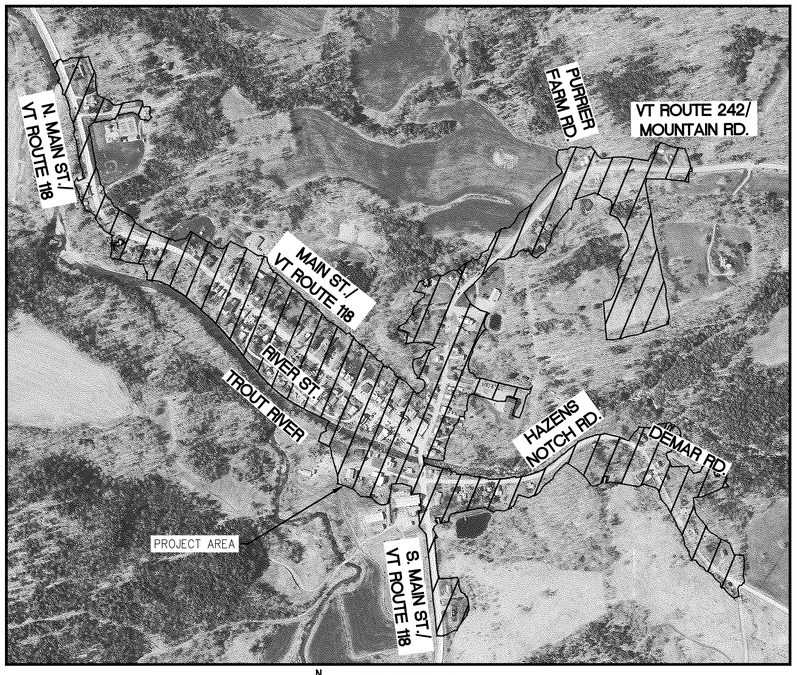
BID SET # _____

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

CWSRF ID: RF1-340-2.1



N LOCATION PLAN
SCALE: 1"=500'

SELECTBOARD:
CHARLIE HANCOCK, CHAIR
EMILY KIMBALL, VICE CHAIR
SUZANNE DOLLOIS
MARK BROULETTE
LEANNE BARNARD

TOWN OF MONTGOMERY, VERMONT

DECEMBER 2024

PREPARED BY:

HOYLE TANNER

DRAWING INDEX

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DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

19_129800_02-G0.DWG

LEGEND - EXISTING

- PROPERTY LINE — PL
- RIGHT-OF-WAY — ROW
- MAJOR CONTOUR — 360
- MINOR CONTOUR — 361
- CHAIN LINK FENCE
- WOOD FENCE
- FENCE-MISCELLANEOUS — X
- GUARDRAIL
- TREE-HEDGE LINE
- SWALE
- STONEWALL
- WETLAND BOUNDARY
- WETLAND BUFFER
- BITUMINOUS PAVEMENT
- GRAVEL ROAD OR DRIVE
- SIDEWALK-CONCRETE
- SIDEWALK-BITUMINOUS
- SIDEWALK-BRICK
- TRAIL
- CURB
- BODY OF WATER-RIVER
- GARDEN
- STONE FILL-LEDGE
- FLOODWAY
- RIVER CORRIDOR
- FLOOD HAZARD CROSS SECTIONS — A: 100 YEAR = 100.0', 500-YEAR = 101.0'
- WATERLINE — W
- SANITARY SEWER — S
- FORCEMAIN — FM
- STORM DRAIN — SD
- CULVERT-DRAIN — D
- ROOF DRAIN — RD
- GAS-NATURAL — GAS
- OVERHEAD POWER — OHP
- OVERHEAD TELEPHONE — OHT
- OVERHEAD POWER-TELEPHONE — OHP/T
- UNDERGROUND ELECTRICAL CONDUIT — UGE
- UNDERGROUND TELEPHONE CONDUIT — UGT
- UNDERGROUND CABLE — UGC
- UNDERGROUND FIBER OPTIC — UFO
- UNDERGROUND ELECTRIC-CABLE — UGE/C
- UNDERGROUND ELECTRIC-TELEPHONE-CABLE — UGE/C/T
- CAP
- CAP WITH THRUST RESTRAINT
- REDUCER
- GATE VALVE
- CURB STOP
- HYDRANT
- MONITORING WELL
- MANHOLE
- CLEAN OUT — 4"PVC
- SEPTIC TANK — S
- CATCH BASIN
- UTILITY POLE

LEGEND - EXISTING (CONT.)

- LIGHT POLE
- GUY WIRE
- TELEPHONE PEDESTAL — TEL PED
- DECIDUOUS TREE
- CONIFEROUS TREE
- STUMP
- SHRUB
- PROPANE TANK — LP
- BOLLARD — B
- MAILBOX
- SURVEY STATION
- BENCHMARK.
- IRON ROD
- IRON PIPE
- CONCRETE BOUND
- BOULDER
- SIGN
- LEDGE PROBE/SOIL BORING — B-2

LEGEND - PROPOSED

- PROPERTY LINE — PL
- RIGHT-OF-WAY
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- MAJOR CONTOUR — 360
- MINOR CONTOUR — 361
- CHAIN LINK FENCE
- WOOD FENCE
- FENCE-MISCELLANEOUS — X
- GUARDRAIL
- TREE-CLEARING LIMITS
- SWALE (REFER TO NOTE FOR TYPE)
- STONEWALL
- BITUMINOUS PAVEMENT
- GRAVEL ROAD OR DRIVE
- SIDEWALK-CONCRETE
- SIDEWALK-BITUMINOUS
- SIDEWALK-STONE
- TRAIL
- CURB
- RETAINING WALL
- WATERLINE — W
- EFFLUENT SEWER — ES
- EFFLUENT FORCEMAIN — EFM
- STORM DRAIN — SD
- CULVERT-DRAIN — D
- LIQUID PROPANE — LP
- OVERHEAD POWER — OHP
- OVERHEAD TELEPHONE — OHT
- OVERHEAD POWER-TELEPHONE — OHP/T
- UNDERGROUND ELECTRICAL CONDUIT — UGE
- UNDERGROUND TELEPHONE CONDUIT — UGT
- UNDERGROUND CABLE — UGC
- UNDERGROUND FIBER OPTIC — UFO
- UNDERGROUND ELECTRIC-CABLE — UGE/O
- UNDERGROUND ELECTRIC-TELEPHONE-CABLE — UGE/C/T

LEGEND - PROPOSED (CONT.)

- CAP
- CAP WITH THRUST RESTRAINT
- REDUCER
- GATE VALVE
- MANHOLE
- SEPTIC TANK (STANDARD 1500 GAL) — ST
- SEPTIC TANK (NOTATION REFERS TO VOLUME) — ST 5.0K
- CLEAN OUT — CO
- BACKWATER CHECK VALVE.
- UTILITY POLE
- LIGHT POLE
- ELECTRICAL PEDESTAL
- ELECTRICAL PULL BOX — E
- TELEPHONE PEDESTAL
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB
- BOLLARD
- PROPERTY MARKER
- SIGN
- STONE CHECK DAM
- RIP-RAP

HOYLE TANNER
125 College Street
Burlington,VT 05401
(802) 860-1331
www.hoyletanner.com

No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

LEGEND AND ABBREVIATIONS

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
G1
SHEET 2 OF 75

DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

19_129800_02-G1.DWG

GENERAL UTILITY NOTES:

1. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES INVOLVED AND VERIFY IN THE FIELD THE EXACT LOCATION OF MAINS AND SERVICES TO PREVENT DAMAGE; TO PREVENT LOSS OF SERVICE DURING CONSTRUCTION; AND TO ASSURE PROPER REPLACEMENT OF SERVICES. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION at 8-1-1 or 1-888-344-7233.

2. EXISTING UTILITIES IN THE STREETS AND WITHIN THE LIMITS OF THE WORK ARE TO REMAIN IN OPERATION DURING CONSTRUCTION. WATER AND WASTEWATER SERVICES SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE LIFE OF THE PROJECT. WASTEWATER FLOW SHALL BE MAINTAINED BY-PASS PUMPING OR OTHER METHOD AS APPROVED BY THE ENGINEER. WATER SERVICE SHALL BE MAINTAINED BY INSTALLATION OF TEMPORARY WATER MAINS AND/OR SERVICES AS APPROVED BY THE ENGINEER. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICES BID.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS FOR ANCHORING, SUPPORTING AND/OR RELOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. IN THE CASE OF DAMAGE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL REPAIRS. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICES BID.

4. UTILITY CONTACT INFORMATION (SEE ALSO SPEC. SECTION 013100 COORDINATION):
   - WATER/STORMWATER: MARK BROUILETTE, (802-309-8574), PUBLICWORKSMONTGOMERY@GMAIL.COM
   - SEWER:
   - ELECTRIC/GAS SERVICE: VERMONT ELECTRIC CO-OP, (802-635-2331)
   - TELECOMMUNICATIONS: CONSOLIDATED COMMUNICATIONS, (802-968-7224)

5. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE WITH THE UTILITY COMPANIES FOR RELOCATING AND/OR SUPPORTING THEIR UTILITIES IN ACCORDANCE WITH THE SPECIFICATIONS.

6. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO EXISTING FACILITIES AT ALL TIMES. IF ANY DISRUPTION MUST OCCUR, CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE ENGINEER, OWNER, AND FACILITY AT LEAST 72 HOURS IN ADVANCE.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF EXISTING UTILITIES AND STRUCTURES DAMAGED OR REMOVED BY THE CONTRACTOR DURING THEIR OPERATIONS.

8. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES AND ARRANGE FOR ALL INSPECTIONS.

9. FINAL ELEVATIONS OF UTILITY STRUCTURES ARE TO BE SET FLUSH WITH FINISH GRADES UNLESS OTHERWISE SPECIFIED ON THE CONTRACT DRAWINGS. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF WORK.

10. DURING EXCAVATION, IT IS ANTICIPATED THAT EXISTING UTILITIES AND SEWERS WILL BE EXPOSED. THE CONTRACTOR SHALL PROVIDE PROTECTION AND SUPPORT OF THESE FACILITIES AND REPAIR ANY DAMAGE CAUSED BY THE WORK IN A MANNER SATISFACTORY TO THE OWNER.

11. ALL ELECTRIC MATERIAL WORKMANSHIP IF APPLICABLE SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AS WELL AS STATE AND LOCAL CODES.

12. IF ANY LEADED DRINKING WATER SYSTEM COMPONENTS, INCLUDING LEAD SERVICE LINES, APPURTENANCES, GOOSENECKS, OR PIGTAILS ARE ENCOUNTERED, EXPOSED, BROKEN, OR DAMAGED DURING CONSTRUCTION, THE LOAN RECIPIENT SHALL IMMEDIATELY NOTIFY THE DRINKING WATER SYSTEM, THE PUBLIC DRINKING WATER PROGRAM IN THE DEC DRINKING WATER AND GROUNDWATER PROTECTION DIVISION, AND THE WATER INVESTMENT DIVISION CONSTRUCTION ENGINEER ASSIGNED TO THIS PROJECT. THE NOTIFICATION SHALL INCLUDE THE ADDRESS OF ALL PROPERTIES BEING SERVED OR AFFECTED BY THE LEADED COMPONENTS. THE LOCATION OF THE LEADED COMPONENTS ENCOUNTERED SHALL BE IDENTIFIED ON THE RECORD DRAWINGS.

13. FOR WORK NOT DEFINED AS MINOR REPAIR OR MINOR REPLACEMENT UNDER § 1-201(63)(A) AND (B) OF THE WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES (RULES) AND PURSUANT TO § 1-304(11) AND (12) OF THE RULES, THE TOWN SHALL:
   - PROVIDE ANY LANDOWNER OF A LOT THAT HAS A NEW SANITARY SEWER SERVICE LINE OR A NEW WATER SERVICE LINE THAT IS REPLACED OR INSTALLED AS PART OF THIS PROJECT A DESIGN CERTIFICATION BY A DESIGNER THAT STATES "I HEREBY CERTIFY THAT, IN THE EXERCISE OF MY REASONABLE PROFESSIONAL JUDGMENT, THE DESIGN-RELATED INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT AND THE DESIGN INCLUDED IN THIS APPLICATION FOR A PERMIT COMPLIES WITH THE VERMONT WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES";
   - PROVIDE ANY LANDOWNER OF A LOT THAT HAS A NEW SANITARY SEWER SERVICE LINE OR A NEW WATER SERVICE LINE THAT IS REPLACED OR INSTALLED AS PART OF THIS PROJECT AN INSTALLATION CERTIFICATION BY A DESIGNER THAT STATES "I HEREBY CERTIFY THAT, IN THE EXERCISE OF MY REASONABLE PROFESSIONAL JUDGMENT, THE INSTALLATION-RELATED INFORMATION SUBMITTED IS TRUE AND CORRECT AND THE WASTEWATER SYSTEM AND POTABLE WATER SUPPLY WERE INSTALLED IN ACCORDANCE WITH THE PERMITTED DESIGN AND ALL THE PERMIT CONDITIONS, WERE INSPECTED, WERE PROPERLY TESTED, AND HAVE SUCCESSFULLY MET THOSE PERFORMANCE TESTS", OR WHICH OTHERWISE SATISFIES THE REQUIREMENTS OF §1-311 OF THE REFERENCED RULES;
   - RECORD ALL DESIGN AND INSTALLATION CERTIFICATIONS IN THE MUNICIPAL LAND RECORDS;
   - SUBMIT ALL DESIGN AND INSTALLATION CERTIFICATIONS TO THE REGIONAL OFFICE PROGRAM IN THE DEC DRINKING WATER AND GROUNDWATER PROTECTION DIVISION USING ANRONLINE (HTTPS://ANRONLINE.VERMONT.GOV/), AND
   - NOTIFY ALL AFFECTED LANDOWNERS THAT THE DESIGN AND INSTALLATION CERTIFICATIONS WILL BE RECORDED IN THE MUNICIPAL LAND RECORDS.

TRAFFIC CONTROL NOTES:

1. THE BELOW REFERENCED SPECIFICATIONS, GUIDELINES, AND PROVISIONS HEREIN PROVIDE MINIMUM REQUIREMENTS AND/OR GUIDELINES; THE CONTRACTOR SHALL EXPAND UPON THESE IN DEVELOPING THEIR TRAFFIC CONTROL PLAN.
   - WORK ZONE TRAFFIC CONTROL STANDARD PLANS*
   - FLAGGER AND UNIFORMED OFFICER USE IN WORK ZONES POLICY AND GUIDELINES*
   - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION
   - DIVISION 600, INCLUDING BUT NOT LIMITED TO SECTIONS 621, 630, 641, 675 AND 678 OF THE VT AOT STANDARD SPECIFICATIONS

   *AVAILABLE ONLINE UNDER HIGHWAY>WORK ZONE SAFETY AT VTRANS.VERMONT.GOV OR THROUGH THE VTAOT CONTRACTS OFFICE (802-917-2458).

   ALL UNIFORMED OFFICERS SHALL HAVE SUCCESSFULLY COMPLETED A VTAOT APPROVED COURSE ON THE SAFE AND EFFECTIVE USE OF LAW ENFORCEMENT PERSONNEL IN WORK ZONES. THE OFFICER SHALL SUPPLY PROOF OF SUCCESSFUL COURSE COMPLETION UPON REQUEST.

2. THE CONTRACTOR SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS IN DEVELOPING THEIR TRAFFIC CONTROL PLAN AND WHILE MAINTAINING TRAFFIC:
   - WORK OPERATIONS SHALL BE DISCONTINUED WHENEVER THE ENGINEER DETERMINES TRAFFIC BACKUPS MAY CONTRIBUTE TO EITHER UNSAFE CONDITIONS OR RESULT IN EXCESSIVE DELAYS FOR THE TRAVELING PUBLIC.
   - MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES AT ALL TIMES. ELIMINATE "LIPS" CREATED WITH COLD PLANING OPERATIONS AT THE CONTRACTOR'S EXPENSE. IN THE EVENT THAT WORK MUST BE COMPLETED AT DRIVES THAT PRECLUDES FULL ACCESS, THE CONTRACTOR SHALL COORDINATE WITH THE ABUTTERS TO ARRANGE THE WORK AT A TIME THAT MINIMIZES INCONVENIENCE TO THE PROPERTY OWNERS/TENANTS.
   - NO LANE CLOSURES WILL BE ALLOWED ON SUNDAYS, HOLIDAYS, OR THE DAY PRECEDING A HOLIDAY UNLESS APPROVED BY THE OWNER.
   - PEDESTRIAN ACCESS MUST BE MAINTAINED ON AT LEAST ONE SIDE OF THE ROAD THROUGH THE WORK ZONE AT ALL TIMES WHERE SIDEWALKS ARE PRESENT. THE MINIMUM SIDEWALK WIDTH SHALL BE 4'.
   - DO NOT ALLOW WORKERS OR CONSTRUCTION VEHICLES TO ENTER INTO, OR IMPEDE, THE FLOW OF TRAFFIC IN AN OPEN LANE. DO NOT ALLOW CONSTRUCTION VEHICLES TO SLOW DOWN OR STOP IN ANY TRAVEL LANE UNLESS SUCH LANE HAS PREVIOUSLY BEEN MADE SAFE WITH APPROPRIATE SIGNS AND CHANNELIZING INSTALLED DEVICES AS REQUIRED.
   - WORKERS' PRIVATE VEHICLES SHALL NOT BE PARKED WITHIN THE RIGHT-OF-WAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   - PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED FOR ADVANCE NOTICE OF CONSTRUCTION ACTIVITIES. THE INTENT IS TO RESERVE THE USE OF THESE SIGNS FOR MEANINGFUL MESSAGES THAT WILL HELP MOTORISTS GET THROUGH THE WORK ZONE SAFELY AND NOT SIMPLY REPEAT INFORMATION FOUND ON OTHER CONSTRUCTION SIGNS. MESSAGE TO BE DISPLAYED SHALL BE COORDINATED WITH THE ENGINEER. OUTDATED MESSAGES SHALL BE UPDATED REGULARLY IN A TIMELY MANNER TO PROVIDE MOTORISTS WITH INFORMATIVE, CURRENT INFORMATION ON CHANGES TO DAILY TRAFFIC PATTERNS, WORK LOCATIONS, ETC. USE PCMS'S TO ADVISE MOTORISTS IN ADVANCE OF SHOULDER OR LANE CLOSURES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. SET THE PCMSS UP IN ADVISORY MODE, ONE (1) WEEK PRIOR TO BEGINNING THE WORK. PROVIDE ANY OTHER REQUIRED SIGNS COMPLIANT WITH MUTCD REQUIREMENTS, SUBSIDIARY TO VTRANS MAINTENANCE OF TRAFFIC STANDARDS.
   - TEMPORARY MARKINGS AND FOR TRAFFIC CONTROL, USE RETROREFLECTIVE PAINT PAVEMENT MARKINGS. DO NOT TRANSITION TRAFFIC ON TO THE NEW PHASE/LAYOUT UNLESS MARKINGS HAVE BEEN APPLIED.
   - PAINTING OF TRAFFIC LANE LINES AND MARKINGS SHALL BE APPLIED AS SOON AS POSSIBLE OR AS DIRECTED BY THE ENGINEER.
   - USE REFLECTORIZED DRUMS (BARRELS) FOR ALL CHANNELIZING TAPERS. USE 36" (MINIMUM) CONES (WITH 6" AND 4" REFLECTORIZED BANDS) OR 42" TUBULAR MARKER (WITH THREE 4" WIDE REFLECTORIZED BANDS) FOR CHANNELIZING TANGENT SECTIONS. BANDING SHALL BE IN COMPLIANCE WITH THE CURRENT MUTCD.
   - TO IMPROVE OPERATIONAL SIGN VISIBILITY, THE BOTTOM OF THESE CONSTRUCTION SIGNS SHALL BE PLACED A MINIMUM OF 3' ABOVE THE ROAD GRADE WHEN SIGNS ARE PLACED BEHIND GUARDRAIL.
   - TRAFFIC SHALL BE MAINTAINED ON PAVEMENT AT ALL TIMES, UNLESS OTHERWISE APPROVED.
   - MAINTAIN PERMANENT SIGNING AT ALL TIMES.
   - THE MINIMUM PAVEMENT WIDTH SHALL BE 16 FEET FOR ONE-LANE, ALTERNATING TWO-WAY TRAFFIC. RESTORE TO TWO-WAY TRAFFIC PRIOR TO NON-WORK HOURS.
   - THE CLEAR ZONE, MEASURED OUT FROM THE EDGE OF THE TRAVELED WAY OPEN TO TRAFFIC, SHALL BE 15 FEET IN AREAS OF POSTED SPEED LIMITS OF 40 MPH OR LESS.
   - CONTRACTOR'S VEHICLES AND EQUIPMENT WILL NOT BE ALLOWED TO REMAIN ON ANY LOCAL ROAD OUTSIDE OF WORK HOURS.
   - WORK MUST BE PERFORMED IN SUCH A WAY THAT DOES NOT ADVERSELY AFFECT TRAFFIC FROM BOTH SIDES OF THE ROADWAY AT ANY LOCATION AT THE SAME TIME.
   - COMPLETION OF BINDER COURSE PAVEMENT FOR DISTURBED ROADWAYS WILL BE REQUIRED PRIOR TO WINTER SHUTDOWN. WORK SHALL BE SEQUENCED ACCORDINGLY.

3. THE CONTRACTOR SHALL NOTIFY AND PROVIDE INFORMATION REGARDING TRAFFIC CONTROL OPERATIONS TO THE AREA EMERGENCY SERVICES NOTED BELOW (SUBSIDIARY TO MAINTENANCE OF TRAFFIC). PARTICULARLY THIS INCLUDES OPERATIONS THAT MAY BLOCK TRAFFIC FLOW TEMPORARILY THROUGH THE WORK ZONE:
   - TOWN OF MONTGOMERY, FIRE DEPT (802-326-4555),
   - TOWN OF MONTGOMERY, PUBLIC SAFETY (802-326-5020),

4. IT IS ANTICIPATED THAT NO TRAFFIC RESTRICTIONS WILL OCCUR DURING HOURS OF DARKNESS. SHOULD THE CONTRACTORS TRAFFIC CONTROL PLAN GET APPROVAL FOR NIGHTTIME RESTRICTIONS THEY SHALL:
   - DIM FLASHING ARROW BOARDS BY 50% AT NIGHT FOR LANE CLOSURES.
   - BE AWARE OF AND ADHERE TO VTAOT'S "WORK ZONE SAFETY AND MOBILITY POLICY GUIDANCE".

5. IF THE OWNER OR ENGINEER FEELS IMPROVEMENTS CAN BE MADE TO THE TRAFFIC CONTROL PLAN AFTER APPROVAL THAT MINIMIZES IMPACTS TO THE TRAVELING PUBLIC AND/OR IMPROVES SAFETY. THE CONTRACTOR SHALL IMPLEMENT REQUESTED IMPROVEMENTS AND WILL BE SUBSIDIARY TO MAINTENANCE OF TRAFFIC.

EARTHWORK & GRADING NOTES:

1. GRADE AWAY FROM BUILDING WALLS AT 2% MINIMUM (TYPICAL).

2. PROVIDE UNIFORM SLOPE BETWEEN CONTOURS AND/OR SPOT ELEVATIONS.

3. EARTH SLOPES SHALL BE NO STEEPER THAN 2:1 (HORIZONTAL: VERTICAL) AND SHALL BE FLATTER WHERE SHOWN.

4. GENERAL FILL BEYOND PAVED AREAS SHALL BE FREE OF BRUSH RUBBISH, STUMPS, AND STONES LARGER THAN 6". FILL SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 8" IN THICKNESS. THE DRY DENSITY AFTER COMPACTION SHALL NOT BE LESS THAN 95% OF THE STANDARD PROCTOR TEST AND DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D698.

5. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2" TO ENSURE BONDING OF THE TOPSOIL AND SUBSOIL.

6. FILL OR TOPSOIL SHALL NEITHER BE PLACED NOR COMPACTED WHILE IN A FROZEN OR MUDDY CONDITION OR WHILE SUBGRADE IS FROZEN.

7. FINISH PAVEMENT SURFACES AND LAWN AREAS SHALL BE CONSTRUCTED FREE OF LOW SPOTS AND PONDING AREAS.

8. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS THAT DO NOT HAVE A SURFACE TREATMENT SPECIFIED SHALL BE RESTORED TO A MINIMUM OF 4-INCHES OF SEEDED TOPSOIL, FERTILIZER, AND MULCH.

9. THE CONTRACTOR SHALL REMOVE, CONTAIN, TEST AND DISPOSE OF EXCAVATED SOILS IN ACCORDANCE WITH THE SPECIFICATIONS.

10. SPOT GRADES SHOWN ARE PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.

11. CONTRACTOR SHALL MAKE EVERY ATTEMPT POSSIBLE TO SAVE EXISTING TREES AND MINIMIZE DAMAGE TO TREES ADJACENT TO CONSTRUCTION LIMITS DURING CONSTRUCTION.

SURVEY NOTES:

1. REFERENCE: MONTGOMERY CENTER
   MONTGOMERY, VERMONT
   PROJECT NO. 19.129800.02

2. FIELD SURVEY PERFORMED BY VERMONT SURVEY AND ENGINEERING, INC. DURING OCTOBER, 2023 WITH ADDITIONAL INFORMATION SURVEYED AND ADDED DURING MARCH, 2024.

3. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY FITZGERALD ENVIRONMENTAL DURING SEPTEMBER 2023.

4. HORIZONTAL DATUM BASED ON VERMONT STATE PLANE COORDINATE SPC (4400 VT) sFT.

5. VERTICAL DATUM IS BASED ON NAVD 88.

6. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND VERMONT SURVEY AND ENGINEERING, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.

7. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVED PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE. UTILITIES WERE NOT MARKED FOR THIS SURVEY.

8. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.

9. ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL. WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

10. OVERALL PARCEL BOUNDARIES AS SHOWN HEREON ARE BASED ON GIS DATA AND ARE IN THEIR ORIGINAL LOCATION.

11. EXISTING CONDITIONS HAVE BEEN MODIFIED BASED UPON REVIEW OF TOWN GIS, DISCUSSION WITH DPW STAFF, RECORD DRAWINGS, AND FIELD OBSERVATIONS MADE BY HOYLE, TANNER.

12. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION CONTROL POINTS PRIOR TO CONDUCTING CONSTRUCTION LAYOUT.

DRAINAGE NOTES:

1. THE CONTRACTOR SHALL STABILIZE ANY AND ALL DITCHES, SWALES AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.

2. WHEN CONNECTING NEW PIPES TO EXISTING STRUCTURES SUCH AS MANHOLES AND CATCH BASINS, THE STRUCTURE SHALL BE COMPLETELY CLEANED OUT. THE HOLE MADE IN THE STRUCTURE SHALL BE AS SMALL AS NECESSARY. THE STRUCTURE SHALL BE REPAIRED TO MATCH ITS ORIGINAL TYPE OF CONSTRUCTION. THE JOINT BETWEEN THE STRUCTURE AND THE PIPE SHALL BE MADE WATERTIGHT BY SEALING THE JOINT WITH NON-METALLIC, NON-SHRINK GROUT.

3. THE CONTRACTOR SHALL CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS, WITHIN THE LIMIT OF WORK UPON COMPLETION OF CONSTRUCTION.

4. ALL DRAIN PIPE WITH LESS THAN 3' OF COVER SHALL BE INSULATED. INSULATION SHALL BE RIGID CLOSED CELL WITH A MINIMUM R VALUE OF 10.

5. ALL NEW DRAINAGE PIPE SHALL BE ADS N-12 HDPE OR APPROVED EQUAL SUITABLE FOR MIN. COVER OF 12 INCHES UNDER H-20 VEHICULAR LOADING.

SEWER NOTES:

1. ALL NEW SEWER MANHOLES SHALL HAVE AN INSIDE DIAMETER (I.D.) OF 48 INCHES UNLESS OTHERWISE SPECIFIED ON THE PLANS.

2. THE CONTRACTOR SHALL PROVIDE FOR HANDLING OF EXISTING FLOWS FROM SERVICE CONNECTIONS AND MAINLINE PIPES. THE EXISTING SEWERS HAVE ACTIVE FLOWS AND THE CONTRACTOR SHALL MAINTAIN CONTINUOUS FLOW WITHOUT RESTRICTIONS.

3. CONTRACTOR SHALL CONFIRM THE SIZE, MATERIAL, AND LOCATION OF ALL SEWER PIPES AND SERVICES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

4. CONTRACTOR SHALL INSULATE NEW SEWER AND/OR WATER LINES WHERE COVER IS LESS THAN 6 FEET IN ROADWAYS AND LESS THAN 4 FEET IN CROSS-COUNTRY AREAS..

5. THE CONTRACTOR SHALL PROVIDE IMPERVIOUS TRENCH DAMS EVERY 50 FEET FOR ALL SEWER PIPES WHERE PIPE SLOPE EXCEEDS 8%.

6. ALL NEW SEWER PIPE SHALL BE HDPE DR11 UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL FIELD VERIFY THE DISTANCE BETWEEN THE SEWER AND WATER PIPES PRIOR TO CONSTRUCTION.

7. SEWER MAIN AND SERVICE LATERAL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION DRINKING WATER AND GROUNDWATER PROTECTION RULES. SANITARY SEWER SHALL BE INSTALLED WITH AT LEAST 10 FEET HORIZONTALLY SEPARATED FROM ALL WATER LINES. SANITARY SEWER SHALL BE INSTALLED WITH AT LEAST 18 INCHES OF VERTICAL SEPARATION FROM ALL WATER LINES.

SEPTIC TANK NOTES:

1. PRIOR TO COMMENCING ANY FIELD WORK ON PUMP STATION NO. 1 OR THE LINEAR SEWER PIPELINE WORK, THE GENERAL CONTRACTOR SHALL FIRST LOCATE AND GAIN ACCESS TO ALL THE EXISTING SEPTIC TANKS WITHIN THE PROJECT. THE GENERAL CONTRACTOR SHALL USE THE WORKSHEET FOUND IN THE TECHNICAL SPECIFICATIONS WITHIN THE SECTION 034100 – PRECAST CONCRETE STRUCTURES TO COLLECT AND RECORD THE FOLLOWING INFORMATION:
   - A. EXISTING SEPTIC TANK LOCATION AND LAYOUT.
   - B. EXISTING GRADE ELEVATION ABOVE SEPTIC TANK.
   - C. EXISTING SEPTIC TANK INFLUENT BUILDING SEWER PIPE:
     - C.A. INVERT ELEVATION (FEET TO THE NEAREST HUNDREDTH).
     - C.B. VERTICAL DISTANCE BELOW EXISTING GRADE (INCHES).
     - C.C. NOMINAL PIPE SIZE (INCHES) AND MATERIAL.
   - D. EXISTING SEPTIC TANK EFFLUENT BUILDING SEWER PIPE:
     - D.A. INVERT ELEVATION (FEET TO THE NEAREST HUNDREDTH).
     - D.B. VERTICAL DISTANCE BELOW EXISTING GRADE (INCHES).
     - D.C. NOMINAL PIPE SIZE (INCHES) AND MATERIAL.

3. SURVEY ELEVATION INFORMATION SHALL BE IN THE SAME HORIZONTAL AND VERTICAL DATUMS AND COORDINATE SYSTEMS AS DESCRIBED ON THIS SHEET.

4. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER. ENGINEER SHALL REVIEW AND USE THE COLLECTED INFORMATION TO DETERMINE IF ANY DESIGN CHANGES WILL BE NECESSARY PRIOR TO CONSTRUCTION BEGINNING TO FACILITATE THE FLOW OF EFFLUENT SEWER VIA GRAVITY FLOW THROUGHOUT THE PROJECT SERVICE AREA.

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

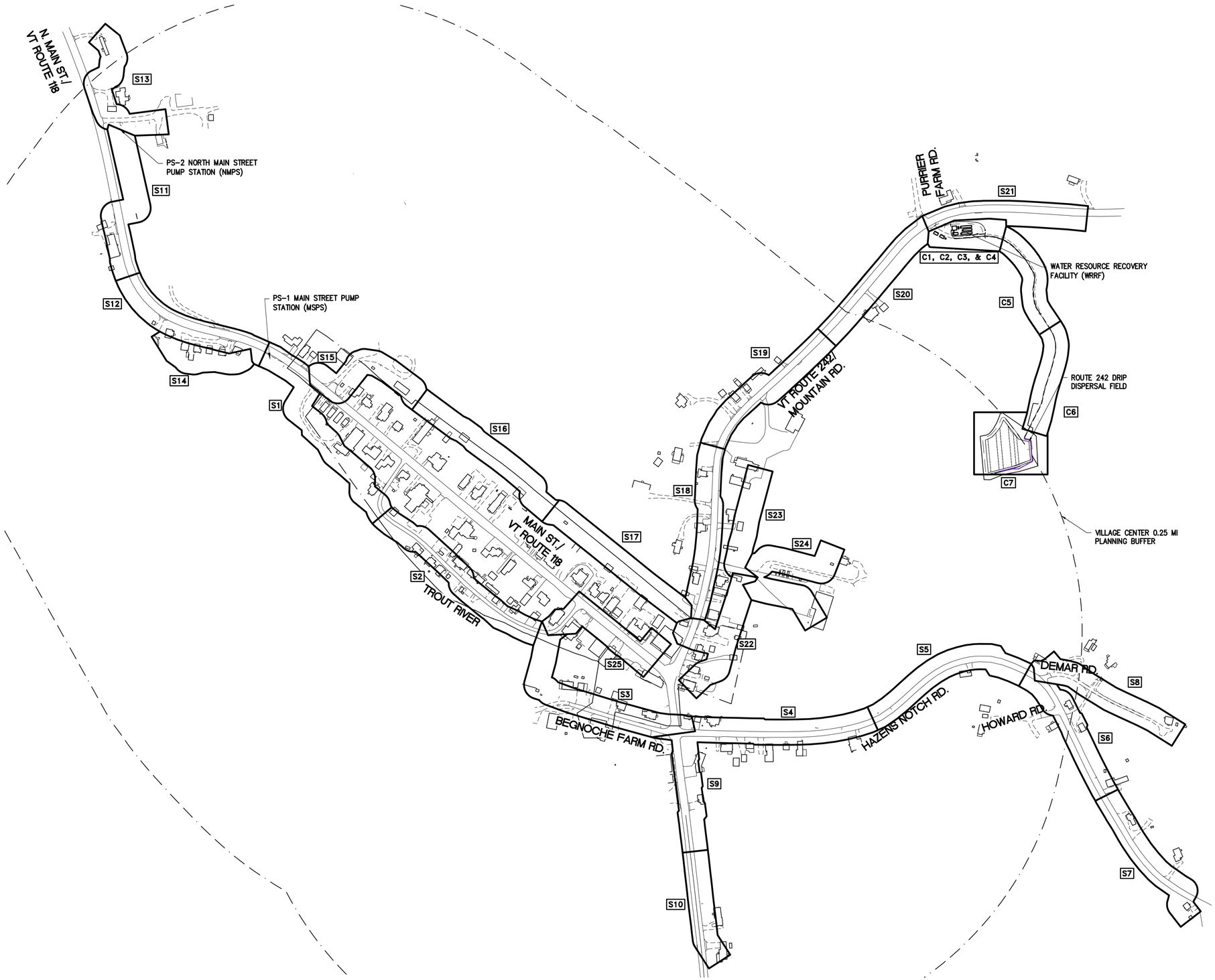
GENERAL NOTES

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
G2
SHEET 3 OF 75

19_129800_02-G2.DWG



PROJECT KEY PLAN
SCALE: 1"=200'

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WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

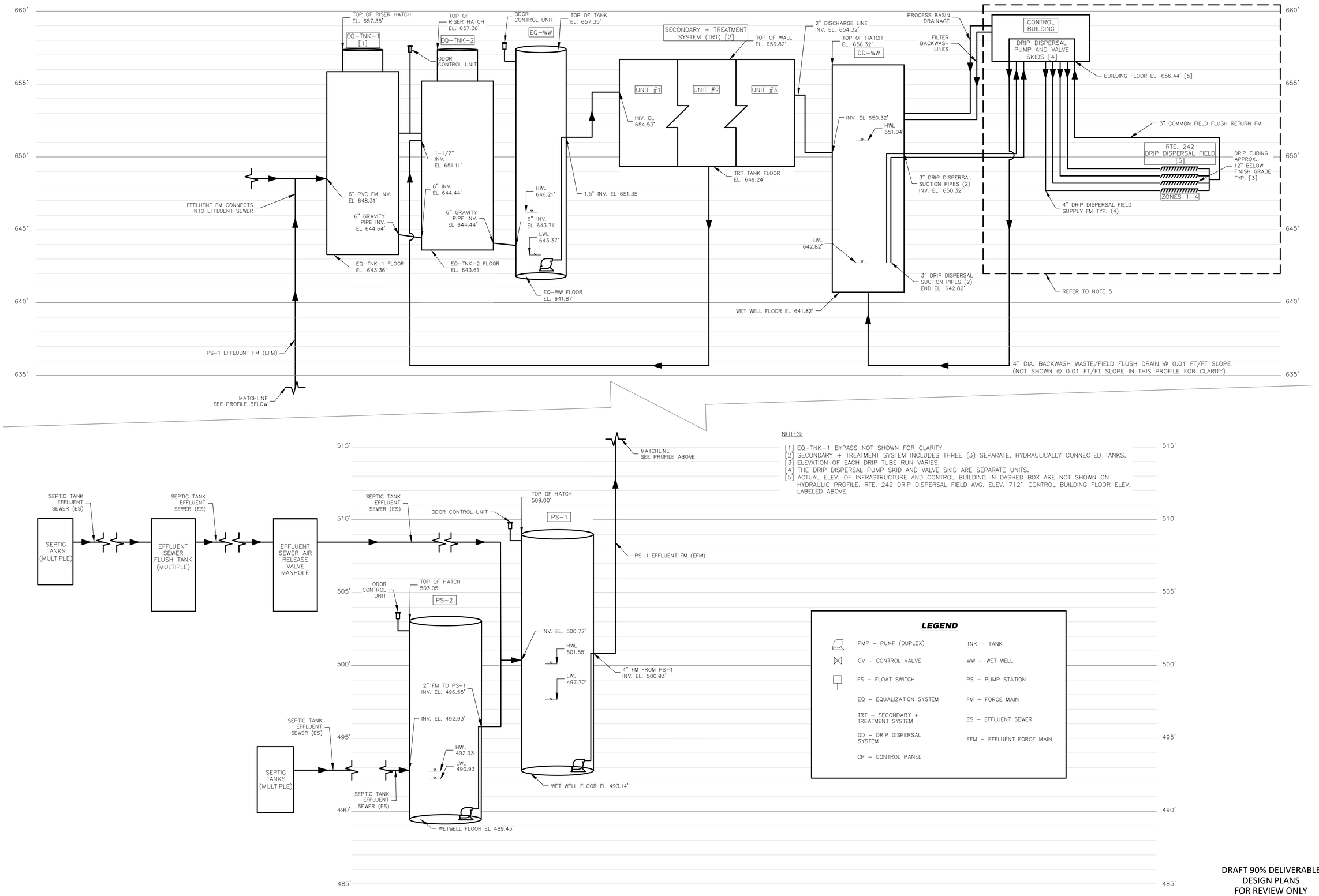
PROJECT KEY PLAN

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
G3
SHEET 4 OF 75

19_129800_02-G3.DWG



NOTES:

[1] EQ-TNK-1 BYPASS NOT SHOWN FOR CLARITY.
[2] SECONDARY + TREATMENT SYSTEM INCLUDES THREE (3) SEPARATE, HYDRAULICALLY CONNECTED TANKS.
[3] ELEVATION OF EACH DRIP TUBE RUN VARIES.
[4] THE DRIP DISPERSAL PUMP SKID AND VALVE SKID ARE SEPARATE UNITS.
[5] ACTUAL ELEV. OF INFRASTRUCTURE AND CONTROL BUILDING IN DASHED BOX ARE NOT SHOWN ON HYDRAULIC PROFILE. RTE. 242 DRIP DISPERSAL FIELD AVG. ELEV. 712'. CONTROL BUILDING FLOOR ELEV. LABELED ABOVE.

LEGEND

PMP – PUMP (DUPLEX)	TNK – TANK
CV – CONTROL VALVE	WW – WET WELL
FS – FLOAT SWITCH	PS – PUMP STATION
EQ – EQUALIZATION SYSTEM	FM – FORCE MAIN
TRT – SECONDARY + TREATMENT SYSTEM	ES – EFFLUENT SEWER
DD – DRIP DISPERSAL SYSTEM	EFM – EFFLUENT FORCE MAIN
CP – CONTROL PANEL	

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

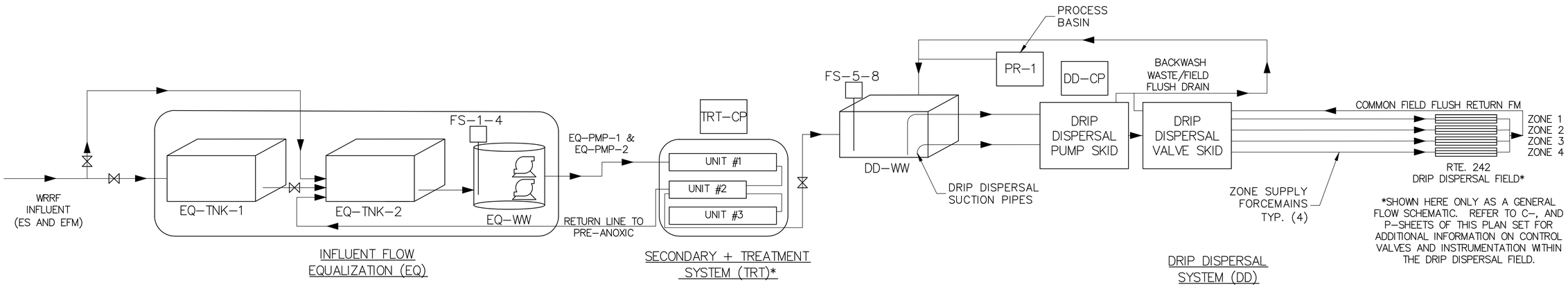
WRRF HYDRAULIC PROFILE

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
G4
SHEET 5 OF 75

19_129800_02-G4-G5.DWG



INFLUENT FLOW EQUALIZATION (EQ)

SECONDARY + TREATMENT SYSTEM (TRT)*

DRIP DISPERSAL SYSTEM (DD)

*SHOWN HERE ONLY AS A GENERAL FLOW SCHEMATIC. REFER TO C–, AND P–SHEETS OF THIS PLAN SET FOR ADDITIONAL INFORMATION ON CONTROL VALVES AND INSTRUMENTATION WITHIN THE DRIP DISPERSAL FIELD.

*SHOWN HERE ONLY AS A GENERAL FLOW SCHEMATIC. REFER TO C–, AND P–SHEETS OF THIS PLAN SET FOR ADDITIONAL INFORMATION ON CONTROL VALVES AND INSTRUMENTATION WITHIN SECONDARY + TREATMENT SYSTEM.

LEGEND

PMP – PUMP (DUPLEX)

CV – CONTROL VALVE

FS – FLOAT SWITCH

EQ – EQUALIZATION SYSTEM

TRT – SECONDARY + TREATMENT SYSTEM

DD – DRIP DISPERSAL SYSTEM

CP – CONTROL PANEL

TNK – TANK

WW – WET WELL

PS – PUMP STATION

FM – FORCE MAIN

ES – EFFLUENT SEWER

EFM – EFFLUENT FORCE MAIN

NOTES:

1. SYSTEM DESIGN CAPACITY = 40,000 GPD
2. EQ TANK INFLUENT FLOW = 68 GPM
3. SECONDARY + TREATMENT SYSTEM INFLUENT FLOW = 28 GPM
4. DRIP DISPERSAL WET WELL INFLUENT FLOW = 28 GPM
5. DOSING FLOW RATE PER ZONES 1–4 = 21–21.4 GPM

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WRRF PIPING P&ID

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JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
G5
SHEET 6 OF 75

19_129800_02–G4–G5.DWG

VT ROUTE 242/
MOUNTAIN RD.

DEMOLISH EXISTING 1" WATER SERVICE FROM EXISTING FOUNDATION TO CURB STOP LOCATION. CAP AT CURB STOP. REFER TO OTHER DRAWINGS FOR CONSTRUCTION OF NEW WATER SERVICE FROM EXISTING CURB STOP TO NEW CONTROL BUILDING.

DEMOLISH EXISTING FOUNDATION WALL, FOOTING, SLAB, SUBBASE, AND MISCELLANEOUS APPURTENANCES DOWN TO NATIVE SOIL MATERIAL

#428
FOUNDATION

4" PVC

DEMOLISH EXISTING SEPTIC TANK, SUBBASE, AND MISCELLANEOUS APPURTENANCES DOWN TO NATIVE SOIL MATERIAL

APPROX SEPTIC LOCATION

428 MOUNTAIN ROAD
OWNER:
TOWN OF MONTGOMERY,
PO BOX 356 MONTGOMERY
CENTER, VT 05471

PARCEL # 242.039X
TAXMAP # 22-20-32
BOOK: 103 PAGE: 116

UP# VEC
98C 12

50 FOOT WETLAND
BUFFER (TYP.)

DEMOLISH EXISTING SIGN AND SIGN POSTS IN ITS ENTIRETY DOWN TO NATIVE SOIL MATERIAL

EXISTING GRAVEL
DRIVE (TYP.)

WETLAND BOUNDARY (TYP.)

INV = 660.41

24" C-HDPE

INV = 660.41

PLAN
SCALE: 1"=10'

GRAPHIC SCALE
0 10 15 20
(IN FEET)

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ROUTE 242 WRRF EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C1
SHEET 7 OF 75

VT ROUTE 242/
MOUNTAIN RD.
NEW RETAINING WALL
NEW GENERATOR AND GENERATOR PAD
NEW SECONDARY + TREATMENT
NEW SECONDARY + TREATMENT
NEW SECONDARY + TREATMENT
NEW CONTROL BUILDING
NEW BOLARD 6' OC (TYP.)
PLOWED SNOW STORAGE AREA (TYP.)
NEW DRIP DISPERSION WETWELL
NEW 12' WIDE DOUBLE FENCE GATE
NEW 16' WIDE DOUBLE FENCE GATE (TYP.)
NEW EQUALIZATION TANK
NEW EQUALIZATION TANK
NEW FREESTANDING WRRF 911 ADDRESS & ENTRY SIGN
NEW 5'ø EQ PUMP WETWELL
NEW PERMANENT GRAVEL ACCESS DRIVEWAY (TYP.)
PLANK RAIL FENCE (TYP.)
12'
50 FOOT WETLAND BUFFER (TYP.)
WETLAND BOUNDARY (TYP.)
24" C-HDPE
UP# VEC 98C 12
B-80
B-81
B-82
B-86
B-87
SP-01
SP-02
SP-03

PLAN
SCALE: 1"=10'

GRAPHIC SCALE
0 10 15 20
(IN FEET)

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ROUTE 242 WRRF SITE LAYOUT PLAN

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PROJECT NO.
19.129800.02

DRAWING
C2

VT ROUTE 242/
MOUNTAIN RD.
RETAINING WALL WITH UPSLOPE AND DOWNSLOPE GRADE PROFILES SECTION VIEW. REFER TO SHEET C-13
RETAINING WALL WITH UPSLOPE AND DOWNSLOPE GRADE PROFILES SECTION VIEW. REFER TO SHEET C-13
NEW GRASS SWALE (TYP.) SEE DETAIL.
NEW GRASS SWALE (TYP.) SEE DETAIL.
CONTRACTOR TO REMOVE TOP LAYER OF SANDY FILL (APPROX. 6' THICK) AND THEN REMOVE AND DISPOSE OF LAYER OF PLASTIC CLAY UNDERNEATH (APPROX. 7' THICK). ENGINEER TO REVIEW SITE AFTER UNSUITABLE (CLAY LAYER) MATERIALS HAVE BEEN REMOVED.
BACKFILL SHALL BE GRANULAR BACKFILL FOR STRUCTURES; VOAT 704.08A. TOP 4" SHALL BE A TOP SOIL CONSISTENT WITH THE EXISTING TOP SOIL ONSITE.
CONTRACTOR MAY REUSE THE EXISTING, IN-PLACE TOP SANDY FILL LAYER (APPROX. 6' THICK) AS BACKFILL IF SUITABLE AND APPROVED BY THE ENGINEER.
SOIL PROBES SP-01, SP-02 AND SP-03 CAN BE MADE AVAILABLE TO CONTRACTOR. (TYP.)
NEW RETAINING WALL TOW=660.50' BOW=654.50
NEW RETAINING WALL TOW=660.50' BOW=654.50'
NEW RETAINING WALL TOW=660.5' BOW=654.50'
NEW CONTROL BUILDING
NEW GENERATOR AND PAD
NEW SECONDARY + TREATMENT VENT FAN (TYP. OF 3)
NEW SECONDARY + TREATMENT UNIT 3
NEW SECONDARY + TREATMENT UNIT 2
NEW SECONDARY + TREATMENT UNIT 1
NEW STONE LINED SWALE (TYP.) SEE DETAIL
NEW EQUALIZATION TANK 1
NEW EQUALIZATION TANK 2
NEW 5'ø EQ PUMP WETWELL
NEW DRIP DISPERSION WETWELL
NEW PERMANENT GRAVEL ACCESS ROAD (TYP.)
INV.=652.82'
INV.=652.00'
INV.=652.01
INV.=651.00'
INV.=653.39'
INV.=640.07'
18" PE (S=0.0180)
18" PE (S=0.0253)
18" PE (S=0.0253)
30" HDPE (S=0.087)
6" PVC (S=0.0197)
24" C-HDPE
50 FOOT WETLAND BUFFER (TYP.)
WETLANDS (TYP.)
UP# VEC 98C 12
B-81
B-82
B-80
B-86
B-87
SP-01
SP-02
SP-03
653.48'
654.24'
655.48'
653.79'
655.79'
655.90'
656.00'
656.25'
656.10'
656.25'
656.32'
656.17'
656.32'
655.94'
656.32'
656.73'
657.47'
657.35'
657.21'
657.35'
657.31'
657.21'
657.00'
657.11'
657.20'
657.11'
657.04'
656.92'
656.92'
656.70'
656.70'
657.50'
668
664
662
654
662
660
656
656
658
660
662
656
654
652
2:1
2%

PLAN
SCALE: 1"=10'

GRAPHIC SCALE
0 10 15 20
(IN FEET)

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ROUTE 242 WRRF GRADING AND DRAINAGE PLAN

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C3

CONTRACTOR TO UTILIZE UTILITY POLE 980-13-11 WITH TRANSFORMER LOCATED APPROX. STA. 39+10. SEE SHEET S-20 THIS PLAN SET.

LIMITS OF RECEIVING PIT

NEW 6" PVC SDR 21 EQ INFLUENT SEWER BYPASS @ 0.01 FT/FT SLOPE

NEW GRAVITY EFFLUENT SEWER

CONNECT 2" HDPE EFFLUENT FORCEMAIN AND EFFLUENT SEWER TO 4" PVC WYE

WRRF INFLUENT FORCEMAIN

4" HDPE SDR11

NEW 4" PVC SCH. 40 VENT PIPE WITH 6" S.S. VENT

EFM

EQ-TNK-1

EQ-TNK-2

EQ WW

NEW 17'X9' EQUALIZATION TANK 1

6" FULL PORT ECCENTRIC PLUG VALVE, PRATT OR APPROVED EQUAL (TYP. OF 2)

18" PE (S=0.0180)

NEW 6" PVC SDR 21 GRAVITY PIPE @ 0.01 FT/FT SLOPE

INV.=652.00'

NEW 17'X9' EQUALIZATION TANK 2

NEW 6" GRAVITY PIPE

NEW 5'ø WETWELL EQ-WW

NEW RETAINING WALL TOW=660.00'

REFER TO SHEET M3 FOR WATER SERVICE ENTRANCE DETAIL

INSTALL WATER SHUT OFF

NEW GRASS SWALE (TYP.)

CONTRACTOR TO FIELD VERIFY SIZE AND MATERIAL OF EXISTING WATER SERVICE PRIOR TO CONSTRUCTION OF NEW WATER LINE AND NOTIFY ENGINEER. AFTER ENGINEER REVIEW, CONTRACTOR TO REMOVE TEMP. CAP AND CONNECT NEW CONTROL BUILDING TO EXISTING WATER SERVICE USING NEW 3/4" COPPER PIPING.

COPPER WATER SERVICE PIPING TO BE SLEEVED WITH 30' LONG, 4" PVC PIPE UNDER NEW RETAINING WALL.

INSTALL NEW 3/4" CU WATER SERVICE TO NEW CONTROL BUILDING

NEW 16'X18' CONTROL BUILDING

INV.=652.82'

BOLLARD (TYP.)

4" PVC (PERF.) ELEV=652.17'

4" PVC (S=0.2752)

6" PVC (S=0.0208)

4" PVC (S=0.0000)

4" PVC (S=0.0183)

6" PVC (S=0.3312)

4" PVC (S=0.0208)

DD-WW

4" PVC (PERF.) ELEV=642.09'

NEW 4" PERF. PVC PIPE BURIED WITH 12" OF 704.02 CRUSHED STONE SURROUNDING PIPE. (TYP.)

4" PVC (PERF.) ELEV=-7.42'

NEW 4" PVC CLEANOUT WITH PVC CAP AT GRADE. (TYP.)

NEW 7.5'X42' SECONDARY + TREATMENT UNIT 3

NEW 7.5'X35' SECONDARY + TREATMENT UNIT 2

NEW 7.5'X42' SECONDARY + TREATMENT UNIT 1

SEC+ TRT

4" PVC (PERF.) ELEV=-7.42' SEC+ TRT

INV.=652.01

4" C-HDPE

18" PE (S=0.0205)

NEW VENT FAN SEE VENT FAN CONCRETE PAD DETAIL ON SHEET P3

8" PVC S=0.0071

NEW 12' ACCESS GATE (TYP.)

FENCE POSTS SHALL NOT CONFLICT WITH DRAIN LINE

NEW PLANK RAIL FENCE (VTAOT STANDARD F-20) (TYP.)

NEW 9'X17' DRIP DISPERSION WETWELL

NEW 1-1/2"" PVC SDR 21 RETURN LINE TO PRE-ANOXIC EFM

NEW 12' WIDE PERMANENT GRAVEL ACCESS DRIVEWAY WITH 1' SHOULDERS

NEW CLEAN OUT (TYP.)

50 FOOT WETLAND BUFFER (TYP.)

NEW 16' ACCESS GATE (TYP.)

INV.=651.00'

NEW PERMANENT GRAVEL ACCESS DRIVEWAY (TYP.)

NEW 1-1/2" PVC SDR 21 INFLUENT FM TO SECONDARY+ TREATMENT SYSTEM

WETLAND BOUNDARY (TYP.)

6" PVC S=0.0197

FOUR (4) NEW 4" HDPE DRIP DISPERSION FORCEMAINS AND ONE (1) NEW 3" HDPE RETURN LINE IN SAME TRENCH. SEE MULTIPLE PIPE IN SAME TRENCH DETAIL.

18" PE (S=0.0253)

INV.=640.07'

6" PLUG VALVE

6" PLUG VALVE

MJ ADAPTER

6" BACKWATER CHECK VALVE, EXTENDABLE, CLEAN CHECK, RECTORSEAL OR APPROVED EQUAL.

4" HDPE ES

4" TO 6" HDPE INCREASER

MJ ADAPTER

6"X6"X6" HDPE TEE

6" HDPE

4" PIPE COUPLING, ROMAC STYLE 501 OR APPROVED EQUAL

4" PVC SDR 35 BACKWASH WASTE/FIELD FLUSH AND PROCESS BASIN 4' DRAIN ELEV=652.10'

4" SDR 35 PVC TEE WITH CLEANOUT ON RIGHT SIDE

3" PVC SDR 21 SUCTION LINES (TYP. OF 2)

4" SDR 35 PVC TEE

6" BACKWATER CHECK VALVE, EXTENDABLE, CLEAN CHECK, RECTORSEAL OR APPROVED EQUAL.

4" PVC (PERF.) ELEV=642.09'

PLAN
SCALE: 1"=10'

GRAPHIC SCALE
0 10 15 20
(IN FEET)

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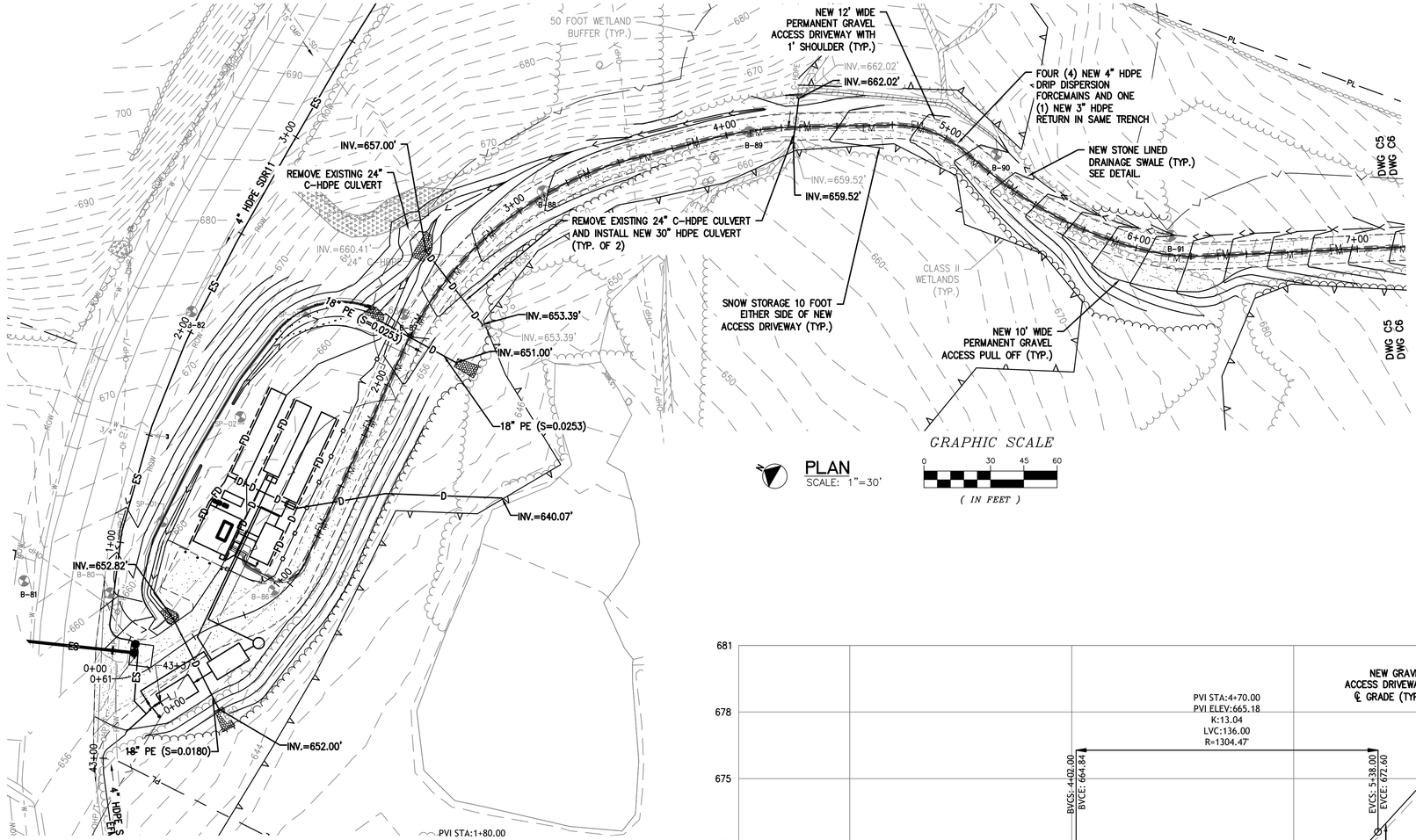
ROUTE 242 WWRF YARD PIPING AND UTILITIES PLAN

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

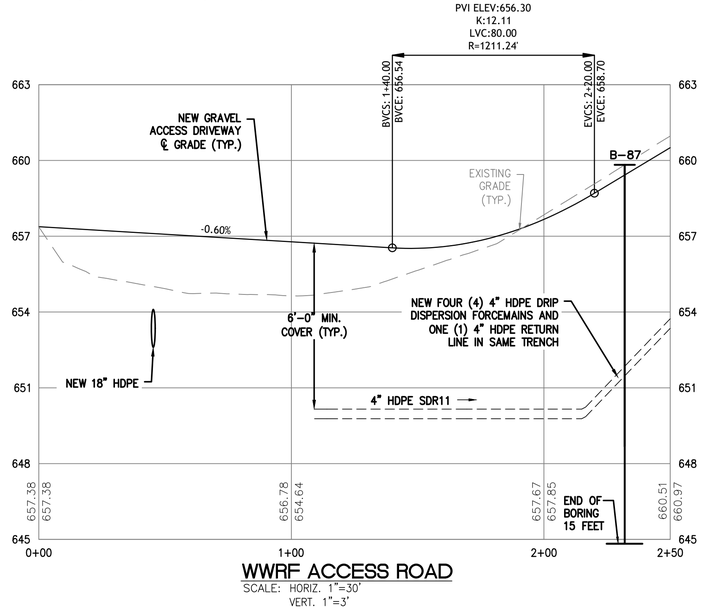
DRAWING
C4
SHEET 10 OF 75



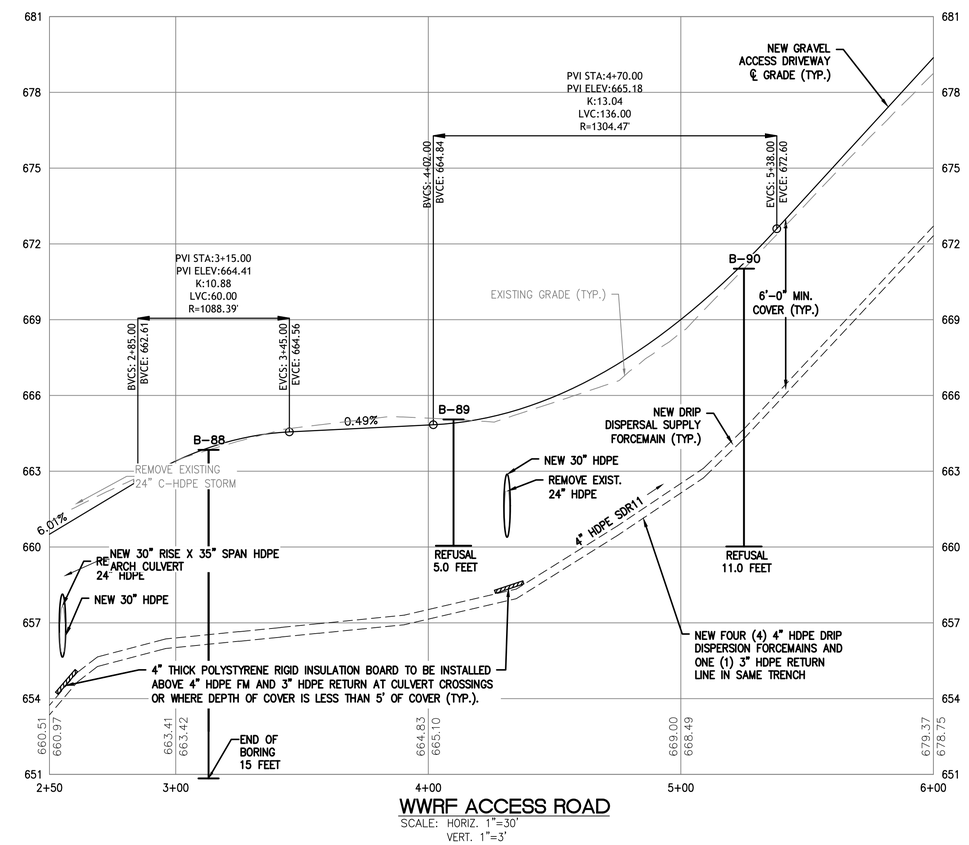
PLAN
SCALE: 1"=30'

LINE TABLE: ALIGNMENTS				
LINE #	START STA.	END STA.	LENGTH	DIRECTION
L1	0+00.00	0+07.54	7.54'	S28° 29' 34"E
L2	0+26.93	0+49.69	22.76'	S65° 31' 31"E
L3	1+14.08	1+69.50	55.42'	N85° 10' 31"E
L4	1+69.50	2+16.57	47.07'	N84° 25' 59"E
L5	3+56.82	3+90.59	33.76'	S44° 21' 07"E
L6	4+34.89	4+74.88	40.00'	S31° 05' 51"E
L7	5+08.91	5+24.89	15.98'	S09° 30' 55"W
L8	6+04.84	6+05.09	0.24'	S16° 27' 18"E
L9	6+30.70	7+23.57	92.87'	S32° 38' 05"E
L10	8+26.36	8+68.48	42.12'	S13° 44' 25"W
L11	8+88.13	9+52.18	64.06'	S18° 14' 30"W

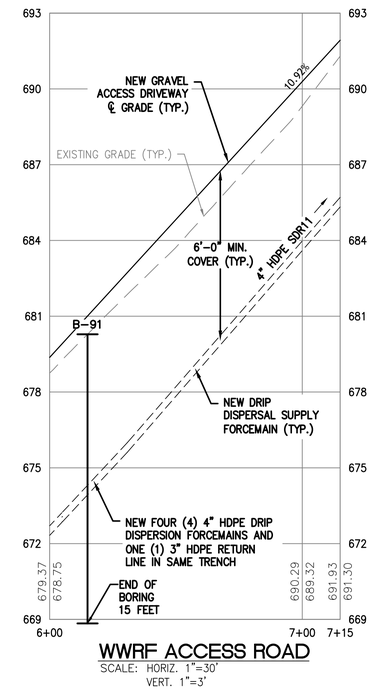
CURVE TABLE: ALIGNMENTS				
CURVE #	START STA.	RADIUS	LENGTH	CHORD DIRECTION
C1	0+07.54	30.00	19.39	S47° 00' 32.36"E
C2	0+49.69	93.14	23.06	S53° 51' 58.67"E
C3	0+49.69	93.14	23.06	S53° 51' 58.67"E
C4	0+72.79	49.26	41.29	S70° 48' 52.43"E
C5	2+16.57	156.90	140.25	S69° 57' 33.85"E
C6	3+90.59	191.50	44.30	S37° 43' 28.88"E
C7	4+74.88	48.00	34.02	S10° 47' 28.15"E
C8	5+24.89	176.40	79.96	S3° 28' 11.85"E
C9	6+05.09	90.70	25.61	S24° 32' 41.80"E
C10	7+23.57	127.00	102.79	S9° 26' 50.17"E
C11	8+68.48	250.00	19.64	S15° 59' 27.64"W
C12	9+52.18	237.30	24.88	S15° 14' 18.64"W



WWRF ACCESS ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



WWRF ACCESS ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



WWRF ACCESS ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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DESIGN PLANS
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FINAL DESIGN PLANS
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125 College Street
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No.	DESCRIPTION	DATE	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ROUTE 242 WWRF SUPPLY FM & ACCESS DRIVEWAY PLAN AND PROFILE I

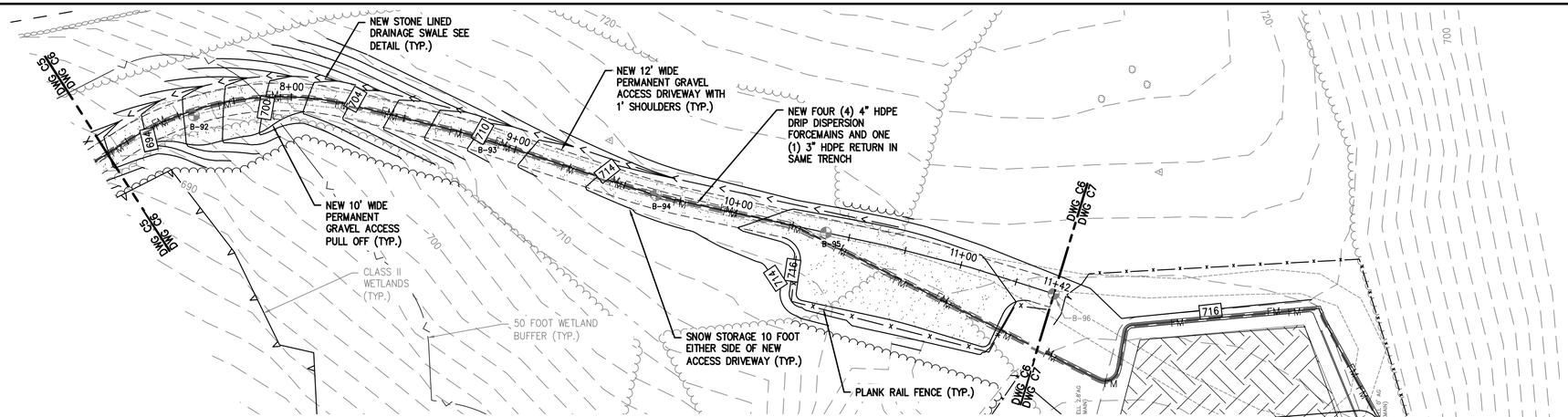
DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C5

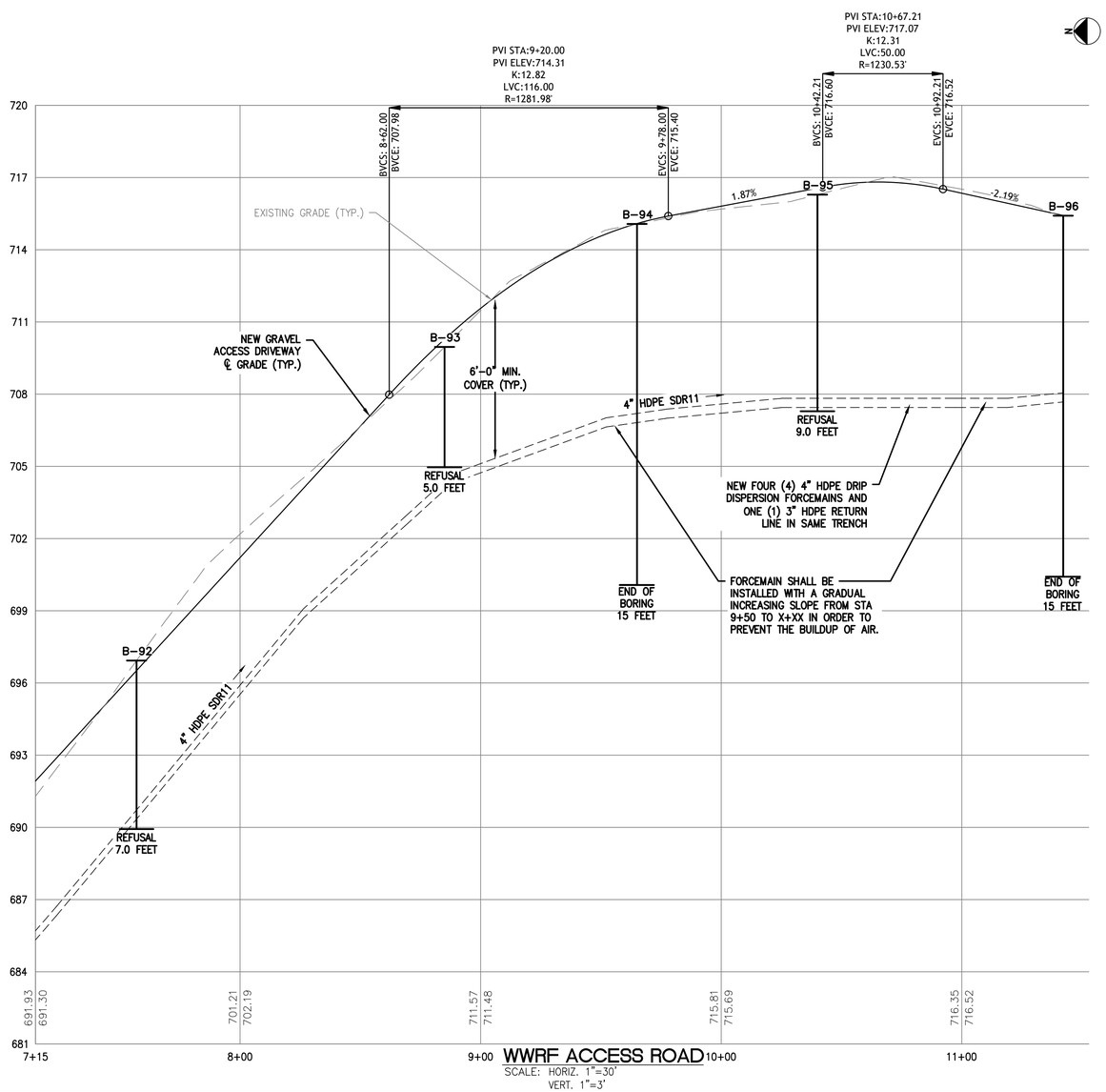
LINE TABLE: ALIGNMENTS				
LINE #	START STA.	END STA.	LENGTH	DIRECTION
L1	0+00.00	0+07.54	7.54'	S28° 29' 34"E
L2	0+26.93	0+49.69	22.76'	S65° 31' 31"E
L3	1+14.08	1+69.50	55.42'	N85° 10' 31"E
L4	1+69.50	2+16.57	47.07'	N84° 25' 59"E
L5	3+56.82	3+90.59	33.76'	S44° 21' 07"E
L6	4+34.89	4+74.88	40.00'	S31° 05' 51"E
L7	5+08.91	5+24.89	15.98'	S09° 30' 55"W
L8	6+04.84	6+05.09	0.24'	S16° 27' 18"E
L9	6+30.70	7+23.57	92.87'	S32° 38' 05"E
L10	8+26.36	8+68.48	42.12'	S13° 44' 25"W
L11	8+88.13	9+52.18	64.06'	S18° 14' 30"W

CURVE TABLE: ALIGNMENTS				
CURVE #	START STA.	RADIUS	LENGTH	CHORD DIRECTION
C1	0+07.54	30.00	19.39	S47° 00' 32.36"E
C2	0+49.69	93.14	23.06	S53° 51' 58.67"E
C3	0+49.69	93.14	23.06	S53° 51' 58.67"E
C4	0+72.79	49.26	41.29	S70° 48' 52.43"E
C5	2+16.57	156.90	140.25	S69° 57' 33.85"E
C6	3+90.59	191.50	44.30	S37° 43' 28.88"E
C7	4+74.88	48.00	34.02	S10° 47' 28.15"E
C8	5+24.89	176.40	79.96	S3° 28' 11.85"E
C9	6+05.09	90.70	25.61	S24° 32' 41.80"E
C10	7+23.57	127.00	102.79	S9° 26' 50.17"E
C11	8+68.48	250.00	19.64	S15° 59' 27.64"W
C12	9+52.18	237.30	24.88	S15° 14' 18.64"W



PLAN
SCALE: 1"=30'

GRAPHIC SCALE
0 30 45 60
(IN FEET)



WWRF ACCESS ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ROUTE 242 WWRF SUPPLY FM & ACCESS DRIVEWAY PLAN AND PROFILE II

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

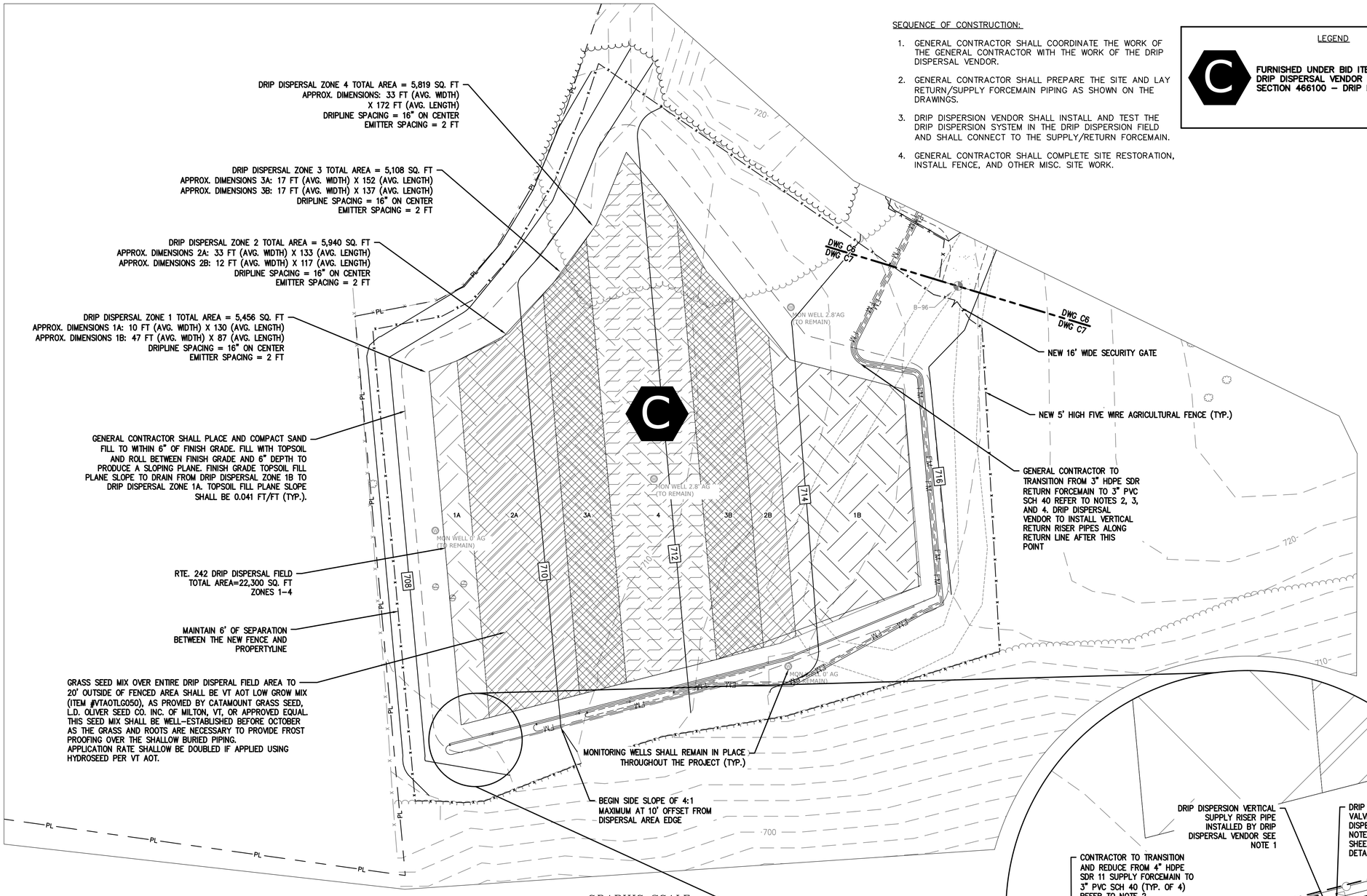
DRAWING
C6
SHEET 12 OF 75

SEQUENCE OF CONSTRUCTION:

1. GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF THE GENERAL CONTRACTOR WITH THE WORK OF THE DRIP DISPERSAL VENDOR.
2. GENERAL CONTRACTOR SHALL PREPARE THE SITE AND LAY RETURN/SUPPLY FORCEMAIN PIPING AS SHOWN ON THE DRAWINGS.
3. DRIP DISPERSION VENDOR SHALL INSTALL AND TEST THE DRIP DISPERSION SYSTEM IN THE DRIP DISPERSION FIELD AND SHALL CONNECT TO THE SUPPLY/RETURN FORCEMAIN.
4. GENERAL CONTRACTOR SHALL COMPLETE SITE RESTORATION, INSTALL FENCE, AND OTHER MISC. SITE WORK.

