

CATTARAUGUS COUNTY

DPW BID #75 - PINES MACHIAS SANITARY SEWER IMPROVEMENTS





9822 ROUTE 16 MACHIAS, NEW YORK 14101

BID DOCUMENTS DECEMBER 13, 2019



Centerpointe Corporate Park 375 Essjay Road, Suite 200 Williamsville, NY 14221 www.wendelcompanies.com p:716.688.0766 f:716.625.6825

Wendel Project No. 307659

CATTARAUGUS COUNTY

PINES MACHIAS SANITARY SEWER IMPROVEMENTS

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DRAWING INDEX

COVERSHEET

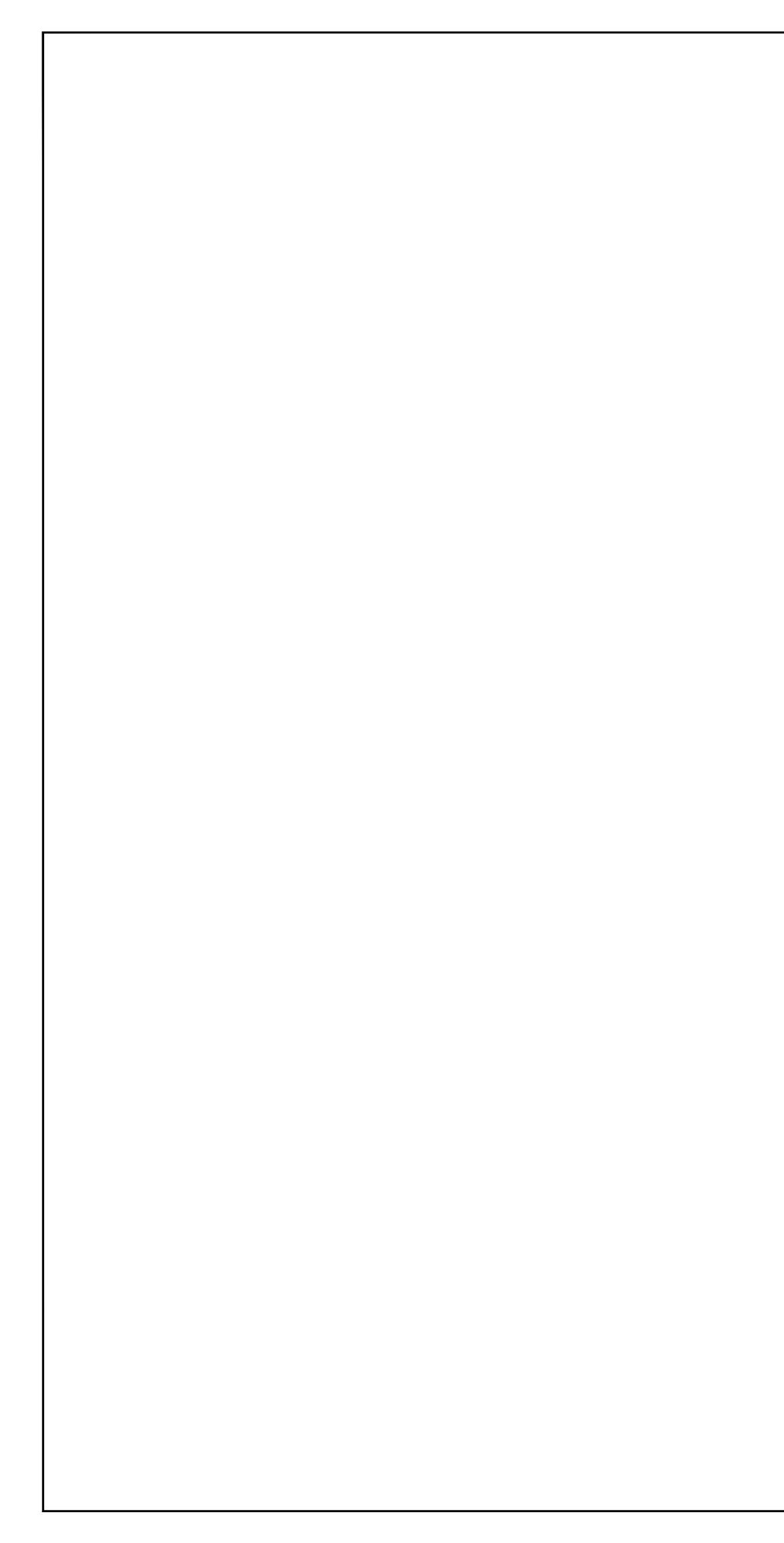
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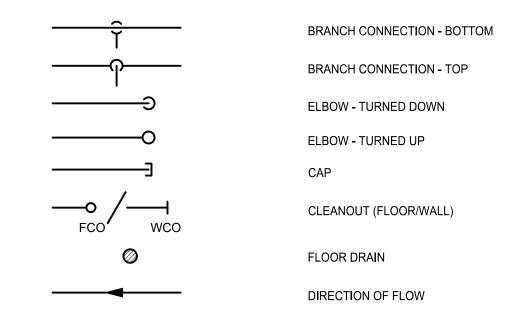
PLUMBING SYMBOLS, NOTES, AND ABBREVIATIONS PARTIAL GROUND FLOOR DEMOLITION PLAN PARTIAL GROUND FLOOR PLAN

