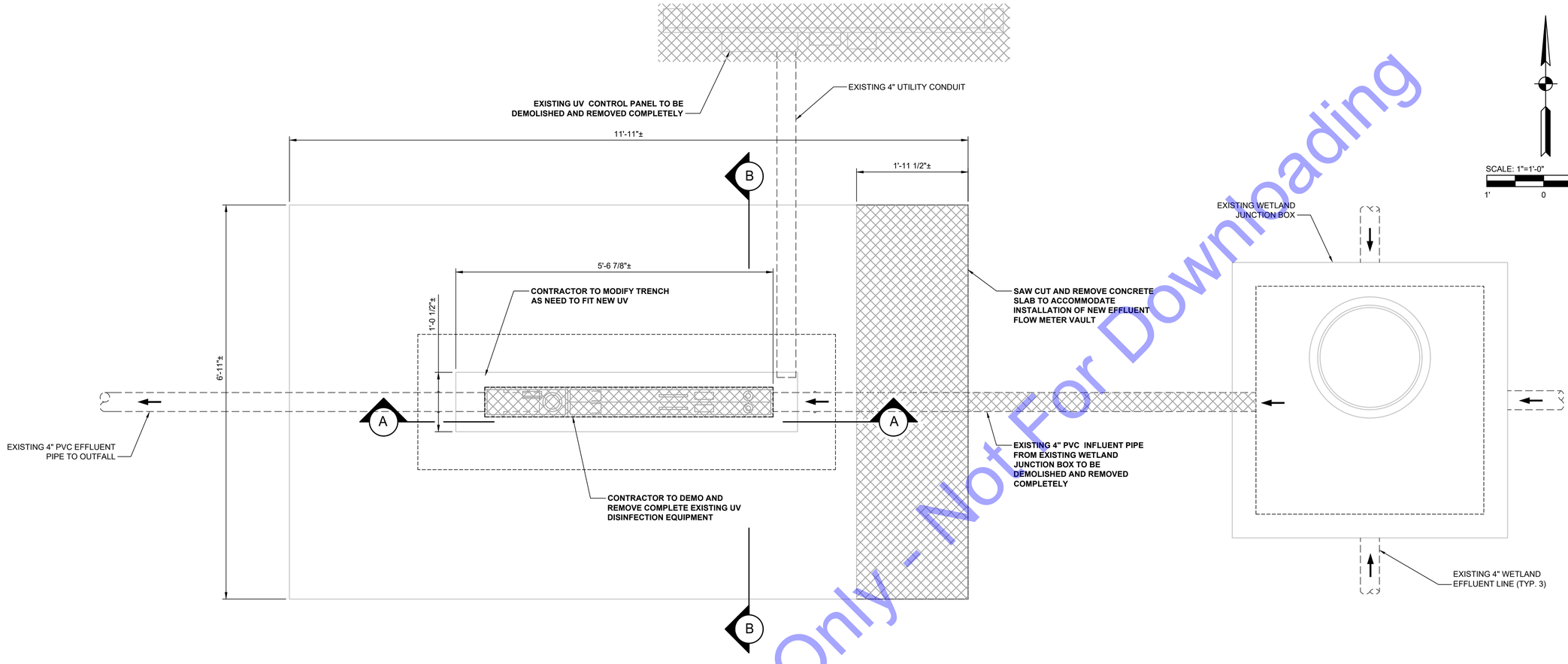
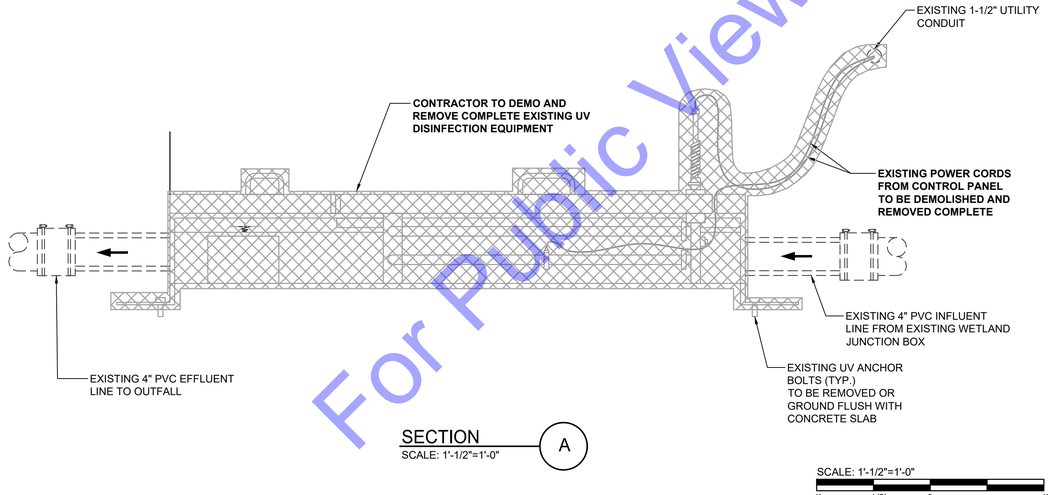


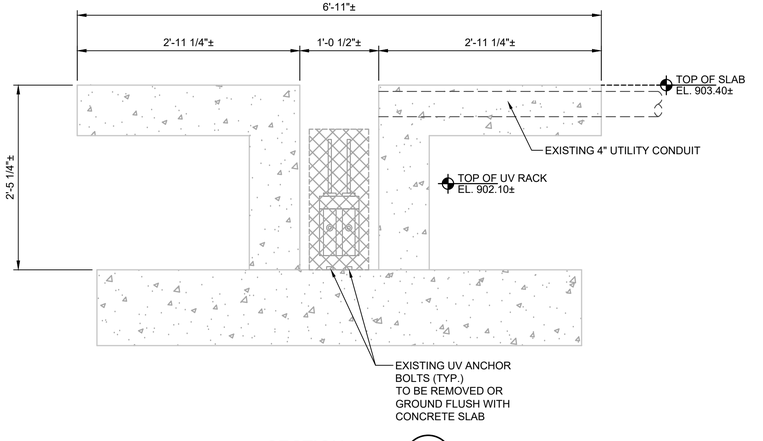
PLAN VIEW
SCALE: 1"=1'-0"

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



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

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



SECTION
SCALE: 1"=1'-0"
B

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

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EXISTING UV STRUCTURE DEMOLITION PLAN AND SECTION VIEWS

Drawing No:
P6-1
Sheet: 36 OF 65

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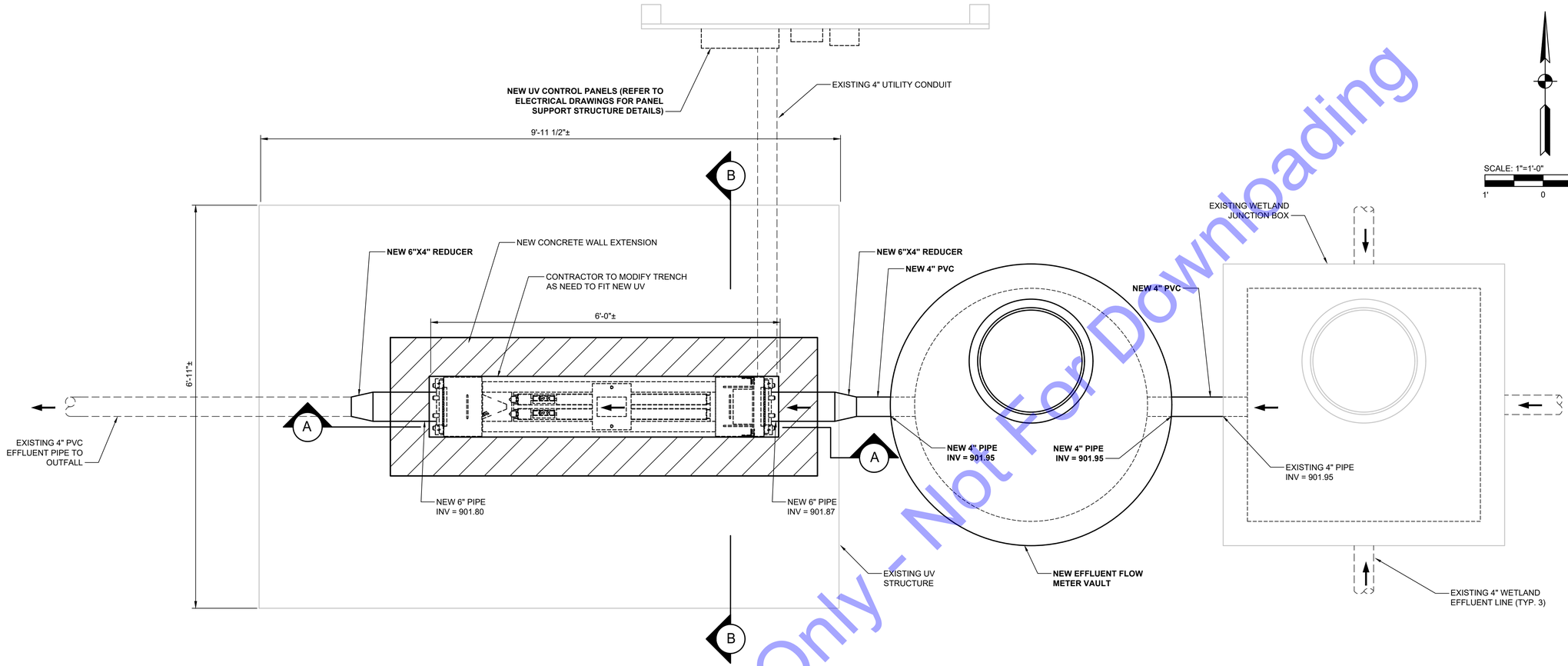

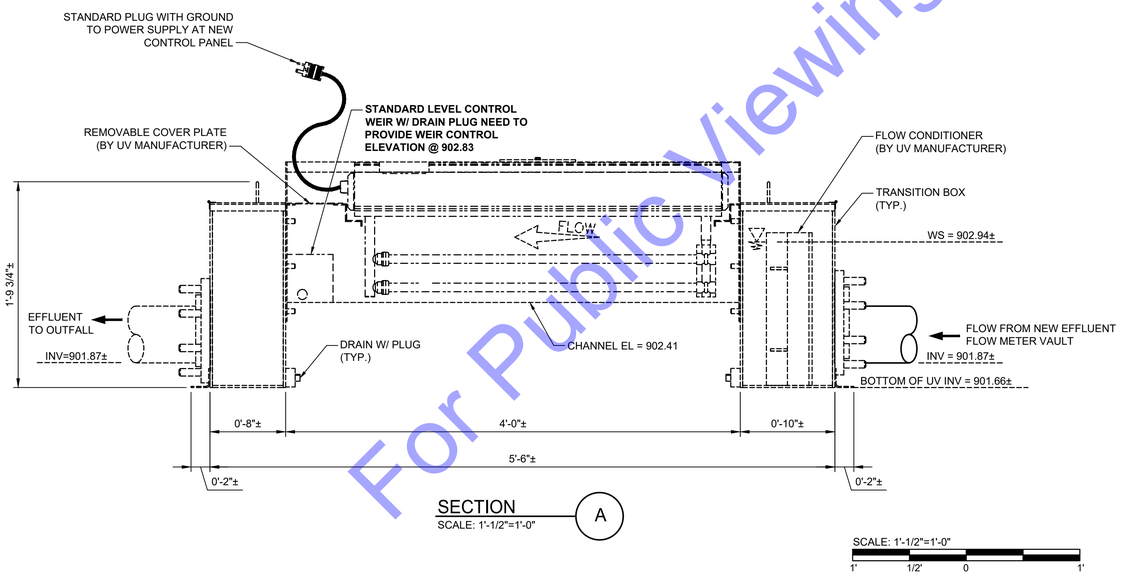

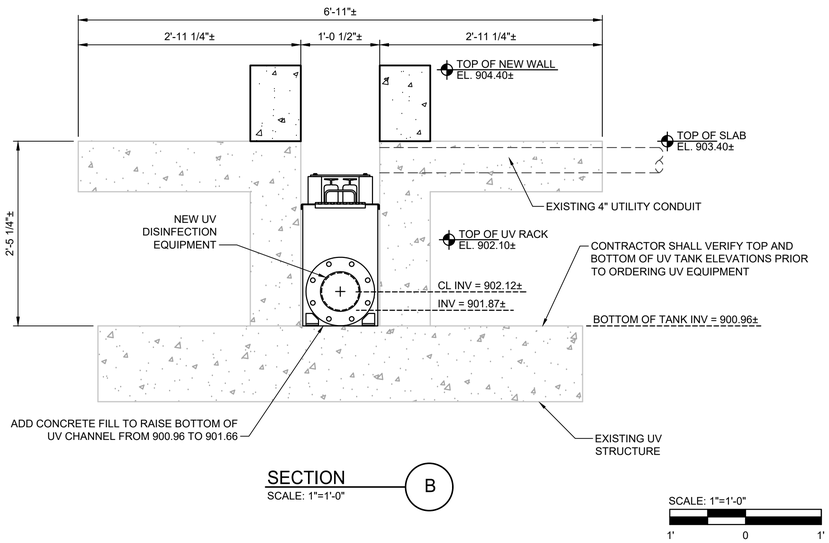

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Issue Date:	**Project No:**	**Scale:**
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NEW UV STRUCTURE PLAN AND SECTION VIEWS

Drawing No:
P6-2
Sheet: 37 OF 65

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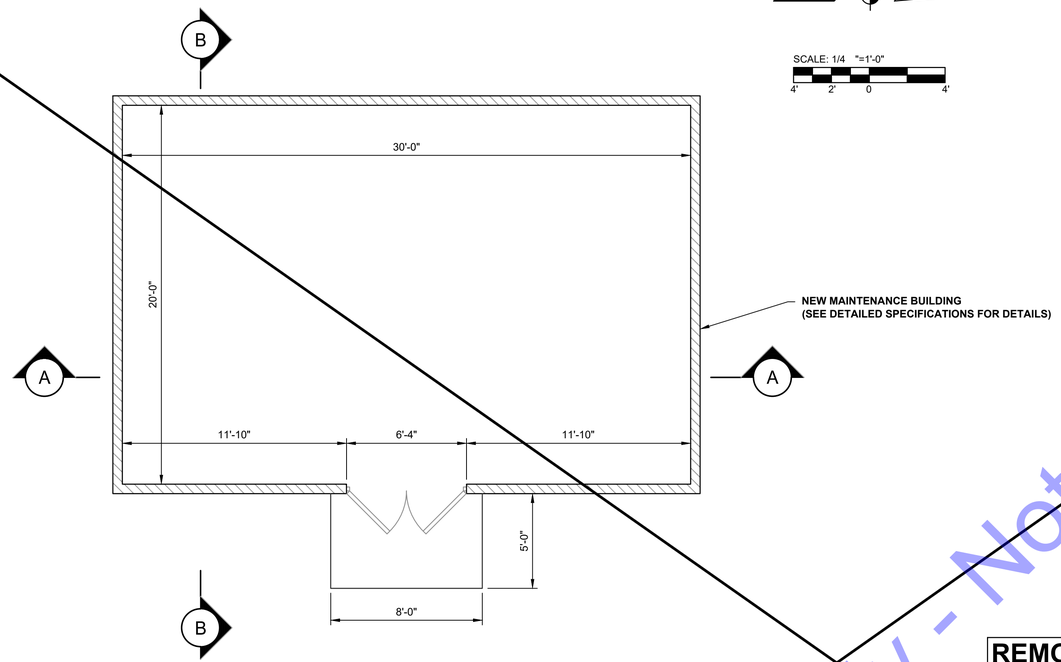


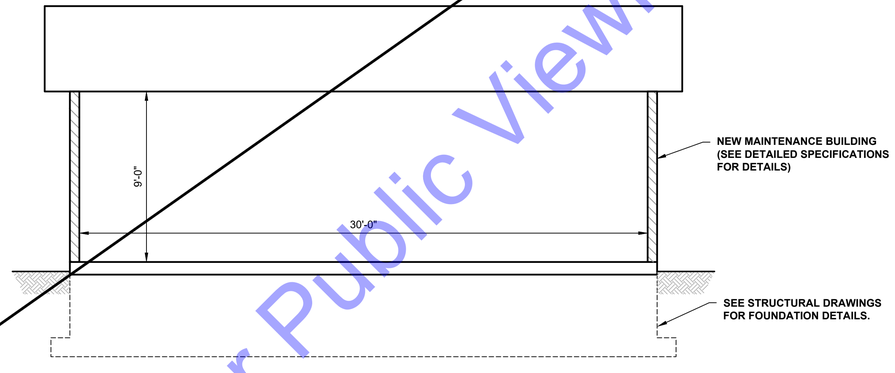
NEW MAINTENANCE BUILDING FLOOR PLAN
SCALE: 1/4"=1'-0"

SCALE: 1/4 "=1'-0"
4' 2' 0 4'

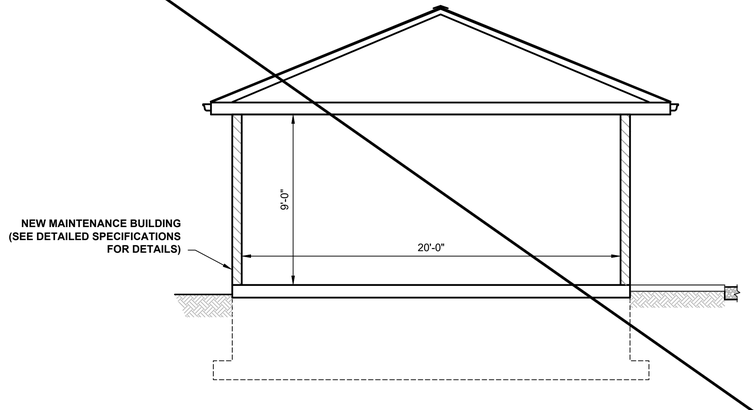
GENERAL FLOOR PLAN NOTES

1. DIMENSIONS ARE FROM INSIDE OF WALLS (SEE STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS).
2. CONTRACTOR SHALL REFER TO DRAWING MD2 FOR ALL DOOR, AND ROOM FINISH SCHEDULES AND DETAILS.

REMOVED FROM BID SET



SECTION VIEW A
SCALE: 1/4" = 1'-0"



SECTION VIEW B
SCALE: 1/4" = 1'-0"

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PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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NEW MAINTENANCE BUILDING PLAN AND SECTION VIEWS

Drawing No:
P7-1
Sheet: 38 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D-S18018 WASTEWATER UTILITIES IMPROV\S05 CAD\01-CURRENT FILES\DRAWINGS\04-S18018-NEW MAINT-CONTROL BUILDING.DWG
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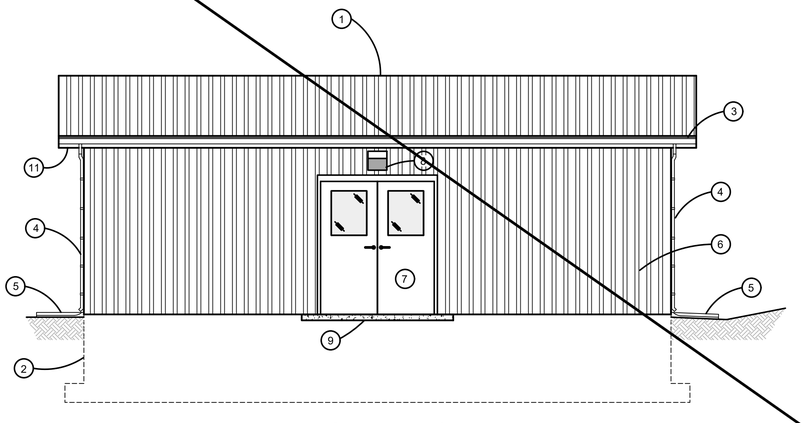
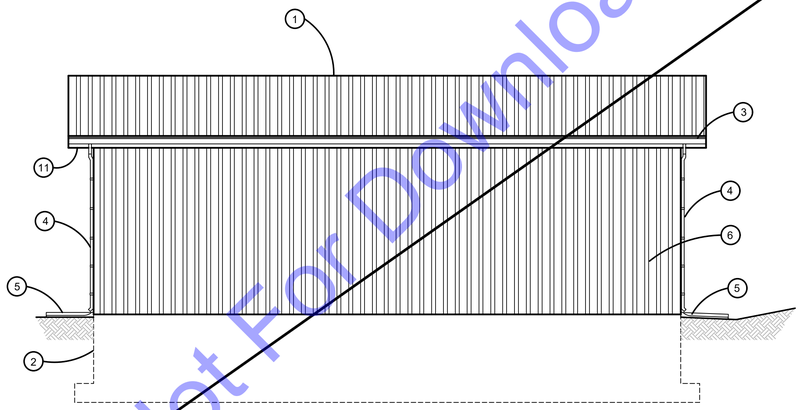


EAST ELEVATION
SCALE: 3/8"=1'-0"



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

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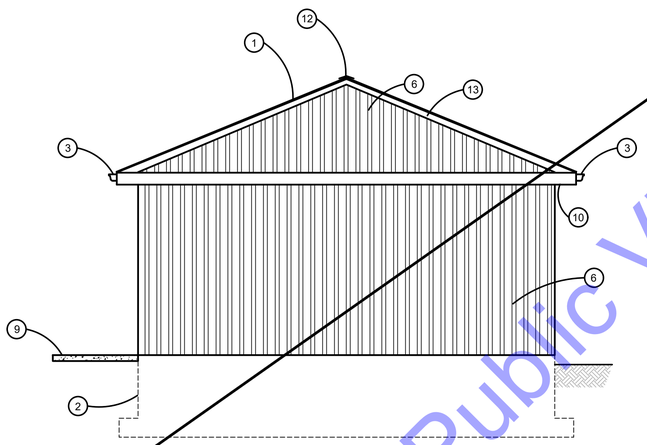
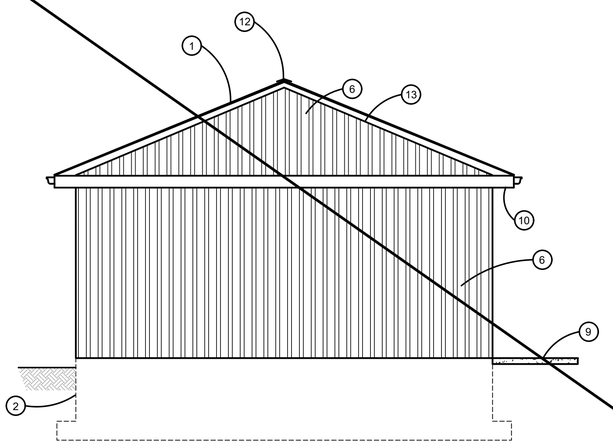


NORTH ELEVATION
SCALE: 3/8 "=1'-0"



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

GENERAL NOTES:

1. CONTRACTOR SHALL ENSURE THAT PROPER GRADING SUCH THAT ALL DRAINAGE FLOWS AWAY FROM BUILDING AND SLAB, INCLUDING DOWNSPOUT RUN-OFF WITH SPLASH BLOCK.

2. CONTRACTOR SHALL REFER TO DRAWING MD-- FOR ALL DOOR, AND ROOM FINISH SCHEDULES AND DETAILS FROM BUILDING MANUFACTURER.

3. ALL COLORS TO BE SELECTED BY OWNER DURING SHOP DRAWING REVIEW.

ELEVATION VIEW KEYNOTE LEGEND:

1. STEEL ROOF PANELS
2. FOOTING AND FOUNDATION (SEE STRUCTURAL DRAWINGS)
3. 6" PREFINISHED ALUM. GUTTER
4. 4" PREFINISHED ALUM. DOWNSPOUT
5. PREFABRICATED CONCRETE SPLASH BLOCK
6. STEEL SIDING PANELS
7. NEW INSULATED DOUBLE METAL DOOR UNIT WITH WINDOW (PAINTED)
8. DUSK TO DAWN SECURITY LIGHT
9. CONCRETE SIDEWALK (SEE SHEET MD1)
10. 2X8 TREATED FASCIA BOARD WITH PRE-FINISHED ALUMINUM TRIM
11. 1X4 TREATED WOOD BOARD WITH PRE-FINISHED ALUMINUM TRIM
12. RIDGE VENT
13. 2X6 TREATED WOOD RAKE BOARDS WITH PRE-FINISHED ALUMINUM TRIM

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NEW MAINTENANCE BUILDING ELEVATION VIEWS

Drawing No:
P7-2
Sheet: 39 OF 65

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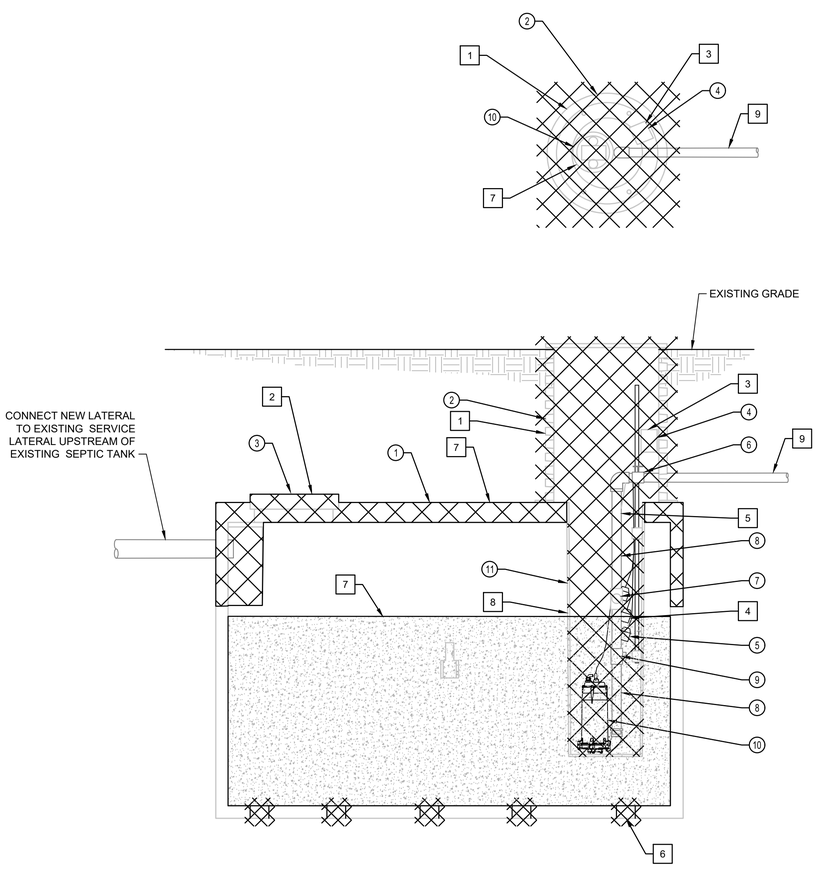


EXISTING SEPTIC TANK AND PUMP
SCALE: N.T.S.