LEGEND

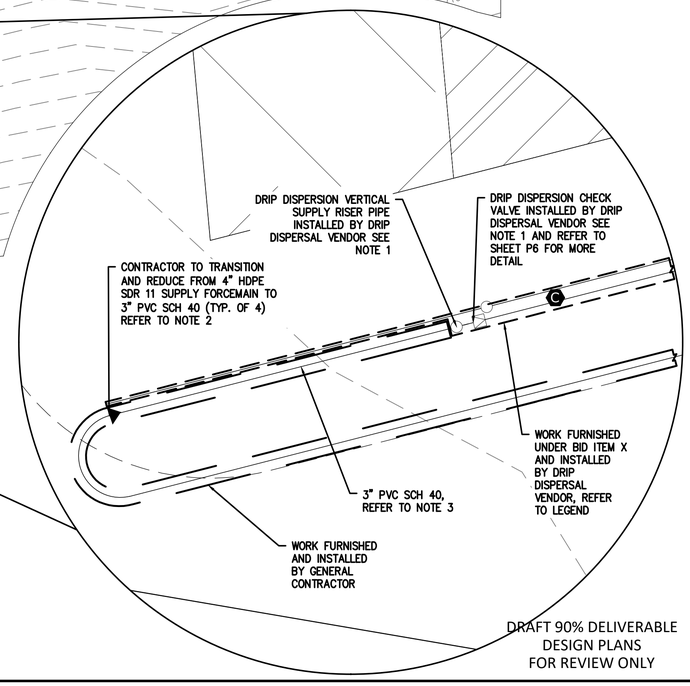
C — FURNISHED UNDER BID ITEM XX AND INSTALLED BY DRIP DISPERSAL VENDOR PER SPECIFICATION SECTION 466100 – DRIP DISPERSAL SYSTEM



N

PLAN
SCALE: 1"=20'

GRAPHIC SCALE
0 20 30 40
(IN FEET)



NOTES:

1. DRIP DISPERSION TUBING, ALL VALVES, FITTINGS AND INSULATION REQUIRED FOR THE MANIFOLD CONNECTIONS TO THE DRIP DISPERSION FIELD SHALL BE FURNISHED UNDER BID ITEM XX AND INSTALLED BY DRIP DISPERSAL VENDOR.
2. THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL HDPE SDR 11 SUPPLY AND RETURN FORCEMAIN PIPING FROM THE WRRF TO THE DRIP DISPERSION FIELD AND SHALL FURNISH AND INSTALL ALL TRANSITIONS, FITTINGS, REDUCERS AND MISC. APPURTENANCES REQUIRED TO TRANSITION FROM HDPE SDR 11 TO PVC SCH 40.
3. THE GENERAL CONTRACTOR SHALL FURNISH ALL PVC SCH 40 PIPING AND SHALL INSTALL 20FT OF PVC SCH 40 AFTER THE TRANSITION FROM HDPE SDR 11. CONTRACTOR SHALL CAP THE PIPE AND THE REMAINING PVC SCH 40 REQUIRED FOR THE SUPPLY AND RETURN MANIFOLDS SHALL BE INSTALLED BY THE DRIP DISPERSAL VENDOR.
4. THE GENERAL CONTRACTOR SHALL PREPARE THE DRIP DISPERSION FIELD AND PIPE TRENCHES, REFER TO DRIP DISPERSION FORCE MAIN AND COMMON RETURN FORCE MAIN TRENCH DETAIL AND CONSTRUCTION SEQUENCING.
5. THE GENERAL CONTRACTOR IS REFEREED TO SPECIFICATION SECTION 466100 – DRIP DISPERSAL SYSTEM FOR ADDITIONAL INSTALLATION REQUIREMENTS.

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TOWN OF MONTGOMERY, VERMONT

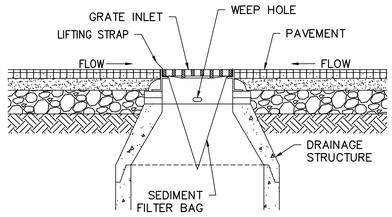
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ROUTE 242 WWRF DRIP DISPERSION PLAN

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C7
SHEET 13 OF 75

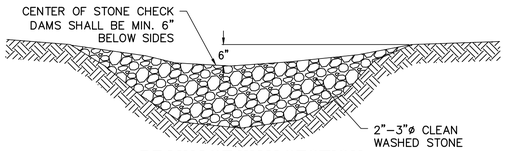


NOTES:

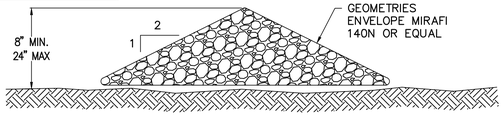
1. REMOVE DRAINAGE INLET GRATE AND PLACE SEDIMENT FILTER BAG AROUND THE FRAME, REPLACE GRATE AND SEDIMENT FILTER BAG IN POSITION OR FOLLOW MANUFACTURER'S RECOMMENDATIONS. LIFTING STRAPS SHALL BE EXPOSED AND READY FOR MAINTENANCE PROCEDURES.
2. INSPECT SEDIMENT FILTER BAG WEEKLY AND AFTER EVERY RAINFALL EVENT. DAMAGED SEDIMENT FILTER BAGS SHALL BE REPLACED IMMEDIATELY.
3. REPLACE, CLEAN OR REMOVE SEDIMENT FILTER BAG AS DIRECTED. THE ACCUMULATED SEDIMENT SHALL NOT BE DISPOSED OF IN THE STRUCTURE.

CATCH BASIN INLET PROTECTION DETAIL

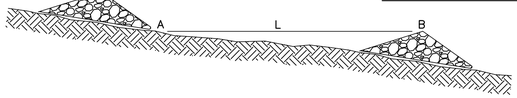
SCALE: NONE



DRAINAGE WAY SECTION



DRAINAGE WAY PROFILE

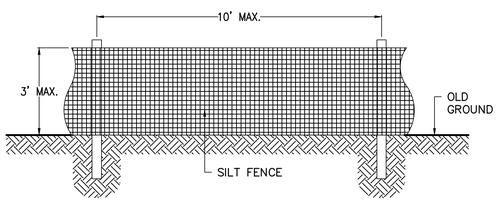


NOTES:

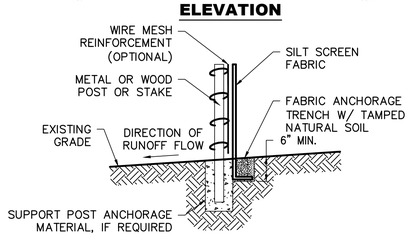
1. CHECK DAM SPACING SHALL BE LESS THAN 100 FT.
2. L = THE DISTANCE SUCH THAT THE ELEVATION A = ELEVATION B.

STONE CHECK DAM DETAIL

SCALE: NONE



ELEVATION



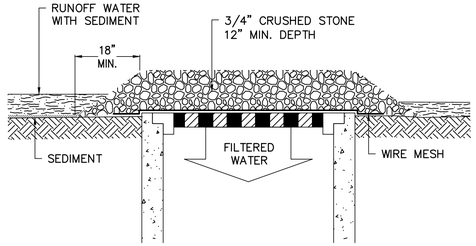
SECTION

NOTES:

1. SPACING OF FENCE POSTS NOT TO EXCEED 10–0".
2. SILT FENCE SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.
3. FILTER FABRIC TO BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES AT TOP, MIDPOINT AND BOTTOM.
4. OVERLAP BY 6". FOLD AND STAPLE ADJOINING SECTIONS OF FILTER FABRIC.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND THE MATERIAL REMOVED WHEN "BULGES" DEVELOP. DO NOT DEPOSIT THE MATERIAL NEAR WETLANDS OR WATERCOURSES.
6. FILTER FABRIC SHALL BE ENTRENCHED 6" MINIMUM BELOW EXISTING OR FINISHED GRADE.

SILT FENCE EROSION CONTROL DETAIL

SCALE: NONE

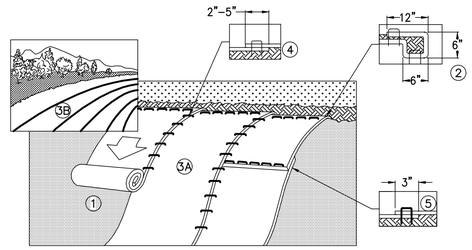


NOTE:

1. GEOTEXTILE FABRIC SHALL BE PLACED BENEATH CATCH BASIN GRATES. PLACE 3/4" CRUSHED STONE OVER GRATE FLUSH WITH ROADWAY.
2. CONTRACTOR SHALL MAINTAIN CRUSHED STONE PILE. SWEEPING SHALL OCCUR AS NECESSARY TO KEEP CRUSHED STONE FROM SPREADING INTO ROADWAY VEHICLE TRAFFIC LANES. CRUSHED STONE SHALL BE REPLACED AS NECESSARY AS SEDIMENT BUILDS UP.

CATCH BASIN EROSION PROTECTION DETAIL

SCALE: NONE

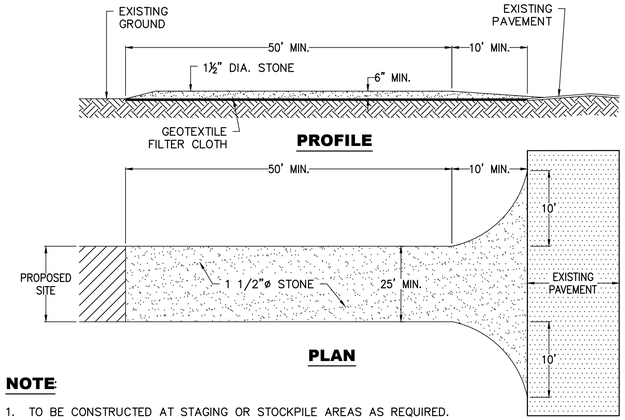


NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"–5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
7. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

SLOPE PROTECTION EROSION CONTROL MATTING DETAIL

SCALE: NONE

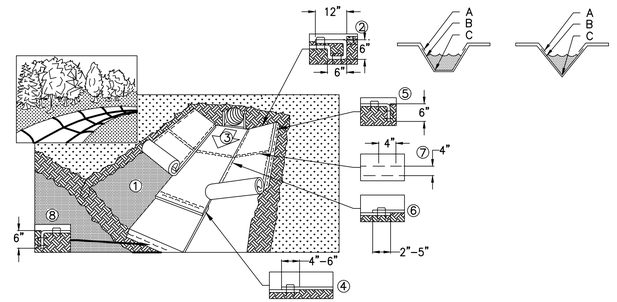


NOTE:

1. TO BE CONSTRUCTED AT STAGING OR STOCKPILE AREAS AS REQUIRED.

STABILIZED CONSTRUCTION ENTRY DETAIL

SCALE: NONE



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED, DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH THE PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"–6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL–LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"–5" (DEPENDING ON BLANKET TYPE) AND STAPLED TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30' TO 40' INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
9. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
10. CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

** HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USED OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS

CHANNEL EROSION CONTROL MATTING DETAIL

SCALE: NONE

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

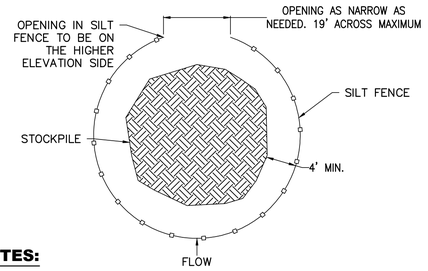
CIVIL DETAILS I

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C8

19_129800_02-C DETAILS.DWG

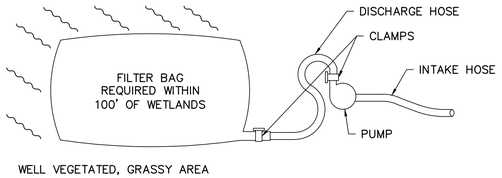


NOTES:

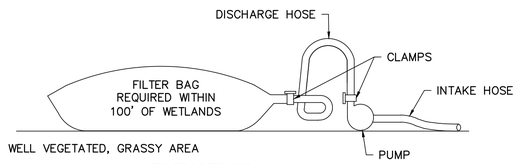
1. ALL STOCKPILED MATERIALS CREATED DURING CONSTRUCTION ACTIVITIES SHALL BE LOCATED OUTSIDE OF ANY WETLAND RESOURCE OR WETLAND BOUNDARY AREAS. LOCATIONS SHALL BE APPROVED BY THE ENGINEER AND OWNER.
2. ALL PERMANENT STOCKPILES SHALL BE COVERED PRIOR TO INCLEMENT WEATHER, GRADED TO SHED WATER, AND COVERED AT THE END OF EACH WORKDAY WITH A MINIMUM OF 20–MIL BLACK POLYETHYLENE. THE COVER SHALL BE WEIGHTED AND WILL BE MAINTAINED THROUGHOUT THE STOCKPILE PERIOD.
3. STOCKPILE AREAS WILL BE GRADED SUCH THAT STORM WATER IS DIVERTED FROM STOCKPILED MATERIALS. STRAW BALES AND SILT FENCE WILL SURROUND ALL STOCKPILES. SLOPES ON STOCKPILES SHALL NOT BE STEEPER THAN 1:1.

STOCKPILE DETAIL

SCALE: NONE



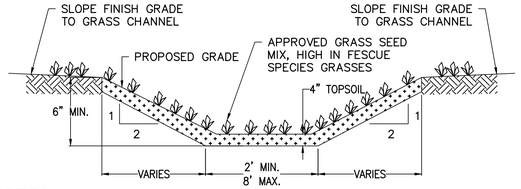
PLAN



ELEVATION

FILTER BAG DISCHARGE DETAIL

SCALE: NONE

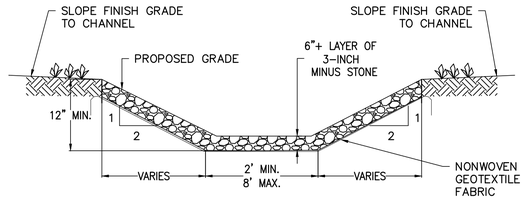


NOTES:

1. THE GRASS CHANNEL SLOPE SHALL BE 4% OR LESS.
2. THE GRASS CHANNEL LOCATIONS SHALL BE AS INDICATED ON THE DRAWINGS.

GRASS SWALE SECTION DETAIL

SCALE: NONE



NOTES:

1. THE CHANNEL SLOPE SHALL BE 4% OR LESS.

STONE LINED SWALE SECTION DETAIL

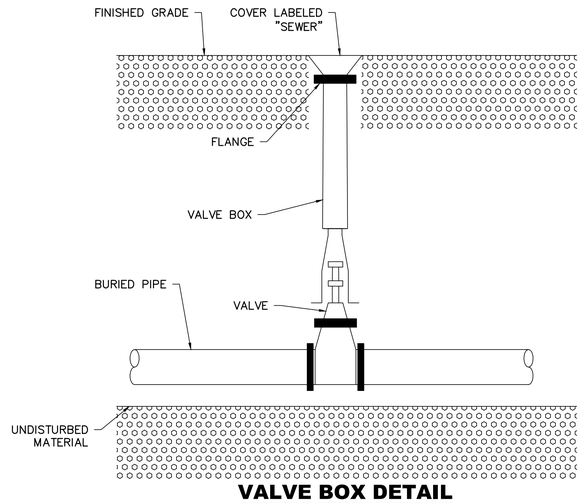
SCALE: NONE

EROSION CONTROL NOTES:

1. ALL DRAINAGE OUTLETS SHALL BE LOCATED AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES INSTALLED AS REQUIRED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL SUBMIT A NOTICE OF INTENT (NOI) AND AN EROSION PREVENTION AND SEDIMENTATION CONTROL PLAN PRIOR TO BEGINNING OF WORK. ALL DEWATERING AND OPERATIONS SHALL CONFORM TO ALL APPROPRIATE AGENCY REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED DISCHARGE SAMPLING AND TESTING AND SHALL BE INCIDENTAL TO THE DEWATERING OPERATIONS.
2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROVIDE EROSION PREVENTION AND SEDIMENT CONTROL.
3. THE CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL AND STATE REGULATIONS.
4. THE CONTRACTOR SHALL FURNISH, INSTALL AND PERFORM ALL NECESSARY REQUIREMENTS TO COMPLY WITH THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL AND THESE PLANS AND SPECIFICATIONS. THE MORE STRINGENT SHALL APPLY.
5. THE CONTRACTOR SHALL PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE TIME THAT SOIL IS LEFT DISTURBED.
6. PROPERLY ENTRENCHED SILTATION FENCE SHALL BE INSTALLED IMMEDIATELY OUTSIDE OF THE PAVEMENT OR AS SHOWN ON THE PLANS.
7. SILT FENCE INSTALLATIONS SHALL BE INSPECTED FOR THE FOLLOWING:
   - VISIBLE DAMAGE TO SILT FENCE INSTALLATIONS.
   - SEDIMENT ACCUMULATION: SEDIMENT REMOVAL SHALL OCCUR WHEN SEDIMENT HAS ACCUMULATED TO NO MORE THAN ONE THIRD THE HEIGHT OF THE FENCE.
   - SIGNS OF CHANNEL OR GULLY EROSION FORMATION PARALLEL TO THE FENCE.
   - SIGNS OF DETERIORATED OR CLOGGED GEOTEXTILE; REPLACE AS NEEDED.
   - SIGNS OF UNDER CUTTING OR PIPING.
   - STAKES SHALL BE SECURED TO THE GROUND.
8. INSPECTIONS OF THE PROJECT SITE AND ALL EROSION CONTROL BARRIERS BY THE CONTRACTOR SHALL OCCUR DAILY AND AFTER EVERY SIGNIFICANT PRECIPITATION EVENT (EXCEEDING 1/2–INCH PRECIPITATION).
9. IN ADDITION LIME SHALL BE ADDED TO THE TOPSOIL IN AMOUNTS AS NECESSARY TO ACHIEVE THE REQUIRED PH AS SPECIFIED.
10. SHOULD SEASONAL LIMITATIONS MAKE ESTABLISHMENT OF GRASS ON AREAS TOPSOILED, SEEDED, AND MULCHED UNREALISTIC, SUCH AREAS SHALL BE TREATED WITH BONDED FIBER MULCH.
11. ALL AREAS DISTURBED SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
12. ALL CUT & FILL SLOPES SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS OF ESTABLISHING FINISHED GRADE.
13. IF THE PROJECT CONTINUES INTO THE WINTER THE FOLLOWING CRITERIA SHALL BE MET:
    - ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES STEEPER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
    - ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

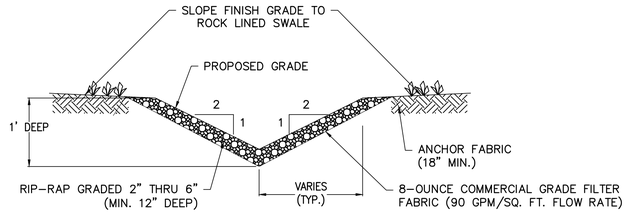
CONSTRUCTION DEWATERING NOTES:

1. THE CONTRACTOR SHALL PROVIDE DEWATERING EQUIPMENT (I.E. PUMPS, HOSES, ETC.,) CAPABLE OF CONTROLLING GROUNDWATER ENCOUNTERED IN THE EXCAVATIONS SUCH THAT ALL WORK CAN BE PERFORMED "IN THE DRY."
2. AS NEEDED, CONSTRUCTION DEWATERING DISCHARGED TO THE SUBSURFACE OR TO SURFACE WATER BODY/DRAINAGE SYSTEM SHALL BE PRETREATED FOR SEDIMENT REMOVAL BY RESIDING IN A FRACTIONATION/SEDIMENTATION TANK PRIOR TO DISCHARGE. UNDER NO CIRCUMSTANCES IS WATER FROM THE SEDIMENTATION TANK TO BE DISCHARGED DIRECTLY TO A WETLAND RESOURCE AREA. WATER FROM THE SEDIMENTATION TANK MUST BE DISCHARGED THROUGH A CATCH BASIN WITH AN ADEQUATE AND FUNCTIONING SUMP OR THROUGH A SEDIMENTATION TRAP PRIOR TO ENTERING A WETLAND RESOURCE AREA OR RECEIVING WATER. THE OUTLET MUST BE INSPECTED DURING OPERATION TO CONFIRM THAT SEDIMENT IS NOT BEING DISCHARGED TO A WETLAND RESOURCE AREA.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PROPER NPDES PERMITTING FOR CONSTRUCTION DEWATERING ACTIVITIES.
4. A FORMAL DEWATERING PLAN SHALL BE PREPARED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF THE WORK AND WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE TOWN OF MONTGOMERY.



VALVE BOX DETAIL

SCALE: NONE



NOTES:

1. THE ROCK LINED DRAINAGE SWALE LOCATION SHALL BE AS INDICATED ON THE DRAWINGS.

ROCK LINED DRAINAGE SWALE DETAIL

SCALE: NONE

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DESIGN PLANS
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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

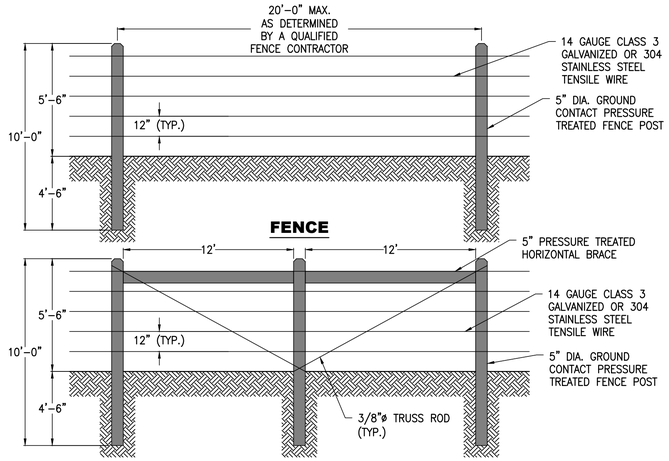
CIVIL DETAILS II

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

PROJECT NO.
19.129800.02

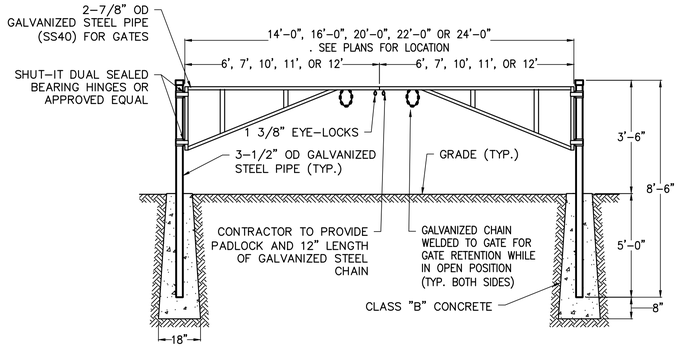
DRAWING
C9
SHEET 15 OF 75

19_129800_02-C DETAILS.DWG



AGRICULTURAL FENCE DETAIL

SCALE: NONE



NOTES:

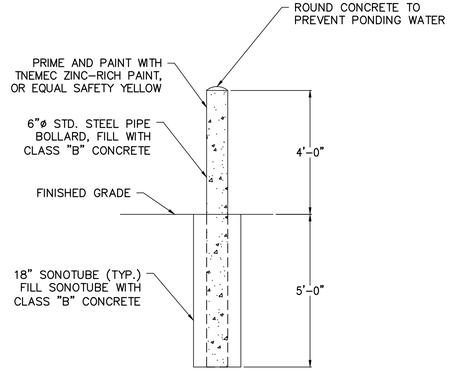
1. CONTRACTOR TO INSTALL BOLLARDS TO RETAIN GATE IN OPEN POSITION. BOLLARDS SHALL BE THE EQUAL TO THE GATE POSTS.

GALVANIZED STEEL GATE DETAIL

SCALE: NONE

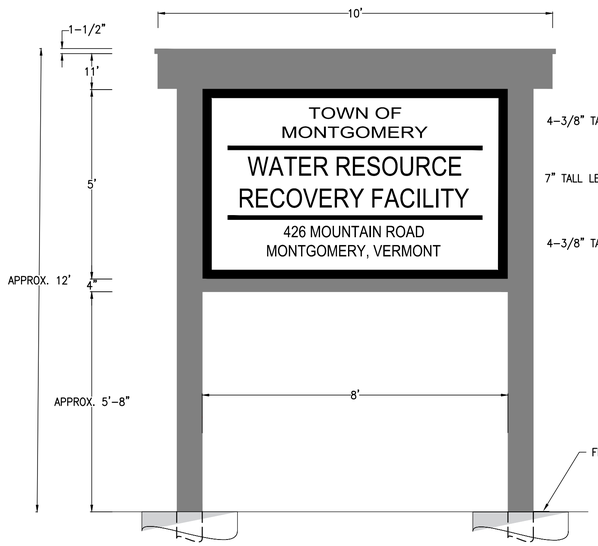
NOTES:

1. FABRICATE METAL BOLLARDS FROM SCH 40 STEEL PIPE.
2. STEEL BOLLARD SHALL COMPLY WITH CWSRF AIS REQUIREMENTS. CONTRACTOR TO SUBMIT AIS DOCUMENTATION WITH SHOP DRAWING SUBMITTAL.
3. FILL BOLLARD SOLIDLY WITH CONCRETE AND ALLOW CONCRETE TO CURE SEVEN DAYS BEFORE INSTALLING.
4. ANCHOR BOLLARD IN PLACE WITH CONCRETE FOOTING. PLACE CONCRETE AND VIBRATE OR TAMP FOR CONSOLIDATION. SUPPORT AND BRACE BOLLARDS IN POSITION UNTIL CONCRETE FOOTING HAS CURED.



BOLLARD DETAIL

SCALE: NONE

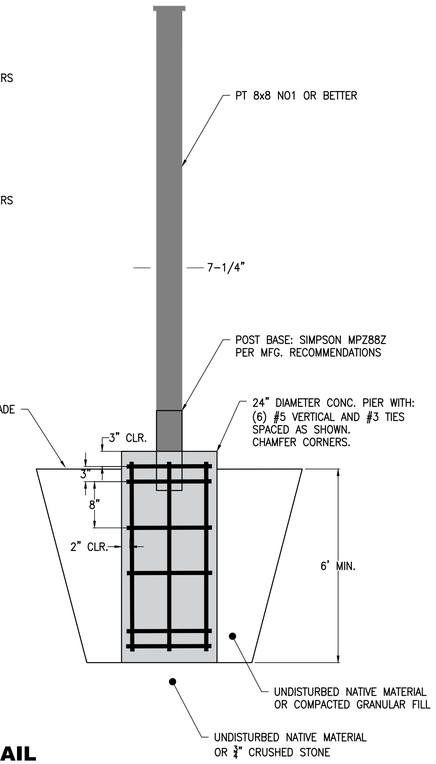


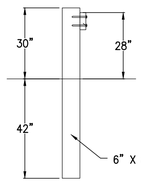
NOTES:

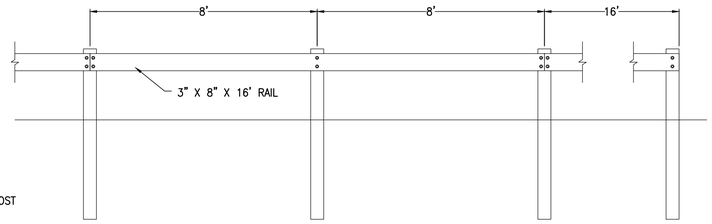
1. SIGN DESIGN SHOWN IS FOR PRICING PURPOSED ONLY. SIGN DESIGN SHALL BE REVIEWED AND FINALIZED BY OWNER PRIOR TO ORDERING.
2. 7–1/4" X 7–1/4" PT WOOD POSTS (5'–0" DIRECT GROUND BURIAL), 4"X7–1/4"X8" PT WOOD BEAMS, AND 10'–4"X11"X8" PT WOOD HEADER PAINTED FLAT BM 2134–30 IRON MOUNTAIN
3. 1" THICK SIGN FOAM BACKGROUNDS PAINTED FLAT WHITE
4. 3" WIDE MOLDING PAINTED FLAT BLACK
5. ½" THICK CUTOUT SIGNFOAM LETTERS PAINTED FLAT BLACK
6. ½" THICK CUTOUT SIGNFOAM LINE BARS PAINTED FLAT BLUE AND GREEN

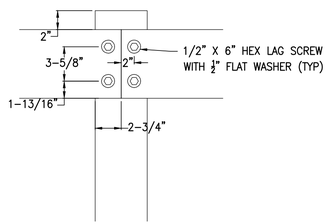
WRRF E911 ENTRANCE SIGN DETAIL

SCALE: NONE

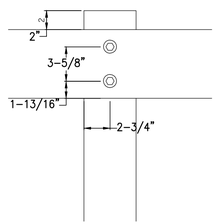




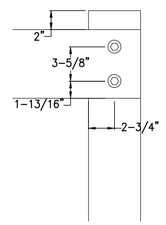




SPLICE POST ATTACHMENT DETAIL



INTERMEDIATE POST ATTACHMENT DETAIL



END POST ATTACHMENT DETAIL

PLANK RAIL FENCE (VT AOT STANDARD F-20)

SCALE: NONE

NOTES:

1. POSTS, RAILS, AND LAG SCREWS SHALL BE IN ACCORDANCE WITH SECTION 727 OF THE VT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTIONS, LATEST EDITION.
2. POST AND RAIL DIMENSIONS ARE SHOWN IN NOMINAL DIMENSIONS.
3. PILOT AND RAIL DIMENSIONS SHOULD BE DRILLED, IN THE RAIL AND POSTS, PRIOR TO ATTACHING THE RAILS TO THE POSTS TO PREVENT BREAKAGE OF THE RAIL POST OR SCREW. PILOT HOLES SHOULD BE STEPPED WITH ¼ INCH DIAMETER PILOT HOLE FOR THE LENGTH OF THE SHAFT AND ⅜ INCH PILOT HOLE FOR THE LENGTH OF THE THREAD.
4. INDIVIDUAL RAIL LENGTH MAY BE REDUCED TO 8 FEET TO ACCOMMODATE THE END OF THE FENCE.
5. THE PLANK RAIL FENCE SHALL BE SEASONED RED (NORWAY) PINE OR SOUTHERN PINE, PLANED ON FOUR SIDES, AND OF THE DIMENSIONS SHOWN ON THE PLANS. WOOD SHALL BE PRESSURE TREATED IN ACCORDANCE WITH SUBSECTION 726.01 OF THE VT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF
MONTGOMERY,
VERMONT

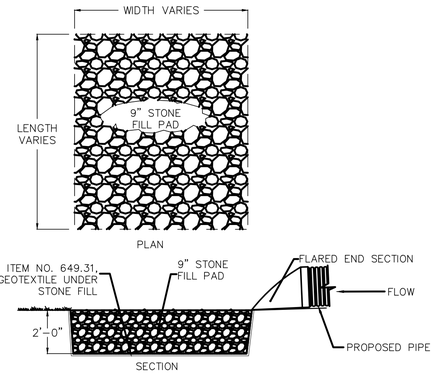
CENTER
COMMUNITY
DECENTRALIZED
WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

CIVIL DETAILS III

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

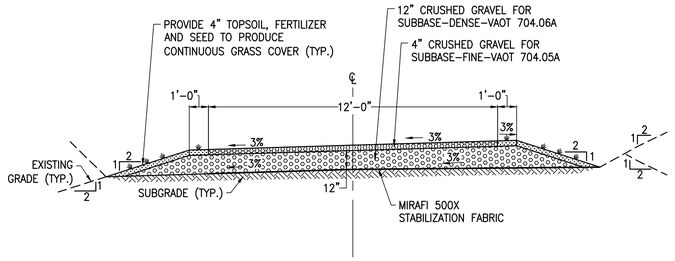
PROJECT NO.
19.129800.02

DRAWING
C10
SHEET 16 OF 75



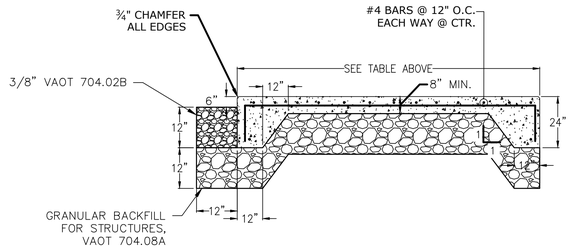
STONE PAD PROTECTION DETAIL

SCALE: NOT TO SCALE



ACCESS DRIVEWAY TYPICAL SECTION

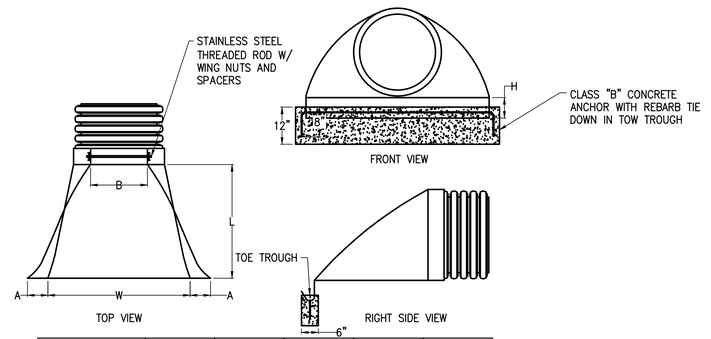
SCALE: NONE



STRUCTURE	LENGTH	WIDTH
PUMP STATION NO. 1 EMERGENCY GENERATOR	54"	42"
PUMP STATION NO. 2 EMERGENCY GENERATOR	54"	42"

TYPICAL CONCRETE EQUIPMENT PAD DETAIL

SCALE: NOT TO SCALE



PIPE SIZE	A	B(MAX)	H	L	W
18"	7.5"	15"	6.5"	32"	35"
24"	7.5"	18"	6.5"	36"	45"

NOTES:

1. FLARED END SECTION SHALL BE HIGH DENSITY POLYETHYLENE MEETING ASTM D3350 MINIMUM CELL CLASSIFICATION 213320C.
2. 2. THE INVERT OF THE PIPE AND THE END SECTION SHALL BE AT THE SAME ELEVATION.

FLARED END SECTION DETAIL

SCALE: NONE

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

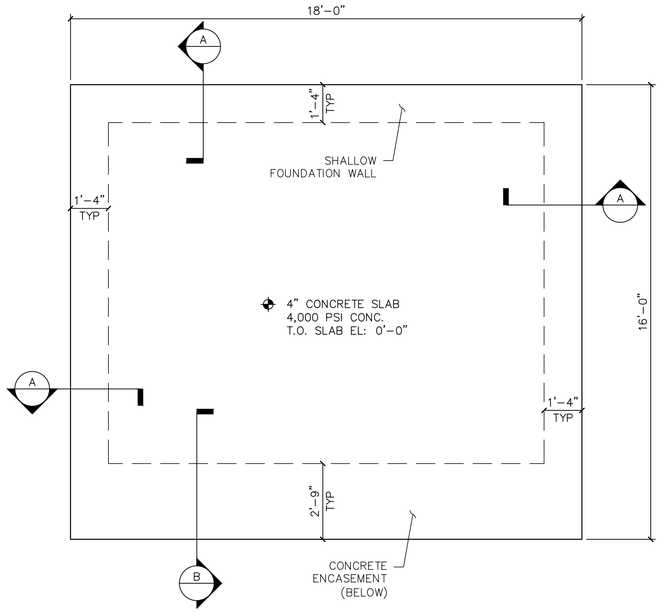
CIVIL DETAILS IV

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C11
SHEET 17 OF 75

19_129800_02-C DETAILS.DWG

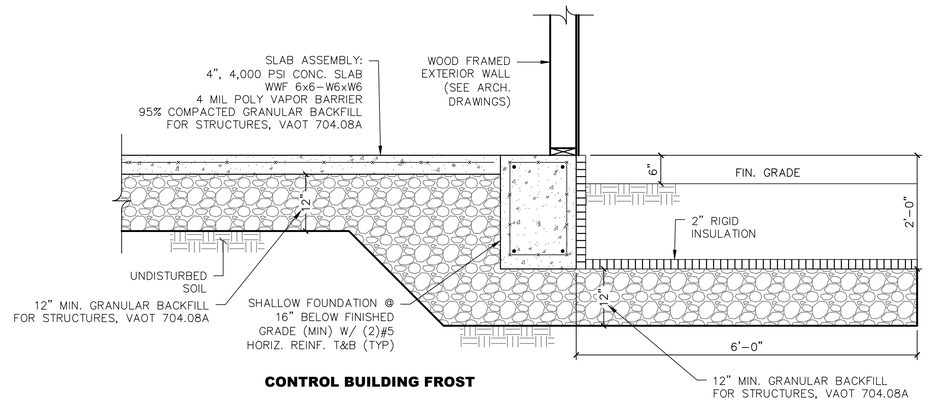


CONTROL BUILDING FOUNDATION & FLOOR PLAN

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

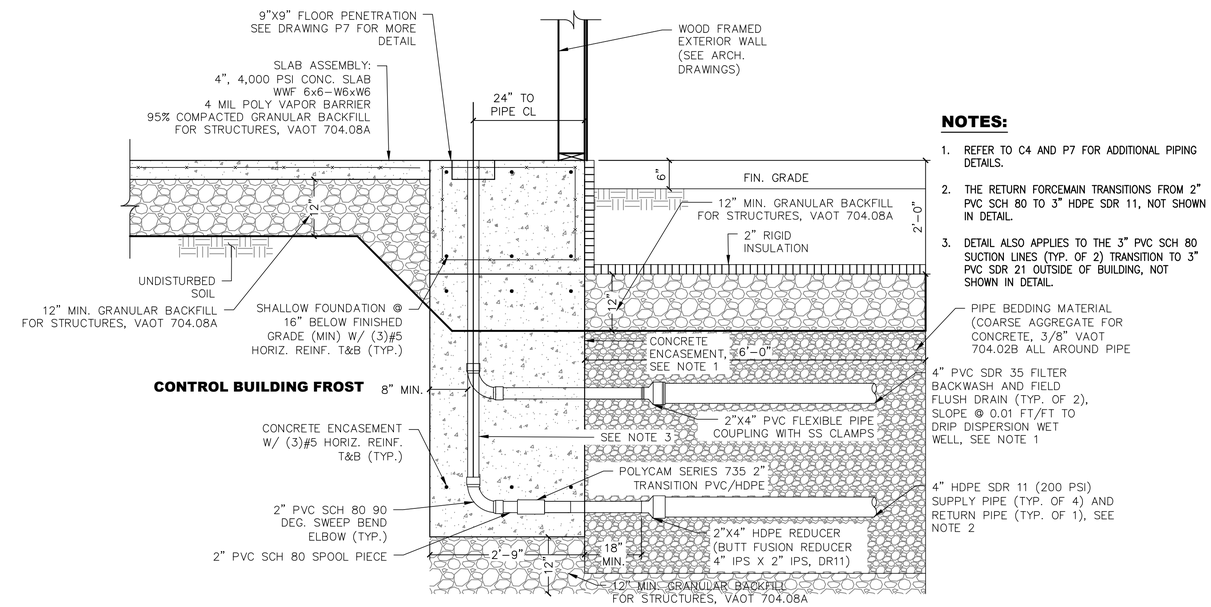
NOTE:

1. RIGID INSULATION NOT SHOWN FOR CLARITY.
2. FOUNDATIONS SHALL BE CONSTRUCTED ON COMPRESSED STRUCTURAL FILL DOWN TO MATCH DEPTHS RECOMMENDED ON GEOTECHNICAL REPORT.



CONTROL BUILDING FROST PROTECTED SLAB FOUNDATION - SECTION A

SCALE: 3/4"=1'-0"



CONTROL BUILDING FROST PROTECTED SLAB FOUNDATION AND PIPING BELOW SLAB - SECTION B

SCALE: 3/4"=1'-0"

NOTES:

1. REFER TO C4 AND P7 FOR ADDITIONAL PIPING DETAILS.
2. THE RETURN FORCEMAIN TRANSITIONS FROM 2" PVC SCH 80 TO 3" HDPE SDR 11, NOT SHOWN IN DETAIL.
3. DETAIL ALSO APPLIES TO THE 3" PVC SCH 80 SUCTION LINES (TYP. OF 2) TRANSITION TO 3" PVC SDR 21 OUTSIDE OF BUILDING, NOT SHOWN IN DETAIL.

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

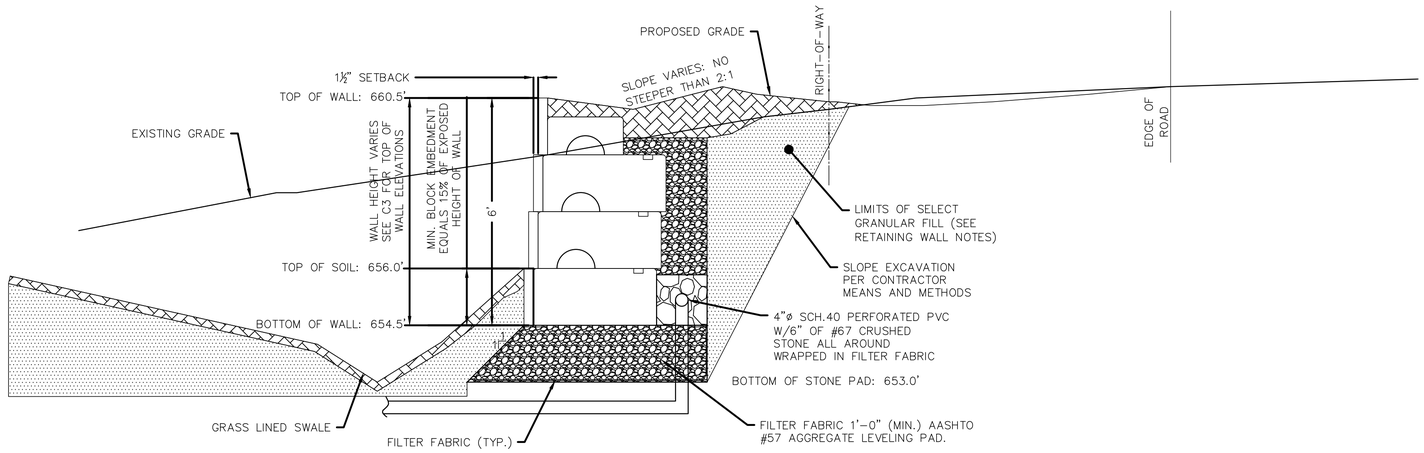
CIVIL DETAILS V

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

PROJECT NO.
19.129800.02

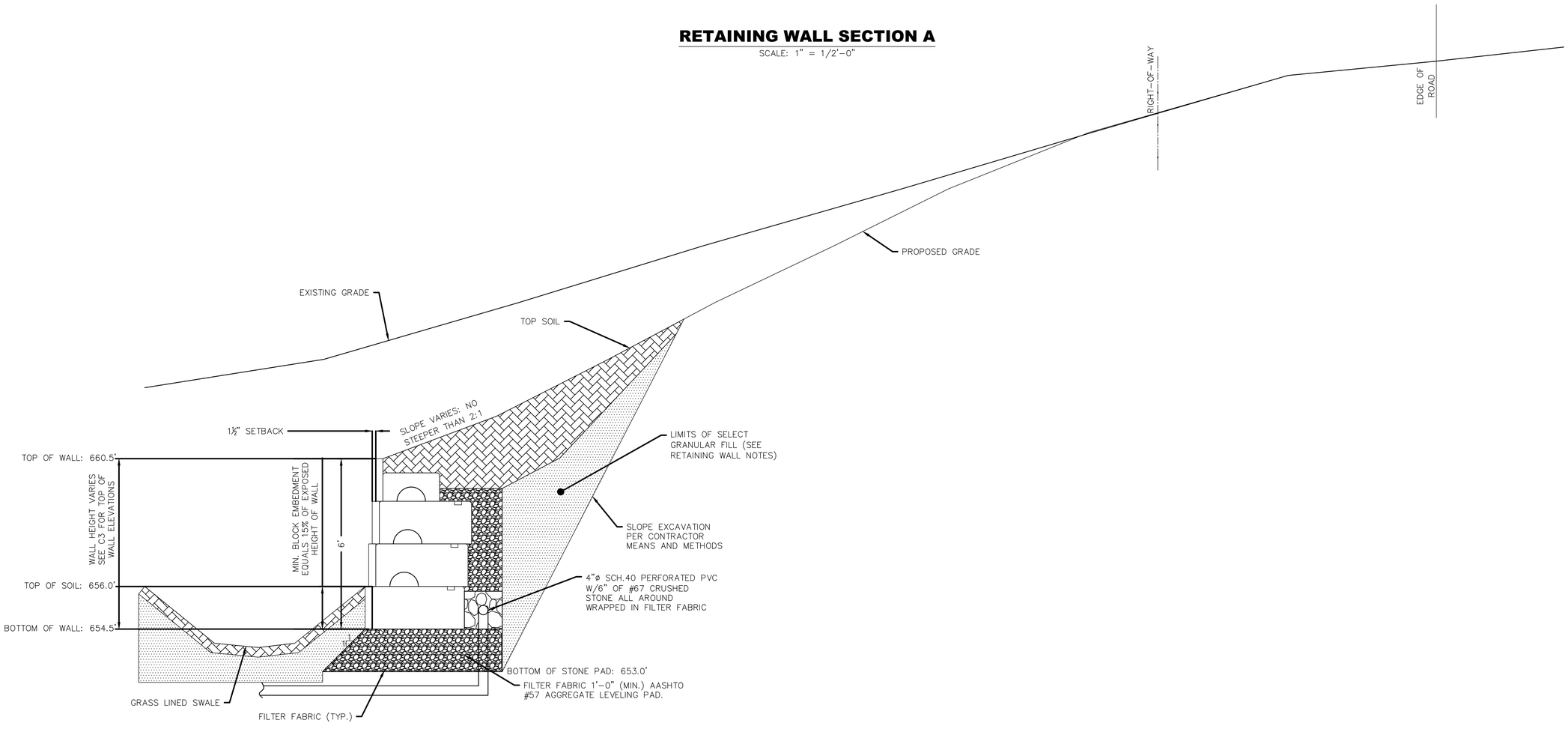
DRAWING
C12
SHEET 18 OF 75

19_129800_02-C DETAILS.DWG



RETAINING WALL SECTION A

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



RETAINING WALL SECTION B

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

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

CIVIL DETAILS VI

DESIGNED	CHECKED
MAD	JDR
DRAWN	DATE
EEB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
C13
SHEET 19 OF 75

DRAFT 90% DELIVERABLE
DESIGN PLANS
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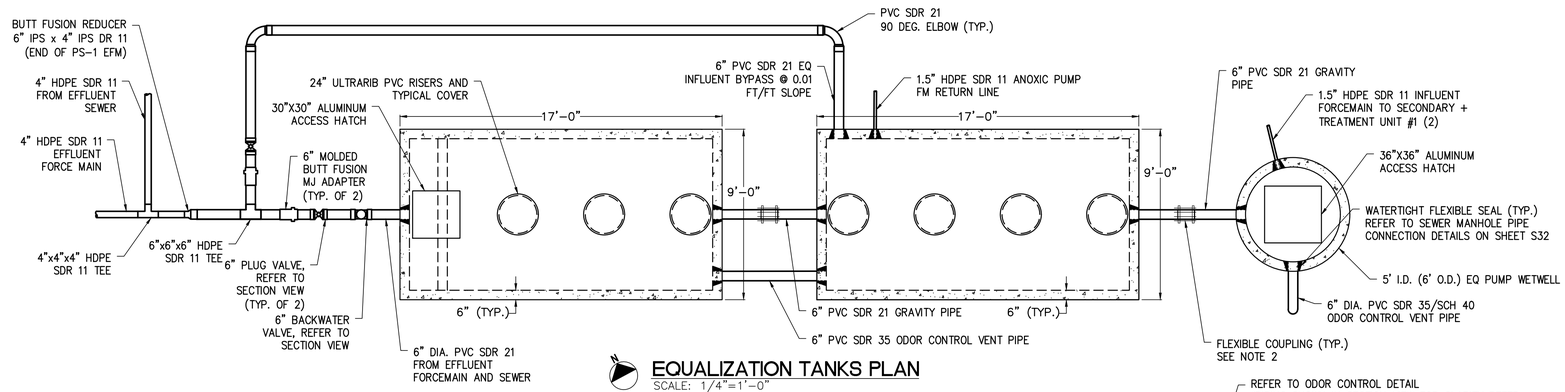
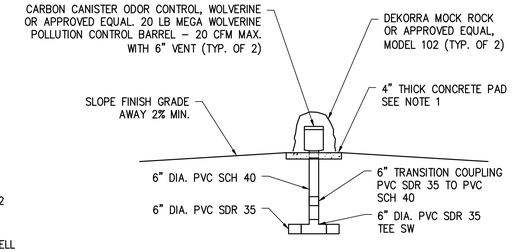
19_129800_02-C DETAILS.DWG



EQUALIZATION TANKS PLAN

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

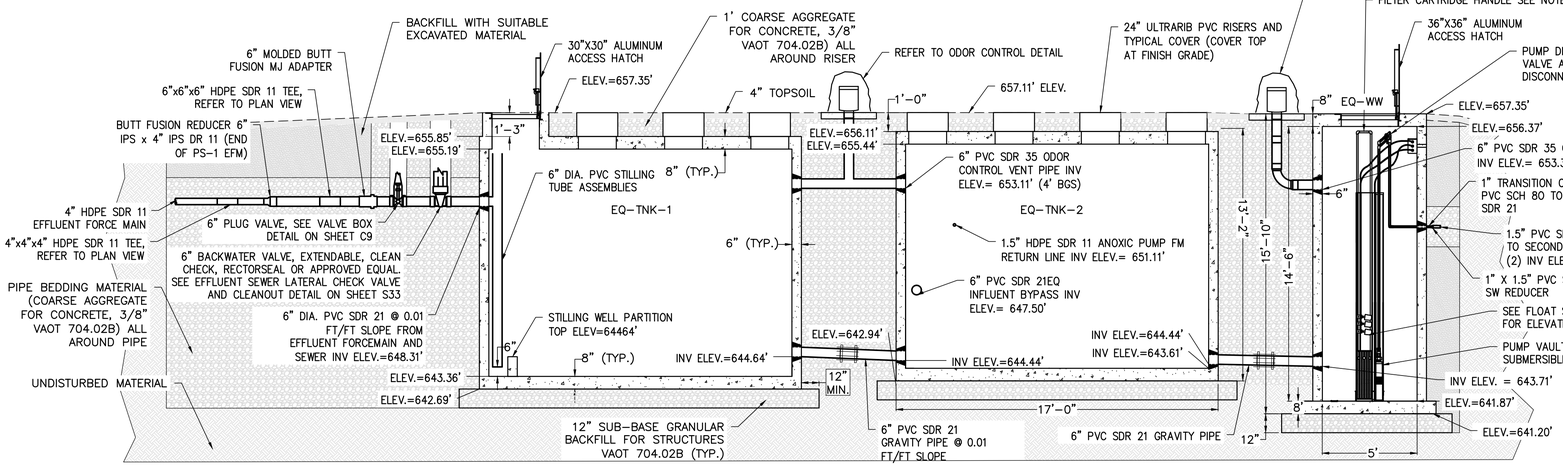


ODOR CONTROL UNIT DETAIL

SCALE: N.T.S.

NOTES:

1. DIMENSIONS OF CONCRETE PAD TO MATCH ARTIFICIAL ROCK SIZE + 4" ALL AROUND. ANCHOR ROCK TO PAD TO PROVIDE 1" VENT SPACE BETWEEN ROCK BOTTOM AND PAD TOP. ANCHOR HARDWARE SHALL BE: 1/4 IN. X 4–1/2 IN. 304L SS WEDGE ANCHOR TYPE.
2. ODOR CONTROL UNIT OFF OF WET WELL SHALL HAVE A PVC SCH 35 90 BEND SW IN LIEU OF THE TEE. REFER TO EQUALIZATION TANK SECTION DETAIL.



EQUALIZATION TANKS SECTION

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

NOTES:

1. CONTRACTOR SHALL INSTALL PUMP VAULT SUCH THAT THE FILTER CARTRIDGE HANDLE AND PUMP DISCHARGE BALL VALVE AND QUICK DISCONNECT ARE 9" BELOW RISER TOP AND BELOW THE ACCESS HATCH TO FACILITATE MAINTENANCE.
2. FURNISH AND INSTALL FLEXIBLE COUPLINGS ON ALL PIPING CONNECTING TWO PRECAST STRUCTURES, GENERAL CONTRACTOR IS REFERRED TO SPECIFICATION SECTION 330509 – FLEXIBLE CONNECTIONS

FLOAT SCHEDULE	
DESCRIPTION	ELEVATION
HIGH LEVEL ALARM	646.21'
LAG PUMP ON	645.96'
LEAD PUMP ON	645.71'
ALL PUMPS OFF	643.71'
LOW LEVEL ALARM	643.37'

EQUALIZATION TANKS DETAIL

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

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EQUALIZATION TANKS & INFLUENT PUMP STATION PLAN, SECTIONS & DETAILS

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
P1

SHEET 20 OF 75

DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

** Note: Spacing between AX-Max units is dependent on desired bury depth. Consult Orenco Engineering for details.*

Design Parameters

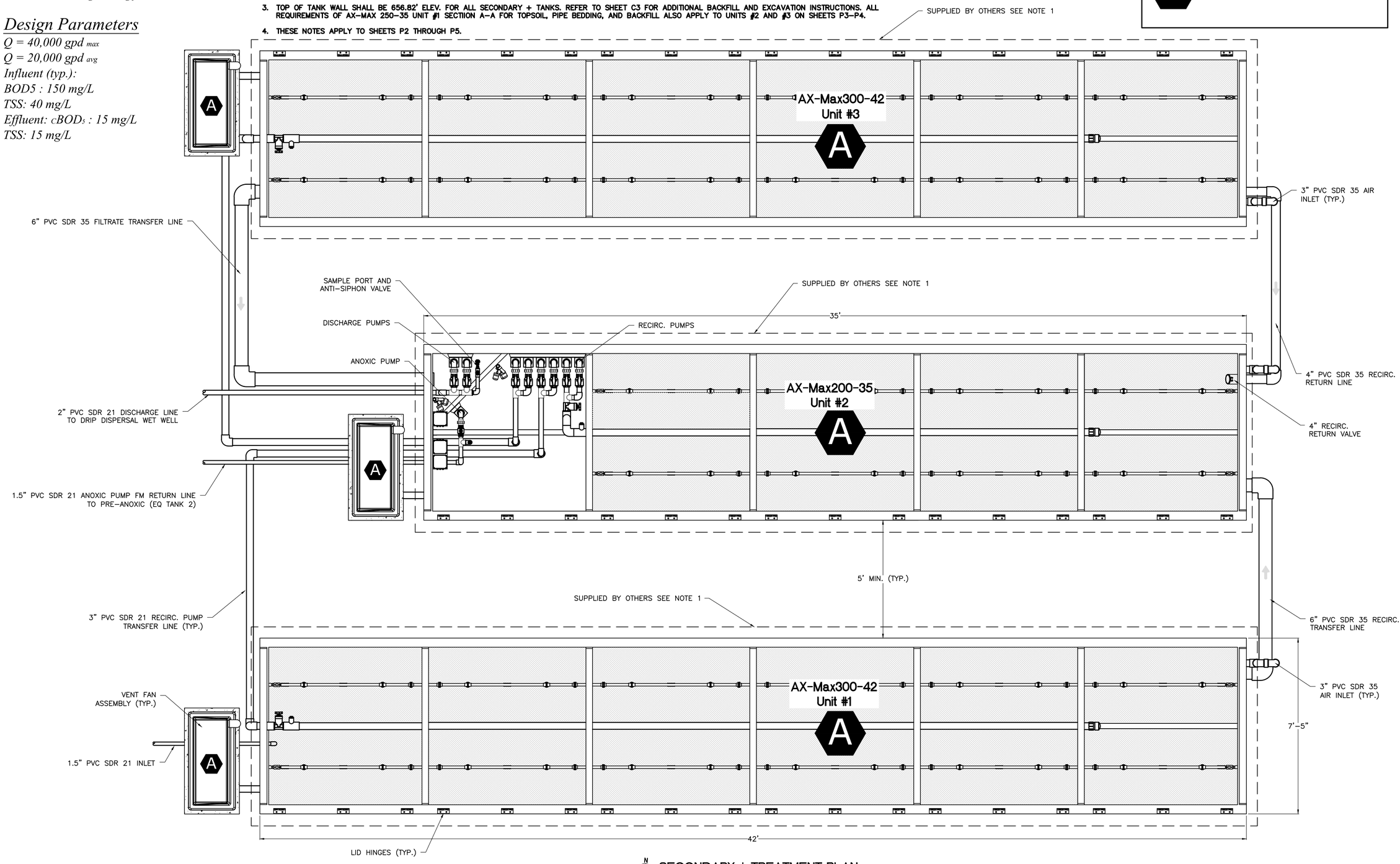
Q = 40,000 gpd max
Q = 20,000 gpd avg
Influent (typ.):
BOD5 : 150 mg/L
TSS: 40 mg/L
Effluent: cBOD5 : 15 mg/L
TSS: 15 mg/L

NOTES:

1. ALL SECONDARY + TANKS (UNITS 1–3) AND VENT FAN ASSEMBLIES SHALL BE FURNISHED BY OTHERS AND INSTALLED BY THE GENERAL CONTRACTOR, REFER TO LEGEND
2. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPING AND ELECTRICAL CONDUIT AND FITTINGS, COUPLINGS, AND MISC. APPURTENANCES BETWEEN TANKS, VENT FANS, AND ASSOCIATED YARD PIPING.
3. TOP OF TANK WALL SHALL BE 656.82' ELEV. FOR ALL SECONDARY + TANKS. REFER TO SHEET C3 FOR ADDITIONAL BACKFILL AND EXCAVATION INSTRUCTIONS. ALL REQUIREMENTS OF AX–MAX 250–35 UNIT #1 SECTION A–A FOR TOPSOIL, PIPE BEDDING, AND BACKFILL ALSO APPLY TO UNITS #2 AND #3 ON SHEETS P3–P4.
4. THESE NOTES APPLY TO SHEETS P2 THROUGH P5.

