

**U.S. Army Corps  
of Engineers**

Baltimore District  
PN-22-33

# Public Notice

**In Reply to Application Number  
NAB-2022-00158-P05 (South Centre Township -  
Wastewater System Project)**

Comment Period: November 15, 2022 to December 14, 2022

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**THE PURPOSE OF THIS PUBLIC NOTICE IS TO INFORM INTERESTED PARTIES OF THE PROPOSED ACTIVITY AND TO SOLICIT COMMENTS. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.**

This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 USC 1344), as described below:

**APPLICANT:** South Centre Township  
c/o Dale Sneiderman  
6260 4th Street  
Bloomsburg, Pennsylvania 17815

## **WATERWAY AND LOCATION OF THE PROPOSED WORK:**

The proposed project is in wetlands and waterways adjacent to the Susquehanna River, Cambells Run and unnamed tributaries to the Susquehanna River in South Centre Township, Columbia County, Pennsylvania. Lat/Long: 41.022584, -76.343245

## **OVERALL PROJECT PURPOSE:**

The overall project purpose is to construct a larger encompassing wastewater treatment system for both residential on-lot disposal systems and industrial and commercial ventures that currently operate their own private systems, and to reduce redundancy of effort and costs within the service area of the Wastewater Treatment Plant (WWTP). Phase II to the wastewater treatment project, which consists of strictly wastewater collection system is currently planned to begin construction in 2024 and the design will begin in the very near future. The applicant's agent has stated that the Phase II to this project is mostly out of the floodplain and "nearly entirely out of wetlands". In addition, the applicant's agent has stated that any impacts to regulated resources, in Phase II, will be considered temporary by the United States Army Corps of Engineers (Corps). Phase II is not included in this Public Notice because this project is tied to funding. Phase II is still part of the overall single and complete project, and when application is submitted proposed impacts will be assessed based upon both Phase I and Phase II impacts.

## **PROJECT DESCRIPTION:**

To construct a wastewater treatment facility, sewage main pipelines and maintenance access roads. The project includes the installation of 33,095-linear-feet of

8-inch-diameter, 7,682-linear feet of 12-inch-diameter, and 12,482-linear-feet of

15-inch-diameter PVC sewer main. The project will temporarily impact 160-linear-feet of stream channel, 170,521-square-feet of palustrine emergent wetlands (PEM) and 9,273-square-feet of palustrine forested wetlands (PFO). The project will permanently impact 26,008-square-feet of PEM wetlands and 16,539-square-feet of PFO wetlands. All streams crossed by this project will be restored within 3-days of earth disturbance. The 9,273-square-feet of forested wetlands that will be temporarily impacted to install gravity sewer will be restored and replanted with native trees. The permanent loss of 0.232 acres of emergent wetlands will be a direct result of required maintenance access. The permanent loss of 0.366-acres of emergent wetlands and 0.380 acres of palustrine forested wetland will occur as a direct result of the construction of the wastewater treatment plant.

#### **EFFECTS ON AQUATIC RESOURCES:**

Activity	Stream Impact (lf)	Wetland Impact (Sq. Ft.)	Authority (Section 10/404/408)
Sewage Treatment Plant		16,539 ft <sup>2</sup> permanent PFO 15,945 ft <sup>2</sup> permanent PEM	404
Gravity sewer main install	160-linear-feet	170,521 ft <sup>2</sup> temporary PEM 9,273 ft <sup>2</sup> temporary PFO	404
Permanent maintenance access		10,101 ft <sup>2</sup> permanent PEM	404

#### **LEAD FEDERAL AGENCY:**

The Corps, as the lead federal agency, is responsible for all coordination pursuant to applicable federal authorities.

#### **APPLICANT'S PROPOSED AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION:**

The applicant has stated that a number of different WWTP site options were considered. Their stated first and most logical option was to site the WWTP in the floodplain along the river using the low elevation to collect all wastewater. A second alternative considered was to site the WWTP near the Lime Ridge Community Center; this alternative was deemed infeasible by the applicant due to the impact it would have on the Lime Ridge community. A third alternative considered was to site the WWTP in the fields between the Elan Memorial Park Cemetery and the Central Columbia High



School. The applicant has stated that this alternative was found to be infeasible as Township officials found that the deed for the cemetery did not allow for any use of the area other than for the cemetery and agriculture. Regardless of which alternative was chosen, the applicant has stated that pump station would still be needed in the floodplain to collect wastewater and pump it to any site which was chosen. The first alternative was preferred by the applicant because they stated that historic photographs and mapping show that the area has been previously disturbed by excavation for the canal and one of the lagoons which was previously located at this site, and greatly reduces the potential for archeological concerns which were likely in the remainder of the floodplain within the Township. The Act 537 Plan ultimately recommended constructing the WWTP and gravity collection system with the plant having an approximate location in the floodplain upstream of the Big Heart Pet Brands WWTP.

During preliminary design and land acquisition, the siting of the WWTP was further refined to the site which was selected by the applicant for final design. The siting was considered in the previously disturbed Big Heart Pet Brands lagoons which covered the floodplain approximately from the alignment of Keefers Lane to Lowe Street extending south to the river. These lagoons were first constructed in the late 1960's, then reduced in size as they were damaged by floods such as Hurricane Agnes in 1972 and Hurricane Lee in 2011. In 2020 the last lagoon was retired following the construction of the Big Heart Pet Brands WWTP inside of one of the lagoons. Within the available footprint, the WWTP was sited at the far east end for several reasons: to minimize the amount of land needed to be acquired from Big Heart including not creating a non-contiguous parcel; to locate the WWTP outfall as far away from the Big Heart outfall to minimize impacts on the river; and to utilize the existent Township ROW and access to the site, thus further minimizing disturbance. The proposed WWTP was then sited as close to the canal and hill as possible, allowing the plant to sit within the "shadow" of the Big Heart Pet Brands WWTP floodplain impact. According to the applicant's agent, the current design that was submitted under the Joint Permit Application follows the Final Act 537 Plan adopted by South Centre Township and approved by the Pennsylvania Department of Environment (PADEP), namely all-gravity wastewater collectors and interceptors feeding a new Township-owned treatment plant. This design avoided 4 to 5 acres of mostly floodplain and some wetlands impacts compared to the Original Act 537 Plan.

The applicant's agent has stated that the use of pump/lift stations is cost prohibitive. The applicant proposes using temporary pads when crossing wetlands to minimize the potential for rutting; to excavate topsoil with the vegetative root mass carefully, and stockpile separately from the subsoil unless there is standing water, or the soil is too saturated to segregate; and to install trench plugs inside of wetland boundaries according to the PADEP standards.

The applicant has proposed that permanent wetland impacts will be mitigated through the purchase of PFO Wetland Mitigation Credits at the Evergreen Hop Bottom Creek Mitigation Bank. The proposed mitigation credits to be purchased from Hop Bottom Creek Mitigation Bank will be 1.36-acres of PFO credits. The mitigation requirement is determined at a ratio of 1:1 for permanent PEM impacts and 2:1 for permanent PFO credits. Forested wetlands that will be temporarily impacted will be replanted with native wetland tree species.