EXISTING RESIDENTIAL SEPTIC TANK KEYNOTES: ◯

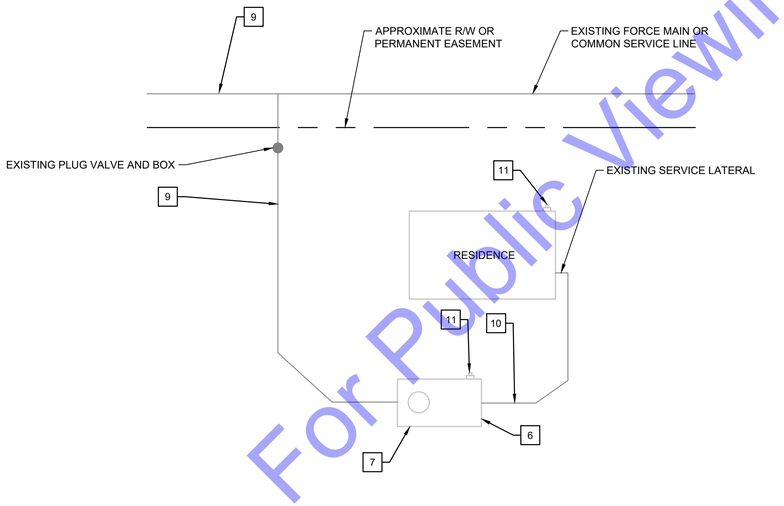
1. 1,000 GALLON SEPTIC TANK
   1,500 GALLON SEPTIC TANK
2. EXISTING POLYETHYLENE RISER AND LID
3. CONCRETE LID AND INSPECTION ACCESS
4. ELECTRICAL JUNCTION BOX
5. LEVEL ALARM FLOATS
6. 1 1/4" NPT PVC TRUE UNION VALVE
7. CHECK VALVE
8. 1 1/4" PVC AND FLEXIBLE HOSE
9. BLEEDER VALVE
10. STEP PUMP
11. POLYETHYLENE PUMP CHAMBER

NOTE:

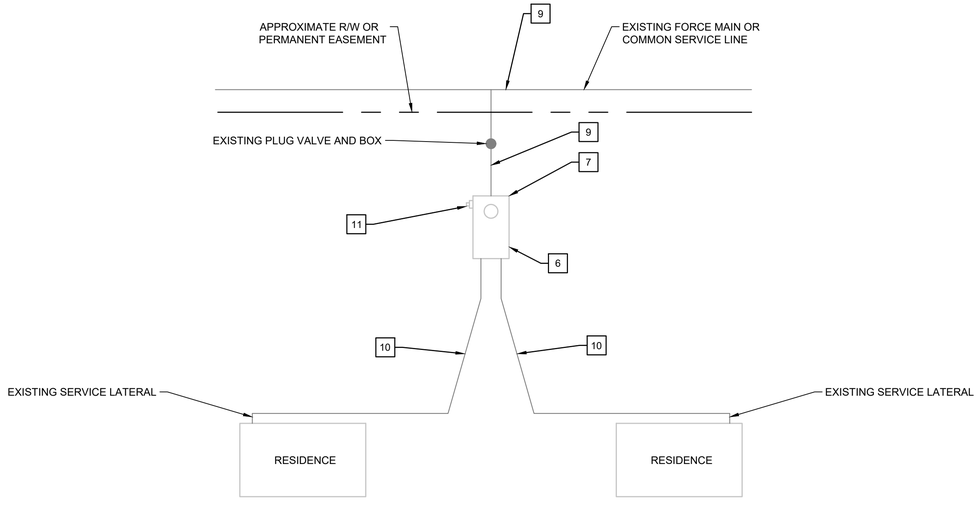
1. CONTRACTOR TO FIELD VERIFY SIZE OF EXISTING TANKS TO BE DEMOLISHED.

DEMOLITION KEYNOTES: ☐

1. REMOVE EXISTING POLYETHYLENE RISER AND LID
2. REMOVE CONCRETE LID AND INSPECTION ACCESS RISER.
3. REMOVE ELECTRICAL JUNCTION BOX.
4. REMOVE LEVEL ALARM FLOATS.
5. REMOVE EXISTING PIPES, FITTINGS AND VALVES.
6. PUNCH FIVE (5) 6" DIAMETER HOLES IN BOTTOM OF TANKS.
7. REMOVE TOP 12" OF EACH SEPTIC TANK AND DUMP BACK INTO EXISTING TANKS AND FILL SEPTIC TANKS WITH CLASS I OR II MATERIAL PER THE WORKMANSHIP AND MATERIAL SPECIFICATION SECTION WM3.
8. REMOVE POLYETHYLENE PUMP CHAMBER AND PUMP.
9. EXISTING FORCEMAIN TO BE ABANDONED IN PLACE. PLUG ANY OPEN ENDS OF FORCEMAIN.
10. DEMO EXISTING LATERALS AS NEEDED. ANY OPEN END PIPES SHALL BE PLUGGED AND REDIRECTED TO NEW GRAVITY COLLECTION SYSTEM AS NOTED ON PLAN AND PROFILE DRAWINGS.
11. DEMO EXISTING ELECTRICAL PANEL TO INCLUDE ALL CONDUIT AND SUPPORTS .



TYPICAL ON-SITE SYSTEM - INDIVIDUAL PUMPING UNIT
SCALE: N.T.S.



TYPICAL ON-SITE SYSTEM - SHARED PUMPING UNIT
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CHRIS A. LIMCACO REGISTERED No. 19700338 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

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EXISTING SEPTIC TANK DEMOLITION PLAN AND SECTION VIEWS

Drawing No: **D1**

Sheet: 40 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPRV\S05 CAD\01-CURRENT FILES\DRAWINGS\S18018-MISC DETAILS.DWG
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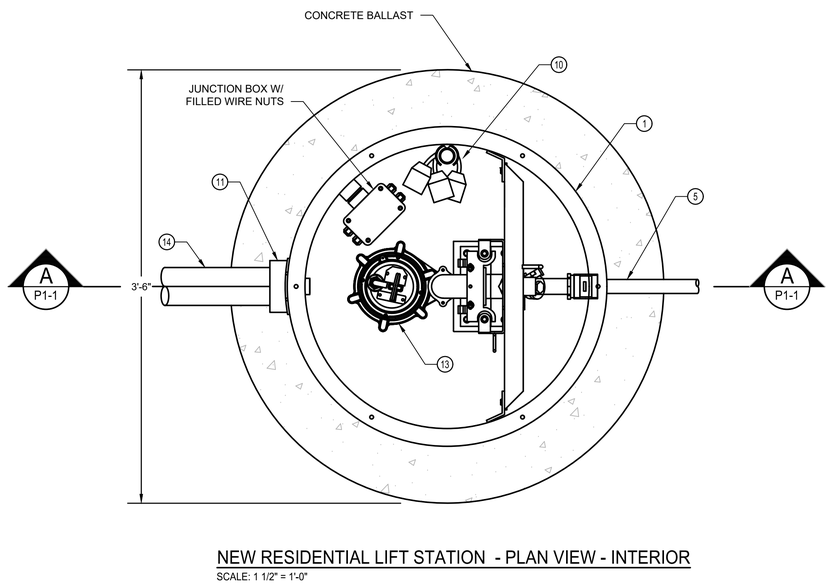
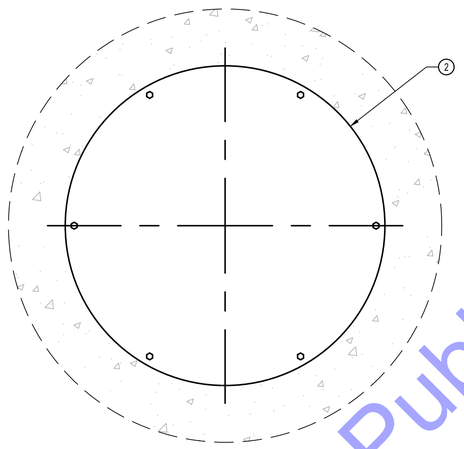


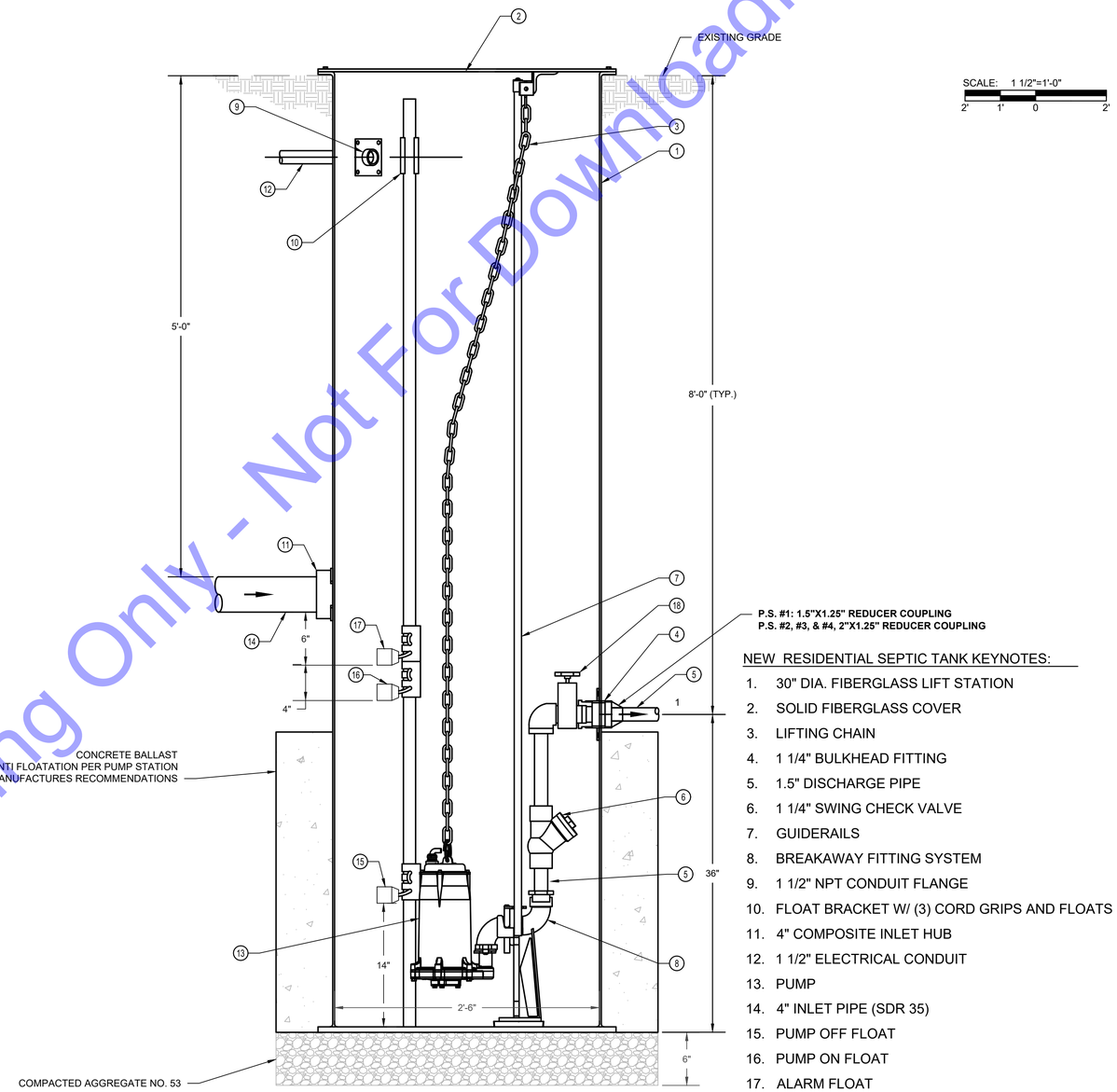
NEW RESIDENTIAL LIFT STATION - PLAN VIEW - INTERIOR

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



NEW RESIDENTIAL LIFT STATION - PLAN VIEW - EXTERIOR

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



SECTION "A"

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

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

2' 1' 0 2'

NEW RESIDENTIAL SEPTIC TANK KEYNOTES:

1. 30" DIA. FIBERGLASS LIFT STATION
2. SOLID FIBERGLASS COVER
3. LIFTING CHAIN
4. 1 1/4" BULKHEAD FITTING
5. 1.5" DISCHARGE PIPE
6. 1 1/4" SWING CHECK VALVE
7. GUIDERAILS
8. BREAKAWAY FITTING SYSTEM
9. 1 1/2" NPT CONDUIT FLANGE
10. FLOAT BRACKET W/ (3) CORD GRIPS AND FLOATS
11. 4" COMPOSITE INLET HUB
12. 1 1/2" ELECTRICAL CONDUIT
13. PUMP
14. 4" INLET PIPE (SDR 35)
15. PUMP OFF FLOAT
16. PUMP ON FLOAT
17. ALARM FLOAT
18. 1 ¼" GATE VALVE

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MISCELLANEOUS DETAILS

Drawing No: **MD1**

Sheet: 41 OF 65

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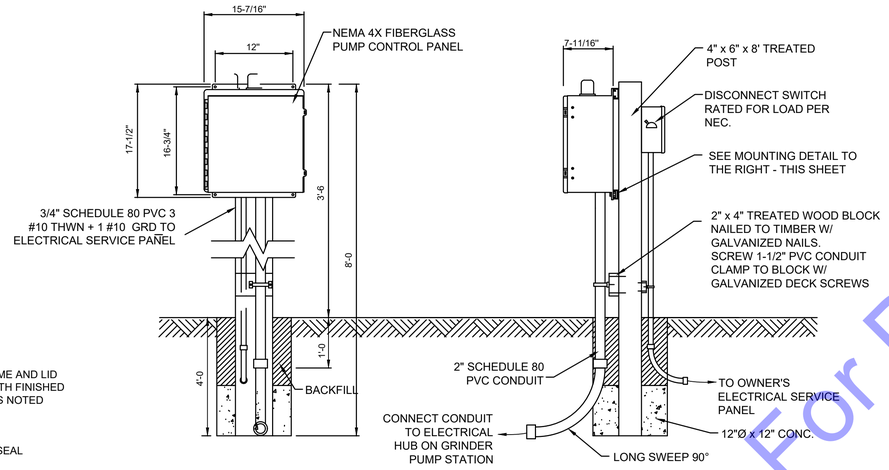
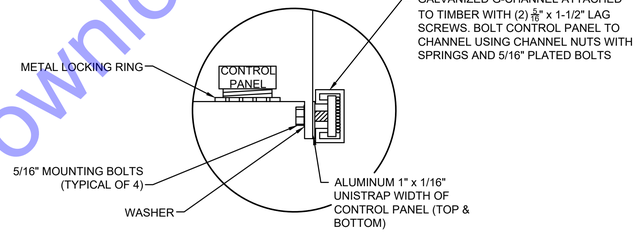
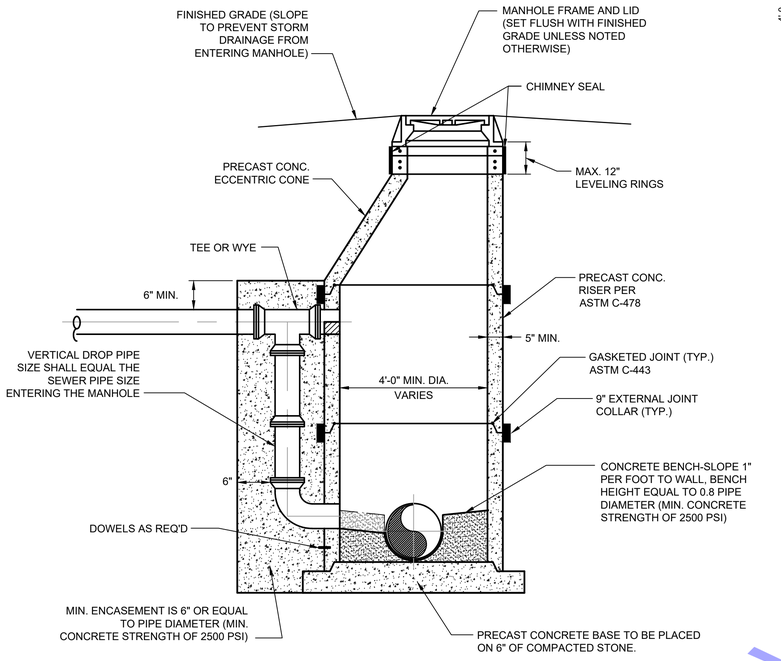


CONTROL PANEL MOUNTING STAND



SECTION CONTROL PANEL MOUNTING DETAILS



PRECAST DROP MANHOLE DETAIL

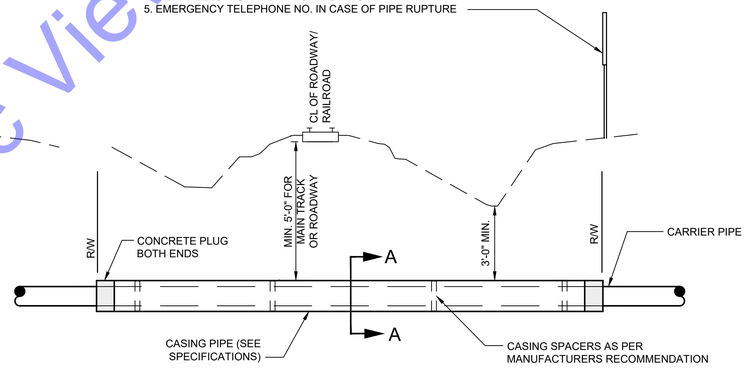
SCALE: N.T.S.

NOTE :
1. FOR ALL MANHOLES 6'-0" OR LESS IN DEPTH - PROVIDE RISER WITH FLAT TOP IN LIEU OF ECCENTRIC CONE IN ACCORDANCE WITH ASTM C-478

2. THE CROWN OF THE INFLUENT PIPE SHALL BE AT OR ABOVE THE CROWN OF THE OUTLET PIPE

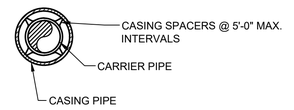
3. DROP MANHOLES SHALL BE USED WHENEVER THE DISTANCE FROM THE INVERT OF THE INCOMING LINE AND BOTTOM OF MANHOLE IS GREATER THAN TWO FEET.

WARNING SIGN(S) TO BE A DURABLE, WATERPROOF SIGN LOCATED OVER CENTERLINE OF PRESSURE PIPE AND SHOWING THE FOLLOWING INFORMATION:
1. NAME AND ADDRESS OF OWNER
2. CONTENTS OF PIPE
3. PRESSURE IN PIPE
4. DEPTH BELOW GRADE AT POINT OF SIGN
5. EMERGENCY TELEPHONE NO. IN CASE OF PIPE RUPTURE



RAILROAD AND HIGHWAY CROSSING- CARRIER PIPE

SCALE: N.T.S.



SECTION "A-A"

CASING PIPE SHALL EXTEND TO THE GREATER OF THE FOLLOWING DISTANCES:
1. 2 FEET BEYOND TOE OF SLOPE
2. 3 FEET BEYOND DITCH LINE
3. A MIN. OF 25 FEET EACH SIDE FROM CENTER LONE OF OUTSIDE TRACK
4. R/W LINE

PIPE SIZE CHART	
CARRIER PIPE	CASING PIPE
3"- 4"	10"
6"	12"
8"	15"
10"	18"
12"	21"
16"	24"
18"	28"

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MISCELLANEOUS DETAILS

Drawing No: **MD2**

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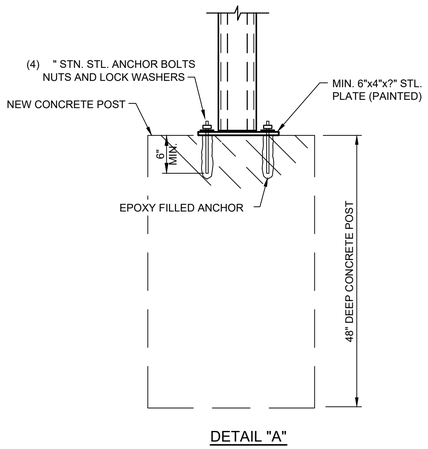
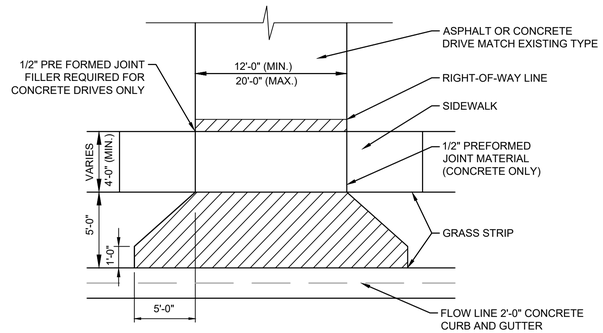


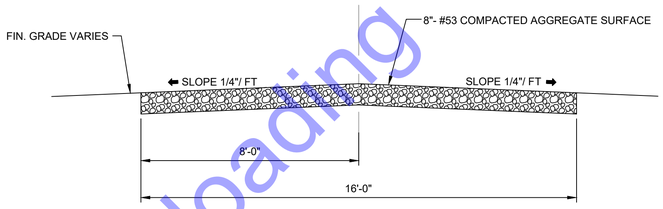
DETAIL "A"



1. CROSS HATCHED AREAS SHALL BE EITHER 6" CONCRETE ON COMPACTED AGGREGATE BASE No. 53 OR 1 1/2" HMA SURFACE TYPE `A' ON 2 1/2" INTERMEDIATE TYPE `A' ON 6" COMPACTED AGGREGATE BASE No. 53 EXTENDING TO THE SIDEWALK OR R/W LINE WHICHEVER IS NEAREST TO THE ROADWAY.
2. SUBGRADE UNDER ALL CURBS, SIDEWALKS AND DRIVES SHALL BE COMPACTED TO A MINIMUM 95%.
3. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE STANDARD AND SHALL BE CONTINUOUS ACROSS DRIVEWAY.

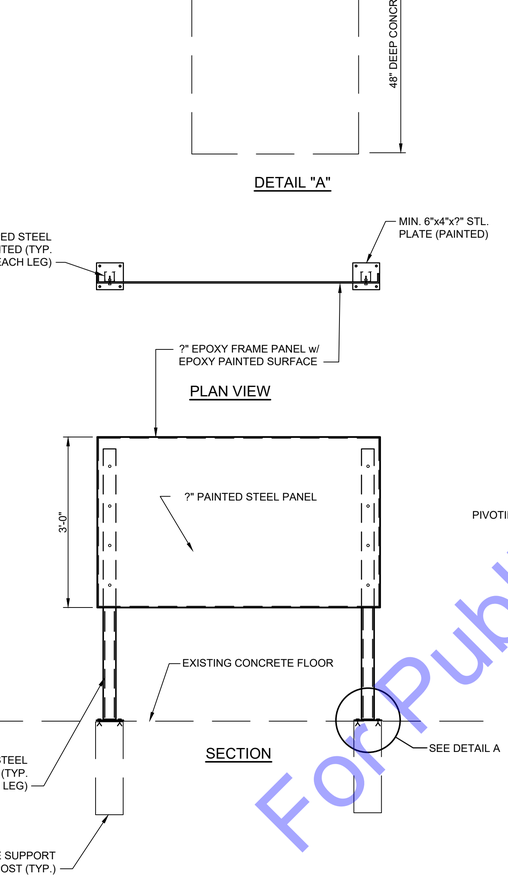
RESIDENTIAL DRIVEWAY DETAIL

NO SCALE



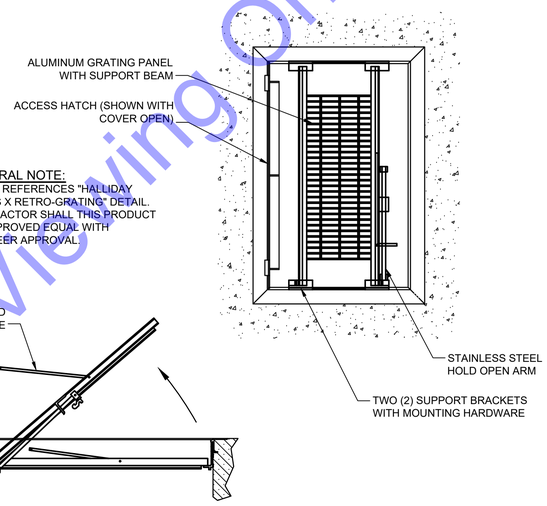
NEW STONE ACCESS ROAD DETAIL

SCALE: N.T.S.



NEW UNI-STRUT PANEL DETAIL

SCALE: ?"=1'-0"

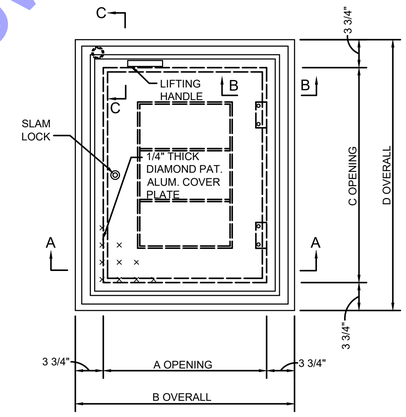


GENERAL NOTE:
DETAIL REFERENCES "HALLIDAY SERIES X RETRO-GRATING" DETAIL. CONTRACTOR SHALL THIS PRODUCT OR APPROVED EQUAL WITH ENGINEER APPROVAL.

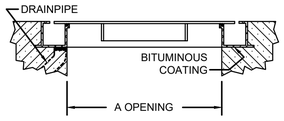
GENERAL NOTE:
THE SERIES X RETRO-GRATE IS A HINGED ALUMINUM GRATING PANEL THAT IS EASILY INSTALLED BENEATH EXISTING ACCESS COVERS REGARDLESS OF THE ORIGINAL COVER MANUFACTURER. THE RETRO-GRATE PROVIDES ADDITIONAL PROTECTION AGAINST FALL THROUGH ACCIDENTS WHEN THE COVER IS LEFT IN THE OPEN POSITION. THE UNIT IS LOCKABLE BY AN OWNER SUPPLIED PADLOCK AND INCORPORATES A SPRING ASSISTED LIFTING HANDLE THAT POSITIONS THE HANDLE NEAR THE SLAB LEVEL. THE UNIT IS SUPPLIED WITH T-316 STAINLESS STEEL MOUNTING HARDWARE AND AN AUTOMATIC HOLD OPEN ARM WITH ALUMINUM RELEASE LATCH. THE RETRO-GRATE IS DESIGNED TO BE INSTALLED BY MOUNTING THE SUPPORT BRACKETS TO EITHER THE EXISTING FRAMEWORK OR TO THE CONCRETE SLAB BELOW THE FRAMEWORK.

ACCESS HATCH "FALL PROTECTION GRATING" DETAIL

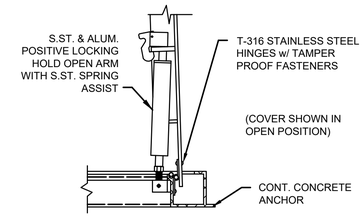
SCALE: NTS



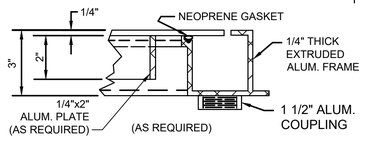
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

NOMINAL OPENING (INCHES)	DIMENSIONS (VARY PER MANUFACTURER)			
	A	B	C	D
24x24	24"	31 1/2"	24"	31 1/2"
30x30	30"	37 1/2"	30"	37 1/2"
36x36	36"	43 1/2"	36"	43 1/2"
30x48	30"	37 1/2"	48"	55 1/2"
36x48	36"	43 1/2"	48"	55 1/2"

TYPICAL SINGLE LEAF ACCESS HATCH DETAIL

NO SCALE

GENERAL NOTE:

CONTRACTOR SHALL PIPE DRAIN TO EXTERIOR OF STRUCTURE.
(REFER TO PROCESS DRAWINGS AND SPECIFICATIONS FOR MORE DETAILS)

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REGISTERED
No. 19700338
STATE OF INDIANA
PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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Designed By:	Drawn By:	Checked By:
RMB	CH	RMB
Issue Date: 7-27-2021	Project No: S18018	Scale: AS SHOWN

MISCELLANEOUS DETAILS

Drawing No:
MD3
Sheet: 43 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPR\SIS CAD\01-CURRENT FILES\DRAWINGS\S08-S18018-MISC DETAILS.DWG
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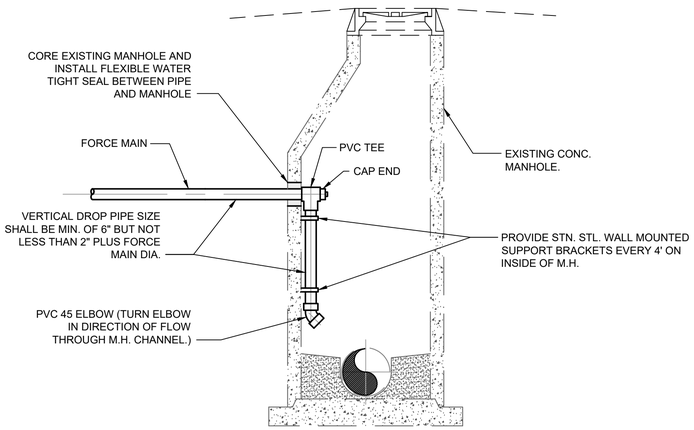
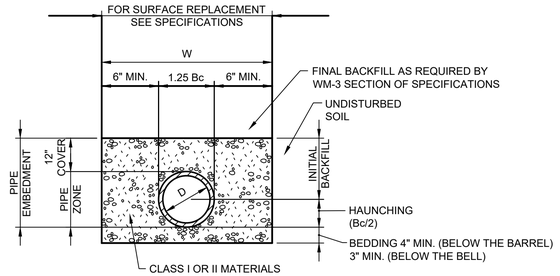


NOTE:
MANHOLES WHICH HAVE FORCE MAIN DISCHARGE LINES SHALL BE COATED WITH SHERWIN WILLIAMS COR-COTE SC OR EQUAL.