LEGEND

A — FURNISHED BY OTHERS AND INSTALLED BY GENERAL CONTRACTOR PER SPECIFICATION SECTION 465000–SECTIONARY + TREATMENT



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SECONDARY + TREATMENT PLAN

SCALE: 1/2"=1'–0"

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

SECONDARY + TREATMENT PLAN

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JEN	DEC 2024

PROJECT NO.
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P2
SHEET 21 OF 75

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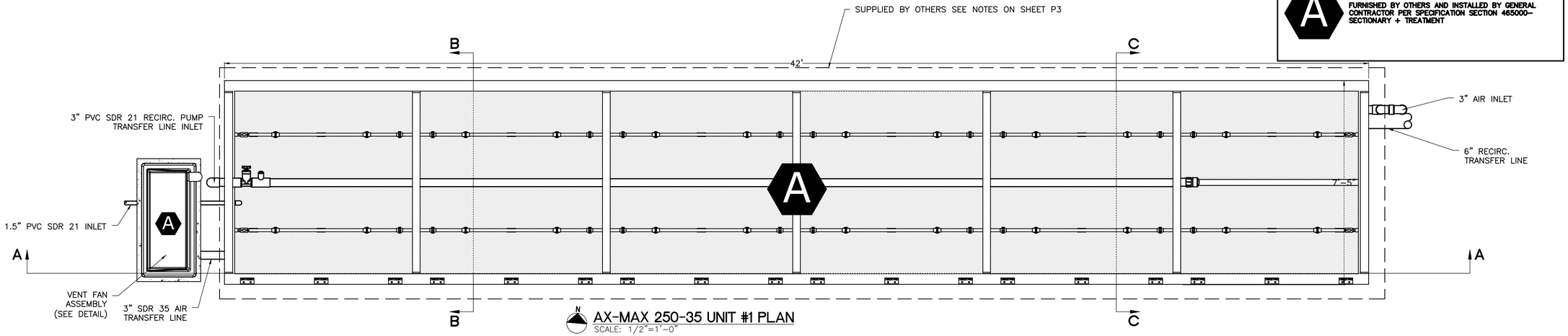
A FURNISHED BY OTHERS AND INSTALLED BY GENERAL CONTRACTOR PER SPECIFICATION SECTION 465000– SECTIONARY + TREATMENT



AX-MAX 250-35 UNIT #1 PLAN
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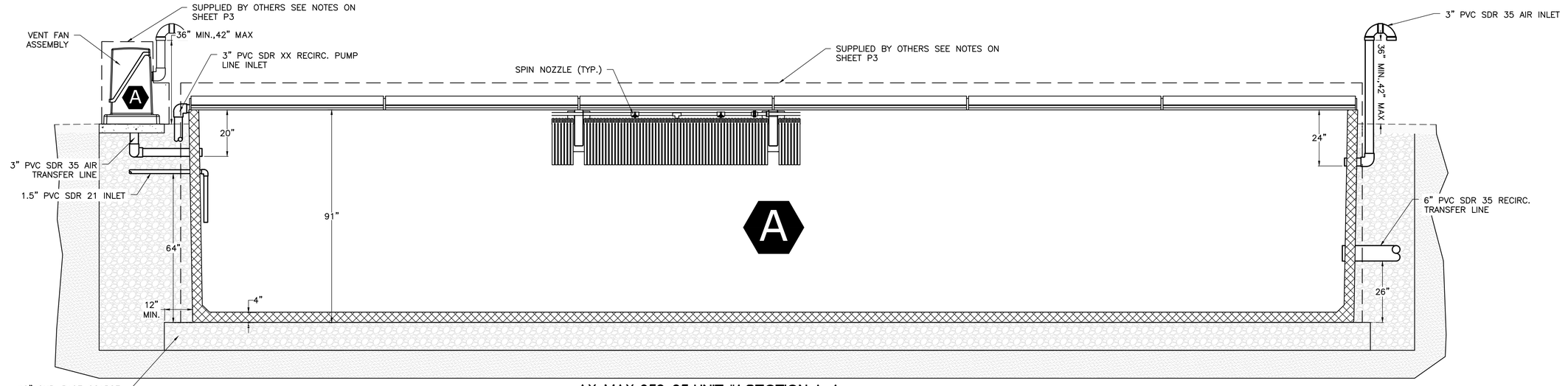

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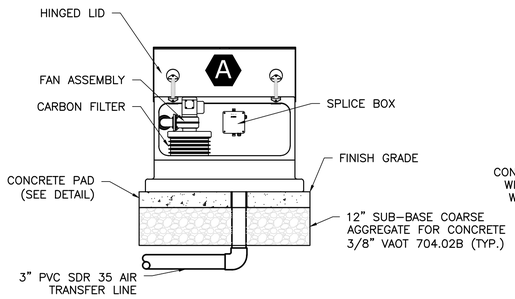

VENT FAN ASSEMBLY DETAIL
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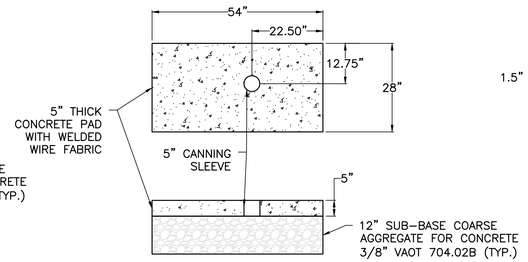

VENT FAN CONCRETE PAD DETAIL
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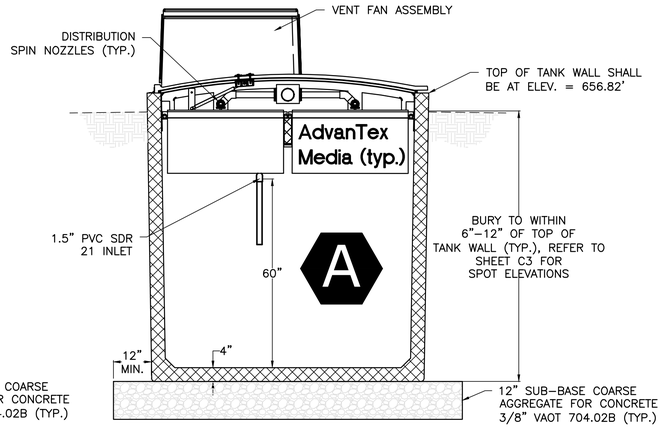

AX-MAX 250-35 UNIT #1 SECTION B-B
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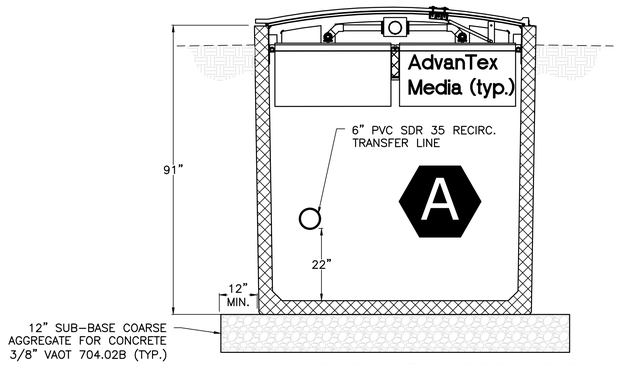

AX-MAX 250-35 UNIT #1 SECTION C-C
SCALE: 1/2"=1'-0"

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SECONDARY + TREATMENT PLAN AND SECTIONS I

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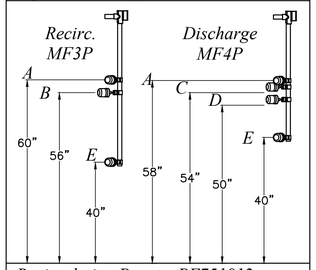
* *Float Functions & Pump Index*

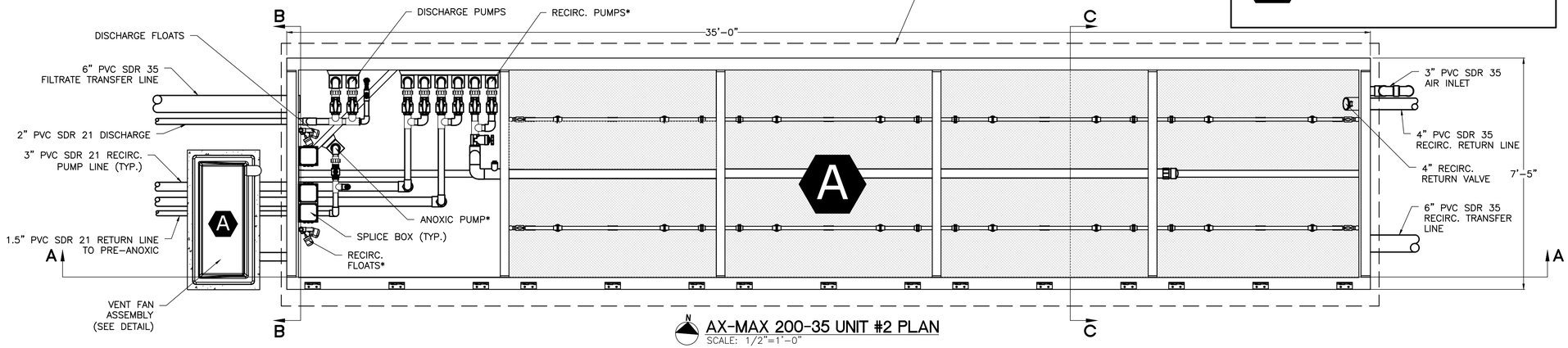
A	*High Level Alarm / Lag Enable*
B	*Override Timer*
C	*Pump ON*
D	*Pump OFF*
E	*Redundant Off / Low Level Alarm*



Recirculation Pumps: PF751012
Discharge Pumps: PF500512
Anoxic Return Pump: PF300512

LEGEND

A — FURNISHED BY OTHERS AND INSTALLED BY GENERAL CONTRACTOR PER SPECIFICATION SECTION 465000–SECTIONARY + TREATMENT



AX-MAX 200-35 UNIT #2 PLAN
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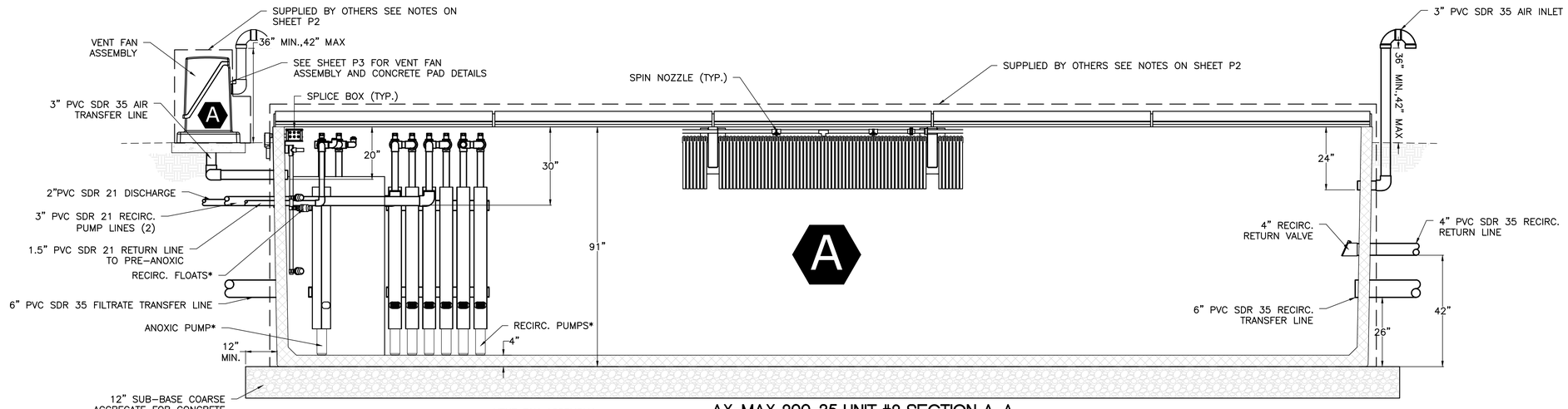

AX-MAX 200-35 UNIT #2 SECTION A-A
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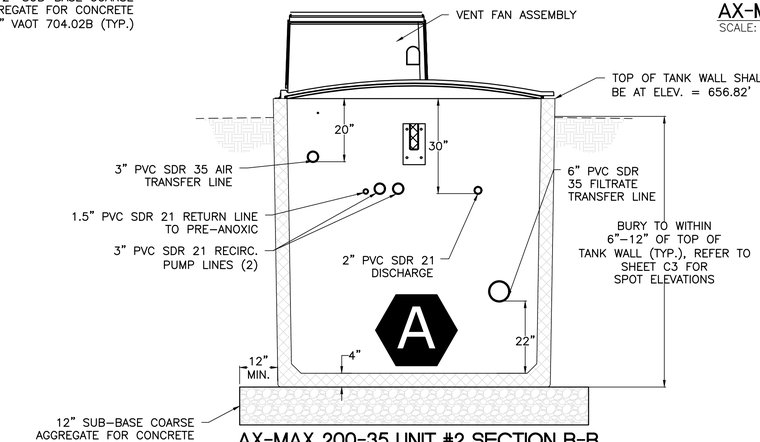
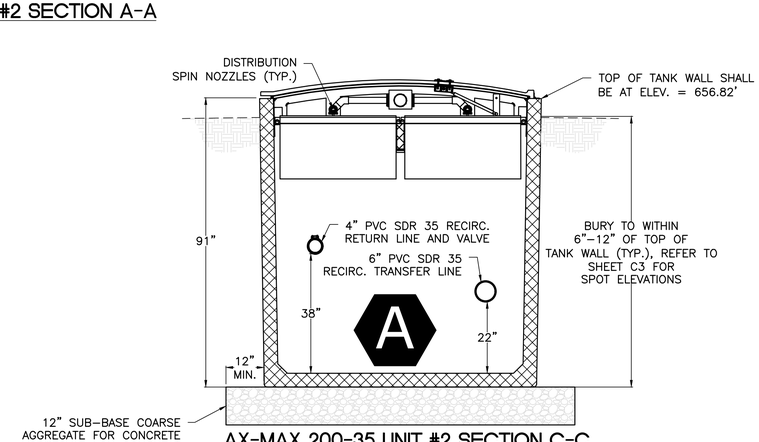


AX-MAX 200-35 UNIT #2 SECTION B-B
SCALE: 1/2"=1'–0"



AX-MAX 200-35 UNIT #2 SECTION C-C
SCALE: 1/2"=1'–0"

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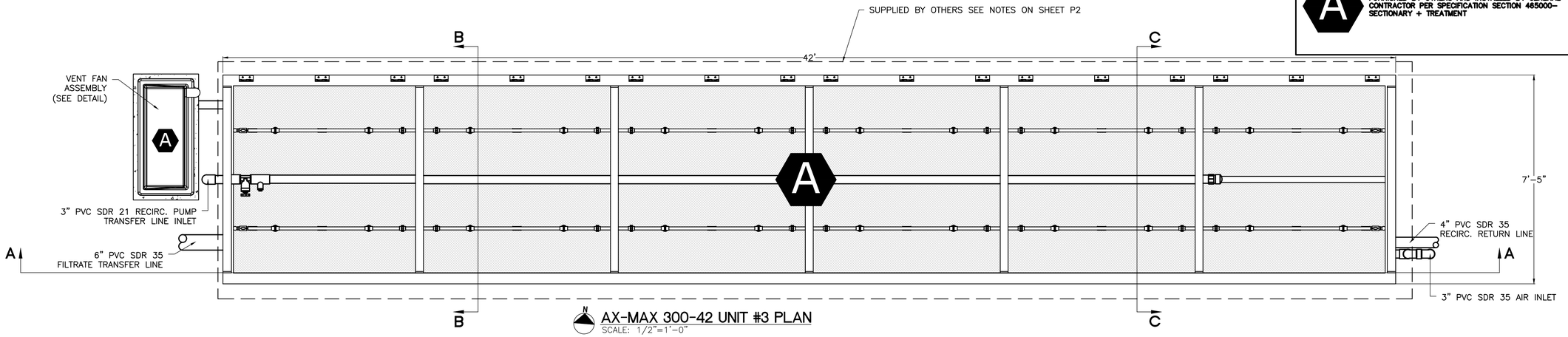
P4

LEGEND

A — FURNISHED BY OTHERS AND INSTALLED BY GENERAL CONTRACTOR PER SPECIFICATION SECTION 465000–SECTIONARY + TREATMENT



AX-MAX 300-42 UNIT #3 PLAN
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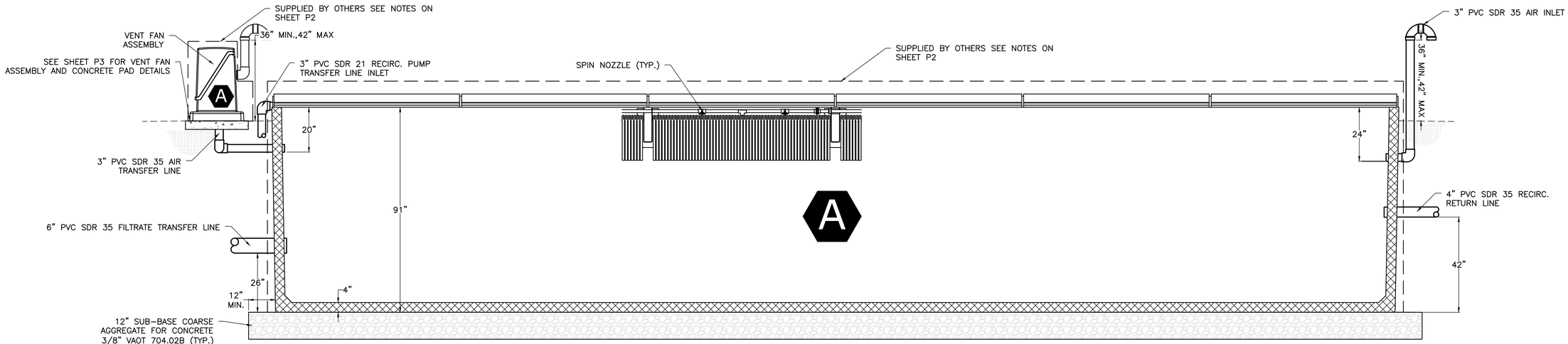
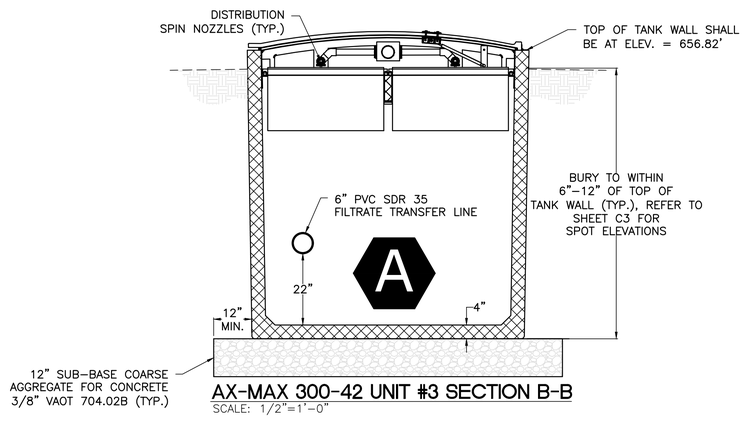


AX-MAX 300-42 UNIT #3 SECTION A-A
SCALE: 1/2"=1'-0"



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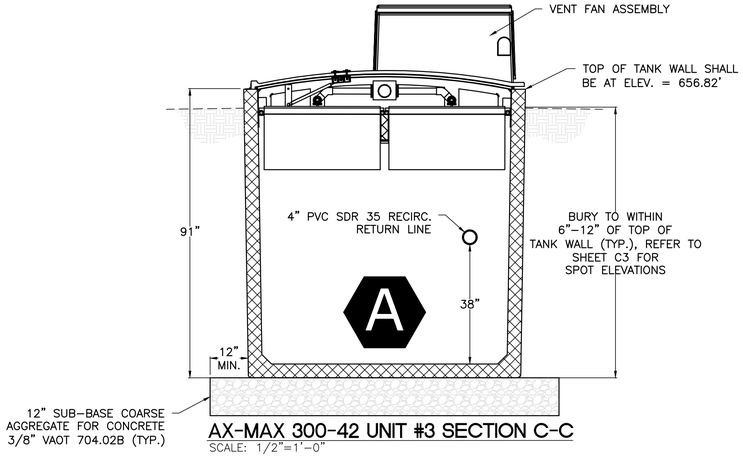
SCALE: 1/2"=1'-0"



AX-MAX 300-42 UNIT #3 SECTION C-C
SCALE: 1/2"=1'-0"

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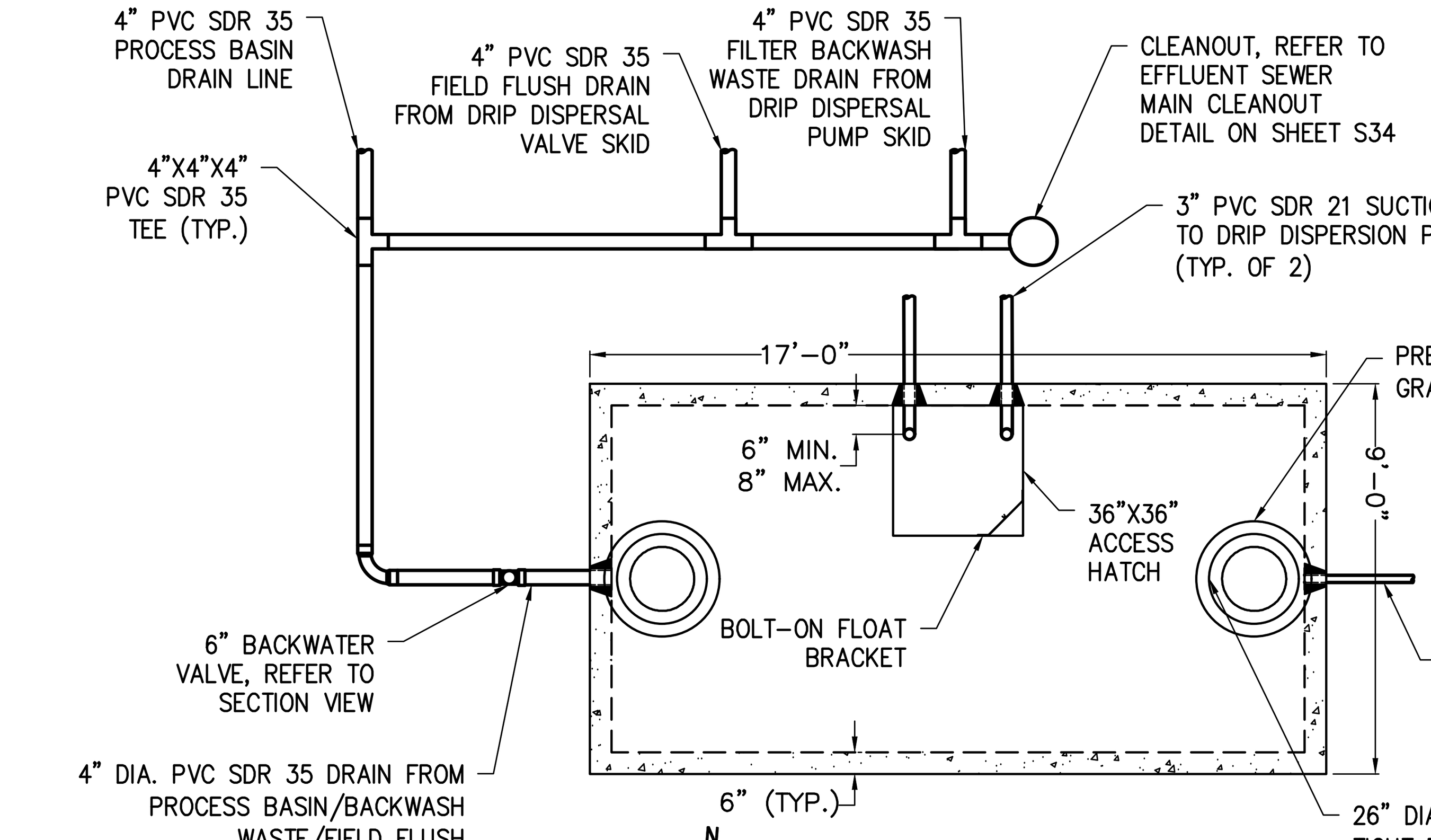
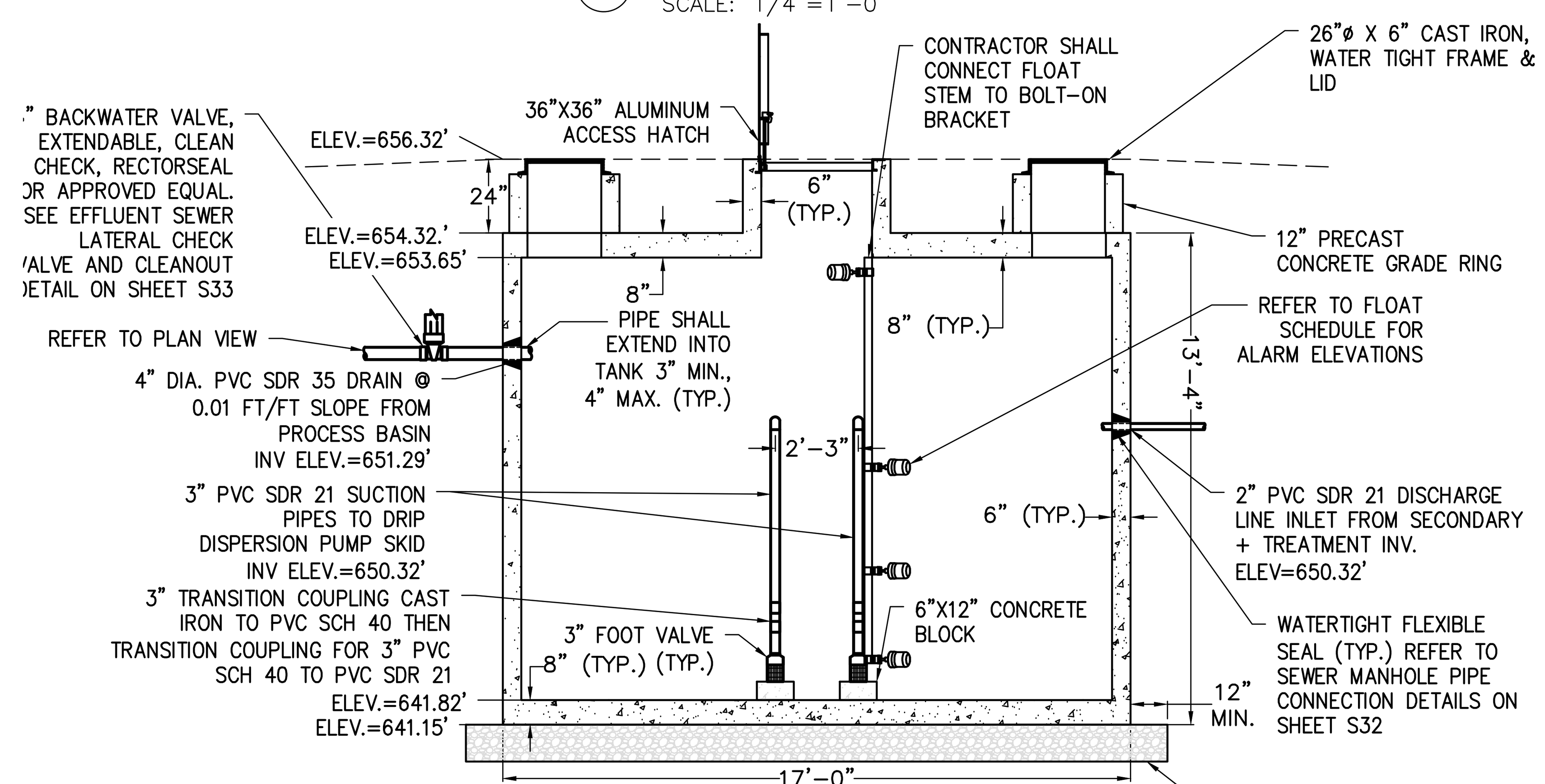


WETWELL TANK PLAN

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



WETWELL TANK SECTION

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

NOTES:

1. ALL REQUIREMENTS OF THE EQUALIZATION TANK SECTION FOR TOPSOIL, PIPE BEDDING, RISER BEDDING, AND BACKFILL ALSO APPLY THE DRIP DISPERSAL WET WELL TANK, REFER TO P1.

FLOAT SCHEDULE	
DESCRIPTION	ELEVATION
HIGH LEVEL ALARM	651.04'
PEAK ENABLE	646.73'
DOSE ENABLE	643.86'
REDUNDANT OFF	642.82'

DRIP DISPERSION DETAILS WITHIN THIS DASHED BORDER ARE FOR PERMIT REVIEW ONLY AND WILL BE INSTALLED BY DRIP DISPERSAL VENDOR, SEE LEGEND

DRIP DISPERSION WET WELL DETAIL

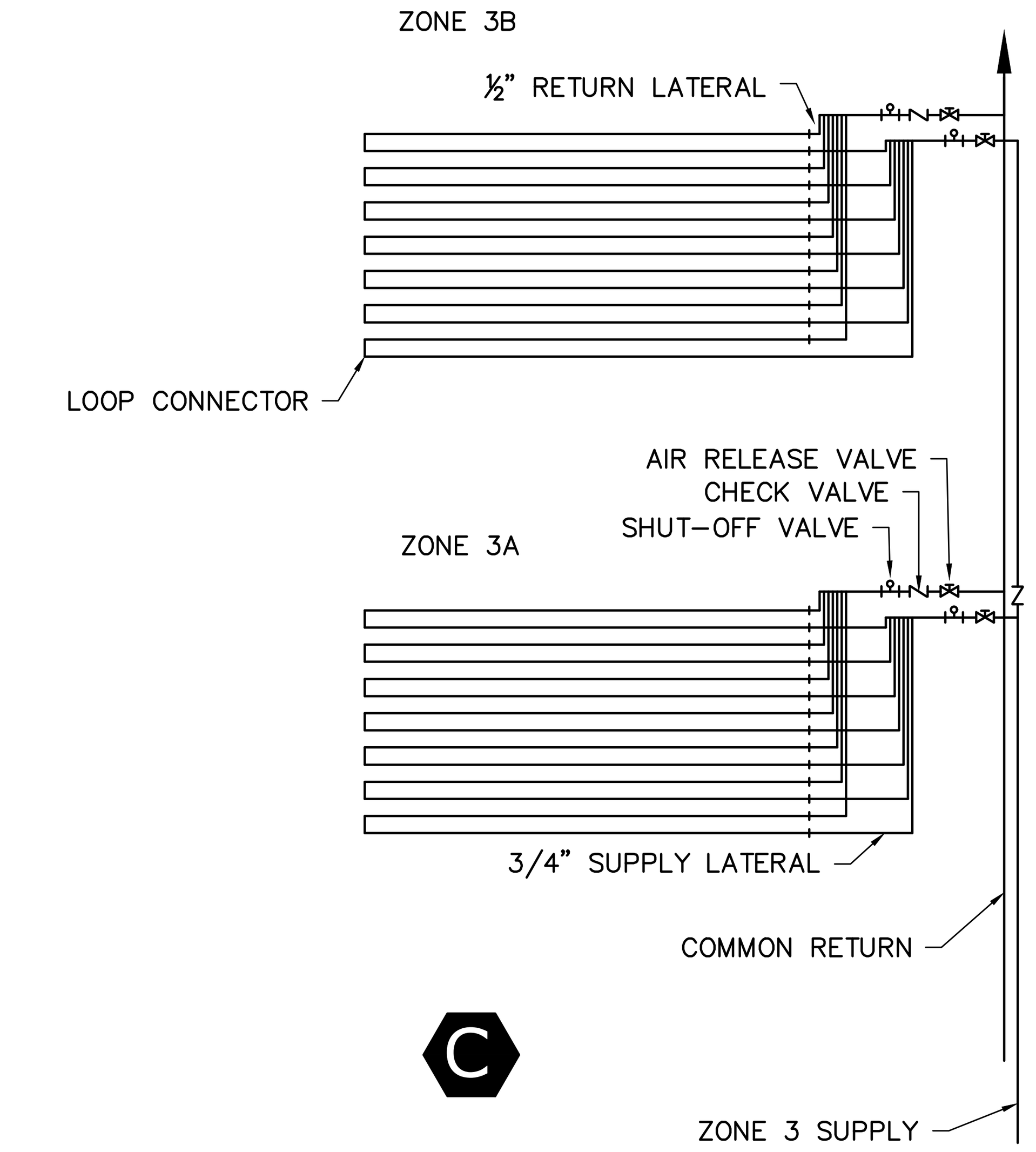
SCALE: 1/4"=1'-0"

GENERAL CONSTRUCTION NOTES (APPLICABLE TO DRIP DISPERSIAL VENDOR EXCEPT WHERE NOTED):

1. THE SYSTEM SHALL NOT BE INSTALLED IN WET OR FROZEN SOILS.
2. DO NOT PARK, DRIVE LARGE EQUIPMENT, OR STORE MATERIALS ON THE DISPERSAL AREA. NO ACTIVITY SHOULD OCCUR ON THE DISPERSAL AREA OTHER THAN THE MINIMUM REQUIRED TO INSTALL THE SYSTEM.
3. ALL INSTALLATION AND CONSTRUCTION TECHNIQUES SHALL CONFORM TO THE STATE AND LOCAL CODES PERTAINING TO ON-SITE WASTEWATER SYSTEMS AND THE PERMIT FOR THE SITE.
4. IF SITE CONDITIONS ARE DETERMINED TO REQUIRE THE INSTALLATION OF THE SYSTEM TO DEVIATE FROM THE DESIGN PLANS, ALL WORK SHALL STOP IMMEDIATELY AND THE DESIGNER AND INSPECTOR SHALL BE NOTIFIED. ANY ONGOING WORK SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. DRIP TUBING MAY BE INSTALLED WITH A VIBRATORY PLOW, A STATIC PLOW, A NARROW TRENCHER (< 6" WIDE), BY HAND TRENCHING, OR BY SCARIFYING THE SURFACE AND BEDDING THE DRIP TUBING IN CLEAN SAND MEETING THE REQUIREMENTS FOR FILL MATERIAL IN THE STATE CODE. FOR SAND FILL SYSTEMS, COVER CONSISTING OF MIN 3" OF THE SAME SAND AND THEN TOPSOIL MEETING THE APPROVED DEPTH REQUIREMENT SHALL BE PROVIDED.
6. ALL DRIP TUBING SHALL BE INSTALLED PARALLEL TO THE CONTOUR.
7. AIR RELEASE VALVES SHALL BE PLACED BELOW THE GROUND SURFACE IN AN INSULATED VALVE BOX BUT AT AN ELEVATION ABOVE THE HIGHEST DRIP LINE IN THAT PARTICULAR ZONE.
8. CONTRACTOR SHALL RESTORE VEGETATIVE COVER FOR INSTALLATIONS WHERE IT IS REMOVED OR BURIED DURING INSTALLATION.
9. ALL CUTTING OF RIGID PVC PIPE, FLEXIBLE PVC, AND DRIP TUBING OF SIZE 2" OR SMALLER SHALL BE ACCOMPLISHED WITH PIPE CUTTERS. NO SAWING IS ALLOWED.
10. ALL RIGID PVC PIPE, FLEXIBLE PVC PIPE AND DRIP TUBING SHALL HAVE THE ENDS COVERED WITH DUCT TAPE AFTER CUTTING TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING THE PIPE.
11. PRIOR TO GLUING, ALL JOINTS SHALL BE INSPECTED FOR AND CLEARED OF ANY DEBRIS. ALL JOINTS SHALL BE CLEANED AND PRIMED WITH PVC PRIMER PRIOR TO BEING GLUED.
12. ALL PVC PIPE AND FITTINGS SHALL BE SCH 40, ONTRACTOR TO REFER TO C7 FOR ADDITIONAL FURNISH AND INSTALL REQUIREMENTS.

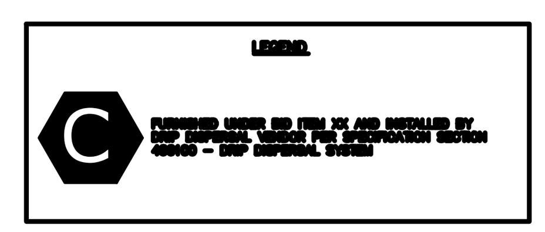
COLD CLIMATE NOTES (APPLICABLE TO DRIP DISPERSIAL VENDOR EXCEPT WHERE NOTED):

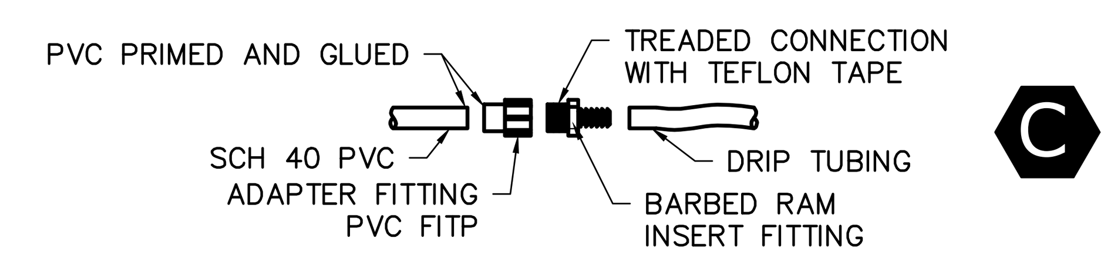
13. THE VERTICAL SECTIONS OF PIPE THAT TRAVEL THROUGH THE FROST ZONE AND CONNECT THE SUPPLY AND RETURN LINES TO THE MANIFOLDS SHALL BE INSULATED SCH 40 PVC PIPE. INSULATION SHALL CONSIST OF OAKSON SUPPLIED FOAM-GLASS WRAPPED INSULATION.
14. FOIL WRAP INSULATION SHALL BE PLACED OVER THE SUPPLY/RETURN MANIFOLDS AND LOOP CONNECTORS SO THAT AT LEAST 1' OF INSULATION EXTENDS EACH DIRECTION BEYOND THE FITTINGS. (SEE MANIFOLD DETAIL)
15. AIR RELEASE VALVE ENCLOSURES SHALL BE INSULATED WITH FOIL WRAP INSULATION.
16. ALL LOOPS CONNECTING DRIP RUNS SHALL CONTAIN AT LEAST ONE EMITTER SO THAT THEY DRAIN INTO THE SOIL AFTER THE PUMP SHUTS OFF.
17. CONTRACTOR SHALL INSTALL DENSE VEGETATIVE COVER OVER THE SUPPLY TRENCH, RETURN TRENCH, MANIFOLDS, AND DRIP TUBING PRIOR TO THE FIRST EXPOSURE TO FREEZING TEMPERATURES. IF VEGETATION CANNOT BE ESTABLISHED THEN THE ENTIRE DRIP DISPERSAL FIELD IS TO BE COVERED WITH A THICK LAYER (MINIMUM 6") OF MULCH, STRAW/HAY, OR FROST BLANKET UNTIL SUCH TURF COVER IS ESTABLISHED. CONTRACTOR TO REFER TO SHEET C7 FOR ADDITIONAL DETAILS.
18. VEGETATION HEIGHT OVER THE DRIP DISPERSAL AREA SHOULD BE A MINIMUM OF 4" – 6" THROUGHOUT THE WINTER MONTHS. CONTRACTOR TO REFER TO SHEET C7 FOR ADDITIONAL DETAILS.



ZONE 3A/3B EXAMPLE MANIFOLD AND TUBING CONNECTIONS

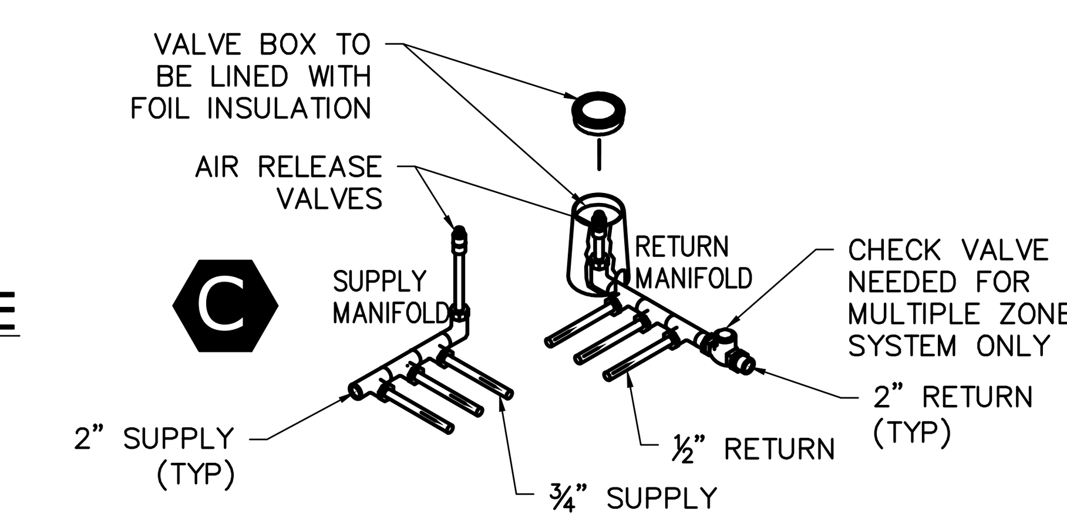
(NOT TO SCALE)





CONNECTIONING DRIP TUBING TO SCH 40 PVC PIPE

(NOT TO SCALE)

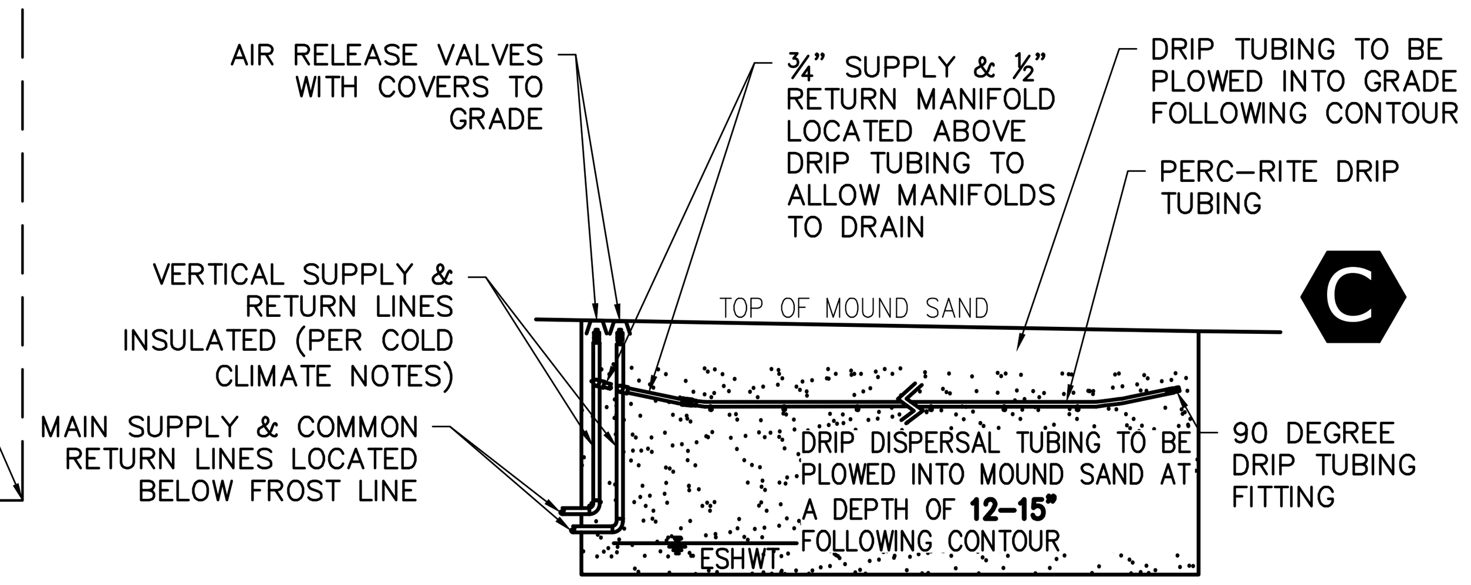


TYPICAL MANIFOLD CONNECTION

(NOT TO SCALE)

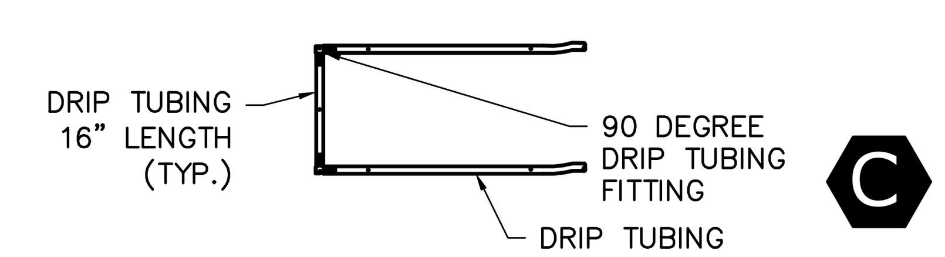
NOTES:

1. ALL RIGID AND FLEXIBLE PVC ARE TO BE LOCATED ABOVE THE DRIP LINE TO ALLOW THE PIPES TO DRAIN.
2. THE AIR RELEASE VALVES SHALL BE PLACED AT THE HIGHEST POINT ON THE SUPPLY AND RETURN LINE FOR EACH ZONE.
3. EACH ZONE TO HAVE TWO AIR RELEASE VALVES
4. RETURN LINES TO BE CONNECTED TO A COMMON RETURN LINE.



PERC-RITE FIELD

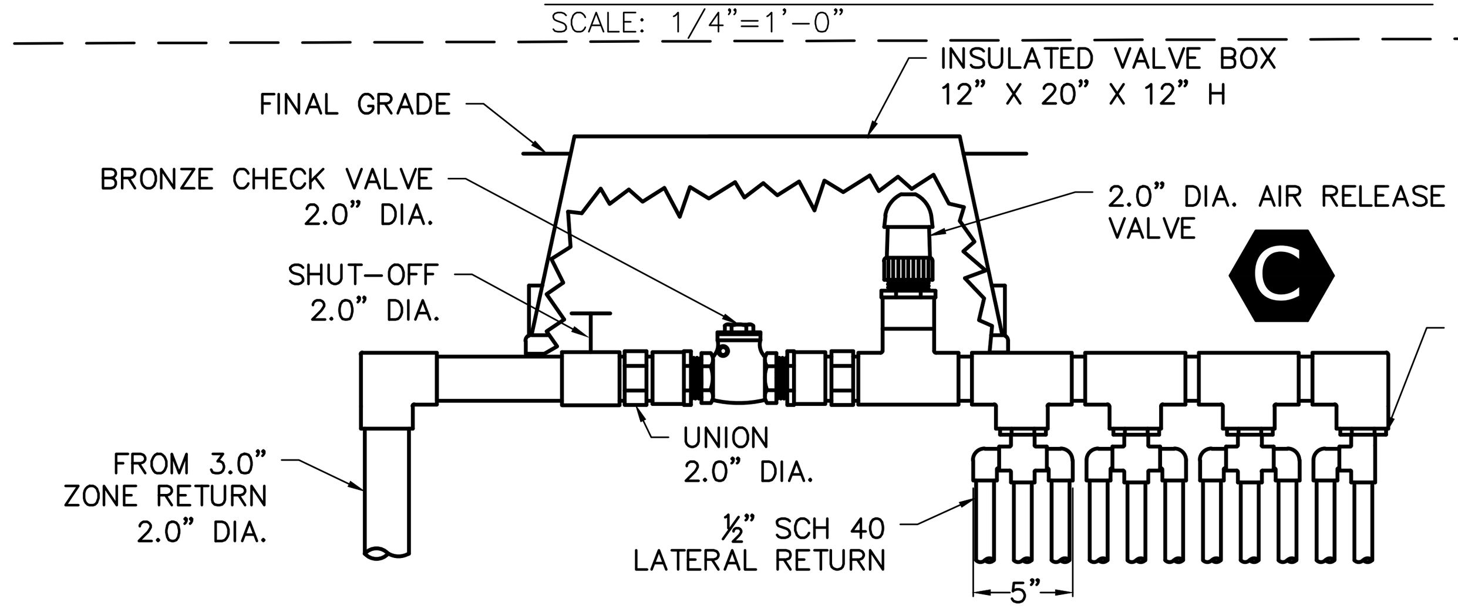
(NOT TO SCALE)



TYPICAL DRIP LOOP CONNECTION

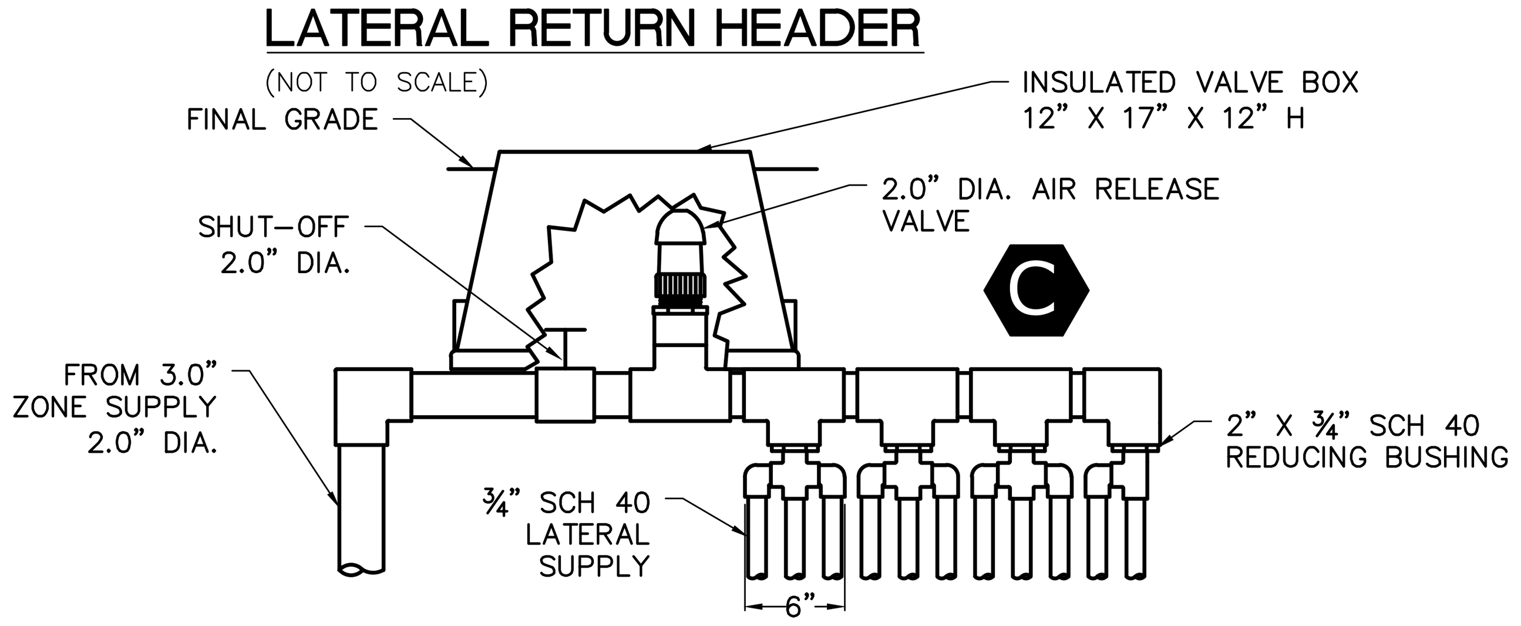
(NOT TO SCALE)

NOTE:
1. ALL DRIP LOOPS ARE TO BE LOCATED 2" ABOVE THE DRIP LINE TO ALLOW FOR THE LOOPS TO DRAIN.



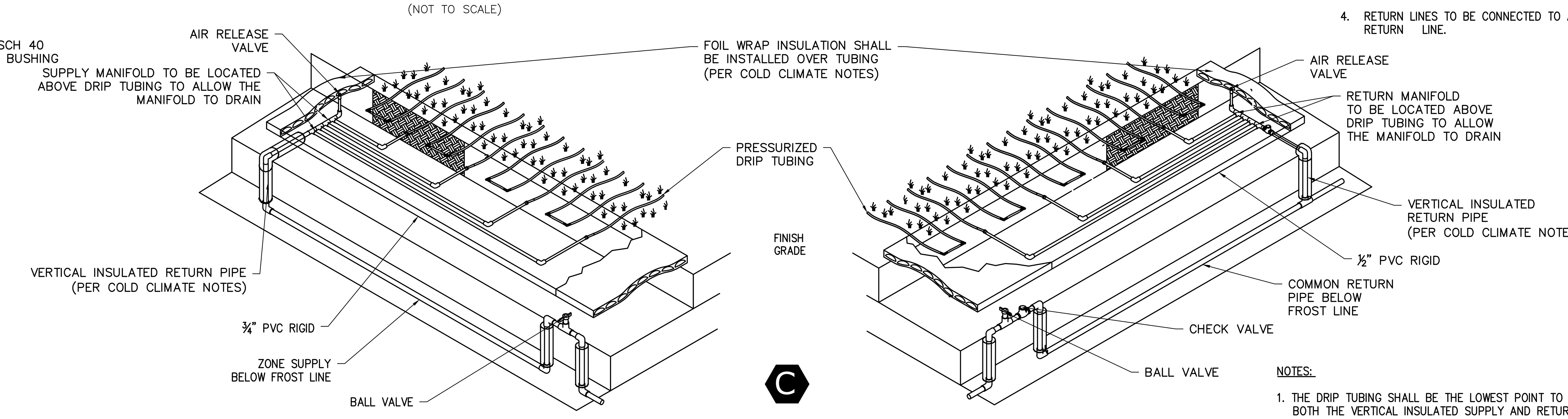
LATERAL RETURN HEADER

(NOT TO SCALE)



LATERAL SUPPLY HEADER

(NOT TO SCALE)



STANDARD DRIP SYSTEM (TOP FEED MANIFOLD)

(NOT TO SCALE)

NOTES:

1. THE DRIP TUBING SHALL BE THE LOWEST POINT TO ALLOW FOR DRAINAGE FROM BOTH THE VERTICAL INSULATED SUPPLY AND RETURN PIPES
2. DRIP TUBING INSTALLATION DEPTH 6" MIN. AS PER DESIGN
3. FORCE MAIN INSTALLATION DEPTH TO BE BELOW THE FROST LINE

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DRIP DISPERSION WETWELL PLAN AND SECTIONS

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

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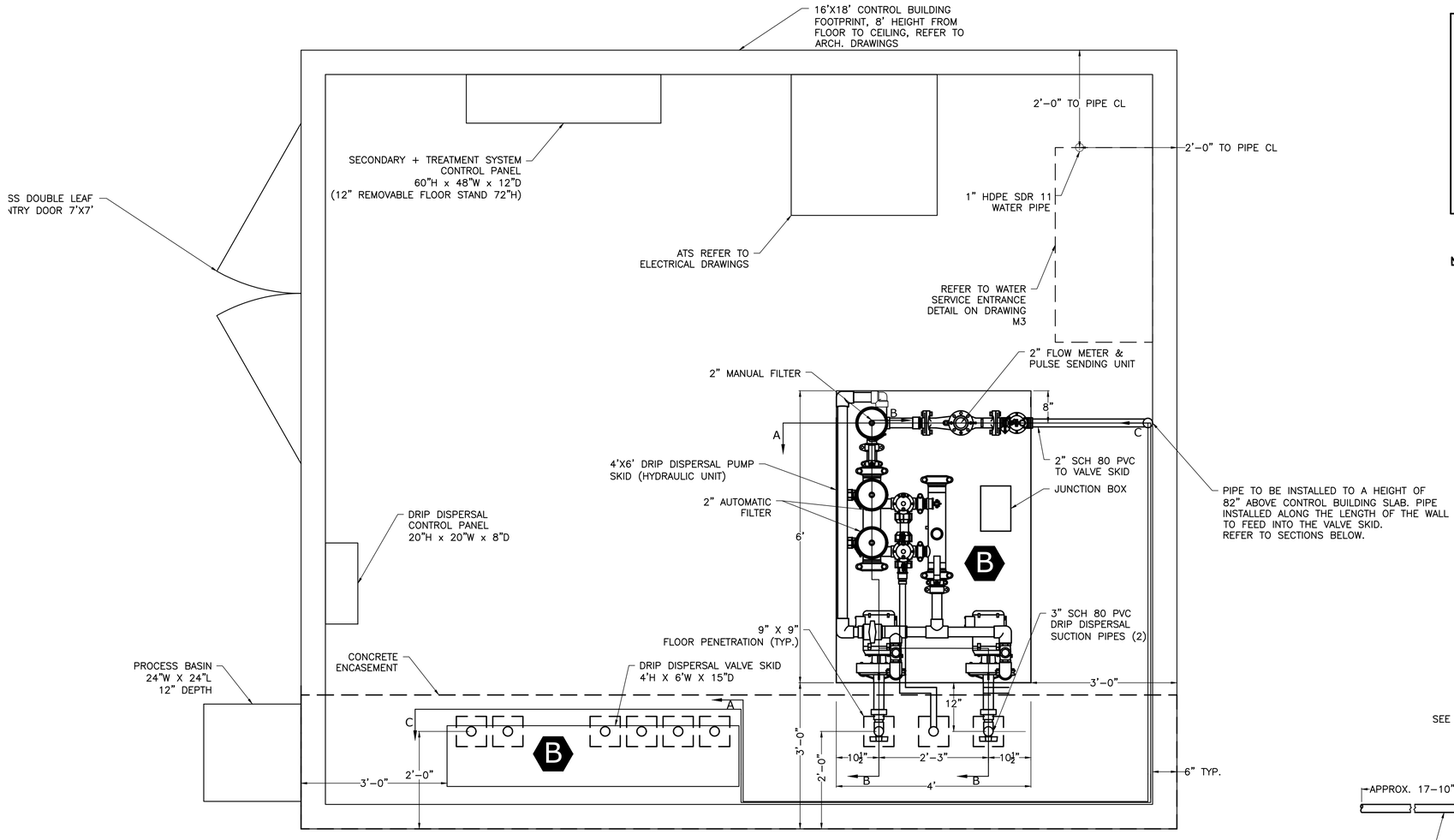
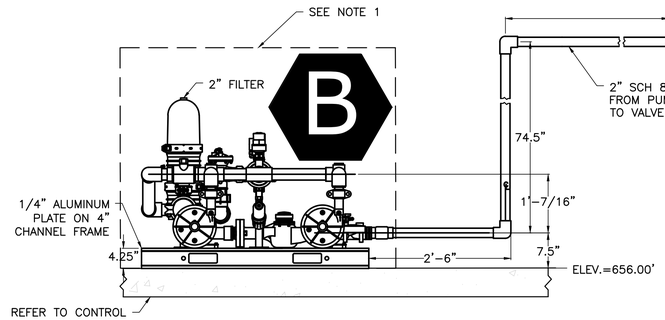


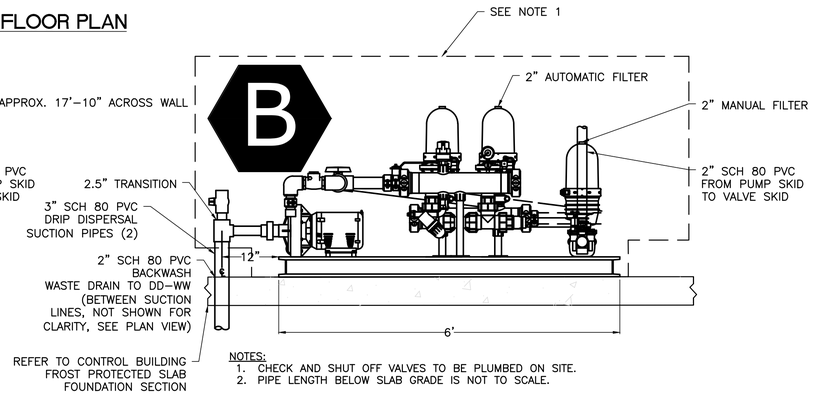
CONTROL BUILDING FLOOR PLAN

SCALE: 3/4"=1'-0"



DRIP DISPERSAL PUMP SKID SECTION A-A

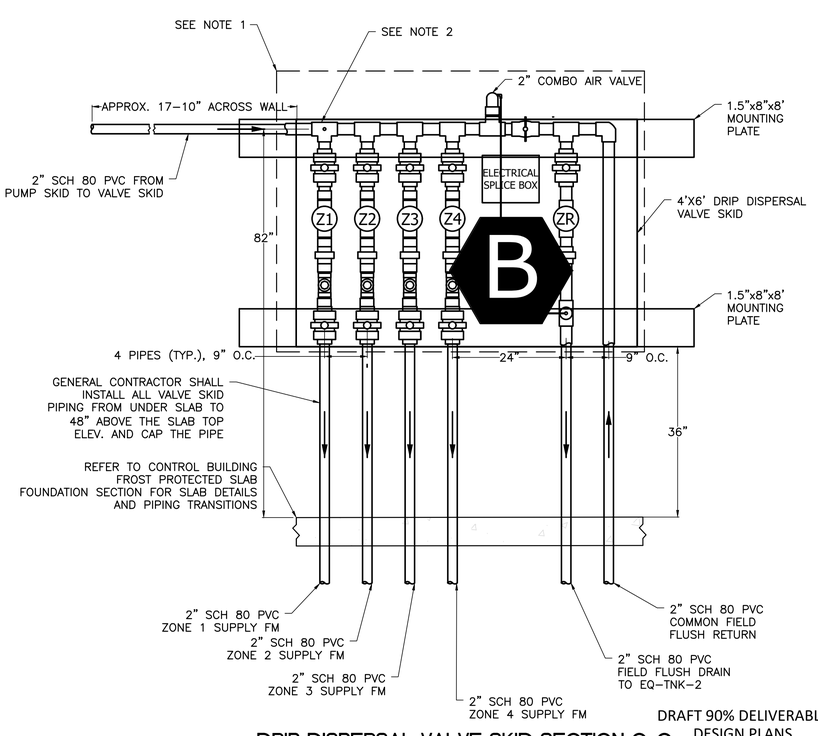
SCALE: 3/4"=1'-0"



NOTES:
1. CHECK AND SHUT OFF VALVES TO BE PLUMBED ON SITE.
2. PIPE LENGTH BELOW SLAB GRADE IS NOT TO SCALE.

DRIP DISPERSAL PUMP SKID SECTION B-B

SCALE: 3/4"=1'-0"



DRIP DISPERSAL VALVE SKID SECTION C-C

SCALE: 3/4"=1'-0"

LEGEND

B — FURNISHED UNDER BID ITEM XX AND INSTALLED BY GENERAL CONTRACTOR PER SPECIFICATION SECTION 466100 – DRIP DISPERSAL SYSTEM

NOTES:

1. **DRIP DISPERSION PUMP AND VALVE SKID FURNISHED UNDER BID ITEM XX AND INSTALLED BY GENERAL CONTRACTOR, REFER TO LEGEND.**
2. **GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPE REDUCERS, INCREASERS, COUPLINGS, AND MISC. APPURTENANCES REQUIRED TO JOIN THE DRIP DISPERSION PROCESS PIPING TO THE CONTROL BUILDING PROCESS PIPING.**
3. **REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.**

FINAL DESIGN PLANS
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CONTROL BUILDING PROCESS FLOOR PLAN AND SECTIONS

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DRAWN	DATE
JEN	DEC 2024

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ABBREVIATIONS & SYMBOLS

AAV	AIR ADMITTANCE VALVE
A/C	AIR CONDITIONING
ACH	AIR CHANGES PER HOUR
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROLS
BBD	BOILER BLOWDOWN
BD	BACKDRAFT DAMPER
BF	BOILER FEED
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BG	BLAST GATE
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BIA	BACKWARD INCLINED AIRFOIL
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CAF	COMBUSTION AIR FAN
CAP	CAPACITY
CC	COOLING COIL
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CL	CENTERLINE
CLG	CEILING
CO	CLEANOUT
CONN	CONNECTION
COP	COEFFICIENT OF PERFORMANCE
CU	CONDENSING UNIT OR COPPER
CUH	CABINET UNIT HEATER
CW	COLD WATER OR CLOTHES WASHER
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DF	DRINKING FOUNTAIN
DG	DIGESTER GAS
DI	DIGITAL INPUT
DIA	DIAMETER
DN	DOWN
DO	DIGITAL OUTPUT
DWG	DRAWING
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EE	EMERGENCY EYEWASH
EER	ENERGY EFFICIENCY RATIO
EES	EMERGENCY EYEWASH & SHOWER
EF	EXHAUST FAN
EGT	ENTERING GAS TEMPERATURE
EH	EXHAUST HOOD
ER	EXHAUST REGISTER
ERH	EXTERIOR ROOF HYDRANT
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EWH	EXTERIOR WALL HYDRANT
EXIST	EXISTING
FA	FREE AREA
FC	FORWARD CURVED OR FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN OR FIRE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT HOSE VALVE
FFU	FAN FILTER UNIT
FH	FILTER HOUSING
FL	FAIL LAST
FLA	FULL LOAD AMPS
FM	FLOW METER OR FACTORY MUTUAL
FMS	FACILITY MANAGEMENT SYSTEM
FP	FIRE PROTECTION
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOW SWITCH OR FLOOR SINK
FT	FEET
F&T	FLOAT AND THERMOSTATIC
G	GAS
GC	GENERAL CONTRACTOR
GF	GAS FURNACE
GMU	GLYCOL MAKEUP UNIT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD
HP	HORSEPOWER OR HEAT PUMP
HRU	HEAT RECOVERY UNIT
HS	HOSE STATION
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
IH	INTAKE HOOD
IW	INDIRECT WASTE
IWH	INTERIOR WALL HYDRANT
KS	KITCHEN SINK
L	LAVATORY
LAT	LEAVING AIR TEMPERATURE
LGT	LEAVING GAS TEMPERATURE
LBS	POUNDS
LP	LIQUID PROPANE
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MMBH	MILLION BTUH
MOCP	MAXIMUM OVERCURRENT PROTECTION
MD	MOTORIZED DAMPER
MS	MOP SINK
MTD	MOUNTED
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
O/A	OUTSIDE AIR
PD	PRESSURE DROP
PE	POLYETHYLENE
PEX	CROSS LINKED POLYETHYLENE
PF	PROPELLER FAN
PG	PROPANE GAS OR PROPYLENE GLYCOL
PP	POLYPROPYLENE
PRE	POWER ROOF EXHAUST
PRV	PRESSURE REDUCING VALVE
PWE	POWER WALL EXHAUSTER
PSI	POUNDS PER SQUARE INCH
PSIG	POUND PER SQUARE INCH GAUGE
R/A	RETURN AIR
RD	ROOF DRAIN
RH	RELATIVE HUMIDITY
RTU	ROOFTOP UNIT
RR	RETURN REGISTER
S/A	SUPPLY AIR
SD	SMOKE DAMPER OR SUPPLY DIFFUSER
SF	SUPPLY FAN
SH	SHOWER
SIC	SQUARE INLINE CENTRIFUGAL
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
T/A	TRANSFER AIR
TAB	TESTING, ADJUSTING & BALANCING
TD	TRENCH DRAIN
TG	TRANSFER GRILLE
TIC	TUBULAR INLINE CENTRIFUGAL
TMX	THERMOSTATIC MIXING VALVE
TOD	TOP OF DUCT
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UCD	UNDERCUT DOOR
UG	UNDERGROUND
UH	UNIT HEATER
UR	URINAL
US	UTILITY SINK
V	VENT
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
WB	WET BULB
WC	WATER CLOSET OR WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE
WH	WATER HEATER
XP	EXPLOSION PROOF

POINT OF DEACTIVATION OR NEW CONNECTION TO EXISTING

FTR-1
1.0
8'-0"

UNIT TYPE
FLOW (GPM)
ACTIVE LENGTH

VAV-1
800
500

VAV BOX SIZE
MAX. FLOW (CFM)
MIN. FLOW (CFM)

SD-1 (100) — DIFFUSER TYPE / AIR FLOW

VALVES

- AUTOMATIC FLOW CONTROL
- BALL OR BUTTERFLY (SIZE DEPENDENT)
- CHECK
- BALANCING
- GATE
- GLOBE
- PLUG
- PRESSURE REGULATING OR REDUCING
- RELIEF
- ANGLE PATTERN MULTI PURPOSE PUMP DISCHARGE
- STRAIGHT PATTERN MULTI PURPOSE PUMP DISCHARGE
- VALVE IN TEE DROP
- VALVE IN TEE RISE
- VALVE IN ELBOW DROP
- VALVE IN ELBOW RISE
- 2-WAY CONTROL (ELECTRONIC)
- 2-WAY CONTROL (PNEUMATIC)
- 3-WAY CONTROL (ELECTRONIC)
- 3-WAY CONTROL (PNEUMATIC)

FITTINGS

- EXPANSION LOOP
- EXPANSION JOINT
- PIPE TURNING DOWN (PIPE DROP)
- PIPE TURNING UP (PIPE RISE)
- TEE UP (OFF TOP)
- TEE DOWN (OFF BOTTOM)
- PIPE DROP IN RUN
- PIPE DROP AND TURN
- TEE OFF TOP
- TEE OFF BOTTOM
- CROSS
- CROSS WITH RISER
- PLAIN ELBOW
- SANITARY ELBOW
- PLAIN TEE (OFF SIDE)
- SANITARY TEE (OFF SIDE)
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION
- FLANGED JOINT
- PIPE CAP
- THREADED HOSE END WITH CAP
- METAL GASKET FACE SEAL
- PIPE GUIDE
- PIPE ANCHOR
- WALL SLEEVE
- FLEX CONNECTION
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- AV — AUTOMATIC AIR VENT
- MV — MANUAL AIR VENT
- PUMP
- DP — DIFFERENTIAL PRESSURE
- TP — TRAP PRIMER
- TEST PLUG
- F L — WATER FILTER HOUSING AND CARTRIDGE
- WYE STRAINER
- WYE STRAINER W/BLOWDOWN
- BASKET STRAINER
- PUMP SUCTION DIFFUSER
- VB — VACUUM BREAKER
- BACKFLOW PREVENTER
- WALL HYDRANT (ELEVATION)
- WALL HYDRANT (PLAN VIEW)
- CLEANOUT END OF LINE
- FLOOR CLEANOUT
- TRAP

PIPING

- EXISTING WORK TO REMAIN
- EXISTING WORK TO BE REMOVED ON DEMOLITION DRAWINGS
- NEW WORK ON PROPOSED DRAWINGS
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- GCHWS — GLYCOL CHILLED WATER SUPPLY
- GCHWR — GLYCOL CHILLED WATER RETURN
- GHWS — GLYCOL HOT WATER SUPPLY
- GHWR — GLYCOL HOT WATER RETURN
- CDS — CONDENSER WATER SUPPLY
- CDR — CONDENSER WATER RETURN
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- LPS — LOW PRESSURE STEAM SUPPLY
- LPR — LOW PRESSURE CONDENSATE RETURN
- MPS — MEDIUM PRESSURE STEAM SUPPLY
- MPR — MEDIUM PRESSURE CONDENSATE RETURN
- HPS — HIGH PRESSURE STEAM SUPPLY
- HPR — HIGH PRESSURE CONDENSATE RETURN
- PC — PUMPED CONDENSATE
- CD — CONDENSATE DRAIN
- G — GAS PIPING
- FOF — FUEL OIL FILL
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- FOV — FUEL OIL VENT
- FP — FIRE PROTECTION SPRINKLER
- TW — TEPID WATER
- CW — DOMESTIC COLD WATER
- HW — DOMESTIC HOT WATER
- HWC — DOMESTIC HOT WATER RECIRC.
- S — SANITARY DRAIN
- S — SANITARY DRAIN BELOW FLOOR
- V — SANITARY VENT
- ST — STORM DRAIN
- ST — STORM DRAIN BELOW FLOOR
- ST (SEC) — SECONDARY STORM DRAIN
- D — INDIRECT DRAIN
- DI — DEIONIZED WATER
- DIS — DEIONIZED WATER SUPPLY
- DIR — DEIONIZED WATER RETURN
- LW — ACID WASTE
- LW — ACID WASTE BELOW FLOOR
- LV — ACID VENT
- AR — ARGON
- O2 — OXYGEN

PIPING CONTINUED

- VAC — VACUUM
- CA — COMPRESSED AIR
- H2 — HYDROGEN
- NO2 — NITROUS OXIDE
- N — NITROGEN
- O2 — OXYGEN
- LN — LIQUID NITROGEN
- NPW — NON POTABLE WATER
- NPHW — NON POTABLE HOT WATER
- DIRECTION OF FLOW
- PITCH PIPE DOWN

DUCTWORK

- EXISTING WORK TO REMAIN
- EXISTING WORK TO BE REMOVED ON DEMOLITION DRAWINGS
- NEW WORK ON PROPOSED DRAWINGS
- SUPPLY AIR DUCT/OUTDOOR AIR (RISE UP)
- SUPPLY AIR DUCT/OUTDOOR AIR (DROP DOWN)
- RETURN AIR DUCT (RISE UP)
- RETURN AIR DUCT (DROP DOWN)
- EXHAUST DUCT (RISE UP)
- EXHAUST DUCT (DROP DOWN)
- 6x6 — DUCT SIZE (FIRST DIMENSION SIDE SHOWN)
- R — RISE IN DIRECTION OF FLOW
- D — DROP IN DIRECTION OF FLOW
- ELBOW WITH TURNING VANES
- DUCT WITH ACOUSTICAL LINING
- DOUBLE WALL DUCT
- FLEXIBLE DUCT
- END CAP
- 45° TAKE-OFF (RECTANGULAR)
- TRANSITION (RECTANGLE TO ROUND)
- TRANSITION (ROUND TO RECTANGLE)
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- VD — VOLUME DAMPER
- BG — BLAST GATE
- FD — FIRE DAMPER
- MD — MOTOR OPERATED DAMPER
- BD — BACK DRAFT DAMPER
- F/S — FIRE/SMOKE DAMPER
- H — HUMIDIFIER
- SD — SMOKE DAMPER

DUCTWORK CONTINUED

- S — SMOKE DETECTOR
- ACCESS DOOR (SCHEMATIC)
- AD — ACCESS DOOR (SIDE)
- FC — FLEXIBLE CONNECTION
- FLOW ARROW
- SUPPLY AIR DIFFUSER/REGISTER OR GRILLE
- RETURN AIR REGISTER OR GRILLE
- EXHAUST AIR REGISTER OR GRILLE
- T — THERMOSTAT
- H — HUMIDISTAT
- PS — PRESSURE SWITCH
- FLOW SWITCH
- FMS — FACILITY MANAGEMENT SYSTEM PANEL
- T — TEMPERATURE SENSOR
- $V — VARIABLE SWITCH
- $H/A — HAND/AUTO SWITCH
- $T — TIMER SWITCH

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

MECHANICAL LEGEND AND ABBREVIATIONS

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.	OCTOBER 2024

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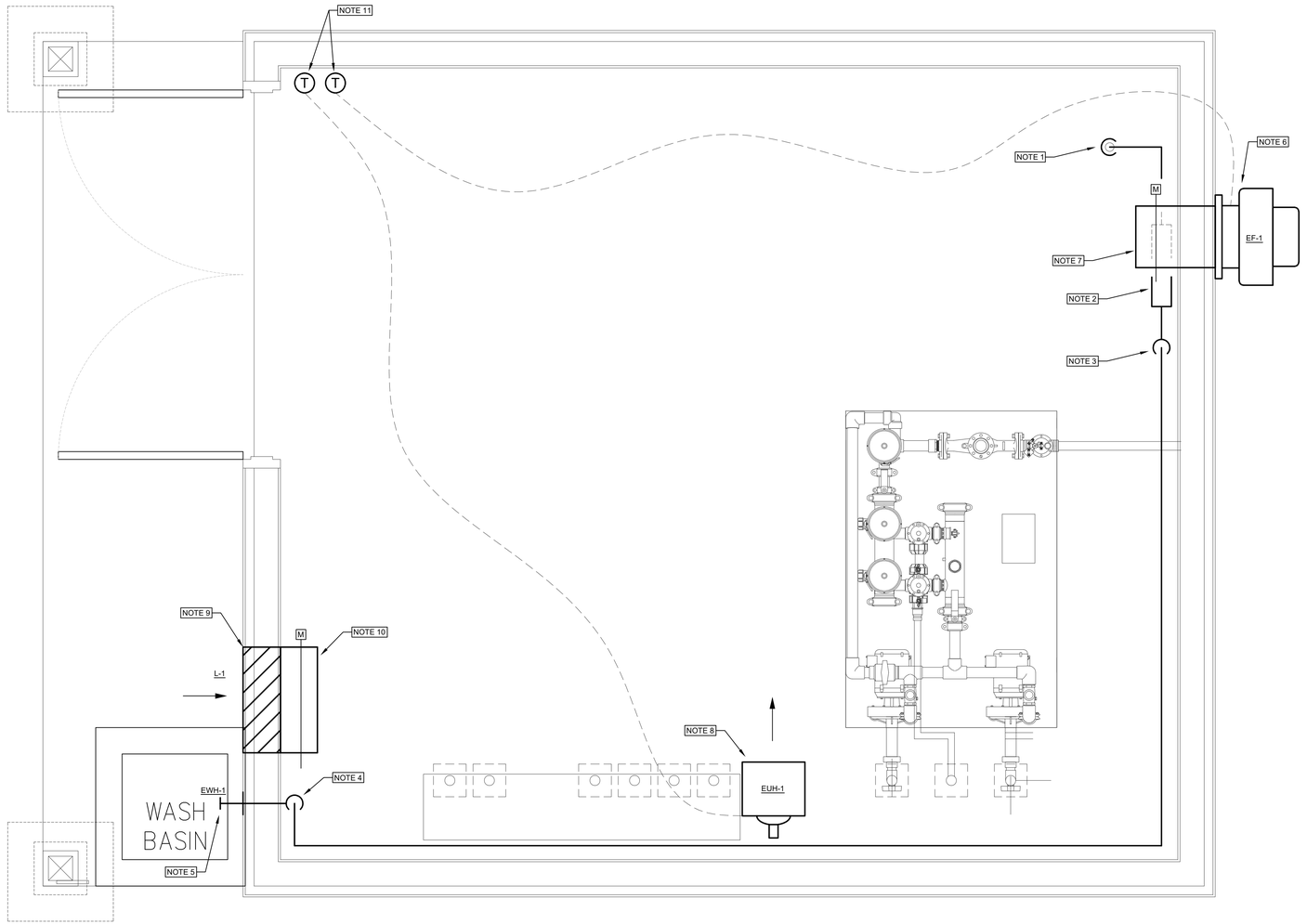

CONTROL BUILDING MECHANICAL PLAN
SCALE: 3/4" = 1'-0"

GENERAL NOTES:

A. EXAMPLE

KEYED NOTES:

1. WATER ENTRANCE, SEE CIVIL DRAWINGS FOR CONTINUATION.
2. WATER SERVICE METER, SEE DRAWING M3 FOR DETAIL.
3. 3/4" DCW RISES AFTER SERVICE ENTRANCE AND RUNS AS HIGH AS POSSIBLE.
4. 3/4" DCW DROPS DOWN TO SERVE EWH-1. PROVIDE ISOLATION VALVE IN DROP AND DRAIN BETWEEN VALVE AND FIXTURE.
5. INSTALL EWH-1 18" ABOVE FINISHED FLOOR.
6. INSTALL EF-1 WITH TOP OF WALL OPENING AT 7'-6" FROM THE INTERIOR FINISHED FLOOR.
7. 14"X14" EXHAUST DUCT WITH MOTORIZED DAMPER. PROVIDE OPEN END DUCT WITH WIRE MESH SCREEN.
8. INSTALL EUH-1 WITH TOP OF UNIT 12" BELOW THE FINISHED CEILING.
9. INSTALL INTAKE LOUVER WITH TOP OF LOUVER AT 7'-6" ABOVE THE INTERIOR FINISHED FLOOR.
10. 24"X18" INTAKE DUCT WITH MOTORIZED DAMPER. PROVIDE OPEN END DUCT WITH WIRE MESH SCREEN.
11. CONTRACTOR SHALL PROVIDE A LABEL FOR EACH THERMOSTAT, "HEATING THERMOSTAT" FOR THE EUH-1 UNIT AND "COOLING THERMOSTAT" FOR THE EF-1 UNIT.