PROCES

PROPOSED SITE PLAN



PLUMBING SYMBOLS - VALVES AND SPECIALTIES



PLUMBING SYMBOLS - PIPING DESIGNATIONS

cw	COLD WATER
SAN	SANITARY SEWER
V	VENT
ST	STORM SEWER
——— W ———	WATER MAIN (EXTERIOR)
PD	PUMP DISCHARGE

PLUMBING ABBREVIATIONS

AD	AREA DRAIN
CO CW	CLEANOUT COLD WATER
EX	EXISTING
FP	FIRE PROTECTION
IE	INVERT ELEVATION
PC	PLUMBING CONTRACTOR
SAN SE ST	SANITARY SEWER SEWAGE EJECTOR STORM SEWER
TFA TFB	TO FLOOR ABOVE TO FLOOR BELOW
V	VENT
WCO	WALL CLEANOUT

GENERAL NOTES

- 1. THIS LEGEND SHEET IS FOR CONTRACTOR REFERENCE ONLY. NOT ALL SYMBOLS AND/OR ABBREVIATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS LEGEND SHEET DOES NOT IMPLY INCLUSION AND/OR EXCLUSION OF ANY PARTICULAR ITEM FROM THE PROJECT.
- 2. THE PLANS ARE DIAGRAMMATIC AND INDICATE ONLY THE SIZE AND GENERAL ARRANGEMENT OF PIPING AND EQUIPMENT. EXACT LOCATION OF ALL ELEMENTS SHALL BE DETERMINED AS WORK PROGRESSES, IN COOPERATION AND COORDINATION WITH THE WORK OF ALL OTHER TRADES. IT IS NOT INTENDED TO SHOW EVERY ITEM OF WORK OR MINOR PIECE OF EQUIPMENT, BUT THE CONTRACTOR SHALL FURNISH AND INSTALL WITHOUT ADDITIONAL REMUNERATION ANY COMPONENT NECESSARY TO COMPLETE THE SYSTEM IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE.
- 3. ITEMS OF WORK OR EQUIPMENT SHOWN ON THE DRAWINGS ONLY, OR CALLED FOR IN THE SPECIFICATIONS ONLY, SHALL BE FURNISHED AND INSTALLED IN THE SAME MANNER AS IF THEY APPEARED ON BOTH THE DRAWINGS AND SPECIFICATIONS.
- 4. DRAWINGS DO NOT INDICATE ALL OFFSETS, CHANGES IN ELEVATIONS, ETC. WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL MAKE SUCH CHANGES IN PIPING AND LOCATION OF EQUIPMENT, ETC. TO ACCOMMODATE WORK WITH THAT OF OTHER CONTRACTORS.
- 5. INSTALL EQUIPMENT AND PIPING TO AVOID INTERFERENCE WITH THE OPERATION OR SERVICING AND MAINTENANCE OF EQUIPMENT.
- 6. PIPES PENETRATING FIRE WALLS AND FLOORS SHALL BE FIRESTOPPED AS SPECIFIED. REFER TO THE ARCHITECTURAL DRAWINGS FOR FIRE WALL LOCATIONS.
- 7. ALL PHYSICAL ATTRIBUTES OF EQUIPMENT AND DEVICES ARE BASED ON THOSE MANUFACTURERS LISTED IN THE SPECIFICATIONS AND/OR THE EQUIPMENT SCHEDULES. THE RESPECTIVE CONTRACTORS ARE RESPONSIBLE FOR ALL CHANGES BROUGHT ABOUT BY USE OF ITEMS BY OTHER MANUFACTURERS. THE ARCHITECT/ENGINEER HAS RESERVED THE RIGHT TO REJECT ITEMS BY OTHER MANUFACTURERS IF THOSE ITEMS DO NOT MATCH THE PHYSICAL ATTRIBUTES OF THE MANUFACTURERS LISTED.
- 8. COMPLY WITH THE NEW YORK STATE 2015 PLUMBING CODE, 2016 NEW YORK STATE ENERGY CODE, 2017 BUILDING CODE SUPPLEMENTS, AND OTHER APPLICABLE CODES.

PLUMBING SPECIFICATIONS

1. <u>SCOPE OF WORK</u>

- A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- B. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NEW YORK STATE PLUMBING CODE, ALL LOCAL CODES, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
- C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY EFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
- D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY ENGINEER OR ARCHITECT.
- 2. <u>PERMITS</u>
- A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

3. <u>SHOP DRAWINGS</u>

A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT/FIXTURES TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT THREE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.