### **CORPS EVALUATION REQUIREMENTS:**

This project will be evaluated pursuant to Corps Regulatory Program Regulations (33 CFR Parts 320-332). The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people. The evaluation of the impact of this project will also include application of the Clean Water Act Section 404(b)(1) Guidelines promulgated by the Administrator, United States Environmental Protection Agency.

### **ENDANGERED SPECIES:**

A preliminary review of this application indicates that the proposed work may affect federally listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

### **ESSENTIAL FISH HABITAT:**

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 04-267), requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH), including species of concern, life cycle

habitat, or Habitat Areas of Particular Concern. The project site lies in or adjacent to EFH as described under MSFCMA for managed species under the MSFCMA. The Baltimore District has made a preliminary determination that the project will have no effect on EFH. The Baltimore District has made a preliminary determination that mitigative measures are not required to minimize adverse effects on EFH at this time. This determination may be modified if additional information indicates otherwise.

#### **HISTORIC RESOURCES:**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 and applicable guidance, the Corps has reviewed the latest published version of the National Register of Historic Places and initially determined that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. The Corps has made the preliminary determination that the proposed project would have no effect on archaeological resources based on an August 13, 2021 letter from the Pennsylvania Historical and Museum Commission. The Corps final eligibility and effect determination will be based on coordination with the State Historic Preservation Office as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps' identified permit area.

#### **TRIBAL RESOURCES:**

Section 106 of the National Historic Preservation Act also requires federal agencies to consult with federally recognized American Indian tribes that attach religious and cultural significance to historic properties that may be affected by the agency's undertaking. Corps Tribal Consultation Policy mandates an open, timely, meaningful, collaborative, and effective deliberative communication process that emphasizes trust, respect, and shared responsibility. The policy further emphasizes that, to the extent practicable and permitted by law, consultation works toward mutual consensus and begins at the earliest planning stages before decisions are made and actions taken. The Corps final eligibility and effect determination will be based on coordination with interested tribes, in accordance with the Corps current tribal standard operating procedures as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on tribal resources.

#### **MODIFICATION OF CIVIL WORKS PROJECTS: 33 USC 408 (SECTION 408):**

All Section 408 proposals will be coordinated internally at USACE. The Section 408 decision will be issued along with the Section 404 and/or Section 10 decision. Please see the following link for more information regarding Section 408:  
<https://www.nab.usace.army.mil/Missions/Regulatory/Section-408-Requests/>.

**WATER QUALITY CERTIFICATION:**

The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act.

**COASTAL ZONE MANAGEMENT PROGRAMS:**

Where applicable, the applicant has certified in this application that the proposed activity complies with and will be conducted in a manner consistent with the approved Coastal Zone Management Program. By this public notice, we are requesting the state concurrence or objection to the applicant's consistency statement.

The applicant must obtain any state or local government permits which may be required.

**SUBMISSION OF COMMENTS:**

The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments provided will become part of the public record for this action and are subject to release to the public through the Freedom of Information Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the Corps, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number  
NAB-2022-00158-P05

**PUBLIC HEARING REQUESTS:**

Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received within the comment period as specified above to receive consideration. Also, it must clearly set forth the interest which may be adversely affected by this activity and

the manner in which the interest may be adversely affected. The public hearing request may be submitted by electronic mail or mailed to the following address:

Marion Gall  
Marion.gall@usace.army.mil  
U.S. Army Corps of Engineers, Baltimore District  
Regulatory Branch  
1631 South Atherton Street  
State College, Pennsylvania 16870

It is requested that you communicate this information concerning the proposed work to any persons known by you to be interested, who did not receive a copy of this notice.

General information regarding the Corps' permitting process can be found on our website at <https://www.nab.usace.army.mil/Missions/Regulatory.aspx>. This public notice has been prepared in accordance with Corps implementing regulations at 33 CFR 325.3. If you have any questions concerning this specific project or would like to request a paper copy of this public notice, please contact Marion Gall at 814-235-1761 or [marion.gall@usace.army.mil](mailto:marion.gall@usace.army.mil). This public notice is issued by the Chief, Regulatory Branch.

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS  
Applicant's Name / Client South Centre Township



**AQUATIC RESOURCE IMPACT TABLE**  
**FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION**

Project / Site Name: South Centre Wastewater System						Date: 10/10/2022										
		Project Information						PA DEP / 105							Enter Only If Different from DEP Impacts Army Corps Impacts	
Plan Sheet Reference	Single & Complete Project Number	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	ACOE Impact Type temp / perm	Watercourse Impact Top of Bank to Top of Bank	Floodway Impact Top of Bank Landward	Wetland Impact Dimensions	Wetland Impact Area	Watercourse Impact	Wetland Impact
											Length and Width in feet	Length and Width in feet	Length and Width in feet	Square Feet	Length and Width in feet	Length and Width in feet
EI-1	1	B-1	PEM	41.024	-76.342			Excavation	perm	temp			232-6	1,395	-	-
EI-1	2	C-1	PEM	41.0235	-76.342			Excavation	perm	temp			476-36	17,231	-	-
EI-1	2	C-2	PEM	41.0233	-76.3428			Fill	perm	perm			35-30	1,065	-	-
AI-1	3	D-1	PEM	41.0228	-76.3451			Excavation	perm	temp			525-34	17,970	-	-
AI-1, EI-1	3	D-2	PEM	41.0229	-76.3447			Fill	perm	perm			295-43	12,594	-	-
AI-1, AI-2	4	E-1	PEM	41.0219	-76.3493			Excavation	perm	temp			1403-31	43,431	-	-
AI-1	4	E-2	PEM	41.0222	-76.3476			Fill	perm	perm			35-20	680	-	-
AI-2	4	E-3	PEM	41.0222	-76.349			Fill	perm	perm			35-26	926	-	-
AI-2	4	E-4	PEM	41.0217	-76.3504			Fill	perm	perm			32-21	683	-	-
AI-2	4	E-5	PEM	41.0215	-76.3512			Fill	perm	perm			30-22	641	-	-
AI-2	4	E-6	PEM	41.0211	-76.3524			Fill	perm	perm			30-19	580	-	-
AI-3	5	F-1	PEM	41.0213	-76.353			Excavation	perm	temp			5-20	99	-	-
AI-3	6	G-1	PEM	41.0207	-76.3571			Excavation	perm	temp			612-34	20,747	-	-
AI-3	6	G-2	PEM	41.0207	-76.3555			Fill	perm	perm			21-60	1,259	-	-
AI-3	6	G-3	PEM	41.0207	-76.3568			Fill	perm	perm			27-355	957	-	-
AI-4	6	G-4	PEM	41.0205	-76.3582			Fill	perm	perm			35-8	268	-	-
															-	-
															-	-

PADEP Impact Type: temporary or permanent.

Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water.

Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts).



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**FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION / REGISTRATION**

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Date: 10/10/2022

		Project Information						PA DEP / 105							Enter Only If Different from DEP Impacts Army Corps Impacts	
Plan Sheet Reference	Single & Complete Project Number	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	ACOE Impact Type temp / perm	Watercourse Impact Top of Bank to Top of Bank	Floodway Impact Top of Bank Landward	Wetland Impact Dimensions	Wetland Impact Area	Watercourse Impact	Wetland Impact
											Length and Width in feet	Length and Width in feet	Length and Width in feet	Square Feet	Length and Width in feet	Length and Width in feet
AI-4, AI-5	7	K-1	PEM	41.0199	-76.3618			Excavation	perm	temp			2127-33	68,648	-	-
AI-4	7	K-2	PEM	41.0203	-76.3597			Fill	perm	perm			26-27	703	-	-
AI-4	7	K-3	PEM	41.02	-76.3611			Fill	perm	perm			26-27	703	-	-
AI-5	7	K-4	PEM	41.0197	-76.3625			Fill	perm	perm			26-26	687	-	-
AI-5	7	K-5	PEM	41.0195	-76.3639			Fill	perm	perm			26-20	531	-	-
AI-5	7	K-6	PEM	41.0191	-76.3653			Fill	perm	perm			25-24	612	-	-
AC-5	8	N-1	PFO	41.0212	-76.3746			Excavation	perm	temp			280-30	8,384	-	-
EI-1	9	T-1	PEM	41.0226	-76.3435			Fill	perm	perm			15-20	299	-	-
EI-1	9	U-1	PEM	41.0226	-76.3432			Fill	perm	perm			89-31	2,769	-	-
EI-1	9	V-1	PEM	41.0226	-76.3429			Fill	perm	perm			15-20	51	-	-
EI-1	9	W-1	PFO	41.0228	-76.3433			Fill	perm	perm			150-110	16,539	-	-
EI-1	9	W-2	PFO	41.0313	-76.8912			Excavation	perm	temp			45 x 20	889	-	-
G-2	9	WWTP-1	Perenial	41.0228	-76.3433	Susquehanna River	WWF	Fill	perm	perm		363 - 266			-	-
G-2	9	WWTP-2	Perenial	41.0226	-76.3428	Susquehanna River	WWF	Excavation	temp	temp		95-45				

PADEP Impact Type: temporary or permanent.

Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water.

Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts).



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		Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm	ACOE Impact Type temp / perm	Watercourse Impact Top of Bank to Top of Bank	Floodway Impact Top of Bank Landward	Wetland Impact Dimensions	Wetland Impact Area Square Feet	Watercourse Impact Length and Width in feet	Wetland Impact Length and Width in feet
											Length and Width in feet	Length and Width in feet				
AC-4, AC-5	10	WF-1	Perennial	41.0199	-76.3719	Cambells Run	CWF	Excavation	perm	temp		3200-15			-	-
AI-6	11	WF-2	Perennial	41.0184	-76.3696	Cambells Run	CWF	Fill	perm	perm	8-8				-	-
AC-4	12	WF-3	Perennial	41.0185	-76.3700	Cambells Run	CWF	Utility Crossing	perm	temp	20-1				-	-
C-1	12	WF-3	Perennial	41.0185	-76.3700	Cambells Run	CWF	Coffer Dam	temp	temp	20-42					
AC-4	12	WF-4	Perennial	41.0191	-76.3707	Cambells Run	CWF	Utility Crossing	perm	temp	20-1				-	-
C-2	12	WF-4	Perennial	41.0191	-76.3707	Cambells Run	CWF	Coffer Dam	temp	temp	22-23					
AC-4, AC-5	12	WF-5	Perennial	41.0209	-76.3731	Cambells Run	CWF	Utility Crossing	perm	temp	20-1				-	-
C-3	12	WF-5	Perennial	41.0209	-76.3731	Cambells Run	CWF	Coffer Dam	temp	temp	20-32					
LR-17	13	WA-1	Perennial	41.0266	-76.3359	UNT to Susq	CWF	Excavation	perm	temp		1600-15			-	-
EI-3	14	WA-2	Perennial	41.0266	-76.3359	UNT to Susq	CWF	Utility Crossing	perm	temp	20-1				-	-
C-4	14	WA-2	Perennial	41.0266	-76.3359	UNT to Susq	CWF	Coffer Dam	temp	temp	20-32					
LR-17	14	WA-3	Perennial	41.0270	-76.3366	UNT to Susq	CWF	Utility Crossing	perm	temp	20-1				-	-
C-5	14	WA-3	Perennial	41.0270	-76.3366	UNT to Susq	CWF	Coffer Dam	temp	temp	20-20					
LR-17	14	WA-4	Perennial	41.0278	-76.3373	UNT to Susq	CWF	Utility Crossing	perm	temp	20-1				-	-
C-6	14	WA-4	Perennial	41.0278	-76.3373	UNT to Susq	CWF	Coffer Dam	temp	temp	20-32					
LR-18	14	WA-5	Perennial	41.0287	-76.3388	UNT to Susq	CWF	Utility Crossing	perm	temp	20-1				-	-
C-7	14	WA-5	Perennial	41.0287	-76.3388	UNT to Susq	CWF	Coffer Dam	temp	temp	20-32					
LR-18	14	WA-6	Perennial	41.0288	-76.3391	UNT to Susq	CWF	Utility Crossing	perm	temp	20-1				-	-
C-8	14	WA-6	Perennial	41.0288	-76.3391	UNT to Susq	CWF	Coffer Dam	temp	temp	20-27					
AI & EI SERIES	15	WR-1	Perennial	41.0199	-76.3719	Susquehanna River	WWF	Excavation	perm	temp		9300-15				
AI-4, AI-5	16	WR-2	Perennial	41.0203	-76.3597	Susquehanna River	WWF	Excavation	perm	perm		10-2224				
AI-3, AI-4	16	WR-3	Perennial	41.0207	-76.3555	Susquehanna River	WWF	Excavation	perm	perm		10-1624				
AI-1, AI-2	16	WR-4	Perennial	41.0222	-76.3476	Susquehanna River	WWF	Excavation	perm	perm		10-1824				
AI-1	16	WR-5	Perennial	41.0229	-76.3447	Susquehanna River	WWF	Excavation	perm	perm		10-530				
G-1	17	WR-6	Perennial	41.0219	-76.3429	Susquehanna River	WWF	Fill	perm	perm	10-10					

PADEP Impact Type: temporary or permanent.

Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water.