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CONTROL BUILDING MECHANICAL PLAN

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ELECTRIC UNIT HEATER SCHEDULE

TAG NUMBER	LOCATION	SERVES	DESIGN BASIS	TYPE	MINIMUM HEATING OUTPUT (BTUH)	AIRFLOW (CFM)	ELECTRICAL				NOTES
							kW	FAN HP	VOLTS	PH	
EUH–1	CONTROL BUILDING	CONTROL BUILDING	MODINE HER 30	HORIZONTAL UNIT HEATER	10,200	380	3	1/40	240	1	1, 2

NOTES:
1. PROVIDE LINE VOLTAGE, WALL MOUNTED THERMOSTAT.
2. PROVIDE WALL MOUNTING BRACKET.

LOUVER SCHEDULE

TAG NUMBER	LOCATION	DESIGN BASIS	NOMINAL SIZE W" X H"	MINIMUM NET FREE AREA REQ'D (FT^2)	MAXIMUM PD (IN. WG)	CFM	SERVICE	NOTES
L–1	CONTROL BUILDING	GREENHECK ESJ–401	24"x18"	1.24	0.07	500	INTAKE	1

NOTES:
1. PROVIDE EXTENDED SILL, BIRDSCREEN & BAKED ENAMEL FINISH, COLOR TO BE SELECTED BY ARCHITECT.

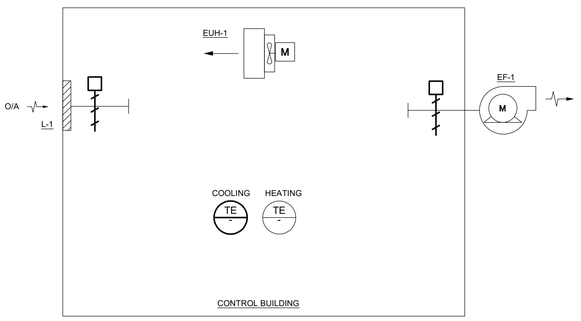
FAN SCHEDULE

TAG NUMBER	LOCATION	SERVES	DESIGN BASIS	FAN TYPE	WHEEL /TYPE	DRIVE TYPE	FLOW (CFM)	ESP (IN)	BHP	FAN RPM	MAX (dBA)	MOTOR				NOTES
												HP	VOLTS	PH	RPM	
EF–1	CONTROL ROOM	CONTROL ROOM	GREENHECK CUE–090–VG	SIDEWALL	BI	DIRECT	500	0.25	0.05	1282	49	1/10	120	1	1725	1, 2, 3, 4, 5, 6, 7

NOTES:
1. PROVIDE UL705 LISTING.
2. PROVIDE ALUMINUM CONSTRUCTION.
3. PROVIDE ALUMINUM BIRDSCREEN.
4. PROVIDE NEMA 4 DISCONNECT SWITCH MOUNTED AND WIRED.
5. PROVIDE EXTERIOR WALL MOUNTING BRACKET.
6. PROVIDE ECM ODP MOTOR AND VARI–GREEN DIAL ON MOTOR.
7. PROVIDE VARI–GREEN TRANSFORMER.

PLUMBING WATER SUPPLY COMPONENT SCHEDULE

TAG NUMBER	DESCRIPTION	DESIGN BASIS	MOUNTING	CONNECTIONS (IN.)			ACCESSORIES & FEATURES	NOTES
				HW	CW	TW		
EWH–1	EXTERIOR WALL HYDRANT	WOODFORD MODEL 65	WALL		3/4"		ANTI–SIPHON, FREEZELESS HYDRANT	



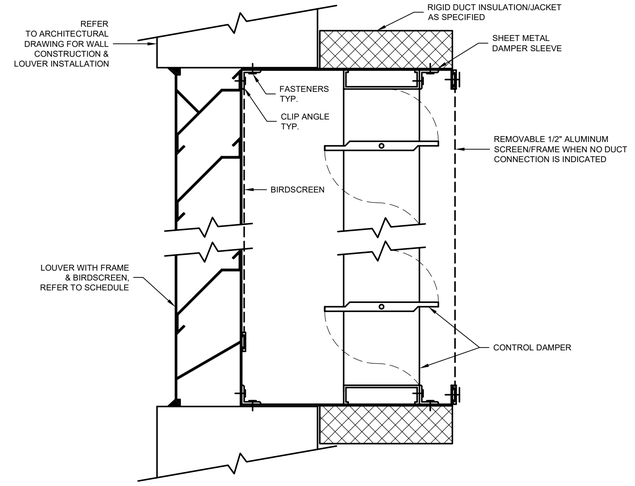
SEQUENCE OF OPERATION

1. GENERAL: THE CONTROL BUILDING IS HEATED BY UNIT HEATER EUH-1 AND VENTILATED BY EXHAUST FAN EF-1.

2. SPACE HEATING: SPACE HEATING CONTROLS IS WORK OF THE DIVISION 15 CONTRACTOR.
   2.1. UNIT HEATER EUH-1 SHALL OPERATE ON THE ASSOCIATED LINE VOLTAGE THERMOSTAT TO MAINTAIN THE HEATING SETPOINT OF 55°F (ADJ.).

3. SPACE VENTILATION/CCOLING:
   2.2.1. EXHAUST FAN EF-1 CONTROL:
   2.2.1.1. EF-1 SHALL BE PROVIDE WITH A CONTROL TRANSFORMER TO ACCEPT A TEMPERATURE SETPOINT AND PROVIDE AN OUTPUT SIGNAL FOR DAMPER CONTROL.
   2.2.1.2. EF-1 SHALL BE ENABLED WHEN THE SPACE TEMPERATURE EXCEEDS THE COOLING SETPOINT (80°F, ADJ.). PROVIDE A 0-10 VDC SIGNAL TO THE EF VARIABLE SPEED MOTOR TO VARY THE FAN SPEED BASED ON THE DEVIATION FROM ROOM TEMPERATURE SETPOINT.
   2.2.1.3. THE EXHAUST AIR MOTOR OPERATED DAMPER SHALL BE TWO POSITION TYPE AND SHALL FAIL CLOSED. THE MOTOR OPERATED DAMPER SHALL BE INTERLOCKED AND OPEN WITH A SIGNAL FOR OPERATION OF EF-1.

3. DAMPER CONTROLS: THE OUTSIDE AIR INTAKE MOTOR OPERATED DAMPER SHALL BE TWO POSITION TYPE AND SHALL FAIL CLOSED. THE MOTOR OPERATED DAMPER SHALL BE INTERLOCKED AND OPEN WITH A SIGNAL FOR OPERATION OF EF-1.

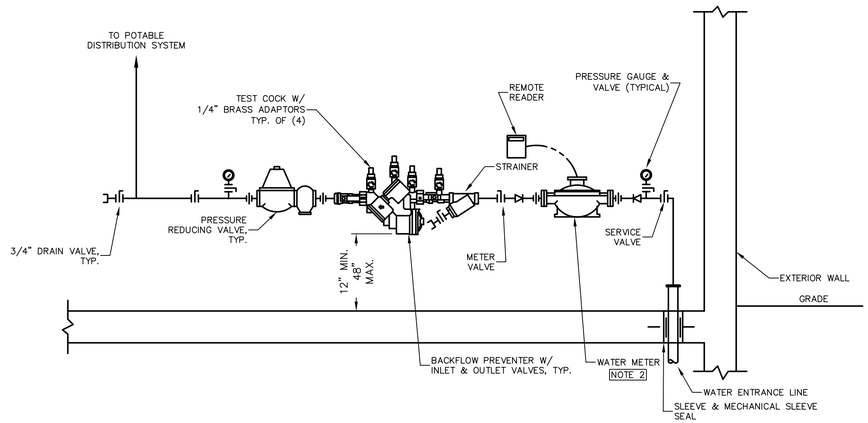


WALL LOUVER/CONTROL DAMPER DETAIL

SCALE: NONE

NOTES:

1. PROVIDE STANDOFF FOR DAMPER ACTUATOR MOUNTING TO PERMIT CONTINUOUS INSULATION OF DAMPER SLEEVE.



WATER SERVICE ENTRANCE DETAIL

SCALE: NONE

NOTES:

1. INSTALL WATER SERVICE ENTRANCE ASSEMBLY WITH A MINIMUM 8" CLEARANCE FROM NEAREST WALL AND WITH A MINIMUM 12" CLEARANCE ABOVE METER & BACKFLOW PREVENTER.

2. COORDINATE WATER METER REMOTE READER REQUIREMENTS WITH WATER DEPARTMENT. PROVIDE METER SUPPORT IN ACCORDANCE WITH WATER DEPARTMENT AND METER MANUFACTURER REQUIREMENTS.

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MECHANICAL SCHEDULES AND DETAILS

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ELECTRICAL SYMBOL LEGEND

REFER TO ELECTRICAL SPECIFICATIONS DIVISION 26 FOR MORE INFORMATION.

POWER

- EQUIPMENT CONNECTION
- LIGHT SWITCH
- $_D$ DIMMER LIGHT SWITCH
- $_{OC}$ OCCUPANCY SENSOR LIGHT SWITCH
- $_P$ LIGHT SWITCH WITH PILOT LIGHT
- $_B$ BOILER SWITCH
- $_K$ KEY OPERATED SWITCH
- $_L$ LOCKING SWITCH
- $_{LV}$ MOMENTARY LOW VOLTAGE SWITCH
- $_M$ MOTOR SENTINEL SWITCH
- $_S$ SPEED CONTROL SWITCH
- $_3$ THREE WAY SWITCH
- $_4$ FOUR WAY SWITCH
- SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE, ABOVE COUNTER
- AF ARC FAULT RECEPTACLE
- CR COIL REEL RECEPTACLE
- GFI GROUND FAULT DUPLEX RECEPTACLE
- WP WEATHERPROOF DUPLEX RECEPTACLE
- QUADRAPLEX RECEPTACLE
- DUPLEX RECEPTACLE, FLOOR MOUNTED
- SPECIAL PURPOSE RECEPTACLE
  SUBSCRIPT DENOTES NEMA CONFIGURATION
- J JUNCTION BOX
- FB FLOOR BOX, W/DUPLEX RECEPTACLE AND TELE/DATA OUTLET
- OS OCCUPANCY SENSOR, WALL MOUNTED
- OS OCCUPANCY SENSOR, CEILING MOUNTED
- PP OCCUPANCY SENSOR, POWER PACK
- PE PHOTO CONTROLLED SWITCH
- LS AMBIENT LIGHT SWITCH
- VS VACANCY SENSOR
- DISCONNECT SWITCH
- FUSIBLE DISCONNECT SWITCH
- BUSPLUG DISCONNECT SWITCH
- MOTOR CONTROLLER
- COMBINATION MOTOR CONTROLLER/DISCONNECT
- R RELAY
- C CONTACTOR
- H HEATER
- CB CIRCUIT BREAKER W/ENCLOSURE, NUMBER DENOTES AMPS
- ATC AUTO TEMPERATURE CONTROL PANEL
- ATS AUTOMATIC TRANSFER SWITCH
- VFD VARIABLE FREQUENCY DRIVE
- VSD VARIABLE SPEED DRIVE
- ELECTRICAL PANEL
- CT CURRENT TRANSFORMER CABINET
- MOTOR
- M SINGLE UTILITY METER
- TC TIME CLOCK
- PUSH BUTTON
- FIROMATIC
- POWER/COMM. POLE
- BRANCH CIRCUIT HOMERUN TO PANEL
- E ELECTRICAL EMERGENCY OFF BUTTON
- G GAS SOLENOID EMERGENCY OFF BUTTON

LIGHTING

- EXIT LIGHT, WALL MOUNTED, LETTER DENOTES TYPE EXIT LIGHT,
- CEILING MOUNTED, LETTER DENOTES TYPE
- EMERGENCY LIGHTS, BATTERY BACKUP
- EMERGENCY LIGHTS, REMOTE BATTERY
- EMERGENCY LIGHTS, REMOTE HEAD
- SURFACE MOUNTED PANEL FIXTURE/TROFFER, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- RECESSED MOUNTED PANEL FIXTURE/TROFFER, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- WALL MOUNTED LINEAR FIXTURE, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- STRIP LIGHT FIXTURE, UPPER CASE LETTER DENOTES TYPE. LOWER CASE DENOTES SWITCHING
- EMERGENCY INDUSTRIAL LIGHT FIXTURE
- EMERGENCY LIGHT PANEL FIXTURE/TROFFER, LETTER DENOTES TYPE.
- WALL MOUNTED LIGHT FIXTURE, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- CEILING MOUNTED/RECESSED LIGHT FIXTURE, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- EMERGENCY CEILING MOUNTED/RECESSED LIGHT FIXTURE, UPPER CASE LETTER DENOTES TYPE, LOWER CASE DENOTES SWITCHING
- PENDANT LIGHT FIXTURE, UPPER CASE LETTER DENOTES TYPE, LOWER CASE LETTER DENOTES SWITCHING
- POST TOP LUMINAIRE
- BOLLARD LIGHT FIXTURE
- POLE LIGHT, SINGLE HEAD
- POLE LIGHT, DOUBLE HEAD
- FAN/LIGHT COMBINATION
- TRACK LIGHTING W/FIXTURE HEAD
- LM EMERGENCY LIGHTING 924 MONITOR MODULE

DATA/COMM

- DATA OUTLET,
  SUBSCRIPT DENOTES QUANTITY
- TELEPHONE OUTLET,
  SUBSCRIPT DENOTES QUANTITY
- COMBINATION DATA/TELEPHONE OUTLET
  SUBSCRIPT DENOTES QUANTITY
- DATA OUTLET, FLOOR MOUNTED
- TELEPHONE OUTLET, FLOOR MOUNTED
- B TELEPHONE BELL

SECURITY/ACCESS CONTROL

- CR CARD READER
- DC DOOR CONTACTS
- DO DOOR OPERATOR
- ES ELECTRIC STRIKE
- DA LOCAL DOOR ALARM
- DL DOOR LOCK
- ML MAGNETIC LOCK
- PIR PASSIVE INFRARED SENSOR
- REX REQUEST TO EXIT DEVICE
- KP KEY PAD
- H DOOR OPERATOR PUSH PAD
- PTZ CAMERA (FIXED IF NO SUBSCRIPT)
  PTZ SUBSCRIPT DENOTES PAN, TILT, ZOOM

FIRE ALARM

- F MANUAL FIRE PULL STATION
- F MASTER BOX
- B BELL
- SPEAKER
- STROBE LIGHT/SPEAKER
- STROBE LIGHT/HORN
- HORN
- STROBE LIGHT-WALL MOUNTED
- STROBE LIGHT-CEILING MOUNTED
- MH MAGNETIC DOOR HOLDER
- RT REMOTE TEST STATION
- STROBE LIGHT/CHIME
- S_I S_{IN} S_I SMOKE DETECTOR, NO SUBSCRIPT:PHOTOELECTRIC,
  SUBSCRIPTS: I=IONIZATION,
  H=PHOTOELECTRIC W/135° HEAT DETECTION
  S=PHOTOELECTRIC W/SOUNDER BASE
- H H 135° HEAT DETECTOR
- CO CO DETECTOR
- S_D DUCT MOUNTED SMOKE DETECTOR
- H_D DUCT MOUNTED HEAT DETECTOR
- TS SPRINKLER TAMPER SWITCH
- FS SPRINKLER FLOW SWITCH
- PS SPRINKLER PRESSURE SWITCH
- FACP FIRE ALARM CONTROL PANEL
- FAVP FIRE ALARM VOICE PANEL
- FA FIRE ALARM ANNUNCIATOR
- C_R FIRE ALARM CONTROL RELAY
- AMM ADDRESSABLE MODULE MONITOR
- IM ISOLATION MODULE
- KB KNOX BOX

INSTRUMENTATION

- MOTORIZED VALVE
- SOLENOID VALVE
- FE FLOW SENSING ELEMENT
- FT FLOW TRANSMITTER
- TS TEMPERATURE SWITCH
- LS LEVEL (FLOAT) SWITCH
- LE LEVEL SENSING ELEMENT
- LT LEVEL TRANSMITTER
- PS PRESSURE SWITCH
- PT PRESSURE TRANSMITTER
- SS SIGNAL SPLITTER
- PH PH SENSOR
- SC SENSOR CONTROLLER
- OE OXYGEN SENSOR

ONE-LINE

- XXXA / XXXP NON-FUSED DISCONNECT SWITCH
- XXXA / XXXP / XXXA FUSED DISCONNECT SWITCH
- CONTACTOR
- PANELBOARD, MAIN LUG ONLY
- XXXA / XXXP PANELBOARD, MAIN CIRCUIT BREAKER
- ATS / XXXA TRANSFER SWITCH:
  ATS=AUTOMATIC TRANSFER
  MTS=MANUAL TRANSFER
  BYP=BYPASS
- 000AF / 000AT / 0P CIRCUIT BREAKER:
  AF=AMP FRAME
  AT=TRIP SETTING OF CIRCUIT BREAKER
  P=NUMBER OF POLES
- CIRCUIT BREAKER WITH AUXILIARY CONTACT
- ST CIRCUIT BREAKER WITH SHUNT TRIP
- K CIRCUIT BREAKER WITH KIRK KEY
- LSIG CIRCUIT BREAKER WITH FIELD ADJUSTABLE LONG, SHORT, INSTANTANEOUS AND GROUND FAULT SETTING AND WITH DELAYS
- XXXA / XXXP HORSEPOWER RATED LOCKABLE SWITCH WITH ENCLOSURE
- GROUND CONNECTION
- G GENERATOR
- M MOTOR
- FUSE
- M METERSOCKET
- M CT CURRENT TRANSFORMER CABINET AND METER SOCKET
- SURGE PROTECTIVE DEVICE
- MOTOR STARTER
- XXXA / XXXP / SIZE X COMBINATION MOTOR STARTER DISCONNECT SWITCH
- XXXA / XXXP / SIZE X COMBINATION STARTER DISCONNECT WITH FUSED DISCONNECT
- XXXA / XXXP COMBINATION STARTER DISCONNECT WITH MOTOR CIRCUIT PROTECTOR
- VARIABLE SPEED DRIVE WITH INTEGRAL CIRCUIT BREAKER DISCONNECTING MEANS
- VARIABLE SPEED DRIVE WITH CIRCUIT BREAKER DISCONNECTING INTEGRAL WITH EQUIPMENT SUPPLIED
- VARIABLE SPEED DRIVE INTEGRAL WITH EQUIPMENT SUPPLIED
- MOTOR STARTER INTEGRAL WITH EQUIPMENT BEING SUPPLIED
- TRANSFORMER (WYE/WYE)
- TRANSFORMER (DELTA/WYE)
- BUS TAP WITH CIRCUIT BREAKER
- Type BUS TAP WITH CIRCUIT BREAKER SURGE PROTECTIVE DEVICE

ABBREVIATIONS

A	AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
CB	CIRCUIT BREAKER
CLG	CEILING
BD	BUS DUCTS
DN	DOWN
DWG	DRAWING
EAS	ENVIRONMENTAL ALARM SYSTEM
EF	EXHAUST FAN
ELEV	ELEVATION
EXIST	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FG	FINISHED GRADE
FOC	FIBER OPTIC CABLE
FS	FLOAT SWITCH
G	GROUND
GEN	GENERATOR
HH	HAND HOLD
IDF	INTERMEDIATE DISTRIBUTION FRAME
JBOX	JUNCTION BOX
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FACILITY
MH	MAN HOLE/MAGNETIC HOLD
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NACP	NOTIFICATION APPLIANCE CONTROL PANEL
NIC	NOT IN CONTRACT
ϕ	PHASE
P	POLE
PP	POWER PANEL
PRI	PRIMARY
SEC	SECONDARY
SW	SWITCH
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
W	WIRE
WP	WEATHERPROOF
WW	WIREWAY

- EXISTING WORK TO REMAIN
- EXISTING WORK TO BE REMOVED ON DEMOLITION DRAWINGS
- NEW WORK ON PROPOSED DRAWINGS

NOTES (APPLIES TO ALL ELECTRICAL DRAWINGS):

1. INSTALLATION AND WIRING TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. ALL EQUIPMENT SHALL BE FIELD LABELED TO IDENTIFY THE CIRCUIT EQUIPMENT SUCH AS LIGHTING SWITCHES, THERMOSTATS, AND OTHER CONTROL DEVICES SHALL BE LABELED WITH A DESCRIPTION OF THEIR FUNCTION. REFER TO SPECIFICATION 16195 FOR ADDITIONAL LABELING REQUIREMENTS..
3. WIRING AND CONDUIT FOR INSTRUMENTATION AND CONTROL SHALL BE PERFORMED BY A QUALIFIED INSTRUMENTATION AND CONTROLS CONTRACTOR.
4. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL 120V POWER WIRING FROM ELECTRICAL PANELS TO ALL CONTROL PANELS AND INSTRUMENTATION DEVICES AS INDICATED ON THE ELECTRICAL DRAWINGS.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE ARRANGEMENT OF ALL POWER AND CONTROL PANELS, AND SHALL VERIFY DIMENSIONS OF EQUIPMENT PROVIDED BY OTHERS PRIOR TO LAYOUT AND ROUGH IN.
6. ALL EQUIPMENT AND WIRING IN WET WELLS SHALL BE CLASS I, DIVISION 1 AND INSTALLED IN ACCORDANCE WITH NEC ARTICLES 500, 501, AND 504. PUMP STATION DRY WELL IS AN UNCLASSIFIED LOCATION.
7. ALL REQUIRED MOTOR DISCONNECT SWITCHES ARE INDICATED ON THE DRAWINGS. HOWEVER, SUPPLY AND EXHAUST FANS HAVE BEEN SPECIFIED IN DIVISION 15 TO BE FURNISHED WITH DISCONNECT SWITCHES. EXPLOSION PROOF FAN DISCONNECT SWITCHES WILL BE SHIPPED LOOSE AND WILL REQUIRE FIELD MOUNTING BY THE CONTRACTOR.
8. PROVIDE SEPARATE DISCONNECTING MEANS FOR ALL OTHER MOTOR DRIVEN EQUIPMENT.

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TOWN OF MONTGOMERY, VERMONT

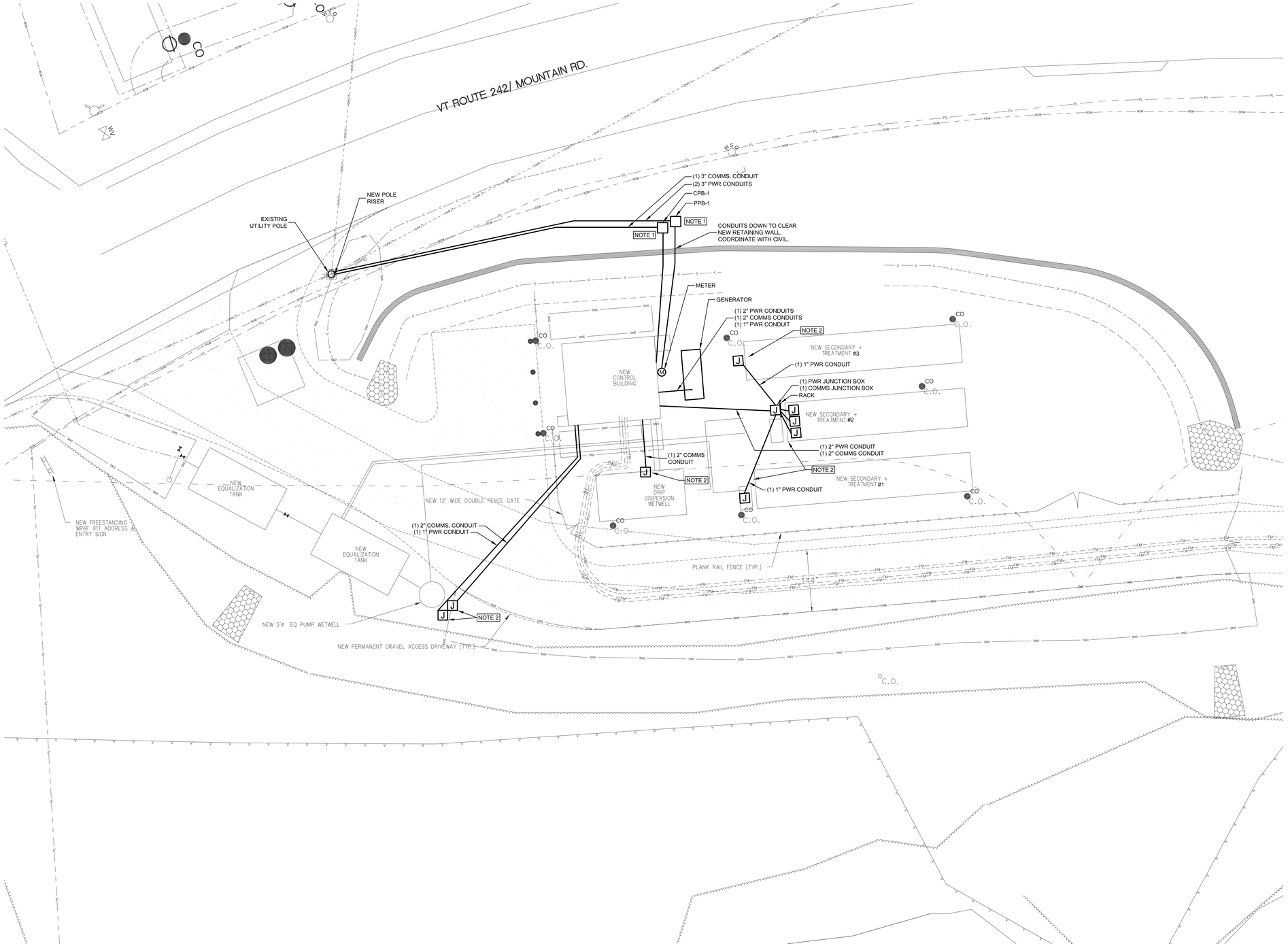
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ELECTRICAL LEGEND AND ABBREVIATIONS

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E1
SHEET 33 OF 75



ELECTRICAL SITE PLAN
SCALE: 1"=10'-0"

GENERAL NOTES:

A. THIS DRAWING IS INTENDED TO SHOW EXTERIOR CONDUIT ROUTING. SEE DRAWINGS E4 AND E5 FOR EQUIPMENT LOCATIONS. CONDUIT TO SWEEP UP AND CONNECT TO THE EQUIPMENT ON THOSE DRAWINGS. SEE DETAIL ON E7 FOR CONDUIT DEPTHS. SEE ELECTRICAL ONE-LINE ON E9 FOR MORE INFORMATION.

B. DRAWINGS ARE DIAGRAMMATIC AND MEANT TO CONVEY THE PROJECT SCOPE AND REQUIREMENTS. COORDINATE FINAL CONDUIT ROUTING WITH OTHER TRADES.

C. CONTRACTOR TO PROVIDE CONDUIT SYSTEMS AS INDICATED. SEE POWER ONE-LINE AND PULL BOX SCHEDULE FOR MORE INFORMATION.

D. ALL MATERIAL AND LABOR FOR THIS PROJECT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

E. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL NEC, UTILITY AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

F. ALL INTERIOR CONDUIT IS TO BE RUN PERPENDICULAR AND SQUARE TO BUILDING LINES. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT SUPPORTS, CORE BORES, FIRE WALL SEALS, WALL PENETRATIONS AND SEALING OF ALL WALL PENETRATIONS.

G. ELECTRICAL CONTRACTOR SHALL RECEIVE AND RIG INTO PLACE ALL EQUIPMENT.

H. CONTRACTOR TO CARRY THE COST OF THE UTILITY SERVICE UPGRADE.

KEYED NOTES:

1. SEE UNDERGROUND PULL BOX SCHEDULE ON E8 AND DETAIL ON E6 FOR MORE INFORMATION.

2. SEE DRAWING E5 FOR ADDITIONAL INFORMATION.

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ELECTRICAL SITE PLAN

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E2
SHEET 34 OF 75

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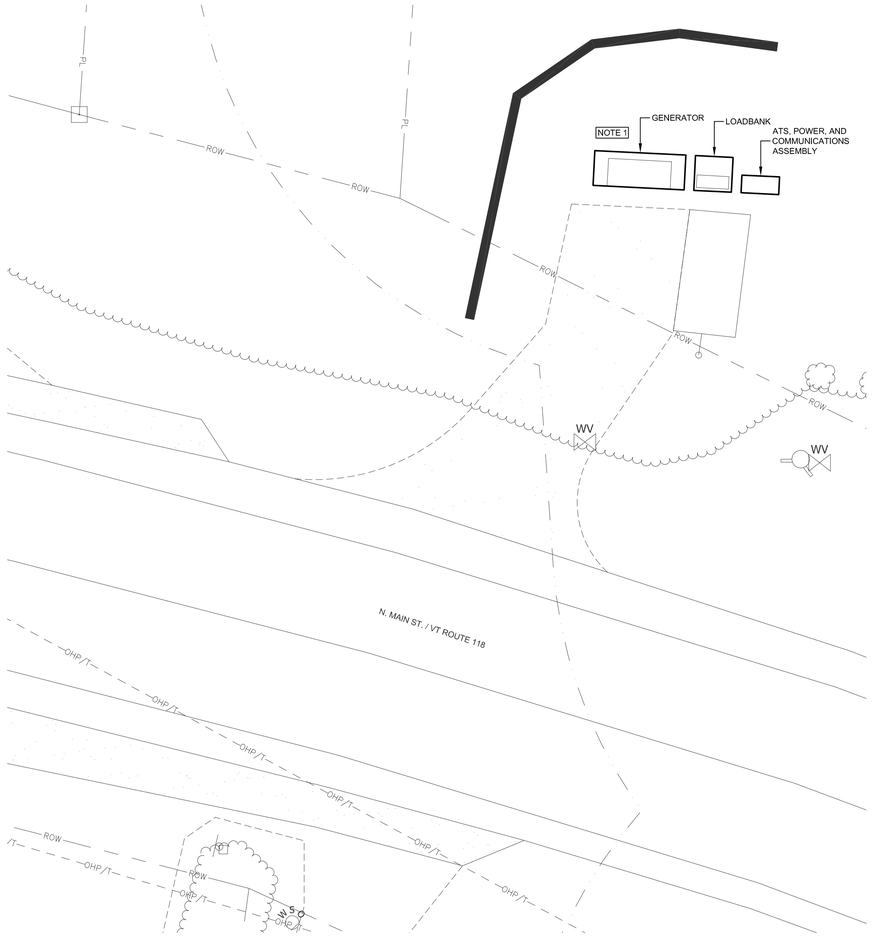
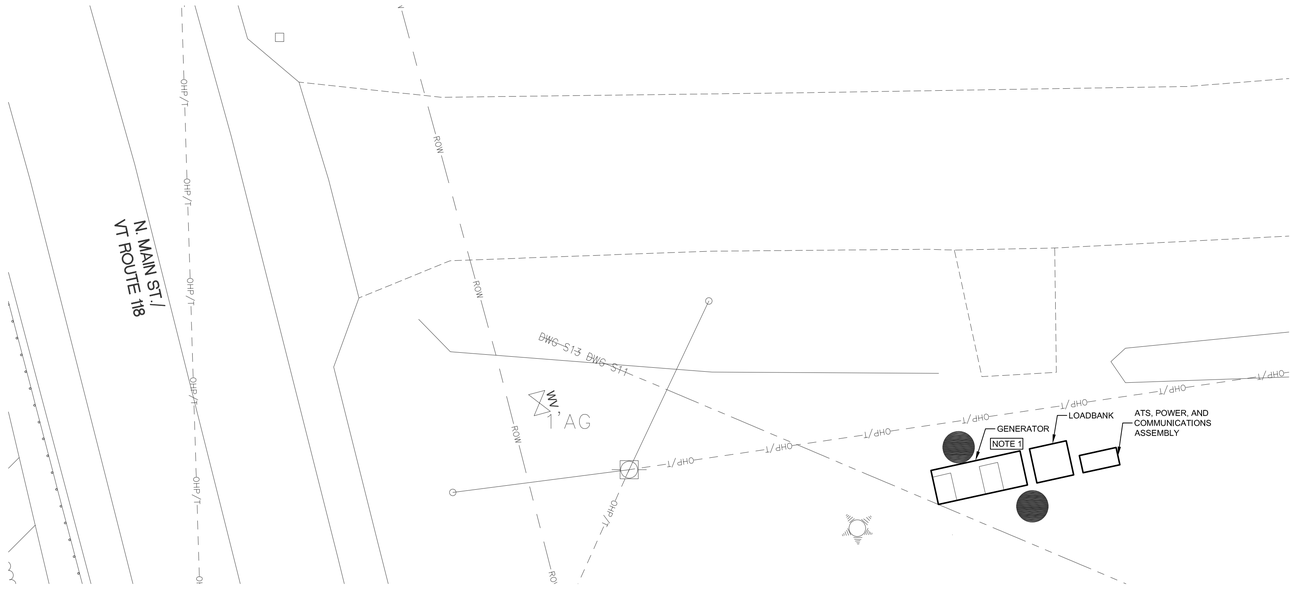


REMOTE PUMP STATION SITE PLANS
SCALE: 1/8" = 1'-0"



REMOTE PUMP STATION SITE PLANS
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. SEE DRAWING G3 FOR REMOTE PUMP STATION LOCATIONS RELATIVE TO THE MAIN SITE.

B. THIS DRAWING IS INTENDED TO SHOW EXTERIOR CONDUIT ROUTING. SEE DRAWING E3 FOR EQUIPMENT LOCATIONS. CONDUIT TO SWEEP UP AND CONNECT TO THE EQUIPMENT ON THOSE DRAWINGS. SEE DETAIL ON E5 FOR CONDUIT DEPTHS. SEE ELECTRICAL ONE-LINE ON E8 FOR MORE INFORMATION.

C. DRAWINGS ARE DIAGRAMMATIC AND MEANT TO CONVEY THE PROJECT SCOPE AND REQUIREMENTS. COORDINATE FINAL CONDUIT ROUTING WITH OTHER TRADES.

D. CONTRACTOR TO PROVIDE CONDUIT SYSTEMS AS INDICATED. SEE POWER ONE-LINE AND PULL BOX SCHEDULE FOR MORE INFORMATION.

E. ALL MATERIAL AND LABOR FOR THIS PROJECT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

F. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL NEC, UTILITY AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

G. ALL INTERIOR CONDUIT IS TO BE RUN PERPENDICULAR AND SQUARE TO BUILDING LINES. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT SUPPORTS, CORE BORES, FIRE WALL SEALS, WALL PENETRATIONS AND SEALING OF ALL WALL PENETRATIONS.

H. ELECTRICAL CONTRACTOR SHALL RECEIVE AND RIG INTO PLACE ALL EQUIPMENT.

I. CONTRACTOR TO CARRY THE COST OF THE UTILITY SERVICE UPGRADE.

KEYED NOTES:

1. SEE DETAILS, SCHEDULES, AND ONE LINES ON E6 FOR MORE INFORMATION, SITE CONFIGURATION TO BE DETERMINED.

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

REMOTE PUMP STATION SITE PLANS

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E3
SHEET 35 OF 75

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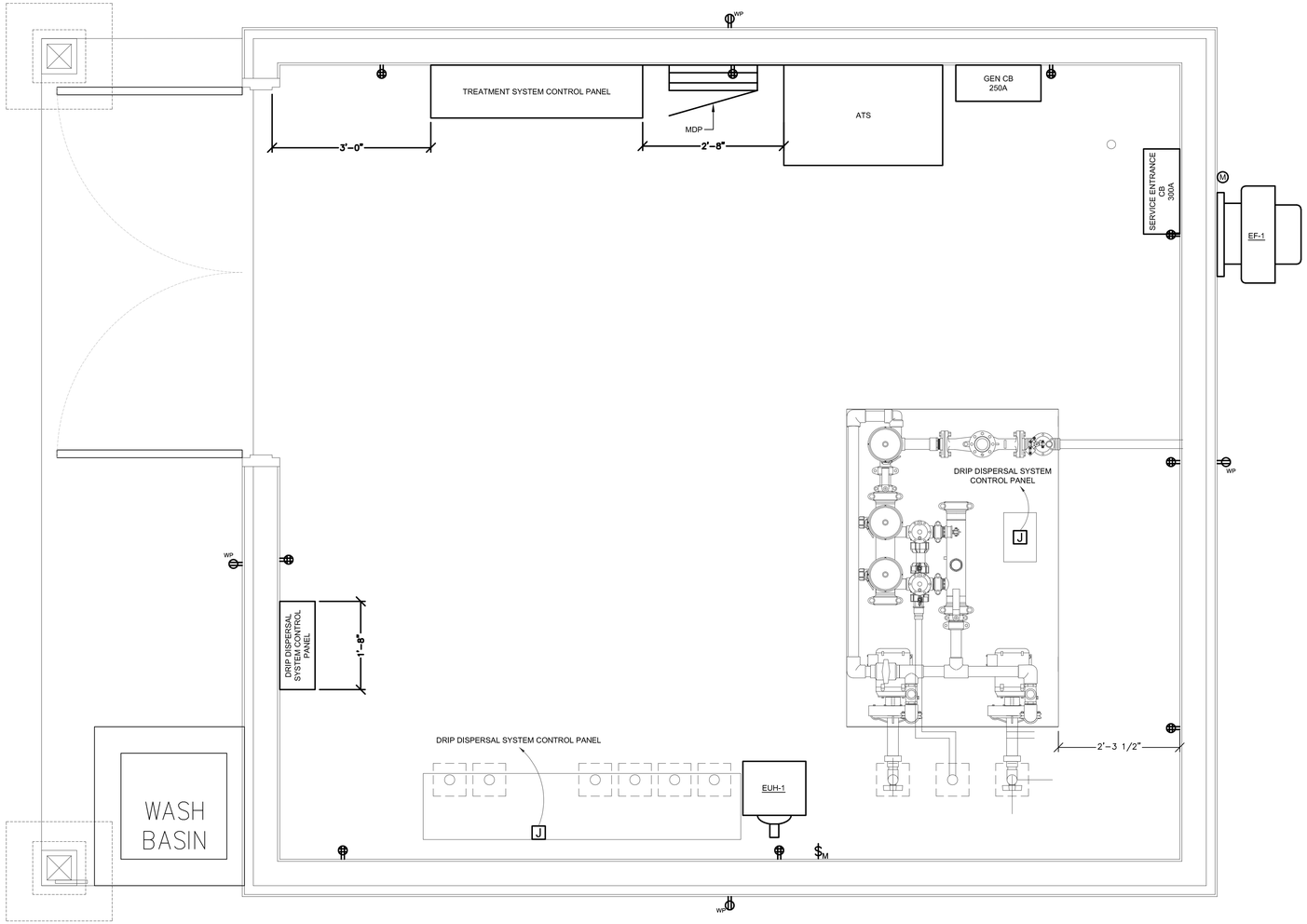

CONTROL BUILDING ELECTRICAL PLAN

SCALE: 3/4" = 1'-0"

GENERAL NOTES:

A. EXAMPLE

KEYED NOTES:

1. EXAMPLE

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TREATMENT AND
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CONTROL BUILDING ELECTRICAL PLAN

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E4
SHEET 36 OF 75

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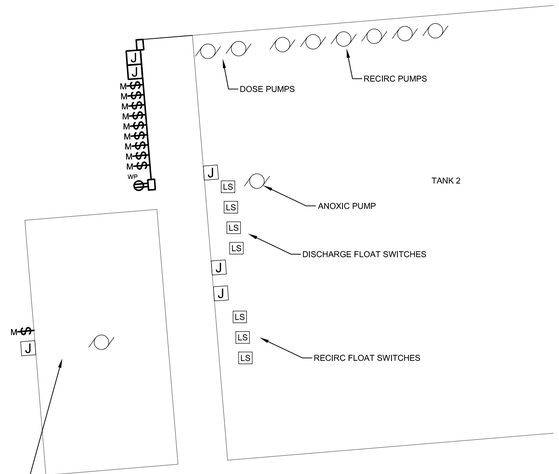
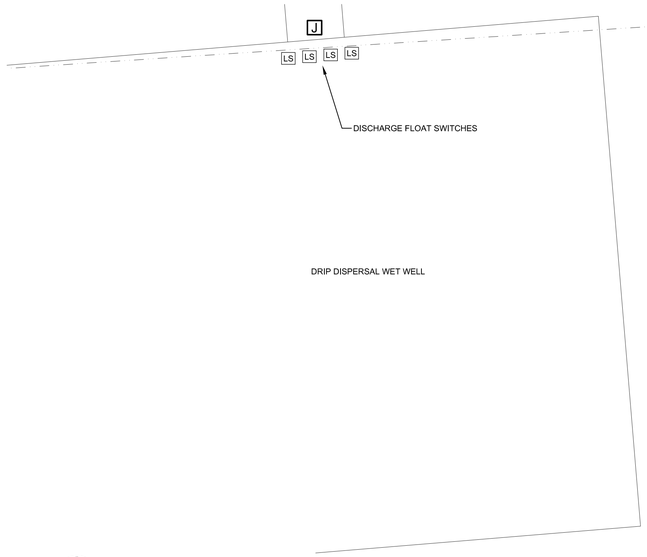


SECONDARY TREATMENT ENLARGED PLAN
SCALE: 3/4" = 1'-0"

VIEW NOTES:

A. SEE DRAWINGS P4 THROUGH P5 FOR ADDITIONAL INFORMATION.

B. FANS, PUMPS, AND JUNCTION BOXES NOT ON RACK SUPPLIED BY PROCESS VENDOR.

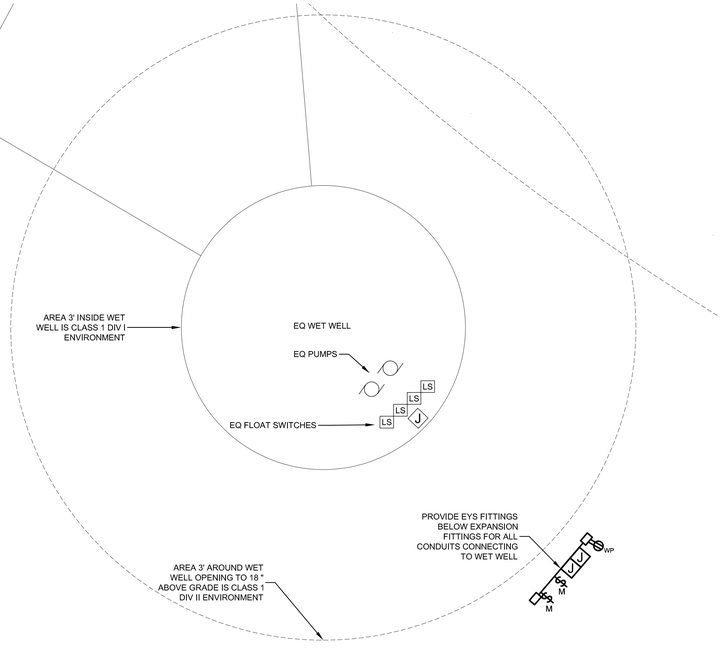


DRIP DISPERSAL WET WELL ENLARGED PLAN
SCALE: 3/4" = 1'-0"

VIEW NOTES:

A. SEE DRAWING P6 FOR ADDITIONAL INFORMATION.

B. FLOAT SWITCHES SUPPLIED BY PROCESS SYSTEM VENDOR.



EQ PUMP WET WELL ENLARGED PLAN
SCALE: 3/4" = 1'-0"

VIEW NOTES:

A. SEE DRAWING P1 FOR ADDITIONAL INFORMATION.

B. JUNCTION BOX IN WET WELL, FLOAT SWITCHES, AND PUMPS SUPPLIED BY PROCESS SYSTEM VENDOR.

GENERAL NOTES:

A. SEE ELECTRICAL ONE LINE AND SITE PLAN DRAWINGS FOR ADDITIONAL INFORMATION.

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ELECTRICAL ENLARGED PLANS

DESIGNED	CHECKED
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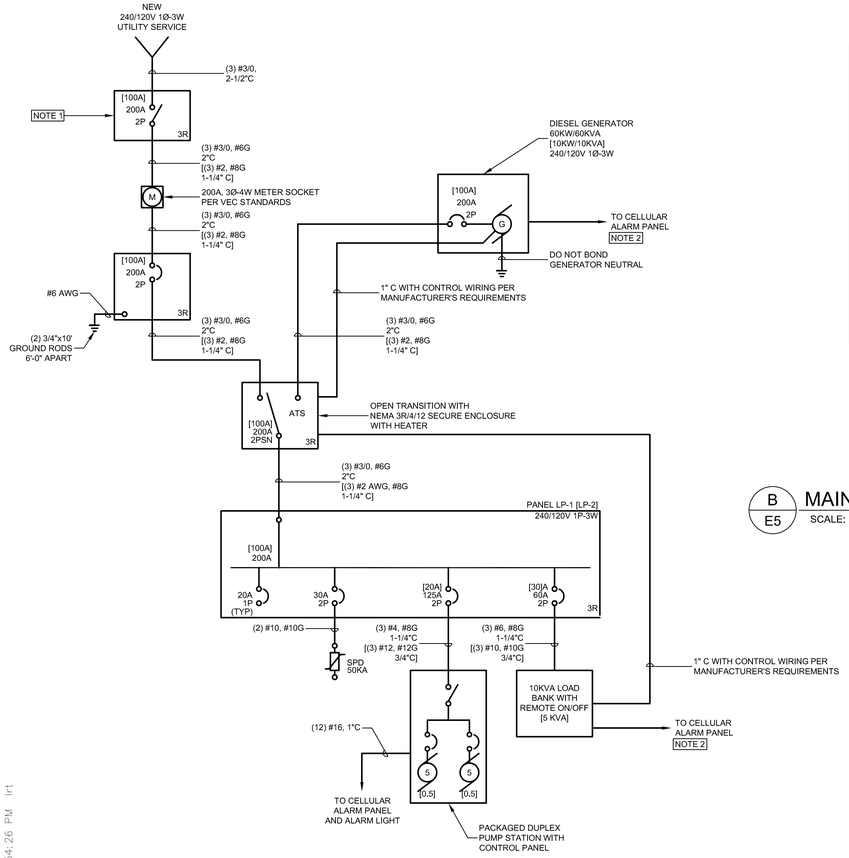
DRAWING
E5
SHEET 37 OF 75



PUMP STATION ELECTRICAL ONE-LINE

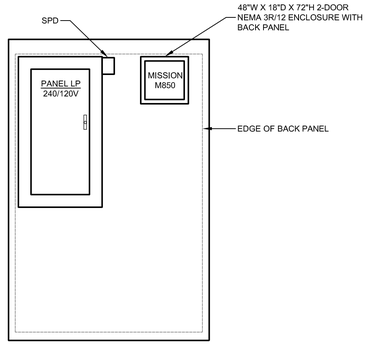
SCALE: NONE

NOTES:

1. PROVIDE DISCONNECT SWITCH ON THE LINE SIDE OF THE METER PER VEC STANDARDS. DISCONNECT SWITCH TO HAVE PROVISIONS FOR LOCKING IN THE ON POSITION.
2. INSTALL UNDERGROUND CONDUIT AND WIRING FROM GENERATOR, LOAD BANK, AND PUMP STATION CONTROL PANEL TO MAIN POWER CABINET FOR REMOTE ALARM AND STATUS SIGNALS. REFER TO STATUS AND ALARM POINT SCHEDULE ON THIS DRAWING.
3. PUMP WET WELL IS A CLASS 1, DIV 1 ENVIRONMENT.
4. LABELS, SIZES, AND RATINGS IN BRACKETS ARE FOR PUMP STATION PS-2.

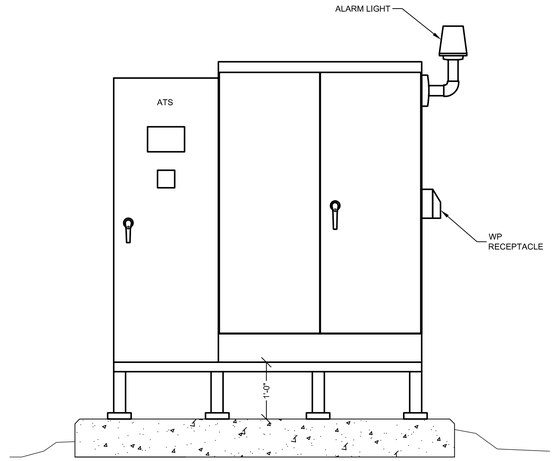
STATUS AND ALARM POINTS

NO.	DESCRIPTION	SOURCE
1	PUMP 1 RUN STATUS	PUMP CONTROL PANEL
2	PUMP 1 FAIL ALARM	PUMP CONTROL PANEL
3	PUMP 2 RUN STATUS	PUMP CONTROL PANEL
4	PUMP 2 FAIL ALARM	PUMP CONTROL PANEL
5	WET WELL HIGH LEVEL ALARM (BACKUP FLOAT)	PUMP CONTROL PANEL
6	PUMP STATION GENERAL ALARM	PUMP CONTROL PANEL
7	WET WELL HIGH LEVEL ALARM (BACKUP FLOAT)	PUMP CONTROL PANEL
8	UTILITY POWER FAILURE	AUTOMATIC TRANSFER SWITCH
9	TRANSFER TO GENERATOR POWER	AUTOMATIC TRANSFER SWITCH
10	GENERATOR RUNNING	GENERATOR
11	GENERATOR ALARM	GENERATOR
12	GENERATOR LOW FUEL ALARM	GENERATOR
13	LOAD BANK ON	LOAD BANK
14	LOAD BANK SUMMARY ALARM	LOAD BANK
15	SPARE	
16	SPARE	
A1	SPARE	



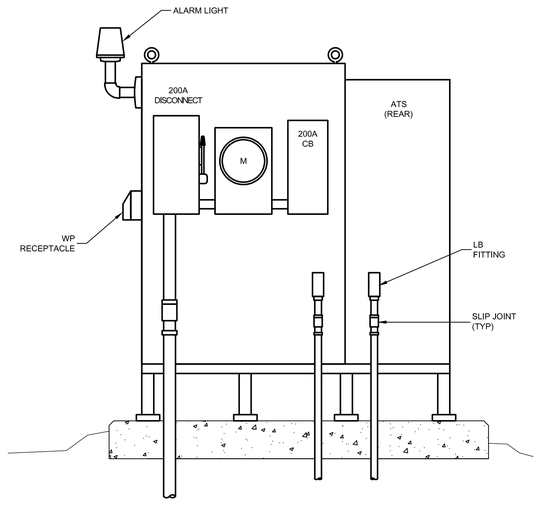
B / E5 MAIN CABINET ELEVATION INTERIOR

SCALE: NONE



C / E5 MAIN POWER CABINET ELEVATION - EXTERIOR VIEW

SCALE: NONE



E / E5 MAIN POWER CABINET ELEVATION - EXTERIOR VIEW

SCALE: NONE

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REMOTE PUMP STATION DETAILS

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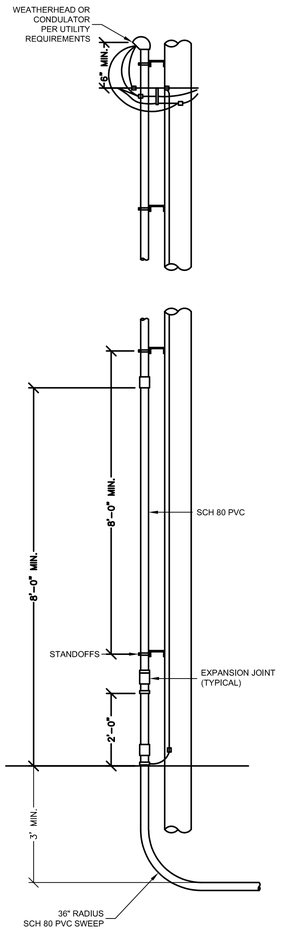
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

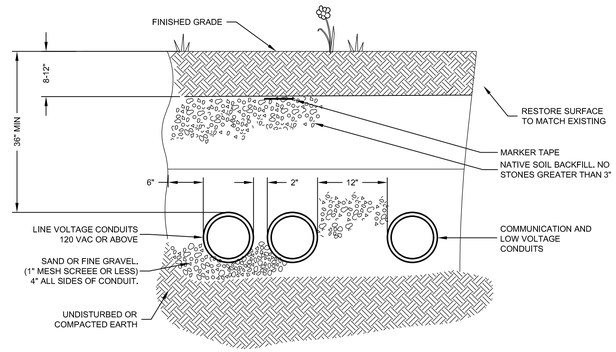
PROJECT NO.
19.129800.02

DRAWING
E6



A E7 UTILITY POLE RISER

SCALE: NONE

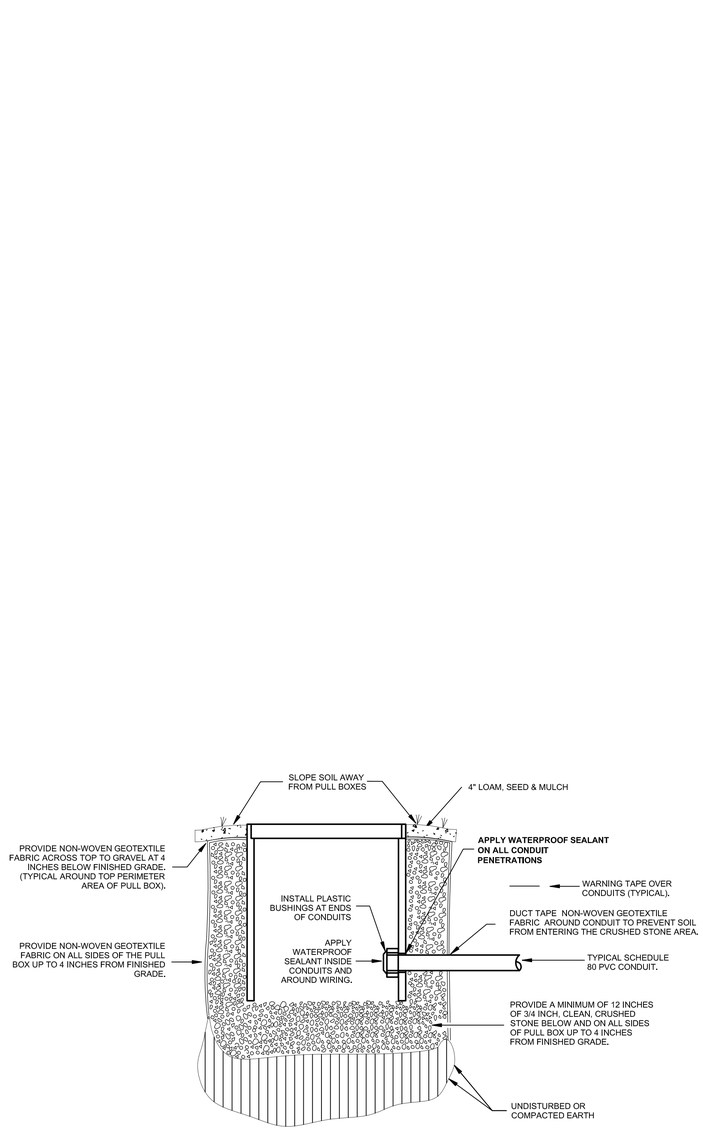


B E7 UNDERGROUND CONDUIT DETAIL

SCALE: NONE

NOTES:

1. REFER TO LOCAL UTILITY COMPANY STANDARDS FOR SPECIFIC REQUIREMENTS RELATED TO CONDUIT INSTALLATION FOR UTILITY SERVICES.
2. WHEN BURIAL DEPTH MUST BE LESS THAN SHOWN DUE TO LEDGE, ROCK OR OTHER OBSTRUCTIONS, RIGID STEEL CONDUIT OR CONCRETE ENCASEMENT MUST BE USED.
3. REFER TO SITE/CIVIL DRAWINGS FOR SURFACE RESTORATION REQUIREMENTS (TOPSOIL, SEEDING, GRAVEL OR PAVEMENT).
4. ENGINEER OR UTILITY COMPANY REPRESENTATIVE (IF REQUIRED) MUST INSPECT ALL UNDERGROUND CONDUIT PRIOR TO BACKFILLING.



C E7 UNDERGROUND CONDUIT DETAIL

SCALE: NONE

NOTES:

1. SEE UNDERGROUND PULL BOX SCHEDULE FOR ADDITIONAL INFORMATION. PULL BOXES ARE TO BE OPEN BOTTOM, GASKETED, TIER 15 RATED, HAVE STAINLESS STEEL COVER BOLTS, AND EITHER "DATA" , "FIBER OPTIC" OR "POWER" LOGO ON THE COVER.
2. WIRING IS NOT TO BE SPLICED WITHIN PULL BOX. PROVIDE SLACK WIRING WITHIN PULL BOX.
3. FOR POWER WIRING: PROVIDE TYPED LABELS INDICATING POWER PANEL, BUILDING POWER PANEL IS LOCATED IN, CIRCUIT NUMBER AND WHAT THE POWER CIRCUIT FEEDS.
4. FOR DATA/FIBER OPTIC WIRING: PROVIDE TYPED LABELS INDICATING EQUIPMENT CONNECTIONS AT EACH END AND LOCATION OF THE EQUIPMENT THAT THE WIRING IS CONNECTED TO.
5. OWNER / PROJECT MANAGER MUST INSPECT ALL UNDERGROUND PULL BOX AND CONDUITS INSTALLATIONS PRIOR TO BACKFILLING.
6. PLASTIC CONDUIT SPACERS SHALL BE USED TO SUPPORT CONDUITS IN DUCT BANKS. (CARLON SNAP-LOC OR EQUAL)

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF
MONTGOMERY,
VERMONT

CENTER
COMMUNITY
DECENTRALIZED
WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

ELECTRICAL DETAILS

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E7
SHEET 39 OF 75

PANEL NAME: LP-1

240/120 VOLTS, 1 - PHASE, 3 - WIRE
200A MAIN LUG ONLY
LOCATION: MAIN POWER PANEL
MOUNTING: SURFACE
TYPE: LOAD CENTER

BR. BREAKERS - BOLTED 10KA AIC TOTAL LOAD: 26,7 KVA
REMARKS: EATON BR SERIES OR EQUAL, NEMA 3R; (G) DENOTES GFCI CIRCUIT BREAKER

CIRC. NO	SIZE	DESCRIPTION	KVA	PH	CIRC. NO	SIZE	DESCRIPTION	KVA
1	20A-1P G	OUTDOOR RECEPTACLE	1,0	A	2	20A-1P	GEN BATTERY CHARGER	0,5
3	20A-1P G	PANEL RECEPT & LIGHT	0,7	B	4	20A-1P	GEN BLOCK HEATER	1,0
5	20A-1P	CELLULAR ALARM PANEL	0,1	A	6	30A-2P	SPD	0,0
7	125A-2P	PUMP STATION	13,4	B	8			
9				A	10	60A-2P	LOAD BANK	10,0
11	20A-1P	SPARE		B	12			
13	20A-1P	SPARE		A	14	20A-1P	SPARE	
15	20A-1P	SPARE		B	16	20A-1P	SPARE	

PANEL NAME: LP-2

240/120 VOLTS, 1 - PHASE, 3 - WIRE
100A MAIN LUG ONLY
LOCATION: MAIN POWER PANEL
MOUNTING: SURFACE
TYPE: LOAD CENTER

BR. BREAKERS - BOLTED 10KA AIC TOTAL LOAD: 10,7 KVA
REMARKS: EATON BR SERIES OR EQUAL, NEMA 3R; (G) DENOTES GFCI CIRCUIT BREAKER

CIRC. NO	SIZE	DESCRIPTION	KVA	PH	CIRC. NO	SIZE	DESCRIPTION	KVA
1	20A-1P G	OUTDOOR RECEPTACLE	1,0	A	2	20A-1P	GEN BATTERY CHARGER	0.5
3	20A-1P G	PANEL RECEPT & LIGHT	0,7	B	4	20A-1P	GEN BLOCK HEATER	1,0
5	20A-1P	CELLULAR ALARM PANEL	0,1	A	6	30A-2P	SPD	0.0
7	20A-2P	PUMP STATION	2,4	B	8			
9				A	10	30A-2P	LOAD BANK	5.0
11	20A-1P	SPARE		B	12			
13	20A-1P	SPARE		A	14	20A-1P	SPARE	
15	20A-1P	SPARE		B	16	20A-1P	SPARE	

UNDERGROUND PULL BOX SCHEDULE

BOX ID	DIMENSIONS (W x L x D)	MANUFACTURER AND MODEL NUMBERS	TIER	NOTES
PPB-1	24" X 24" X 24"	QUAZITE OR EQUAL: BOX / LID: B14242424A / C12242402A084	15	BOLTS, AND "POWER" COVER LOGO. NO MOUSE HOLES, CONDUIT SIDE ENTRY.
CPB-1	24" X 24" X 24"	QUAZITE OR EQUAL: BOX / LID: B14242424A / C12242402A012	15	BOLTS, AND "COMMUNICATIONS" COVER LOGO. NO MOUSE HOLES, CONDUIT SIDE ENTRY.

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No.	DATE	DESCRIPTION	CHECKED
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TOWN OF MONTGOMERY, VERMONT

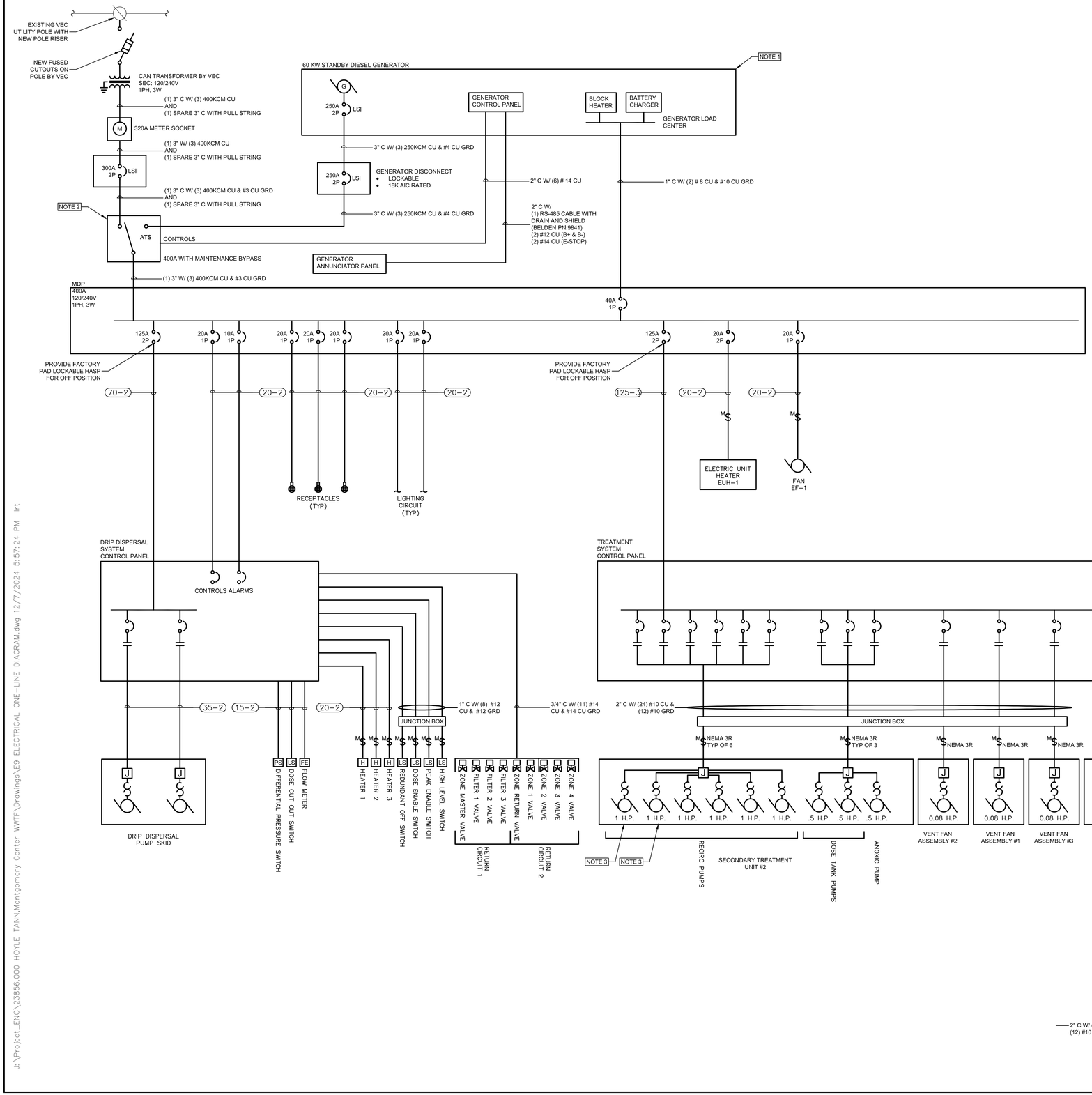
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ELECTRICAL SCHEDULES

DESIGNED	CHECKED
.	.
DRAWN	DATE
.	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E8
SHEET 40 OF 75



GENERAL NOTES:

A. ALL MATERIAL AND LABOR FOR THIS PROJECT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

B. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL NEC AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

C. ALL INTERIOR CONDUIT IS TO BE RUN PERPENDICULAR AND SQUARE TO BUILDING LINES. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT SUPPORTS, CORE BORES, FIRE WALL SEALS, WALL PENETRATIONS AND SEALING OF ALL WALL PENETRATIONS.

D. CONDUIT RUNS SHOWN ARE DIAGRAMMATIC ONLY. COORDINATE FINAL ROUTING WITH MECHANICAL CONTRACTORS.

E. ELECTRICAL CONTRACTOR SHALL RECEIVE AND RIG INTO PLACE ALL EQUIPMENT.

KEYED NOTES:

1. PROVIDE GENERATOR WITH:
   - 1.1. BLOCK HEATER
   - 1.2. BATTERY CHARGER
   - 1.3. SOUND ATTENUATED LEVEL 2 OUTDOOR ENCLOSURE
   - 1.4. CRITICAL GRADE SILENCER
   - 1.5. COLD WEATHER OPERATION / KITS (SUBMIT LOWEST OPERATING TEMPERATURE)
   - 1.6. THE FOLLOWING STATUS AND ALARM POINTS:
     - 1.6.1. GENERAL ALARM
     - 1.6.2. GENERATOR LOW FUEL ALARM
     - 1.6.3. GENERATOR RUNNING
2. PROVIDE ATS WITH THE FOLLOWING STATUS AND ALARM POINTS:
   - 2.1. UTILITY POWER FAILURE
   - 2.2. TRANSFER TO GENERATOR POWER
3. (2) OF (6) 1 HP PUMPS OPERATE CONCURRENTLY

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

ELECTRICAL ONE-LINE DIAGRAM

DESIGNED	CHECKED
LRT	LRT
DRAWN	DATE
LRT	OCTOBER 2024

PROJECT NO.
19.129800.02

DRAWING
E9
SHEET 41 OF 75

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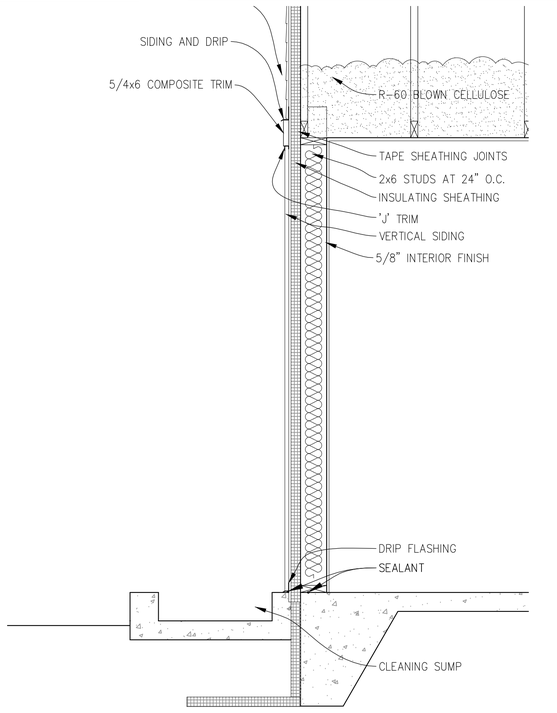
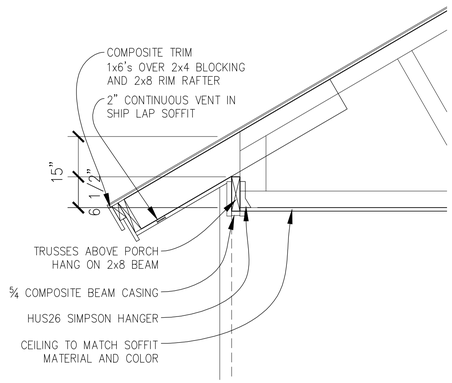
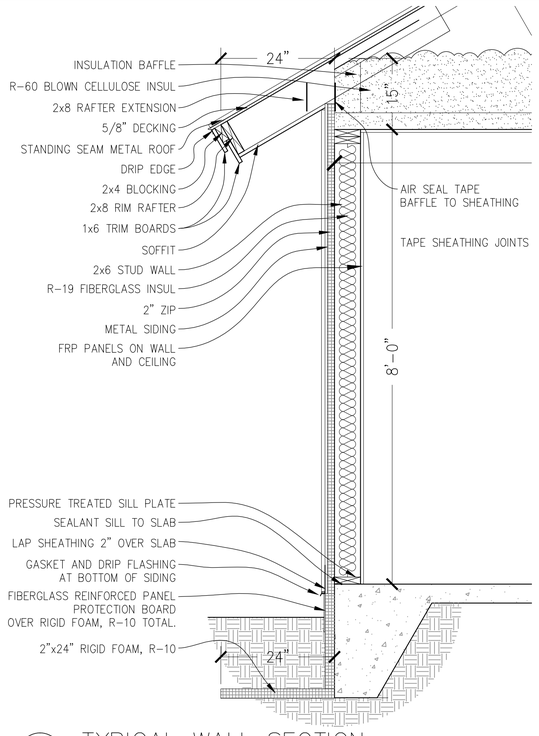
J:\Project_ENG\23856.000 HOYLE TANN.Montgomery Center WWTF\Drawings\E9 ELECTRICAL ONE-LINE DIAGRAM.dwg 12/7/2024 5:57:24 PM lrt



2 PORCH WALL SECTION
3/4" = 1'-0"



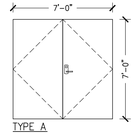
2 EAVE DETAIL
3/4" = 1'-0"



1 TYPICAL WALL SECTION
3/4" = 1'-0"

DOOR SCHEDULE

MARK	WIDTH×HEIGHT	TYPE	MATERIAL	FRAME MATERIAL	HARDWARE	T-HOLD	DETAILS	NOTES
101	7'-0"x7'-0"	A	INSULATED FIBERGLASS	FIBERGLASS	A	A		--

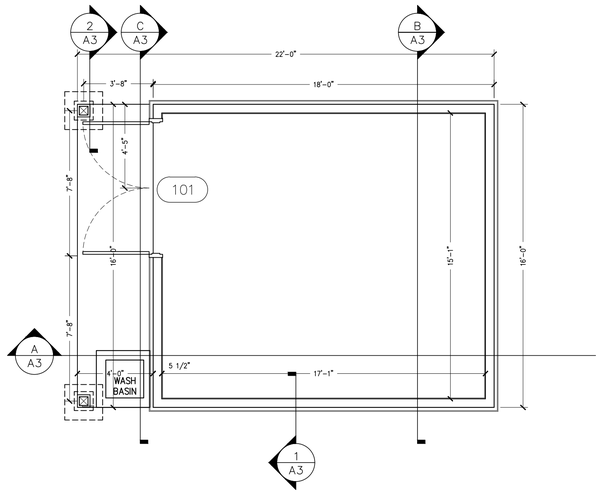


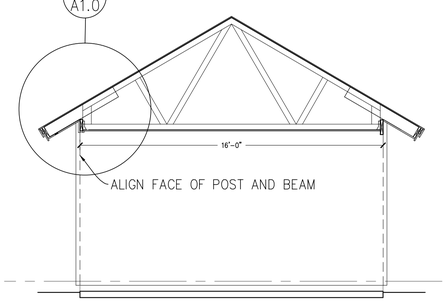
TYPE A

HARDWARE SCHEDULE

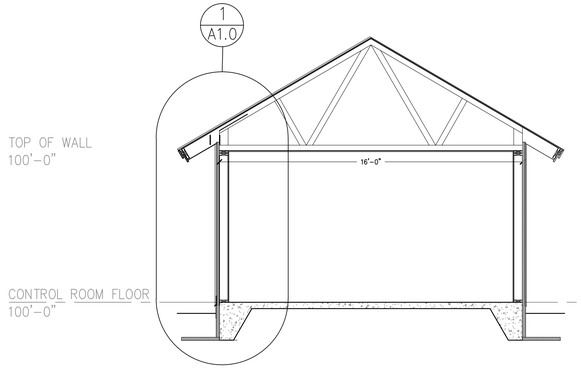
(A)
ENTRY
3 Hinges
Keyless Entry Combination
Mortise Lock
Weather Strip and Sweep
Astragal on Inactive Leaf
Surface Bolts on Inactive Leaf

NOTES: ALL HARDWARE TO HAVE LEVER HANDLE

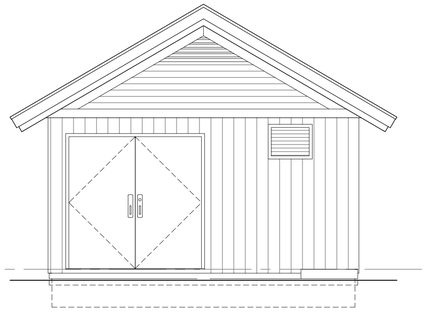




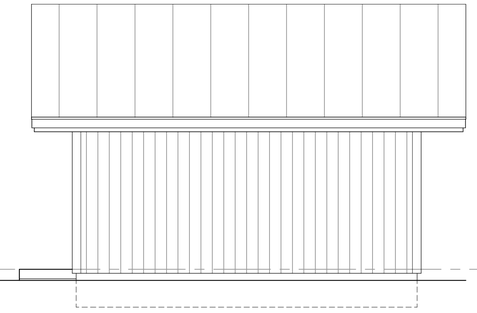
C SECTION C
1/8" = 1'-0"



B SECTION B
1/8" = 1'-0"



WEST



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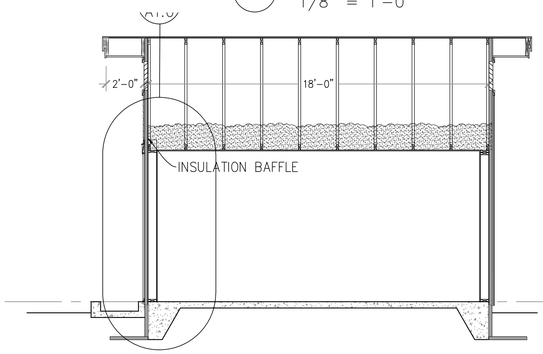
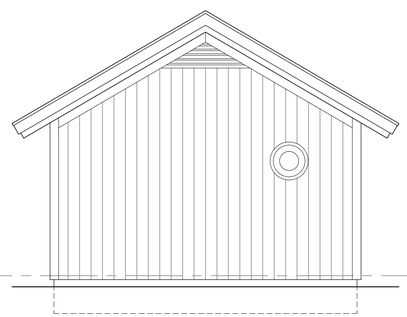
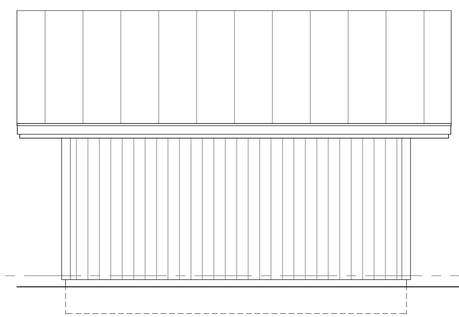


A SECTION A
1/8" = 1'-0"



EAST



NORTH

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TOWN OF
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WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

DESIGNED	CHECKED
DRV	DRV
DRAWN	DATE
DRV	OCTOBER 2024

PROJECT NO.
19.129800.02

A1

SECTION 055000

METAL FABRICATIONS

PART 1 GENERAL

1. SUMMARY

A. Provide miscellaneous metal items fabricated from heavy gage metals and not provided with structural steel system:
1. Aluminum ladders.
2. Aluminum loose lintels.
3. Aluminum floor plates and covers.
4. Aluminum counter and equipment supports.
5. Aluminum sill angles.
6. Aluminum miscellaneous framing and supports.
7. Miscellaneous galvanized steel shapes.
8. Equipment hangers & supports.