4. <u>SANITARY AND VENT</u>

- A. BELOW GRADE: SERVICE WT. CAST IRON WITH BELL AND SPIGOT JOINTS OR SCH. 40 PVC WITH SOLVENT JOINTS.
- B. DRAINAGE PIPING SHALL BE RUN AS STRAIGHT AS POSSIBLE AND SHALL HAVE LONG TURN FITTINGS.
- C. DRAINAGE PIPING 3" SIZE AND SMALLER SHALL RUN AT A UNIFORM GRADE OF AT LEAST 1/4" PER FOOT, AND PIPING LARGER THAN 3" SHALL BE RUN AT A GRADE OF NO LESS THAN 1/8" PER FOOT. UNLESS OTHERWISE NOTED.

5. <u>MISCELLANEOUS</u>

- A. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
- B. THE PLUMBING PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURE'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
- C. INSTALL PIPE LABELS EVERY 10 FEET. LABELS TO STATE SYSTEM AND FLOW DIRECTION.

6. <u>TESTING</u>

A. PLUMBING SYSTEMS SHALL BE FLOW AND PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH STANDARD PRACTICE AND THE NEW YORK STATE PLUMBING CODE.

7. <u>GUARANTEE</u>

- A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- B. FOR THE SAME PERIOD, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY THE PLUMBING CONTRACTOR.



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Wendel WD Architecture, Engineering, Surveying and Landscape Architecture, P.C.

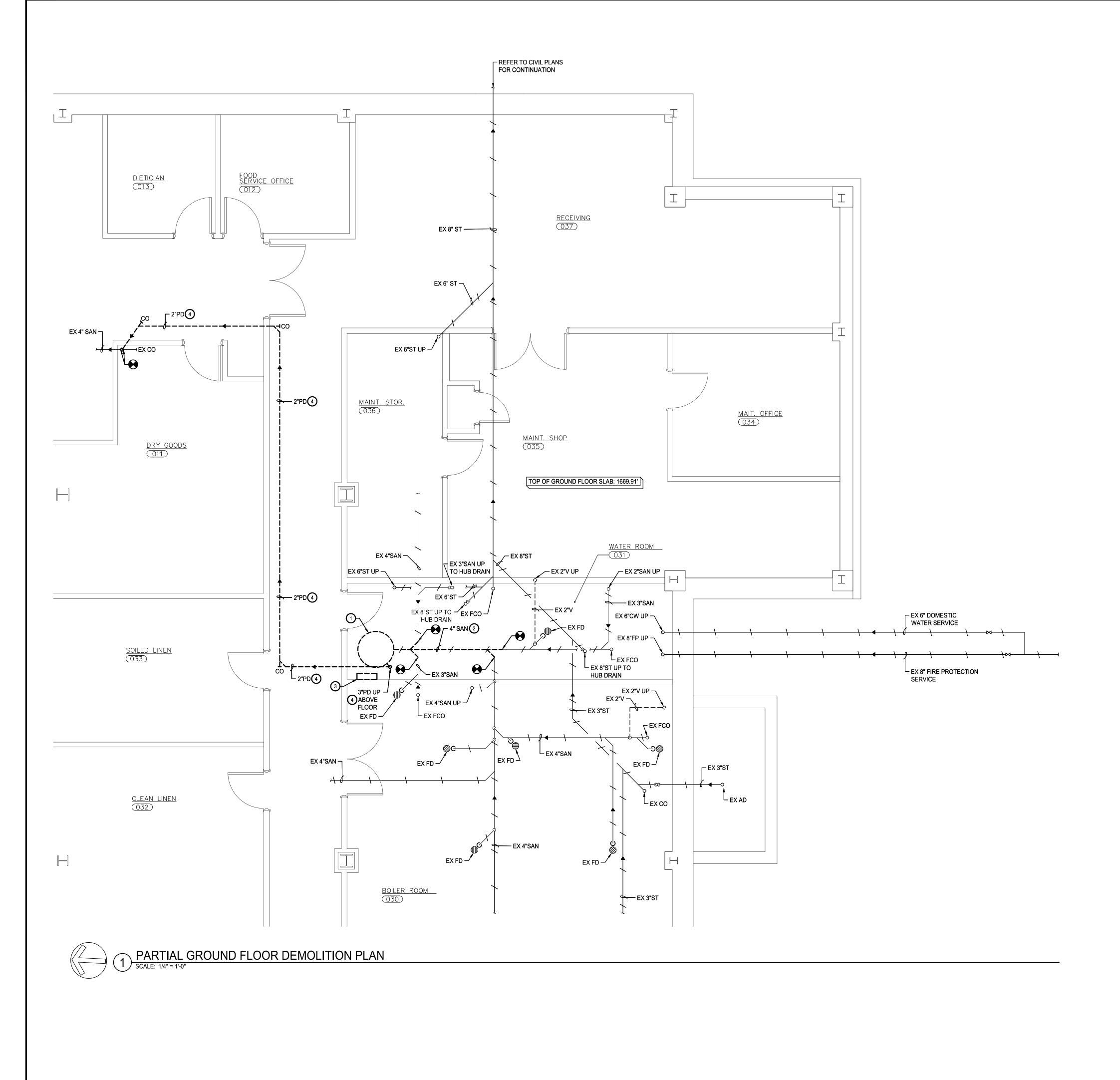
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NO.	REVISIONS	DATE