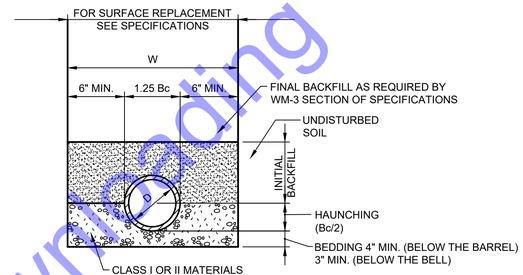
FORCE MAIN DROP INTO EXISTING MANHOLE
NO SCALE



W= MAXIMUM ALLOWABLE TRENCH WIDTH FOR PIPE AS PER ASTM NOT TO EXCEED FOUR (4) FEET FOR 6" THROUGH 24" PIPE NOT SIX (6) FEET FOR 27" THROUGH 48" PIPE
D= PIPE DIAMETER (INTERNAL)
Bc= PIPE DIAMETER (EXTERNAL)

NOTES:
1. COMPACTED INITIAL BACKFILL SHALL EXTEND A MINIMUM OF 12" ABOVE THE TOP OF THE PIPE. FINAL BACKFILL ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AS REQUIRED HEREIN.
2. WHEN CLASS I MATERIAL IS USED BEDDING. HAUNCHING, AND INITIAL BACKFILL COMPACTING MAY BE ACCOMPLISHED BY HAND OR MECHANICAL TAMPING, OR BY WALKING TO A MIN,. OF 85% STANDARD PROCTOR DENSITY
3. WHEN CLASS II MATERIAL IS USED FOR BEDDING HAUNCHING AND INITIAL BACKFIRE COMPACTION MAY BE ACCOMPLISHED BY HAND OR MECHANICAL TAMPING TO A MIN. OF 85% STANDARD PROCTOR DENSITY.
4. WORK FALLING UNDER THE JURISDICTION OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL. ANYWHERE WITHIN 21 FEET OF THE EDGE OF PAVEMENT. FOR ALL OTHER NON-INDOT PAVEMENT AREAS (INCLUDING BOTH HARD SURFACED AND COMPACTED AGGREGATE). COMPACTED GRANULAR S BACKFILL MATERIAL SHALL BE USED WITHIN 5 FEET OF THE EDGE OF THE PAVEMENT.

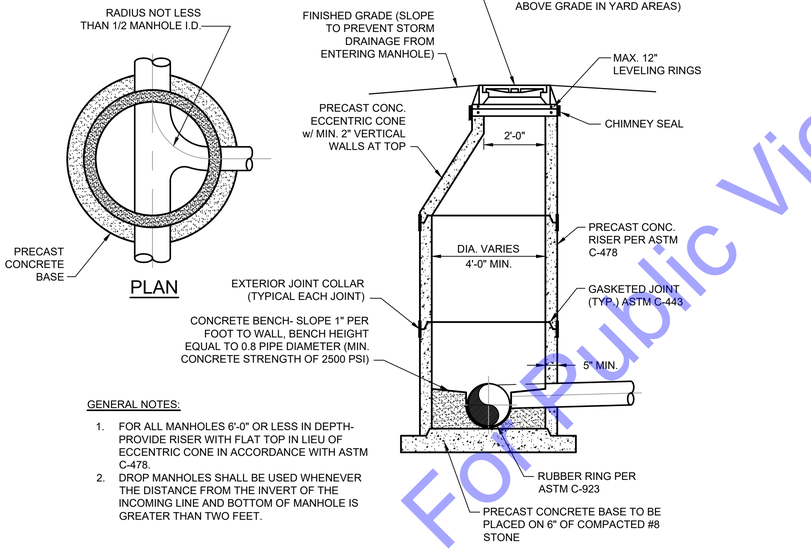
TRENCH DETAIL FOR FLEXIBLE CONDUITS
NO SCALE



W= MAXIMUM ALLOWABLE TRENCH WIDTH FOR PIPE AS PER ASTM NOT TO EXCEED FOUR (4) FEET FOR 6" THROUGH 24" PIPE NOT SIX (6) FEET FOR 27" THROUGH 48" PIPE
D= PIPE DIAMETER (INTERNAL)
Bc= PIPE DIAMETER (EXTERNAL)

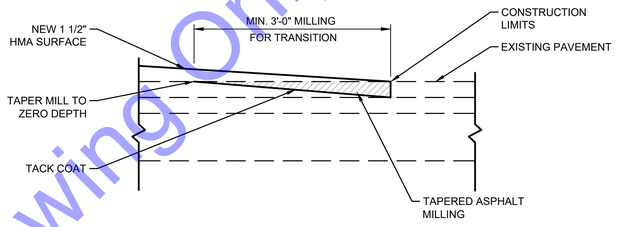
NOTES:
1. COMPACTED BEDDING STOPS AT SPRING-LINE OF THE PIPE. BACKFILLING ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AS REQUIRED HEREIN.
2. WHEN CLASS I MATERIAL IS USED FOR BEDDING COMPACTION MAY BE ACCOMPLISHED BY HAND OR MECHANICAL TAMPING
3. WHEN CLASS II MATERIAL IS USED FOR BEDDING, COMPACTION SHALL BE ACCOMPLISHED ONLY BY HAND OR MECHANICAL TAMPING TO A MIN. OF 95% STANDARD PROCTOR DENSITY.
4. WORK FALLING UNDER THE JURISDICTION OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 12 FEET OF THE EDGE OF PAVEMENT. FOR ALL OTHER NON-INDOT PAVEMENT AREAS (INCLUDING BOTH HARD SURFACED AND COMPACTED AGGREGATE), COMPACTED GRANULAR BACKFILL MATERIAL SHALL BE USED WITHIN 5 FEET OF THE EDGE OF THE PAVEMENT.

TRENCH DETAIL FOR RIGID CONDUITS
NO SCALE



GENERAL NOTES:
1. FOR ALL MANHOLES 6'-0" OR LESS IN DEPTH- PROVIDE RISER WITH FLAT TOP IN LIEU OF ECCENTRIC CONE IN ACCORDANCE WITH ASTM C-478.
2. DROP MANHOLES SHALL BE USED WHENEVER THE DISTANCE FROM THE INVERT OF THE INCOMING LINE AND BOTTOM OF MANHOLE IS GREATER THAN TWO FEET.

STANDARD SANITARY MANHOLE DETAIL
NO SCALE



TRANSITION MILLING DETAIL
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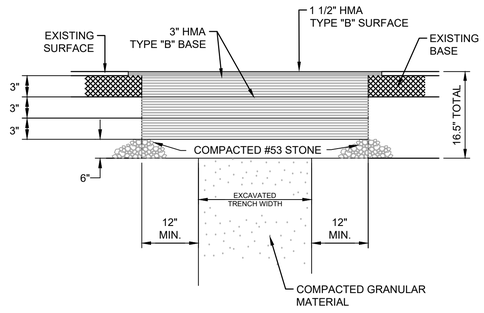

HIGHWAY REPLACEMENT DETAIL
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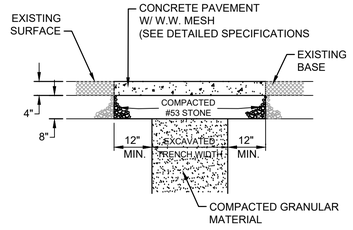
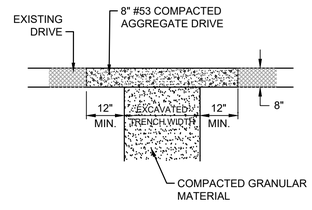
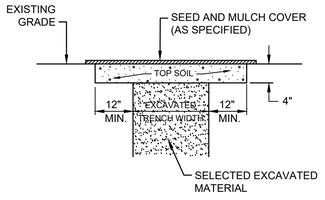


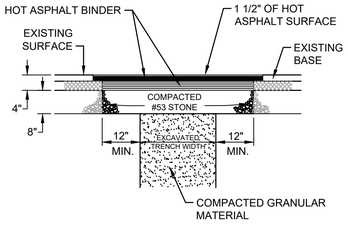
SURFACE RESTORATION DETAIL FOR CONCRETE PAVEMENT - DRIVE
NO SCALE



SURFACE RESTORATION DETAIL FOR GRAVEL PAVEMENT- ROAD
NO SCALE



SURFACE RESTORATION DETAIL FOR GRASS AREAS
NO SCALE



SURFACE RESTORATION DETAIL FOR ASPHALT PAVEMENT- ROAD
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PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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Issue Date:	Project No:	Scale:
7-27-2021	S18018	AS SHOWN

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Drawing No: **MD4**

Sheet: 44 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPROVS\05 CAD\01-CURRENT FILES\DRAWINGS\08-S18018-MISC DETAILS.DWG
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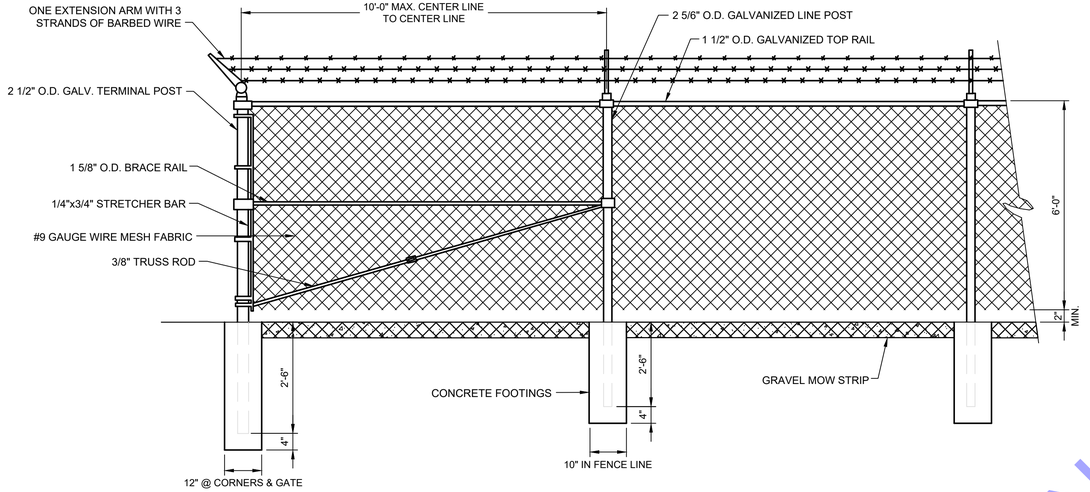
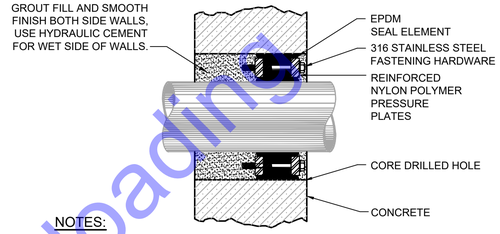


CHAIN LINK FENCE DETAIL

NO SCALE

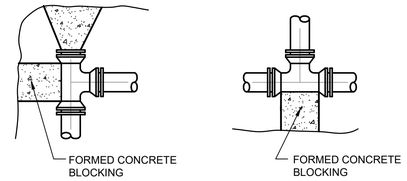


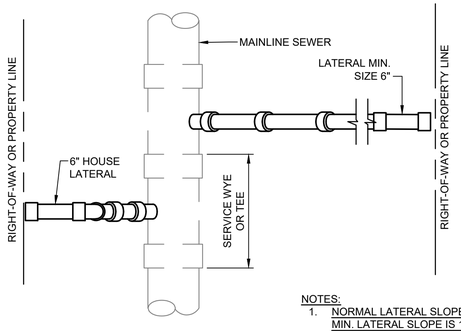
NOTES:

1. ELECTROMETRIC ELEMENT AND LINK-SEAL APPARATUS REQUIRED COMPATIBLE FOR HIGH TEMPERATURE APPLICATIONS - FOR ALL LINES
2. ALL WALL PENETRATIONS (EXISTING WALLS) CONVEYING PIPE SHALL UTILIZE A LINK-SEAL EQUIVALENT, SHALL BE GROUTED SMOOTH, AND SHALL HAVE A BONDING AGENT APPLIED.

LINK-SEAL WITH CORE DRILLED HOLE DETAIL

NO SCALE

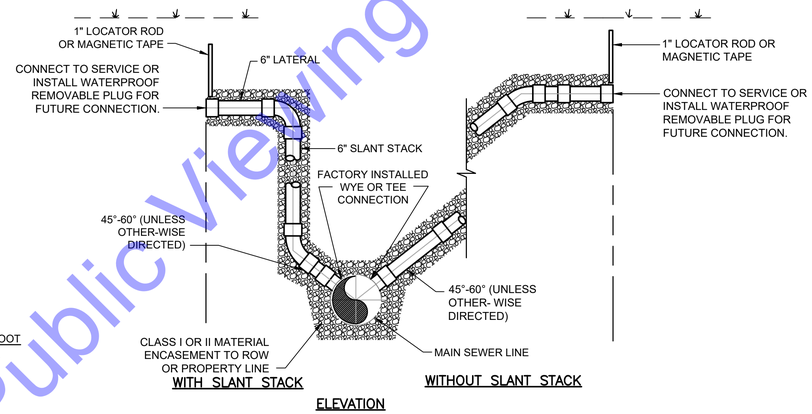




PLAN VIEW

NOTES:

1. NORMAL LATERAL SLOPE IS 1/4" PER FOOT MIN. LATERAL SLOPE IS 1/8" PER FOOT
2. MIN. COVER IS 5 FEET OVER PIPE



ELEVATION

CONTRACTOR SHALL PROVIDE "AS-BUILT" SERVICE CONNECTION TIES TO THE OWNER, ENGINEER, AND PROPERTY OWNER

SERVICE CONNECTION

SCALE: N.T.S.

TABLE OF DIMENSION FOR CONCRETE BLOCKING

SIZE	TEE				PLUG					90° BEND				45° BEND				22° BEND				11° BEND			
PIPE	L	T	W	D	L	T	W	D	s	L	T	W	D	L	T	W	D	L	T	W	D	L	T	W	D
4"	18"	12"	12"	8"	18"	12"	18"	18"	2"	24"	12"	24"	8"	18"	8"	12"	8"	18"	8"	12"	8"	15"	8"	12"	6"
6"	18"	12"	12"	8"	18"	12"	18"	18"	2"	24"	15"	24"	8"	18"	10"	12"	8"	18"	10"	12"	8"	18"	10"	18"	6"
8"	30"	12"	24"	8"	30"	18"	30"	24"	4"	36"	16"	30"	8"	24"	12"	18"	8"	24"	18"	18"	8"	24"	12"	18"	8"
10"	36"	18"	30"	10"	36"	18"	36"	24"	4"	48"	20"	36"	10"	30"	14"	24"	10"	30"	14"	24"	10"	24"	14"	18"	8"
12"	48"	18"	36"	10"	42"	18"	42"	24"	4"	54"	24"	48"	10"	36"	16"	30"	10"	36"	16"	30"	10"	30"	16"	24"	10"
14"	54"	24"	42"	12"	48"	18"	48"	30"	6"	60"	28"	60"	12"	42"	16"	42"	12"	42"	16"	42"	12"	33"	16"	27"	12"
16"	60"	24"	48"	12"	54"	18"	54"	30"	6"	66"	32"	63"	12"	48"	18"	48"	12"	48"	18"	48"	12"	36"	18"	30"	12"
18"	66"	30"	60"	14"	60"	24"	60"	36"	6"	66"	36"	66"	14"	54"	18"	54"	14"	54"	18"	54"	14"	39"	18"	33"	14"
20"	72"	30"	60"	14"	66"	24"	66"	36"	8"	72"	40"	69"	14"	60"	20"	60"	14"	60"	20"	60"	14"	42"	20"	36"	14"
24"	84"	36"	72"	18"	78"	30"	78"	42"	8"	84"	48"	75"	18"	72"	22"	72"	18"	72"	22"	72"	18"	48"	22"	42"	18"
30"	96"	42"	78"	24"	96"	36"	78"	48"	10"	108"	54"	96"	24"	84"	24"	72"	24"	72"	26"	72"	24"	54"	26"	48"	24"
42"	144"	48"	96"	36"	144"	42"	96"	60"	10"	180"	66"	144"	36"	120"	36"	96"	36"	84"	34"	72"	36"	60"	34"	48"	36"

NOTES:

1. FOR TEE WITH BRANCH UNEQUAL TO RUN USE TEE TYPE KICKER WITH D, L, AND W DIMENSIONS THE SAME AS THOSE FOR PLUG WITH SAME DIAMETER AS BRANCH OF TEE, SELECT "T" DIMENSIONS FROM TEE TABLE UNDER COLUMN HEADED BY THE SIZE OF THE BRANCH
2. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN USE NEXT LARGER SIZE
3. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE BLOCKING MUST BE PLACED AGAINST UNDISTURBED EARTH OR ROCK
4. CONCRETE BLOCKING SHALL BE CLASS "B"

THRUST BLOCKING DETAIL

SCALE: N.T.S.

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Signature 7-27-2021 Date

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Issue Date: 7-27-2021	Project No: S18018	Scale: AS SHOWN

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Drawing No: **MD5**

Sheet: 45 OF 65

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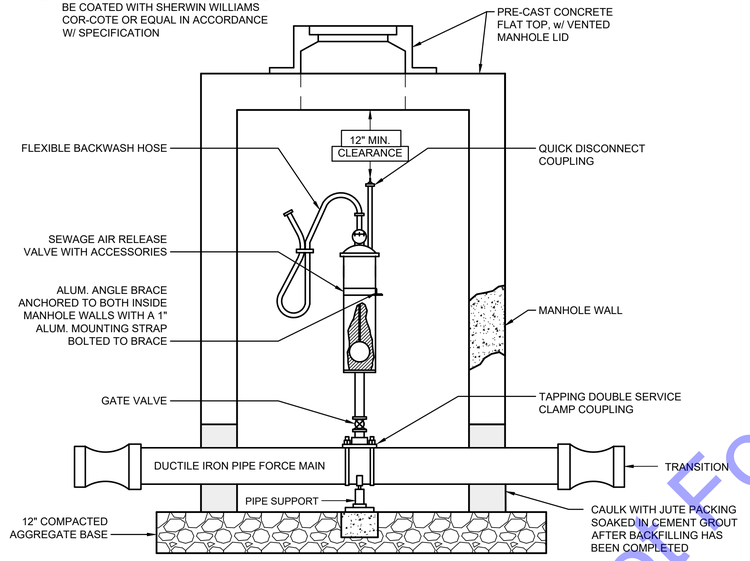
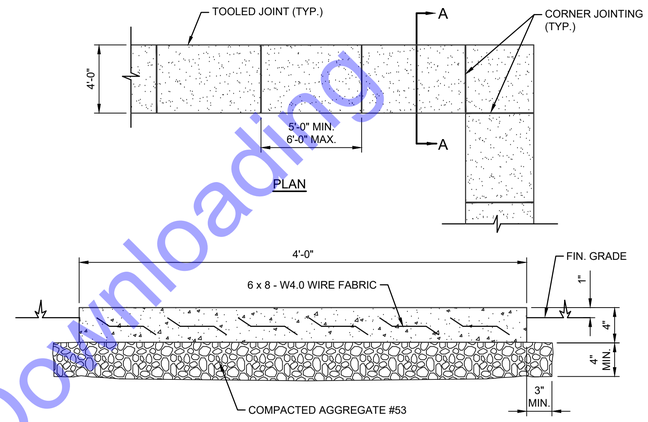
Saved: 5/7/2025 2:35:12 PM Plotted: 5/7/2025 3:08:10 PM Current User: George Rader LastSavedBy: grader

NOTE:
1. ALL COMPONENTS SHALL BE RESISTANT TO SEWAGE GAS AND SEWAGE.
2. AIR RELEASE VALVE MANHOLES SHALL BE COATED WITH SHERWIN WILLIAMS COR-COTE OR EQUAL IN ACCORDANCE W/ SPECIFICATION



COMBINATION AIR RELEASE OR SEWAGE AIR RELEASE VALVE (SEE SPECIFICATIONS)
NO SCALE

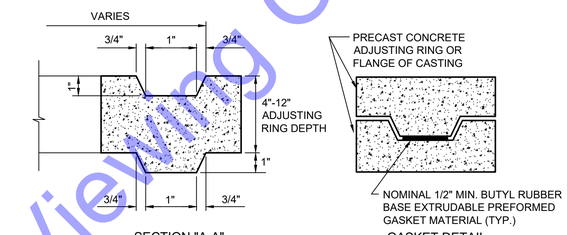


SECTION "A-A"

GENERAL NOTES:

1. TRANSVERSE JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/4" AT SPACING AT A MINIMUM OF 6'-0".
2. SIDEWALK SHALL BE 6" WITH 8" OF COMPACTED AGGREGATE No. 53 AT ALL DRIVEWAY CROSSINGS.
3. SIDE SLOPE SHALL BE 1/4"/ FT.

CONCRETE SIDEWALK DETAIL
NO SCALE



SECTION "A-A"
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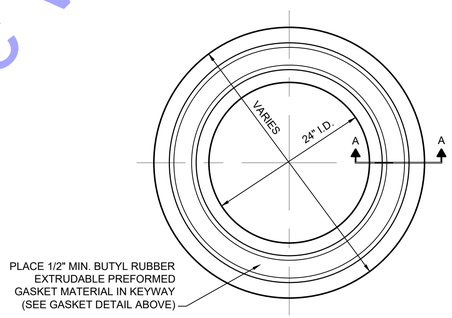
GASKET DETAIL
NO SCALE



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

ADJUSTING RING DETAIL
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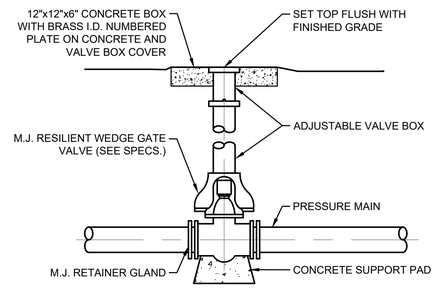

BURIED PLUG/GATE VALVE AND BOX DETAIL
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Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT BLACKFORD COUNTY, INDIANA

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7-27-2021	S18018	AS SHOWN

MISCELLANEOUS DETAILS

Drawing No:
MD6
Sheet: 46 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPR\SIS CAD\01-CURRENT FILES\DRAWINGS\S08-S18018-MISC DETAILS.DWG
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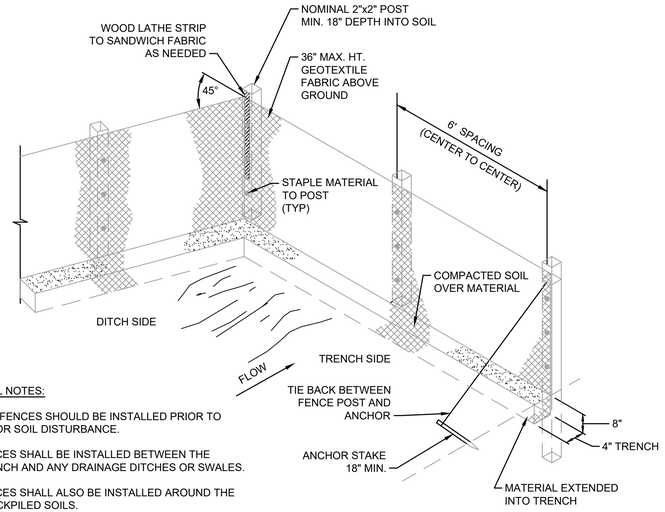
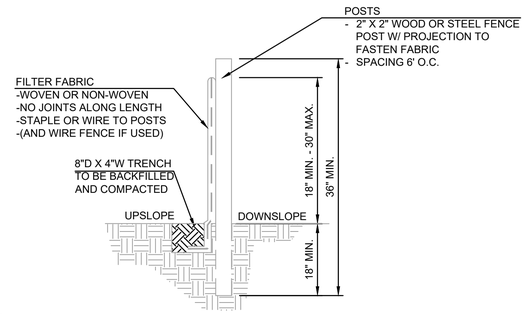


GENERAL NOTES:

1. SILT FENCES SHOULD BE INSTALLED PRIOR TO MAJOR SOIL DISTURBANCE.
2. FENCES SHALL BE INSTALLED BETWEEN THE TRENCH AND ANY DRAINAGE DITCHES OR SWALES.
3. FENCES SHALL ALSO BE INSTALLED AROUND THE STOCKPILED SOILS.
4. THE GEOTEXTILE SHALL BE FREE FROM DEFECTS, TEARS, PUNCTURES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION, STORAGE, OR INSTALLATION.
5. TIE BACKS SHALL BE PLACED AS REQUIRED.



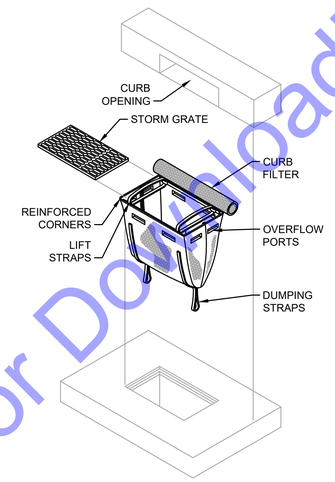
INSTALLATION:

1. THE BOTTOM 1' OF THE FENCE SHALL BE BURIED IN THE TRENCH ON THE UPSLOPE SIDE.
2. FENCE SHALL BE INSTALLED ALONG LEVEL GRADES, NOT ACROSS FLOW CHANNELS.
3. IF OPTIONAL SUPPORT WIRE FENCE IS USED, POST SPACING MAY BE EXTENDED TO 8' O.C.

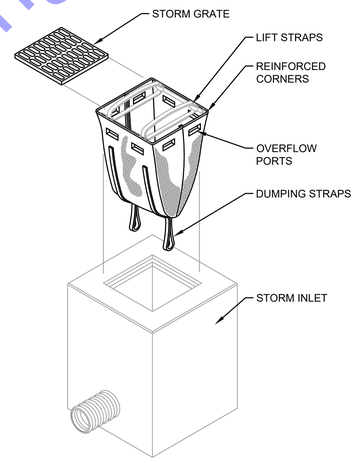
MAINTENANCE:

1. INSPECT SILT FENCE PERIODICALLY (WEEKLY) AND AFTER EACH STORM EVENT.
2. IF FABRIC IS TORN OR DAMAGED OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE, OR IT IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE NOT TO UNDERMINE THE FENCE DURING SEDIMENT REMOVAL.
5. AFTER THE CONTRIBUTING AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND REMAINING SEDIMENT, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

SILT FENCE DETAIL
NOT TO SCALE



INSERT (BASKET) CURB INLET PROTECTION DETAIL
NO SCALE



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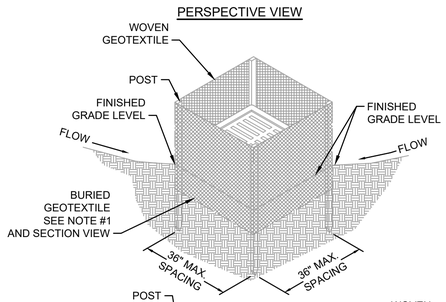
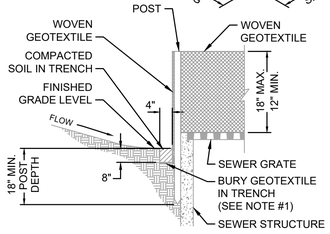
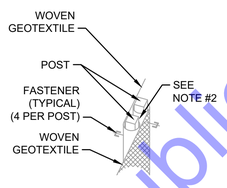




SECTION VIEW

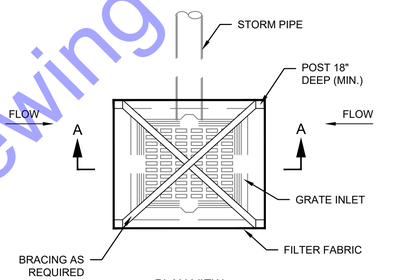


TYP. SPLICE DETAIL

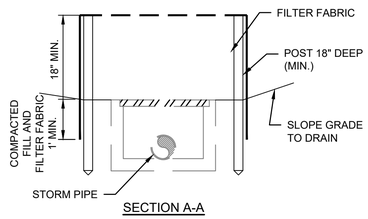
NOTES:

1. GEOTEXTILE FABRIC LAID ON DOWN-SLOPE SIDE AND BOTTOM OF TRENCH ALONG FULL PERIMETER OF SEWER STRUCTURE. DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.
2. IF SPLICING IS NECESSARY, FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO CREATE A SEAMLESS JOINT AND PREVENT SILT-LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN SUMP LOCATIONS.
3. PREFABRICATED UNITS MAY BE USED WITH PRIOR APPROVAL FROM PROJECT ENGINEER.