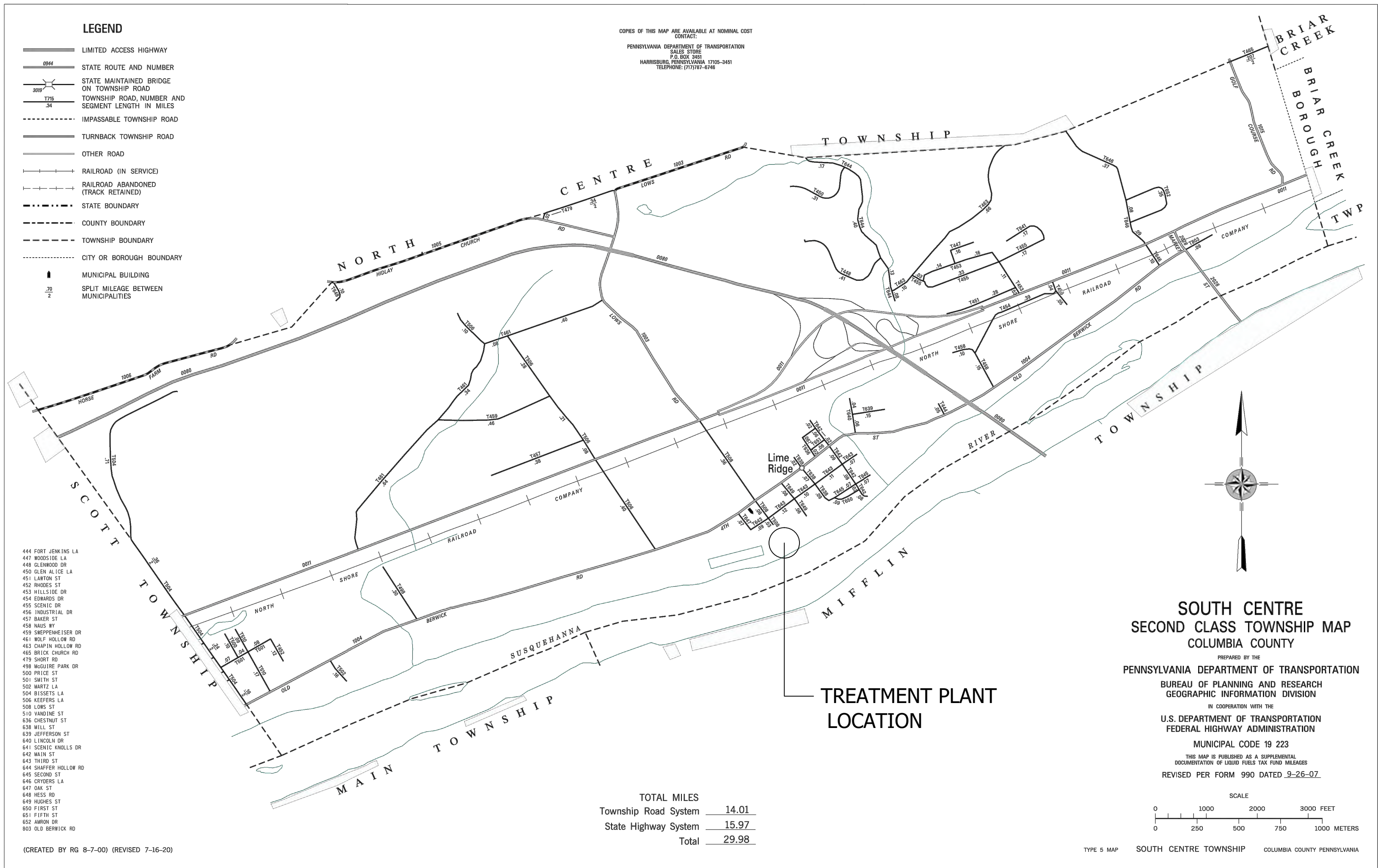
Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts).



# SOUTH CENTRE TOWNSHIP WASTEWATER SYSTEM

COLUMBIA COUNTY, PENNSYLVANIA

## ISSUED FOR REVIEW



**Bassett  
Engineering**  
570-368-2131  
bassetteng.com

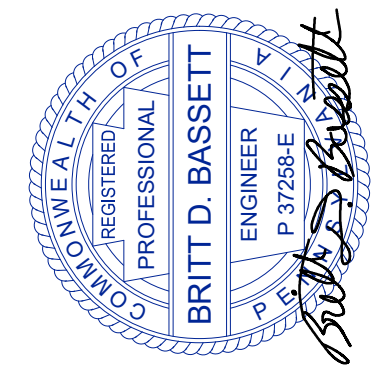
SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

# COVER

DRAWING REVISIONS			
NO.	REVISION	DATE	
0	30% DRAFT COLLECTION SYSTEM	08/17/2022	
1	50% DRAFT COLLECTION SYSTEM	09/07/2022	



BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P-37298-E

ONLY THOSE PLANS  
INCORPORATING THE  
SIGNED PROFESSIONAL  
SEAL OF THE ENGINEER  
CONSIDERED OFFICIAL AND  
RELIED UPON BY USER.  
THIS DRAWING IS THE  
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COVER			51.	LR-9	LIME RIDGE COLLECTION PLAN & PROFILE
1.	G-1	DRAWING LIST	52.	LR-10	LIME RIDGE COLLECTION PLAN & PROFILE
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14.	AI-4	ALMEDIA INTERCEPTOR PLAN & PROFILE	65.	LR-23	LIME RIDGE COLLECTION PLAN & PROFILE
15.	AI-5	ALMEDIA INTERCEPTOR PLAN & PROFILE	66.	LR-24	LIME RIDGE COLLECTION PLAN & PROFILE
16.	AI-6	ALMEDIA INTERCEPTOR PLAN & PROFILE	67.	LR-25	LIME RIDGE COLLECTION PLAN & PROFILE
17.	EI-1	EAST INTERCEPTOR PLAN & PROFILE	68.	LR-26	LIME RIDGE COLLECTION PLAN & PROFILE
18.	EI-2	EAST INTERCEPTOR PLAN & PROFILE			
19.	EI-3	EAST INTERCEPTOR PLAN & PROFILE			
20.	EI-4	EAST INTERCEPTOR PLAN & PROFILE			
21.	AC-1	ALMEDIA COLLECTION PLAN INDEX SHEET			
22.	AC-2	ALMEDIA COLLECTION PLAN INDEX SHEET			
23.	AC-3	ALMEDIA COLLECTION PLAN INDEX SHEET			
24.	AC-4	ALMEDIA COLLECTION PLAN & PROFILE			
25.	AC-5	ALMEDIA COLLECITON PLAN & PROFILE			
26.	AC-6	ALMEDIA COLLECITON PLAN & PROFILE			
27.	AC-7	ALMEDIA COLLECITON PLAN & PROFILE			
28.	AC-8	ALMEDIA COLLECITON PLAN & PROFILE			
29.	AC-9	ALMEDIA COLLECITON PLAN & PROFILE			
30.	AC-10	ALMEDIA COLLECITON PLAN & PROFILE			
31.	AC-11	ALMEDIA COLLECITON PLAN & PROFILE			
32.	AC-12	ALMEDIA COLLECITON PLAN & PROFILE			
33.	AC-13	ALMEDIA COLLECITON PLAN & PROFILE			
34.	AC-14	ALMEDIA COLLECITON PLAN & PROFILE			
35.	AC-15	ALMEDIA COLLECITON PLAN & PROFILE			
36.	AC-16	ALMEDIA COLLECITON PLAN & PROFILE			
37.	AC-17	ALMEDIA COLLECITON PLAN & PROFILE			
38.	AC-18	ALMEDIA COLLECITON PLAN & PROFILE			
39.	AC-19	ALMEDIA COLLECITON PLAN & PROFILE			
40.	AC-20	ALMEDIA COLLECITON PLAN & PROFILE			
41.	AC-21	ALMEDIA COLLECITON PLAN & PROFILE			
42.	AC-22	ALMEDIA COLLECITON PLAN & PROFILE			
43.	LR-1	LIME RIDGE COLLECTION PLAN INDEX SHEET			
44.	LR-2	LIME RIDGE COLLECTION PLAN INDEX SHEET			
45.	LR-3	LIME RIDGE COLLECTION PLAN INDEX SHEET			
46.	LR-4	LIME RIDGE COLLECTION PLAN INDEX SHEET			
47.	LR-5	LIME RIDGE COLLECTION PLAN & PROFILE			
48.	LR-6	LIME RIDGE COLLECTION PLAN & PROFILE			
49.	LR-7	LIME RIDGE COLLECTION PLAN & PROFILE			
50.	LR-8	LIME RIDGE COLLECTION PLAN & PROFILE			