DWG. TITLE

SYMBOLS, NOTES, AND ABBREVIATIONS

() 1 GENERIC S	" CALE BAR	2"
	E BAR SHOWN IS TWO INCH	ES ON THE ORIGI	
DATE	10-04-2019		
SCALE	AS NOTED		
DWN.	GMM	CHK.	JTW
PROJ. No.	307664		
DWG. No.			
P001			





GENERAL DEMOLITION NOTES:

- A. CONTRACTOR SHALL COORDINATE WITH FACILITY FOR ACCESS FOR ANY WORK TO BE PERFORMED OUTSIDE OF THE WATER AND MAINTENANCE ROOMS.
- B. CONTRACTOR SHALL TEMPORARILY DISCONNECT AND REMOVE EXISTING ACT CEILING AS REQUIRED TO PERFORM ANY WORK OUTSIDE OF WATER AND MAINTENANCE ROOMS. EXISTING CEILING SHALL BE STORED IN AN APPROVED AREA. UPON COMPLETION OF WORK, CONTRACTOR SHALL REINSTALL CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR SHALL REPLACE, WITHOUT ANY REMUNERATION, ANY DAMAGED CEILING TILES, HARDWARE, OR ANCILLARY DEVICES TO MATCH EXISTING.
- C. CONTRACTOR SHALL SAWCUT EXISTING CONCRETE FLOOR AND EXCAVATE AS REQUIRED TO PERFORM THE WORK INDICATED ON DRAWING. CONTRACTOR SHALL REPAIR SAWCUT TO MATCH ADJACENT FLOOR ACCORDING TO DETAILS.

⊘ DEMOLITION NOTES:

- 1. REMOVE SEWAGE EJECTOR INCLUDING PUMPS, BASIN, AND CONTROLS. REMOVE ASSOCIATED PUMPED DISCHARGE PIPING AND ASSOCIATED SUPPORTS BACK TO SANITARY MAIN AND CAP. REMOVE ASSOCIATED SANITARY VENT PIPING AND ASSOCIATED SUPPORTS BACK TO MAIN AND CAP.
- 2. REMOVE SANITARY SEWER PIPING BACK TO POINTS INDICATED AND PREPARE FOR RECONNECTION.
- REMOVE SEWAGE EJECTOR CONTROL PANEL AND ASSOCIATED CONTROLS. DISCONNECT AND REMOVE 208V 3 PHASE 4 WIRE ELECTRICAL CONNECTION TO SEWAGE EJECTOR PUMP AND ALL ITS ASSOCIATED ELECTRICAL WORK IN ITS ENTIRETY BACK TO SOURCE PANEL DPO-2EEQ.
- 4. REMOVE ABOVE GRADE PUMPED DISHARGE PIPING AND SUPPORTS FROM SEWAGE EJECTOR TO SANITARY SEWER MAIN AND CAP.