YARD INLET PROTECTION DETAIL
NO SCALE



PLAN VIEW



SECTION A-A

STORM INLET WITH SILT FENCE EROSION DETAIL
NOT TO SCALE

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL FROM THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND LOCAL EROSION AND SEDIMENT CONTROL ORDINANCE, OR SWCD.
2. THE NOTICE OF INTENT (NOI) AND PUBLIC NOTICE FOR THE PROJECT SHALL BE POSTED ON A SIGN INSTALLED AT OR NEAR THE SITE CONSTRUCTION TRAILER. THE NOI SHALL LIST THE CONTACT INFORMATION FOR THE SITE CONTACT PERSON. THE SIGN AND INFORMATION SHALL BE MAINTAINED AND REMAIN LEGIBLE THROUGHOUT CONSTRUCTION.
3. A COPY OF THIS EROSION AND SEDIMENT CONTROL PLAN AND THE EROSION AND SEDIMENT CONTROL REPORT SHALL BE AVAILABLE AT THE PROJECT SITE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
4. THE CONTRACTOR SHALL CONTROL WASTE, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE SO THEY WILL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WIND, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIAL APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED.
5. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENT. ALL SEDIMENT THAT IS CLEARED MUST BE RETURNED TO THE LIKELY POINT OF ORIGIN OR OTHER SUITABLE LOCATION. CLEARING OF LARGE AMOUNTS OF SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER.
6. MINIMIZE THE EXPOSURE OF BARE EARTH BY LIMITING THE WORK AREA TO THAT NECESSARY TO PERFORM THE WORK, AND BY PROPER SCHEDULING OF MANPOWER AND EQUIPMENT.
7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED, CLEANED, AND MAINTAINED FOLLOWING EACH STORM EVENT.
8. WHEREVER POSSIBLE, MAINTAIN EXISTING VEGETATIVE COVER. USE NON-VEGETATIVE MATERIAL INCLUDING MULCH, EROSION BLANKETS, OR STONE TO CONTROL EROSION FROM DISTURBED AREAS.
9. A LOG SHALL BE MAINTAINED OF ALL INSPECTIONS (WEEKLY, AND FOLLOWING STORM EVENTS), MAINTENANCE AND REPAIR OF EROSION AND SEDIMENT CONTROL MEASURES. THE LOG SHALL BE MAINTAINED ON SITE AND BE AVAILABLE UPON REQUEST TO THE OWNERS REPRESENTATIVES AND THE OPERATING AUTHORITIES HAVING JURISDICTION OVER THE SITE.

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PROFESSIONAL ENGINEER

Signature 7-27-2021 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM
IMPROVEMENTS

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Issue Date:	Project No:	Scale:
7-27-2021	S18018	AS SHOWN

EROSION CONTROL DETAILS

Drawing No:
MD7
Sheet: 47 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPROVS\05 CAD\01-CURRENT FILES\DRAWINGS\S08-S18018-MISC DETAILS.DWG
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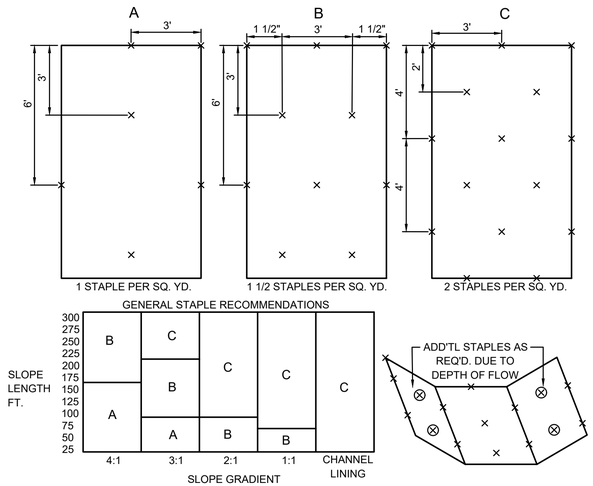


EROSION CONTROL BLANKET
NOT TO SCALE

SPECIFICATIONS

EFFECTIVE LIFE

- THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED.

ANCHORING

- STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)

MATERIALS

- ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH INCORPORATED WITH A POLYPROPYLENE, NATURAL FIBER OR SIMILAR NETTING MATERIAL. (THE NETTING MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.)

  NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING MATRIX.

- SIX TO 12-INCH STAPLES, PINS, OR STAKES.

INSTALLATION

1. SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL, FLOW VELOCITY) PER THE MANUFACTURER'S RECOMMENDATIONS.
2. PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION.
3. LAY EROSION CONTROL BLANKETS ON THE SEEDED AREA SO THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL WITH EACH UP-SLOPE OR UP-STREAM BLANKET OVERLAPPING THE DOWN-SLOPE OR DOWN-STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS.
4. TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITION CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER BLANKETS.
5. ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE

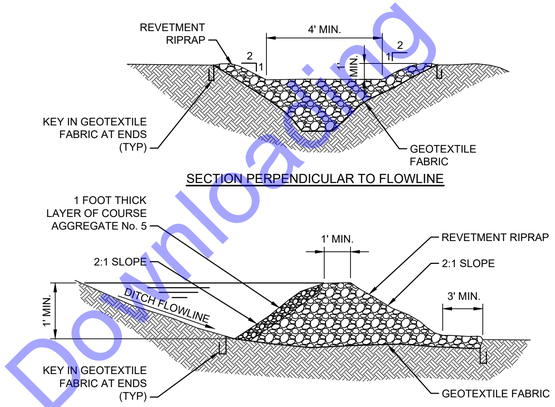
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.
- IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

NOTES

CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL.

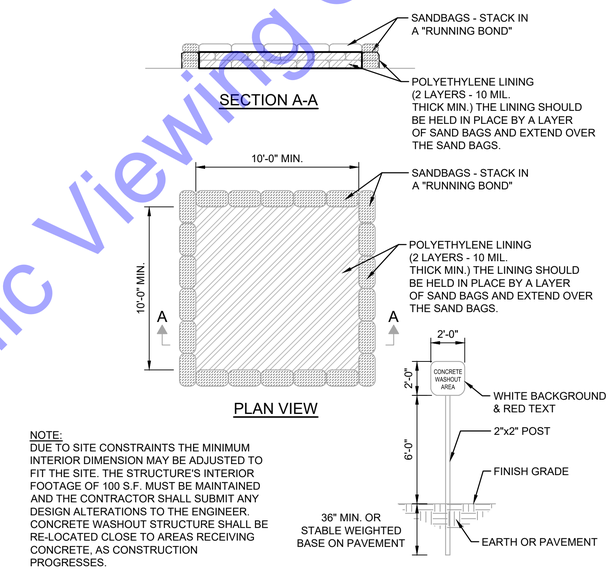
AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.



GENERAL NOTES:

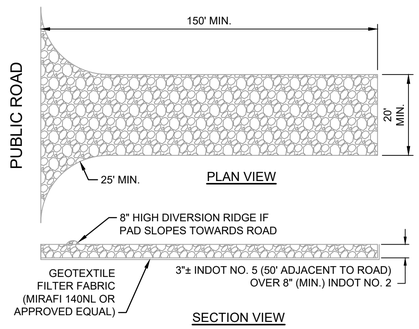
1. RIPRAP DITCH CHECK DAMS SHALL BE PLACED SUCH THAT THE TOP OF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE ADJACENT UPSTREAM CHECK DAM.
2. AFTER COMPLETION OF CONTRACT, OR AS REQUESTED BY OWNER, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL ITEMS, REMOVE ALL ACCUMULATED DEPOSITS AND, AS REQUIRED, SEED AND MULCH OR SOD AS REQUIRED TO ESTABLISH AREA TO CONDITION PRIOR TO CONSTRUCTION.

ROCK CHECK DAM DETAIL
NO SCALE



NOTE:
DUE TO SITE CONSTRAINTS THE MINIMUM INTERIOR DIMENSION MAY BE ADJUSTED TO FIT THE SITE. THE STRUCTURE'S INTERIOR FOOTAGE OF 100 S.F. MUST BE MAINTAINED AND THE CONTRACTOR SHALL SUBMIT ANY DESIGN ALTERATIONS TO THE ENGINEER. CONCRETE WASHOUT STRUCTURE SHALL BE RE-LOCATED CLOSE TO AREAS RECEIVING CONCRETE, AS CONSTRUCTION PROGRESSES.

CONCRETE WASHOUT PIT DETAIL
NO SCALE



MAINTENANCE:

1. INSPECT DAILY, AND AFTER EACH STORM EVENT OR HEAVY USE.
2. RESHAPE AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN STONE AS REQUIRED. MAINTAIN MINIMUM DEPTH THROUGHOUT CONSTRUCTION.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY SWEEPING OR BRUSHING. (DO NOT FLUSH AREA WITH WATER UNLESS WATER IS CONVEYED TO SEDIMENT TRAP.)
5. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
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Signature 7-27-2021 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT
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EROSION CONTROL DETAILS

Drawing No: **MD8**

Sheet: 48 OF 65

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GENERAL

1. The structure has been designed for the in-service loads only. The methods, procedures, and sequences of construction are the responsibility of the Contractor. Supporting formwork for the concrete construction shall not be removed before the concrete has gained sufficient strength to safely support the dead and superimposed loads which will be subsequently applied. The Contractor shall take all necessary precautions to maintain and ensure the integrity of the structure at all stages of construction.

2. All work shall be performed in accordance with the Indiana Building Code, 2014 Edition (2012 International Building Code, first printing, with Indiana Amendments).

3. *Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field, and report any errors or discrepancies to the Structural Engineer prior to the fabrication and erection of any new members.*

4. Do not determine dimensions by "scaling" off the plans. The Contractor shall accept all risk associated with "scaling" and shall be responsible for all inadequate work resulting therefrom. Questions regarding missing or conflicting dimensions shall be directed, in writing, to the Structural Engineer.

5. Existing materials to be removed and reinstalled as part of this contract, but become damaged, shall be replaced with approved new material of equivalent quality and appearance at the Contractor's expense.

6. All work shall be performed without damage to adjacent retained work. Adequate protection of areas nearby work against dust, dirt and debris accumulation shall be maintained at all times.

7. Principal openings in the structure are indicated on the structural drawings. Refer to the architectural, mechanical, electrical, and plumbing drawings for sleeves, curbs, inserts, etc. not herein indicated. Openings in slabs with a maximum side dimension or diameter of 10 inches or less shall not require additional framing or reinforcement, unless noted otherwise. The location of sleeves or openings not shown in structural members shall be approved by the Structural Engineer.

8. The Contractor shall relocate all mechanical piping, ducts, equipment, electrical conduits, wiring and plumbing that interfere with the proposed construction. Service shall be maintained to all equipment that is served by mechanical, electrical or plumbing conduit being relocated.

9. The Contractor shall relocate all utilities which interfere with the proposed construction. Service shall be maintained at all times during utility relocation unless otherwise noted.

FOUNDATIONS

1. Exterior footings shall bear 2'-6" minimum below finish grade and shall bear on undisturbed soil.

2. Foundation excavations shall be made to plan elevations. The soil conditions beneath foundations shall then be inspected by a qualified Geotechnical Engineer. If the underlying soils are found to be unacceptable, one of the following procedures shall be followed:

   A. Remove the unacceptable soil and backfill with an engineered structural fill in accordance with the geotechnical engineering report or inspecting Geotechnical Engineer.

   B. Lower the footing to an acceptable soil. Contact the Structural Engineer for potential modifications to the foundation system.

3. Subgrade structural elements subjected to differential lateral soil pressure shall be adequately braced until the structural elements which provide lateral restraint have been placed and allowed to cure for a minimum of 7 days.

4. Excavations for spread footings, combined footings, continuous footings and/or mat foundations shall be cleaned and hand tamped to a uniform surface. Foundation excavations shall be adequately protected against detrimental change in condition from disturbance, rain, freezing, etc. Surface runoff shall not be allowed to enter the excavation.

5. Foundation conditions noted during construction, which differ from those described in the geotechnical report shall be reported to the Structural Engineer and Geotechnical Engineer before further construction is attempted.

6. Center all column and wall footings under the column or wall above unless otherwise indicated.

CONCRETE

1. Reinforced concrete has been designed in accordance with the latest editions of the Building Code Requirements for Reinforced Concrete (ACI 318) and Environmental Engineering Concrete Structures (ACI 350R) by the American Concrete Institute (ACI).

2. Slabs-on-grade shall be constructed in accordance with the latest edition of the Guide for Concrete Floor and Slab Construction (ACI 302.1R).

3. Mixing, transporting, and placing of concrete shall conform to the latest edition of the Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete (ACI 211.1) and the Standard Specifications for Structural Concrete (ACI 301). The special provisions of ACI 211.1 Appendix 5 (Mass Concrete Mix Proportioning) shall be used in proportioning the concrete mixture for the mat foundation to control temperature rise during hydration. In addition, the provisions of ACI 207.1R (Mass Concrete) shall apply. Concrete curing shall conform to the latest editions of the Standard Practice for Concrete Curing (ACI 308) and the Standard Specification for Curing Concrete (ACI 308.1). In case of a discrepancy, the plans and specifications shall govern.

4. Unless noted otherwise, concrete shall have natural sand fine aggregate and normal weight coarse aggregates conforming to ASTM C33, and Type I or III Portland Cement conforming to ASTM C150. Type III Portland Cement shall not be used in mass concrete. The Contractor shall submit a mix design for each proposed class of concrete. Mix designs shall indicate proportions by weight, water-cement ratio, slump, air content, synthetic fiber size and quantity, sieve analyses of fine and coarse aggregates, standard deviation analysis, and required average strength and documentation of average strength verifying compliance with ACI 318. The Contractor shall not vary from the mix design without approval from the Structural Engineer.

5. Unless noted otherwise, fly ash may be used as a pozzolan to replace a portion of the Portland Cement in a concrete mix. Fly ash, when used, shall conform to ASTM C618, Type C (except in mass concrete, ASTM C618, Type F shall be used). Concrete mixes using fly ash shall be proportioned to account for the properties of the specific fly ash used and to account for the specific properties of the fly ash concrete thus resulting. The ratio of the amount of the fly ash to the total amount of fly ash plus cement in the mix shall not exceed 25 percent.

6. Water-reducing admixtures conforming to ASTM C494 may be used in the concrete mix design. Maximum slump shall be 5 inches for mixes containing water-reducing admixtures and 5 to 8 inches for mixes containing high range water-reducing admixtures.

7. Concrete compressive strength tests shall be performed in accordance with ASTM C39. Copies of the test results shall be forwarded to the Structural Engineer. One set of specimens shall be taken for each day's pour of appreciable size and for each 50 cubic yards (100 cubic yards for mass concrete) in accordance with the latest edition of ASTM C31. Each set shall include one specimen tested at 7 days, 2 specimens tested at 28 days and one specimen retained in reserve. Two additional reserve specimens shall be retained for all mass concrete pours. These test cylinders shall be laboratory cured. For mass concrete pours, these test cylinders shall remain on-site for 48 hours before being transported to the testing lab.

8. When the ambient temperature is expected to fall below 40 degrees during the course of a concrete pour or subsequent curing period, it shall be placed and cured in accordance with the latest edition of Cold Weather Concreting (ACI 306R) and an additional set of concrete test cylinders shall be made. For mass concrete, this set of additional test cylinders shall consist of four specimens for each 200 cubic yards of concrete placed. These cylinders shall be stored immediately adjacent to, and cured under the same conditions as the building concrete. Special curing boxes are not permitted for these test cylinders.

9. Concrete mixed, transported, placed, and cured under conditions of high ambient temperature, low humidity, solar radiation, or high winds shall conform to the latest edition of Hot Weather Concreting (ACI 305R) and an additional set of concrete test cylinders shall be made. For mass concrete, this set of additional test cylinders shall consist of four specimens for each 200 cubic yards of concrete placed. These cylinders shall be stored immediately adjacent to, and cured under the same conditions as the building concrete. Special curing boxes are not permitted for these test cylinders.

10. Slump tests shall be made prior to and following the addition of plasticizers. Where concrete is placed by pumping methods, concrete for test cylinders and slump tests shall be taken at the point of final placement.

11. Water shall not be added to the concrete at the job site. The Contractor is responsible for coordinating a pumpable and workable mix without the addition of water at the job site. The use of plasticizers, retardants and other additives shall be at the option of the Contractor subject to the approval of the Structural Engineer. Follow the recommendations of the manufacturer for the proper use of additives. Use of calcium chloride or other chloride bearing salts is prohibited.

11. Place concrete in a manner so as to prevent segregation of the mix. Delay floating and troweling operations until the concrete has lost surface water sheen or all free water. Do not sprinkle free cement on the slab surface. Finishing of slab surfaces shall conform to the latest editions of ACI 302.1R and ACI 304R (Guide for Measuring, Mixing, Transporting and Placing Concrete).

12. Where an epoxy adhesive is specified for bonding plastic concrete to hardened concrete, it shall conform to the latest edition of the Standard Specification for Bonding Plastic Concrete to Hardened Concrete with a Multi-Component Epoxy Adhesive (ACI 503.2).

13. Maintain concrete in a moist condition for at least 5 days at ambient temperatures above 70 degrees, and at least 7 days at ambient temperatures above 50 degrees. Curing compounds or moisture retention covers shall be used for all non-formed surfaces. Formed surfaces shall be cured by leaving forms in place. During hot, dry weather, keep forms moist by sprinkling. When forms are removed prior to the end of the curing period, apply curing compound to the exposed surfaces.

14. All interior slabs shall receive a hard "troweled finish". Exterior slabs, sidewalks, and stoops shall receive a "broom (or other type of slip resistant) finish". All formed surfaces not exposed to public view shall receive a "rough form finish", exposed surfaces shall receive a "smooth form finish". Concrete finishes shall be as defined in ACI 301.

15. Protect finished concrete surfaces from damage, rain, hail, running water, other injurious effects.

16. Protect the concrete surface between finishing operations on hot, dry days or any time plastic shrinkage cracks could develop by using wet burlap, plastic membranes or fogging.

17. Horizontal and vertical joints are not permitted in concrete construction except where indicated.

18. Construction joints and/or contraction joints at locations other than where indicated shall be submitted to the Structural Engineer for approval.

19. Construction joints shall be prepared by roughening the contact surface in an approved manner to a full amplitude of approximately 1/4 inch leaving the contact surface clean and free of laitance.

20. Provide 3/4 inch chamfers on all exposed corners of concrete except those abutting masonry.

21. The Contractor shall verify the location of sleeves, openings, embedded items, etc. and shall ensure that they are in place prior to the placement of the concrete.

22. Earth cuts shall not be used as forms ("bank forming") for vertical or sloping surfaces unless otherwise approved by the Structural Engineer. Where bank forming is permitted, the concrete element shall be increased at least 3 inches on all sides exposed to earth to account for possible soil contamination during concrete placement.

CONCRETE SCHEDULE

CONCRETE SCHEDULE						
CLASS	f'_c	AIR CONTENT	MIN. CEMENT: LB/CY (SACKS/CY)	MAX. WATER/ CEMENT: RATIO	CONCRETE PLACEMENT	REMARKS
A	4,000 psi	optional	517 (5.5)	0.48	slab-on-grade, footings	
B	4,000 psi	optional	517 (5.5)	0.48	concrete wall	crystalline waterproofing admixture
C	4,500 psi	6% ± 1.5%	611 (6.5)	0.40	exterior slabs-on-grade, stoops, curbs, & sidewalks exposed to de-icers	synthetic fibers (1.5 lbs/cys)

REINFORCING STEEL

1. Reinforcing bar detailing, fabricating, and placing shall conform to the latest edition of the following standards: Specifications for Structural Concrete for Buildings (ACI 301), ACI Detailing Manual (SP66). The latest editions of Concrete Reinforcing Steel Institute's Reinforcing Bar Detailing and Placing Reinforcing Bars may also be used.

2. Provide standard bar chairs, slab bolsters, spacers, etc. as required to maintain concrete protection specified. Reinforcing steel shall be tied to prevent displacement during concrete placement.

3. Reinforcement bars shall not be tack welded, welded, heated or cut unless otherwise indicated or approved by the Structural Engineer.

4. Welding of reinforcement bars, when approved by the Structural Engineer, shall conform to the latest edition of American Welding Society Standard D1.4. Electrodes for shop and field welding of reinforcement bars shall conform to ASTM A233, Class E90XX.

5. Synthetic fibers shall be used for temperature and shrinkage reinforcement in concrete slabs-on-grade. Synthetic fibers shall be virgin (non-recycled) nylon or polypropylene fibers conforming to ASTM C1116, Type III. Fibers shall be introduced into the mix at the plant in accordance with the manufacturer's recommendations. The Contractor shall submit the mix design, including the fiber size and quantity, to the Structural Engineer for approval prior to construction. The Contractor shall take adequate measures to manage any difficulty in concrete finishing associated with the use of the fibers.

6. Concrete cover over reinforcement, unless otherwise noted, shall be as specified in the latest editions of ACI 318 and ACI 350 with the most stringent requirements governing.

7. Unless noted otherwise, splicing of reinforcing bars shall conform to the latest edition of ACI 318.

CONCRETE REINFORCING STEEL LAP SPLICE SCHEDULE			
BAR SIZE	TENSION SPLICE		COMPRESSION SPLICE
	TOP BAR	OTHER	
#3	21"	16"	12"
#4	28"	24"	15"
#5	35"	30"	19"
#6	42"	36"	23"
#7	49"	42"	26"
#8	56"	48"	30"
#9	63"	57"	34"
#10	76"	66"	38"
#11	93"	72"	42"

8. Horizontal bars in walls, masonry bond beams, and continuous wall footings shall be bent at corners and intersections in such a way that continuity is provided through the joint. Separate corner bars of the same size and spacing as the horizontal reinforcing may be substituted for the bent portion of the continuous bars.

9. Unless noted otherwise, provide 2-#5 bars (one each face) around unframed openings and diagonally at reentrant corners of vertical height offsets in concrete walls. Place bars parallel to the sides of the opening and extend 24 inches beyond corners.

10. The Contractor shall prepare detailed working or shop drawings to enable him to fabricate, erect and construct all parts of the work in accordance with the drawings and specifications and shall submit one reproducible copy and one blue line copy to the Structural Engineer for review prior to fabrication. These shop drawings will be reviewed for design concepts only. The Contractor shall be responsible for all dimensions, accuracy, and fit of work.

POST-INSTALLED EXPANSION/ADHESIVE ANCHORS

1. Post-installed anchors shall only be used where specified on the Construction Documents. The Contractor shall obtain approval from the Structural Engineer prior to installing the post-installed anchors in place of missing or misplaced cast-in-placed anchors.

2. Care shall be taken in placing post-installed anchors to avoid conflicts with existing reinforcing steel.

3. Post-installed anchors shall be installed by qualified personnel in accordance with the drawings and specifications.

4. Post-installed anchors shall be installed by qualified personnel in accordance with the Manufacturer's Printed Installation Instructions (MPII), the drawings and specifications. Installation of adhesive anchors shall be performed by personnel trained to install adhesive anchors. Contractor shall submit installer training cards with anchor package.

5. Post-installed anchors shall be HILTI type as manufactured by HILTI Fastening Systems or approved equivalent. Substitution requests must be submitted by the Contractor to the Structural Engineer for review. Provide back-up technical data that demonstrates that the substituted product is capable of achieving the equivalent performance values (minimum) of the specified products using the appropriate design procedure and/or standard(s) as required by the building code.

6. The Contractor shall inspect the concrete surface at each proposed post-installed anchor location prior to installation. If the concrete is honeycombed, cracked or otherwise unsound, the post-installed anchors shall be repositioned so as to be located in sound material and be in accordance with the manufacturer's minimum spacing and edge distance requirements.

7. Adhesive anchors shall be subject to the following additional requirements:
   A. Anchors shall meet the requirements of ACI 355.2 (mechanical anchors) and ACI 355.4 (adhesive anchors).
   B. Proof loading of adhesive anchors is not required.
   C. Anchors shall not be installed in concrete cured less than 21-days
   D. Anchors shall not be installed until the concrete has reached a minimum compressive strength of 2,500 psi.
   E. Concrete temperature must be greater than 50 °F and less than 80 °F prior to installation of the anchors unless otherwise permitted by the MPII.
   F. Anchors shall be installed in holes drilled with the HILTI Hollow Drill Bit (TE-CD (SDS Plus) or TE-YD (SDS Max)) and HILTI VC 20/40 Vacuum (VC 20-U or VC 40-U). Follow the MPII for size and depth of holes required.
   G. The acceptability of certification other than the ACI/CRSI Adhesive Anchor Installer Certification shall be the responsibility of the Structural Engineer.
   H. Adhesive anchors installed in horizontal or upwardly inclined orientations to resist sustained tension loads shall be continuously inspected during installation by an inspector specially approved for that purpose by the building official. The special inspector shall furnish a report to the licensed design professional and building official that the work covered by the report has been performed and that the materials used and the installation procedures used conform to the approved contract documents and MPII.

NON-SHRINK GROUT

1. Grout shall be a high early strength, non-metallic, shrinkage resistant (when tested in accordance with the latest edition of ASTM C827 or CRD-C621), premixed, non-corrosive, non-staining product conforming to the requirements of the latest edition of ASTM C1107 and containing Portland Cement, silica sands, shrinkage compensating agents and fluidity improving compounds.

2. Grout compressive strength tests shall be performed in accordance with the latest edition of ASTM C109, with a restraining plate placed over the molds.

3. Grout shall be installed in accordance with the manufacturer's instructions.

4. Grout shall be placed in a non-sag flowable state and shall have forms built around it for confinement. Grout shall be cured according to manufacturer's recommendations.

PRE-ENGINEERED POST-FRAME BUILDING

1. The Pre-Engineered Post-Frame Building manufacturer shall prepare detailed working or shop drawings to enable fabrication, erection and construction of all parts of the work in accordance with the drawings and specifications and shall submit copies per the specifications, including calculations, to the Structural Engineer for review prior to fabrication. These shop drawings shall show the design loads, plans, elevations, sections, connections, required bracing, attachments, other work, and details necessary for the Pre-Engineered Post-Frame Building manufacturer to fabricate, erect and construct all parts of the work. These shop drawings and calculations will be reviewed for design concepts only. The Pre-Engineered Post-Frame Building manufacturer shall be responsible for all dimensions, accuracy, and fit of work. The Pre-Engineered Post-Frame Building framing shall be designed by, and the shop drawings and calculations shall bear the seal and signature of, a registered professional engineer in the State of Indiana.

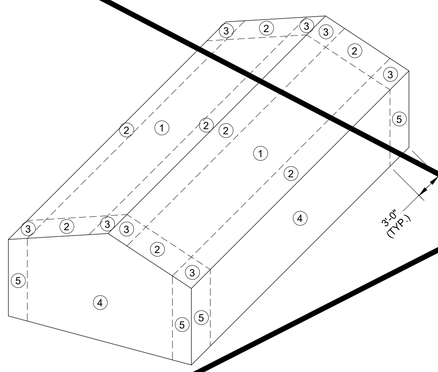
2. The Pre-Engineered Post-Frame Building manufacturer shall submit in a timely manner anchor bolt plans that include anchor bolt location, diameter and projection as well as minimum column reactions for verification of the foundation design shown in the drawings.

3. The Contractor shall reference specification section DS-11 (PRE-ENGINEERED POST-FRAME BUILDING) for additional requirements for the pre-engineered post-frame building systems.

4. The Pre-Engineered Post-Frame Building Manufacturer is responsible for the design and supply of wall openings, louvers and exhaust fan support framing.

COORDINATION WITH OTHER TRADES

1. The Contractor shall coordinate and check all dimensions relating to architectural finishes, structural framing, mechanical openings, equipment, etc. The Structural Engineer shall be notified of any discrepancies before proceeding with work in an area under question.



DESIGN

1. Building Code: Indiana Building Code, 2014 Edition (2012 International Building Code, first printing, with Indiana Amendments).

2. Soil information:
   Allowable net bearing pressure: 2000 psf (assumed)
   Equivalent fluid pressure on tank walls 90 psf / ft (assumed)
   Coefficient of friction between soil and concrete footing 0.30 (assumed)

3. Concrete:
   28 day compressive strength (f'c) See Schedule

4. Reinforcing steel (deformed bars of new billet steel):
   Stirrup and tie ASTM A615, Grade 60
   Weldable (Low-Alloy) ASTM A706, Grade 60
   Otherwise ASTM A615, Grade 60
   Welded wire fabric (smooth) ASTM A185

5. Non-shrink grout:
   28 day compressive strength 5,000 psi

6. Risk Category: For purposes of design load calculation, the building shall be classified as Risk Category II in accordance with ASCE 7-10.