DRAWING REVISIONS			
NO.	REVISION	DATE	
0	30% DRAFT COLLECTION SYSTEM	08/17/2022	
1	50% DRAFT COLLECTION SYSTEM	09/07/2022	



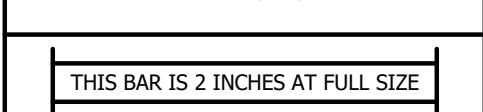
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

**SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA**

# DRAWING LIST

DRAWING DATE: 10/19/2022



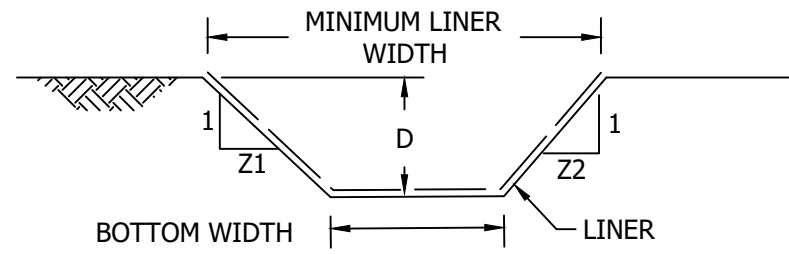
G-1
-----

	EXISTING BOUNDARY
	EXISTING BUILDING
	EXISTING WATER
	EXISTING GAS
	EXISTING EDGE OF GRAVEL
	EXISTING EDGE OF PAVEMENT
	EXISTING EDGE OF WATER
	100 YEAR FLOOD PLAIN
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING RIGHT-OF-WAY
	PROPOSED PERMANENT SEWER EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL LAND OWNER
	PROPOSED SEWER LATERAL AUTHORITY
	PROPOSED FILTER SOCK
	WETLAND FENCE
	LIMIT OF DISTURBANCE
	EXISTING STORM PIPE
	EXISTING WETLAND
	PROPOSED STREAM CROSSING
	EXISTING UTILITY POLE
	EXISTING GUY WIRE
	EXISTING SIGN
	EXISTING TREE
	WETLAND FLAG
	PROPOSED MANHOLE







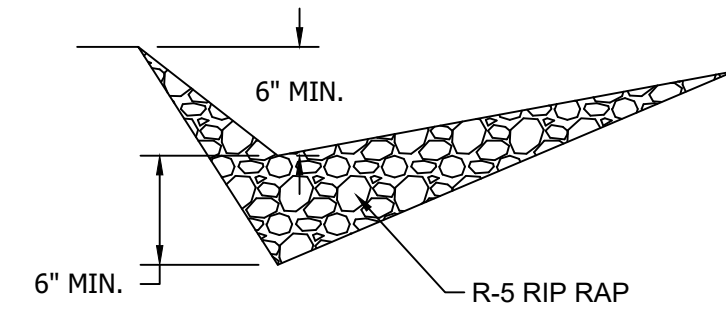


CHANNEL ID	MINIMUM DEPTH D (FT)	Z1 (FT)	Z2 (FT)	BOTTOM WIDTH (FT)	LINER *	MINIMUM LINER WIDTH (FT)
A-1	1.0	2	2	1.5	NAG P300	5

\* NAG - NORTH AMERICAN GREEN, LL - LANDLOK

## TRAPEZOIDAL CHANNEL CROSS SECTION

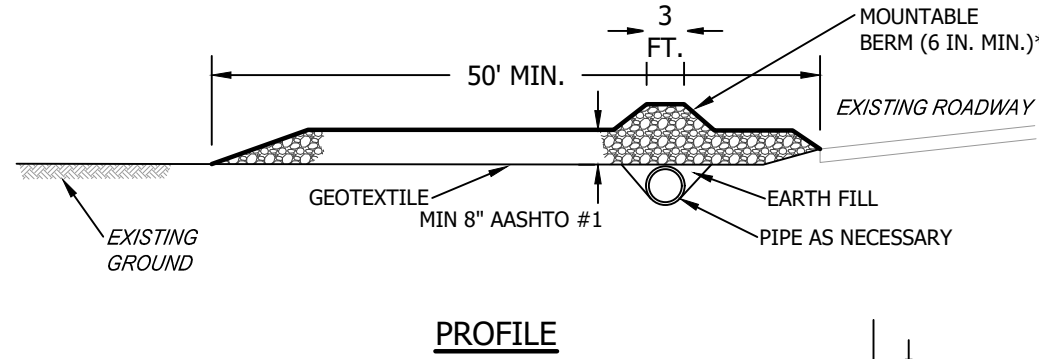
N.T.S.



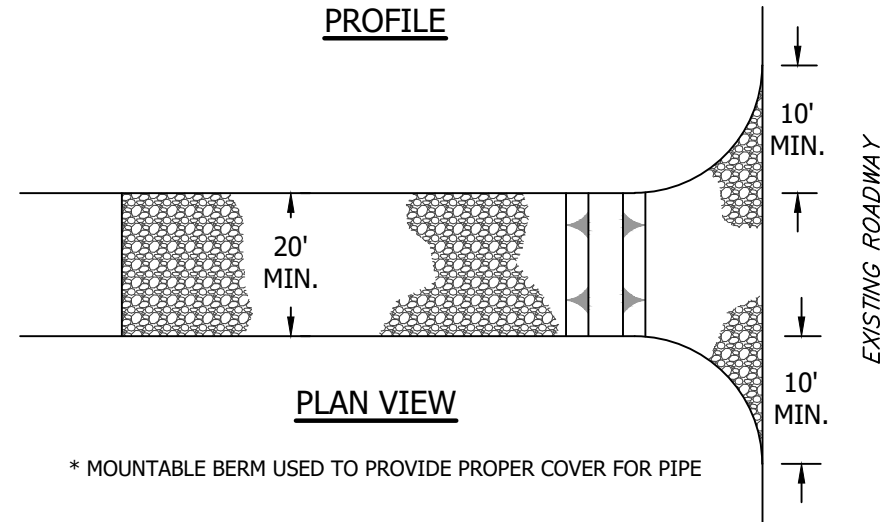
NOTE: CHECK DAMS SHALL BE PLACED AT 50' INTERVALS IN TEMPORARY CHANNELS WHERE LONGITUDINAL SLOPES EXCEED 2%. GRADE ALL SWALES AS FINAL.