2. SUBMITTALS

A. Submit for approval samples of gratings, shop drawings, product data, and test reports.

B. Indicate dimensions and clearances required for each product on shop drawings.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Provide manufacturer's standard warranties for Stairs (10 years) Railings, and Ladders

PART 2 PRODUCTS

1. MATERIALS

A. Materials:
1. Aluminum sheet and plate: ASTM B209.
2. Aluminum Drawn Seamless Tubes ASTM B 210
3. Aluminum Extruded Bars, Rods, Wire, Profiles, and Tubes: ASTM B221
4. Aluminum treads and bar grating: ASTM B632 B632M.
5. Aluminum Extruded Structural Pipe: ASTM B241, schedule 40
6. Aluminum - Alloy T6061-T6 Standard Structural: ASTM B 308
7. Fasteners: Aluminum or Corrosion resistant coated steel fasteners designed for loading and use.
8. Grout: Non-shrink non-metallic grout.
9. Concrete inserts: Stainless Steel.
10. Cast Aluminum: Alloy 356 or as required for strength and workability.

A. Aluminum Ladders: Comply with OSHA 29 CFR Standard 1910, subpart D. See architectural drawings for dimensions.
a. Aluminum Ships Ladder: similar to ErectaStep, custom height.

A. Corrosion Control: Design, fabricate and install to prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

D. Galvanized ferrous metal items where exposed to weather; 1 coat primer (shop-applied) elsewhere.
1. Galvanizing: ASTM A 525.
2. Primer; Tnemec 10-99, PPG Inhibitive Metal Primer, Rustoleum Rusty Metal Primer, or approved equal.
3. Galvanizing repair paint, zinc rich primer; Tnemec, PPG, ZRC Chemical Products or approved equal.

B. Equipment hangers & supports in wet areas to be stainless steel including all fasteners, brackets, connectors and framing members. Unistrut, Fastenal or approved equal. See also Section 15140, Mechanical Hangers & Supports.

C. Welded Aluminum Grating:
a. Bar Spacing: 11/16 inch max, and as required to comply with structural performance requirements.
b. Bearing Bar Depth: 1-1/2 inches min, and as required to comply with structural performance requirements.
c. Bearing Bar Thickness: As required to comply with structural performance requirements.
d. Crossbar Spacing: 4 inches max o.c.
e. Traffic Surface: Serrated
f. Shop primer in subparagraph below protects gratings during transit only. Revise if special pretreatment and finish are required.
g. Fabricate with banding bars attached by welding to entire perimeter of each section. Include anchors and fasteners of type indicated or, if not indicated, as recommended by manufacturer for attaching to supports.
h. Do not notch bearing bars at supports to maintain elevation.

D. Finishes:
a. Aluminum: Mill finish.

PART 3 EXECUTION

1. INSTALLATION

A. Take field measurements prior to preparation of shop drawings and fabrication. Do not delay job; allow for cutting and fitting if field measurement not practical.

B. Form work true to line with sharp angles and edges. Weld continuously, grind flush and make smooth on exposed surfaces. Conceal fasteners.

C. Install work plumb and level with hairline joints and ground flush welds.

D. Lintels: Provide sizes indicated with 8" bearing at each end.

E. Railings: Provide sizes, profiles and dimensions indicated. Provide mitered joints at 90 degree turns and smooth sweeps at bends. Provide wall returns, end caps, brackets, fittings, and toe boards.

F. Remove debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

SECTION 055800

SHEET METAL FABRICATIONS

PART 1 GENERAL

1. SUMMARY

A. Provide decorative sheet metal fabrications of stainless steel, aluminum, or carbon steel:
1. Cabinets.
2. Closures and trims.
3. Sills.
4. Filler panels.
5. Mechanical unit enclosures.

B. Corrosive environments require use of Stainless Steel or Aluminum in all areas.

2. SUBMITTALS

A. Submit for approval samples, shop drawings, product data.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

1. MATERIALS

A. Materials:
1. Stainless steel: 16 gage with AISI No. 6 satin directional polish.
2. Aluminum: 0.125" with color anodized finish.
3. Hardware: Hinges, pulls, and locking devices as approved.
5. Gaskets, coatings and shims as needed for completing work.

B. Corrosion Control: Design, fabricate and install to prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

PART 3 EXECUTION

1. INSTALLATION

A. Wood framing: Comply with recommendations of NFPA Manual for House Framing, NFPA Recommended Nailing Schedule, and NFPA National Design Specifications for Wood Construction.

B. Plywood: Comply with recommendations of APA Design and Construction Guide - Residential and Commercial.

C. Provide nailers, blocking and grounds where required. Set work plumb, level and accurately cut.

D. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.

E. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.

F. Restore damaged finishes and test for proper operation. Remove labels, clean all surfaces and protect work from damage.

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 GENERAL

1. SUMMARY

A. Provide rough carpentry work:
1. Wood Blocking.
2. Backing panels for utilities.
3. Nailers, furring, and sleepers, fire retardant treated.

2. SUBMITTALS

A. Submit for approval product data.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Protect materials from weather, water or damage from other activities.

PART 2 PRODUCTS

1. MATERIALS

A. Lumber, finished 4 sides, 19% maximum moisture content:
1. Wall and Roof framing: No. 2 grade SPF or better.

B. Wood for nailers, blocking, furring and sleepers: No. 2 grade SPF, finished 4 sides, 19% maximum moisture content. Coordinate with all trades to provide blocking for all mounted items.

C. Plywood, APA rated for use and exposure:
1. Wall sheathing: Zip System R-Sheathing 2" thickness, R-9.6 or equal.
2. Backing panels: APA C-D plugged interior with exterior glue, fire-retardant treated, 3/4" thick.

D. Wood treatment:
1. Preservative treatment: Pressure-treated with waterborne preservatives, to comply with AWPB LP-2 for above-ground items, LP-22 for ground contact items. Kiln dry after treatment to 19% max. moisture content for lumber and 15% for plywood. Treat all wood in contact with the ground, concrete or water.

PART 3 - EXECUTION

1. INSTALLATION

A. Wood framing: Comply with recommendations of NFPA Manual for House Framing, NFPA Recommended Nailing Schedule, and NFPA National Design Specifications for Wood Construction.

B. Plywood: Comply with recommendations of APA Design and Construction Guide - Residential and Commercial.

C. Provide nailers, blocking and grounds where required. Set work plumb, level and accurately cut.

D. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.

E. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.

F. Restore damaged finishes and test for proper operation. Remove labels, clean all surfaces and protect work from damage.

SECTION 071900

WATER REPELLENTS

PART 1 GENERAL

1. SUMMARY

A. Provide transparent non-yellowing, non-gloss water repellant coating over interior and exterior slabs.

2. SUBMITTALS

A. Submit for approval samples, product data, mock-ups, warranty.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Use water based products if possible for all applications.

PART 2 PRODUCTS

1. MATERIALS

A. Provide specified products below by Hydrozo Products Company, Applied Technologies LLC, Sika, or approved equal.
1. Poured concrete surfaces: Enviroseal 20, A-Tech, Sikagard-200 or equal

PART 3 EXECUTION

1. INSTALLATION

A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials with uniform appearance. Coordinate with work of other sections.

B. Remove debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

C. Remove debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

SECTION 072100

INSULATION AND AIR BARRIER

PART 1 GENERAL

1. SUMMARY

A. Provide building insulation of board, blanket, and loose-fill types as applicable:
1. New exterior walls; Mineral wool batts to fill voids and stud cavities, R-23.
3. Roof; blown cellulose, R60
4. New foundation walls; rigid expanded polystyrene insulation. R-10.
5. Voids between exterior components; expansive foam.

B. Provide air barrier at underside of roof trusses.

C. Provided taped air barrier at exterior face of rigid foam on exterior walls.

D. Provide vapor barrier below slabs.

2. SUBMITTALS

A. Submit samples and shop drawings for approval.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Protect materials from weather, water or damage from other activities.

PART 2 PRODUCTS

1. MATERIALS

A. Board Type Insulation for framed walls: See Division 6200.

B. Board Type Insulation for grade contact: Extruded polystyrene board; compressive strength 25 psi under slab-on-grade, 60 psi under walks or drives; Styrofoam by Dow Chemical or Foamular by Owens Corning Industries or approved equal.

C. Protection Board: Foundation insulation exposed above grade to be protected with fiberglass reinforced panel (FRP); color gray.

D. Vapor Barrier Below Slab: 10 mil Class C.

E. Expansive Foam Insulation for small gaps; Touch-n-Foam by Convenience Products, Great Stuff, or approved equal HCFC - free product.

F. Cellulose Blown Insulation: borate only, sulfate-free product.

G. Insulation Baffles: J&R Products cardboard attic baffles or approved equal.

H. Air Barrier Membrane: Certainteed MemBrain, or approved equal.

I. Air Barrier Tape: Tescon Vana by Pro Clima or equal, width as required for 1" adhesion each side of joint.

J. Accessories:
1. Fasteners and adhesives of type and quantity recommended by manufacturer of product to be secured and substrate.
2. Air seal gaskets equal to Pro Clima or QuickFlash for wire and pipe penetrations of exterior walls.

PART 3 EXECUTION

1. INSTALLATION

A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.

B. Install vapor barrier below slab with 12" minimum overlap. Tape seams with manufacturers recommended product.

C. Install insulation baffles 6" over height of blown insulation and to seal at top of wall.

D. Install air barrier and air barrier tape per manufacturer's instructions where indicated on drawings.

E. Install FRP panels over insulation using adhesive compatible with insulation. FRP to extend 6" minimum below grade and fully cover all insulation. Seal joints with color matched silicone.

F. Field test application of tape or adhesives in small area before full installation to verify that these products adhere to substrate and do not degrade insulation.

G. Restore damaged finishes and test for proper operation. Remove labels, clean all surfaces and protect work from damage. Remove debris from site and dispose of debris using care to recycle products as available by local services.

SECTION 07460

METAL SIDING AND COMPOSITE TRIM

PART 1 - GENERAL

1. SUMMARY

A. Provide painted steel board and batten vertical siding.

B. Provide ship lap soffit boards, nominal size: 1x8.

C. Provide composite trim boards.

2. SUBMITTALS

A. Submit 12" samples, product data and shop drawings for approval.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

1. MATERIALS

A. Pre-finished 26 gauge shiplap siding. 10" width with hidden fasteners. Profile approximately 8" panel with 2"x ¾" batten. As provided by one of the following Manufacturers, or equal: Metal Exteriors of Shiloh, Ohio; Quality Edge of Walker, Michigan; EDCO of Hopkins, Minnesota. Color: Dark Brown.

B. Shiplap soffit boards and composite trim: Nominal 8" exposure as manufactured by one of the following or equal Acre™ of Macomb, Mississippi; TruExterior of East Spencer, North Carolina.

PART 3 - EXECUTION

1. INSTALLATION

A. Examine, clean and repair any substrate conditions that would be detrimental to proper installation.

B. Stain all boards to match metal siding with one coat, 6 sides before installation.

C. Install siding over OSB insulating sheathing with taped joints. Fasten per manufacturer's instructions. Avoid joints in vertical boards.

D. Restore damaged components. Clean and protect work from damage. Remove debris from site and dispose of debris using care to recycle paper, plastic and wood products as available by local services.

SECTION 075000

ROOFING MATERIALS

PART 1 – GENERAL

1. SUMMARY

A. Provide batten seam galvalume roofing and accessories.
1. Painted corrugated galvalume panels.
2. Painted galvalume flashing and drip edge.
3. Self-stick ice and water shield underlay.
4. Vent /penetration boots.

2. SUBMITTALS

A. Submit for approval samples, product data, warranty, extra stock.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for at least three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

1. MATERIALS

A. Plus or minus 1 ¼" rib height, 18" maximum pan width, .26 gage roofing, concealed fasteners with locking vertical cap. One of the following or equal; Vertical Seam as manufactured by Metal Sales; Monarch by ATAS International. Dark brown color to be chosen by architect. Trims in matching color.

C. Fasteners and accessories such as soffit and ridge vents: Non-corrosive.

D. Water protection sheet: Ice and Water Shield by W .R. Grace or approved equal.

E. Self-stick ice and water shield membrane.

F. Vent Boots: Flexible Neoprene liner with aluminum boot to match roof.

G. Shims between dissimilar metals: Bituminous, neoprene or PVC shims of thickness and hardness required for permanent separation of components.

PART 3 - EXECUTION

1. INSTALLATION

A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

B. Install ice and water protection sheet on entire roof surface.

C. Install corrugated roofing with side lap of 2 corrugations on slopes of 3 in 12 or more. Install with side lap of 3 corrugations on slopes below 3 in 12.

D. See drawings for types of venting required at soffits and gables.

E. Restore damaged components. Clean and protect work from damage.

F. Remove Debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

SECTION 079500

JOINT SEALERS

PART 1 GENERAL

1. SUMMARY

A. Provide sealants at intersection of building components, control and expansion joints.

2. SUBMITTALS

A. Submit color samples and product data for approval.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

1. MATERIALS

A. Joints designed for expansion and movement conditions at site:
1. Exterior Joints on Vertical Surfaces: Paintable clear silicone.
2. Horizontal Slab Joints, interior and exterior: Self-levelling polyurethane; Tremco Spectrum 900SL, Pecora 310SL, or approved equal.
3. Interior Joints: Mildew resistant Acrylic latex; Tremco, Dow, or equal.
4. Pre-compressed Expanding Sealant Tape; Emseal, 3M, or approved equal.
5. Pavement Joint Filler: Resilient, pre-molded asphalt impregnated fiberboard.
6. Primers, Bond Breakers and Backer Rods; compatible with sealant and adjacent surfaces.

PART 3 EXECUTION

1. INSTALLATION

A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.

B. Provide sealants in colors as selected by Architect from manufacturer's standards. Field test each product and obtain Contracting Officers approval of colors before proceeding with installation of sealants.

C. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints, and install bond breakers, backer rods and sealant as recommended by manufacturers.

D. Depth shall equal width up to 1/2" wide, depth shall equal 1/2 width for joints over 1/2" wide.

E. Seal all joints, gaps and cracks in exterior wall construction with appropriate material. Eliminate air transfer from interior to exterior between materials. Apply sealant during erection to conceal joints.

F. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove excess sealant or primer.

G. Restore damaged finishes and test for proper operation. Remove labels, clean all surfaces and protect work from damage.

H. Remove debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

SECTION 081100

FIBERGLASS DOORS AND FRAMES

PART 1 GENERAL

1. SUMMARY

A. Provide exterior insulated fiberglass (FRP) doors including fiberglass frames.

B. Coordinate with hardware

2. SUBMITTALS

A. Submit product data and shop drawings for approval.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for at least three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Protect materials from weather, water or damage from other activities.

C. Warranty: Replacement warranty for 10 years against defects in materials and workmanship, warping in excess of ¼" and delamination.

PART 2 PRODUCTS

1. MATERIALS

A. Manufacturers: Listed manufacturers are believed to conform to the criteria stated for material quality standards, function and appearance. Manufacturers are subject to meeting the requirements of this specification. Non-conforming substitutions will not be accepted.
1. Corrim
2. Edge Water
3. Metropolitan Door Industries

B. Corrosion resistance is primary condition for this product. Cores for exterior doors shall be closed cell foam with a minimum density of 3 pounds per square foot, R-value = 7.5 minimum.

C. Stiles and Rails: Stiles and rails shall be reinforced with solid polymers or aluminum extrusions compatible with door facing material. Outside dimensions shall conform to hardware reinforcement requirements and overall door thickness of 1.75 inches.

D. Door Face Skins shall consist of a Fiberglass Laminate with minimum thickness of 0.090 inches. Face sheet reinforcements shall be type "A" glass.

E. Frame shall be fiberglass with complete uniformity in color and size. The frame will be of one-piece construction with molded stop. Internal Reinforcement shall be continuous within the structure to allow for mounting of specified hardware. Provide a minimum hinge screw holding value of 1000 lbs per screw. Jamb/Header connection shall be mitered for tight fit. Provide 3 rubber silencers per door.

PART 3 EXECUTION

1. INSTALLATION

A. Comply with NFPA and NWWDA quality standards for doors and hardware mounting. Pre-fit doors to frames. Pre-machine doors for hardware listed on final schedules. Factory bevel doors. Ship pre-finished door and frame in single package.

B. Machining and fitting: All fiberglass doors shall be machined by the manufacturer or authorized manufacturer for cutouts, hinges, locks, closures and all hardware requiring routing and mortising.

C. Install doors with not more than 1/8" clearance to jamb at top and sides, 3/4" to floor slab at bottom. Comply with NFPA 80 for rated assemblies.

D. Insulate hollow frames with spray foam taking care not to overfill and deform frames.

F Restore damaged components. Adjust, clean and protect work from damage.

G. Clean site and dispose of debris using care to recycle paper, plastic, metal, and wood products as available by local services

SECTION 087100

FINISH HARDWARE

PART 1 GENERAL

1. SUMMARY

A. Provide finish hardware for exterior door.

2. SUBMITTALS

A. Submit for approval product data, hardware schedule with proposed keying for use based on Owner's requirements and schedule.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Provide one year warrantee for all hardware. Return to site for final adjustment 11 months after final Certificate of Occupancy.

PART 2 PRODUCTS

1. MATERIALS

A. Hinges, butts and pivots: Full-mortise, 5 knuckle ball-bearing type; Hagar, Stanley, or approved equal, stainless steel.

B. Locksets, latchsets, exit devices:
1. Keyless entry cylinder. Heavy duty mechanical combination door lock, Lockey 2835 marine grade, or Codelocks CL510 marine grade, or approved equal.
2. Lever Design: Quantum (full return).

C. Surface Bolts with recessed strike: Ives, Rockwood, Adams Rite, or approved equal.

D. Kick Lever Door Holder: 5" with rubber tip, Rockwood, Kuba or approved equal.

E. Thresholds: Reese, NGP, or approved equal.

F. Weather stripping: Reese – DS77C @ Head and Jambs, 95CP-95C @ Astragals, 967C @ Brush Sweeps, NGP, or approved equals.

G. Finish: US 32D, Satin stainless or brushed aluminum.

PART 3 EXECUTION

1. INSTALLATION

A. Follow guidelines of DHI "Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames" and hardware manufacturers' instructions.

B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

C. Kick stop to be installed on interior face of doors.

D. Adjust operation, clean and protect.

E. Restore damaged finishes and test for proper operation. Remove labels, clean all surfaces and protect work from damage.

F. Remove debris from site and dispose of debris using care to recycle paper, plastic, metal and wood products as available by local services.

SECTION 089000

LOUVERS AND VENTS

PART 1 GENERAL

1. SUMMARY

A. Provide louvers and vents:
1. Aluminum louvers for exterior walls
2. Soffit and eave vents.

2. SUBMITTALS

A. Submit for approval shop drawings, color samples, product data.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

1. MATERIALS

A. Triangular Aluminum Louver: Manufactured from coil stock, stationary, 4" depth horizontal drainable blade louvers, with nailing flange 3 sides, fiberglass insect screen, by; KEES Inc, American Louver and Vent or approved equal. Color; dark brown in size as indicated on plans.

B. Soffit Vents: continuous aluminum screened vent, color: dark brown.

PART 3 EXECUTION

1. INSTALLATION

A. Comply with AMCA Standard 500 and provide units with AMCA Certification rating seal. Comply with SMACNA Architectural Sheet Metal Manual.

B. Take field measurements prior to fabrication. Install units plumb and level; isolate dissimilar materials to prevent corrosion. Touch-up damaged coatings.

D. Provide separate continuous sills where needed to prevent water penetration. Maintain equal blade-to-blade and blade-to-frame spacing for uniform appearance. Provide concealed vertical mullions and reinforcement as needed.

E. Provide anchors, supports and accessories as needed. Provide gaskets, flashings and fillers as necessary to make installation water tight.

F. Restore damaged finishes. Remove labels, clean all surfaces and protect work from damage.

G. Remove debris from site and dispose of debris using care to recycle paper, plastic and wood products as available by local services.

SECTION 097800

INTERIOR PANEL PRODUCTS

PART 1 GENERAL

1. SUMMARY

A. Provide interior finish panels:
1. Interior walls and ceilings
2. See Division 061000 for wood framing support systems.

2. SUBMITTALS

A. Submit for approval product data.

3. QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Tolerances: Not more than 1/16" difference in true plane at joints between adjacent boards before finishing. Not more than 1/8" in 10' deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.

C. Protect materials from weather, water or damage from other activities.

PART 2 PRODUCTS

1. MATERIALS

A. Panel Boards: Interior use; fire resistant and moisture resistant, one of the following systems or approved equal:
1. Magnesiacore 3/8" thickness.
1. Fiberglass faced 5/8" moisture resistant gypsum wall board; Georgia Pacific DensArmor Plus, USG GlasRoc, or approved equal.

B. Fasteners: ASTM C 514 and ASTM C 646. Provide Type S bugle head screws, cadmium plated. Provide additional anchors and fasteners as required.

C. Sealant for joints in non-gypsum Magnesiacore product ONLY: Paintable, mold resistant; GE -Max* Shield Ultra Seal Sealant, Masterseal, NP-1 or approved equal. Color White.

D. Joint Reinforcement for Fiberglass Faced Panels ONLY: ASTM C 587 fiberglass tape and vinyl compound.

E. Accessories: Use only Plastic corner beads, casing beads, control joints; Trim-Tex products or approved equal.

PART 3 EXECUTION

1. INSTALLATION

A. Install all ceiling panels with all edges backed up with framing to minimize sag.

B. System 1: Where non-gypsum system is installed assure seams are minimum 1 ⅛" wide and do not vary more than 1/8" over length or width of board. Fill seams with sealant and shave off flush after sealant has cured. Painting is not required for this system.

C. System 2: Comply with ASTM C 840 and GA 216 - Recommended Specifications for the Application and Finishing of Gypsum Board. Inspect substrate and insulation before installation. Include blocking for surface mounted items.
1. Install trim and 3-coat joint treatment in strict compliance with manufacturer's instructions and recommendations. Joint treatment is required at all fasteners and edges between boards. Fill all surface defects. Sand between and after joint treatment coatings and leave ready for finish painting or wall treatment.

D. Clean site and dispose of debris using care to recycle paper, plastic, metal, and wood products as available by local services.

SECTION 099000

PAINTING

PART 1 GENERAL

1. SUMMARY

A. Extent of painting work is specified herein and/or in schedules in Section Specifications.

B. This Section includes surface preparation, painting and finishing of all exposed interior and exterior items and surfaces throughout Project, except as otherwise indicated.
1. Surface preparation, priming and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.

C. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers and other applied materials whether used as prime, intermediate or finish coats.

D. Paint all exposed surfaces whether or not colors are designated in schedules, except where natural finish of material is specifically noted as not to be painted. Where items or surfaces are not specifically mentioned, paint same as adjacent similar materials or surfaces. If color or finish is not designated, Engineer will select from standard colors or finishes available.
1. Painting of interior surfaces includes, but is not necessarily limited to the following:
a. All interior building walls and ceilings.
b. All fiberglass doors and frames.
c. All interior concrete surfaces.

2. Painting also includes field painting of all new exposed bare, covered and submerged pipes and ducts (including color coding) and of hangers, exposed and submerged steel and iron work and primed metal surfaces of mechanical and electrical equipment, except as otherwise indicated. Items covered under this specification include but are not necessarily limited to the following:
a. All piping, ducts, conduit, and related items located inside of the building.
b. All outdoor exposed and submerged piping, ducts, and conduits.

E. Following categories of work are not included as part of field-applied finish work:
1. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer finishing is specified for such items as (but not limited to) roof structures, acoustic materials, finished mechanical and electrical equipment including light fixtures, switchgear and distribution cabinets, and equipment.
2. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces in concealed areas and generally inaccessible areas such as furred areas, utility tunnels, pipe spaces and duct shafts.
3. Finished Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze, brass and similar finished materials will not require finish painting.
4. Operating Parts and Labels: Unless otherwise indicated, moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts will not require finish painting.

F. Do not paint over any code-required labels, such as Underwriters' Laboratories (UL) and Factory Mutual (FM), or any equipment identification, performance rating, name, or nomenclature plates.

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G. Following categories of work are included under other Sections of these Specifications.
1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under various sections for metal fabrications, hollow metal work and similar items. Also, for fabricated components such as shop-fabricated or factory-built mechanical and electrical equipment or accessories.
a. Repair damaged prime coats with compatible material part of this Section.
b. Use finish coat paints compatible with shop applied primers.

3. SUBMITTALS

A. Product data for each paint system specified, including fillers and primers.
1. Provide manufacturer's technical information including label analysis and instructions for handling, storage, manufacturer's recommendations for surface preparation and application of each material proposed for use.
2. List each material and cross-reference the coating, finish system and application, referring to system identification numbers listed herein. Identify each material by manufacturer's catalog number and general classification.

C. Provide manufacturer's physical color charts for review of color and texture only.

D. At Engineer's request, provide samples of each color and material to be applied, with texture to simulate actual conditions on representative samples of actual substrate.
1. Provide stepped samples, defining each separate coat including fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color and texture are achieved.
2. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.

4. QUALITY ASSURANCE

A. Applicator Qualifications: A firm which has completed painting system applications similar in material and extent to those indicated, that have resulted in a construction record of successful in-service performance.

B. Single-Source Responsibility: Provide primers and undercoat paint produced by same manufacturer as finish coats.

C. Coordination of Work: Review other Sections of Specifications in which primers are provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use to ensure use of compatible primers.
1. Notify Engineer of anticipated problems using the materials specified over substrates indicated and/or primers provided by others.

5. DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label and following information:
1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Federal Specification number, if applicable.
4. Manufacturer's stock number and date of manufacturer.
5. Contents by volume, for major pigment and vehicle constituents.
6. Thinning instructions.
7. Application instructions.
8. Color, name, and number.

B. Store materials not in actual use in tightly covered containers in well ventilated areas at a minimum ambient temperature of 45 deg. F. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue. Protect from freezing.

C. Take precautions to ensure that workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.

6. PROJECT CONDITIONS

A. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg. F unless otherwise permitted by paint manufacturer's printed instructions.

B. Do not apply paint in snow, rain, fog or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg. F above the dew point; or to damp or wet surfaces unless otherwise permitted by paint manufacturer's printed instructions.
1. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.

C. Erect, maintain and remove scaffolds or staging required for the proper execution of the work in a safe and careful manner, using sound lumber, ladders or staging. Take extreme care in fastening, bracing, and staging to avoid damaging other work.

PART II PRODUCTS

1. MANUFACTURERS

A. Materials shall be products of Tnemec Company, Inc., Sherwin Williams, Carboline, or approved equal. Materials are designated in schedules by reference to products of Tnemec Company, Inc. for reference purposes only.

2. PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide fillers, primers, finish coat and related materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide best quality trade paint material of various coating types specified as manufactured by acceptable paint materials manufacturers. Paint material containers not displaying manufacturer's product identification will not be acceptable.
1. Proprietary names used to designate colors or materials are not intended to imply that products of named manufacturers are required to exclusion of equivalent products of other manufacturers.

C. Colors: Paint colors, surface treatments and finishes are indicated in schedules included at the end of this Section. Prior to beginning work, Engineer will make selection from manufacturer's complete range of colors for surfaces to be painted.

D. Pigments: Pure, nonfading, applicable types to suit substrates and service indicated.
1. Lead content in pigment, if any, is limited to contain not more than 0.06 percent lead, based on the total nonvolatile (dry-film) of paint by weight.

E. Piping Color Code: To facilitate identification of piping, all new exposed piping shall be painted. The following color scheme will be utilized. If a specific piping is not listed, verify color with the Engineer.

Raw Wastewater	Dark Gray
Mixed Liquor	Olive Green
Clarified Water	Aqua
Disinfected Effluent	Aqua
Potable Water	Light Blue
Plant Water (non-potable)	Dark Blue
Waste Sludge	Dark brown
Sewer (Sanitary or Other)	Dark gray
LP Gas	Red
Other lines	Light gray

1. In situations where two colors do not have significant contrast to easily differentiate between them, a six-inch band of contrasting color will be on one of the pipes at approximately 30 inch intervals.
2. The name of material and an arrow indicates direction of flow shall be provided at intervals not exceeding fifteen feet.

F. Spare Paint. Provide one extra unopened container of each type and color of paint used.

PART III EXECUTION

1. EXAMINATION

A. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Do not proceed with work until unsatisfactory conditions have been corrected. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within any particular area.

2. PREPARATION

A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.

B. Removal: Have workers skilled in trades involved, remove hardware, accessories, plates, lighting fixtures and similar items already installed that are not to be finish-painted or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, for complete painting of items and adjacent surfaces.
1. Following completion of painting of each space or area, have items reinstalled by workers skilled in the trades involved.

C. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the coating. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly painted surfaces.

D. Surface Preparation: Clean and prepare all surfaces to be painted in proper condition for finishing by customary cleaning, sanding and puttying operations according to manufacturer's instructions and as specified. Do not paint until any and all defects have been properly repaired.
1. Provide barrier coats over incompatible primers or remove and reprime. Notify Engineer in writing of any anticipated problems in using the specified coating systems with substrates primed by others.

E. Cementitious Materials: Prepare surfaces of concrete and fiber-reinforced cement panels to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
1. Use abrasive blast-cleaning methods if recommended by manufacturer.
2. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application of paint. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
3. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush floor with clean water to remove acid, neutralize with ammonia, rinse allow to dry and vacuum before painting.

F. Wood and Composite Trim: Clean surfaces of dirt, oil or other foreign substances with scrapers, mineral spirits and sandpaper as required. Sand surfaces exposed to view smooth and dust off.
1. Scrape and clean and apply primer. After priming, fill holes and imperfections in finish surfaces with exterior grade wood-filler. Sand smooth when dried.
2. Prime, stain or seal 6 sides of wood and trim required to be painted, immediately upon delivery to job.

G. Ferrous Metals: Clean surfaces which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and foreign substances. Use solvent or mechanical cleaning methods complying with recommendations of the Steel Structures Painting Council (SSPC).
1. Touch-up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by manufacturer and touch-up with same or compatible primer.
2. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.

H. Galvanized Surfaces: Clean surfaces free of oil and surface contaminants with non-petroleum based solvent. Remove pretreatment from coil stock by mechanical methods.

I. Materials Preparation: Mix and prepare painting materials according to manufacturer's directions.
1. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
2. Stir materials before application to produce a mixture of uniform density and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
3. Use only thinners approved by paint manufacturer, and within recommended limits.

J. Tinting: Tint each undercoat a lighter shade for identification of each coat where multiple coats are to be applied.

3. APPLICATION

A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces or conditions otherwise detrimental to formation of a durable paint film.
2. Provide finish coats that are compatible with primers used.
3. The number of coats and paint film thickness required is same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where required by manufacturer to produce an even smooth surface.
4. Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, welds and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, covers, grilles and similar components are in place. Extend coatings in these areas as required to maintain system integrity and provide desired protection.
6. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat only before final installation of equipment.
7. Finish exterior doors on tops, bottoms and side edges same as exterior faces.
8. Sand lightly between each succeeding enamel coat.
9. Omit first coat (primer) on metal surfaces which have been shop-primed and touch-up painted, unless otherwise indicated.

B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration. Allow sufficient time between successive coatings to permit proper drying.

C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness (DFT) as indicated or, if not indicated, as recommended by coating manufacturer. DFT is per coat scheduled.

D. Application: Apply paints and coatings by brush, roller, spray or other applicators according to manufacturer's directions. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections. Neatly draw color breaks.
1. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for the materials and texture indicated.
a. Do not double-back with spray equipment building-up dry film thickness (DFT) of 2 coats in one pass, unless recommended by coating material manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to those items exposed inside building. Mechanical items to be painted include, but are not limited to, piping, pipe hangers and supports.

G. Electrical items to be painted include, but are not limited to, conduit and fittings.

H. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by manufacturer to material which is required to be painted or finished which has not been prime coated by others.
1. Recoat primed and sealed surfaces where there is evidence of unsealed areas or poor adhesion in first coat.

I. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.

J. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

4. FIELD QUALITY CONTROL

A. The Owner reserves the right to invoke the following test procedures at any time and as often as the Owner deems necessary during the period when paint is being applied.

B. The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of materials delivered to the Project will be taken, identified, sealed and certified in the presence of the Contractor.

C. The testing agency will perform appropriate tests for any or all of the following characteristics as required.
1. Quantitative materials analysis.
2. Abrasion resistance.
3. Apparent reflectivity.
4. Flexibility.
5. Wash ability.
6. Absorption.
7. Accelerated weathering.
8. Dry opacity.
9. Accelerated yellowness.
10. Recoating.
11. Skinning.
12. Color retention.
13. Alkali and mildew resistance.
14. Lead content.
15. Volatile organic compounds (VOCs).

D. The testing agency will also perform in-place testing to determine dry film thickness (DFT) of materials applied to determine compliance with specified DFT.

E. If test results show material being used does not comply with specified requirements, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing, repaint surfaces coated with rejected paint and remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are incompatible.
1. If applied dry film thickness (DFT) is less than specified, Contractor may be required to apply additional coats of specified materials to achieve DFT specified.

5. CLEANING AND PROTECTION

A. Clean-Up: During progress of work, remove from site rubbish, cans and rags at end of each work day.

B. Upon completion of painting work, paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or otherwise damage finished surfaces.

C. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing and repainting, as acceptable to Engineer.

D. Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
1. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

PART IV SCHEDULE

1. EXTERIOR PAINT SYSTEMS (EPS):

EPS – 1 Woodwork: Opaque (High Gloss/Alkyd):

Coat 1:	Tnemec Series 10V Primer 2.0 - 3.5 mils DFT Sherwin Williams Exterior Pre-Cryl Wood Primer 2.0 - 3.5 mils DFT Or Equal
Coat 2:	Tnemec Series 1029 1.5 - 3.5 mils DFT Sherwin Williams Super Paint Satin 1.5 - 3.5 mils DFT Or Equal
Coat 3:	Tnemec Series 1029 1.5 - 3.5 mils DFT Sherwin Williams Super Paint Satin 1.5 - 3.5 mils DFT Or Equal

EPS – 2 Carbon Steel - Non-Immersion: Including miscellaneous metal, tanks, pipes and equipment

Shop Primer Coat:	Tnemec Series 1 Primer 2.5 - 3.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5 - 3 mils DFT Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 5.0 mils DFT Or Equal
Finish Coat:	Tnemec Series 73-color Endura-Shield 2.5 - 5.0 mils DFT Sherwin Williams Polane 8880 Polyurethane 2.5-5 DFT Or Equal

EPS – 3 Submerged Carbon Steel: Including submerged pipes, hangers, supports, etc.

Shop Primer Coat:	Tnemec Series 1 Primer 2.5 - 3.5 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-3.5 mils DFT Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 5.0 mils DFT Or Equal
Finish Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 6.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 6.0 mils DFT Or Equal

EPS - 4 Ductile Iron Pipe - Non-Immersion:

Shop Primer Coat:	Tnemec Series 1 Primer 2.5 - 3.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-3.5 mils DFT Or Equal
Field Touch-up Coat:	Tnemec Series 1 Primer 0 - 5.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 0-0.5 mils DFT Or Equal
Intermediate Coat:	Tnemec Series N69 Hi-Build Epoxoline 4.0 - 6.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 4.0 - 6.0 mils DFT Or Equal
Finish Coat:	Tnemec Series 73 Endura-Shield 2.5 - 5.0 mils DFT Sherwin Williams Polane 8880 Polyurethane 2.5-5 mils DFT Or Equal

EPS – 5 Ductile Iron Pipe – Submerged

Shop Primer Coat:	Tnemec Series 1Primer 2.5 - 3.5 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-5 mils DFT Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 4.0 - 6.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 4.0 - 6.0 mils DFT Or Equal
Finish Coat:	Tnemec Series N69 Hi-Build Epoxoline 4.0 - 6.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 4.0 - 6.0 mils DFT Or Equal

EPS – 6 Galvanized Steel: Includes pipe, conduit, metal deck and miscellaneous fabrications:

Spot Prime Coat:	Tnemec Series 1 Primer (galvanized touch-up only) Lightly sand all hot dip (conduit) galvanized surfaces, then solvent wipe with 41-1 Tnemec solvent Pressure wash metal decking. Sherwin Williams Corothane 1 Galva Pac Zinc Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 2.0 - 3.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 2.0-3.0 mils DFT Or Equal
Finish Coat	Tnemec Series 73 Endurashield 2.0 - 3.0 mils DFT Sherwin Williams Polane 8880 Polyurethane 2.0 - 3.0 mils DFT Or Equal

EPS – 7 Zinc Coated Metal: Including supports, hangers, etc.

Surface preparation:	SSPC-SP1 Solvent cleaning – Abrade Surface
Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3-4 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3-4 mils DFT Or Equal
2 coats:	Tnemec Series N69 Hi-Build Epoxoline 3-4 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3-4 mils DFT Or Equal

EPS – 8 New Steel: Misc. Steel:

Shop Primer Coat:	Tnemec Series Zinc 90-97 Tnemec-Zinc, 2.5 - 3.5 mils DFT Sherwin Williams Corothane 1 Galva Pac Zinc 2.5-3.5 mils DFT Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 5.0 mils DFT Or Equal
Finish Coat:	Tnemec Series 73-color Endura-Shield 2.5 - 5.0 mils DFT Sherwin Williams Polane 8880 Polyurethane 2.5 - 5 DFT Or Equal

EPS – 10 Factory Primed Steel and Fiberglass: Doors, Frames & Misc. Equipment:

Shop Prime Coat:	Shop applied primer by manufacturer
Field Prime:	Tnemec Series N27 S.T. Typoxy 2.0 - 3.0 mils DFT Sherwin Williams Macropoxy HS 2-3 DFT Or Equal
Finish Coat:	Tnemec Series 73-color Endura-Shield 2.5 - 5.0 mils DFT Sherwin Williams Polane 8880 Polyurethane 2.5-5 DFT Or Equal

EPS - 11 Concrete:

Prep:	All concrete must be uniformly brush-blasted per SSPC-SP13/NACE 6, ICRI-CSP3-5 Surface Preparation of Concrete. Fill all bug holes with Series 218 Tnemec Mortar or equal
2 Coats:	Tnemec Series 104 H.S. Epoxy 10 mils DFT Carboline Carboguard 890 10 mils DFT Or Equal

2. INTERIOR PAINT SYSTEMS (IPS)

IPS – 1 Interior Carbon Steel - Non-Immersion:

Shop Primer Coat:	Tnemec Series 1 Primer 2.5 - 3.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-3 mils DFT Or Equal
Field Prime Coat:	Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 5.0 mils DFT Or Equal
Finish Coat:	Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0 - 5.0 mils DFT Or Equal

IPS – 2 Interior Ductile Iron Pipe - Non-Immersion:

Shop Primer Coat:	Tnemec Series 1 Primer 2.5 - 3.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-3.5 mils DFT Or Equal
Field Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0-5.0 mils DFT Or Equal
Finish Coat:	Tnemec Series N69 Hi-Build Epoxoline 3.0 - 5.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0-5.0 mils DFT Or Equal

IPS – 3 Galvanized Steel: Includes pipe, conduit, metal deck and miscellaneous fabrications:

Prime Coat:	Tnemec Series Series 1 2.5 - 3.0 mils DFT Sherwin Williams Corothane 1 1k Galva Pac Zinc 2.5-3.5 mils DFT Or Equal
	Lightly sand all surfaces (conduit) and then solvent wipe with Tnemec 41-1 solvent.
Field Prime Coat:	Tnemec Series N69 Epoxoline 3.0 - 4.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0-4.0 mils DFT Or Equal
Finish Coat:	Tnemec Series N69 Epoxoline 3.0 - 4.0 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3.0-4.0 mils DFT Or Equal

IPS – 4 Zinc Coated Metal: Including supports, hangers, etc.

Surface preparation:	SSPC-SP1 Solvent cleaning and abrade substrate
Prime Coat:	Tnemec Series N69 Hi-Build Epoxoline 3-4 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 3-4 mils DFT Or Equal
2 coats:	Tnemec Series N69 Hi-Build Epoxoline 6-8 mils DFT Sherwin Williams Macropoxy 646 FC Epoxy 6-8 mils DFT Or Equal

IPS – 5 Panel Ceilings:

Prime Coat:	Tnemec Series 151 180 – 400 Sq. Ft. per gallon Sherwin Williams Pro Cryl Acrylic Primer Or Equal
Finish Coat:	Tnemec Series 113 H.B. Tnemc-Tufcoat 4-6 mils DFT Sherwin Williams Pro Industrial Hi Build Water Based Epoxy Or Equal

IPS – 6 Gypsum Drywall (Satin/Alkyd):

Prime Coat:	Tnemec Series 151 180 – 400 Sq. Ft. per gallon Sherwin Williams Pro Cryl Acrylic Primer Or Equal
Second Coat:	Tnemec Series 113 HB 3.0 - 6.0 mils DFT Sherwin Williams Pro Industrial Hi Build Water Based Epoxy Or Equal
Third Coat:	Tnemec Series 113 HB 3.0 - 6.0 mils DFT Sherwin Williams Pro Industrial Hi Build Water Based Epoxy Or Equal

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No.	DATE	DESCRIPTION	CHECKED

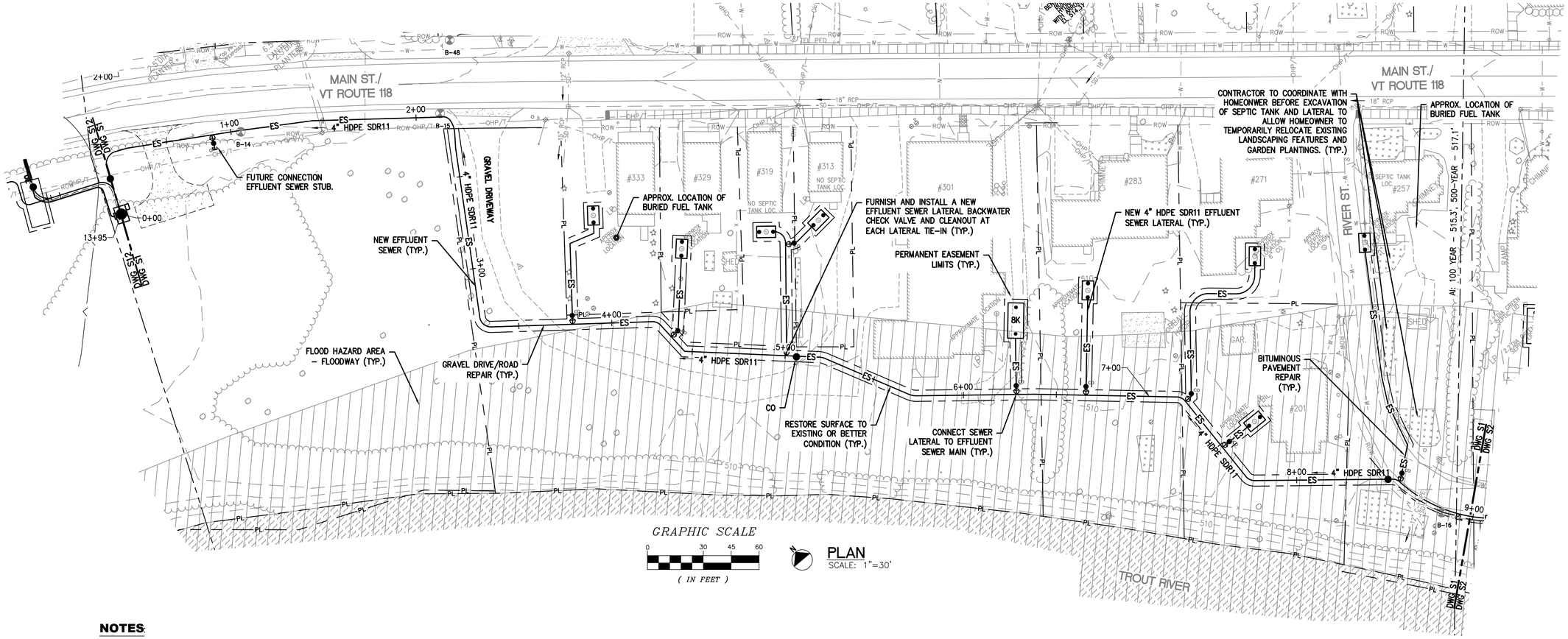
TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

DESIGNED	CHECKED
DRV	DRV
DRAWN	DATE
DRV	OCTOBER 2024

PROJECT NO.
19.129800.02

A3



NOTES:

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2. EFFLUENT SEWER MAIN AND EFFLUENT SEWER LATERAL PIPING SHALL BE LAID AT UNIFORM GRADE BETWEEN INDICATED LOCATIONS ON THE DRAWINGS TO DRAIN TO THE PUMP STATIONS.
3. FURISH AND INSTALL A CLEANOUT AND BACKWATER CHECK VALVE ON EVERY LATERAL EFFLUENT SEWER CONNECTION TO THE EFFLUENT SEWER MAIN OR AS LOCATED ON THESE DRAWINGS. SEE EFFLUENT SEWER LATERAL CHECK VALVE AND CLEANOUT DETAIL.
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5. INSTALLATION OF ALL HDPE EFFLUENT SEWER FORCE MAINS (EFM) AND GRAVITY EFFLUENT SEWER (ES) MAINS AND LATERALS SHALL COMPLY WITH REQUIREMENTS AND RECOMMENDATIONS OF THE PLASTICS PIPE INSTITUTE (PPI) HANDBOOK OF POLYETHYLENE PIPE. THE MINIMUM ALLOWABLE COLD BEND RADIUS IS 25 TIMES THE PIPES OUTSIDE DIAMETER (OD). THE COLD BEND RADIUS SHALL BE LIMITED TO MINIMUM RADIUS OF 100 X OD FOR A DISTANCE OF 5 X OD ON EITHER SIDE OF A FITTING OR FLANGE CONNECTION. NON SWEEP ELBOW FITTINGS SHALL NOT BE USED. SWEEP ELBOW FITTINGS SHALL ONLY BE USED WHERE COLD BENDING OF HDPE PIPE CANNOT BE PERFORMED IN ACCORDANCE WITH MINIMUM REQUIREMENTS.
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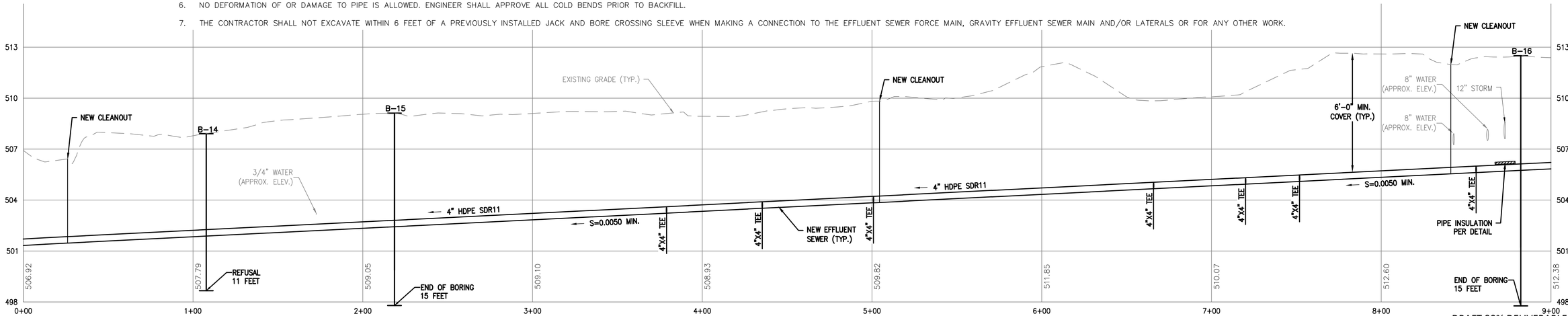

PS-1 TO 490 HAZENS NOTCH RD.

SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF
MONTGOMERY,
VERMONT

CENTER
COMMUNITY
DECENTRALIZED
WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S1

NOTES:

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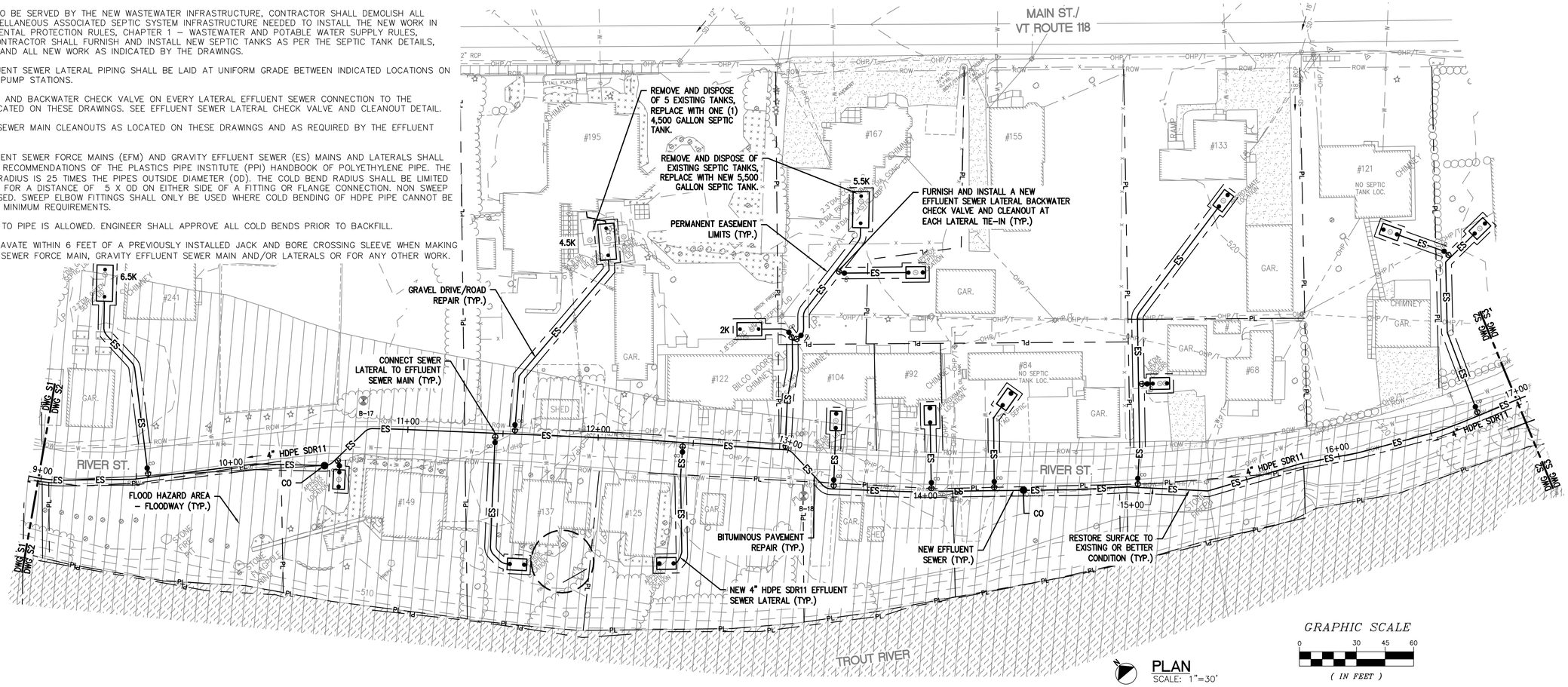

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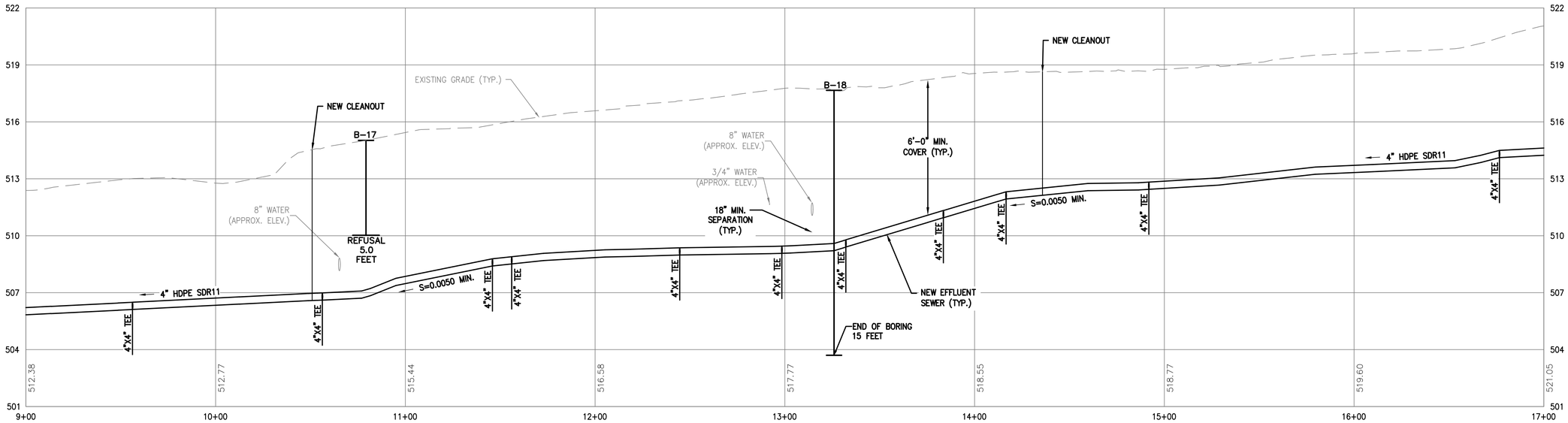

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VERT. 1"=3'

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TOWN OF MONTGOMERY, VERMONT

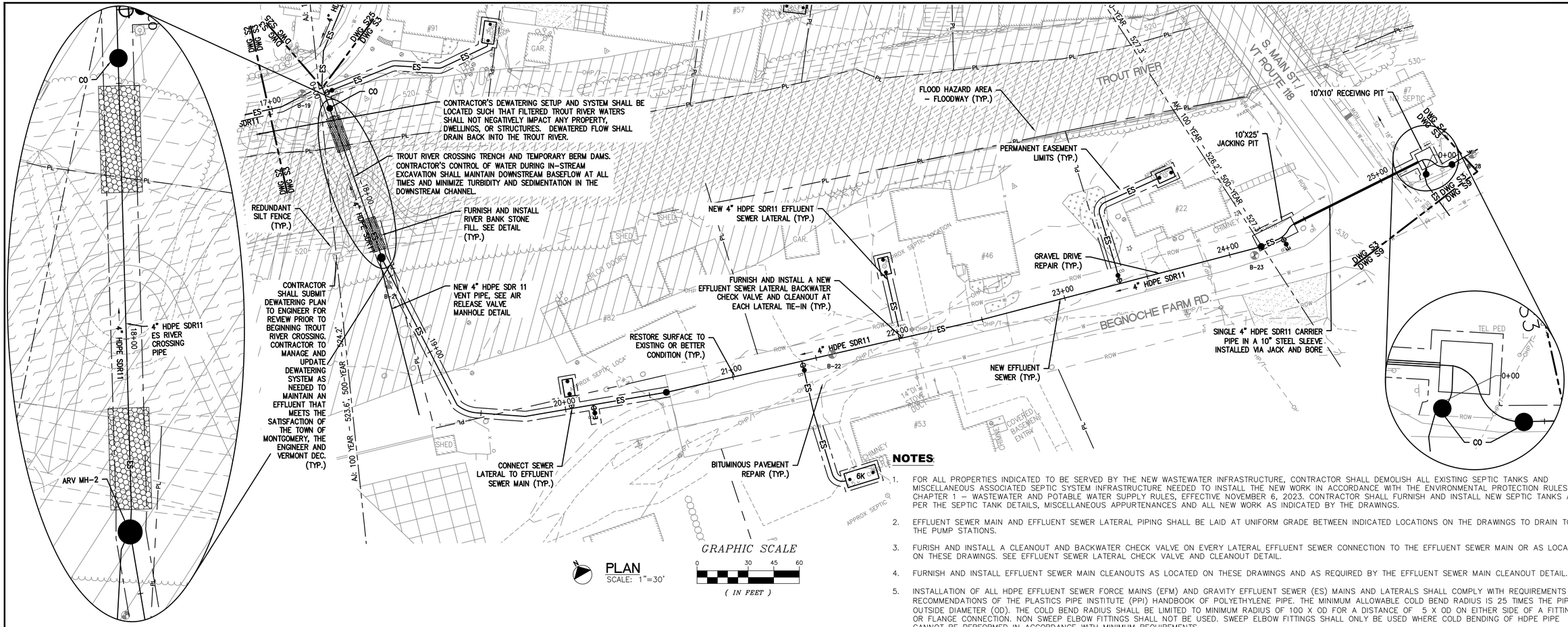
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S2
SHEET 43 OF 75



PLAN
SCALE: 1"=30'

GRAPHIC SCALE
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(IN FEET)

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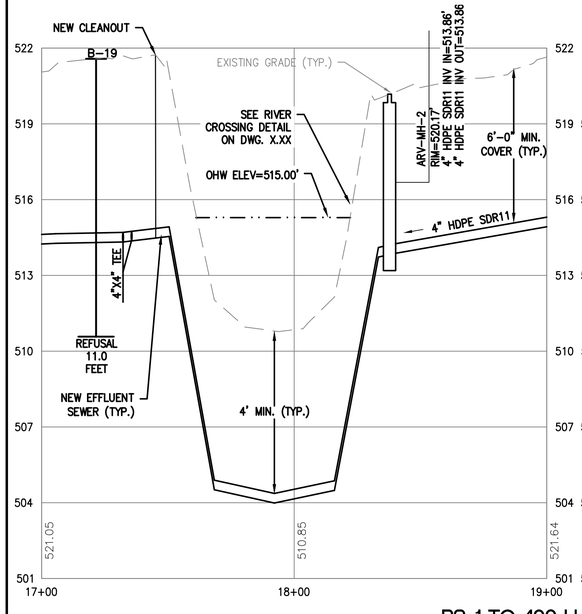

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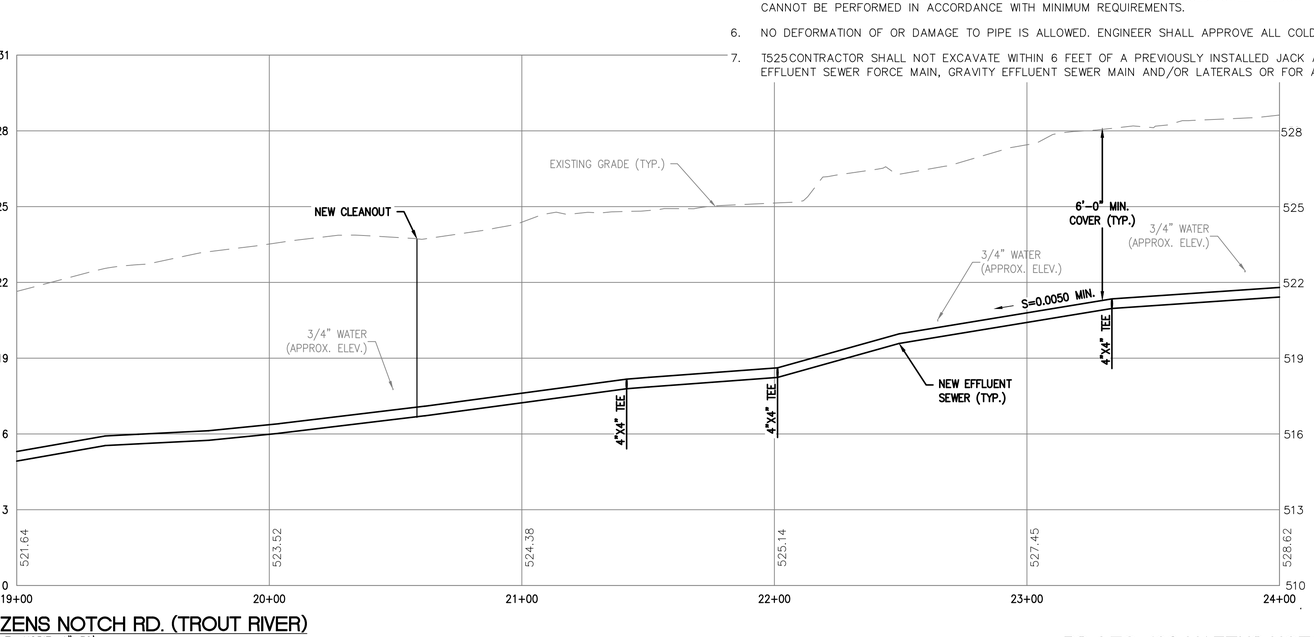

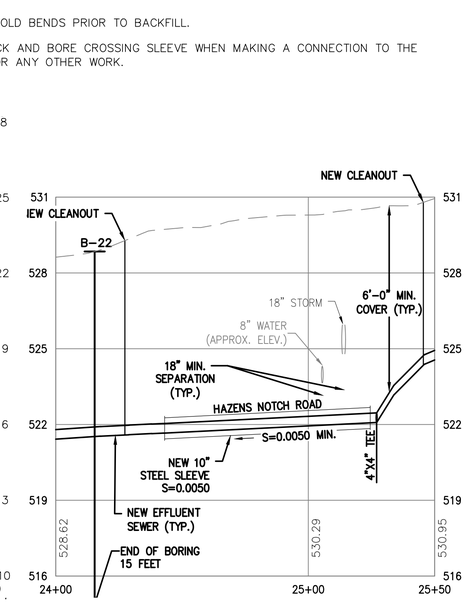

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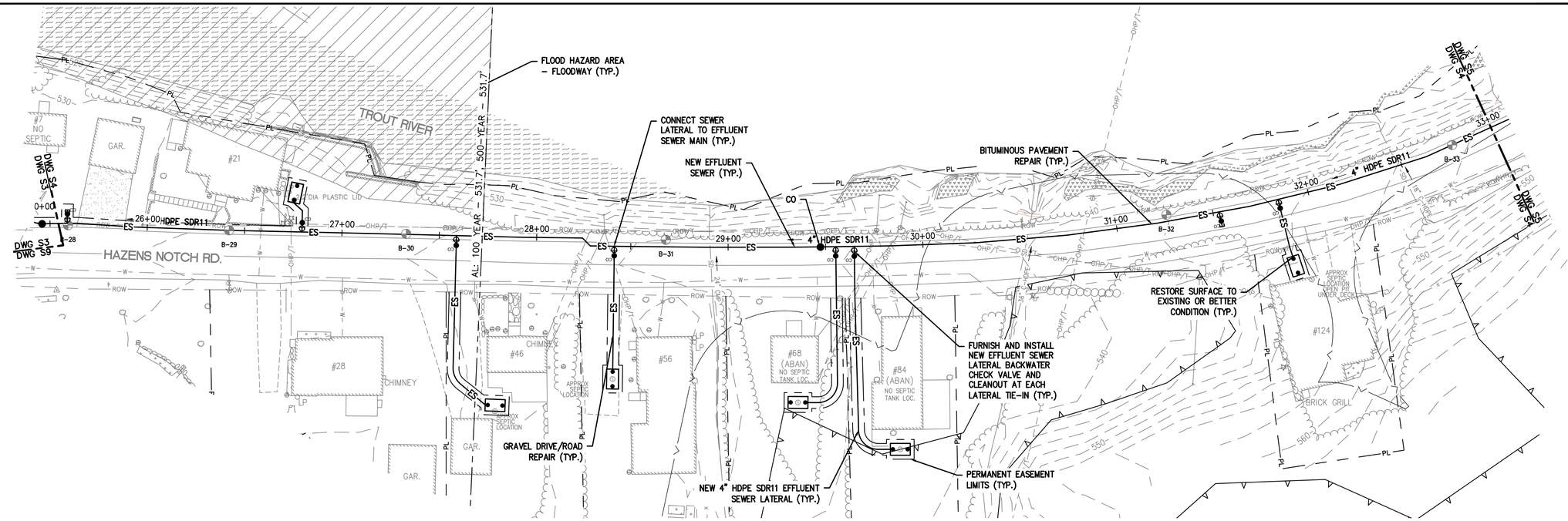
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S3



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PLAN
SCALE: 1"=30'

GRAPHIC SCALE
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(IN FEET)

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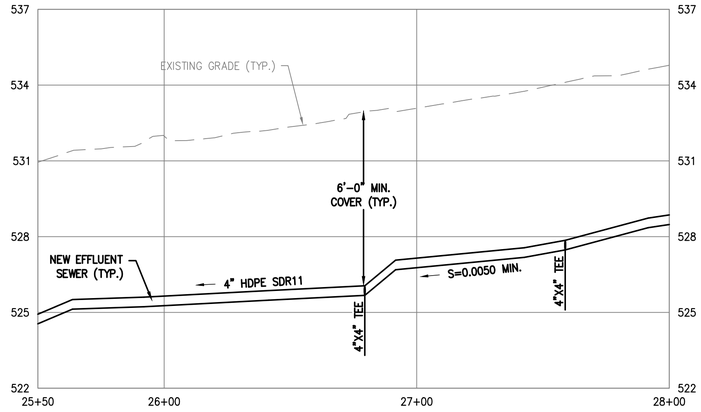

PS-1 TO 490 HAZENS NOTCH RD.
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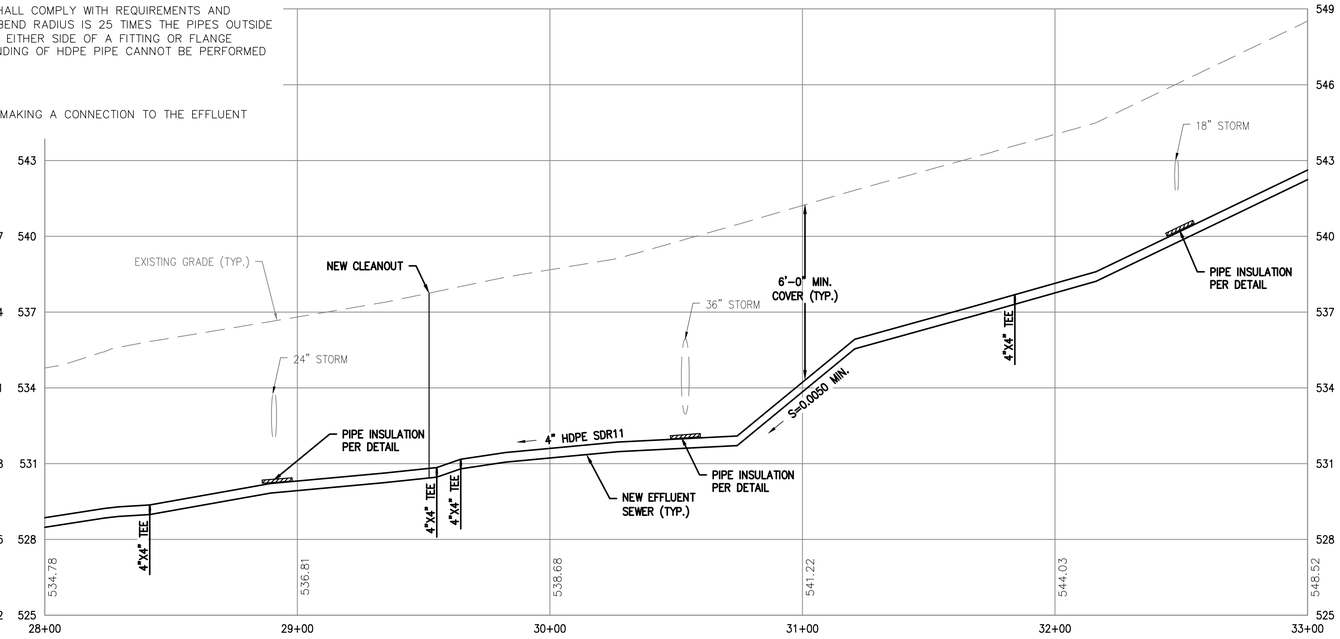
VERT. 1"=3'