7. Dead Loads: The dead load shall be the weight of the Pre-Engineered Post-Frame Building system materials.

8. Collateral Loads: The collateral load shall be 5 psf or as shown on the construction drawings. Collateral Loads shall not be carried by the roof sheathing.

9. Live loads:
   Roof (Pre-Engineered Building):The building roof structural members shall be capable of supporting a minimum gravity live load of 20 psf reduced in accordance with the 2014 Indiana Building Code, but not less than 12 psf
   Floor: 100 psf

10. Snow Loads:
    Ground Snow Load, Pg 20 psf
    Snow Exposure Factor, Ce 0.9
    Snow Importance Factor, Is 1.0
    Thermal Factor, Ct 1.0
    Flat-Roof Snow Load, Pf 12.6 psf
    Rain-on-Snow Surcharge 5 psf
    Design Flat-Roof Snow Load, Pf 25 psf with drift considerations

11. Rainfall Intensity: All exterior gutters and downspouts shall be designed for rainfall intensity based upon the requirements of the 2014 Indiana Building Code.

12. Deflections shall be limited as follows:

    Primary Framing

    L/180 for roof total load
    L/240 for roof live or snow load
    H/150 for wind load

    Secondary Framing

    L/180 for roof dead load + roof snow load; but not less than that required to maintain positive drainage fo the greater of dead load + 1/2 roof snow load or dead load.
    L/180 for wind load on walls and roof
    L/240 for roof snow load

13. Wind loads:
    Basic wind speed (3-second gust) 115 mph
    Importance factor, Iw 1.0
    Risk Category II
    Exposure C

14. Seismic loads:
    Seismic importance factor, Ie 1.0
    Mapped Spectral Response Acceleration at Short Periods, Ss 13.7% g
    Mapped Spectral Response Acceleration at 1 Second, S1 7.8% g
    Site Class D (assumed)
    Design Spectral Response Acceleration at Short Periods, Sds 14.6% g
    Design Spectral Response Acceleration at 1 Second, Sd1 12.4% g
    Seismic Design Category B

REMOVED FROM BID SET

COMPONENT & CLADDING DESIGN WIND PRESSURES (PSF)

LOCATION	ZONE	EFFECTIVE WIND AREA (SF)	POS.	NEG.
ROOF	1	10	+16.6	-26.4
		20	+16.0	-25.7
		50	+16.0	-24.7
		100	+16.0	-24.0
	2	10	+16.6	-46.0
		20	+16.0	-42.3
		50	+16.0	-37.4
		100	+16.0	-33.8
	3	10	+16.6	-68.0
		20	+16.0	-63.6
		50	+16.0	-57.7
		100	+16.0	-53.3
WALLS	4	10	+28.9	-31.3
		20	+27.6	-30.0
		50	+25.8	-28.3
		100	+24.5	-27.0
	5	10	+28.9	-38.6
		20	+27.6	-36.0
		50	+25.8	-32.6
		100	+24.5	-30.0

NOTES:
1. DESIGN WIND PRESSURES REPRESENT THE NET PRESSURE (SUM OF THE EXTERNAL AND INTERAL PRESSURES) APPLIED NORMAL TO ALL SURFACES.
2. DESIGN CRITERIA:
   BASIC WIND SPEED (3-SECOND GUST) 115 MPH
   IMPORTANCE FACTOR I=1
   EXPOSURE C
   ENCLOSURE CLASSIFICATION ENCLOSED
   PARTIALLY ENCLOSED INTERNAL PRESSURE COEF. GCpi ± 0.18
3. WIND PRESSURES FOR THE MAIN WIND FORCE RESISTING SYSTEMS SHOULD BE DETERMINED IN ACCORDANCE WITH INDIANA BUILDING CODE, 2014 EDITION, SECTION 1609 AND ASCE 7-10.

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JOHN DAVID TAYLOR
REGISTERED
No. PE19900097
STATE OF INDIANA
PROFESSIONAL ENGINEER
Signature 04/6/22 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM IMPROVEMENTS

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No.	Submittal / Revision	By	Date

Designed By:	Drawn By:	Checked By:
MRC	RMS	JDT
Issue Date: 4/6/22	Project No: 21-117	Scale: AS SHOWN

GENERAL STRUCTURAL NOTES

Drawing No: **S1-1**

Sheet: 49 OF 65

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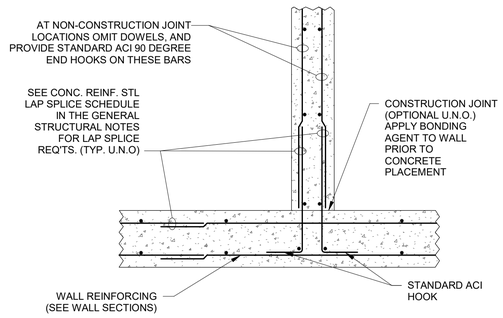
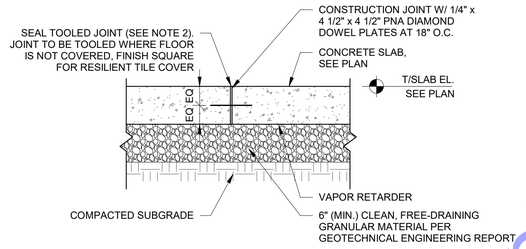


WALL REINFORCING - PLAN VIEW

(BOTH FACES)

5 S1-2 TYP. CONC. WALL INTERSECTION

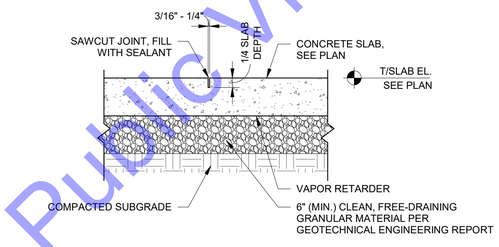
1/8" = 1'-0"



NOTES:
1. INSTALL PNA DIAMOND DOWEL PLATES PER MANUFACTURER'S RECOMMENDATIONS.
2. PRIOR TO SEALING JOINT, PREPARE JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS.
3. CONSTRUCTION JOINTS SHALL ONLY OCCUR AT LOCATIONS INDICATED.
4. APPLY LIQUID BOND BREAKER TO FULL DEPTH OF JOINT.

6 S1-2 TYP. SLAB ON GRADE CONSTRUCTION JOINT

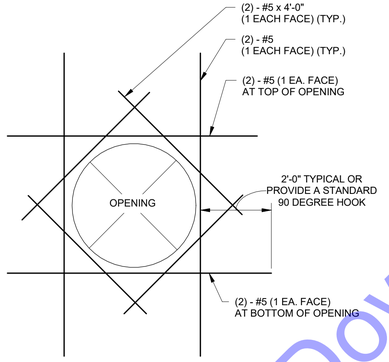
1" = 1'-0"

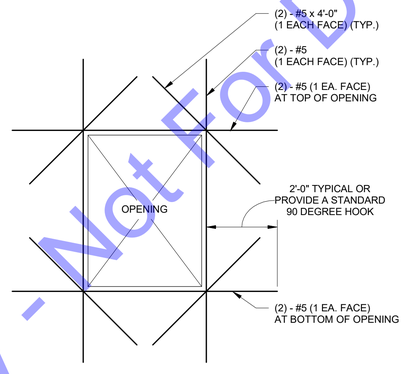


NOTES:
1. SAWCUT JOINT AS SOON AS POSSIBLE WITHOUT RAVELING THE EDGE OF CONCRETE.
2. PRIOR TO SEALING JOINT, PREPARE JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS.

7 S1-2 TYP. SLAB ON GRADE CONTRACTION JOINT

1" = 1'-0"

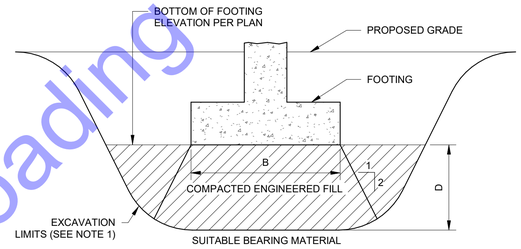




NOTES:
1. WHERE VERTICAL REINFORCING IS INTERRUPTED BY THE OPENING, ONE HALF OF THE INTERRUPTED STEEL SHALL BE ADDED TO EACH SIDE OF THE OPENING. USE FULL LENGTH BARS.
2. THIS DETAIL APPLIES TO ALL OPENINGS IN CONCRETE WALLS UNLESS DETAILED OTHERWISE ON THE PLANS.

3 S1-2 TYP. OPENING IN CONCRETE WALL

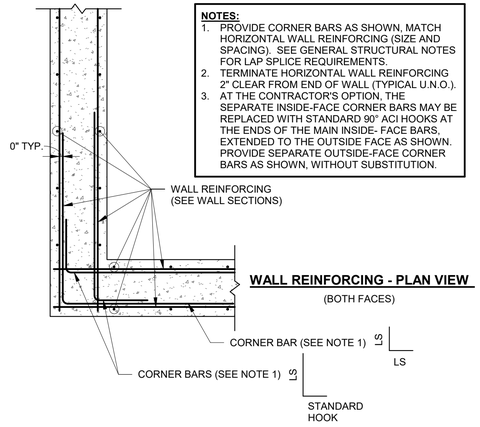
1/8" = 1'-0"



NOTES:
1. DEWATER EXCAVATION AS REQUIRED.
2. WIDTH OF EXCAVATION SHALL EQUAL WIDTH OF FOOTING PLUS DEPTH OF UNDERCUT (W=B+D).

1 S1-2 TYP. FOOTING IN UNDERCUT AREA

1" = 1'-0"



NOTES:
1. PROVIDE CORNER BARS AS SHOWN, MATCH HORIZONTAL WALL REINFORCING (SIZE AND SPACING). SEE GENERAL STRUCTURAL NOTES FOR LAP SPLICE REQUIREMENTS.
2. TERMINATE HORIZONTAL WALL REINFORCING 2" CLEAR FROM END OF WALL (TYPICAL U.N.O.).
3. AT THE CONTRACTOR'S OPTION, THE SEPARATE INSIDE-FACE CORNER BARS MAY BE REPLACED WITH STANDARD 90° ACI HOOKS AT THE ENDS OF THE MAIN INSIDE- FACE BARS, EXTENDED TO THE OUTSIDE FACE AS SHOWN. PROVIDE SEPARATE OUTSIDE-FACE CORNER BARS AS SHOWN, WITHOUT SUBSTITUTION.

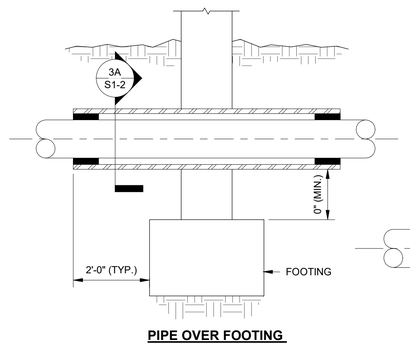
WALL REINFORCING - PLAN VIEW

(BOTH FACES)

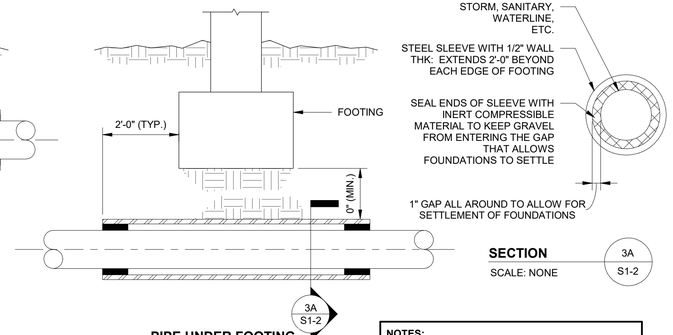
TYPICAL CONCRETE WALL CORNER REINFORCEMENT - PLAN VIEW

2 S1-2

3/4" = 1'-0"



PIPE OVER FOOTING



PIPE UNDER FOOTING

SECTION 3A S1-2

SCALE: NONE

NOTES:
1. COORDINATE THE USE OF THESE DETAILS WITH THE UNDERSLAB PIPING CONTRACTOR.
2. IF THE TOP OF THE SERVICE PIPE IS 2'-0" (OR GREATER) BELOW THE BOTTOM OF THE FOOTING, STEEL SLEEVE IS NOT REQUIRED.

4 S1-2 TYP. UNDERGROUND SERVICE PIPE DETAIL AT WALL FOUNDATION

1/8" = 1'-0"

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JOHN DAVID TAYLOR REGISTERED No. PE19900097 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 04/06/22 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT BLACKFORD COUNTY, INDIANA

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No.	Submittal / Revision	By	Date

Designed By:	Drawn By:	Checked By:
MRC	RMS	JDT
Issue Date: 4/6/22	Project No: 21-117	Scale: AS SHOWN

TYPICAL STRUCTURAL DETAILS - CONCRETE - 01

Drawing No: **S1-2**

Sheet: 50 OF 65

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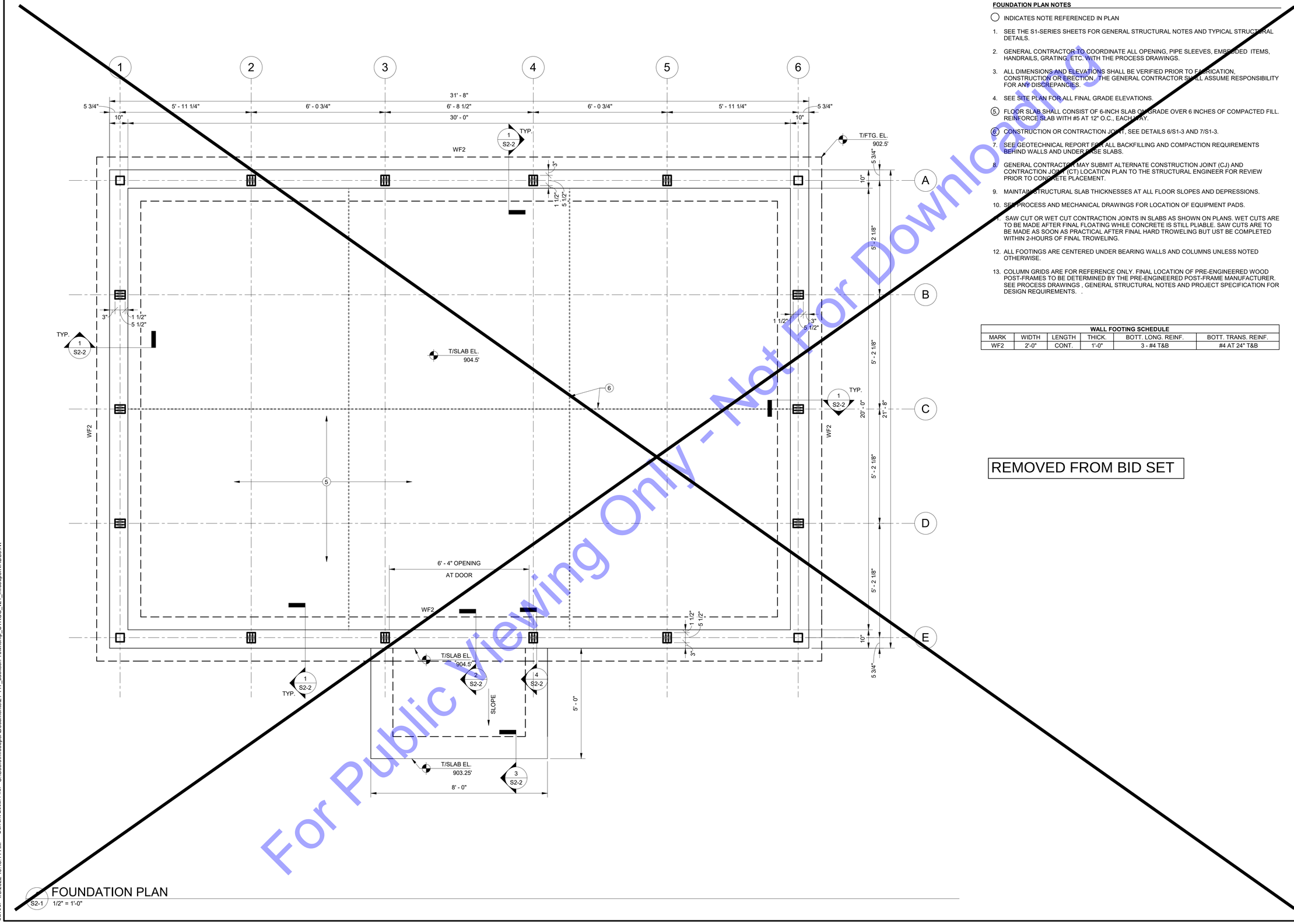

FOUNDATION PLAN NOTES

(1) INDICATES NOTE REFERENCED IN PLAN

1. SEE THE S1-SERIES SHEETS FOR GENERAL STRUCTURAL NOTES AND TYPICAL STRUCTURAL DETAILS.
2. GENERAL CONTRACTOR TO COORDINATE ALL OPENING, PIPE SLEEVES, EMBEDDED ITEMS, HANDRAILS, GRATING, ETC. WITH THE PROCESS DRAWINGS.
3. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION, CONSTRUCTION OR ERECTION. THE GENERAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DISCREPANCIES.
4. SEE SITE PLAN FOR ALL FINAL GRADE ELEVATIONS.
5. FLOOR SLAB SHALL CONSIST OF 6-INCH SLAB ON GRADE OVER 6 INCHES OF COMPACTED FILL. REINFORCE SLAB WITH #5 AT 12" O.C., EACH WAY.
6. CONSTRUCTION OR CONTRACTION JOINT. SEE DETAILS 6/S1-3 AND 7/S1-3.
7. SEE GEOTECHNICAL REPORT FOR ALL BACKFILLING AND COMPACTION REQUIREMENTS BEHIND WALLS AND UNDER BASE SLABS.
8. GENERAL CONTRACTOR MAY SUBMIT ALTERNATE CONSTRUCTION JOINT (CJ) AND CONTRACTION JOINT (CT) LOCATION PLAN TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
9. MAINTAIN STRUCTURAL SLAB THICKNESSES AT ALL FLOOR SLOPES AND DEPRESSIONS.
10. SEE PROCESS AND MECHANICAL DRAWINGS FOR LOCATION OF EQUIPMENT PADS.
11. SAW CUT OR WET CUT CONTRACTION JOINTS IN SLABS AS SHOWN ON PLANS. WET CUTS ARE TO BE MADE AFTER FINAL FLOATING WHILE CONCRETE IS STILL PLIABLE. SAW CUTS ARE TO BE MADE AS SOON AS PRACTICAL AFTER FINAL HARD TROWELING BUT UST BE COMPLETED WITHIN 2-HOURS OF FINAL TROWELING.
12. ALL FOOTINGS ARE CENTERED UNDER BEARING WALLS AND COLUMNS UNLESS NOTED OTHERWISE.
13. COLUMN GRIDS ARE FOR REFERENCE ONLY. FINAL LOCATION OF PRE-ENGINEERED WOOD POST-FRAMES TO BE DETERMINED BY THE PRE-ENGINEERED POST-FRAME MANUFACTURER. SEE PROCESS DRAWINGS , GENERAL STRUCTURAL NOTES AND PROJECT SPECIFICATION FOR DESIGN REQUIREMENTS. .

WALL FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK.	BOTT. LONG. REINF.	BOTT. TRANS. REINF.
WF2	2'-0"	CONT.	1'-0"	3 - #4 T&B	#4 AT 24" T&B

REMOVED FROM BID SET

S2-1 FOUNDATION PLAN
1/2" = 1'-0"

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(260) 494-3223

JOHN DAVID TAYLOR
REGISTERED
No. PE19900097
STATE OF INDIANA
PROFESSIONAL ENGINEER
Signature 04/06/22 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM
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NEW MAINTENANCE BUILDING FOUNDATION PLAN

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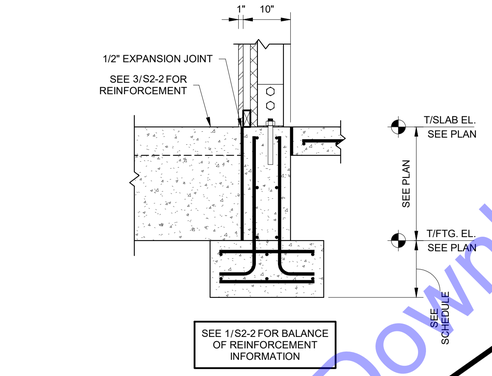
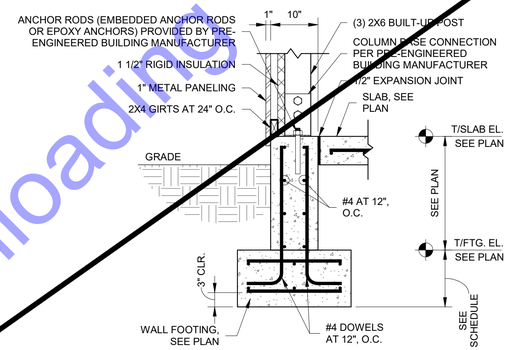


4 S2-2 SECTION
3/4" = 1'-0"



1 S2-2 SECTION
3/4" = 1'-0"

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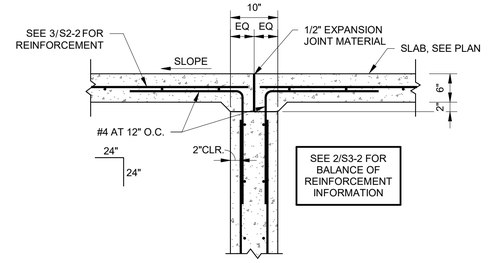
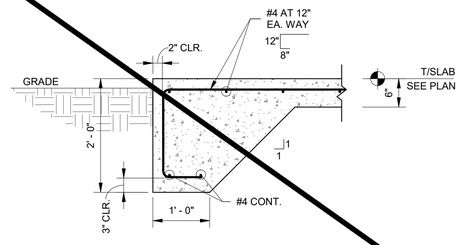


2 S2-2 SECTION
3/4" = 1'-0"



3 S2-2 SECTION
3/4" = 1'-0"

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9604 Coldwater Rd. Suite 223 Fort Wayne, IN 46825 (260) 494-3223

JOHN DAVID TAYLOR REGISTERED No. PE19900097 STATE OF INDIANA PROFESSIONAL ENGINEER
Signature 04/06/22 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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MRC	RMS	JDT
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DETAILS

Drawing No:
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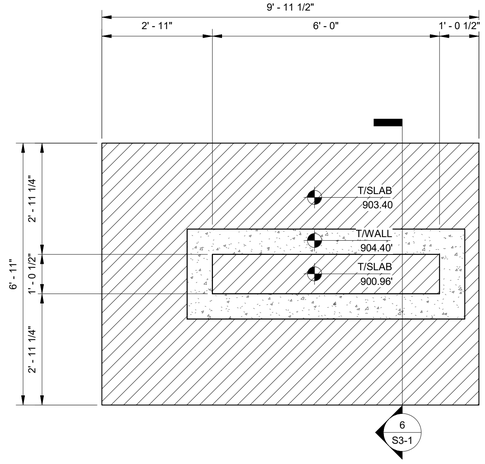
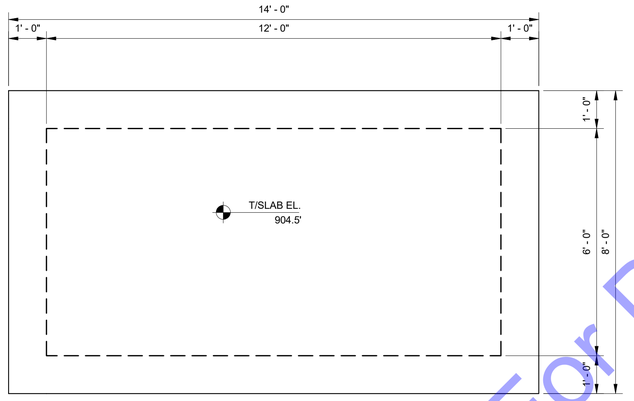
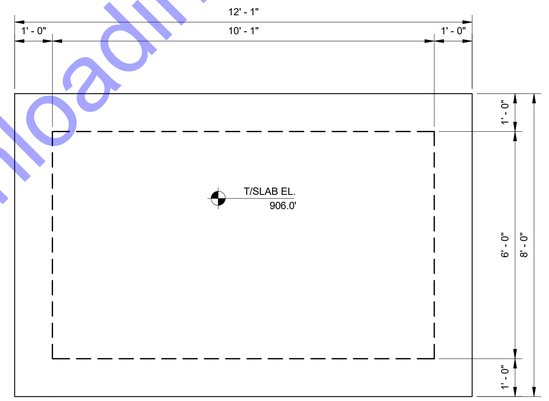


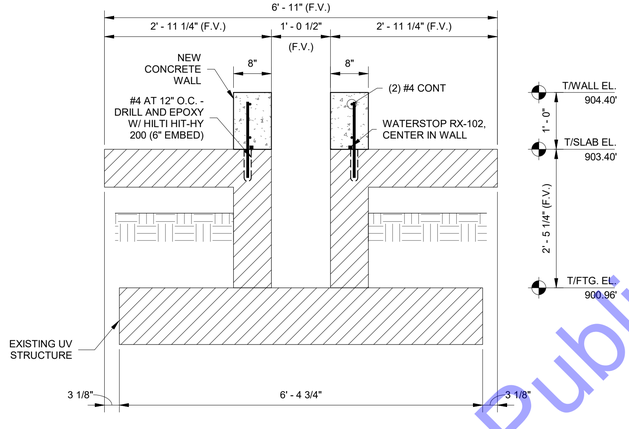
5 S3-1 **FOUNDATION PLAN**
1/2" = 1'-0"



3 S3-1 **FOUNDATION PLAN**
1/2" = 1'-0"

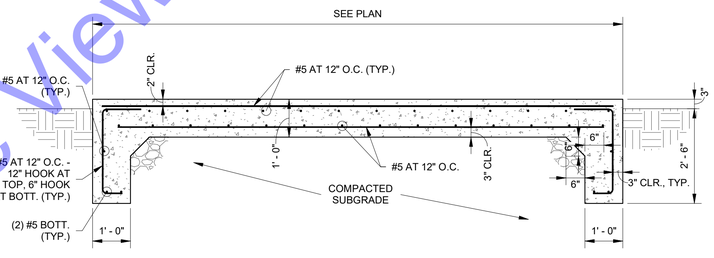


1 S3-1 **FOUNDATION PLAN**
1/2" = 1'-0"



6 S3-1 **SECTION**
3/4" = 1'-0"

NOTES:
1. SEE PROCESS DRAWINGS FOR EQUIPMENT PAD LOCATION.
2. TOP OF EQUIPMENT PAD SHALL BE FLAT AND LEVEL.
3. COORDINATE EQUIPMENT PADS WITH THE SELECTED MECHANICAL/ELECTRICAL CONTRACTORS.



4 S3-1 **SECTION**
1/2" = 1'-0"

NOTES:
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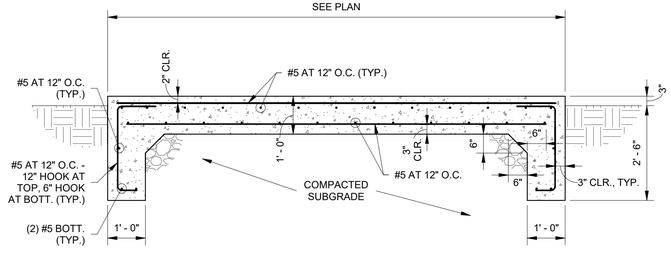
2. TOP OF EQUIPMENT PAD SHALL BE FLAT AND LEVEL.
3. COORDINATE EQUIPMENT PADS WITH THE SELECTED MECHANICAL/ELECTRICAL CONTRACTORS.