## CHECK DAM DETAIL

N.T.S.



## PROFILE



## PLAN VIEW

\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

## NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

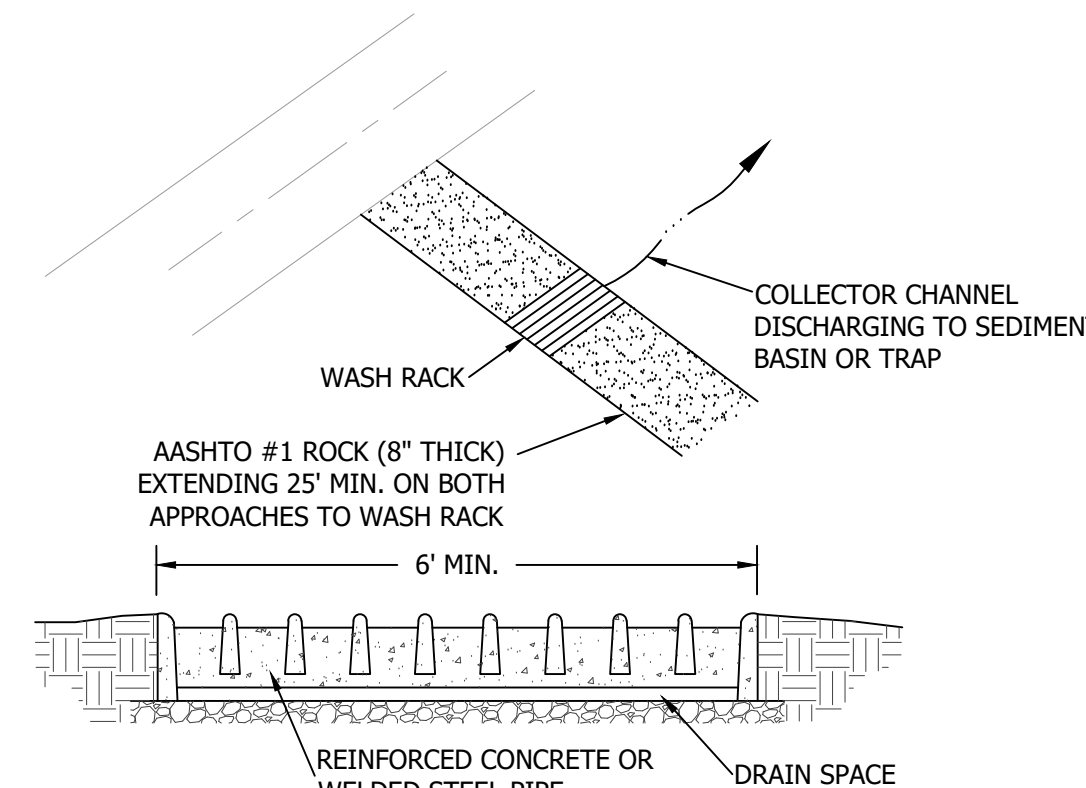
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

## STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

N.T.S.



## NOTES:

WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

## STANDARD CONSTRUCTION DETAIL #3-2 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK

N.T.S.