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VERT. 1"=3'

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

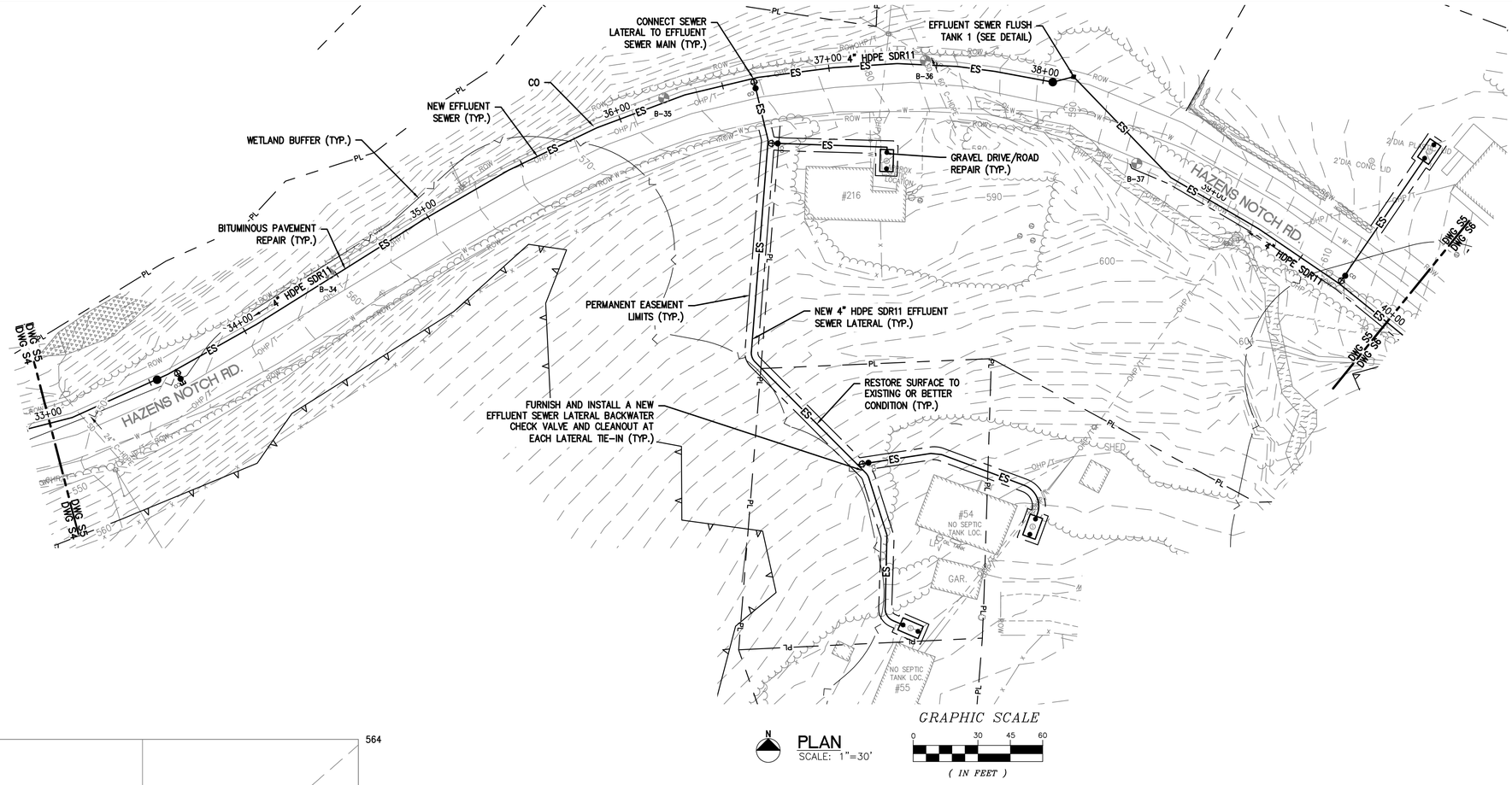
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S4



PLAN
SCALE: 1"=30'

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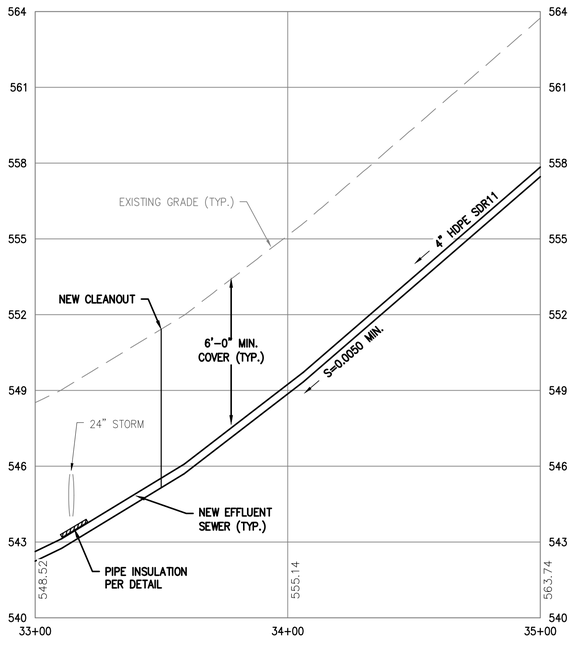

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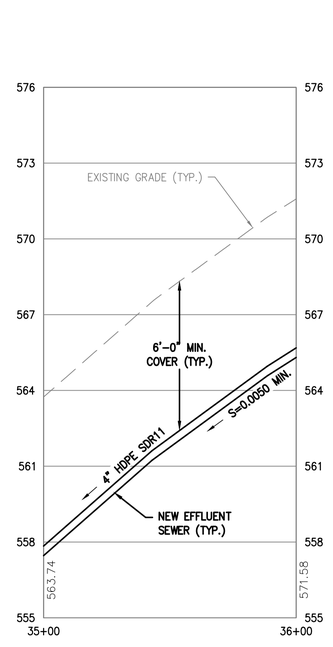

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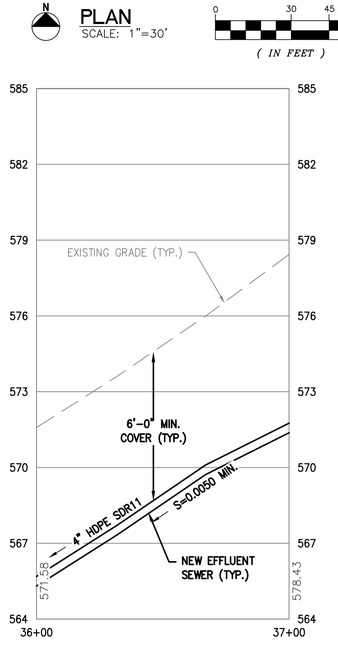

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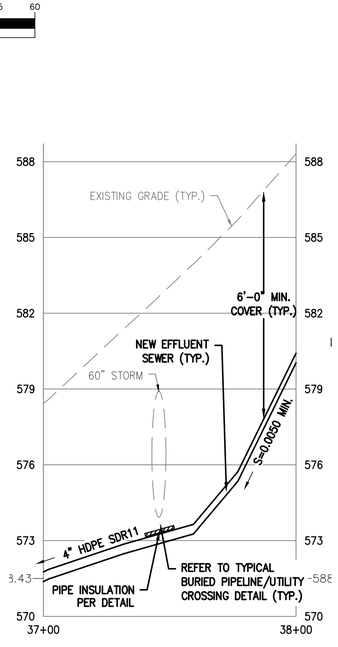

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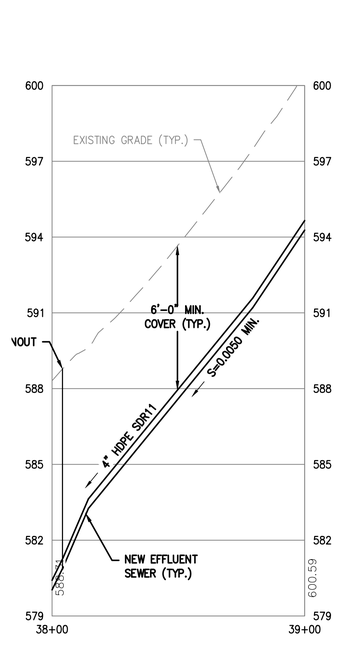

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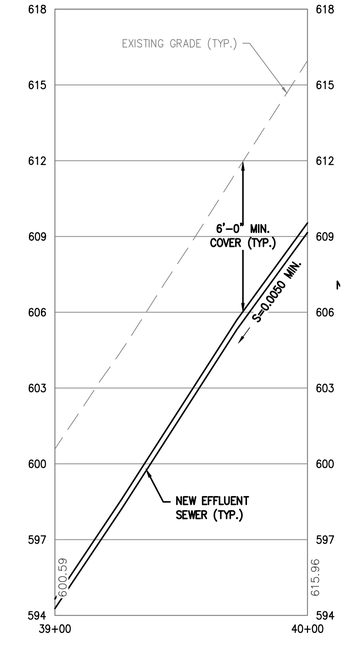

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EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S5

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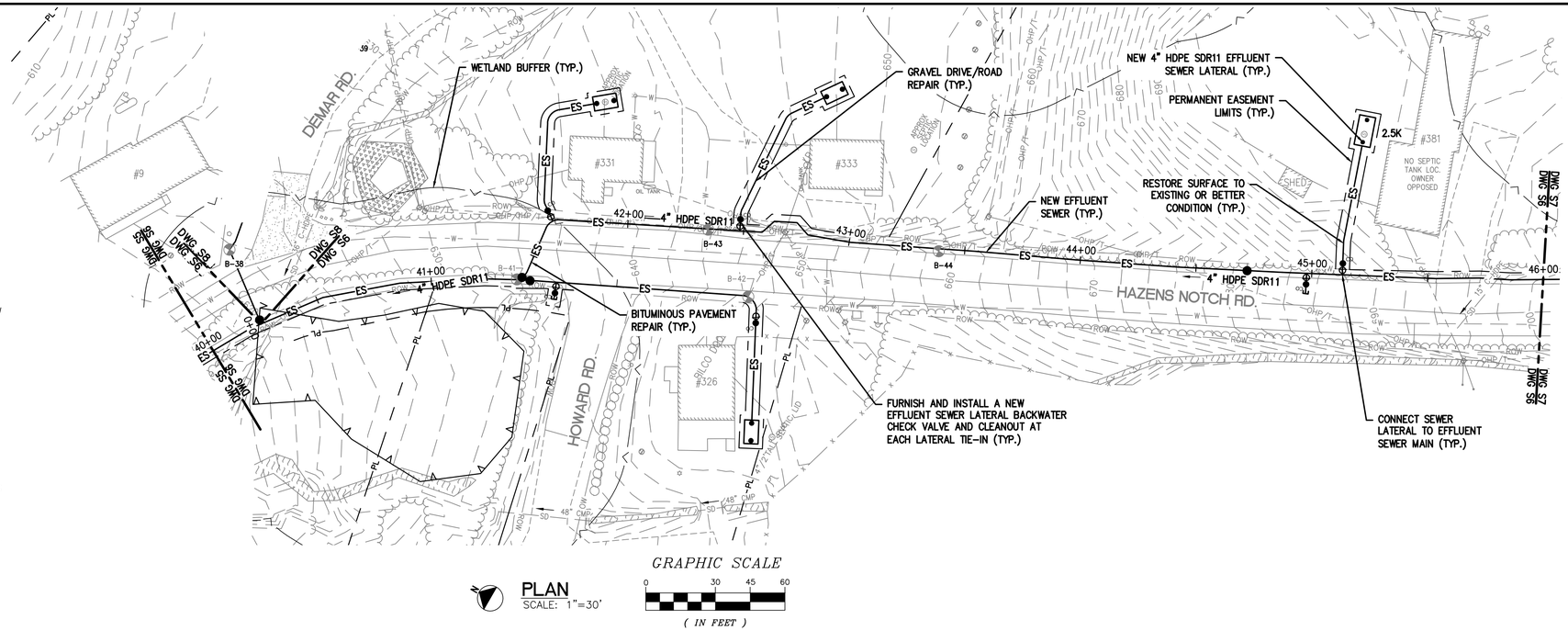

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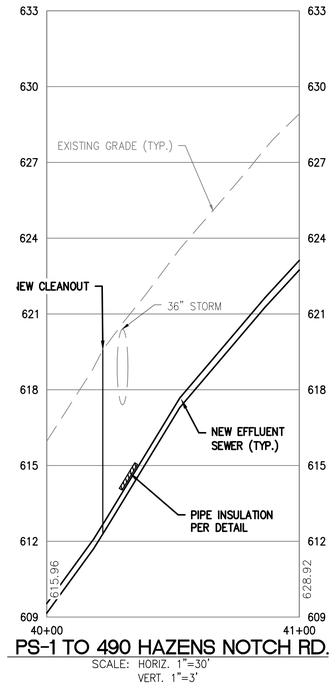

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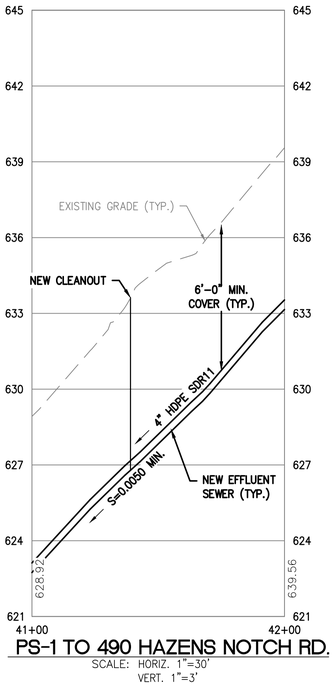

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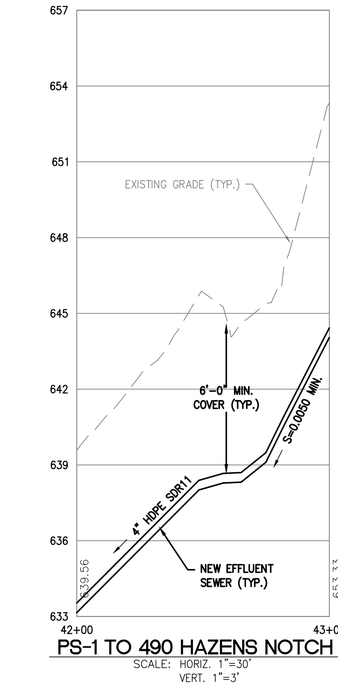

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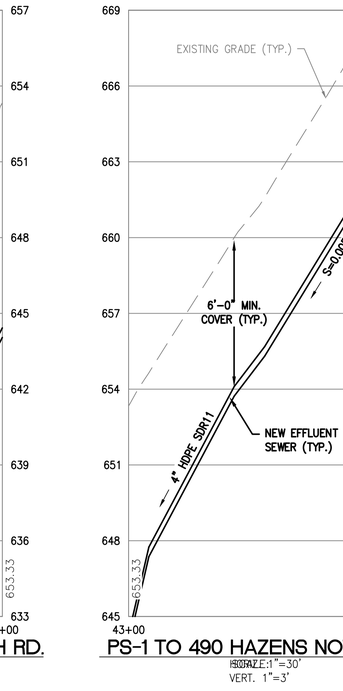

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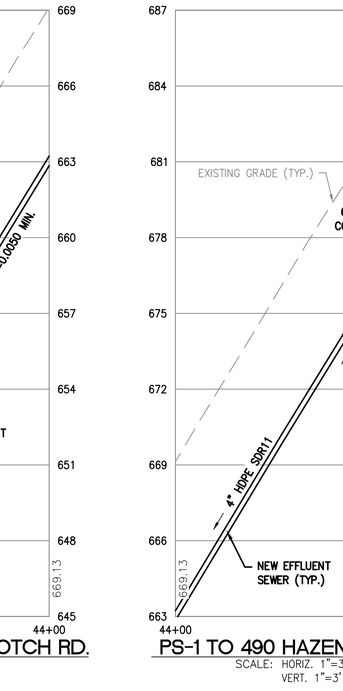

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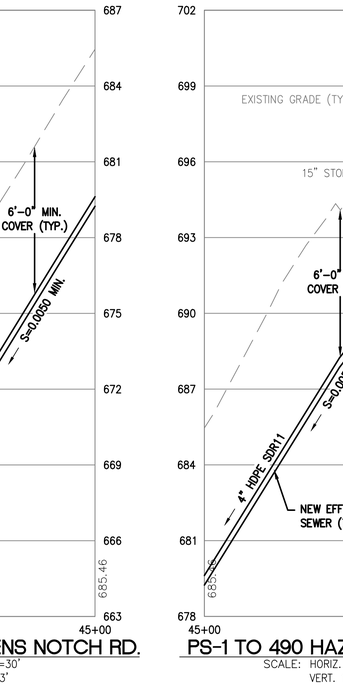

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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

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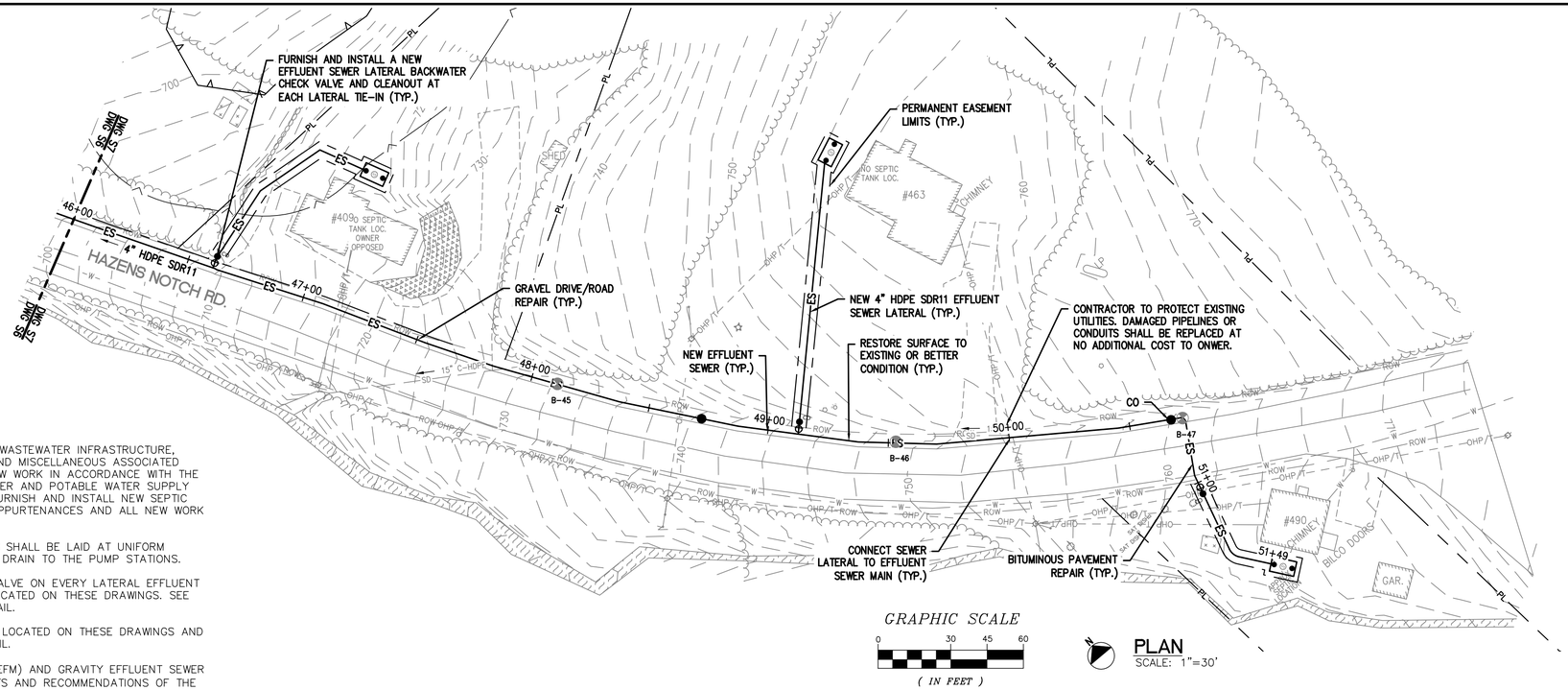
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S6



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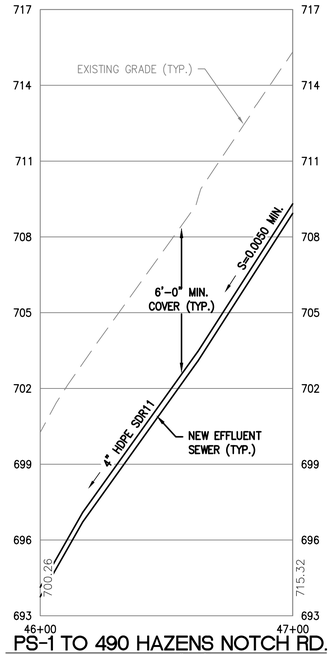

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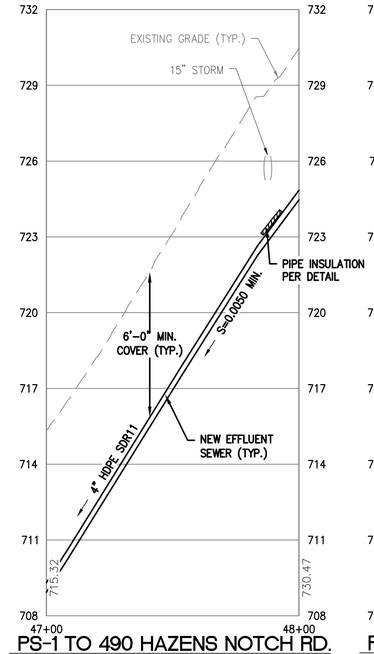
VERT. 1"=3'



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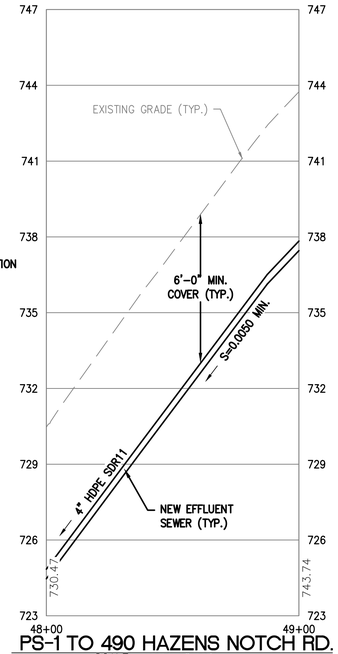

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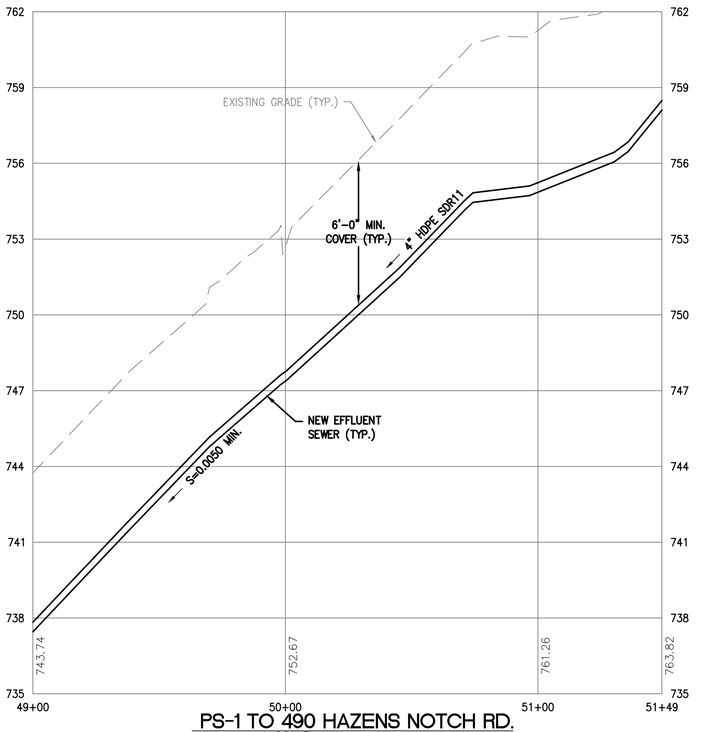

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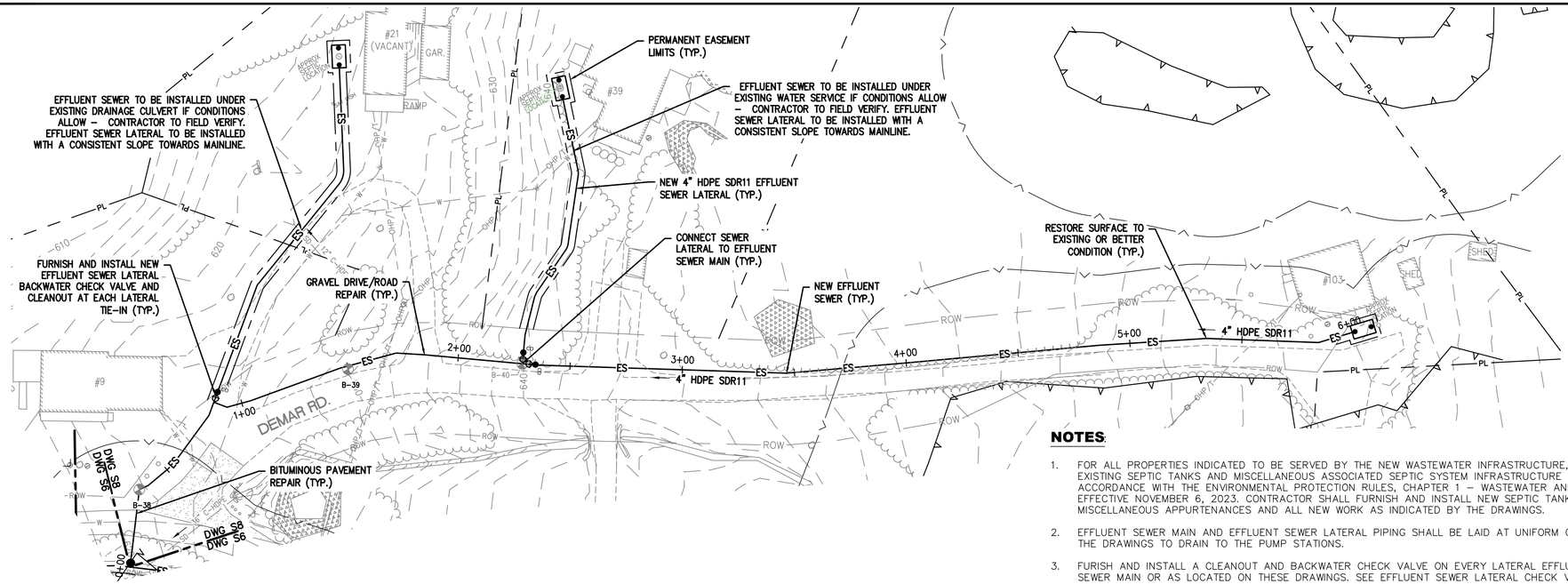
EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S7
SHEET 48 OF 75



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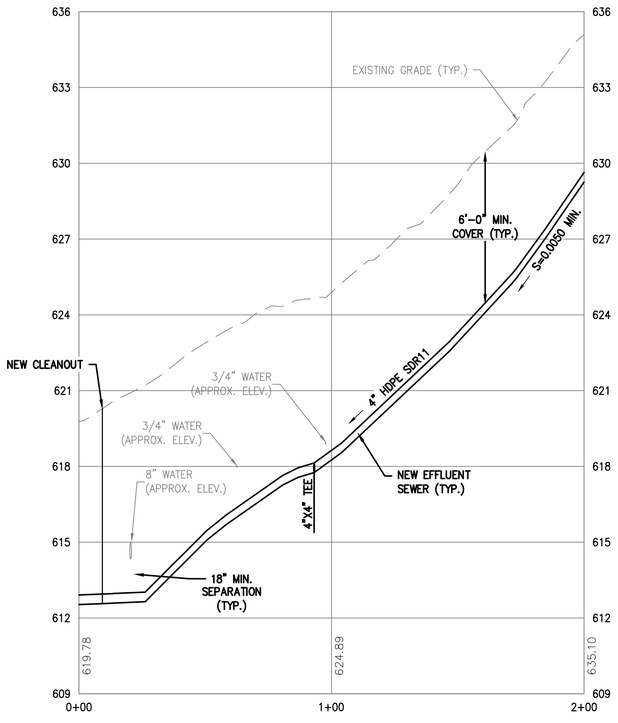

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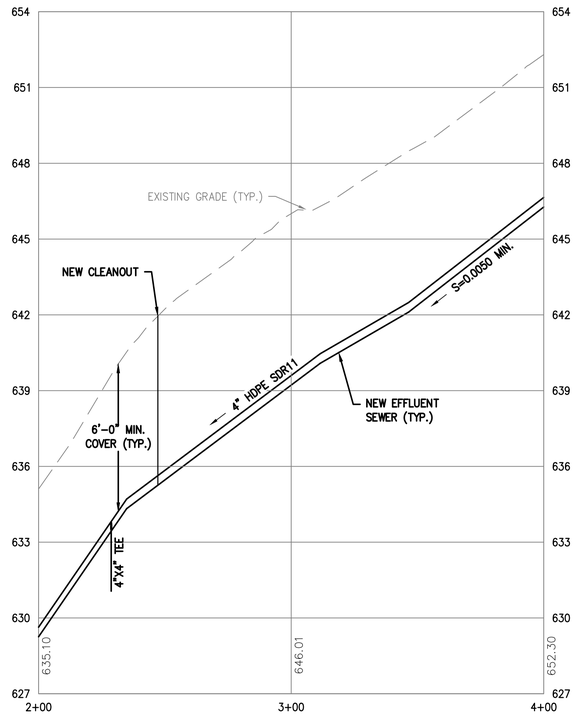

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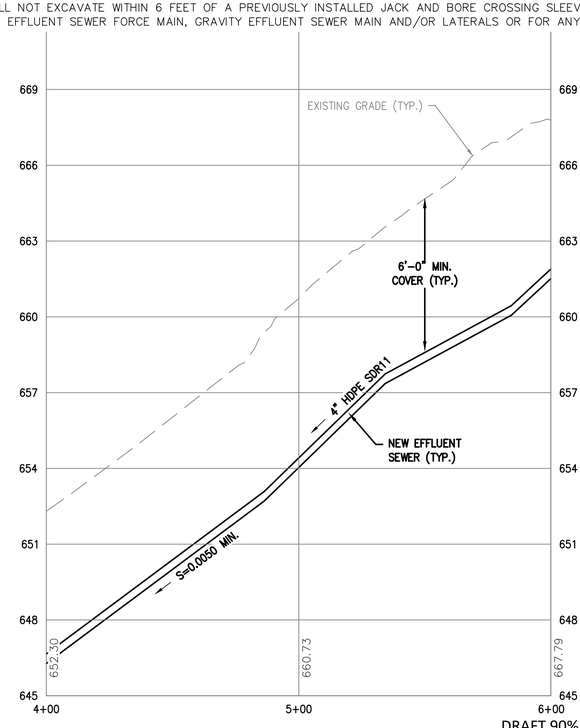

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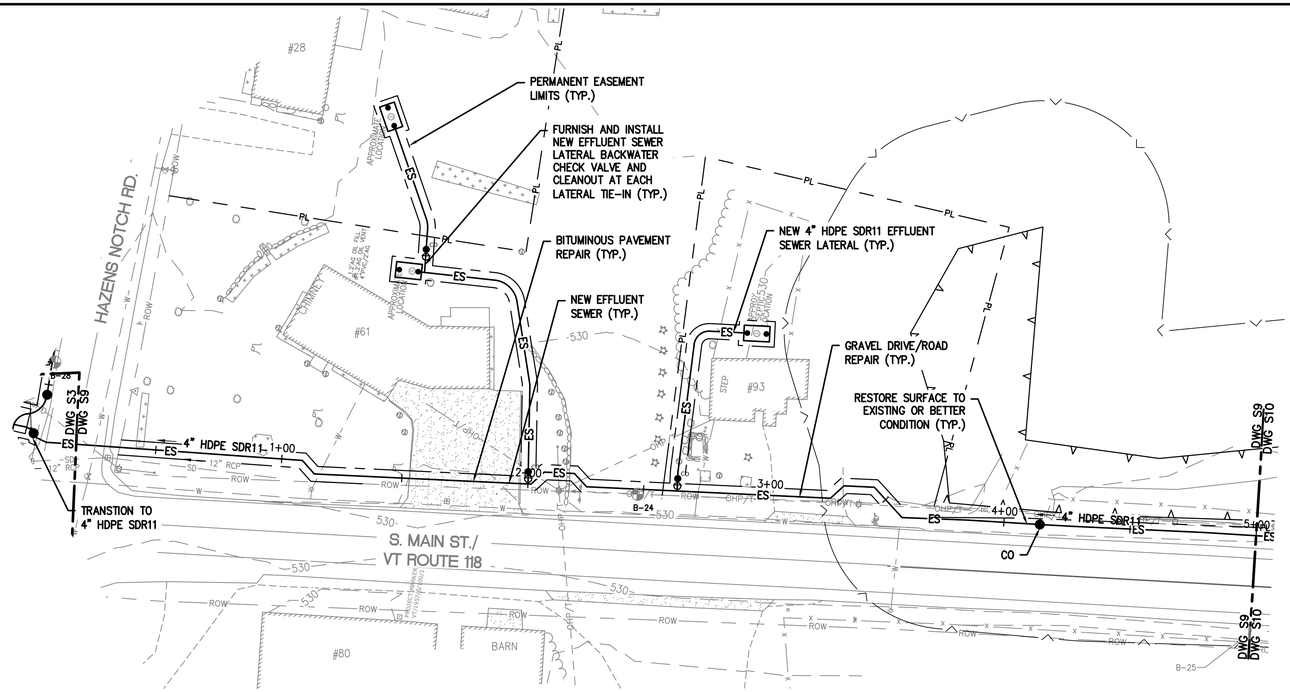
DRAWING
S8



PLAN
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GRAPHIC SCALE
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(IN FEET)

NOTES:

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4. FURNISH AND INSTALL EFFLUENT SEWER MAIN CLEANOUTS AS LOCATED ON THESE DRAWINGS AND AS REQUIRED BY THE EFFLUENT SEWER MAIN CLEANOUT DETAIL.
5. INSTALLATION OF ALL HDPE EFFLUENT SEWER FORCE MAINS (EFM) AND GRAVITY EFFLUENT SEWER (ES) MAINS AND LATERALS SHALL COMPLY WITH REQUIREMENTS AND RECOMMENDATIONS OF THE PLASTICS PIPE INSTITUTE (PPI) HANDBOOK OF POLYETHYLENE PIPE. THE MINIMUM ALLOWABLE COLD BEND RADIUS IS 25 TIMES THE PIPES OUTSIDE DIAMETER (OD). THE COLD BEND RADIUS SHALL BE LIMITED TO MINIMUM RADIUS OF 100 X OD FOR A DISTANCE OF 5 X OD ON EITHER SIDE OF A FITTING OR FLANGE CONNECTION. NON SWEEP ELBOW FITTINGS SHALL NOT BE USED. SWEEP ELBOW FITTINGS SHALL ONLY BE USED WHERE COLD BENDING OF HDPE PIPE CANNOT BE PERFORMED IN ACCORDANCE WITH MINIMUM REQUIREMENTS.
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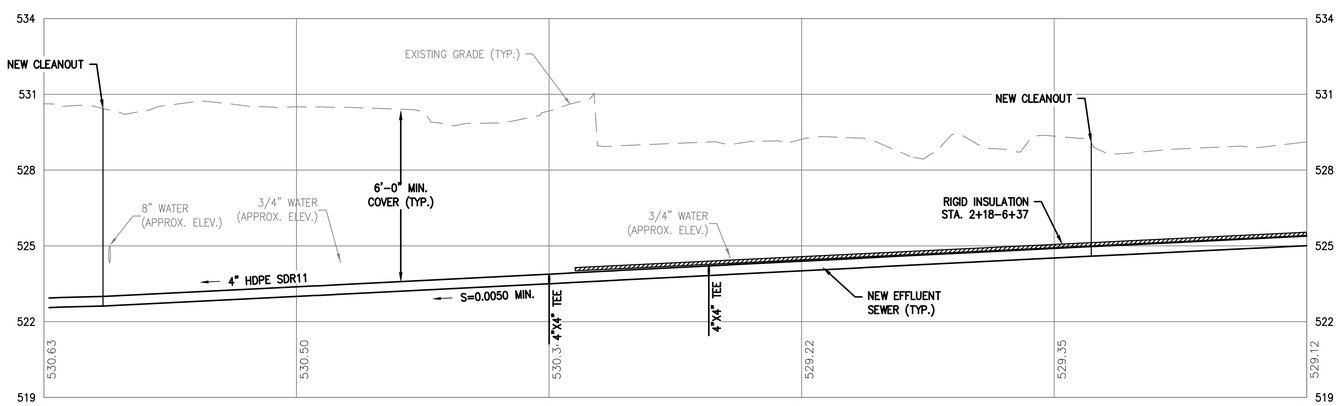

SOUTH MAIN ST.
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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DESIGN PLANS
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125 College Street
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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S9
SHEET 50 OF 75

NOTES:

1. FOR ALL PROPERTIES INDICATED TO BE SERVED BY THE NEW WASTEWATER INFRASTRUCTURE, CONTRACTOR SHALL DEMOLISH ALL EXISTING SEPTIC TANKS AND MISCELLANEOUS ASSOCIATED SEPTIC SYSTEM INFRASTRUCTURE NEEDED TO INSTALL THE NEW WORK IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION RULES, CHAPTER 1 – WASTEWATER AND POTABLE WATER SUPPLY RULES, EFFECTIVE NOVEMBER 6, 2023. CONTRACTOR SHALL FURNISH AND INSTALL NEW SEPTIC TANKS AS PER THE SEPTIC TANK DETAILS, MISCELLANEOUS APPURTENANCES AND ALL NEW WORK AS INDICATED BY THE DRAWINGS.

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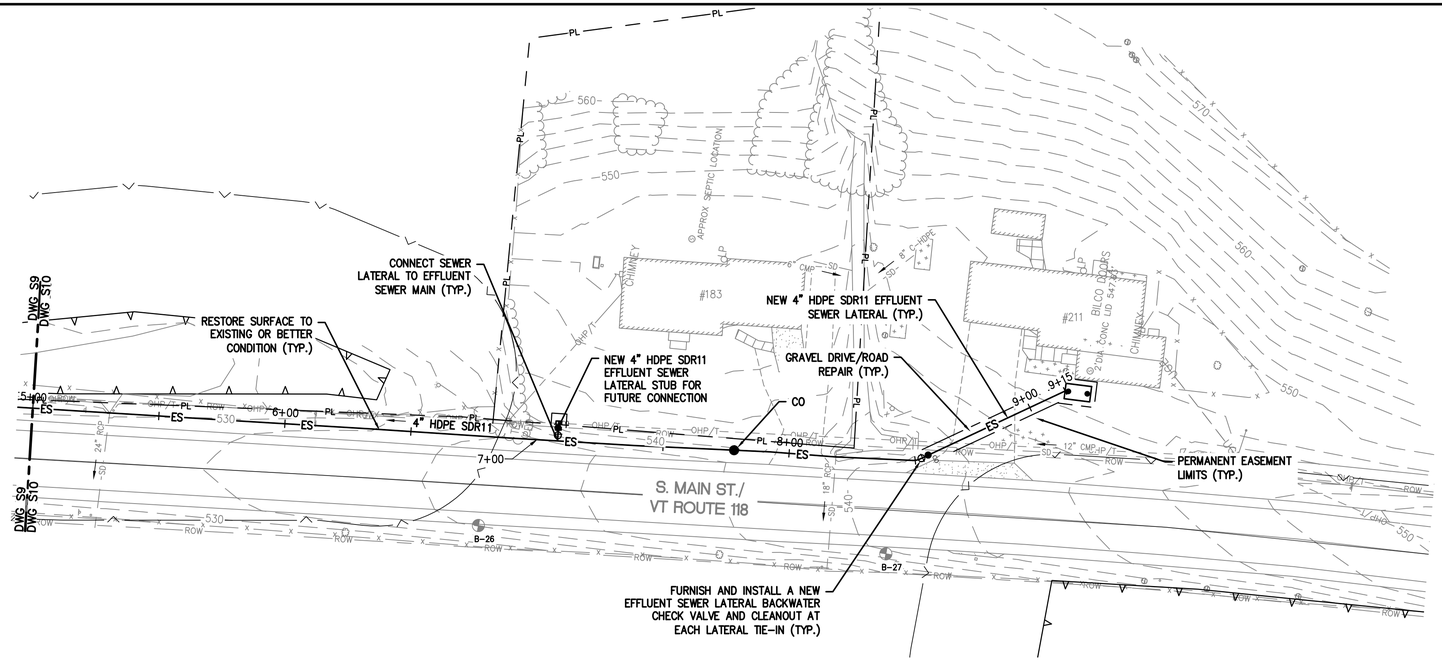

GRAPHIC SCALE

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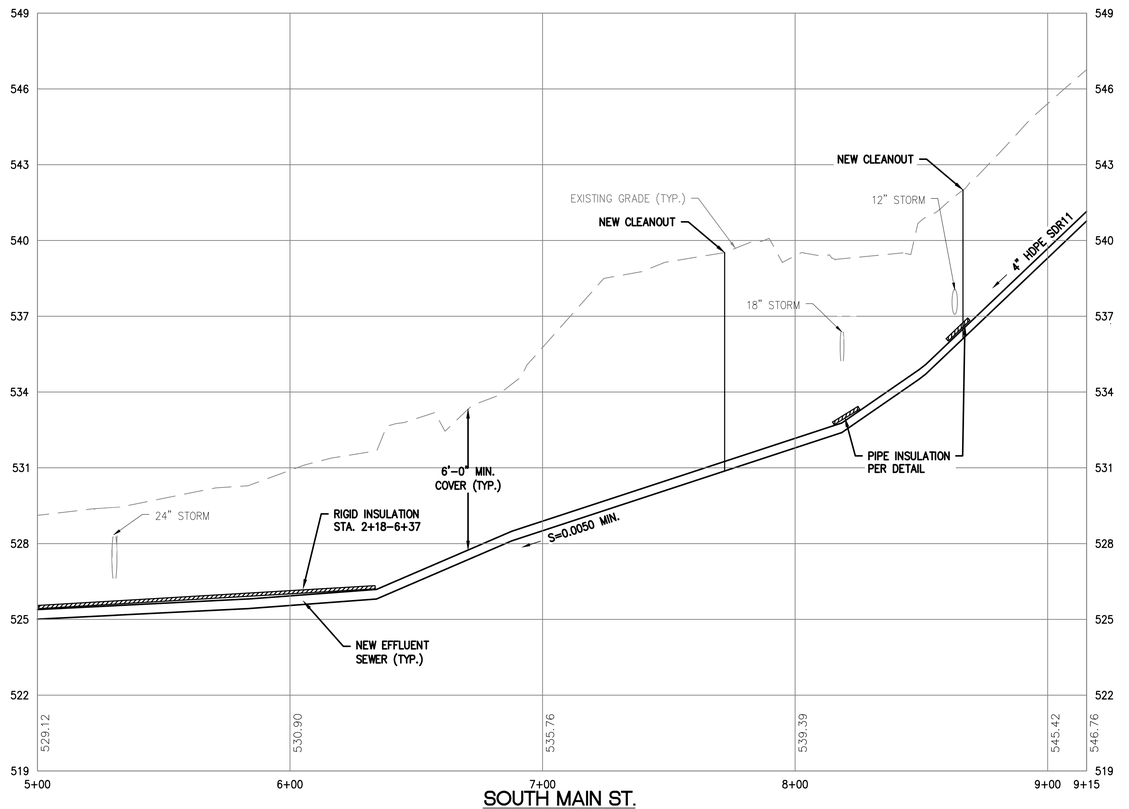
(IN FEET)



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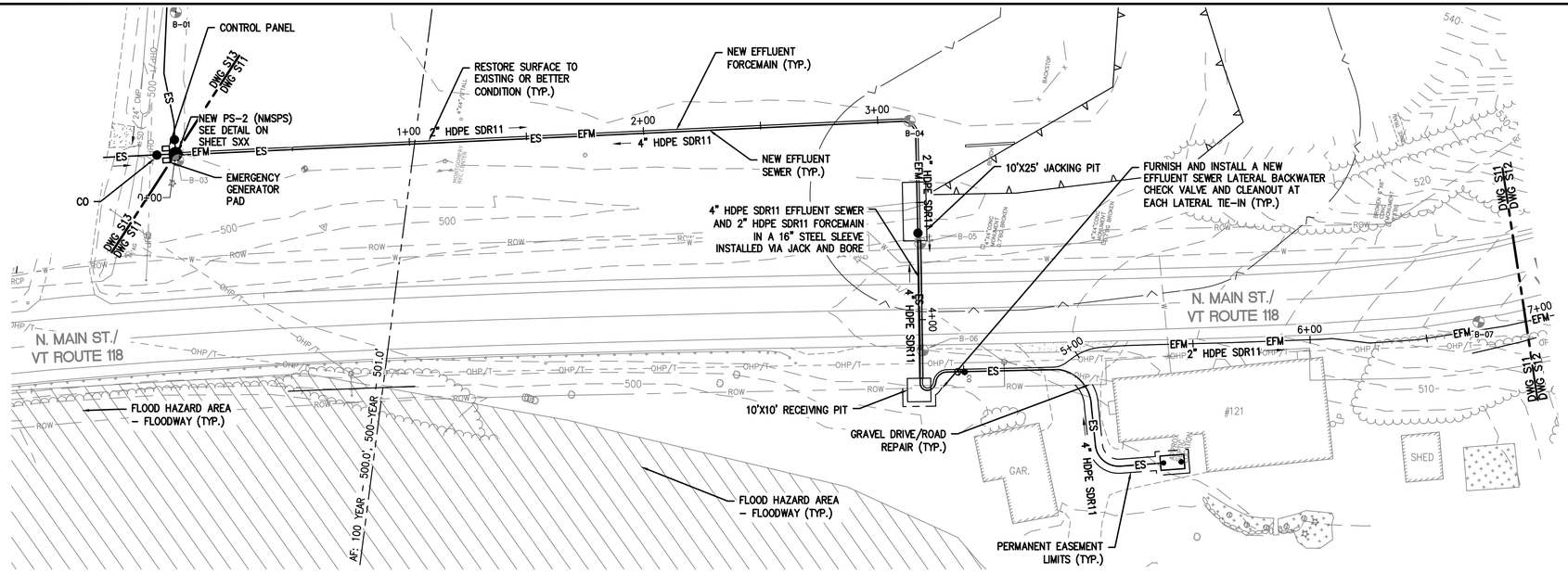
EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S10
SHEET 51 OF 75



GRAPHIC SCALE

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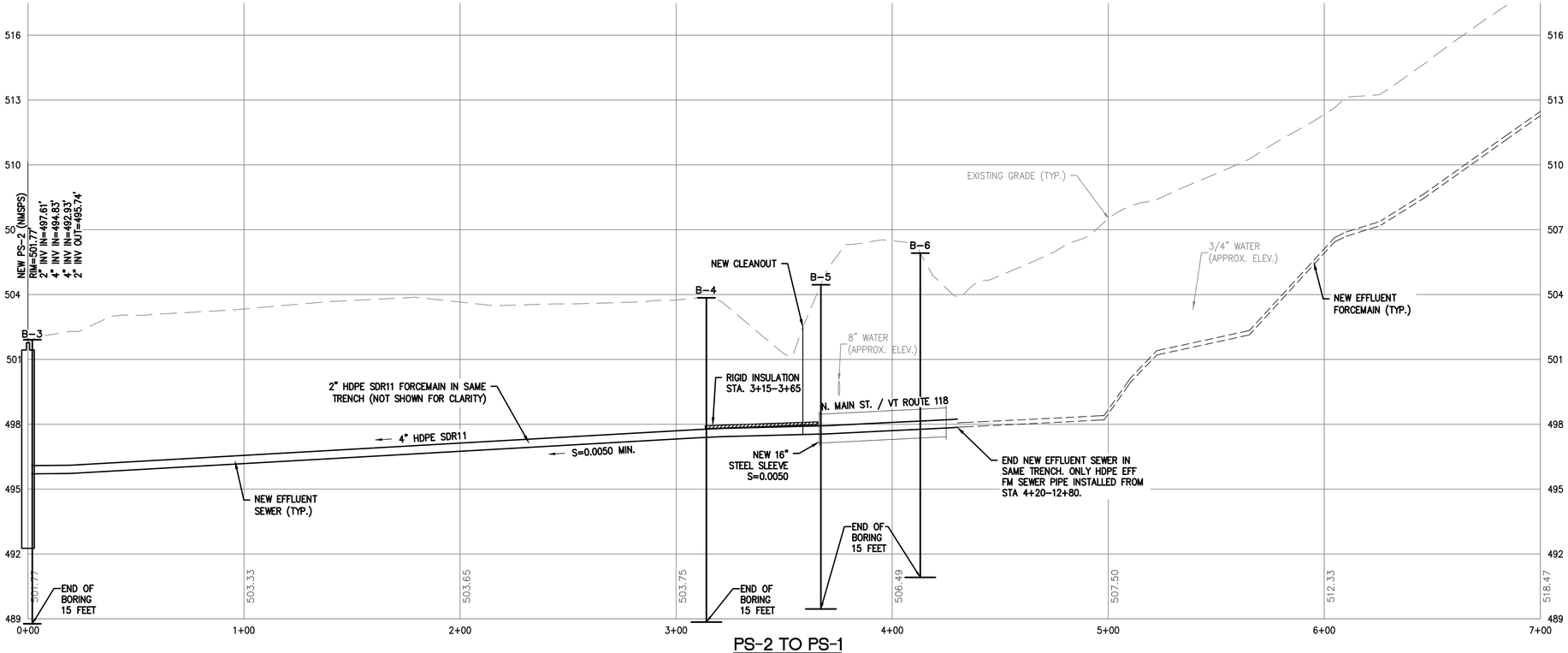
(IN FEET)



PS-2 TO PS-1
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

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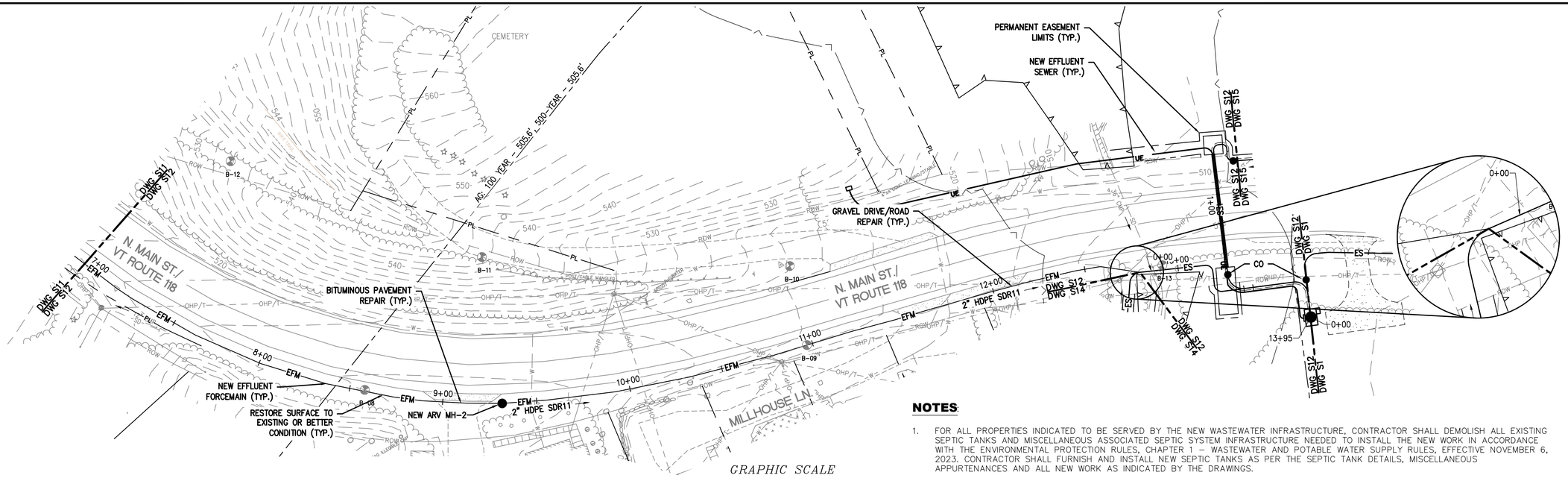
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S11



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SCALE: 1"=30'

GRAPHIC SCALE
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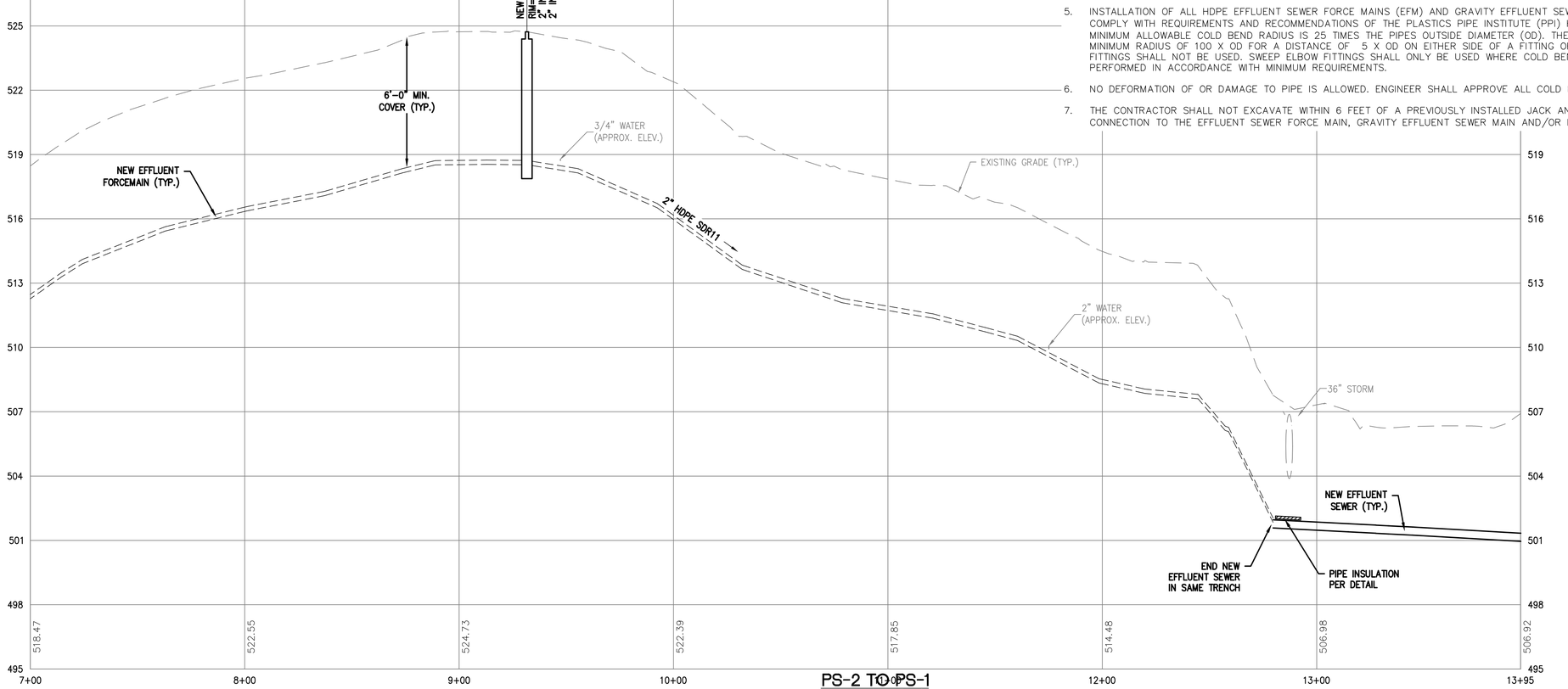
(IN FEET)



PS-2 TO PS-1
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DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
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DRAWING
S12
SHEET 57 OF 75

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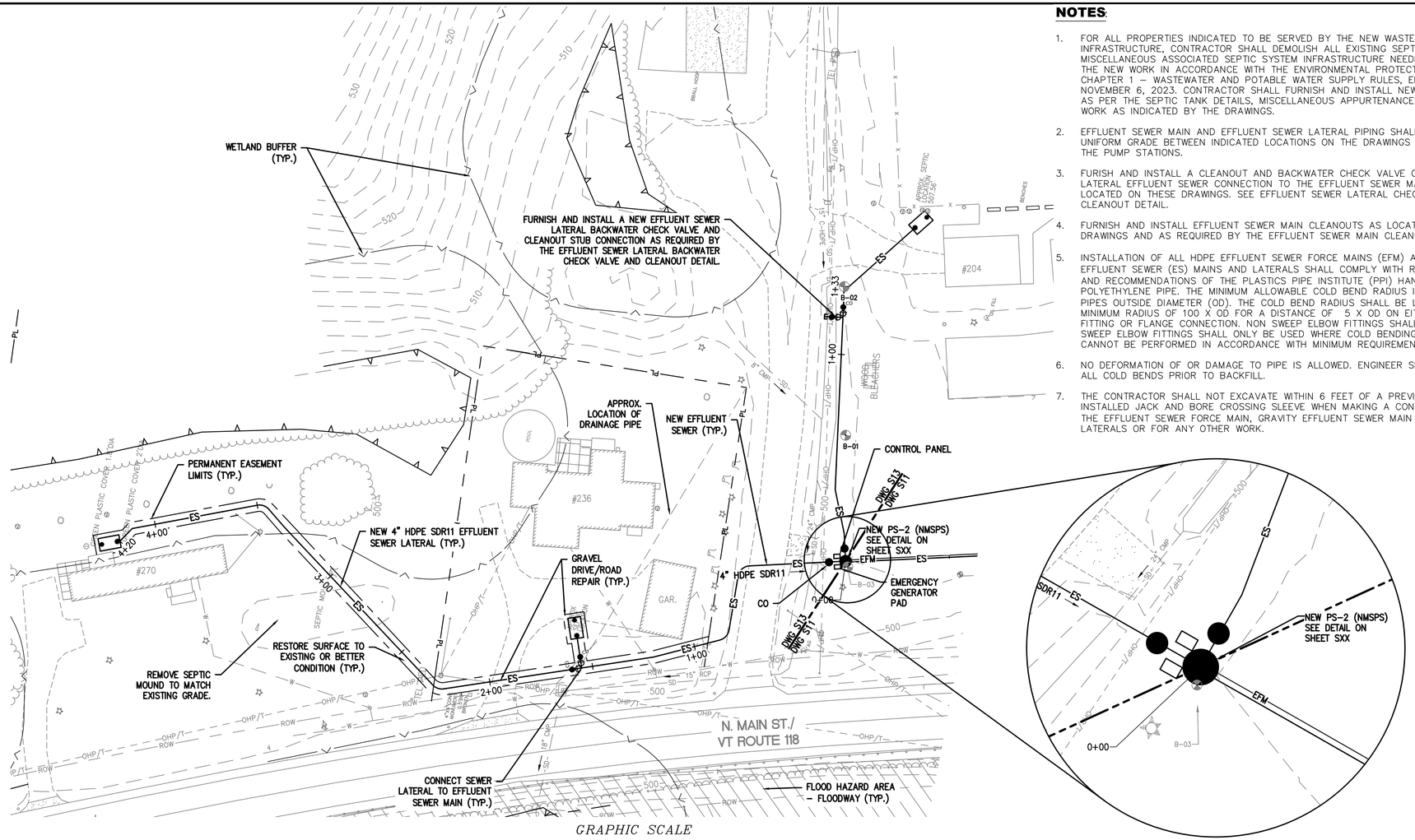

GRAPHIC SCALE

PLAN
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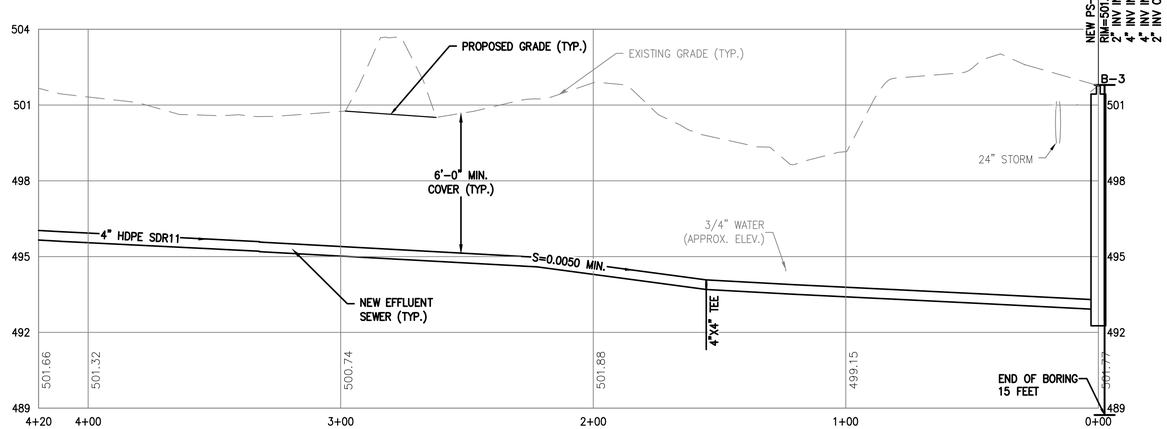
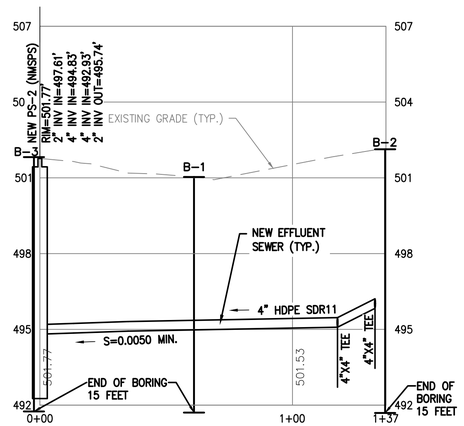
(IN FEET)



270 NORTH MAIN ST. TO PS-2
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



204 NORTH MAIN ST. SERVICE
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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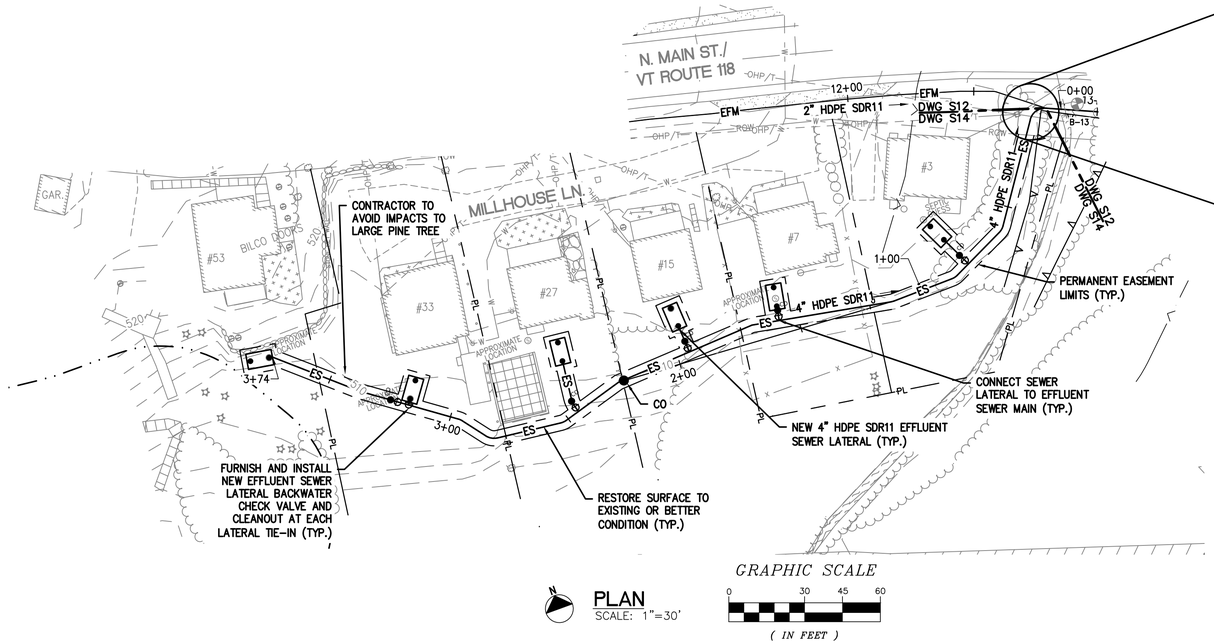
EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S13
SHEET 54 OF 75



PLAN
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GRAPHIC SCALE
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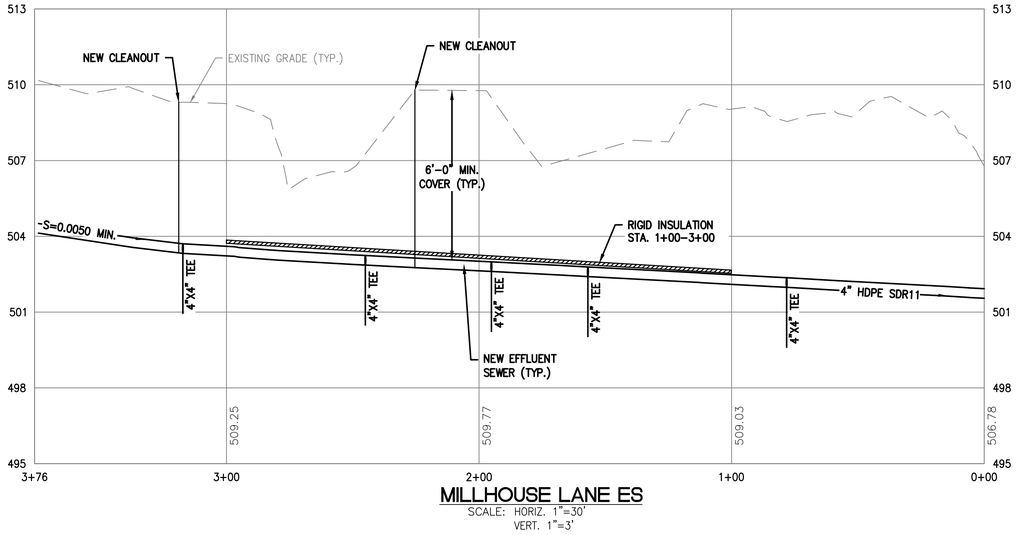

MILLHOUSE LANE ES
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
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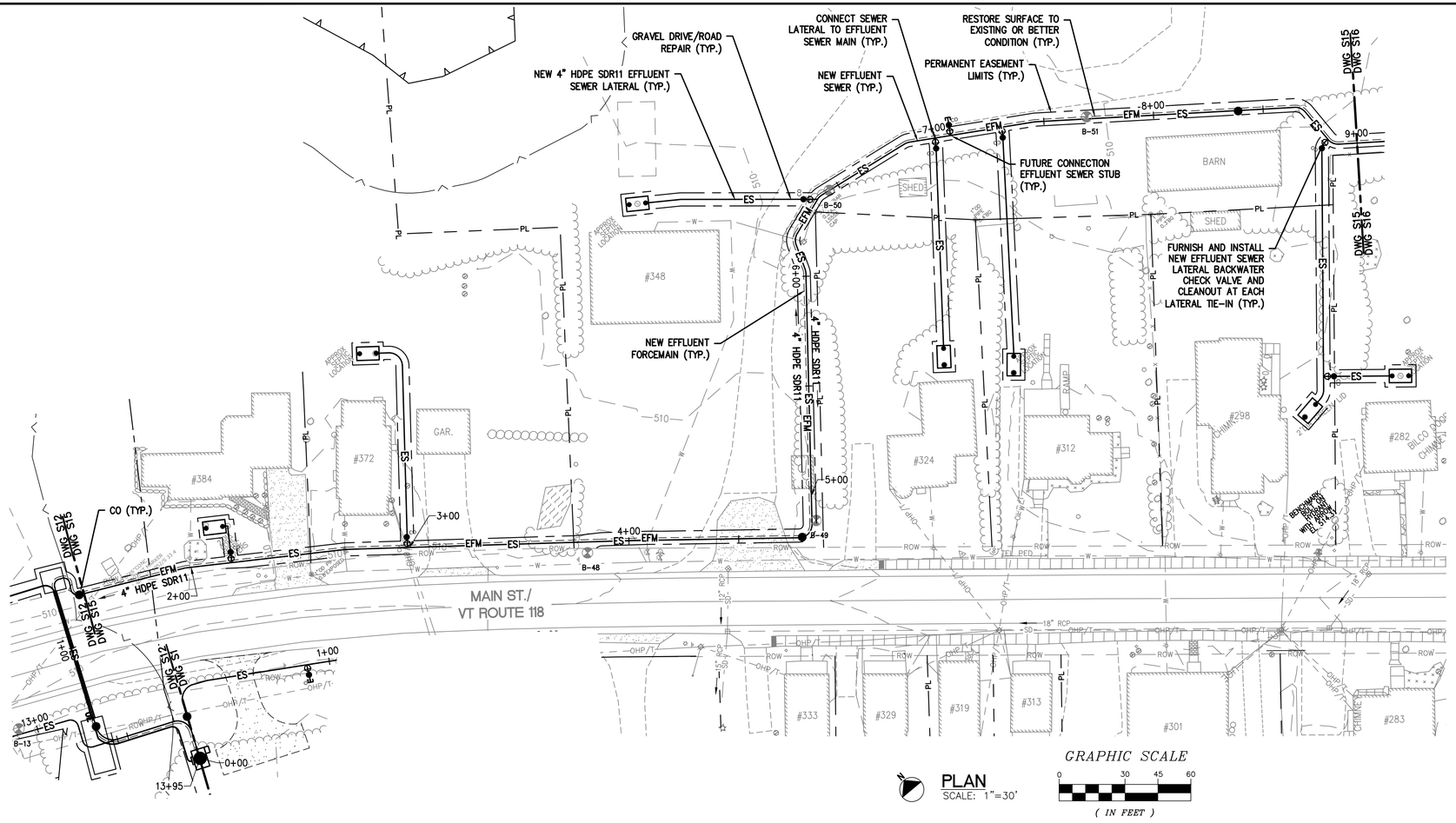
DRAWING
S14
SHEET 55 OF 75



GRAPHIC SCALE

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(IN FEET)