2 S3-1 **SECTION**
1/2" = 1'-0"

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NEW BLOWER AND GENERATOR PADS - PLANS AND SECTIONS

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PROCESS AND INSTRUMENTATION DIAGRAM LEGEND

INSTRUMENT TAG IDENTIFICATION

COMPONENT DESIGNATOR

AREA 035D: BUILDING OR PROCESS AREA NUMBER

TAG TYPE P: FIRST LETTER, SEE ISA TABLE BELOW
AH: SUCCEEDING LETTERS, SEE ISA TABLE BELOW

TAG NUMBER 12: P&ID NUMBER
3: LOOP NUMBER
4: EQUIPMENT NUMBER
A: DEVICE LETTER IF MULTIPLE DEVICES

TAG FUNCTION HOA: TAG FUNCTION ABBREVIATION, SEE LISTING AT RIGHT

(QUANTITY) (2): TOTAL NUMBER OF DEVICES WHERE MORE THAN ONE DEVICE IS REQUIRED. DEVICE NUMBERS ARE SEQUENTIAL BEGINNING WITH THE TAG NUMBER SHOWN. IF QUANTITY IS NOT SHOWN, THEN ONE DEVICE ONLY IS REQUIRED.

COMPONENT DESIGNATOR SEE LISTING AT RIGHT

PLC POINT TYPE

ANALOG INPUT	
ANALOG OUTPUT	
DISCRETE INPUT	
DISCRETE OUTPUT	
NETWORK CONNECTION	

TAG FUNCTION ABBREVIATIONS

ALT ALTERNATE
C CLOSED(C)
CM COMPUTER-MANUAL
DIFF DIFFERENCE OR DIFFERENTIAL
DO DISSOLVED OXYGEN
F FAIL
F(X) CHARACTERIZED
FOR FORWARD-STOP(OFF)-REVERSE(MAINTAINED CONTACT)
FSR FORWARD-STOP-REVERSE(MOMENTARY CONTACT)
HOA HAND-OFF-AUTOMATIC(MAINTAINED CONTACT)
HOR HAND-OFF-REMOTE(MAINTAINED CONTACT)
I CURRENT TO CURRENT
IP CURRENT TO PNEUMATIC
LL LEAD-LAG(MAINTAINED CONTACT)
LOE LOSS OF ECHO(ULTRASONIC SENSOR FAILURE)
LOR LOCAL-OFF-REMOTE(MAINTAINED CONTACT)
LOS LOCKOUT STOP(LOCKABLE IN "STOP" POSITION MOMENTARY CONTACT)
L/R LOCAL/REMOTE(MAINTAINED CONTACT)
MA MANUAL-AUTOMATIC(MAINTAINED CONTACT)
MOA MANUAL-OFF-AUTOMATIC(MAINTAINED CONTACT)
O OPEN
OA OFF-AUTOMATIC
OCA OPEN-CLOSE-AUTOMATIC(MAINTAINED CONTACT)
OC OPEN-CLOSE(D)(MAINTAINED CONTACT)
OSC OPEN-STOP-CLOSE(MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION)
00 ON-OFF(MAINTAINED CONTACT)
OOA ON-OFF-AUTOMATIC(MAINTAINED CONTACT)
OOR ON-OFF-REMOTE(MAINTAINED CONTACT)
R RUN
SBL SLUDGE BLANKET INTERFACE LEVEL
SP SPEED POT
SQRT SQUARE ROOT
SS START-STOP
SSA START-STOP-AUTOMATIC
SSL START-STOP-LOCK (LOCKABLE IN "STOP" POSITION. MOMENTARY CONTACT)
SUM SUMMINATION
VIB VIBRATION
X MULTIPLY

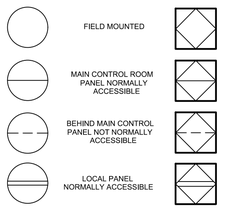
FWD FOWARD
REV REVERSE
F/R FOWARD/REVERSE(MOTOR STARTER COILS)
ESTP ESTOP(EMERGENCY STOP)
SPD (SPEED POT)
SUSP SUSPEND
ALRT ALERT
RSET RESET
STRT START

TAG SYMBOLS

HORIZONTAL BAR SYMBOLS FOR PHYSICAL MOUNTING OF DEVICE

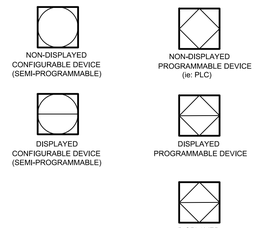
SINGLE FUNCTION SINGLE/MULTI I/O DEVICE NON-CONFIGURABLE NON-PROGRAMMABLE

MULTI FUNCTION MULTI I/O PROGRAMMABLE DEVICE



CONTROL AND I/O DEVICES DISPLAY

[ADD APPROPRIATE HORZ. BAR(S)]



INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER(S) PROCESS OR INITIATING VARIABLE	FIRST LETTER(S) MODIFIER	SUCCEEDING LETTER(S) READOUT OR PASSIVE FUNCTION	SUCCEEDING LETTER(S) OUTPUT FUNCTION	SUCCEEDING LETTER(S) MODIFIER
A	ANALYSIS		ALARM(W. LOGGING)	ANNUNCIATE	
B	BURNER COMBUSTION		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
C	USERS CHOICE(*)			CONTROL	CLOSE
D	USERS CHOICE(*)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			FEEDBACK
G	USERS CHOICE(*)		GLASS		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE	KEYPAD(DATA ENTRY)	CONTROL STATION	
L	LEVEL		LIGHT(PILOT)		LOW
M	MOTOR	MOMENTARY			MONITORING
N	USERS CHOICE(*)		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
O	USERS CHOICE(*)		ORIFICE		
P	PRESSURE OR VACUUM		POINT TEST CONNECTION		
Q	QUANTITY	INTEGRATE			
R	RADIATION		RECORD, TREND, LOG		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSIT	
U	UNIVERSAL/MULTIVARIABLE(*)		MULTIFUNCTION(*)	MULTIFUNCTION(*)	MULTIFUNCTION(*)
V	VIBRATION		VALVE	VALVE	
W	WEIGHT, FORCE, TORQUE		WELL	W	
X	UNCLASSIFIED(*)	X AXIS	UNCLASSIFIED(*)	UNCLASSIFIED(*)	UNCLASSIFIED(*)
Y	EVENT, STATE	Y AXIS		RELAY OR COMPUTE(*)	
Z	POSITION, DIMENSION	Z AXIS		DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL

SPECIAL CASES:
ETM - ELAPSED TIME METER
JBX - JUNCTION BOX
NDX - INDEX #
MS - MOTOR STARTER
MOR - MOTOR OVERLOAD RELAY
MPR - MOTOR PROTECTION RELAY

CONDUIT NOTES

PVC SCHEDULE 40 BELOW GRADE.

RIGID ALUMINUM OR PVC COATED RGS CONDUIT ABOVE GRADE OUTDOORS.

RIGID ALUMINUM OR PVC COATED RGS CONDUIT IN CLASSIFIED AND CORROSIVE SPACES.

NO CONDUIT SHALL BE INSTALLED ON TOP OF A DECK, ON A WALKWAY, OR IN AN AREA THAT MAY POSE A TRIP HAZARD. NO CONDUIT SHALL BE INSTALLED ABOVE A DECK, ABOVE A WALKWAY, OR IN AN AREA THAT IS COMMONLY TRAVELED. ALL CONDUIT IN SUCH AREAS SHALL BE COORDINATED WITH THE OWNER/ENGINEER AND SHALL BE INSTALLED BELOW GRADE OR IN THE CONCRETE DECKING OR PAD. CONDUIT INSTALLED IN CONCRETE DECKING OR PAD SHALL BE AVOIDED WHEN POSSIBLE. IF CONDUIT IS TO BE ROUTED IN A STRUCTURAL CONCRETE DECK, PAD, WALL, ETC. IT SHALL BE COORDINATED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. CONDUIT INSTALLED IN CONCRETE CAN IMPACT THE STRUCTURAL INTEGRITY OF CONCRETE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFORM TO ANY REQUIREMENTS REQUIRED OF THE STRUCTURAL ENGINEER TO ACCOMMODATE THE INTEGRITY OF THE INSTALLATION AT NO COST TO THE OWNER. FOR A CONDUIT EMBEDDED IN CONCRETE TO BE CONSIDERED IT MUST BE THE ONLY REASONABLE SOLUTION AS DETERMINED BY THE ENGINEER. ALL PROPOSED INSTALLATIONS MUST COMPLY WITH ACI 318 AND BE ENGINEER APPROVED.

ALL UNDERGROUND CONDUITS SHALL BE SEALED AT BOTH ENDS.

NO CONDUIT PENETRATIONS ON THE TOP OF ANY OUTDOOR PANELS/ENCLOSURES.

EMT IS ACCEPTABLE IN CONDITIONED ELECTRICAL ROOMS AND OFFICE/BREAK AREAS ONLY. EMT SHALL BE TRANSITIONED PRIOR TO EXITING NON CORROSIVE SPACES. EMT SHALL NOT BE USED WHEN IT CAN BE EXPOSED TO ANY CORROSIVE GASES.

CONTROL WIRING REQUIREMENTS

EACH ANALOG INPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH ANALOG OUTPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE INPUT REQUIRES 2 #14's IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE OUTPUT REQUIRES 2 #14's IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

CONTROL WIRING OF THE SAME TYPE MAY BE COMBINED INTO THE SAME CONDUIT. EXAMPLES: TWO 4-20MA ANALOG SIGNALS MAY BE COMBINED, TWO 24VDC DISCRETE SIGNALS MAY BE COMBINED, AND TWO 120VAC DISCRETE SIGNALS MAY BE COMBINED.

NOTE: INSTRUMENTS AND CABLE SHALL BE AS REQUIRED BY THE INSTRUMENT MANUFACTURER.

INSTRUMENT POWER

INSTRUMENTS REQUIRING 120 VAC:

1. MAGNETIC FLOW METERS
2. TURBIDITY TRANSMITTERS
3. pH TRANSMITTERS
4. ORP TRANSMITTERS
5. DO TRANSMITTERS
6. ULTRASONIC LEVEL TRANSMITTERS
7. ULTRASONIC FLOW TRANSMITTERS
8. INFLUENT AND EFFLUENT SAMPLERS

NOTE: THIS LIST IS PROVIDED AS A REFERENCE AND IS NOT ALL INCLUSIVE. COORDINATE WITH THE GENERAL CONTRACTOR AND THE EQUIPMENT SUPPLIERS FOR DETAILED WIRING REQUIREMENTS OF INSTRUMENTS, SENSORS, AND EQUIPMENT.

ELECTRICAL GENERAL NOTES

(GENERAL NOTES APPLICABLE TO ALL ELECTRICAL SHEETS)

1. CONTRACTOR SHALL EXAMINE NOT ONLY PLANS AND SPECIFICATIONS FOR ELECTRICAL AND INSTRUMENTATION, BUT PLANS AND SPECIFICATIONS FOR OTHER RELATED SECTIONS. VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. LATE CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE WILL NOT BE RECOGNIZED.
2. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INCLUDE EVERY DETAIL OF REQUIRED CONSTRUCTION, EQUIPMENT, AND MATERIALS. PROVIDE ALL MATERIALS AND WORK NOT SPECIFICALLY MENTIONED, SHOWN, OR CAN BE REASONABLY INFERRED ON THE DRAWINGS BUT WHICH ARE NECESSARY TO FULLY COMPLETE THE WORK.
3. WHEN SUBSTITUTING OTHER EQUIPMENT, MATERIALS, AND PRODUCTS THAN SPECIFIED IN THE CONTRACT DOCUMENTS, INCLUDE IN PRICING ALL COSTS FOR OTHER DESIGN CHANGES TO THE PROJECT (ALL DIVISIONS) WHICH WILL RESULT FROM USE OF THE SUBSTITUTED ITEM(S).
4. REVIEW THE CONTRACT DOCUMENTS OF OTHER DIVISIONS, AND COORDINATE ELECTRICAL AND CONTROL WORK WITH THE WORK OF OTHER DISCIPLINES TO AVOID CONFLICTS AND INTERFERENCE.
5. UPON COMPLETION OF THE WORK REQUIRED UNDER THIS CONTRACT, PROVIDE TYPED UPDATED DIRECTORY WITHIN DOOR OF EACH AFFECTED PANELBOARD. LEAVE "SPARE" BREAKERS IN "OFF" POSITION.
6. ALL MOUNTING HEIGHTS INDICATED ON DRAWINGS ARE TO CENTERLINE, UON.
7. PROVIDE LIGHTING FIXTURES COMPATIBLE WITH CEILING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL ROOM FINISH SCHEDULES.
8. IN AREAS HAVING FINISHED CEILINGS, LOCATE CEILING-MOUNTED ELECTRICAL DEVICES AND FIXTURES ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLAN. DO NOT INSTALL CEILING-MOUNTED SMOKE DETECTORS WITHIN 4 FEET OF HVAC SUPPLY DIFFUSERS.
9. IN ELECTRICAL AND MECHANICAL EQUIPMENT SPACES, COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES WITH CONDUIT BANKS, DUCTWORK, PIPING, STRUCTURE, SUPPORTS, AND OTHER OBSTRUCTIONS. LOCATE FIXTURES SUCH THAT DIALS, GAUGES, METERS, ETC. ARE PROPERLY ILLUMINATED.
10. DO NOT USE ANY LIGHTING FIXTURE AS A RACEWAY FOR CONDUCTORS NOT SERVING THAT PARTICULAR FIXTURE.
11. CONNECT BATTERY-OPERATED EMERGENCY LIGHTING UNITS AND EXIT SIGNS HAVING BATTERY BACK-UP TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NEC SUCH THAT FAILURE OF CIRCUIT TRANSFERS UNIT FROM NORMAL TO EMERGENCY MODE, CAUSING LAMPS TO RE-ENERGIZE.
12. DO NOT INSTALL OUTLET BOXES BACK-TO-BACK IN NON-RATED PARTITIONS. OFFSET AND SEAL, SIMILAR TO REQUIREMENTS FOR RATED PARTITIONS, TO MINIMIZE SOUND TRANSMISSION.
13. COORDINATE ROUTING OF ALL LARGE CONDUITS (2" DIA AND LARGER) AND PULL BOX LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICTS AND TO GUARANTEE REQUIRED CLEARANCE AND ACCESSIBILITY OF ELECTRICAL AND OTHER SYSTEMS.
14. COORDINATE WITH OWNER OR OWNER'S SELECTED VENDOR PRIOR TO ROUGH-IN FOR EXACT LOCATIONS OF SPECIAL PURPOSE OUTLETS DEDICATED TO SPECIFIC EQUIPMENT. VERIFY REQUIRED NEMA CONFIGURATION OF ALL SUCH OUTLETS.
15. PROVIDE APPROPRIATE PULL WIRE IN EACH EMPTY SYSTEMS CONDUIT INCLUDED IN THIS PROJECT.
16. INCLUDE GREEN-INSULATED GROUNDING CONDUCTOR SIZED PER 2002 NEC TABLE 250-122 WITH ALL BRANCH CIRCUIT CONDUCTORS SERVING LIGHTING FIXTURES, RECEPTACLES, MECHANICAL OR OTHER DEVICES INSTALLED AT OR BELOW 8'-0".
17. MATCH A.I.C. RATINGS AND OTHER CHARACTERISTICS OF EXISTING DEVICES IN PANELBOARD WHEN ADDING BREAKERS TO EXISTING PANELBOARDS.
18. ALL WORK SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION ADOPTED BY INDIANA, THE INDIANA CODE AMENDMENT, LOCAL/MUNICIPAL CODE, AND THE AUTHORITIES HAVING JURISDICTION.
19. ALL CONNECTIONS TO EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, NOT LESS THAN 12" IN LENGTH, NOR GREATER THAN 36" IN LENGTH.
20. ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROPRIATE CONDUIT SEALING MATERIAL.
21. ALL CABLE SIZES SHALL UTILIZE COPPER CONDUCTORS.
22. FIELD VERIFY LOCATIONS OF BUILDING EXPANSION JOINTS WHEN ROUTING CONDUIT. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL BE INSTALLED WITH THE EXPANSION FITTINGS. EXPANSION FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURERS WRITTEN RECOMMENDATIONS.
23. FEEDERS FROM PANELBOARDS BACK TO MAIN SWITCHBOARD, BETWEEN AUTO TRANSFER SWITCHES AND THEIR SOURCES/LOADS, BETWEEN DRY TRANSFORMERS AND THEIR SOURCES/LOADS ARE NOT INDICATED. FEEDERS ARE PART OF THE WORK, AND SHALL BE SIZED AS INDICATED ON THE LINE DIAGRAM.
24. HOMERUNS SHALL NOT BE COMBINED IN A RACEWAY UNLESS SHOWN ON THE CONTRACT DRAWINGS. SINGLE PHASE BRANCH CIRCUIT HOMERUNS MAY BE COMBINED AT THE CONTRACTORS DISCRETION NOT GREATER THAN (3) PHASE CONDUCTORS, NEUTRAL CONDUCTORS, AND A GROUNDING CONDUCTOR.
25. EACH SINGLE PHASE BRANCH CONDUCTOR SHALL HAVE A DEDICATED NEUTRAL BACK TO THE PANEL.
26. ALL PENETRATIONS BELOW GRADE SHALL USE LINK SEALS.
27. WHERE LOW VOLTAGE (CONTROL) CABLING IS ALLOWED TO BE INSTALLED WITHOUT A RACEWAY, IT SHALL BE SUPPORTED NOT EXCEEDING INTERVALS OF 48", AND NOT MORE THAN 6" FROM THE CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES AND TERMINALS.
28. ALL MOUNTING HARDWARE INCLUDING NUTS, BOLTS, SCREWS, WASHERS, ETC. SHALL BE STAINLESS STEEL.
29. MOUNT JUNCTION BOXES AND DISCONNECT SWITCHES ON STAINLESS STEEL UNISTRUT.
30. ALL UNISTRUT, MOUNTING BRACKETS AND SUPPORTING STRUCTURES SHALL BE STAINLESS STEEL.
31. DO NOT MIX CONTROL AND POWER CONDUCTORS IN THE SAME CONDUIT. DO NOT MIX DISCRETE AND ANALOG CONTROL CONDUCTORS IN THE SAME CONDUIT.
32. ADJUSTABLE SPEED DRIVES (ASD) LINE AND LOAD WIRE SHALL BE RUN IN SEPARATE RACEWAYS.
33. CONTRACTOR SHALL COORDINATE WITH HEAT TRACE MANUFACTURER DURING BIDDING AND CONSTRUCTION AND SHALL PROVIDE ALL CONDUIT, WIRING, AND CIRCUITS AS REQUIRED. HEAT TRACE SHALL BE PROVIDEDINSTALLED COMPLETE. ALL HEAT TRACE IS REQUIRED TO BE GFI PROTECTED.
34. CONTRACTOR SHALL NOT COMBINE POWER FEEDS FOR THREE PHASE LOADS.
35. THE BELOW LOCATIONS ARE WHERE GFCI OUTLETS ARE REQUIRED:
    - 35.1. KITCHENS: ALL KITCHEN OUTLETS.
    - 35.2. BATHROOMS: GFCI OUTLETS ARE REQUIRED IN BATHROOMS NEAR THE SINK.
    - 35.3. GARAGES: GFCI OUTLETS ARE REQUIRED IN GARAGES THAT HAVE SINKS.
    - 35.4. BASEMENTS: UNFINISHED BASEMENTS REQUIRE AT LEAST ONE GFCI OUTLET.
    - 35.5. OUTDOOR SPACES: GFCI OUTLETS ARE REQUIRED IN OUTDOOR AREAS THAT ARE ACCESSIBLE OR AT GRADE LEVEL.
    - 35.6. LAUNDRY ROOMS: ALL LAUNDRY ROOM OUTLETS.
    - 35.7. CRAWL SPACES: GFCI OUTLETS ARE REQUIRED IN CRAWL SPACES WHERE MECHANICAL EQUIPMENT IS LOCATED.
    - 35.8. UTILITY ROOMS: ALL UTILITY ROOM OUTLETS.
36. LIMIT CAT 6E INSTALLATION TO 230' MAXIMUM DISTANCE. CONTRACTOR SHALL FURNISH AND INSTALL FIBER OPTIC CABLE AND MEDIA CONVERTERS IF CONDUIT ROUTING EXCEEDS CAT 6E LIMITS.

LEGEND

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL, UON
	OPEN LIGHTING FIXTURE SYMBOLOGY DENOTING FIXTURES CONNECTED TO NORMAL POWER: FIXTURE TYPE DETERMINES MOUNTING.	----
	SINGLE DIAGONAL LIGHTING FIXTURE SYMBOLOGY DENOTING FIXTURES CONNECTED TO CRITICAL OR EQUIPMENT BRANCH (OR EMERGENCY POWER), UON: FIXTURE TYPE DETERMINES MOUNTING.	----
	DOUBLE DIAGONAL LIGHTING FIXTURE SYMBOLOGY DENOTING FIXTURES CONNECTED TO LIFE SAFETY BRANCH (OR EMERGENCY POWER), UON: FIXTURE TYPE DETERMINES MOUNTING.	----
	BATTERY POWERED EMERGENCY LIGHTING UNIT	7'-6"
	EXIT SIGN: ARROWS DENOTE DIRECTIONAL INDICATING CHEVRON ROMTS, SHADING DENOTES FACE(S) ORIENTATION.	----
	WALL/WASH OR OTHER DIRECTIONALLY ADJUSTABLE/AIMABLE FIXTURE: OPEN SIDE DENOTES ORIENTATION. TYPE DETERMINES MOUNTING.	----
	TRACK LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	----
	POLE-MOUNTED SITE LIGHTING FIXTURE: TYPE DETERMINES MTG.	----
	FLOOD LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	----
PC	PHOTO-CELL	----
	ALL FIXTURES IN THIS SPACE SHALL BE SAME TYPE INDICATED, U.O.N.	
S	SINGLE-POLE TOGGLE SWITCH	3'-10"
$	SINGLE-POLE TOGGLE SWITCH: SLASH DENOTES ESSENTIAL POWER SYSTEM CONNECTION - TYPICAL FOR ALL SWITCHES.	3'-10"
$_m	DUAL TECHNOLOGY, WALL MNTD OCCUPANCY SENSOR WITH MANUAL OVERRIDE SWITCH	3'-10"
$_O	DUAL TECHNOLOGY, CEILING MNTD OCCUPANCY SENSOR WITH REMOTE MANUAL OVERRIDE SWITCH	
$_RM	SINGLE-POLE REMOTE OVERRIDE SWITCH FOR CEILING MNTD OCCUPANCY SENSOR	3'-10"
$_D	DIMMER SWITCH	3'-10"
$_D3	THREE-WAY DIMMER SWITCH	3'-10"
$_P	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	3'-10"
$_M	SINGLE-POLE MOTOR-RATED TOGGLE SWITCH DISCONNECT	3'-10"
$_T	SINGLE-POLE OR DOUBLE-POLE MANUAL MOTOR STARTER WITH MELTING ALLOY ELEMENTS FOR THERMAL OVERLOAD PROTECTION	3'-10"
$_OS	OCCUPANCY SENSOR SWITCH	3'-10"
$_IT	INTERVAL TIMER RESET AND CONTROL SWITCH	3'-10"
$_J	JOG SWITCH	3'-10"
	MUSHROOM HEAD TYPE PUSHBUTTON STATION	5'-0"
P	AUTO DOOR CONTROL PUSHPLATE	----
$_V	VARIABLE INTENSITY CONTROLLER INCLUDED WITH OWNER-FURNISHED-CONTRACTOR-INSTALLED SURGICAL LIGHTING FIXTURE	5'-0"
$_LV	LOW VOLTAGE CONTROL SWITCH	3'-10"
WS	FACTORY SUPPLIED WALL CONTROLLER FOR CEILING MOUNTED LIGHT-INSTALLED BY ELECTRICAL CONTRACTOR	3'-10"
	120V DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V QUADRUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V QUADRUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V SINGLE RECEPTACLE, AMP RATING (IF OTHER THAN 20A) SHOWN: STANDARD MOUNTING HEIGHT, OR OTHER HEIGHT AS NOTED	1'-6", UON
GFCI	120V GFCI DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V GFCI QUADRUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V GFCI DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	SINGLE RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	----
	RECPTACLE OR J-BOX CONNECTION FOR X-RAY VIEWER. VERIFY CONNECTION RQMTS WITH UNIT FURNISHED PRIOR TO ROUGH-IN	----
	120V DUPLEX RECEPTACLE IN FLUSH FLOOR-MOUNTED BOX	----
TP	TELE-POWER POLE	----
H	HALON DUMP STATION	----
F	FIRE ALARM MANUAL PULL STATION	3'-10"
FK	FIRE ALARM MANUAL PULL STATION, KEY-OPERATED	3'-10"
D	FIRE ALARM CEILING-MOUNTED SMOKE DETECTOR	----
H	FIRE ALARM CEILING-MOUNTED HEAT DETECTOR	----
D_S	FIRE ALARM SUPPLY AIR DUCT-MOUNTED SMOKE DETECTOR	----
D_R	FIRE ALARM RETURN AIR DUCT-MOUNTED SMOKE DETECTOR	----
DX	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - RECEIVER	AS NOTED
DT	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - TRANSMITTER	AS NOTED
Y	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM VALVE STATUS SWITCH (TAMPER SWITCH)	----
FS	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM WATER FLOW SWITCH	----
F	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE-CHIME & STROBE	6'-8"
F	FIRE ALARM AUDIO/VISIUAL NOTIFICATION DEVICE-HORN & STROBE	6'-8"
F	FIRE ALARM VISUAL ONLY NOTIFICATION DEVICE - STROBE LIGHT	6'-8"
FS FCS	FIRE ALARM SPEAKER: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
FH	FIRE ALARM HORN, WALL-MOUNTED	AS NOTED
R FH	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
SAI RSAI	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT AND TEST SWITCH: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
Z	FIRE ALARM ZONE ADDRESSABLE MODULE	----
I	FIRE ALARM INDIVIDUAL ADDRESSABLE MODULE	----
	FIRE ALARM ELECTRO-MAGNETIC DOOR HOLDER	6'-4"
FR	FIRE RELAY	----
	DESK MOUNTED INTERCOM	----
W	WALL MOUNTED INTERCOM	----
$_X	EXPLOSION PROOF SWITCH	3'-10"
$_3	3 WAY SWITCH	3'-10"
$_4	4 WAY SWITCH	3'-10"
$_WP	NEMA 4X SWITCH	3'-10"

PUMP AND METER LEGEND

SYMBOL	DESCRIPTION
MF	MAGNETIC FLOW METER
	SONIC FLOW METER
	CENTRIFUGAL PUMP
	LOBE PUMP
	PERISTALTIC PUMP
	SUBMERSIBLE PUMP

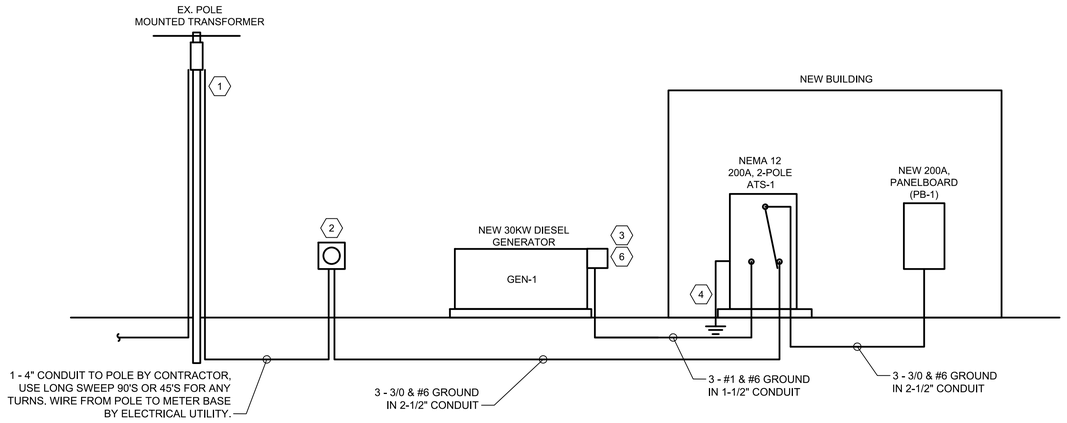
LEGEND

ABBREVIATIONS

ABV	ABOVE	IG	ISOLATED GROUND
AFF	ABOVE FINISHED FLOOR	MON	MONITOR
ACLG	ABOVE FINISHED CEILING	MTG	MOUNTING
BFC	BELOW FINISHED CEILING	MV	MULTI-VIEWER
C	CRITICAL BRANCH OR EMERG PWR-RED DEVICE & PLATE, UON.	MW	MICROWAVE OVEN
CL	CENTER-LINE	NEC	NATIONAL ELECTRICAL CODE
CLG	CEILING-MOUNTED	OCPD	OVERCURRENT PROTECTIVE DEVICE
COF	COFFEE MAKER	OFCI	OWNER-FURNISHED-CONTRACTOR-INSTALLED
COP	COPIER	OFE	OWNER-FURNISHED EQUIPMENT
CTR	COUNTER	PRT	PRINTER
ECB	ENCLOSED CIRCUIT BREAKER	PTS	PNEUMATIC TUBE STATION
EMER	EMERGENCY	Q	EQUIP BRANCH OR EMERG PWR-RED DEVICE & PLATE, UON.
EWC	ELECTRIC WATER COOLER	REF	REFRIGERATOR
EWH	ELECTRIC WATER HEATER	RQMTS	REQUIREMENTS
FAX	FACSIMILE MACHINE	T	TAMPERPROOF DEVICE
FBO	FURNISHED BY OTHERS	TSP	TWISTED SHIELDED PAIR
GFCI	GROUND FAULT CIRCUIT INTERRUPTING - PERSONNEL PROTECTION	UON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTING - EQUIPMENT PROTECTION	UCR	UNDER-COUNTER REFRIGERATOR
HGT	HEIGHT	WP	WEATHERPROOF
FPMR	FUSED PER MANUFACTURE'S RECOMMENDATIONS		