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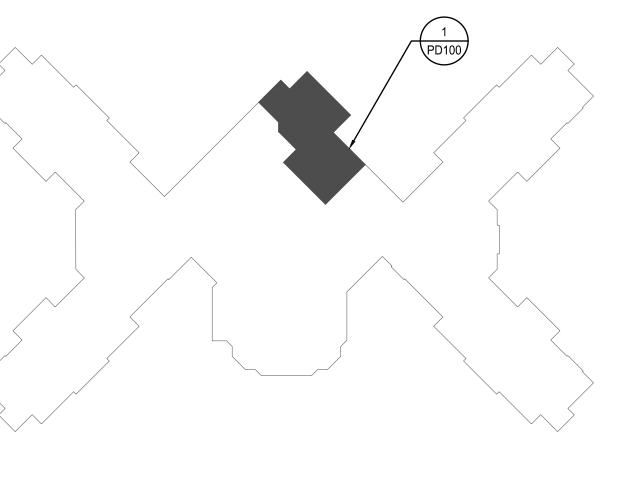
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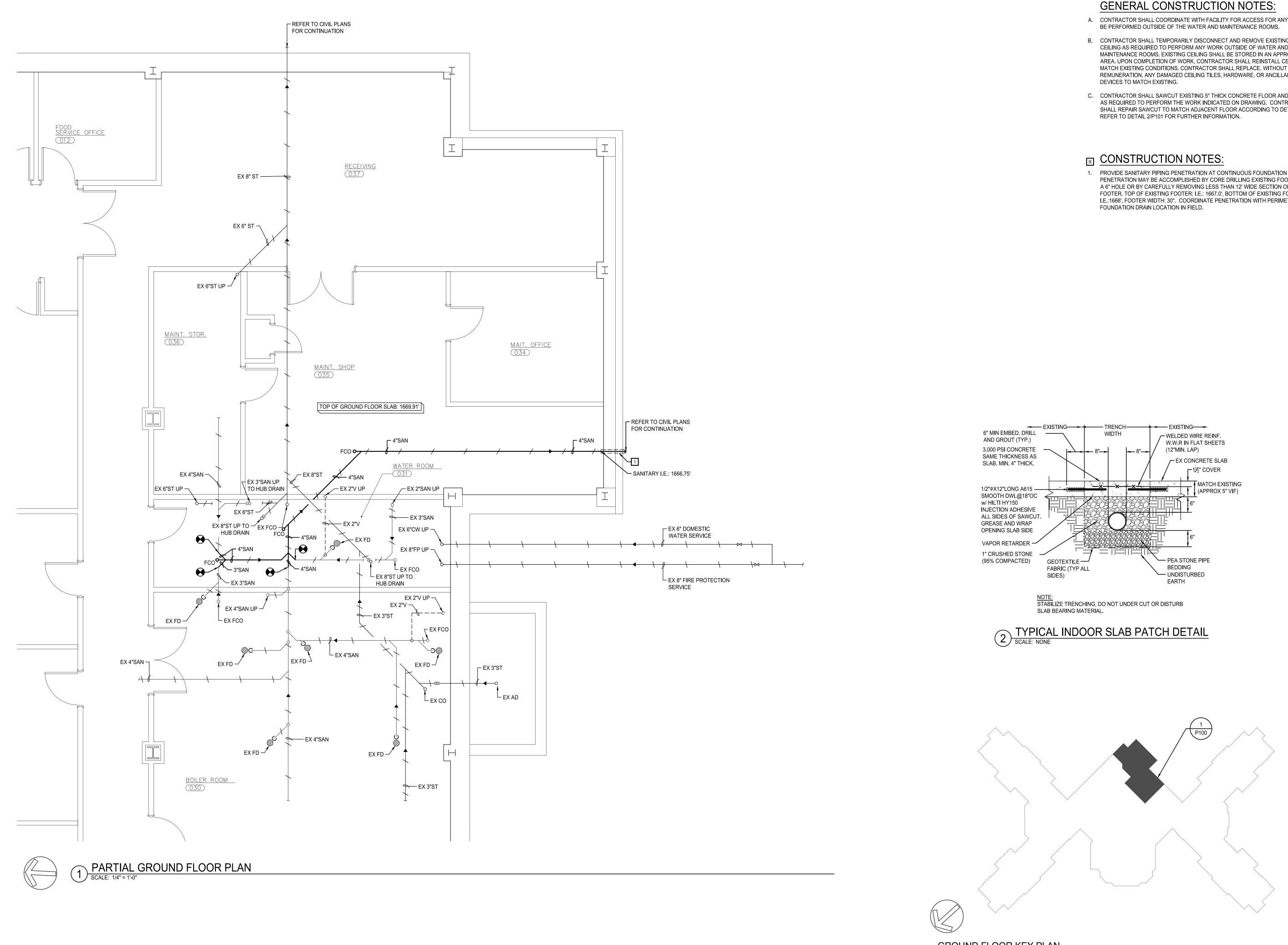
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 DWG. TITLE
 PARTIAL GROUND FLOOR DEMOLITION PLANS

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DATE	10-04-2019		
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GROUND FLOOR KEY PLAN

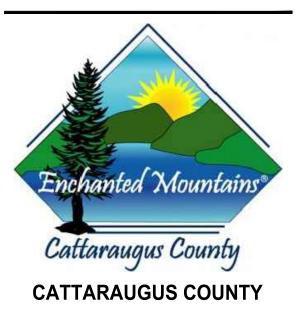


GROUND FLOOR KEY PLAN

GENERAL CONSTRUCTION NOTES:

- A. CONTRACTOR SHALL COORDINATE WITH FACILITY FOR ACCESS FOR ANY WORK TO
- B. CONTRACTOR SHALL TEMPORARILY DISCONNECT AND REMOVE EXISTING ACT CEILING AS REQUIRED TO PERFORM ANY WORK OUTSIDE OF WATER AND MAINTENANCE ROOMS. EXISTING CEILING SHALL BE STORED IN AN APPROVED AREA. UPON COMPLETION OF WORK, CONTRACTOR SHALL REINSTALL CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR SHALL REPLACE, WITHOUT ANY REMUNERATION, ANY DAMAGED CEILING TILES, HARDWARE, OR ANCILLARY
- C. CONTRACTOR SHALL SAWCUT EXISTING 5" THICK CONCRETE FLOOR AND EXCAVATE AS REQUIRED TO PERFORM THE WORK INDICATED ON DRAWING. CONTRACTOR SHALL REPAIR SAWCUT TO MATCH ADJACENT FLOOR ACCORDING TO DETAILS.