PLAN
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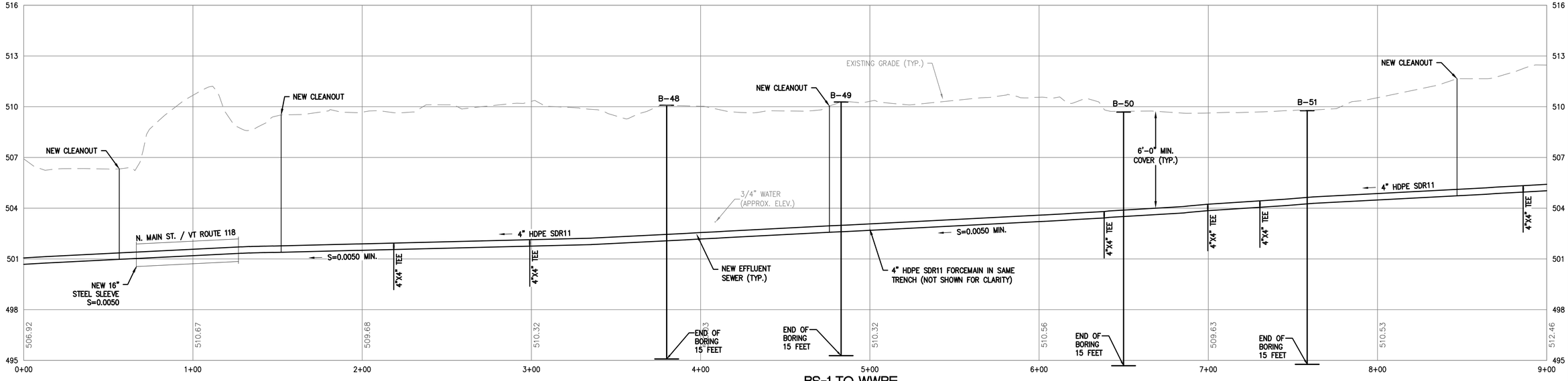

PS-1 TO WWRF
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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S15

SHEET 56 OF 75

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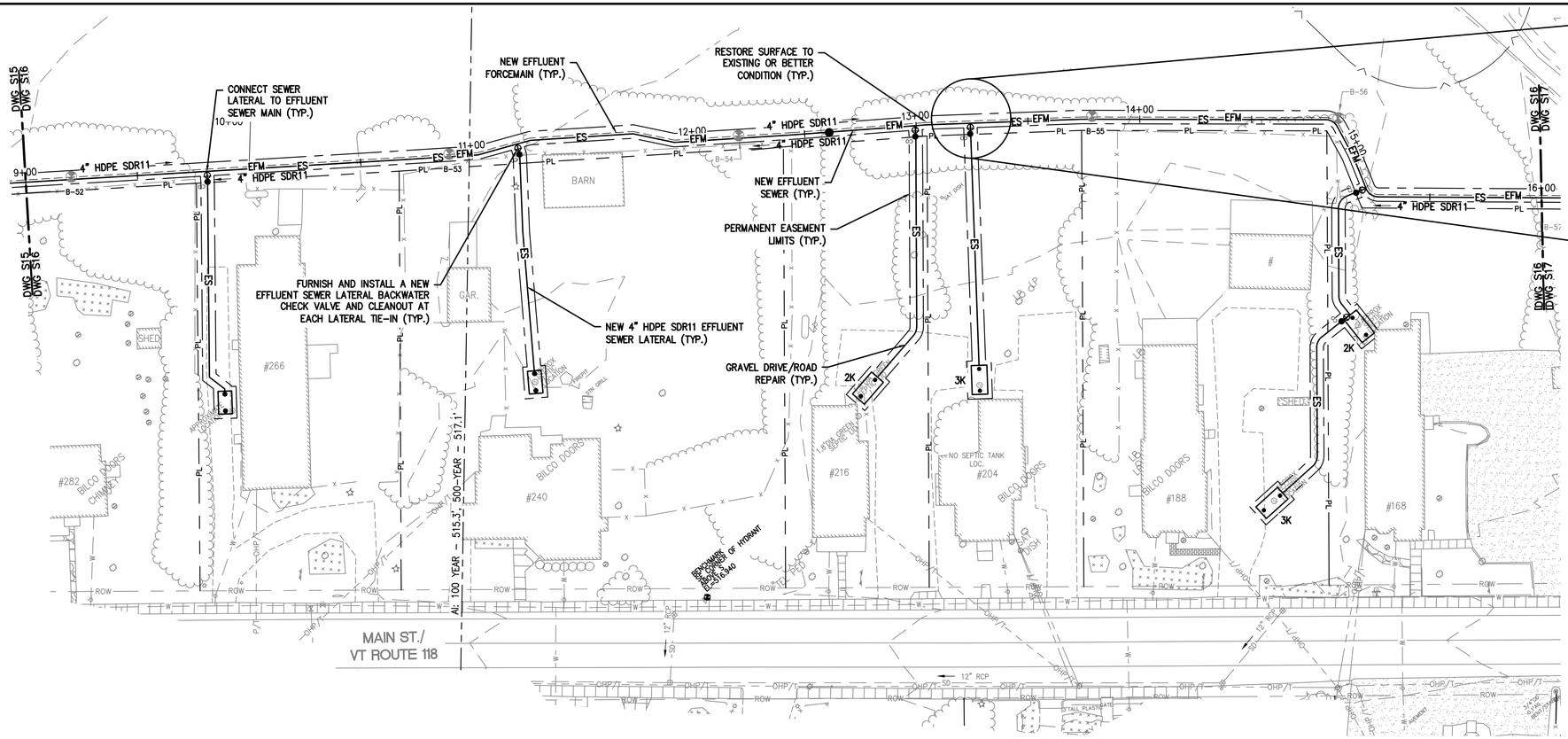

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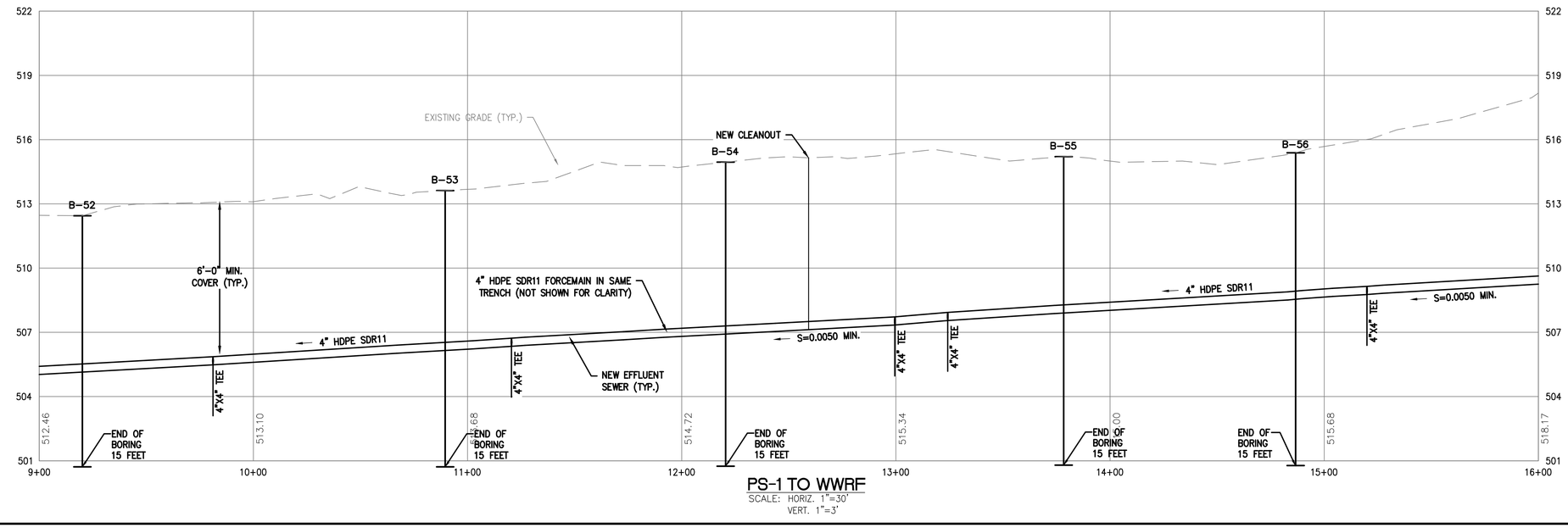

PS-1 TO WWRF
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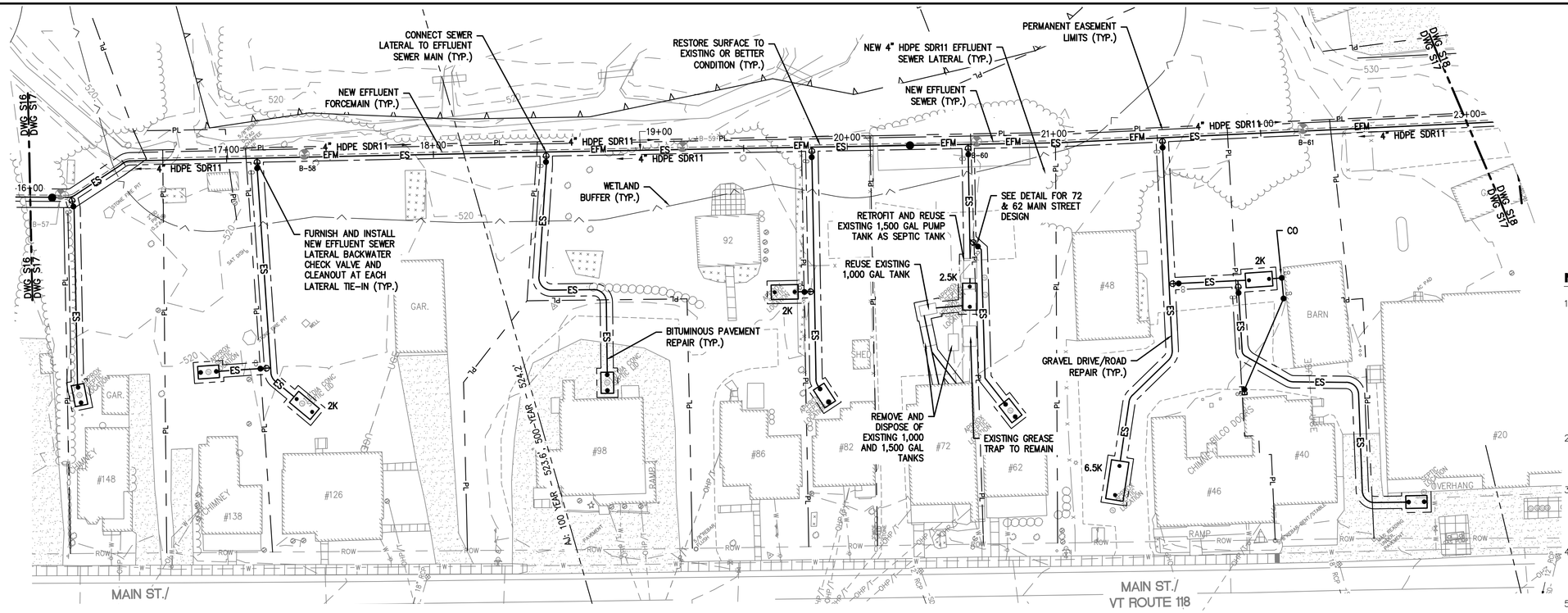
DRAWING
S16
SHEET 61 OF 75



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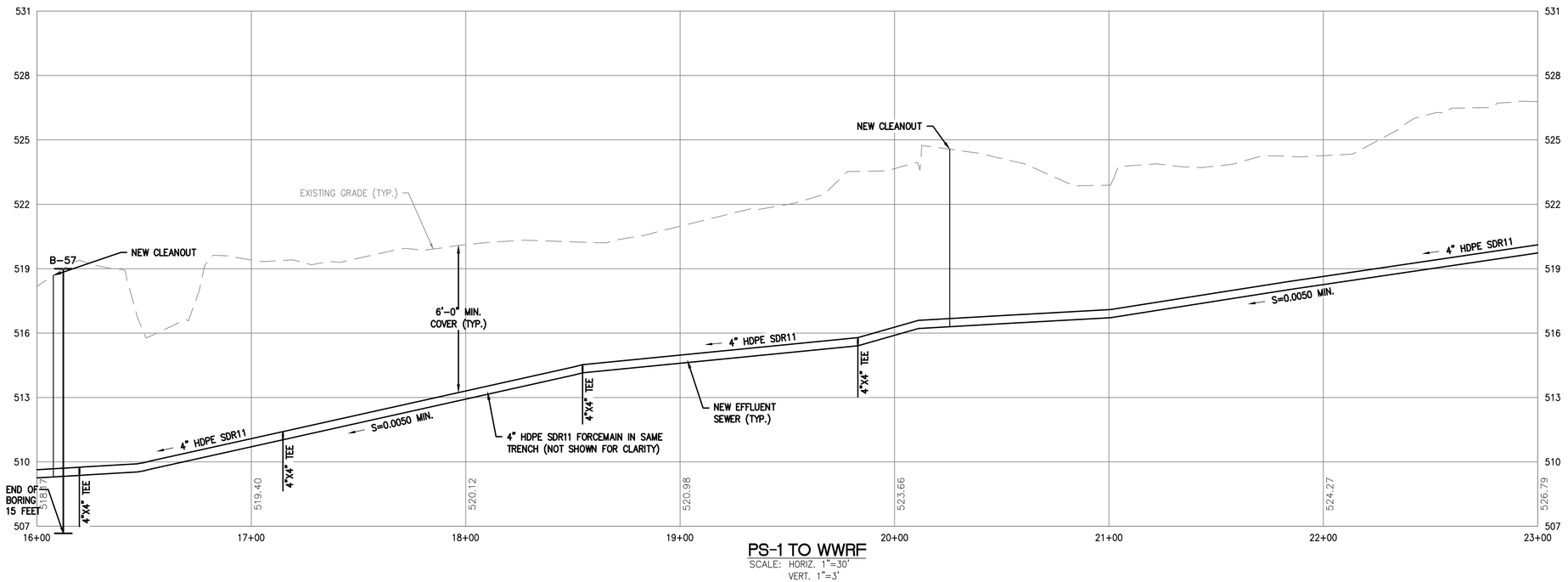

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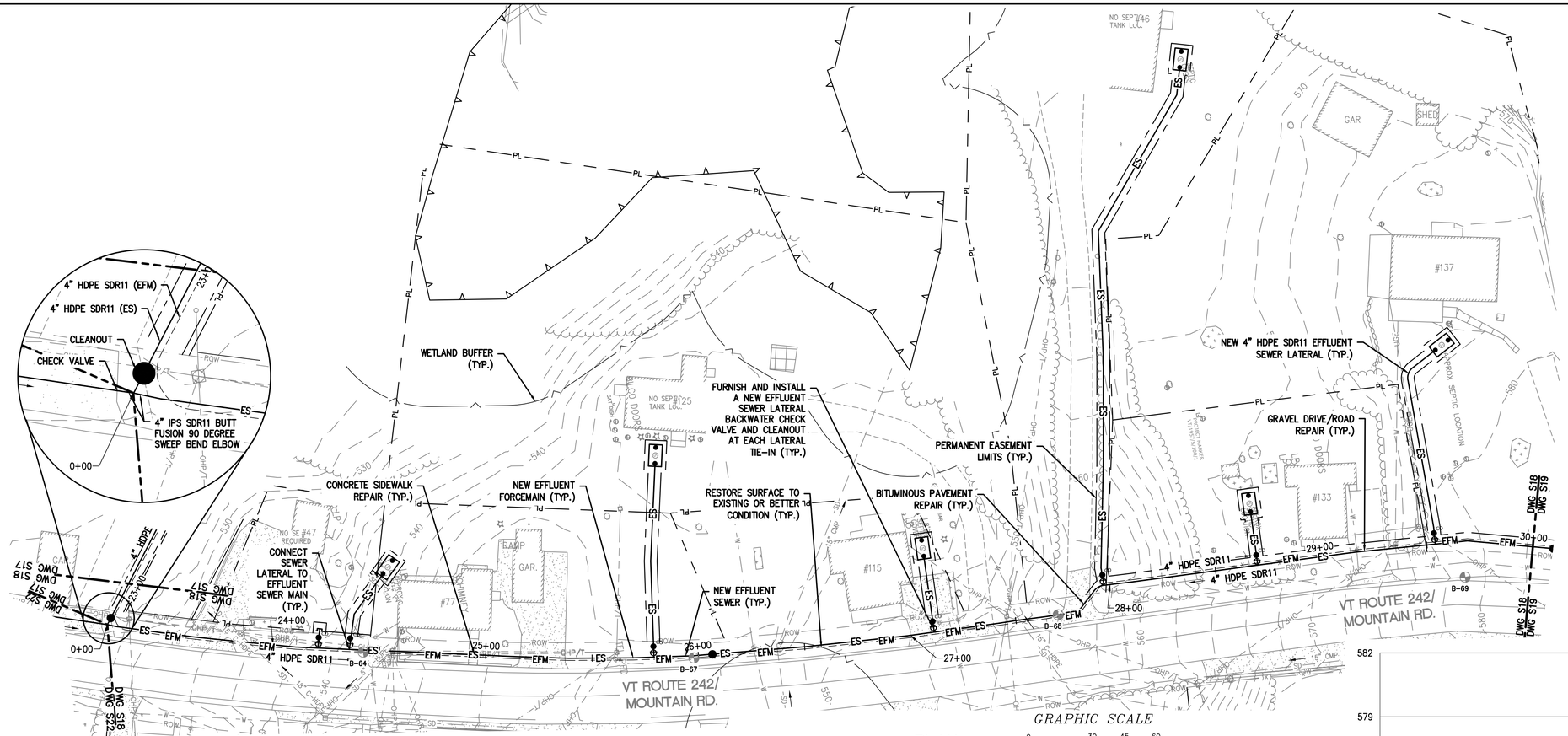

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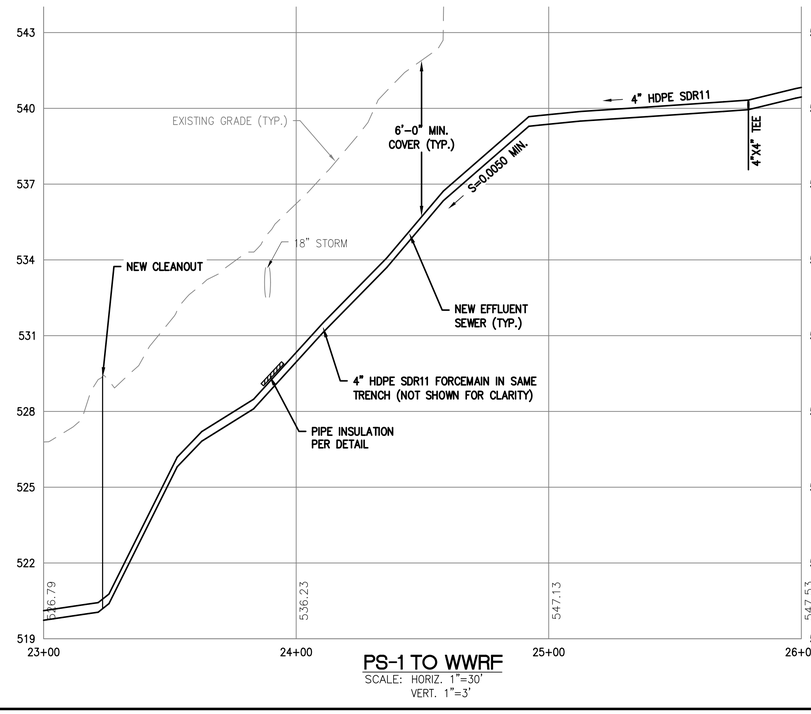

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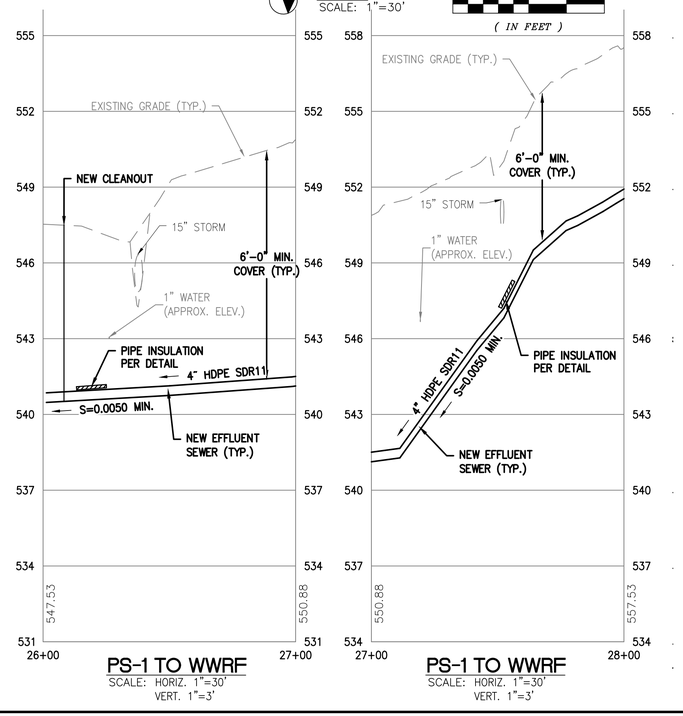

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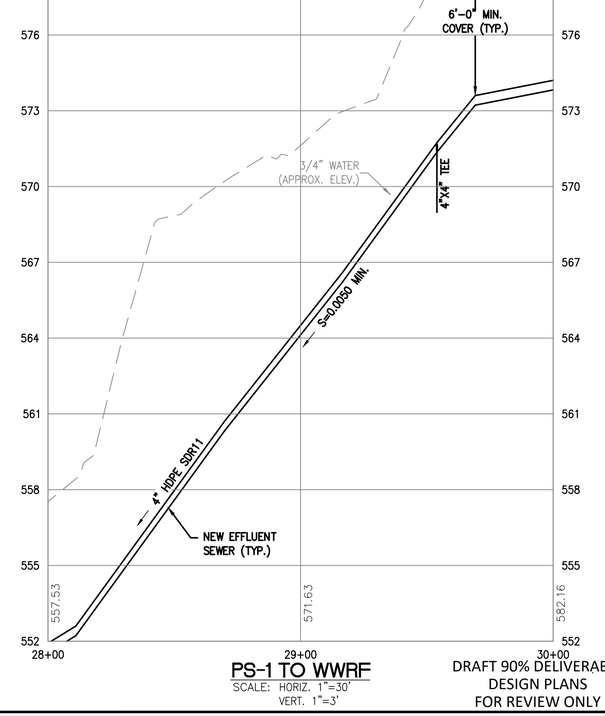

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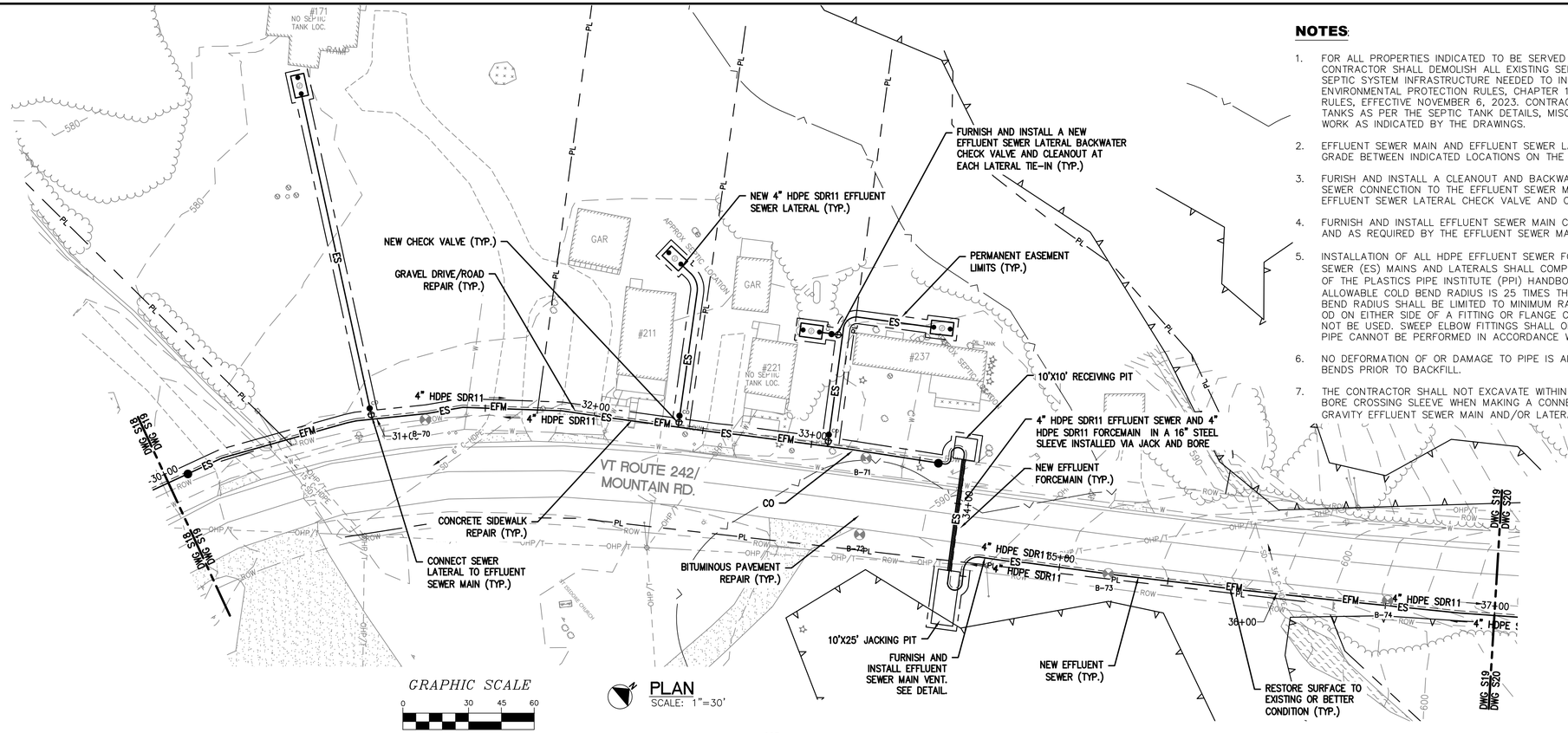

GRAPHIC SCALE

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PLAN
SCALE: 1"=30'

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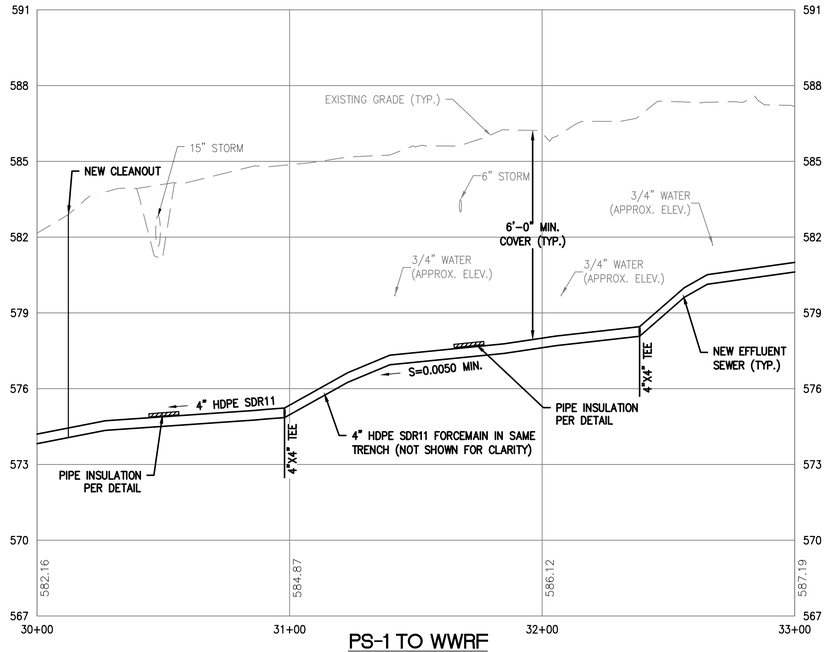

PS-1 TO WWRF
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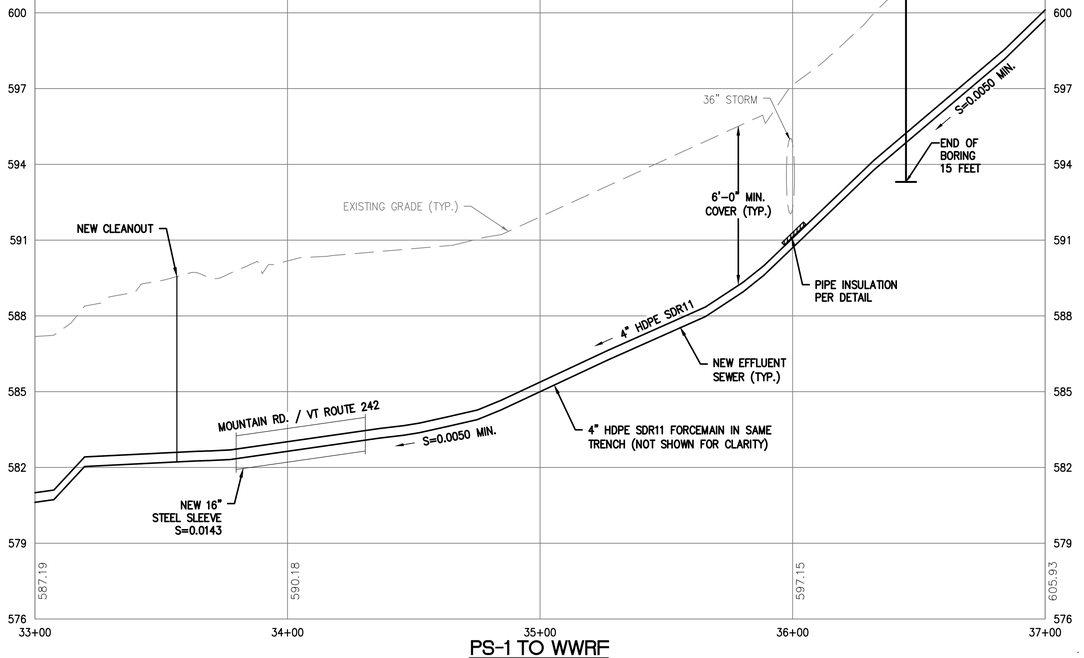

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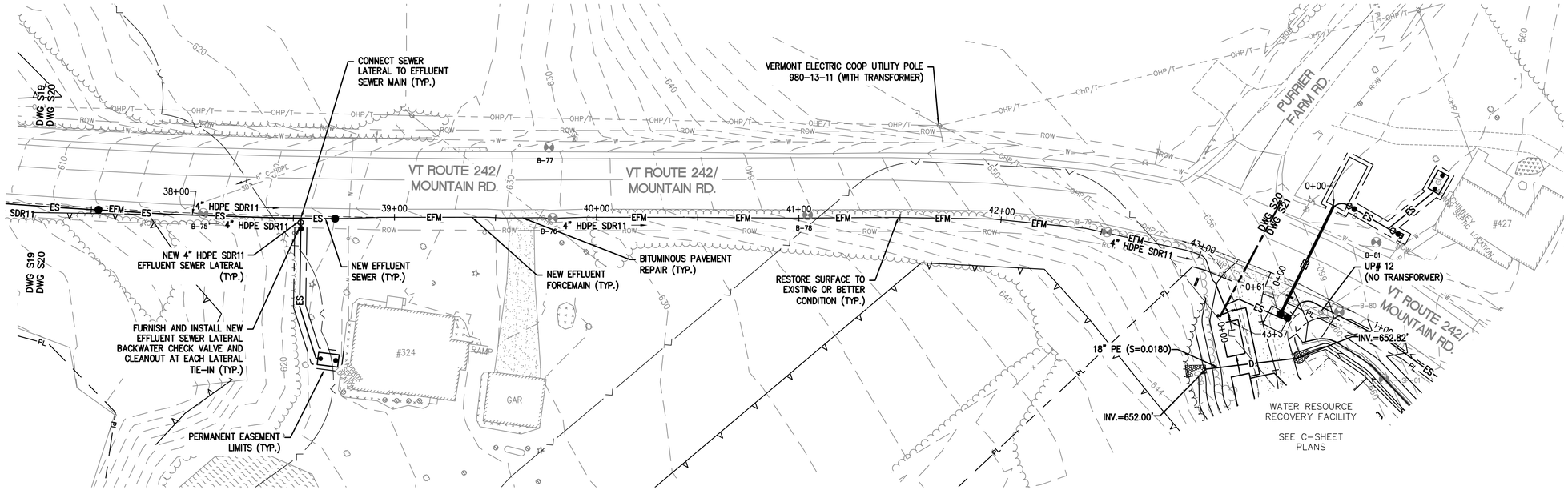

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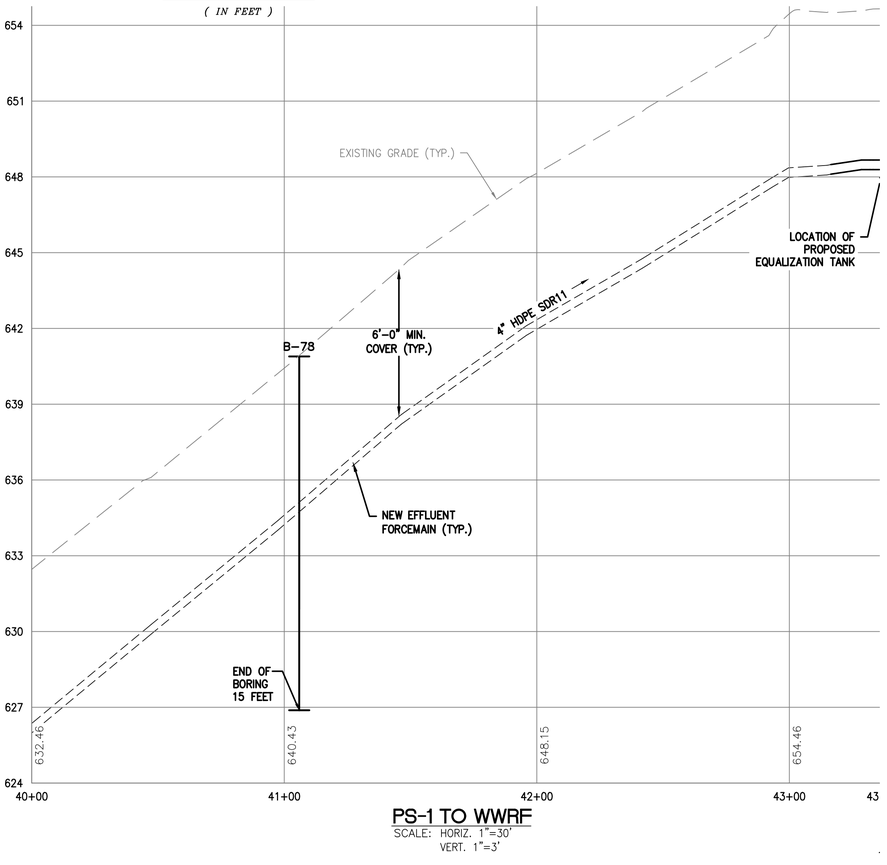

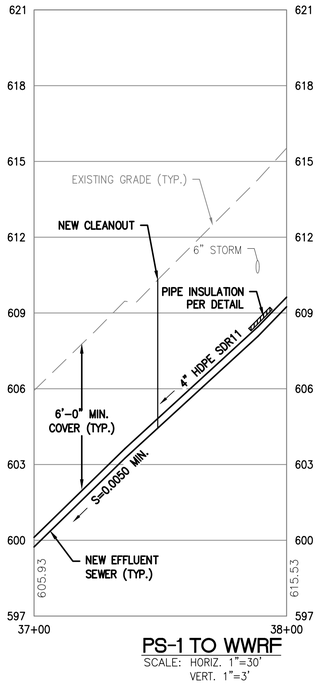

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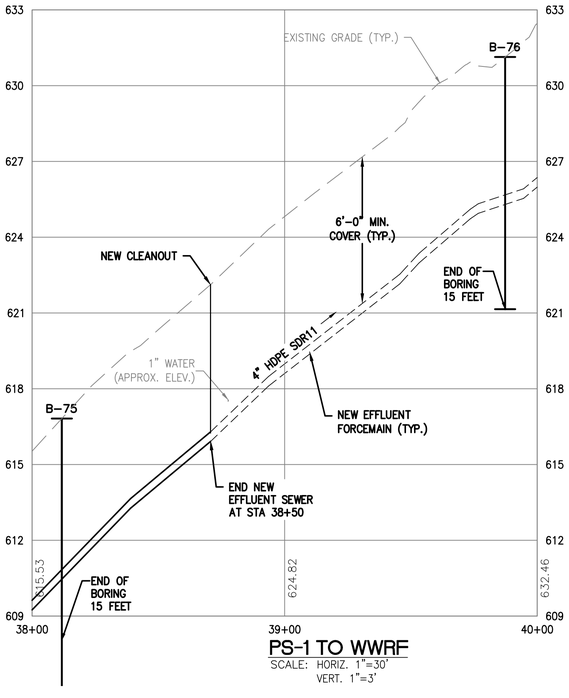

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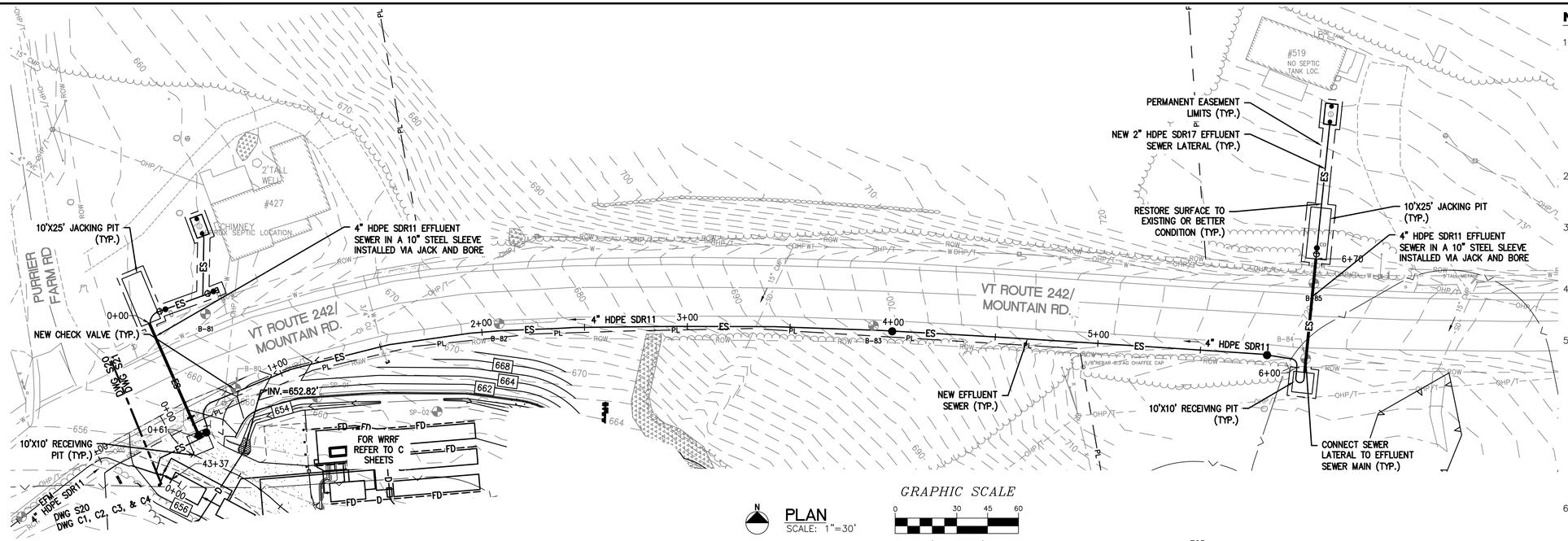

PLAN
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4. FURNISH AND INSTALL EFFLUENT SEWER MAIN CLEANOUTS AS LOCATED ON THESE DRAWINGS AND AS REQUIRED BY THE EFFLUENT SEWER MAIN CLEANOUT DETAIL.
5. INSTALLATION OF ALL HDPE EFFLUENT SEWER FORCE MAINS (EFM) AND GRAVITY EFFLUENT SEWER (ES) MAINS AND LATERALS SHALL COMPLY WITH REQUIREMENTS AND RECOMMENDATIONS OF THE PLASTICS PIPE INSTITUTE (PPI) HANDBOOK OF POLYETHYLENE PIPE. THE MINIMUM ALLOWABLE COLD BEND RADIUS IS 25 TIMES THE PIPES OUTSIDE DIAMETER (OD). THE COLD BEND RADIUS SHALL BE LIMITED TO MINIMUM RADIUS OF 100 X OD FOR A DISTANCE OF 5 X OD ON EITHER SIDE OF A FITTING OR FLANGE CONNECTION. NON SWEEP ELBOW FITTINGS SHALL NOT BE USED. SWEEP ELBOW FITTINGS SHALL ONLY BE USED WHERE COLD BENDING OF HDPE PIPE CANNOT BE PERFORMED IN ACCORDANCE WITH MINIMUM REQUIREMENTS.
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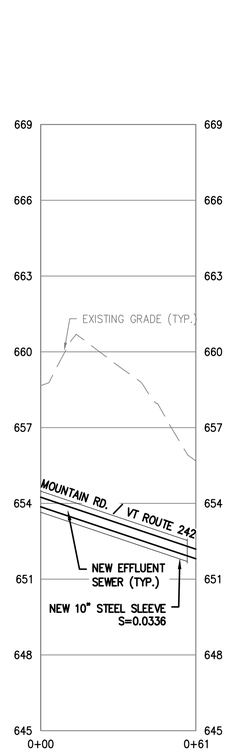
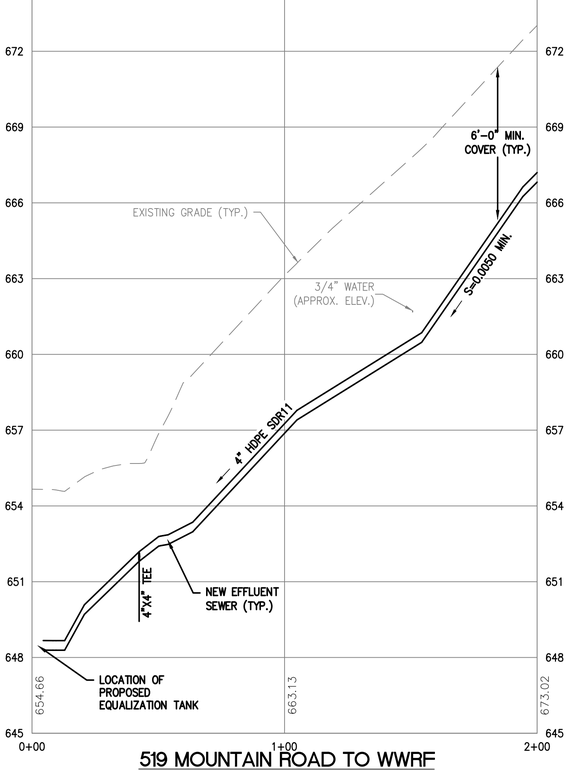
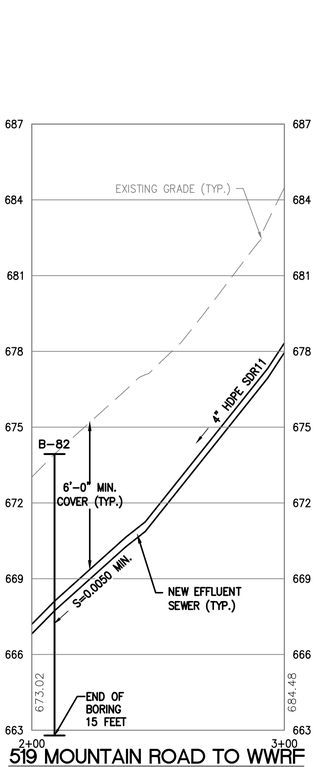


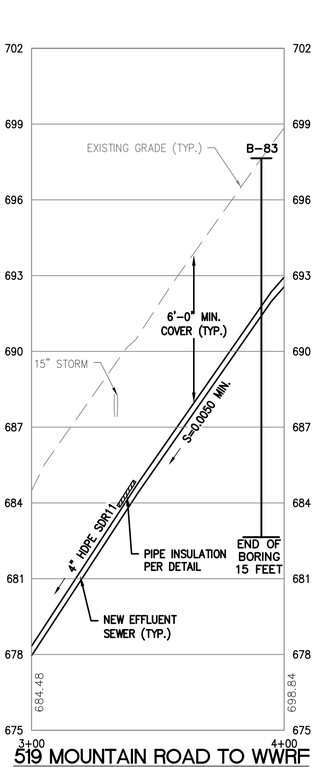
427 MOUNTAIN ROAD TO WWRF
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



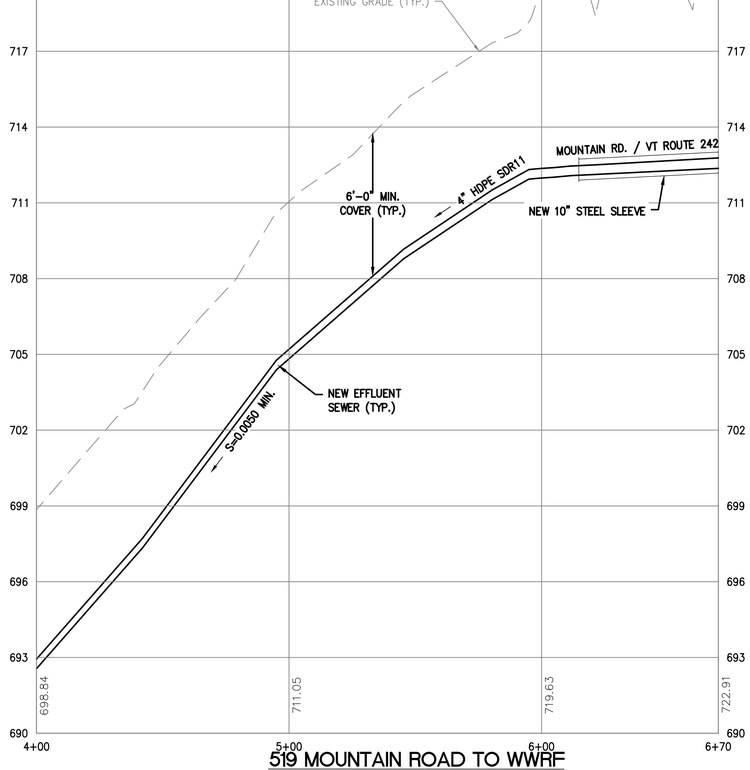
519 MOUNTAIN ROAD TO WWRF
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



519 MOUNTAIN ROAD TO WWRF
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



519 MOUNTAIN ROAD TO WWRF
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



519 MOUNTAIN ROAD TO WWRF
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

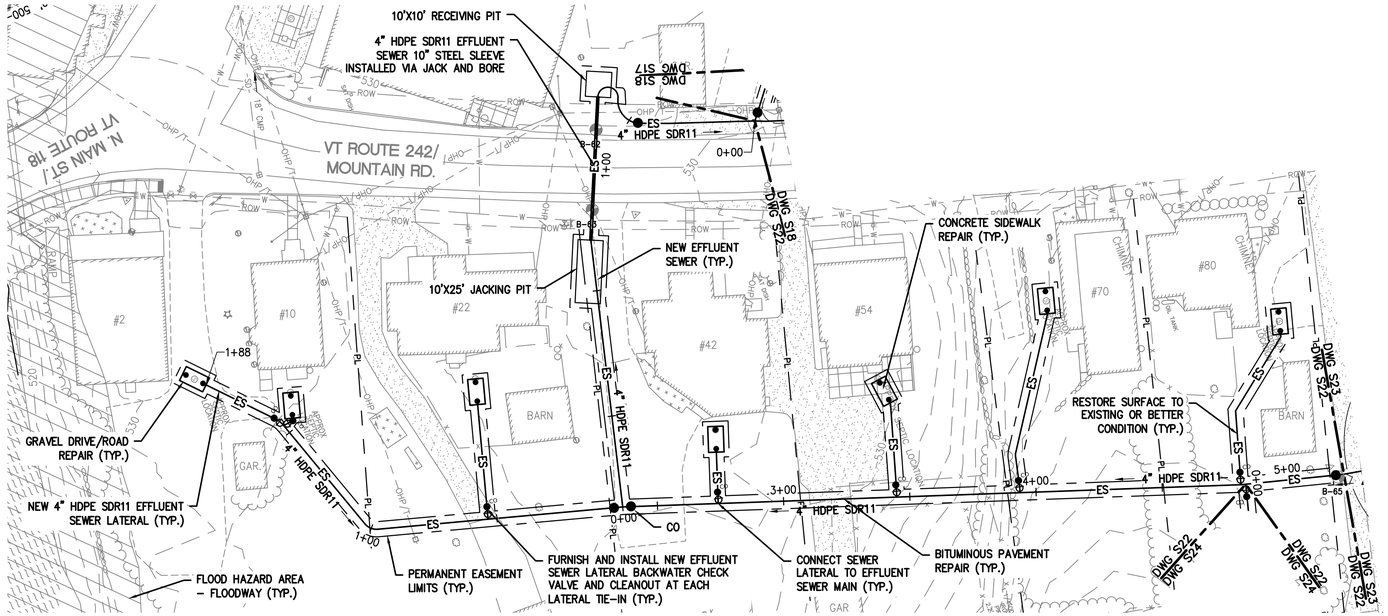
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S21



GRAPHIC SCALE

PLAN
SCALE: 1"=30'

0 30 45 60
(IN FEET)

NOTES:

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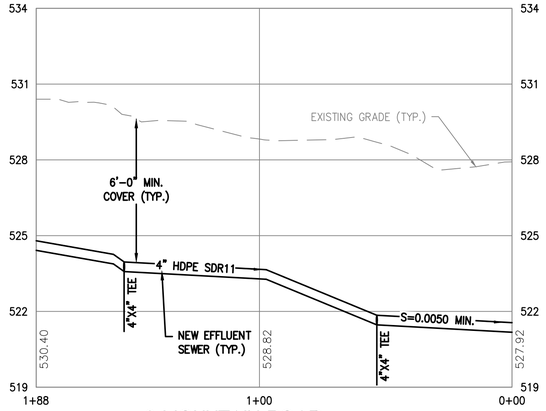
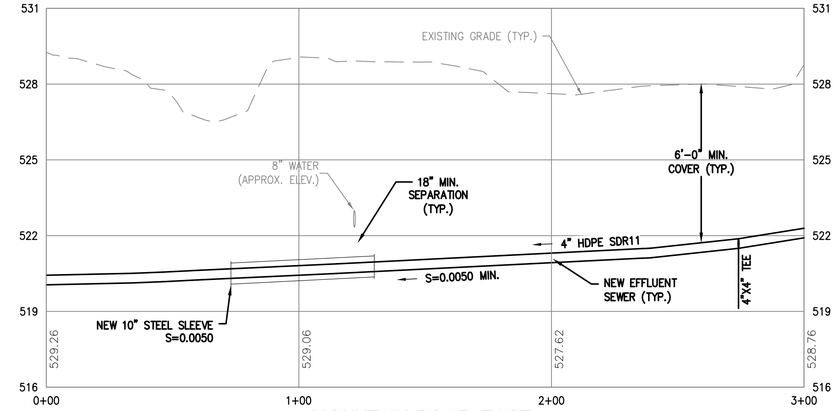


2 MOUNTAIN ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



MOUNTAIN ROAD EAST
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

MOUNTAIN ROAD EAST
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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TOWN OF MONTGOMERY, VERMONT

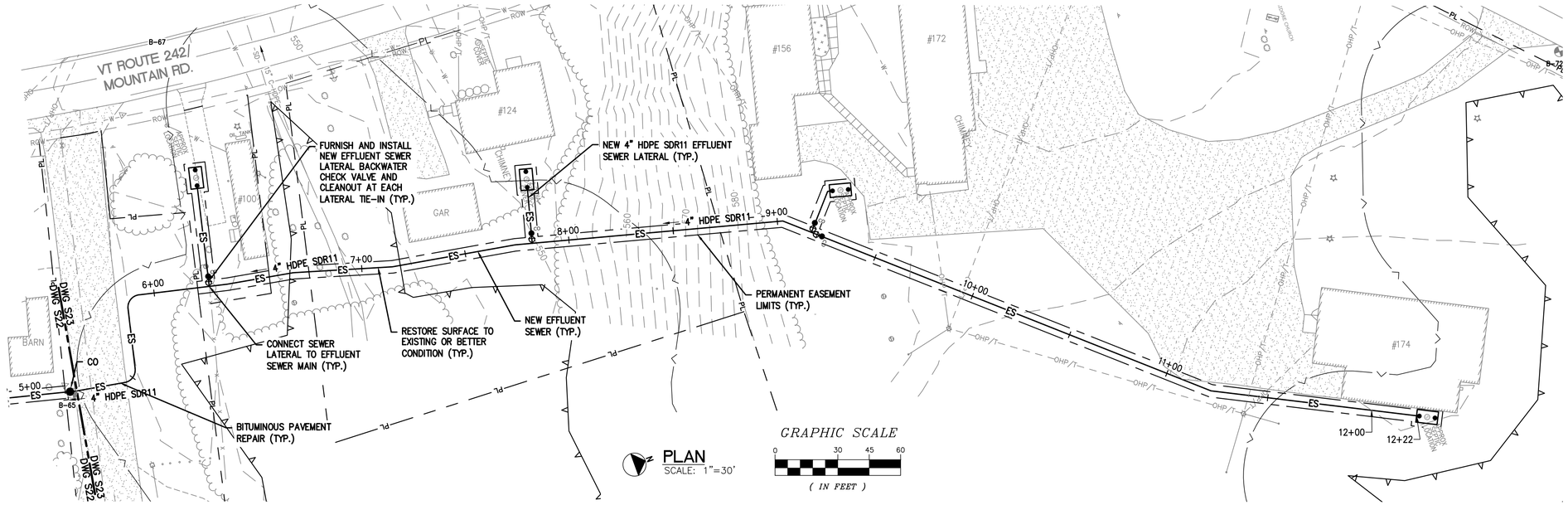
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S22



PLAN
SCALE: 1"=30'

GRAPHIC SCALE
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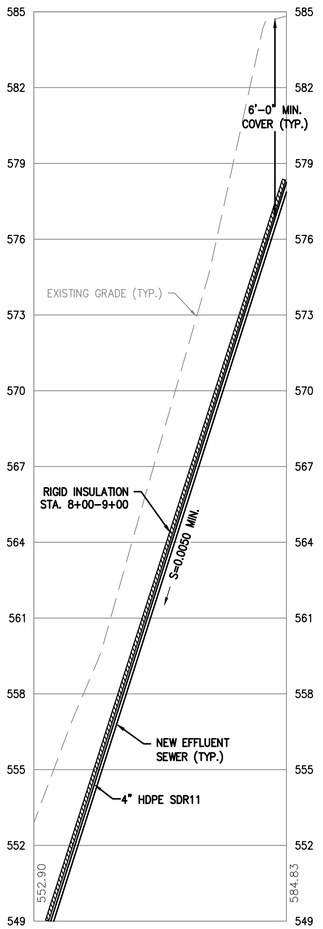
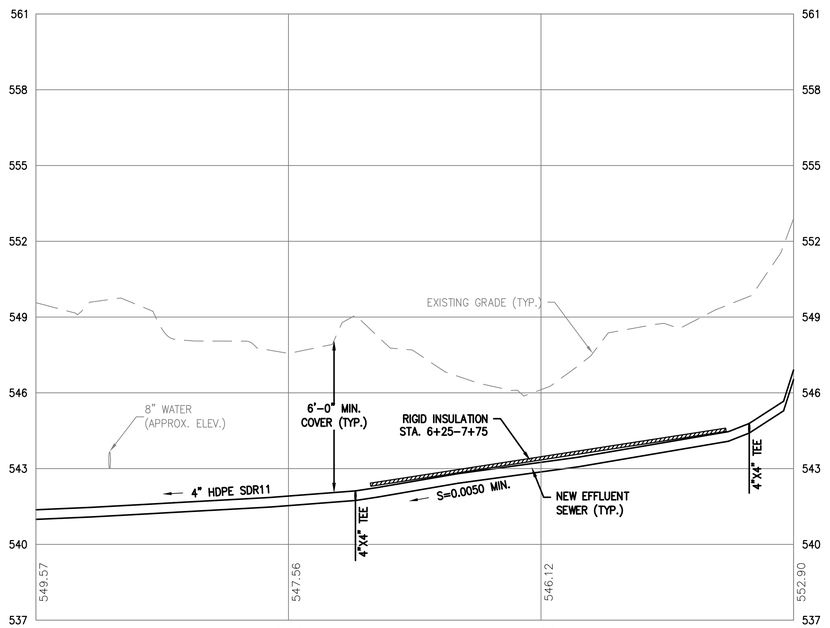
(IN FEET)



MOUNTAIN ROAD EAST
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



MOUNTAIN ROAD EAST
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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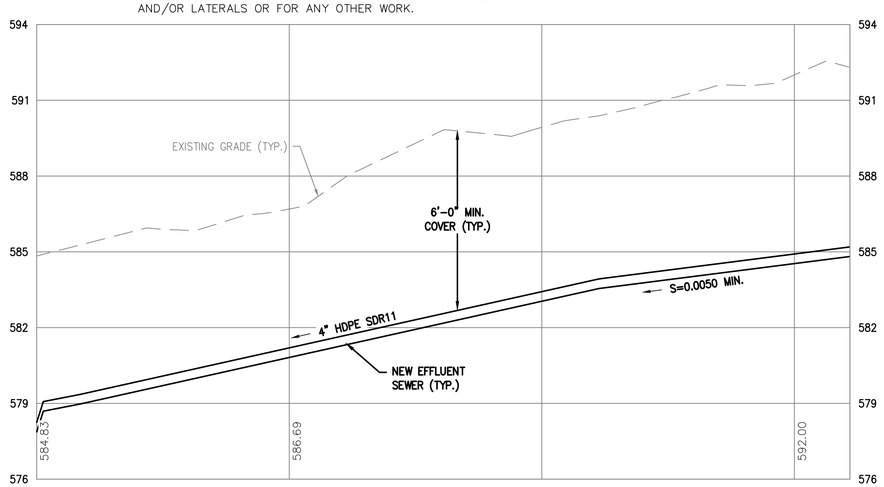

MOUNTAIN ROAD EAST
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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TOWN OF MONTGOMERY, VERMONT

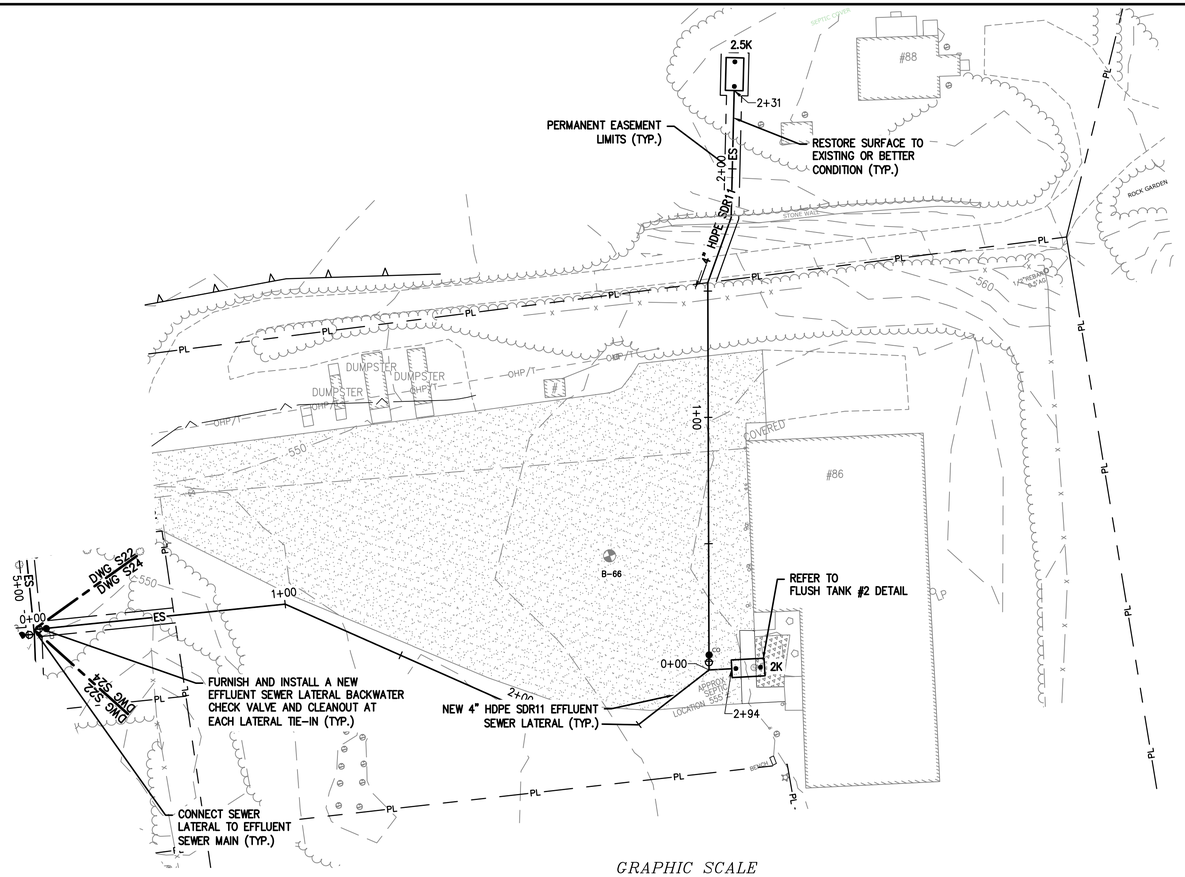
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S23
SHEET 64 OF 75



PLAN
SCALE: 1"=30'

GRAPHIC SCALE
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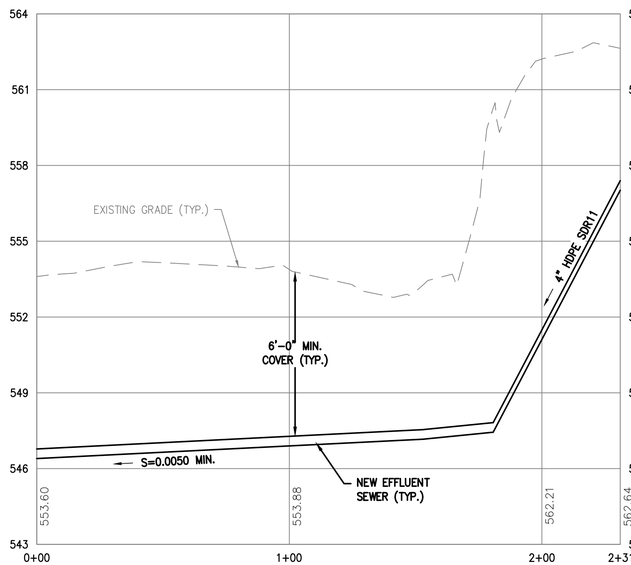
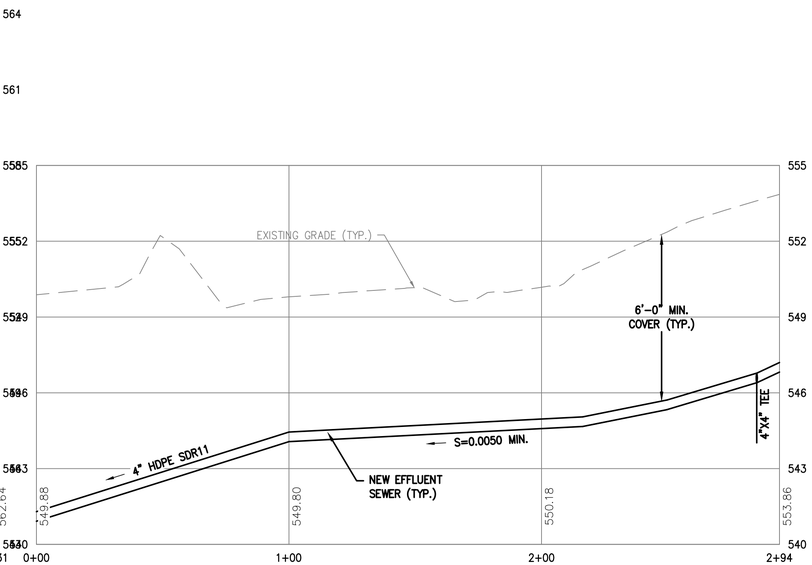
(IN FEET)



88 MOUNTAIN ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'



86 MOUNTAIN ROAD
SCALE: HORIZ. 1"=30'
VERT. 1"=3'

NOTES:

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TOWN OF MONTGOMERY, VERMONT

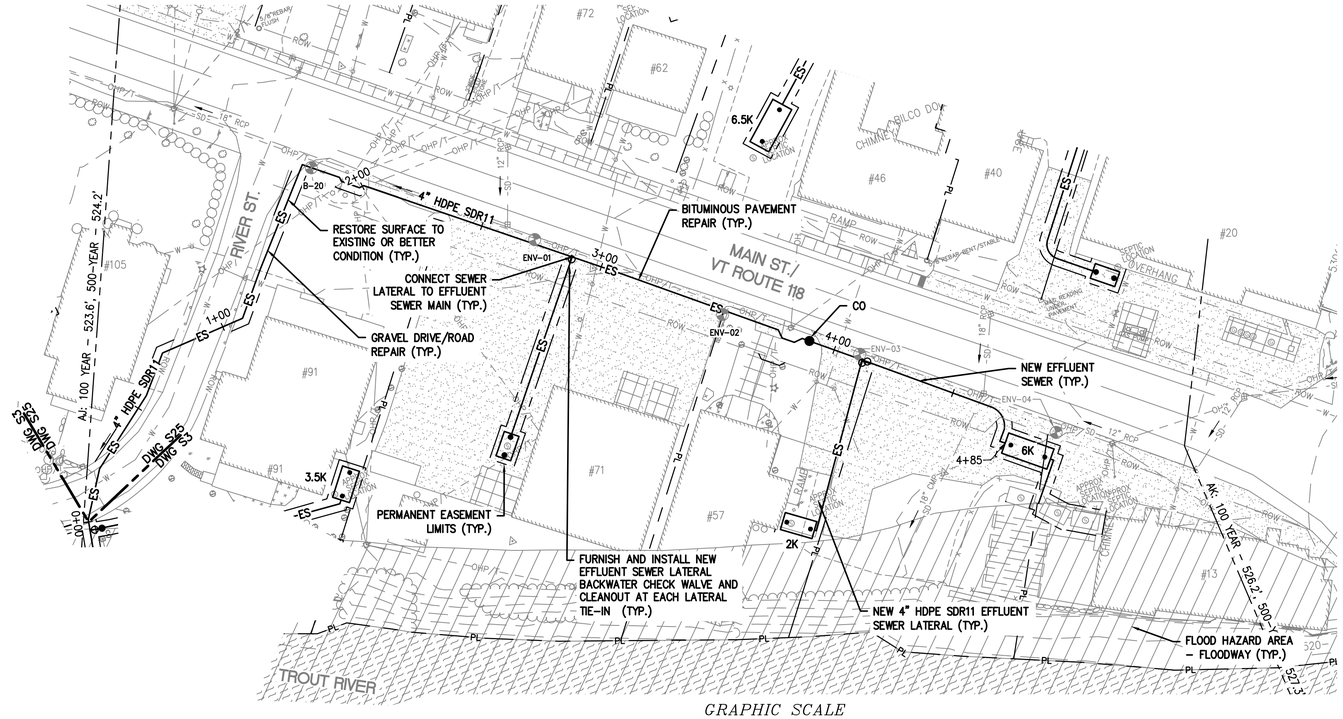
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

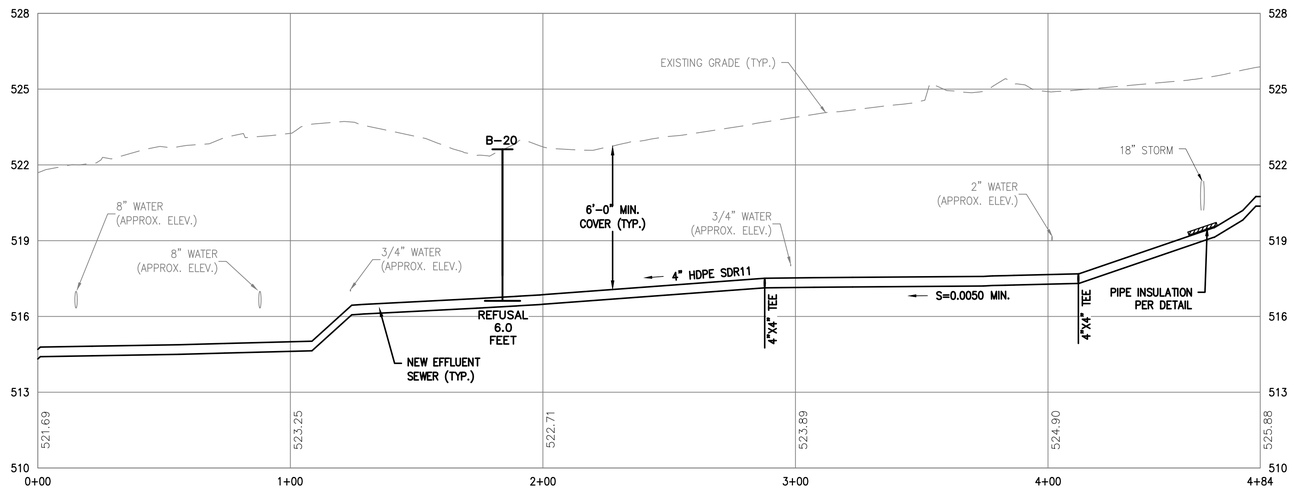
EFFLUENT SEWER AND EFFLUENT FORCEMAIN PLAN AND PROFILE

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S24
SHEET 65 OF 75





91 RIVER STREET TO 13 MAIN STREET

SCALE: HORIZ. 1"=30'
VERT. 1"=3'

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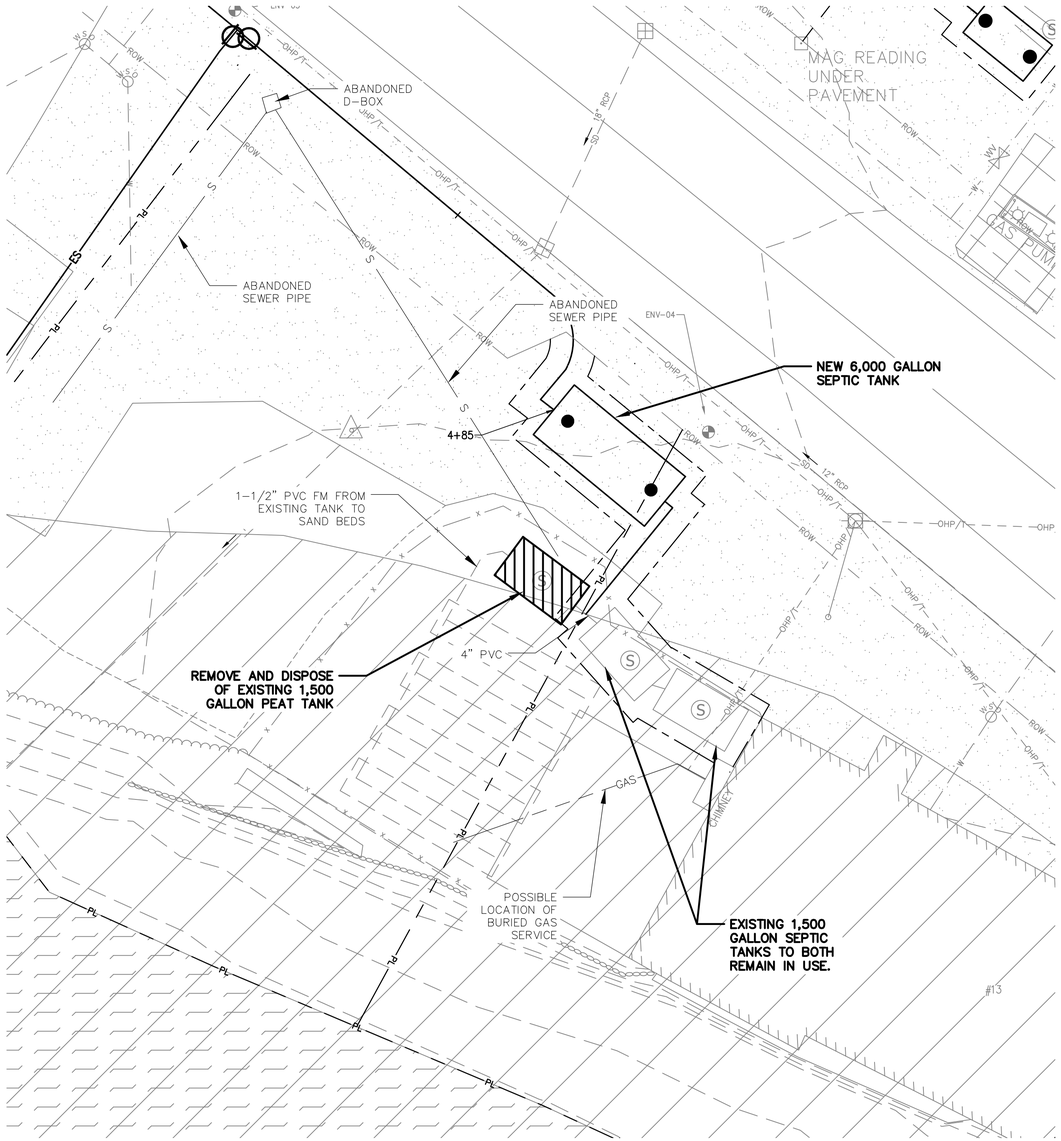
DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S25
SHEET 66 OF 75