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL, UON
	EXPOSED RACEWAY	----
	RACEWAY CONCEALED IN OR ABOVE CEILINGS AND WITHIN WALLS	----
	BRANCH CIRCUIT RACEWAY CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE	----
	FEEDER RACEWAY CONCEALED BELOW FLOOR SLAB OR BELOW GRADE	----
	LIGHTNING PROTECTION CABLING	----
	HOMERUN RACEWAY: NUMBER OF ARROWHEADS DENOTES NUMBER OF CIRCUITS.	----
	RACEWAY TURNING UP AS VIEWED FROM THE LOAD	----
	RACEWAY TURNING DOWN AS VIEWED FROM THE LOAD	----
	RACEWAY VERTICAL RISER WITH HORIZONTAL CONTINUATION AT TWO LEVELS SHOWN	----
	CAPPED RACEWAY	----
	GENERAL LIGHTING OR OUTLET CIRCUIT - MAY BE DAISY CHAINED	----
J	JUNCTION BOX	AS NOTED
	ENCLOSED BREAKER	
	FUSIBLE SAFETY SWITCH (AMP RATING, POLES, FUSE SIZE, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	----
	NON-FUSIBLE SAFETY SWITCH (AMP RATING, POLES, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	----
	COMBINATION MAGNETIC ACROSS-THE-LINE STARTER WITH MOTOR CIRCUIT PROTECTOR (NEMA STARTER SIZE NOTED)	----
	CONTROL PANEL FURNISHED INTEGRAL TO EQUIPMENT (SINGLE-POINT ELECTRICAL CONNECTION REQUIRED)	----
	MOTOR	----
	FLEXIBLE CONDUIT CONNECTION	----
	SURFACE- OR FLUSH-MOUNTED LIGHTING/RECEPTACLE PANELBOARD	----
	POWER DISTRIBUTION PANELBOARD	----
T T	DRY TYPE TRANSFORMER	----
XXX	MISCELLANEOUS SYSTEMS PANEL OR CABINET: REFER TO ABBREVIATIONS.	----

NOTE !! ALL ABBREVIATIONS, NOTES, AND SYMBOLS SH



RISER DIAGRAM

SCALE: NTS

PLAN NOTES

1. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL UTILITY FOR 200A, 240V 1-PHASE, 3-WIRE NEW SERVICE. FEEDER CONDUIT BY CONTRACTOR AND WIRE TO METER BASE BY UTILITY.
2. ELECTRICAL CONTRACTOR TO PROVIDE METER BASE AND MOUNTING AS REQUIRED BY LOCAL UTILITY. COORDINATE WITH UTILITY ON METER SOCKET REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT AND WIRE AFTER METER BASE. MOUNT METER BASE ON THE SIDE OF THE NEW MAINTENANCE BUILDING.
3. PROVIDE 200A GENERATOR INTEGRAL CIRCUIT BREAKER TO PROVIDE MEANS OF CURRENT PROTECTION AND DISCONNECTION AT THE GENERATOR.
4. PROVIDE TRIAD GROUNDING SYSTEM.
5. COORDINATE WITH GENERATOR AND ATS SUPPLIER/MANUFACTURER FOR WIRING REQUIREMENTS DURING BIDDING AND CONSTRUCTION.
6. VERIFY THAT THE NEUTRAL TO GROUND IS NOT BONDED AT GENERATOR BY THE GENERATOR MANUFACTURER.

GENERATOR

MINIMUM RATED CAPACITY: 30kW

BASES OF DESIGN: MANUFACTURER: KOHLER MODEL: KOHLER 30REOZK OR EQUAL MEETING SPECIFICATIONS

RATED VOLTAGE: 240 1-PHASE/3-WIRE

ENCLOSURE RATING: SEE SPECIFICATIONS FUEL TYPE: DIESEL

FUEL TANK CAPACITY: **209 GALLONS (72 HOURS) (KOHLER ADV-8705 OR EQUAL MEETING HEIGHT)**

SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA 4X TRANSFER SWITCH

TRANSFER SWITCH TYPE: AUTOMATIC CURRENT RATING: 200A

RATED VOLTAGE: 240 1-PHASE/3-WIRE # OF POLES: 2

NEUTRAL CONFIGURATION: SOLID IN-SYNC TRANSFER: YES

MAIN CIRCUIT BREAKER: 200A GROUND FAULT ON MAIN: NO

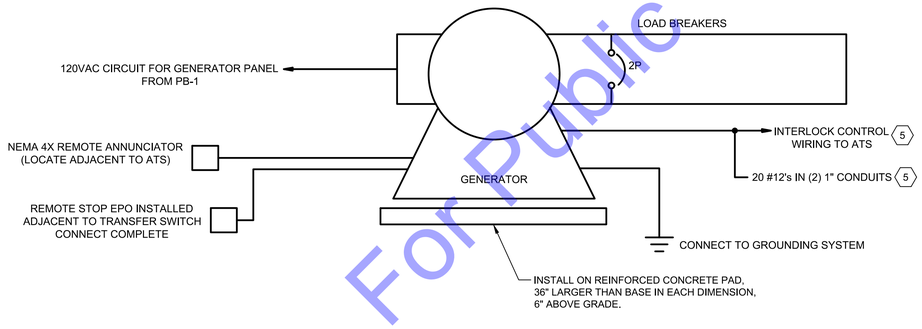
SERVICE ENTRANCE RATED: YES REMOTE ANNUNCIATION: YES

BY-PASS/ISOLATION: NO NEC LOAD BRANCH: 702 KAIC: 42,000

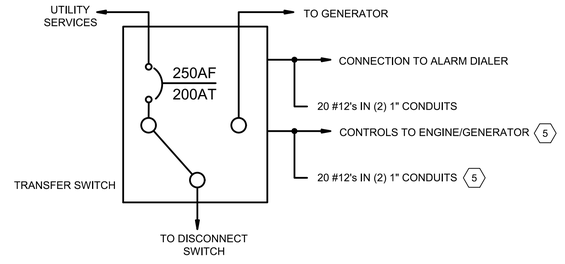
SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA RATING: 4X CYCLE RATING: 3

NOTE: AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED WITH A CONDENSATION HEATER.



GENERATOR DETAIL



AUTOMATIC TRANSFER SWITCH

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PROFESSIONAL ENGINEER

Signature 05/05/2025 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM
IMPROVEMENTS

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No.	Submittal / Revision	By	Date

Designed By:	Drawn By:	Checked By:
CM	CM	TLC
Issue Date:	Project No:	Scale:
—	S18018	AS SHOWN

RISER DIAGRAM

Drawing No:
E1-0
Sheet: 55 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPR\VS\05 CAD\11-MECHANICAL-ELECTRICAL\DRAWINGS\ELECTRICAL DRAWINGS.DWG
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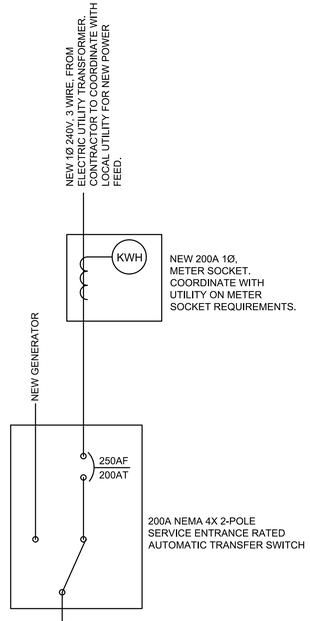
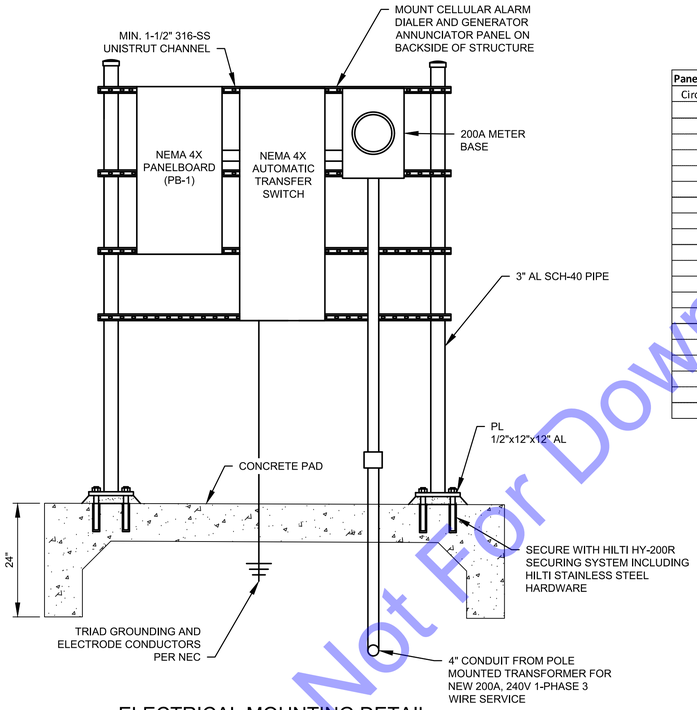


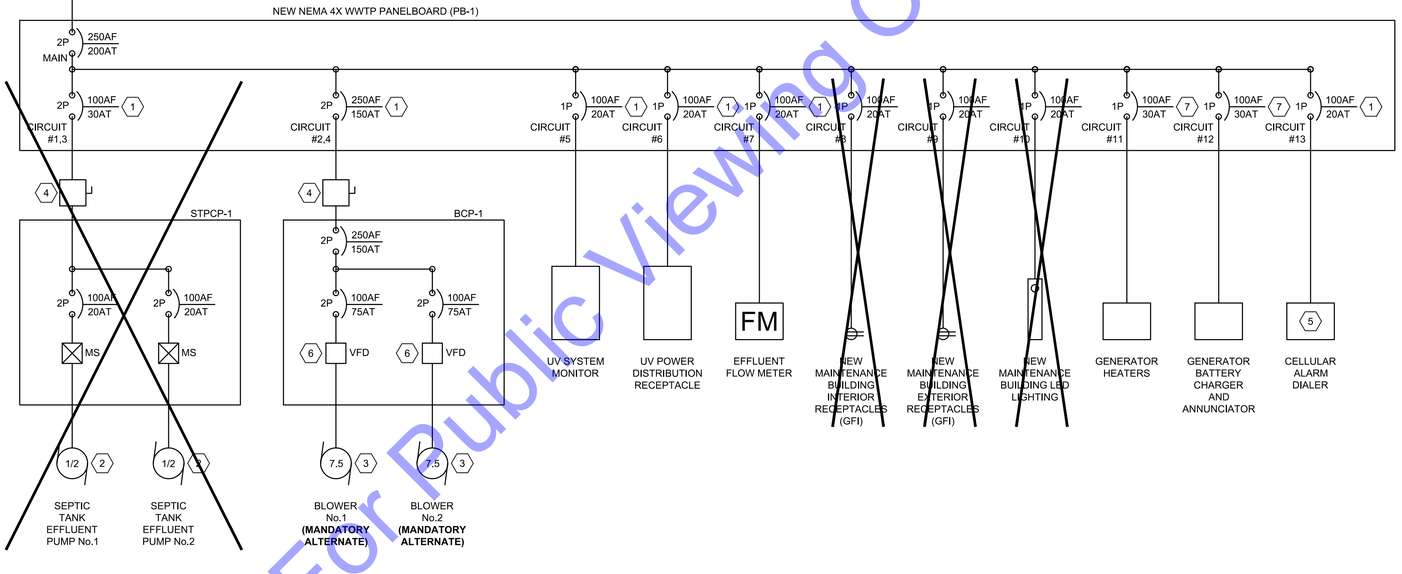


ELECTRICAL MOUNTING DETAIL

SCALE: NTS

Panelboard Branch Circuit Conduit & Cable Schedule

Circuit Description	Description
1 Pole 20A	3/4" Conduit with 2 #12 Conductors and 1 #12 Ground Conductor
2 Pole 20A	3/4" Conduit with 3 #12 Conductors and 1 #12 Ground Conductor
1 Pole 30A	3/4" Conduit with 2 #10 Conductors and 1 #10 Ground Conductor
2 Pole 30A	3/4" Conduit with 3 #10 Conductors and 1 #10 Ground Conductor
1 Pole 40A	3/4" Conduit with 2 #8 Conductors and 1 #10 Ground Conductor
2 Pole 40A	1" Conduit with 3 #8 Conductors and 1 #10 Ground Conductor
1 Pole 50A	3/4" Conduit with 2 #6 Conductors and 1 #10 Ground Conductor
2 Pole 50A	1" Conduit with 3 #6 Conductors and 1 #10 Ground Conductor
1 Pole 60A	1" Conduit with 2 #4 Conductors and 1 #8 Ground Conductor
2 Pole 60A	1-1/4" Conduit with 3 #4 Conductors and 1 #8 Ground Conductor
1 Pole 80A	1" Conduit with 2 #3 Conductors and 1 #8 Ground Conductor
2 Pole 80A	1-1/4" Conduit with 3 #3 Conductors and 1 #8 Ground Conductor
1 Pole 100A	1-1/4" Conduit with 2 #2 Conductors and 1 #6 Ground Conductor
2 Pole 100A	1-1/2" Conduit with 3 #2 Conductors and 1 #6 Ground Conductor
1 Pole 125A	1-1/2" Conduit with 2 #1 Conductors and 1 #6 Ground Conductor
2 Pole 125A	1-1/2" Conduit with 3 #1 Conductors and 1 #6 Ground Conductor
1 Pole 150A	2" Conduit with 2 - 1/0 Conductors and 1 #6 Ground Conductor
2 Pole 150A	2" Conduit with 3 - 1/0 Conductors and 1 #6 Ground Conductor
1 Pole 200A	2" Conduit with 2 - 3/0 Conductors and 1 #6 Ground Conductor
2 Pole 200A	2-1/2" Conduit with 3 - 3/0 Conductors and 1 #6 Ground Conductor



ONE LINE DIAGRAM

PLAN NOTES:

1. COORDINATE WITH THE CONTRACTOR AND EQUIPMENT SUPPLIERS WHEN SELECTING THE CIRCUIT BREAKER SIZES TO ENSURE NEW CIRCUIT BREAKERS ARE PROPERLY SIZED.
2. ~~WIRE PUMP SAFETIES AND LEVEL CONTROLS AS REQUIRED. COORDINATE WITH CONTRACTOR DURING BIDDING AND CONSTRUCTION. INTEGRATE PUMP SAFETY RELAYS INTO CONTROL PANEL AS REQUIRED BY PUMP MANUFACTURER.~~
3. WIRE BLOWER SAFETIES AS REQUIRED. REFERENCE DS SPECIFICATIONS AND COORDINATE WITH MANUFACTURERS DURING BIDDING AND CONSTRUCTION.
4. NEMA 4X DISCONNECT SWITCH SIZED AS REQUIRED FOR THE LOAD. DISCONNECT PROVIDED BY PUMP MANUFACTURER.
5. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CELLULAR ALARM DIALER COMPLETE INCLUDING ALL CONDUIT, WIRE, AND TERMINATIONS. CONTRACTOR SHALL INSTALL ANTENNA AND ANTENNA CABLE. THE ALARM DIALER SYSTEM SHALL BE PROVIDED WITH A ONE YEAR CELLULAR SERVICE.
6. VFD'S SIZED AS REQUIRED FOR PHASE CONVERSION.
7. COORDINATE WITH THE CONTRACTOR AND GENERATOR SUPPLIER DURING BIDDING AND CONSTRUCTION WHEN SELECTING THE CIRCUIT BREAKER SIZES TO ENSURE NEW CIRCUIT BREAKERS ARE PROPERLY SIZED FOR GENERATOR ANCILLARY DEVICES.

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MICHAEL A. MIRANDE REGISTERED No. 19800084 STATE OF INDIANA PROFESSIONAL ENGINEER

Signature 05/05/2025 Date

JACKSON TOWNSHIP REGIONAL SEWER DISTRICT BLACKFORD COUNTY, INDIANA

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CM	CM	TLC
Issue Date:	Project No:	Scale:
—	S18018	AS SHOWN

ONE LINE DIAGRAM

Drawing No: **E1-1**

Sheet: 56 OF 65

File: Z:\SHARED\IN CLIENTS A-L\JACKSON TOWNSHIP RSD\D S18018 WASTEWATER UTILITIES IMPR\DWGS\05 CAD\11-MECHANICAL-ELECTRICAL\DRAWINGS\ELECTRICAL DRAWINGS.DWG
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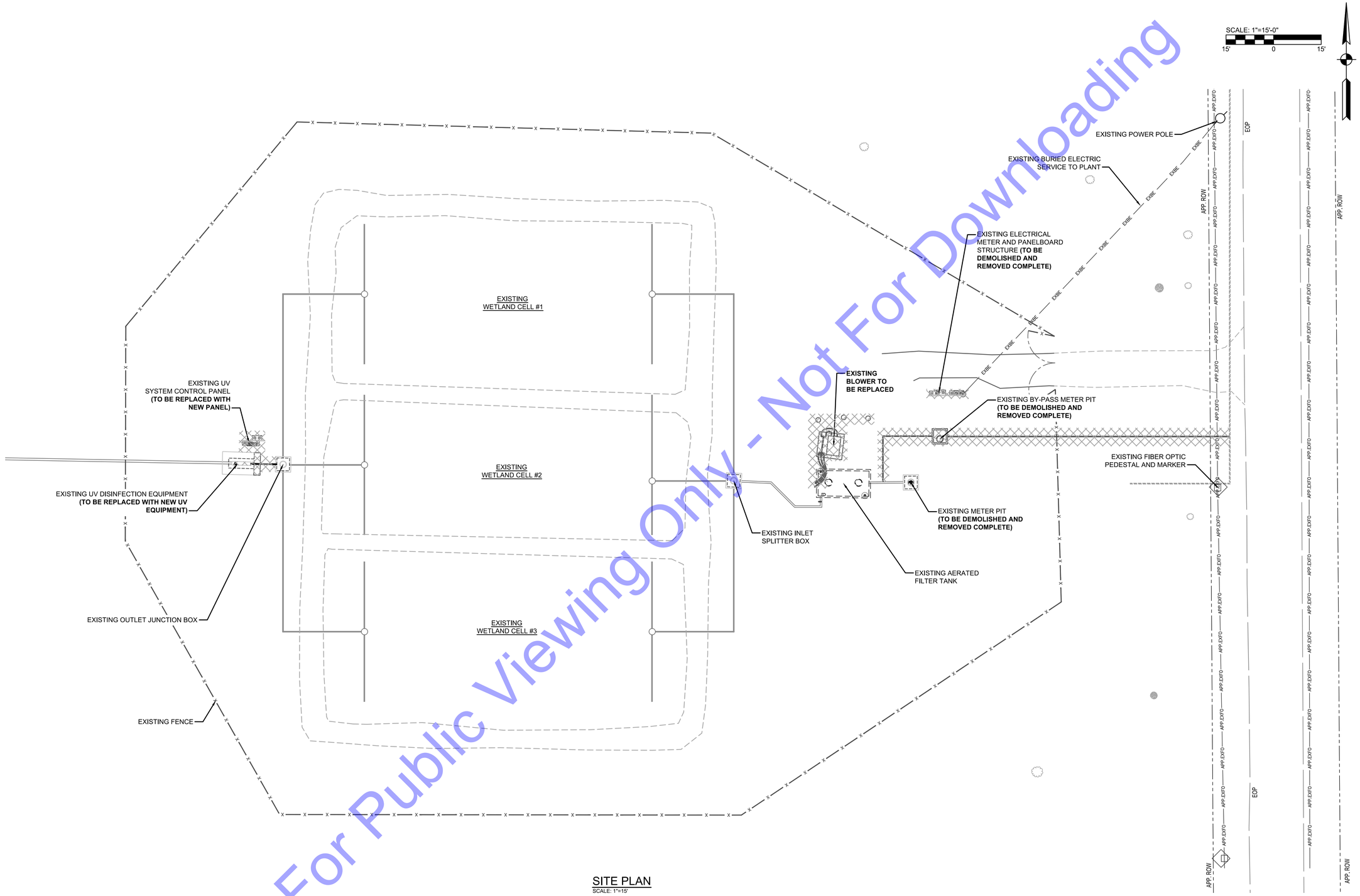

SITE PLAN
SCALE: 1"=15'

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REGISTERED
No. 19800084
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PROFESSIONAL ENGINEER

Signature 05/05/2025 Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

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ELECTRICAL SITE DEMOLITION PLAN

Drawing No:
E2-0
Sheet: 57 OF 65

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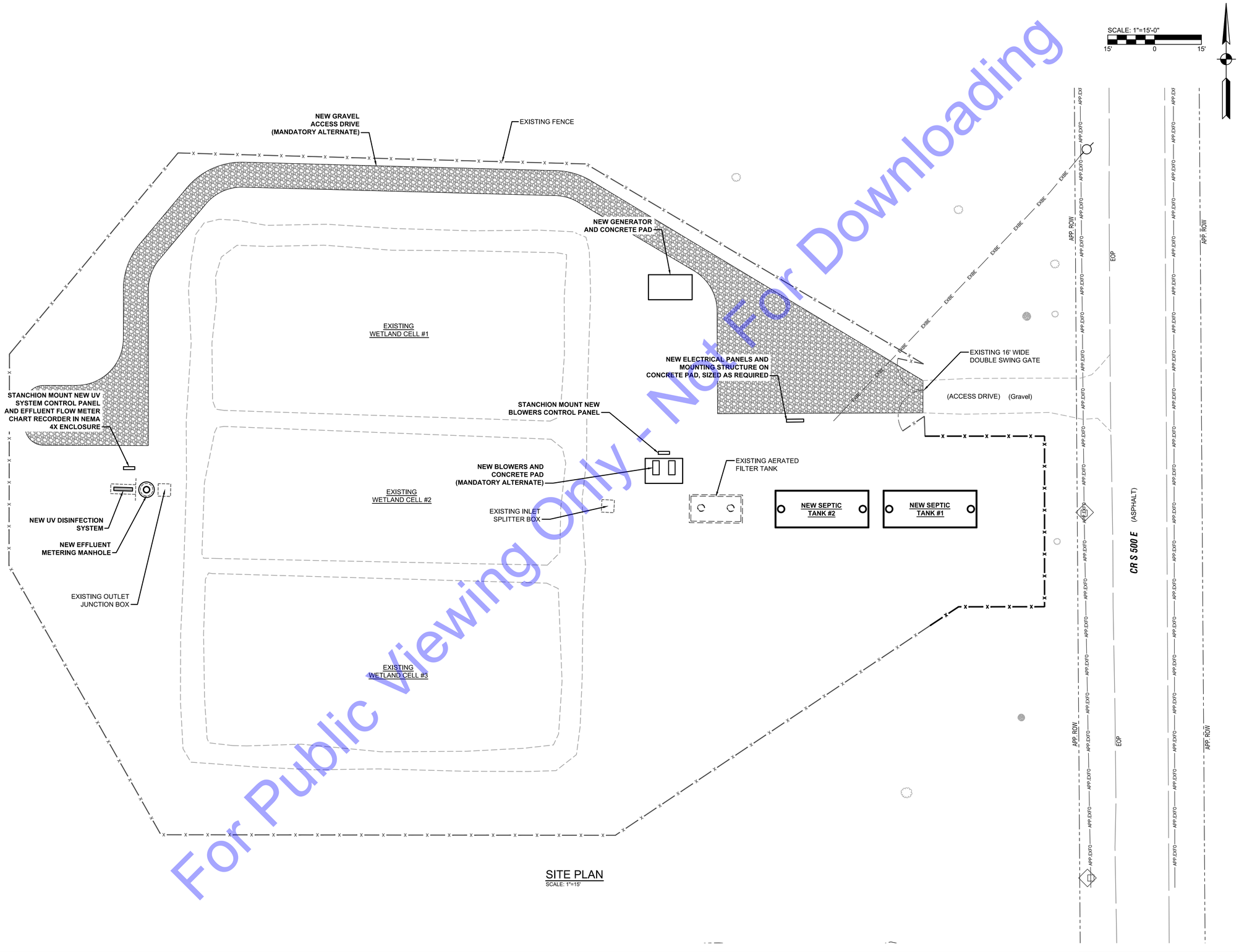

SITE PLAN
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ELECTRICAL SITE IMPROVEMENTS PLAN

Drawing No:
E2-1
Sheet: 58 OF 65

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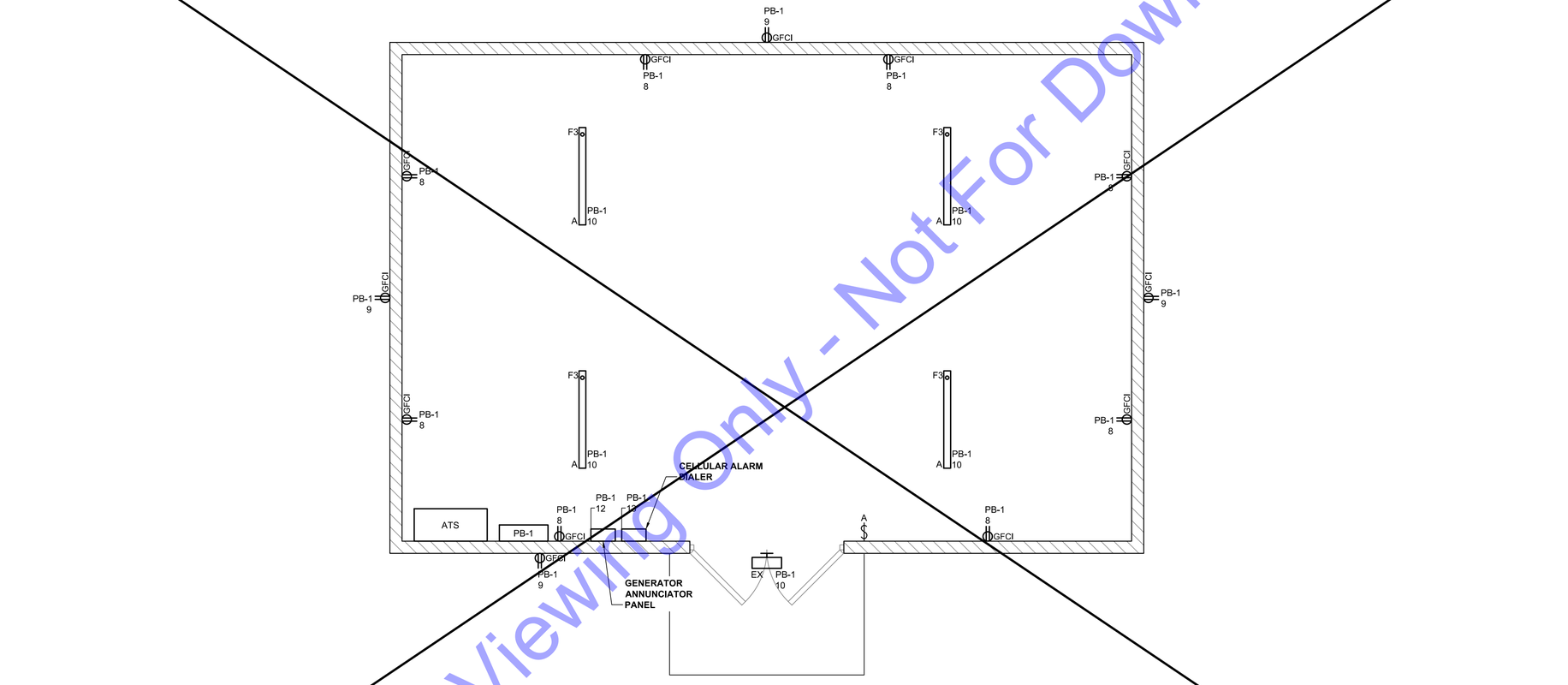

LIGHTING FIXTURE SCHEDULE

IMAGE	TYPE	MFR	CATALOG NUMBER	LAMPS	VOLT	MOUNTING	NOTES
	F3	LITHONIA, CREE, OR EQUAL	ZL2N L48 5000LM MDD MVOLT 40K 80CRI	LED	120-277	SURFACE	PROVIDE WITH REQUIRED MOUNTING BRACKETS OR CHAINS AS REQUIRED FOR INSTALLATION.
	EX	SYLVANIA, CREE, OR EQUAL	TWP/L/030/740/C5/UNV/BZ	LED	120-277	SURFACE	WALL MOUNTED OUTDOOR SCONCE WITH TEMPERED GLASS LENS. PROVIDE WITH PHOTOCELL. 2800 LUMENS.