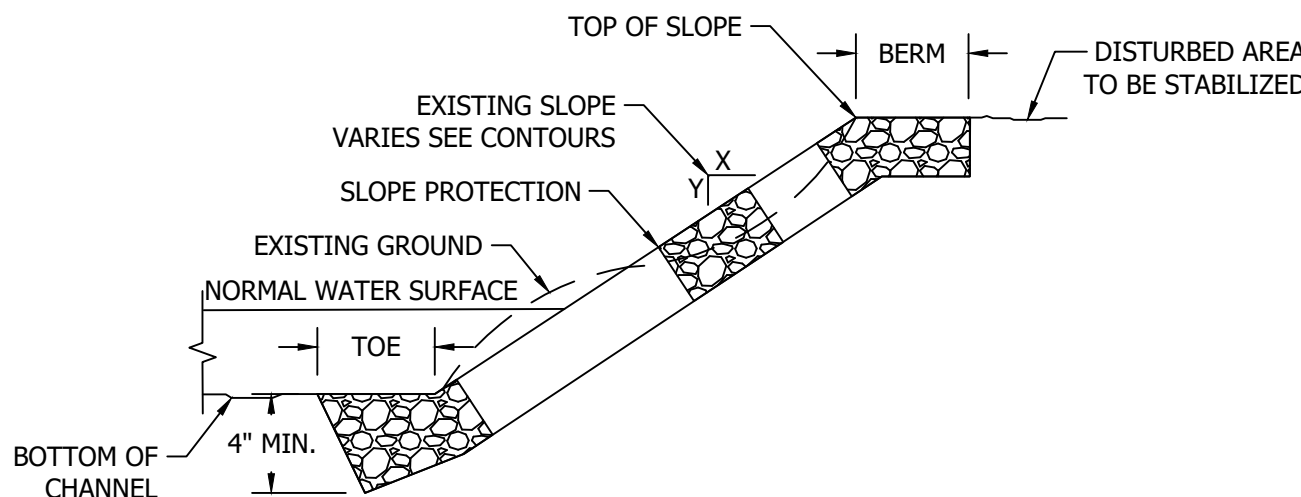


TABLE 6.6

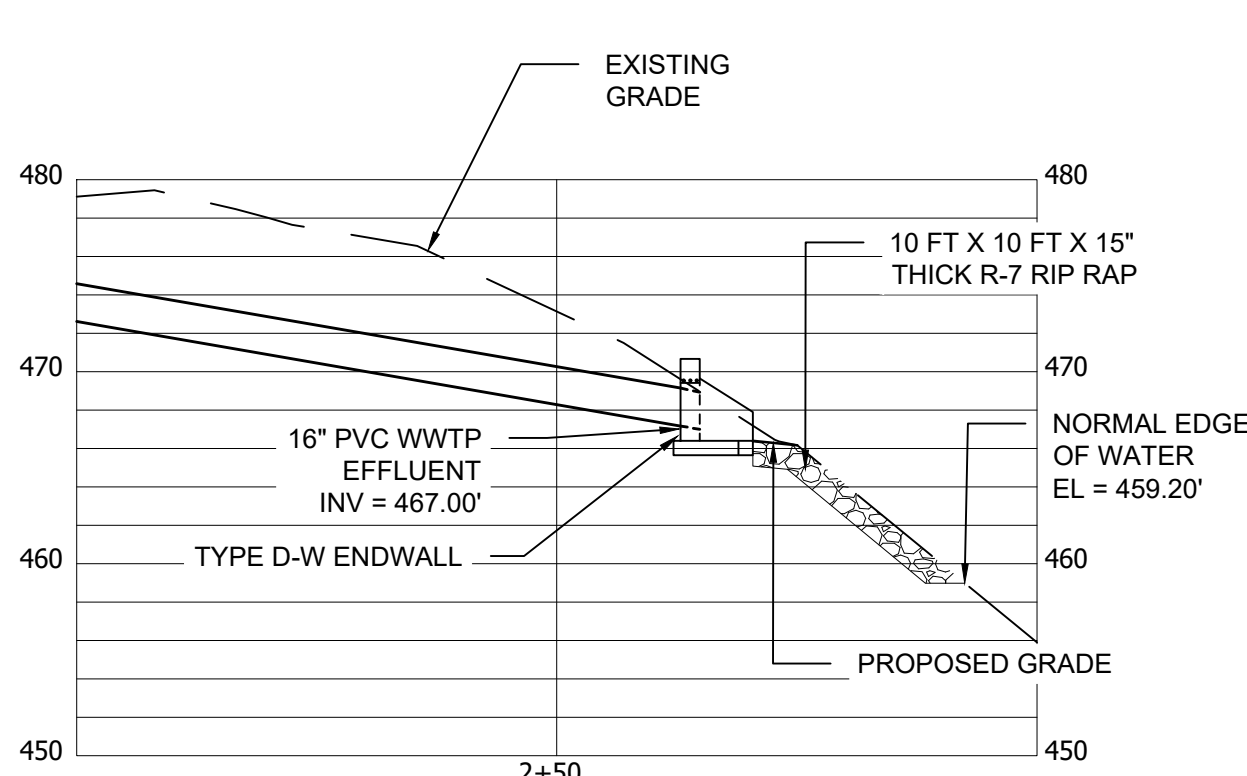
Riprap Gradation, Filter Blanket Requirements, Maximum Velocities						
Percent Passing (Square Openings)						
Class, Size NO. Rock Size (inches)	R-8	R-7	R-6	R-5	R-4	R-3
42 100		100				
30 15-50		100				
24 15-50		100				
18 15-50		100				
15 0-15		100				
12 0-15		100				
9 15-50		100				
6 15-50		100				
4 0-15		100				
3 0-15		100				
2 0-15		100				
Nominal Placement Thickness (inches)	63	45	36	27	18	9
Filter Stone <sup>1</sup> V <sub>max</sub> (ft/sec)	AASHTO #1	AASHTO #1	AASHTO #1	AASHTO #3	AASHTO #3	AASHTO #57
	17.0	14.5	13.0	11.5	9.0	6.5

Adapted from PennDOT Pub. 408, Section 703.2(c), Table C

1 This is a general standard. Soil conditions at each site should be analyzed to determine actual filter size. A suitable woven or non-woven geotextile underlayment, used according to the manufacturer's recommendations, may be substituted for the filter stone for gradients < 10%.

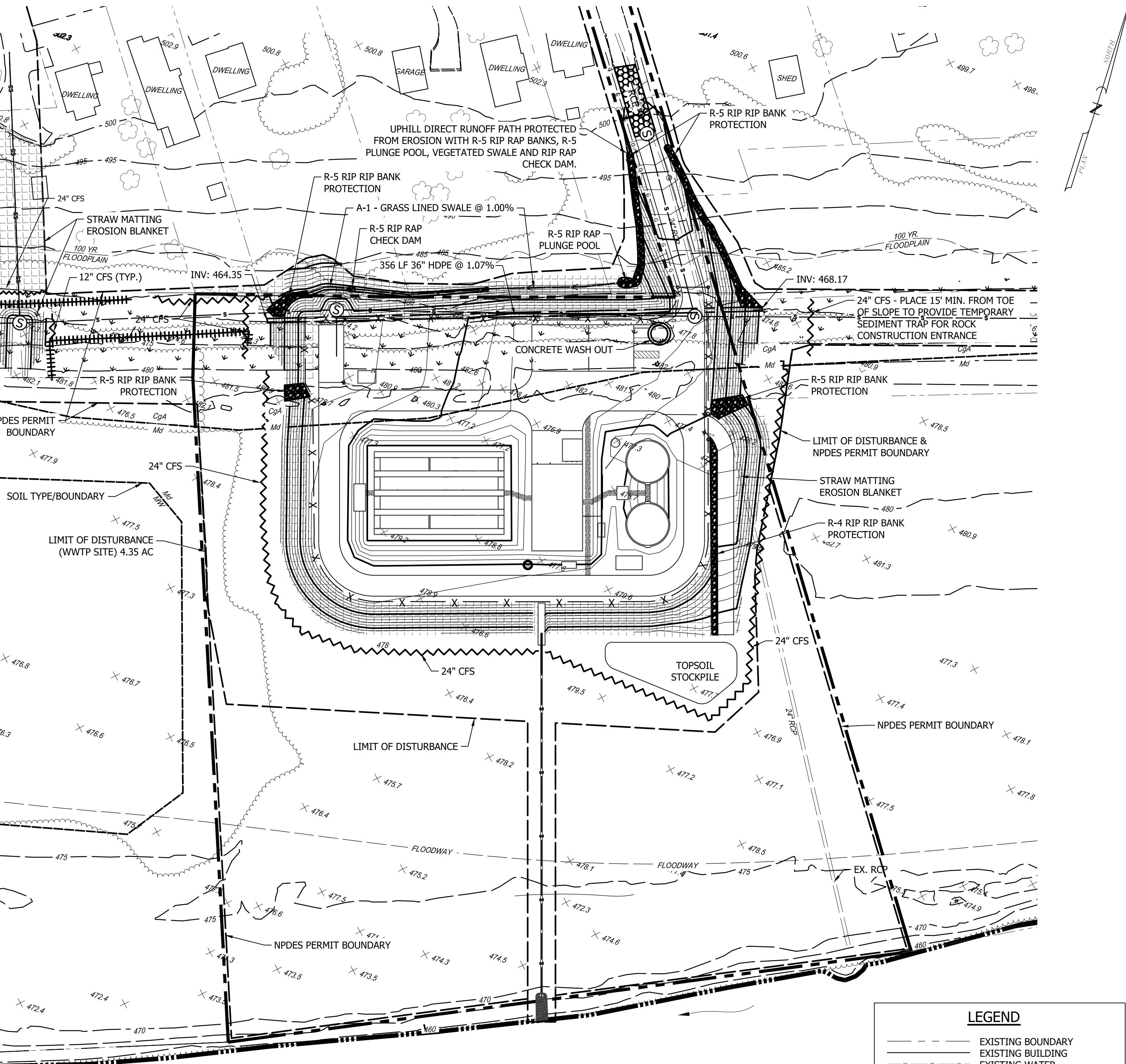
## RIP RAP BANK PROTECTION

N.T.S.