GRAPHIC SCALE
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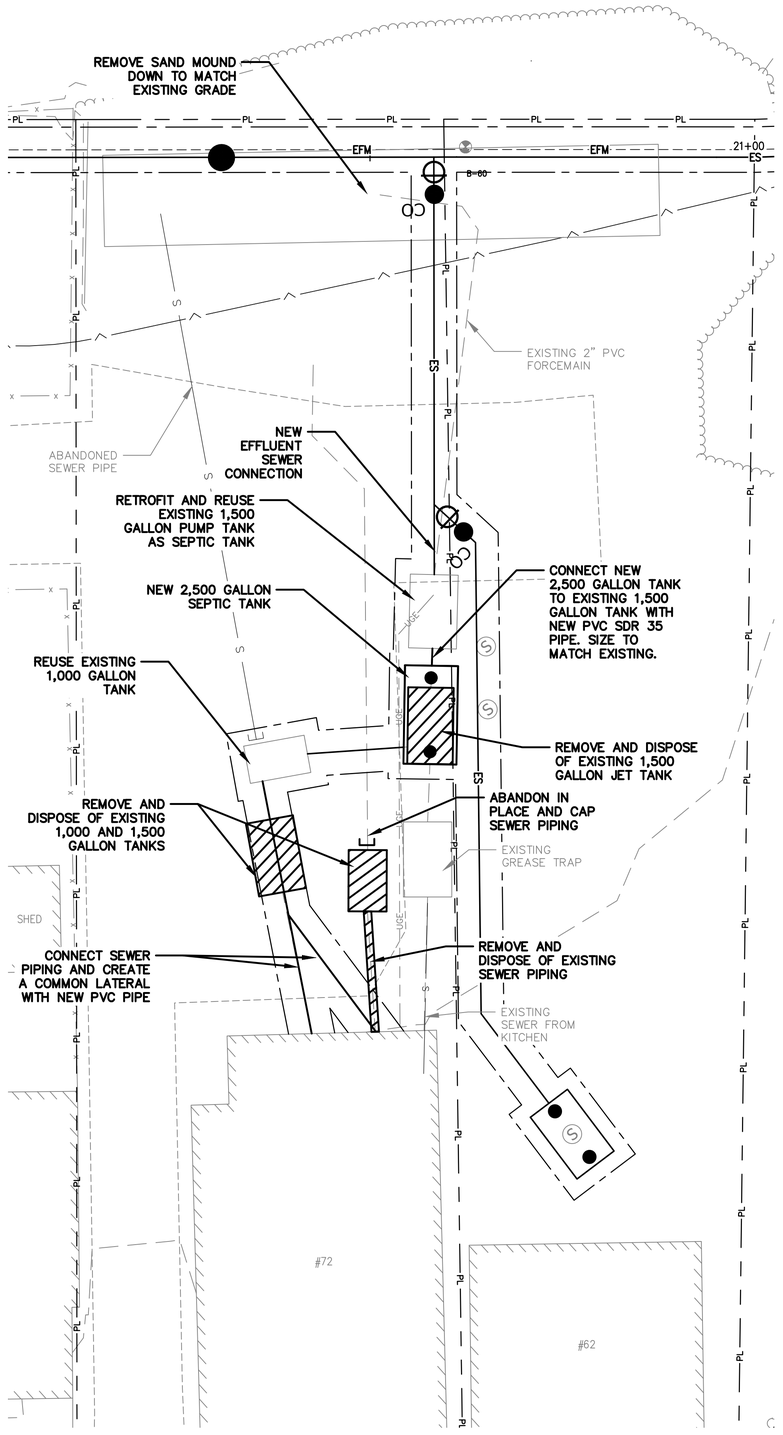
(IN FEET)

PLAN
SCALE: 1"=10'

#13 MAIN STREET



GRAPHIC SCALE
0 10 15 20
(IN FEET)

#72 MAIN STREET

PLAN
SCALE: 1"=10'

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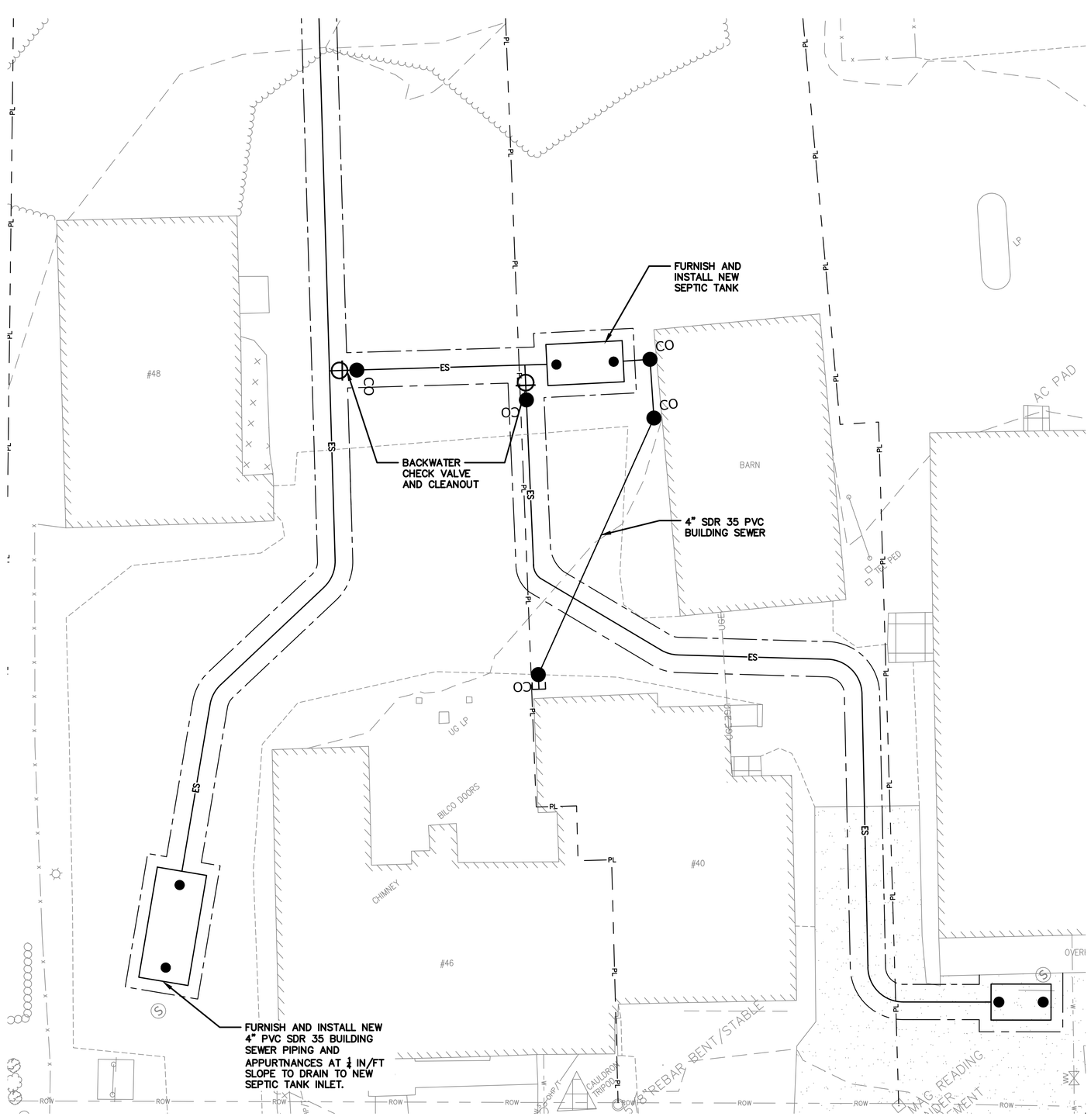
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

#13 AND #72 MAIN STREET SEPTIC TANK REUSE DETAILS

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S26
SHEET 67 OF 75



GRAPHIC SCALE
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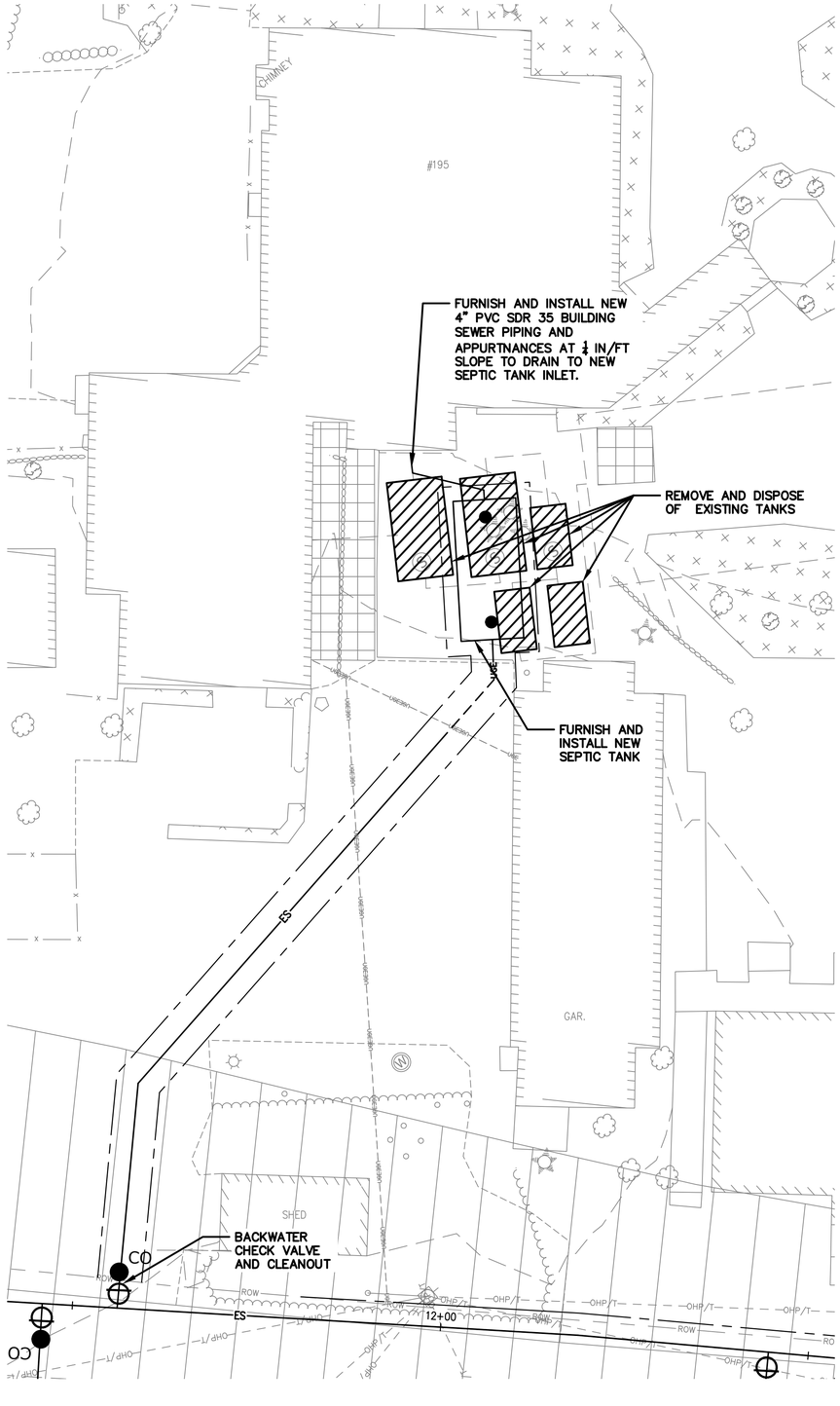
(IN FEET)

#40/46 MAIN STREET

PLAN
SCALE: 1"=10'



GRAPHIC SCALE
0 10 15 20
(IN FEET)

#195 MAIN STREET

PLAN
SCALE: 1"=10'

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#40/46 AND #195 MAIN STREET SEPTIC TANK REUSE DETAILS

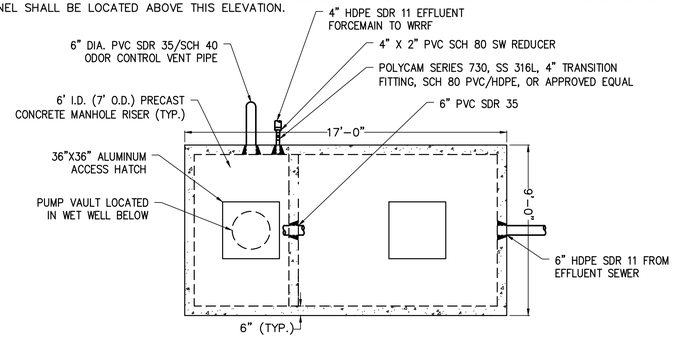
DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

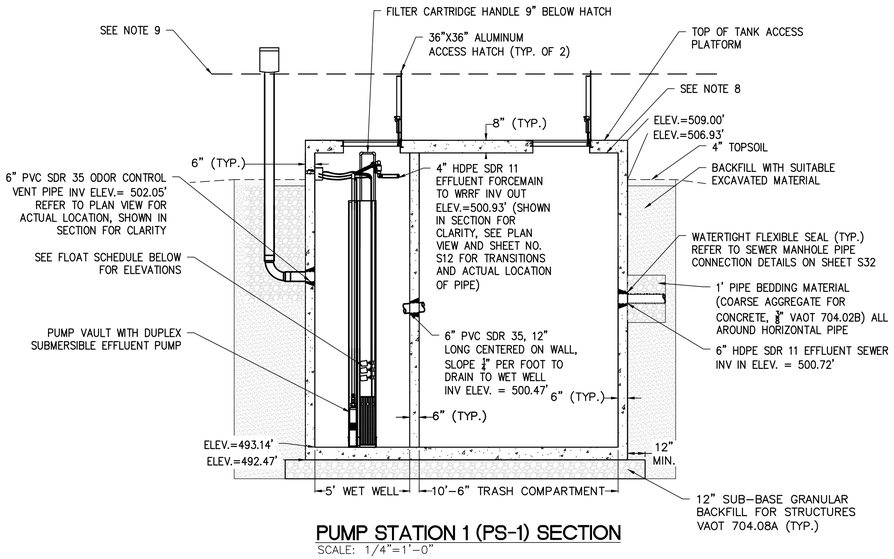
DRAWING
S27
SHEET 68 OF 75

NOTES:

1. CONTRACTOR IS REFERRED TO SPECIFICATION SECTION 468000 FOR DETAILS ON PUMPING EQUIPMENT.
2. CONTRACTOR IS REFERRED TO ALUMINUM ACCESS HATCH SPECIFICATION SECTION 083100 FOR REQUIREMENTS.
3. ALL PENETRATIONS IN CONCRETE STRUCTURE FOR PIPE AND ELECTRICAL CONDUIT SHALL BE SEALED WATERTIGHT WITH SEAL.
4. SEE DRAWING NO. S12 FOR SITE PIPING AND SITE LAYOUT.
5. SEE ELECTRICAL DRAWINGS FOR ELECTRICAL REQUIREMENTS.
6. THE EFFLUENT PUMP STATION WETWELLS AND AREAS WITHIN 3' OF THESE LOCATIONS ARE CLASS 1, DIVISION 1 LOCATIONS IN ACCORDANCE WITH NFPA 820. ALL ELECTRICAL AND MECHANICAL EQUIPMENT LOCATED IN THESE AREAS SHALL BE EXPLOSION PROOF RATED FOR CLASS 1, DIVISION 1 LOCATIONS.
7. FURNISH AND INSTALL PUMP VAULT WITH DUPLEX SUBMERSIBLE EFFLUENT PUMPING SYSTEM, ELECTRICAL AND MISCELLANEOUS APPURTENANCES.
8. CONTRACTOR TO FURNISH AND INSTALL HYDROGEN SULFIDE RESISTANT EPOXY COATING RATED FOR IMMERSION TO WALLS, CEILING, AND FLOOR OF PUMP STATION, TNMEC 434 PERMA-SHIELD OR APPROVED EQUAL.
9. ALL INFRASTRUCTURE BELOW ELEVATION 512.50' SHALL BE WATERTIGHT AND ABLE TO WITHSTAND SUBMERGENCE. CONTROL PANEL SHALL BE LOCATED ABOVE THIS ELEVATION.

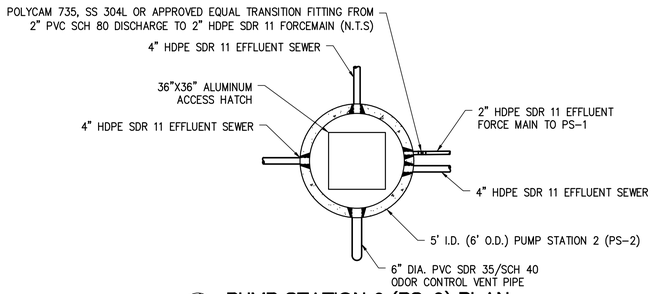


PUMP STATION 1 (PS-1) PLAN
SCALE: 1/4"=1'-0"

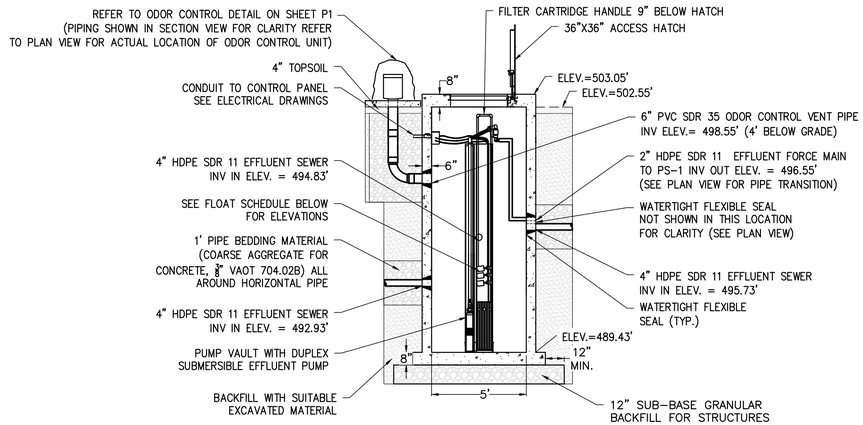


PUMP STATION 1 (PS-1) SECTION
SCALE: 1/4"=1'-0"

FLOAT SCHEDULE	
DESCRIPTION	ELEVATION
HIGH LEVEL ALARM	501.55'
LAG PUMP ON	500.22'
LEAD PUMP ON	499.97'
ALL PUMPS OFF	497.97"
LOW LEVEL ALARM	497.72'



PUMP STATION 2 (PS-2) PLAN
SCALE: 1/4"=1'-0"



PUMP STATION 2 (PS-2) SECTION
SCALE: 1/4"=1'-0"

FLOAT SCHEDULE	
DESCRIPTION	ELEVATION
HIGH LEVEL ALARM	492.93'
LAG PUMP ON	492.68'
LEAD PUMP ON	492.43'
ALL PUMPS OFF	491.18"
LOW LEVEL ALARM	490.93'

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

PUMP STATION DETAIL

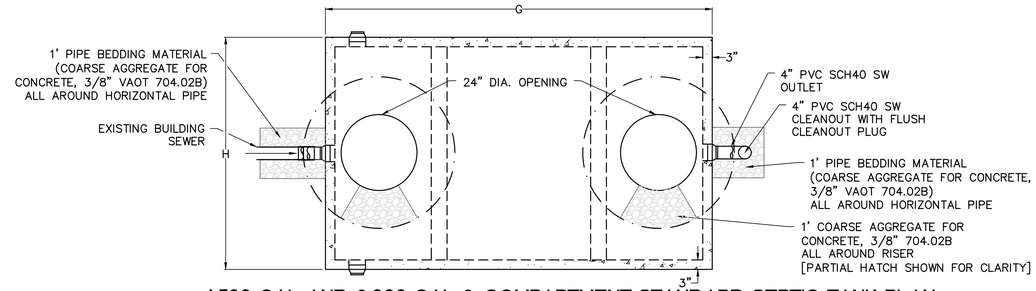
DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S28
SHEET 69 OF 75

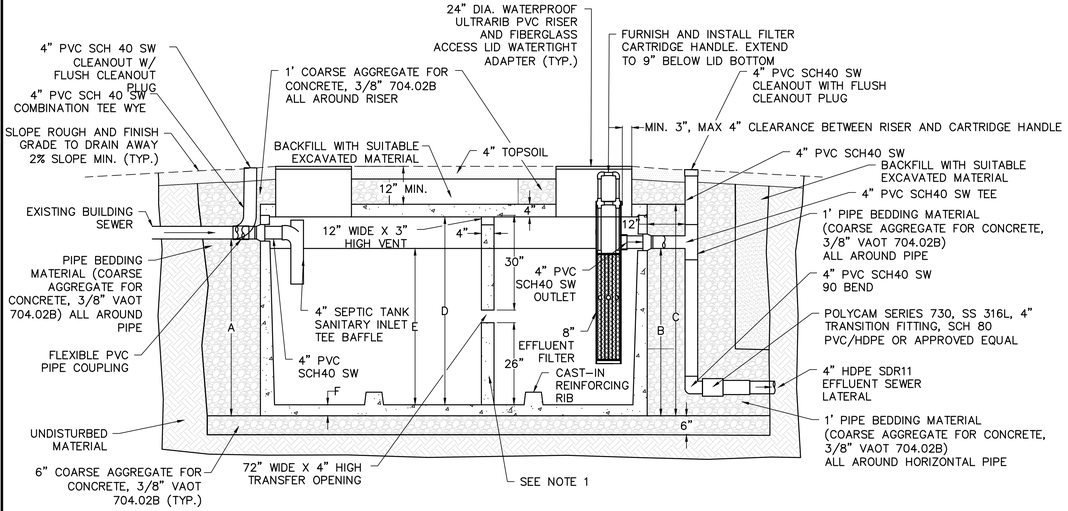
DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

PUMP STATION DETAIL.DWG



1,500 GAL AND 2,000 GAL 2-COMPARTMENT STANDARD SEPTIC TANK PLAN

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



1,500 GAL AND 2,000 GAL 2-COMPARTMENT STANDARD SEPTIC TANK SECTION

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

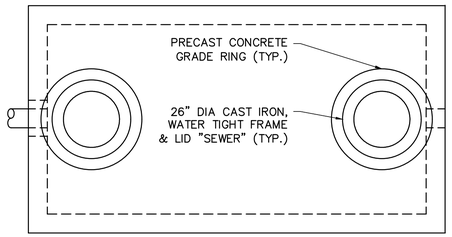
NOTES:

1. THE WALL AND ASSOCIATED VENT AND TRANSFER OPENING APPLIES TO THE 2,000-GAL STANDARD 2-COMPARTMENT TANK ONLY. THE 1,500-GAL TANK SHALL NOT INCLUDE A WALL.

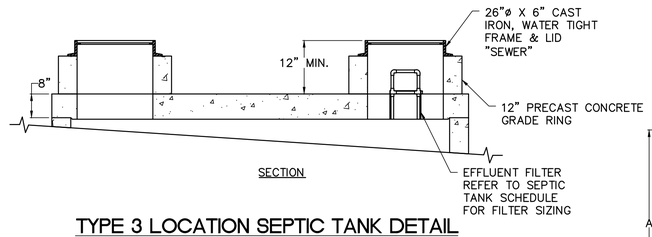
STANDARD SEPTIC TANK SIZING (1,500 AND 2,000 GALLON)								
TANK CAPACITY	INLET (A)	OUTLET (B)	OUTER HEIGHT (C)	INNER HEIGHT (D)	LIQUID (E)	FLOOR (F)	LENGTH (G)	WIDTH (H)
1,500 GAL	56"	53"	67"	59.5"	49.5"	3.5"	10'-2.5"	6'-1.5"
2,000 GAL	56"	53"	68"	60"	49"	4"	12'-0"	6'-6"

NOTES:

1. FOR EFFLUENT FILTER SIZING REFER TO SEPTIC TANK SCHEDULE ON SHEET S31.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANY PIPE ADAPTER AND/OR COUPLING NEEDED TO COMPLETE THE WORK.
3. CONTRACTOR IS REFERRED TO SPECIFICATION SECTION – 033000 PRECAST CONCRETE STRUCTURES FOR REQUIREMENTS.
4. CONTRACTOR IS REFERRED TO SPECIFICATION SECTION – 330531 PVC PIPE AND SPECIFICATION SECTION – 330533 HDPE PIPE FOR REQUIREMENTS.
5. CONTRACTOR IS REFERRED TO SPECIFICATION SECTION – 333416 EFFLUENT FILTERS AND SPECIFICATION SECTION – 333419 SEPTIC TANK ACCESSORIES FOR REQUIREMENTS.
6. ALL HARDWARE SHALL BE SS 316L.
7. REFER TO TYPE 3 LOCATION SEPTIC TANK DETAIL.



PLAN



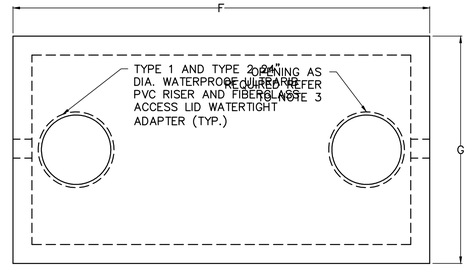
SECTION

TYPE 3 LOCATION SEPTIC TANK DETAIL

SCALE: NONE

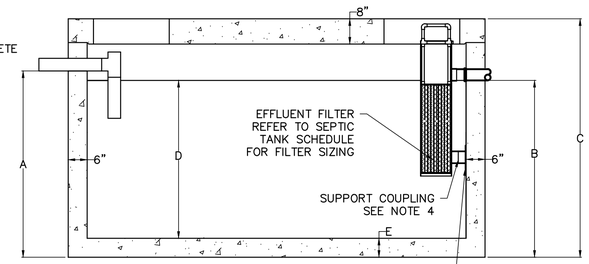
NOTES:

1. FOR TANKS GREATER THAN 5,000 GAL A THIRD OPENING SHALL BE PROVIDED IN THE MIDDLE OF THE TANK FOR ADDITIONAL MAINTENANCE ACCESS.
2. REFER TO SEPTIC TANK SCHEDULE ON S31 FOR SPECIFIC FILTER SIZING FOR EACH PROPERTY WITH A HEAVY DUTY SEPTIC TANK.
3. FURNISH AND INSTALL PIPE SUPPORT FOR 12-INCH AND 15-INCH FILTERS AS SHOWN IN THIS DETAIL SECTION. CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPE FITTINGS, COUPLINGS, AND MISC. APPURTENANCES REQUIRED TO JOIN THE PIPE SUPPORT COUPLING ON THE EFFLUENT FILTER TO THE SUPPORT BRACKET.
4. ALL REQUIREMENTS OF 1,500 GAL AND 2,000 GAL 2-COMPARTMENT STANDARD SEPTIC TANK PLAN AND SECTION DETAIL APPLY TO THE HEAVY DUTY SEPTIC TANK PLAN AND SECTION DETAIL EXCEPT AS OTHERWISE SHOWN ON THE HEAVY DUTY SEPTIC TANK PLAN AND SECTION.
5. ALL HARDWARE SHALL BE SS 316L.
6. REFER TO THE TYPE 3 LOCATION SEPTIC TANK DETAIL.



HEAVY DUTY SEPTIC TANK PLAN

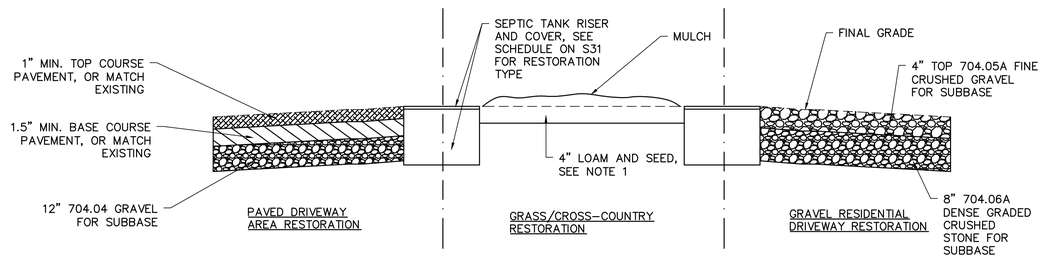
SCALE: NONE



HEAVY DUTY SEPTIC TANK SECTION

SCALE: NONE

HEAVY DUTY SEPTIC TANK SIZING (1,500 - 10,500 GALLONS)								
TANK CAPACITY	INLET (A)	OUTLET (B)	HEIGHT (C)	LIQUID (D)	FLOOR (E)	LENGTH (F)	WIDTH (G)	WEIGHT
1,500 GAL	58"	55"	74"	49"	6"	11'-0"	6'-0"	23,300 LBS
2,000 GAL	54"	51"	68"	45"	6"	13'-0"	7'-0"	29,800 LBS
2,500 GAL	65"	62"	82"	56"	6"	13'-0"	7'-0"	29,800 LBS
3,000 GAL	76"	73"	94"	67"	6"	13'-0"	7'-0"	34,500 LBS
3,500 GAL	87"	84"	103"	78"	6"	13'-0"	7'-0"	37,000 LBS
5,500 GAL	77"	74"	94"	66"	8"	19'-0"	8'-6"	57,400 LBS
6,000 GAL	83"	80"	100"	72"	8"	19'-0"	8'-6"	59,400 LBS
6,500 GAL	89"	86"	106"	78"	8"	19'-0"	8'-6"	61,400 LBS
8,000 GAL	107"	104"	124"	96"	8"	19'-0"	8'-6"	67,300 LBS

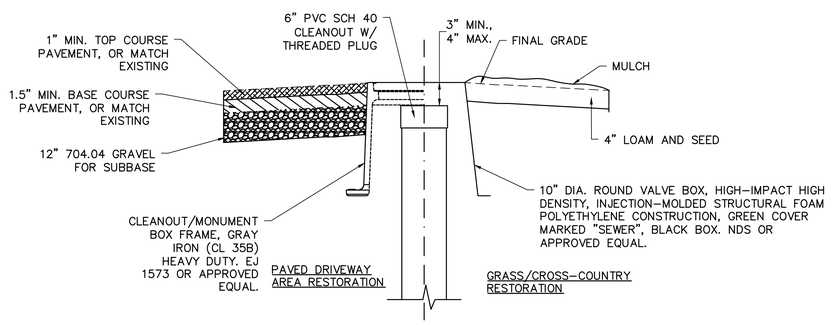


NOTES:

1. FOR TRENCH CONSTRUCTION THAT IS NOT IN THE ROADS, ROAD SHOULDERS AND WALKWAYS, CONTRACTOR SHALL RESTORE TO GRADE WITH LOAM, SEED, FERTILIZER, AND MULCH AS PER THE TECHNICAL SPECIFICATIONS.

SEPTIC TANK SURFACE RESTORATION DETAIL

SCALE: NONE



SEPTIC TANK CLEANOUT SURFACE RESTORATION DETAIL

SCALE: NONE

DRAFT 90% DELIVERABLE DESIGN PLANS FOR REVIEW ONLY

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

SEPTIC TANK DETAILS

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S29
SHEET 70 OF 75

SEPTIC_TANK_DETAIL.DWG

Address	Water Meter Account	Tank Type	Restoration Type	Tank Design Volume (gal)	Effluent Filter Size	Existing WW Permit Number
BEGNOCHE FARM ROAD 22	057	Standard	1	1,500	8-inch	0
BEGNOCHE FARM ROAD 46	056	Standard	1	1,500	8-inch	0
BEGNOCHE FARM ROAD 53	053	Heavy Duty	2	6,000	15-inch	0
BEGNOCHE FARM ROAD 82	055	Standard	1	1,500	8-inch	0
DEMAR ROAD 9	218	Standard	1	1,500	8-inch	0
DEMAR ROAD 21	045	Standard	1	1,500	8-inch	0
DEMAR ROAD 39	046	Standard	1	1,500	8-inch	0
DEMAR ROAD 103	047	Heavy Duty	2	1,500	8-inch	0
HART LANE 46	014	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 21	028	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 28	029	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 46	030	Standard Duty	1	1,500	8-inch	0
HAZENS NOTCH ROAD 56	031	Heavy Duty	3	1,500	8-inch	0
HAZENS NOTCH ROAD 68	032	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 84	033	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 124	034	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 216	035	Heavy Duty	3	1,500	8-inch	0
HAZENS NOTCH ROAD 326	036	Standard	1	1,500	8-inch	6-2096
HAZENS NOTCH ROAD 331	044	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 333	043	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 381	042	Heavy Duty	1	2,500	12-inch	0
HAZENS NOTCH ROAD 409	041	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 463	040	Standard	1	1,500	8-inch	0
HAZENS NOTCH ROAD 490	039	Standard	1	1,500	8-inch	0
HOWARD ROAD 54	038	Standard	1	1,500	8-inch	0
HOWARD ROAD 55	037	Standard	1	1,500	8-inch	0
MAIN STREET 13	058	Heavy Duty	3	6,000	15-inch	6-3059
MAIN STREET 20	094	Heavy Duty	3	1,500	8-inch	0
MAIN STREET 40	096	Standard	2	2,000	8-inch	6-3178
MAIN STREET 46/48	095	Heavy Duty	3	8,000	15-inch	6-3178
MAIN STREET 57	059	Heavy Duty	3	2,000	8-inch	0
MAIN STREET 62	097	Standard	1	1,500	8-inch	0
MAIN STREET 71	061	Heavy Duty	3	1,500	8-inch	0
MAIN STREET 72	098	Heavy Duty	3	2,500	15-inch	6-3392
MAIN STREET 82	099	Standard	1	1,500	8-inch	0
MAIN STREET 86	100	Standard	1	2,000	8-inch	0
MAIN STREET 91	062	Heavy Duty	1	3,500	12-inch	0
MAIN STREET 98	102	Heavy Duty	3	1,500	8-inch	0
MAIN STREET 105	072	Standard	1	1,500	8-inch	0
MAIN STREET 121	073	Standard	1	1,500	8-inch	0
MAIN STREET 126	103	Standard	1	2,000	8-inch	0
MAIN STREET 133	074	Standard	1	1,500	8-inch	0
MAIN STREET 138	104	Standard	1	1,500	8-inch	0
MAIN STREET 148	105	Standard	1	1,500	8-inch	0
MAIN STREET 155	075	Standard	1	1,500	8-inch	0
MAIN STREET 167	076	Heavy Duty	1	5,500	15-inch	0
MAIN STREET 168	106	Standard	1	2,000	8-inch	0
MAIN STREET 188	107	Heavy Duty	3	3,000	12-inch	0
MAIN STREET 195	077	Heavy Duty	1	4,500	15-inch	6-0648
MAIN STREET 204	108	Heavy Duty	3	3,000	12-inch	0
MAIN STREET 216	109	Heavy Duty	3	2,000	8-inch	0
MAIN STREET 240	110	Standard	1	1,500	8-inch	0
MAIN STREET 241	078	Heavy Duty	1	6,500	15-inch	0
MAIN STREET 257	079	Standard	1	1,500	8-inch	0
MAIN STREET 266	111	Heavy Duty	3	1,500	8-inch	0
MAIN STREET 271	080	Standard	1	1,500	8-inch	0
MAIN STREET 282	112	Standard	1	1,500	8-inch	0
MAIN STREET 283	081	Standard	1	1,500	8-inch	0
MAIN STREET 298	113	Standard	1	1,500	8-inch	0

Address	Water Meter Account	Tank Type	Restoration Type	Tank Design Volume (gal)	Effluent Filter Size	Existing WW Permit Number
MAIN STREET 301	082	Heavy Duty	1	8,000	15-inch	0
MAIN STREET 312	114	Standard	1	1,500	8-inch	0
MAIN STREET 313	083	Standard	2	1,500	8-inch	0
MAIN STREET 319	084	Standard	1	1,500	8-inch	0
MAIN STREET 324	115	Standard	1	1,500	8-inch	0
MAIN STREET 329	085	Standard	1	1,500	8-inch	0
MAIN STREET 333	086	Standard	1	1,500	8-inch	0
MAIN STREET 348	220	Heavy Duty	3	1,500	8-inch	0
MAIN STREET 372	116	Standard	1	1,500	8-inch	0
MAIN STREET 384	117	Standard	1	1,500	8-inch	0
MILL HOUSE LANE 7	088	Standard	1	1,500	8-inch	0
MILL HOUSE LANE 15	089	Standard	1	1,500	8-inch	0
MILL HOUSE LANE 27	090	Standard	1	1,500	8-inch	0
MILL HOUSE LANE 33	091	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 2	027.2	Heavy Duty	3	1,500	8-inch	0
MOUNTAIN ROAD 10	026.1	Standard	2	1,500	8-inch	0
MOUNTAIN ROAD 22	025	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 42	024	Standard	2	1,500	8-inch	0
MOUNTAIN ROAD 54	023	Heavy Duty	3	1,500	8-inch	0
MOUNTAIN ROAD 70	022	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 77	017	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 80	021	Heavy Duty	3	1,500	8-inch	0
MOUNTAIN ROAD 86	215	Heavy Duty	3	2,000	8-inch	0
MOUNTAIN ROAD 88	008	Heavy Duty	1	2,500	12-inch	0
MOUNTAIN ROAD 100	019	Heavy Duty	3	1,500	8-inch	0
MOUNTAIN ROAD 115	015	Standard	2	1,500	8-inch	0
MOUNTAIN ROAD 124	018	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 125	016	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 133	013	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 137	012	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 156	010	Standard	2	1,500	8-inch	0
MOUNTAIN ROAD 171	007	Standard	2	1,500	8-inch	0
MOUNTAIN ROAD 174	009	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 211	011	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 221	006	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 237	005	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 324	004	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 427	002	Standard	1	1,500	8-inch	0
MOUNTAIN ROAD 428	003	TO BE DEMOLISHED				0
MOUNTAIN ROAD 519	001	Standard	1	1,500	8-inch	0
NORTH MAIN STREET 3	087	Standard	1	1,500	8-inch	0
NORTH MAIN STREET 53	092	Standard	1	1,500	8-inch	0
NORTH MAIN STREET 121	093	Heavy Duty	3	1,500	8-inch	0
NORTH MAIN STREET 204	216	Heavy Duty	1	2,000	8-inch	0
NORTH MAIN STREET 236	119	Heavy Duty	3	1,500	8-inch	0
NORTH MAIN STREET 270	120	Standard	1	1,500	8-inch	3-3340
RIVER STREET 68	063	Heavy Duty	2	1,500	8-inch	0
RIVER STREET 84	064	Standard	1	1,500	8-inch	0
RIVER STREET 92	065	Standard	1	1,500	8-inch	0
RIVER STREET 104	066	Standard	1	1,500	8-inch	0
RIVER STREET 122	067	Standard	1	2,000	8-inch	0
RIVER STREET 125	068	Standard	1	1,500	8-inch	0
RIVER STREET 137	069	Standard	1	1,500	8-inch	0
RIVER STREET 149	070	Standard	1	1,500	8-inch	0
RIVER STREET 201	071	Standard	1	1,500	8-inch	0
SOUTH MAIN ST 183	700	Standard	1	1,500	8-inch	0
SOUTH MAIN STREET 61	048	Standard	1	1,500	8-inch	0
SOUTH MAIN STREET 93	049	Standard	1	1,500	8-inch	0
SOUTH MAIN STREET 211	050	Standard	1	1,500	8-inch	0

SEPTIC TANK DETAIL.DWG

DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF
MONTGOMERY,
VERMONT

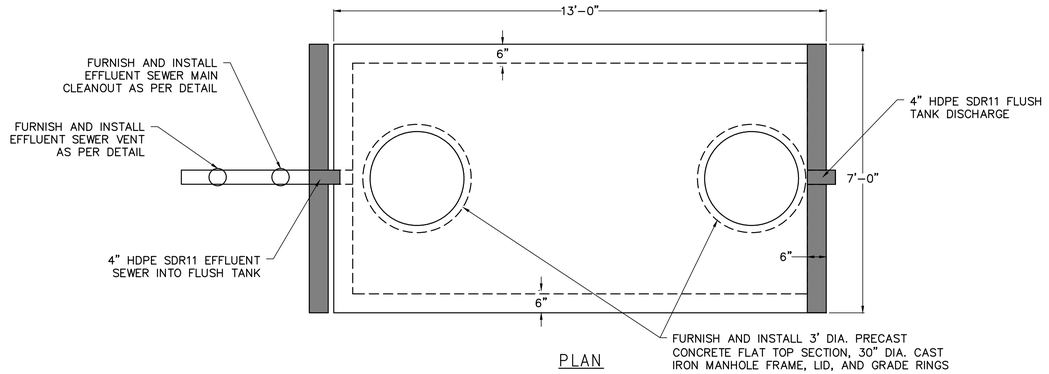
CENTER
COMMUNITY
DECENTRALIZED
WASTEWATER
TREATMENT AND
DISPOSAL SYSTEM

SEPTIC TANK SCHEDULE

DESIGNED	CHECKED
JEN	JDR
DRAWN	DATE
JEN	DEC 2024

PROJECT NO.
19.129800.02

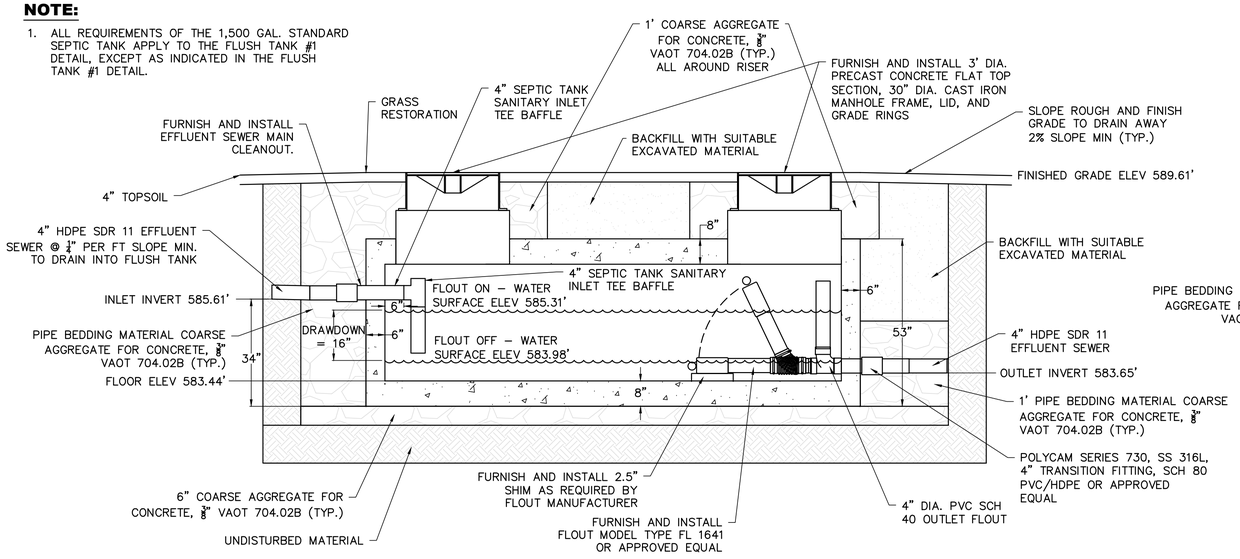
DRAWING
S30
SHEET 71 OF 75



PLAN

NOTE:

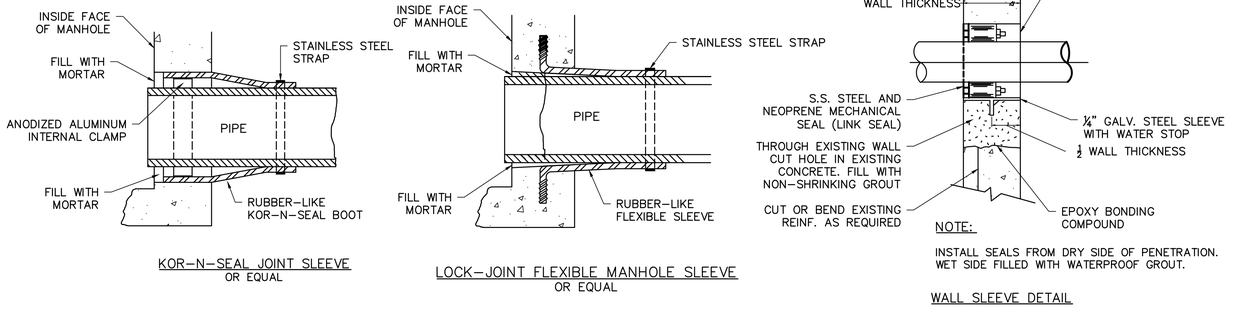
1. ALL REQUIREMENTS OF THE 1,500 GAL. STANDARD SEPTIC TANK APPLY TO THE FLUSH TANK #1 DETAIL, EXCEPT AS INDICATED IN THE FLUSH TANK #1 DETAIL.



SECTION

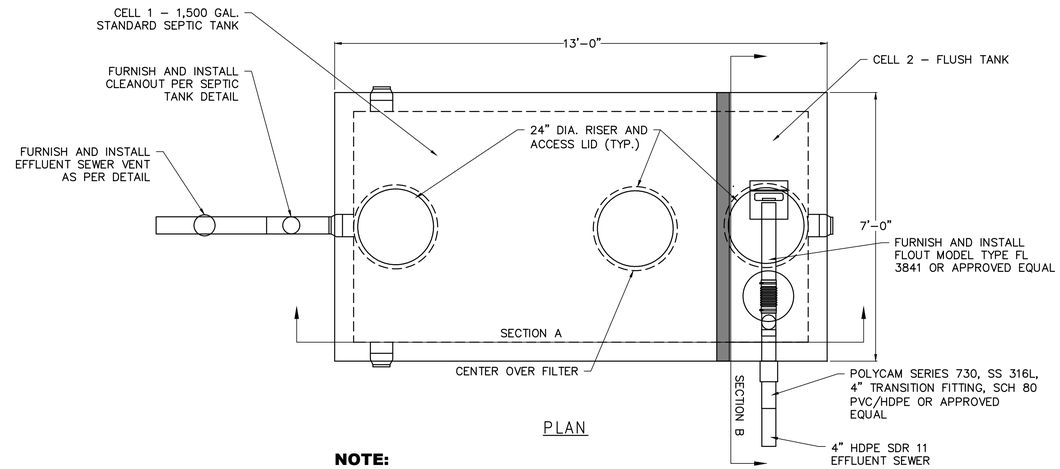
FLUSH TANK #1 DETAIL

SCALE: 1" = 2'



SEWER MANHOLE PIPE CONNECTION DETAILS

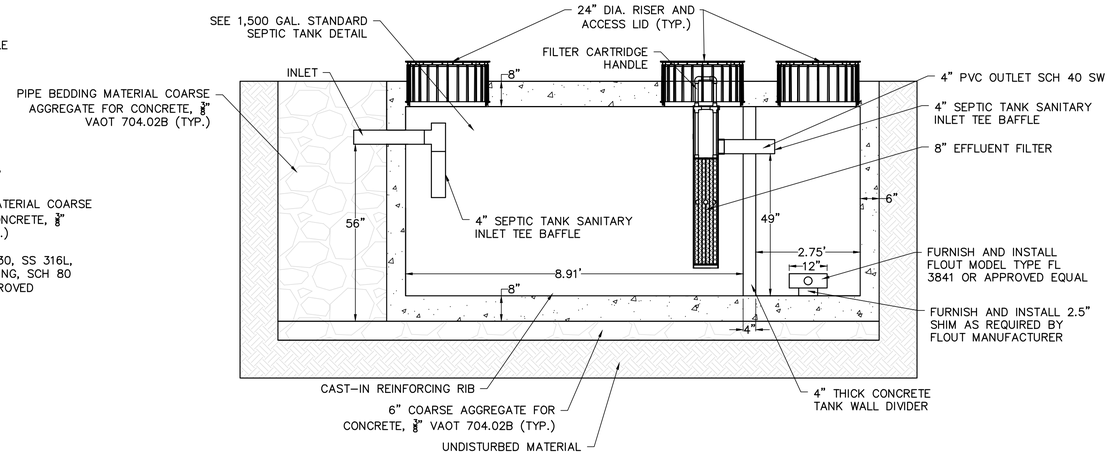
SCALE: NONE



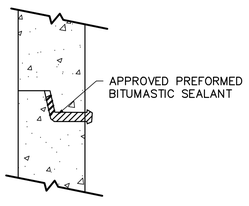
PLAN

NOTE:

1. ALL REQUIREMENTS OF THE 1,500 GAL. STANDARD SEPTIC TANK APPLY TO THE FLUSH TANK #2 DETAIL, EXCEPT AS INDICATED IN THE FLUSH TANK #2 DETAIL.

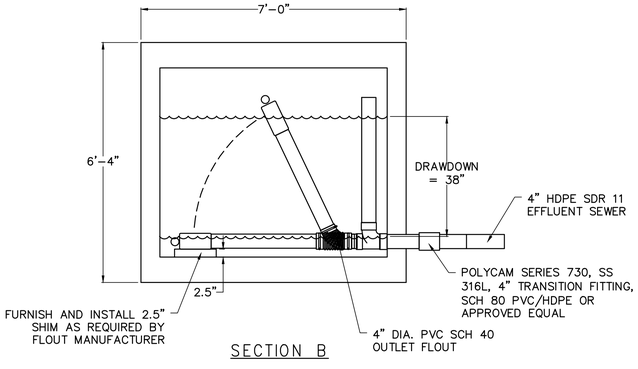


SECTION A



BITUMASTIC PRECAST CONCRETE JOINT SEALANT

SCALE: NONE



SECTION B

FLUSH TANK #2 DETAIL

SCALE: 1" = 2'

DRAFT 90% DELIVERABLE DESIGN PLANS FOR REVIEW ONLY

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

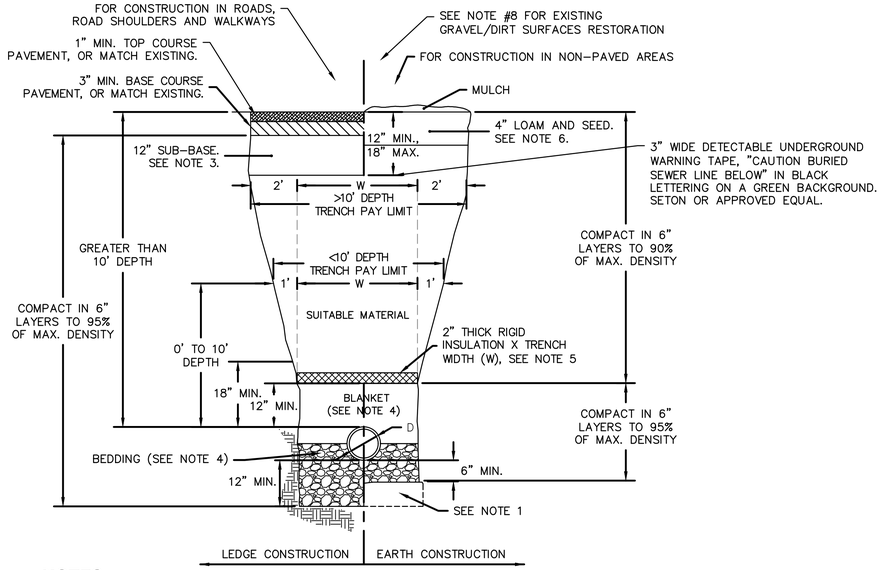
FLUSH TANK DETAILS

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S31
SHEET 72 OF 75

19_129800_02-S DETAILS.DWG

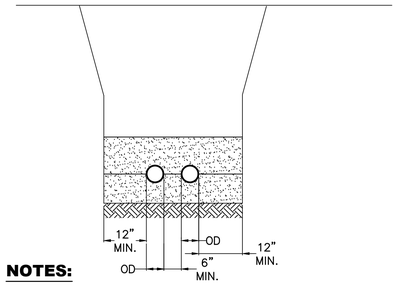


NOTES:

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH PIPE EMBEDMENT MATERIAL. SEE ALSO NOTE 2.
2. W=MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. W=D+2', OR 3', WHICHEVER IS GREATER. D = NOMINAL PIPE DIAMETER.
3. SEE PERMANENT TRENCH RESTORATION DETAIL FOR SUB-BASE MATERIAL REQUIREMENTS AND PAVEMENT WEARING AND BASE COURSE REQUIREMENTS.
4. PIPE EMBEDMENT INCLUDING BLANKET AND BEDDING SHALL BE COURSE AGGREGATE FOR CONCRETE, ⅜ INCH – VAOT 704.02B.
5. FURNISH AND INSTALL RIGID INSULATION IN LOCATIONS WHERE DEPTH OF PIPE COVER IS LESS THAN 4 FEET.
6. FOR TRENCH CONSTRUCTION THAT IS NOT IN THE ROADS, ROAD SHOULDERS AND WALKWAYS, CONTRACTOR SHALL RESTORE TO GRADE WITH LOAM, SEED, FERTILIZER AND MULCH AS PER THE TECHNICAL SPECIFICATIONS.
7. SEE TECHNICAL SPECIFICATION 310000 FOR COMPACTION REQUIREMENTS.
8. SEE ACCESS DRIVEWAY TYPICAL SECTION DETAIL FOR RESTORATION OF DIRT AND GRAVEL SURFACES.

STANDARD WATER AND SEWER TRENCH SECTION CONSTRUCTION AND PAY LIMITS DETAIL

SCALE: NOT TO SCALE

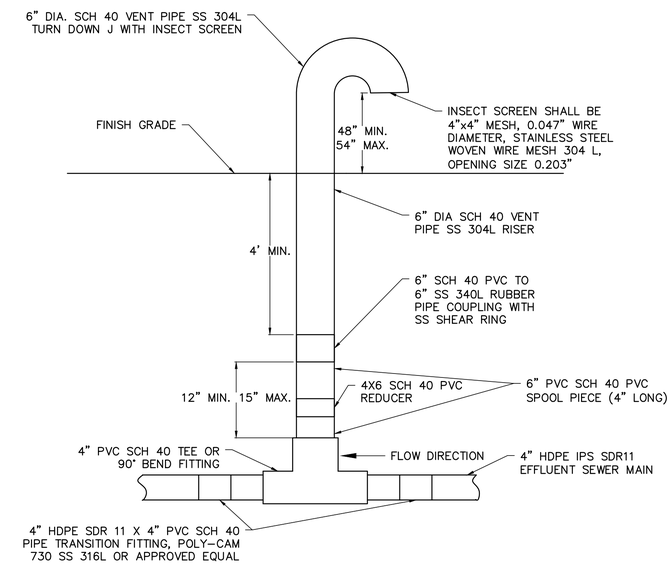


NOTES:

1. ALL REQUIREMENTS OF THE STANDARD PIPE TRENCH SECTION – CONSTRUCTION PAY LIMITS DETAIL APPLY TO THE DUAL PIPE TRENCH DETAIL.
2. FOR PAYMENT OF DRIP DISPERSAL FORCE MAINS AND COMMON RETURN MAIN, THIS EXCAVATION CONSTITUTES ONE TRENCH.

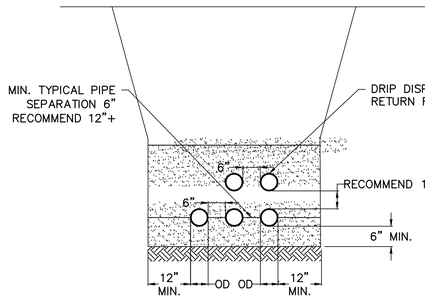
DUAL PIPE TRENCH DETAIL

SCALE: NONE



EFFLUENT SEWER VENT DETAIL

SCALE: NONE

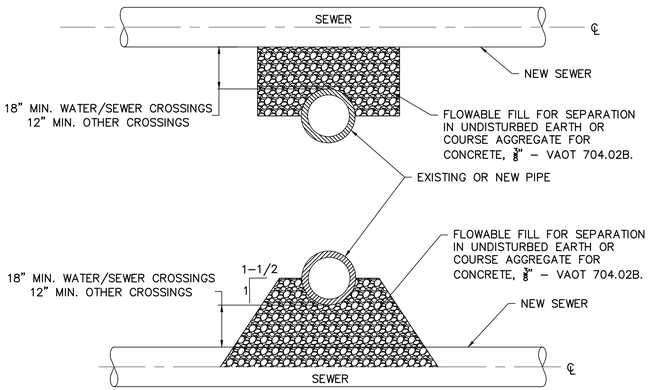


NOTES:

1. ALL REQUIREMENTS OF THE STANDARD PIPE TRENCH SECTION – CONSTRUCTION PAY LIMITS DETAIL APPLY TO THE DRIP DISPERSION FORCE MAIN AND COMMON RETURN FORCE MAIN TRENCH DETAIL.
2. FOR PAYMENT OF DRIP DISPERSAL FORCE MAINS AND COMMON RETURN MAIN, THIS EXCAVATION CONSTITUTES ONE TRENCH

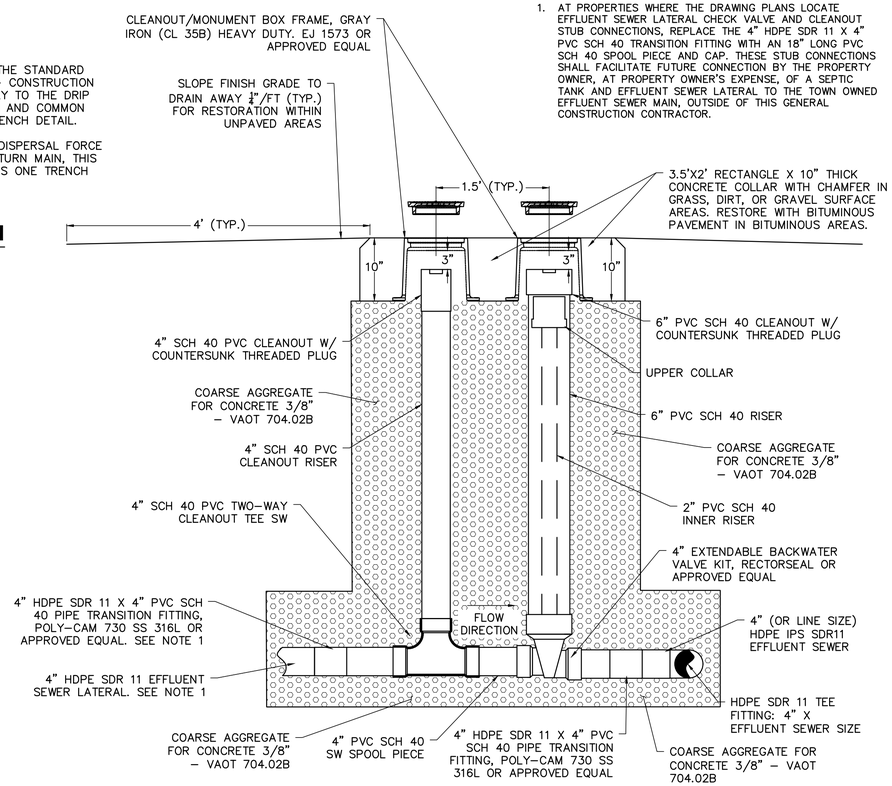
DRIP DISPERSION FORCE MAIN AND COMMON RETURN FORCE MAIN TRENCH DETAIL

SCALE: NONE



TYPICAL BURIED PIPELINE/UTILITY CROSSING DETAIL

SCALE: NONE



NOTES:

1. AT PROPERTIES WHERE THE DRAWING PLANS LOCATE EFFLUENT SEWER LATERAL CHECK VALVE AND CLEANOUT STUB CONNECTIONS, REPLACE THE 4" HDPE SDR 11 X 4" PVC SCH 40 TRANSITION FITTING WITH AN 18" LONG PVC SCH 40 SPOOL PIECE AND CAP. THESE STUB CONNECTIONS SHALL FACILITATE FUTURE CONNECTION BY THE PROPERTY OWNER, AT PROPERTY OWNER'S EXPENSE, OF A SEPTIC TANK AND EFFLUENT SEWER LATERAL TO THE TOWN OWNED EFFLUENT SEWER MAIN, OUTSIDE OF THIS GENERAL CONSTRUCTION CONTRACTOR.

EFFLUENT SEWER LATERAL CHECK VALVE AND CLEANOUT DETAIL

SCALE: NONE

DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

FINAL DESIGN PLANS
FOR PERMIT REVIEW ONLY

19_129800_02-S DETAILS.DWG

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No.	DATE	DESCRIPTION	CHECKED

TOWN OF MONTGOMERY, VERMONT

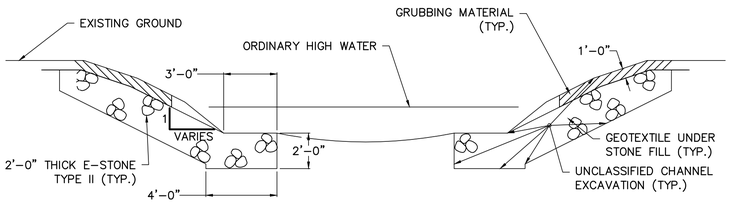
CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

SEWER DETAILS I

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S32
SHEET 73 OF 75

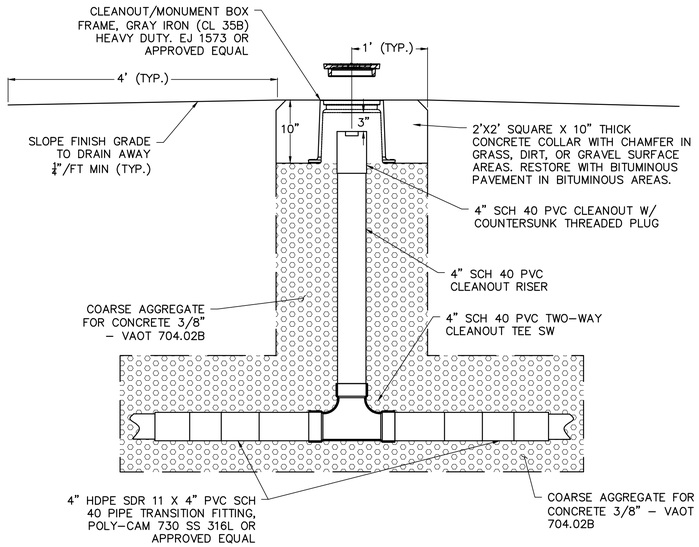


NOTES:

1. STREAM BANK PROTECTION DETAIL DEPICTS PROTECTION ON BOTH SIDES OF STREAM.
2. FURNISH AND INSTALL STREAM BANK PROTECTION ON WEST SIDE OF STREAM ONLY.

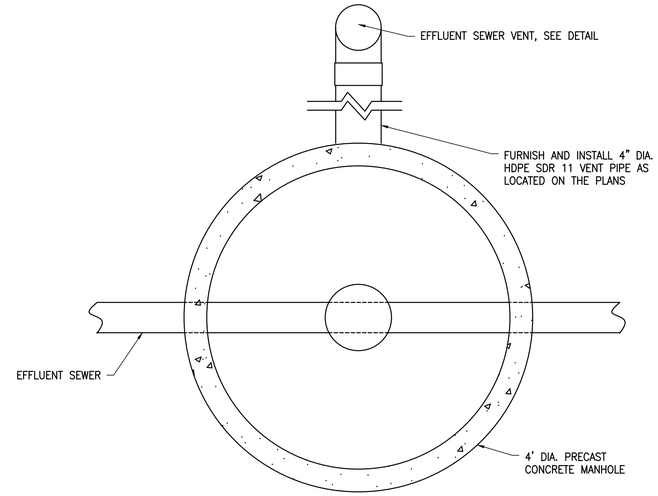
RIVER BANK STONE FILL DETAIL

SCALE: NONE

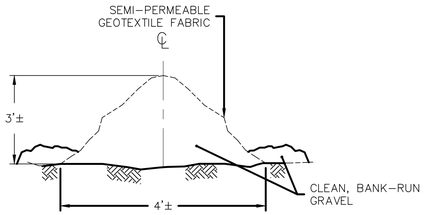


EFFLUENT SEWER MAIN CLEANOUT DETAIL

SCALE: NONE

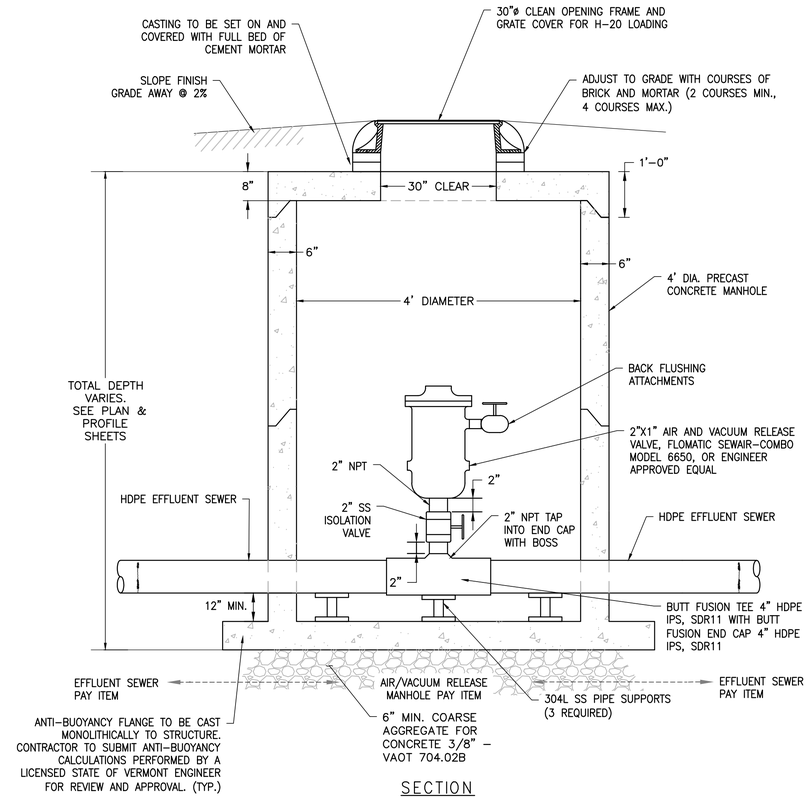


PLAN



TYPICAL TROUT RIVER CROSSING BERM SECTION

SCALE: NOT TO SCALE



SECTION

AIR/VACUUM RELEASE MANHOLE DETAIL

SCALE: NONE

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DESIGN PLANS
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TOWN OF MONTGOMERY, VERMONT

CENTER COMMUNITY DECENTRALIZED WASTEWATER TREATMENT AND DISPOSAL SYSTEM

SEWER DETAILS II

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S33

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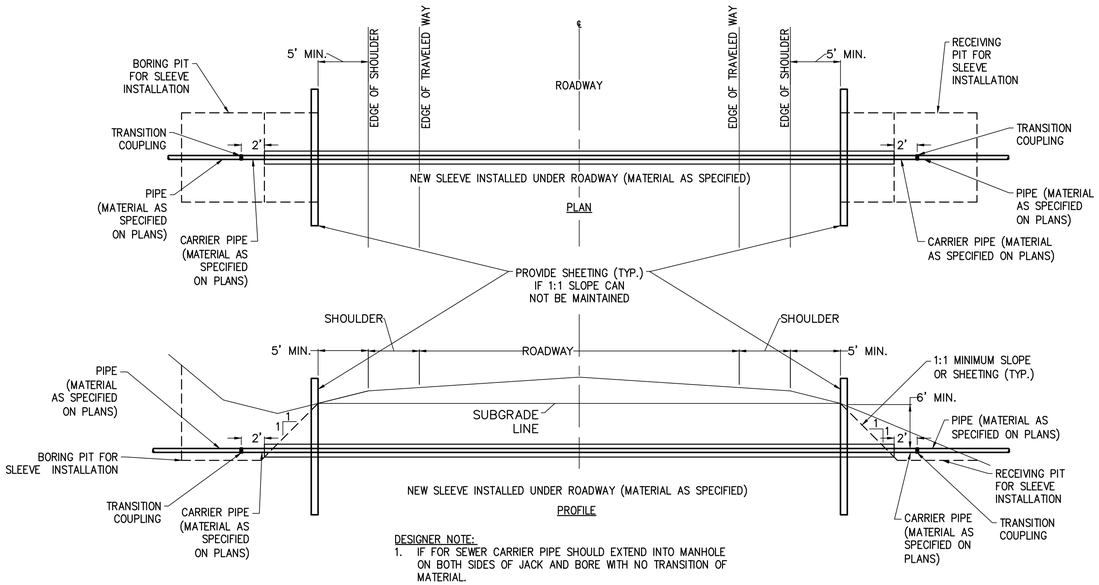
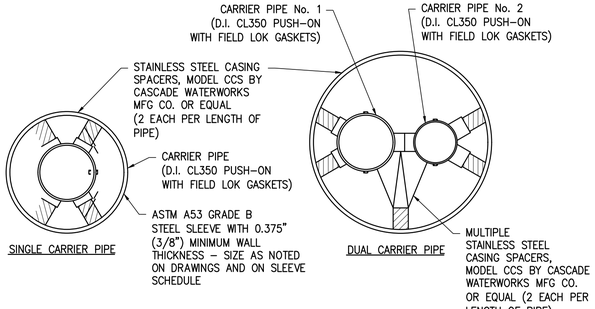


JACK AND BORE PLAN AND PROFILE DETAIL

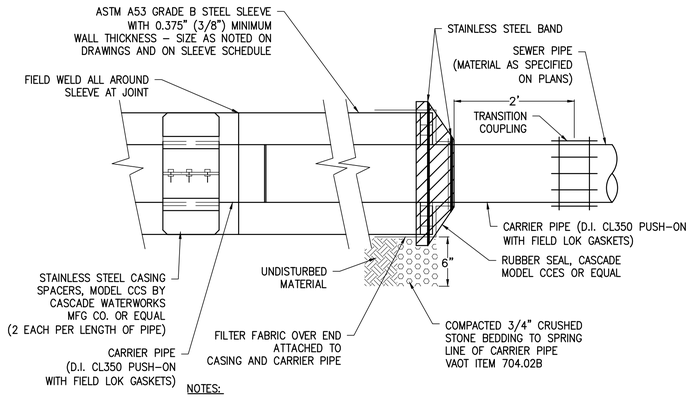
SCALE: NONE

JACK & BORE SCHEDULE					
Location	Sheet Number	Casing / Sleeve Pipe	Number of Carrier Pipes	Size of Carrier Pipes	Distance from Pit Face to Pit Face
S. Main St.	S3	10" Steel	1	4" ES	81.4'
Rec. Park	S11	16" Steel	2	4" ES, 2" FM	58.7'
PS–2	S12	16" Steel	2	4" ES, 4" FM	60.4'
237 Mountain Rd.	S19	18" Steel	2	4" ES, 4" FM	51.1'
427 Mountain Rd.	S21	10" Steel	1	4" ES	58.0'
519 Mountain Rd.	S21	10" Steel	1	4" ES	55.5'
22 Mountain Rd.	S22	10" Steel	1	4" ES	56.8'



TYPICAL SLEEVE SECTION DETAIL

SCALE: NONE



NOTES:

1. FOR DUAL CARRIER PIPES THROUGH SLEEVES PROVIDE DUAL/MULTIPLE CASING SPACER FOR EACH PIPE, BY CASCADE WATERWORKS OR EQUAL.

JACK AND BORE SLEEVE DETAIL

SCALE: NONE

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SEWER DETAILS II

DESIGNED	CHECKED
TGB	JDR
DRAWN	DATE
TGB	DEC 2024

PROJECT NO.
19.129800.02

DRAWING
S34
SHEET 75 OF 75

DRAFT 90% DELIVERABLE
DESIGN PLANS
FOR REVIEW ONLY

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