PROVIDE BULBS FOR ALL FIXTURES. PROVIDE 10% SPARE BULBS TO THE OWNER AT THE END OF THE PROJECT.

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NEW MAINTENANCE BUILDING ELECTRICAL PLAN

Drawing No:
E3-0
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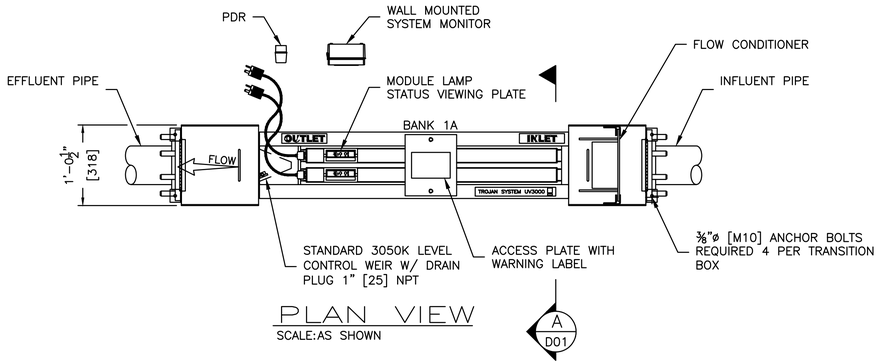
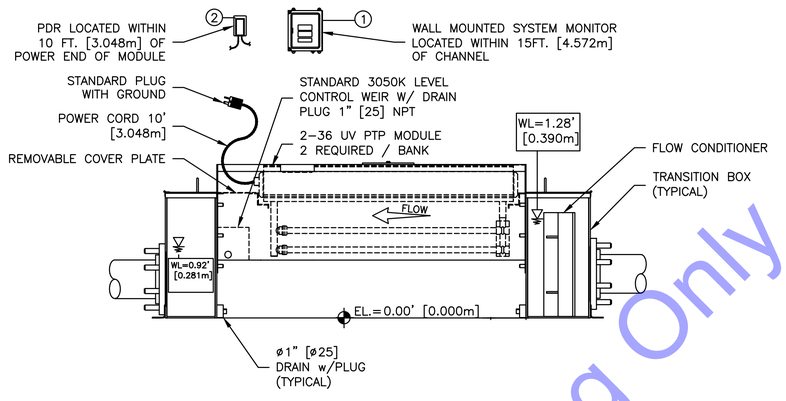


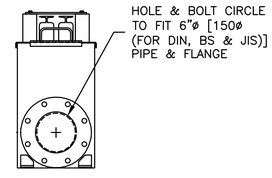
PLAN VIEW
SCALE:AS SHOWN

No.	DESCRIPTION	FROM	TO
1	SYSTEM MONITOR POWER SUPPLY 120V, 1 PHASE, 2 WIRE, 5 AMPS	PB-1	SYSTEM MONITOR
2	POWER DISTRIBUTION RECEPTACLE (PDR) POWER SUPPLY 120V, 1 PHASE, 2 WIRE, ACTUAL DRAW 1.7 AMPS / PDR	PB-1	PDR

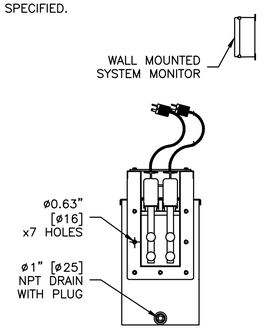
NOTES:
: DO NOT SLOPE CHANNEL FLOOR.
: CHANNEL WIDTH & DEPTH MUST BE KEPT WITHIN A TOLERANCE OF + OR – ¼" [6].
: ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
: BOLTS, WASHERS & NUTS FOR CONNECTION OF CHANNEL TO TRANSITION BOXES ARE PROVIDED BY TROJAN TECHNOLOGIES.
: SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY CONTRACTOR.
: ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY. ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
: CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
: ACCESS IS REQUIRED FOR MODULE REMOVAL – NOTE THE CHANNEL WIDTH AND ENSURE ADEQUATE ACCESS IS PROVIDED TO ALL MODULES.
: DO NOT ENCASE THE STEEL CHANNEL IN CONCRETE.
: [ ] INDICATES MILLIMETERS UNLESS OTHERWISE SPECIFIED.



FRONT VIEW
SCALE:AS SHOWN



END VIEW (TYPICAL)
SCALE:AS SHOWN



A D01 SECTION
SCALE:AS SHOWN
NOTE: PDR NOT SHOWN FOR CLARITY

GENERAL NOTES:

BASIS OF DESIGN IS TROJAN UV SYSTEM. DRAWING PROVIDED BY UV MANUFACTURER AND IS GENERIC IN NATURE AND PROVIDED AS A REFERENCE FOR CONTRACTOR CONVENIENCE. CONTRACTOR TO COORDINATE DURING BIDDING AND CONSTRUCTION TO FURNISH A COMPLETE AND FULLY OPERATIONAL SYSTEM.

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Signature
05/05/2025
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UV WIRING DIAGRAM

Drawing No:
E4-0
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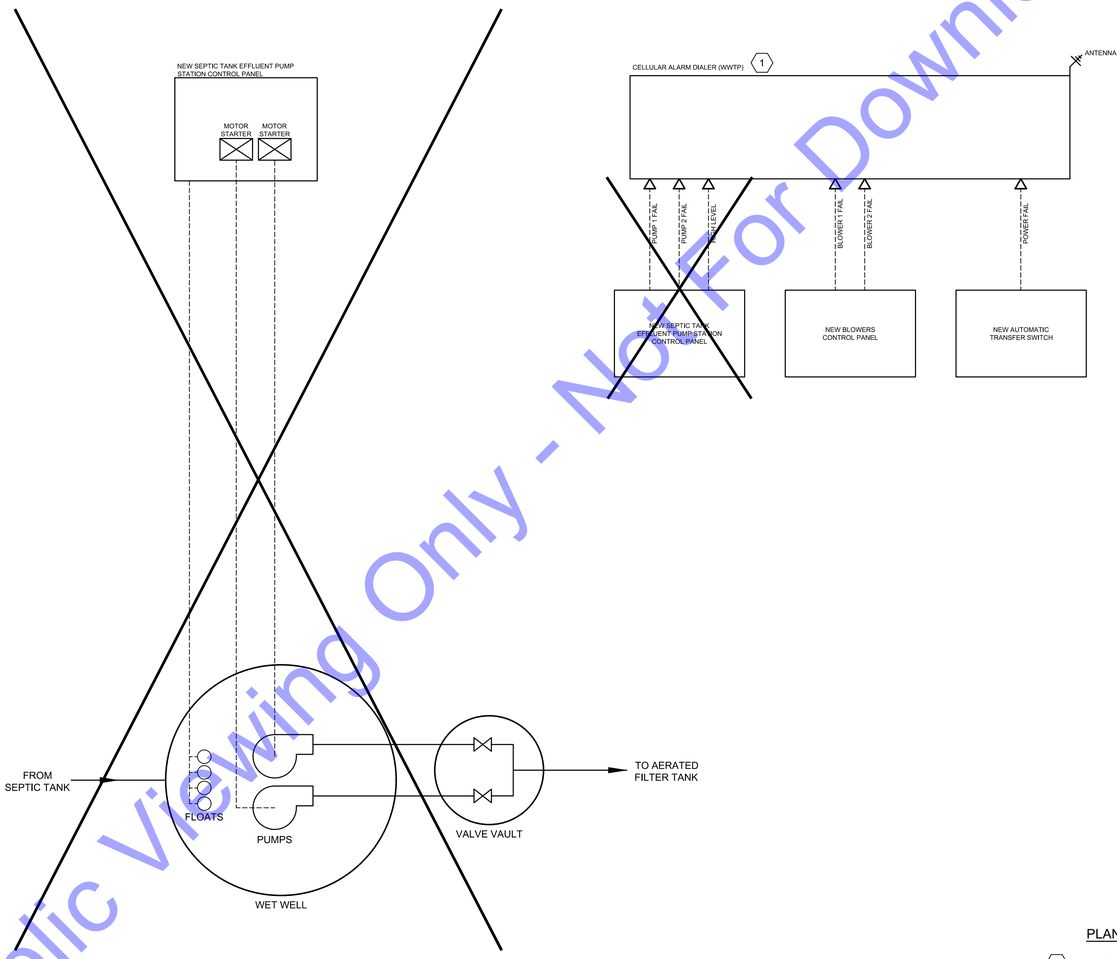

PLAN NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CELLULAR ALARM DIALER COMPLETE INCLUDING ALL CONDUIT, WIRE, AND TERMINATIONS. CONTRACTOR SHALL INSTALL ANTENNA AND ANTENNA CABLE. THE ALARM DIALER SYSTEM SHALL BE PROVIDED WITH A ONE YEAR CELLULAR SERVICE. CONTRACTOR TO PROVIDE 120VAC TO ALARM DIALER FROM PB-1.

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PROCESS AND INSTRUMENTATION DRAWING

Drawing No: **E5-0**

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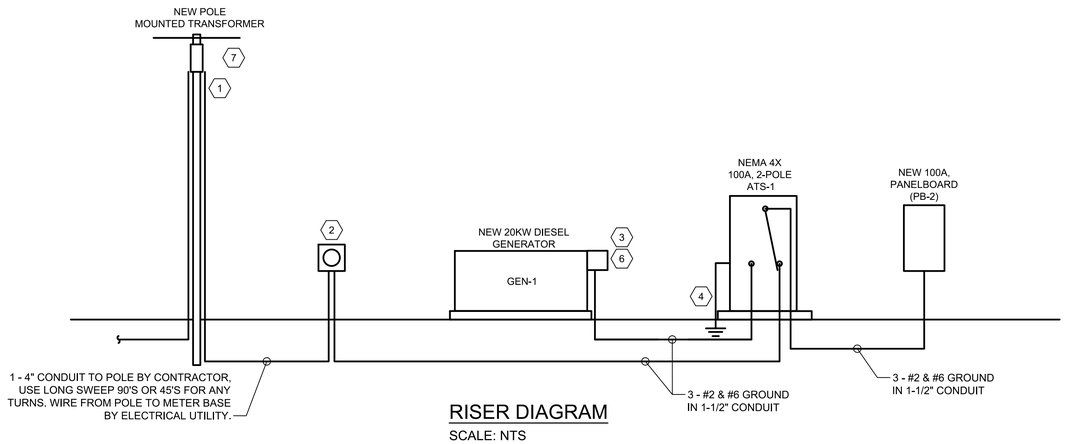


RISER DIAGRAM

SCALE: NTS

PLAN NOTES

1. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL UTILITY FOR 100A, 240V 1-PHASE, 3-WIRE NEW SERVICE. FEEDER CONDUIT BY CONTRACTOR AND WIRE TO METER BASE BY UTILITY.
2. ELECTRICAL CONTRACTOR TO PROVIDE METER BASE AND MOUNTING AS REQUIRED BY LOCAL UTILITY. COORDINATE WITH UTILITY ON METER SOCKET REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT AND WIRE AFTER METER BASE.
3. PROVIDE 80A GENERATOR INTEGRAL CIRCUIT BREAKER TO PROVIDE MEANS OF CURRENT PROTECTION AND DISCONNECTION AT THE GENERATOR.
4. PROVIDE TRIAD GROUNDING SYSTEM.
5. COORDINATE WITH GENERATOR AND ATS SUPPLIER/MANUFACTURER FOR WIRING REQUIREMENTS DURING BIDDING AND CONSTRUCTION.
6. VERIFY THAT THE NEUTRAL TO GROUND IS NOT BONDED AT GENERATOR BY THE GENERATOR MANUFACTURER.
7. COORDINATE WITH UTILITY DURING BIDDING AND CONSTRUCTION ON TRANSFORMER TYPE (POLE MOUNTED TRANSFORMERS OR PAD MOUNT TRANSFORMER) FOR NEW UTILITY FEED.

GENERATOR

MINIMUM RATED CAPACITY: 20kW

BASES OF DESIGN: MANUFACTURER: KOHLER MODEL: KOHLER 20REOZK OR EQUAL MEETING SPECIFICATIONS

RATED VOLTAGE: 240 1-PHASE/3-WIRE

ENCLOSURE RATING: SEE SPECIFICATIONS FUEL TYPE: DIESEL

FUEL TANK CAPACITY: 24 HOURS

SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA 4X STAINLESS STEEL TRANSFER SWITCH

TRANSFER SWITCH TYPE: AUTOMATIC CURRENT RATING: 100A

RATED VOLTAGE: 240 1-PHASE/3-WIRE # OF POLES: 2

NEUTRAL CONFIGURATION: SOLID IN-SYNC TRANSFER: YES

MAIN CIRCUIT BREAKER: 100A GROUND FAULT ON MAIN: NO

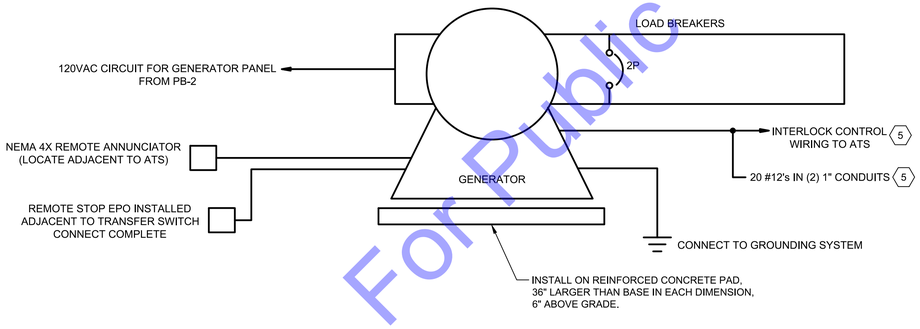
SERVICE ENTRANCE RATED: YES REMOTE ANNUNCIATION: YES

BY-PASS/ISOLATION: NO NEC LOAD BRANCH: 702 KAIC: 42,000

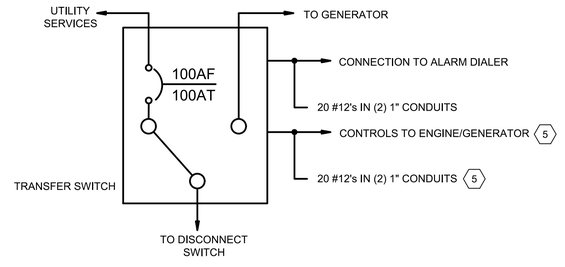
SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA RATING: 4X CYCLE RATING: 3

NOTE: AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED WITH A CONDENSATION HEATER.



GENERATOR DETAIL



AUTOMATIC TRANSFER SWITCH

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NEW MAIN LIFT STATION RISER DIAGRAM

Drawing No:
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Sheet: 62 OF 65

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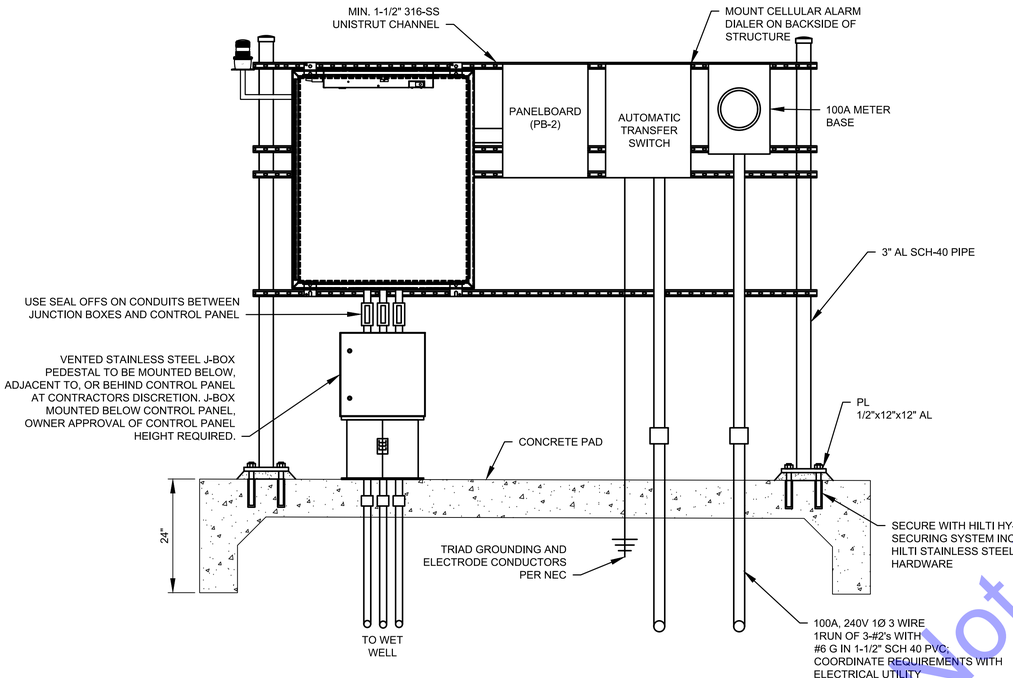
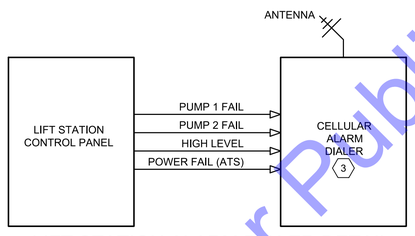


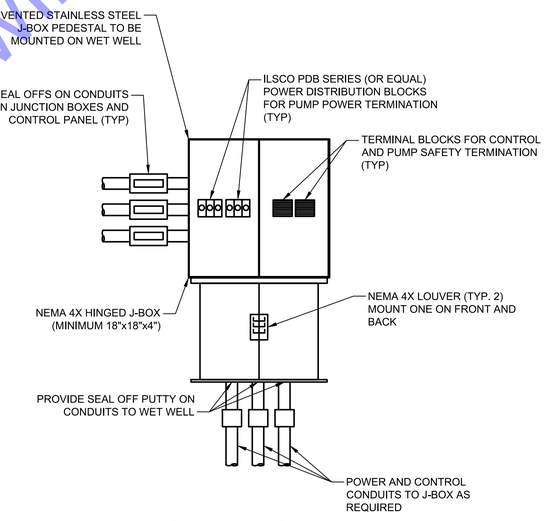
ELECTRICAL AND PUMP CONTROL MOUNTING DETAIL

NOTES:

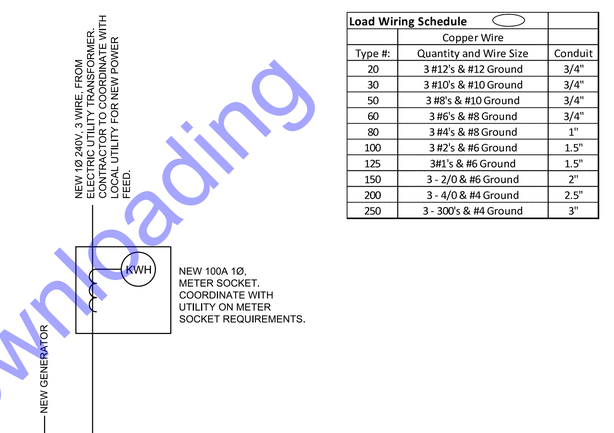
1. SIZE NEMA 4X CONTROL PANEL AS REQUIRED.
2. CONTROL PANEL SHALL BE CONSTRUCTED TO UL STANDARDS IN A UL PANEL SHOP. CONTROL PANEL SHALL BE UL LISTED.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ELECTRIC UTILITY TO PROVIDE POWER SERVICE TO THE NEW LIFT STATION. PROVIDE CONDUIT, WIRE, METER BASE, ETC. TO PROVIDE POWER COMPLETE TO THE LIFT STATION.
4. CONTRACTOR TO PROVIDE METER BASE PER ELECTRIC UTILITY METER BASE REQUIREMENTS.
5. ALL COSTS ASSOCIATED WITH PROVIDING POWER TO THE LIFT STATION SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.
6. PILOT DEVICES AND ELAPSED TIME METERS SHALL BE MOUNTED ON THE PANEL DEAD FRONT.
7. PROVIDE FLOAT CONTROL (4 FLOATS).



LIFT STATION ALARM DIALER DETAIL



J-BOX INTERIOR DETAIL



Load Wiring Schedule		
	Copper Wire	
Type #:	Quantity and Wire Size	Conduit
20	3 #12's & #12 Ground	3/4"
30	3 #10's & #10 Ground	3/4"
50	3 #8's & #10 Ground	3/4"
60	3 #6's & #8 Ground	3/4"
80	3 #4's & #8 Ground	1"
100	3 #2's & #6 Ground	1.5"
125	3#1's & #6 Ground	1.5"
150	3 - 2/0 & #6 Ground	2"
200	3 - 4/0 & #4 Ground	2.5"
250	3 - 300's & #4 Ground	3"

ONE LINE DIAGRAM

SCALE: NTS

PLAN NOTES:

1. COORDINATE WITH THE CONTRACTOR AND EQUIPMENT SUPPLIERS WHEN SELECTING THE CIRCUIT BREAKER SIZES TO ENSURE NEW CIRCUIT BREAKERS ARE PROPERLY SIZED.
2. WIRE PUMP SAFETIES AND LEVEL CONTROLS AS REQUIRED. COORDINATE WITH CONTRACTOR DURING BIDDING AND CONSTRUCTION. INTEGRATE PUMP SAFETY RELAYS INTO CONTROL PANEL AS REQUIRED BY PUMP MANUFACTURER.
3. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CELLULAR ALARM DIALER COMPLETE INCLUDING ALL CONDUIT, WIRE, AND TERMINATIONS. CONTRACTOR SHALL INSTALL ANTENNA AND ANTENNA CABLE. THE ALARM DIALER SYSTEM SHALL BE PROVIDED WITH A ONE YEAR CELLULAR SERVICE.
4. COORDINATE WITH THE CONTRACTOR AND GENERATOR SUPPLIER DURING BIDDING AND CONSTRUCTION WHEN SELECTING THE CIRCUIT BREAKER SIZES TO ENSURE NEW CIRCUIT BREAKERS ARE PROPERLY SIZED FOR GENERATOR ANCILLARY DEVICES.

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NEW MAIN LIFT STATION ELECTRICAL DETAILS

Drawing No:

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SITE PLAN
SCALE: 1"=10'

SCALE: 1"=10'-0"
10' 8' 6' 4' 2' 0 10'

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(260) 494-3223

MICHAEL A. MIRANDE
REGISTERED
No. 19800084
STATE OF INDIANA
PROFESSIONAL ENGINEER
Signature
05/05/2025
Date

JACKSON TOWNSHIP
REGIONAL SEWER DISTRICT
BLACKFORD COUNTY, INDIANA

WASTEWATER SYSTEM
IMPROVEMENTS

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CM	CM	TLC
Issue Date:	Project No:	Scale:
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NEW MAIN LIFT STATION ELECTRICAL SITE PLAN

Drawing No:
E6-2
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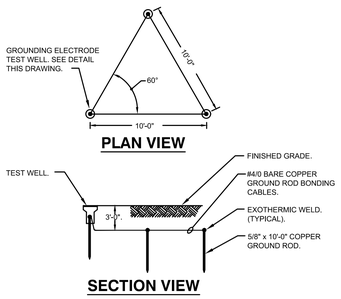
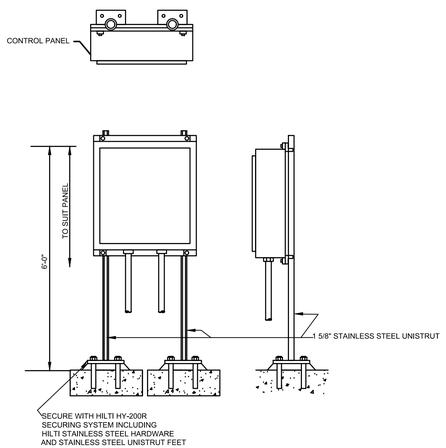


GROUNDING ELECTRODE SYSTEM

NOT TO SCALE

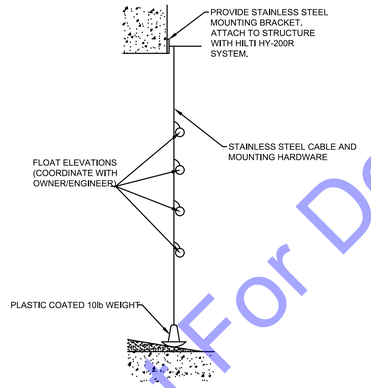


NOTE:

1. ROUND OFF ALL EXPOSED EDGES & CORNERS.
2. PAINT METAL IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATIONS FOR PAINTING.
3. ALL BOLTS, ANCHORS, AND OTHER HARDWARE SHALL BE STAINLESS STEEL.

UNISTRUT MOUNT SMALL PANEL

NOT TO SCALE



FLOAT MOUNTING DETAIL

NOT TO SCALE

Single Eye, Split Mesh, Lace Closing

Single Eye, Split Mesh, Lace Closing*
For permanent support when cable end is not available to be installed through grip.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs. (N)	E Inches (cm)	M Inches (cm)	Catalog Number
.75"-.99" (1.90-2.51)	2,820 (12,543)	10" (25.40)	25" (63.50)	**02207010**
1.00"-1.24" (2.54-3.15)	4,280 (19,037)	12" (30.48)	28" (71.12)	**02207011**
1.25"-1.49" (3.17-3.78)	4,280 (19,037)	12" (30.48)	30" (76.20)	**02207012**
1.50"-1.99" (3.81-5.05)	4,280 (19,037)	12" (30.48)	34" (86.36)	**02207013**

Note: E-Eye length.
M-Mesh length at nominal diameter.
** Change catalog number from 022 to 024 for stainless steel. Consult factory for availability.*

NOTE:

PROVIDE CABLE SUPPORT GRIPS ON ALL PUMP AND FLOAT CABLES ENTERING WET WELLS. SUSPEND CABLE SUPPORTS WITH STAINLESS STEEL HARDWARE AND STAINLESS STEEL BRACKETS USING HILTI HY-200R SYSTEM.

CABLE SUPPORT DETAIL

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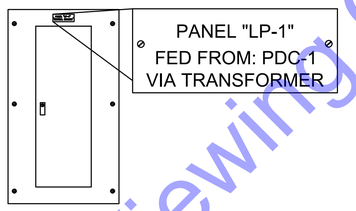

NOTE:

ALL PANELBOARDS INVOLVED IN THIS PROJECT SHALL BE IDENTIFIED BY THE PANEL NAME AND SOURCE OF THE PANEL'S POWER. REFER TO THE SPECIFICATIONS FOR COLORS AND ADDITIONAL REQUIREMENTS.

PANELBOARD IDENTIFICATION

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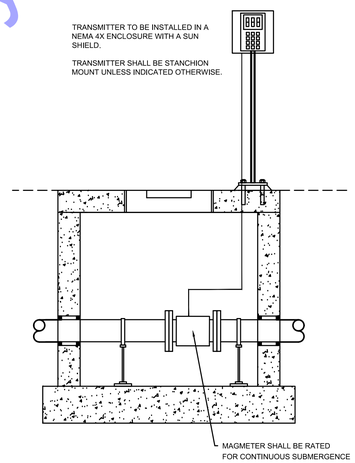

MAGNETIC FLOW METER VAULT

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ELECTRICAL DETAILS

Drawing No:
E7-0
Sheet: 65 OF 65

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