1. PROVIDE SANITARY PIPING PENETRATION AT CONTINUOUS FOUNDATION FOOTER. PENETRATION MAY BE ACCOMPLISHED BY CORE DRILLING EXISTING FOOTER WITH A 6" HOLE OR BY CAREFULLY REMOVING LESS THAN 12' WIDE SECTION OF THE FOOTER. TOP OF EXISTING FOOTER: I.E.: 1667.0', BOTTOM OF EXISTING FOOTER I.E.:1666', FOOTER WIDTH: 30". COORDINATE PENETRATION WITH PERIMETER



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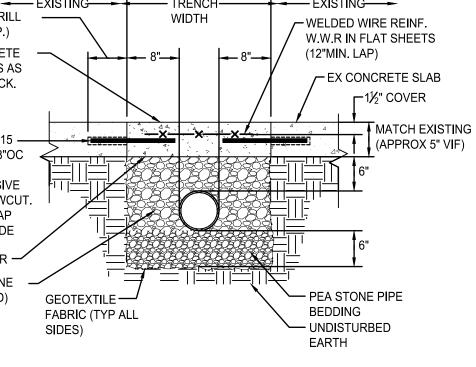
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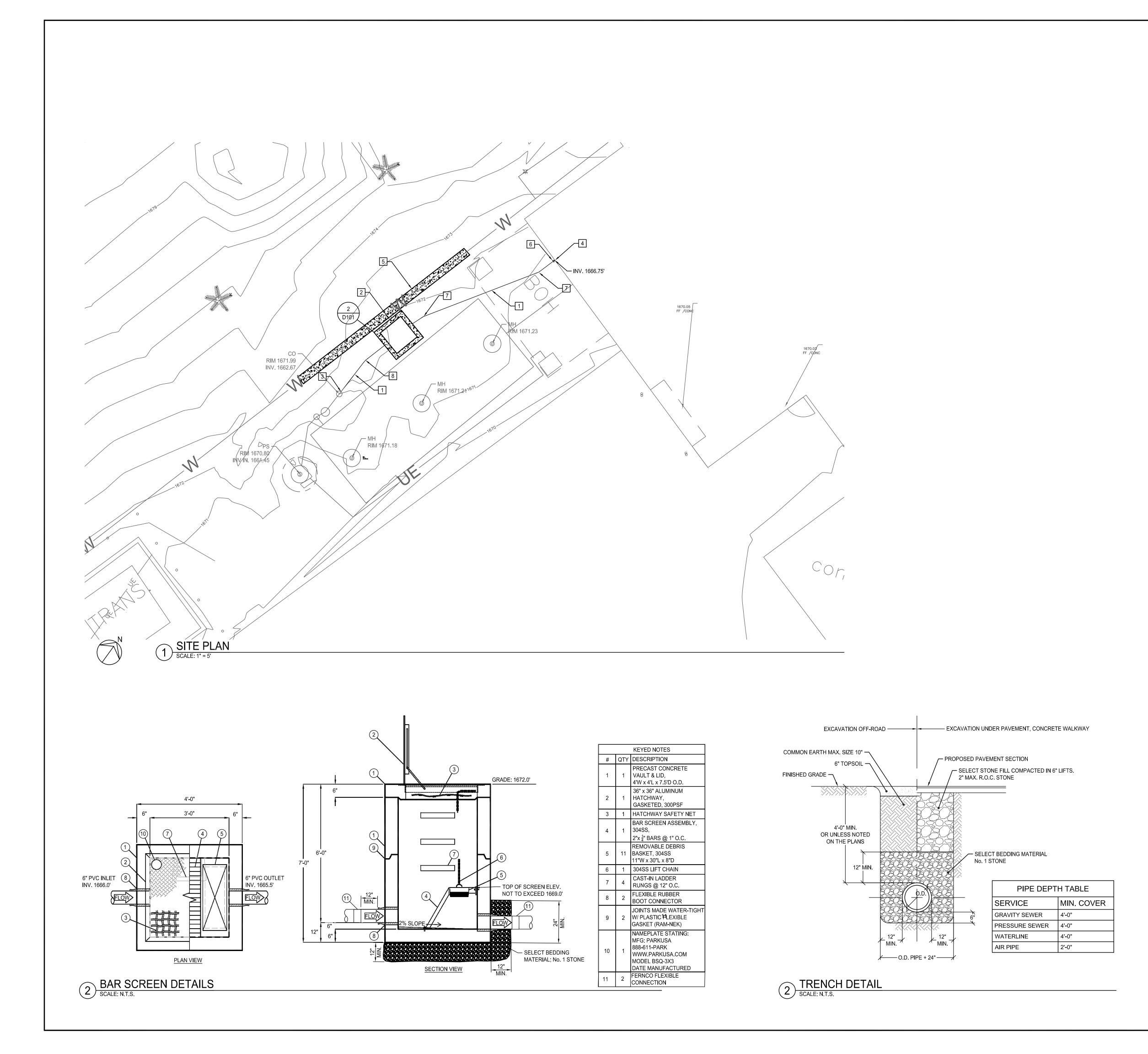
DWG. TITLE

REVISIONS

PARTIAL GROUND FLOOR PLAN

12/13/19

DATE



GENERAL NOTES:

- A. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD-VERIFY THE EXACT LOCATIONS OF THE EXISTING WATER MAIN AND EDGE OF THE GREASE TRAP STRUCTURE. IF THE LOCATION IS NOT AS SHOWN, THE CONTRACTOR SHALL PROVIDE LOCATION INFORMATION TO THE ENGINEER FOR REVIEW.
- B. THE EXISTING WATER MAIN AND GREASE TRAP STRUCTURE SHALL BE SUPPORTED AND PROTECTED THROUGHOUT CONSTRUCTION . PROVIDE ALL NECESSARY SHORING AND EXCAVATION PROTECTION TO SUPPORT AND PREVENT MOVEMENT OF THE WATER MAIN DURING SEWER CONSTRUCTION AND CONCRETE ENCASEMENT ACTIVITIES. REFER TO SPECIFICATION SECTION 315000 FOR EXCAVATION SUPPORT AND PROTECTION REQUIREMENTS

□ CONSTRUCTION NOTES:

- 1. INSTALL NEW 6" PVC GRAVITY SEWER
- NEW BAR SCREEN STRUCTURE. SEE DETAILS THIS SHEET
 CONNECT NEW GRAVITY SEWER TO THE EXISTING CLEANOUT PIPE TEE. PROVIDE PVC ELBOWS AND FITTINGS AT THE CONNECTION POINT AS REQUIRED TO PROVIDE A
- SMOOTH TRANSITION INTO THE EXISTING PIPING.
 4. CONNECT NEW GRAVITY SEWER PIPE TO INTERIOR PIPING WITH A FLEXIBLE CONNECTION. REFER TO PLUMBING DRAWINGS FOR EXACT LAYOUT OF INTERIOR
- PIPING.
 5. PROVIDE CONTROLLED LOW STRENGTH CONCRETE (FLOWABLE FILL) IN LIEU OF PIPE BEDDING FOR THE EXISTING WATER MAIN WITHIN 2' OF THE PROPOSED BAR SCREEN STRUCTURE AND ANYWHERE THE WATER MAIN BEDDING IS DISTURBED.
- 4"X6" REDUCER
 11.25° PVC ELBOW
- PVC ELBOW, 45° OR AS NECESSARY TO PROVIDE REQUIRED VERTICAL AND HORIZONTAL BEND.

462100 BAR SCREEN SPECIFICATION:

- A. BASIS OF DESIGN FOR THE BAR SCREEN IS MODEL BSQ 3x3 AS MANUFACTURED BY PARK ENVIRONMENTAL EQUIPMENT. EQUIVALENT SCREEN SYSTEMS WILL BE CONSIDERED.
- BAR SCREEN DESIGN TO CONFORM TO CRITERIA SET BY THE INTERNATIONAL
 ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO), ASTM C913, AND
 ANY OTHER STATE/LOCAL REQUIREMENTS.
- C. BAR SCREEN TANK SHALL BE CONSTRUCTED OF PRECAST CONCRETE HAVING A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI. FLOOR AND FIRST STAGE WALL SHALL BE OF A MONOLITHIC CONSTRUCTION WITH SECTIONAL RISERS TO THE REQUIRED DEPTH.
- D. STRUCTURAL REINFORCEMENT SHALL BE STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS.
- E. HATCHWAY OF ALUMINUM SKID-RESISTANT FLOOR PLATE, EXTRUDED ALUMINUM FRAME W CONTINUOUS CONCRETE ANCHOR AND DOOR SEATS, STAINLESS STEEL HINGES, AND TAMPERPROOF BOLTING.
- F. THE BAR SCREEN ASSEMBLY SHALL BE INSTALLED TO PERMIT EASY INSPECTION AND CLEANING. ALL MATERIALS SHALL BE GRADE 304 STAINLESS STEEL CONSTRUCTION.
- G. THE BAR SCREEN SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO THE PLANS AND SPECIFICATIONS.
- H. BAR SCREEN TO BE INSTALLED ON LEVEL, UNDISTURBED SOIL OR COMPACT FILL WITH A MINIMUM LOAD BEARING CAPACITY OF 2,000PSF.
 I. BACKFILL WITH AN APPROVED BACKFILLING MATERIAL. BACKFILLING IS TO BE
- COMPLETED ALONG ALL SIDES OF THE STRUCTURE SIMULTANEOUSLY TO PREVENT UNBALANCED PRESSURES. J. ALL JOINTS TO BE MADE WATER-TIGHT. MANUFACTURER SHALL SEAL JOINTS WITH A
- ALL JOINTS TO BE MADE WATER-TIGHT. MANOPACTORER SHALL SEAL JOINTS WITH A PLASTIC FLEXIBLE GASKET CONFORMING TO AASHTO M-198-75 FOR BITUMEN GASKET.
 K. BAR SCREEN INLET AND OUTLET CONNECTIONS SHALL BE INSTALLED IN
- ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- L. A STAINLESS STEEL RAKE FOR REMOVAL OF DEBRIS FROM THE SCREEN IS TO BE PROVIDED WITH A 10' LONG HANDLE.
 M. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS PRIOR TO THE PURCHASE OF THE DESCRET VALUE.
- THE PRECAST VAULT. N. A MANUFACTURER'S REPRESENTATIVE SHALL BE ON-SITE DURING THE SETTING OF THE STRUCTURE AND START-UP TO ENSURE THE SYSTEM IS INSTALLED AND OPERATING CORRECTLY.

333000 PIPING SPECIFICATION:

- A. ALL PVC PIPING, UNLESS NOTED ON THE CONTRACT DRAWINGS, SHALL BE TYPE 1, GRADE 1, SCHEDULE 40, HAVING THE SAME OUTER DIAMETER AS CAST-IRON PIPE.
 B. ALL PVC FITTINGS SHALL MATCH THE TYPE, GRADE, SCHEDULE, AND COLOR OF THE
- ASSOCIATED PIPE. B.A. SOLVENT WELD FITTINGS SHALL CONFORM TO ASTM D2467
- B.B. THREADED FITTINGS SHALL CONFORM TO ASTM D2464
- B.C. FLANGED FITTINGS SHALL BE PROVIDED WITH VITON GASKETS.

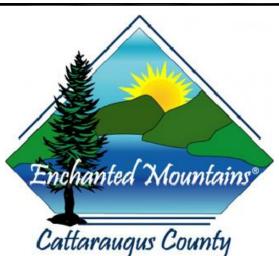
315000 EXCAVATION SUPPORT SPECIFICATION:

- A. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS THAT COULD DEVELOP DURING EXCAVATION SUPPORT AND PROTECTION SYSTEM OPERATIONS.
- B. SHORE, SUPPORT, AND PROTECT UTILITIES ENCOUNTERED.
 C. LOCATE EXCAVATION SUPPORT AND PROTECTION SYSTEMS CLEAR OF PERMANENT CONSTRUCTION SO THAT FORMING AND FINISHING OF CONCRETE SURFACES IS NOT IMPEDED.
- D. MONITOR EXCAVATION SUPPORT AND PROTECTION SYSTEMS DAILY DURING EXCAVATION PROGRESS AND FOR AS LONG AS EXCAVATION REMAINS OPEN. PROMPTLY CORRECT BULGES, BREAKAGE, OR OTHER EVIDENCE OF MOVEMENT TO ENSURE THAT EXCAVATION SUPPORT AND PROTECTION SYSTEMS REMAIN STABLE.
- PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY INSTALLING
 EXCAVATION SUPPORT AND PROTECTION SYSTEMS.
 PROVIDE MATERIALS THAT ARE EITHER NEW OR IN SERVICEABLE CONDITION.
- F.A. STRUCTURAL STEEL TO MEET ASTM A36, ASTM A690, OR ASTM A992
 F.B. STEEL SHEET PIPING TO MEET ASTM A328, ASTM A572, OR ASTM A690 WITH CONTINUOUS INTERLOCKS
- F.C. WOOD LAGGING TO BE LUMBER, MIXED HARDWOOD, MINIMUM ROUGH THICKNESS OF 3 INCHES.
- F.D. CAST-IN-PLACE CONCRETE: ACI 301, OF COMPRESSIVE STRENGTH REQUIRED FOR
- APPLICATION F.E. REINFORCING BARS: ASTM A615, GRADE 60, DEFORMED

312000 CONTROLLED LOW-STRENGTH CONCRETE (FLOWABLE FILL) SPECIFICATION:

A. PROVIDE SELF-COMPACTING, FLOWABLE CONCRETE MATERIAL PRODUCED FROM THE FOLLOWING:

- A.A. PORTLAND CEMENT: ASTM C 150
- A.B. FLY ASH: ASTM C 618, CLASS C OR F A.C. NORMAL-WEIGHT AGGREGATE: ASTM C 33
- A.D. FOAMING AGENT: ASTM C 869
- A.E. WATER: ASTM C 94/C 94M A.F. AIR-ENTRAINING ADMIXTURE: ASTM C 260
- B. PROVIDE CONVENTIONAL-WEIGHT, CONTROLLED LOW-STRENGTH MATERIAL WITH 150-PSI COMPRESSIVE STRENGTH WHEN TESTED ACCORDING TO ASTM C 495.



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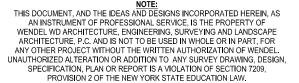
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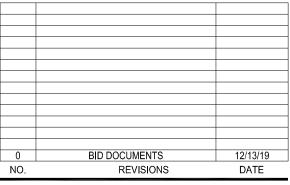


Vendel WD Architecture, Engineering, Surveying and

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DWG. TITLE

PROPOSED SITE PLAN & DETAILS