## CONCRETE ENDWALL PROFILE

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

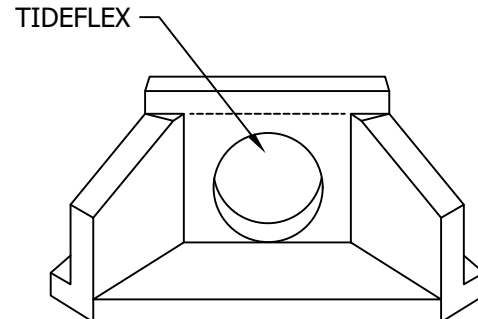


## NOTE:

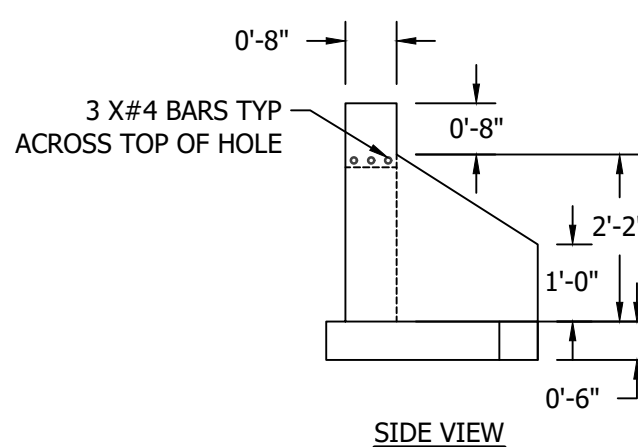
1. PROVIDE EC BLANKET ON ALL SLOPES GREATER THAN 3:1
2. PROVIDE EC BLANKET WITH ON ANY DISTURBANCE WITH 50LF OF ALL WATERCOURSES.
3. SEE SHEET G-6 FOR LOCATIONS OF PROPOSED EC BLANKET.

## PLAN

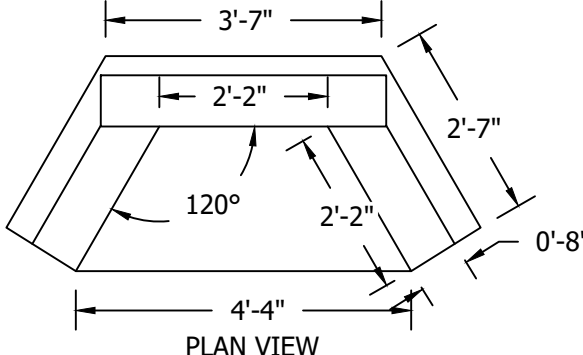
SCALE: 1" = 50'



## ISOMETRIC



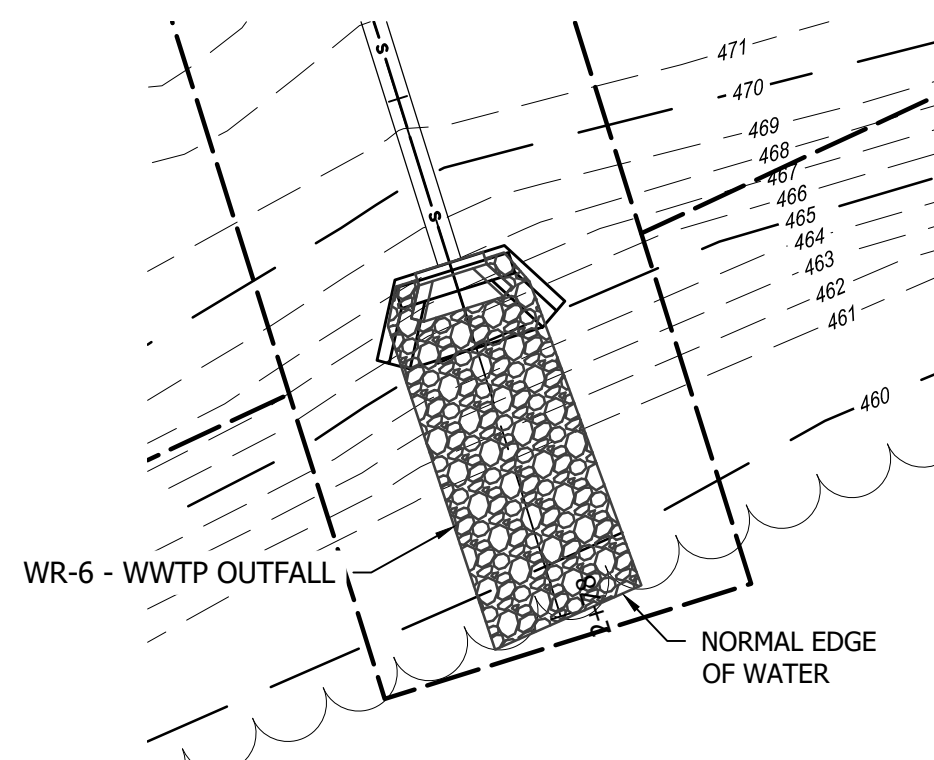
## SIDE VIEW



## PLAN VIEW

## PENNDOT TYPE-DW ENDWALL

NTS



NOTES:  
1. SET FACE OF END WALL MIN. 10 FT. FROM NORMAL EDGE OF WATER.

## CONCRETE ENDWALL PLAN

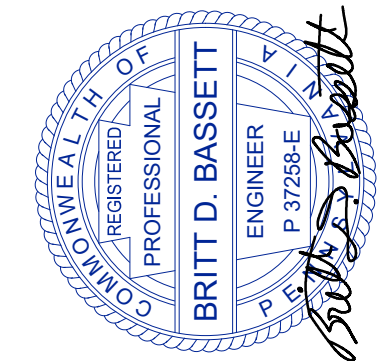
SCALE: 1" = 10'

## LEGEND

- EXISTING BOUNDARY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING GAS
- EXISTING EDGE OF GRAVEL
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF WATER
- 100 YEAR FLOOD PLAIN
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING OVERHEAD ELECTRIC
- EXISTING RIGHT-OF-WAY
- EXISTING ROAD CENTERLINE
- EXISTING SOIL BOUNDARY
- PROPOSED EDGE OF PAVE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED SEWER MAIN
- PROPOSED SEWER LATERAL
- PROPOSED FILTER SOCK
- WETLAND FENCE
- LIMIT OF DISTURBANCE
- EXISTING STORM PIPE
- EXISTING WETLAND
- PROPOSED STREAM CROSSING
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SIGN
- EXISTING TREE
- IRON PIN FOUND
- WETLAND FLAG
- PROPOSED MANHOLE

## DRAWING REVISIONS

NO.	REVISION	DATE



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570-368-2131

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

EROSION CONTROL  
PLAN & DETAILS

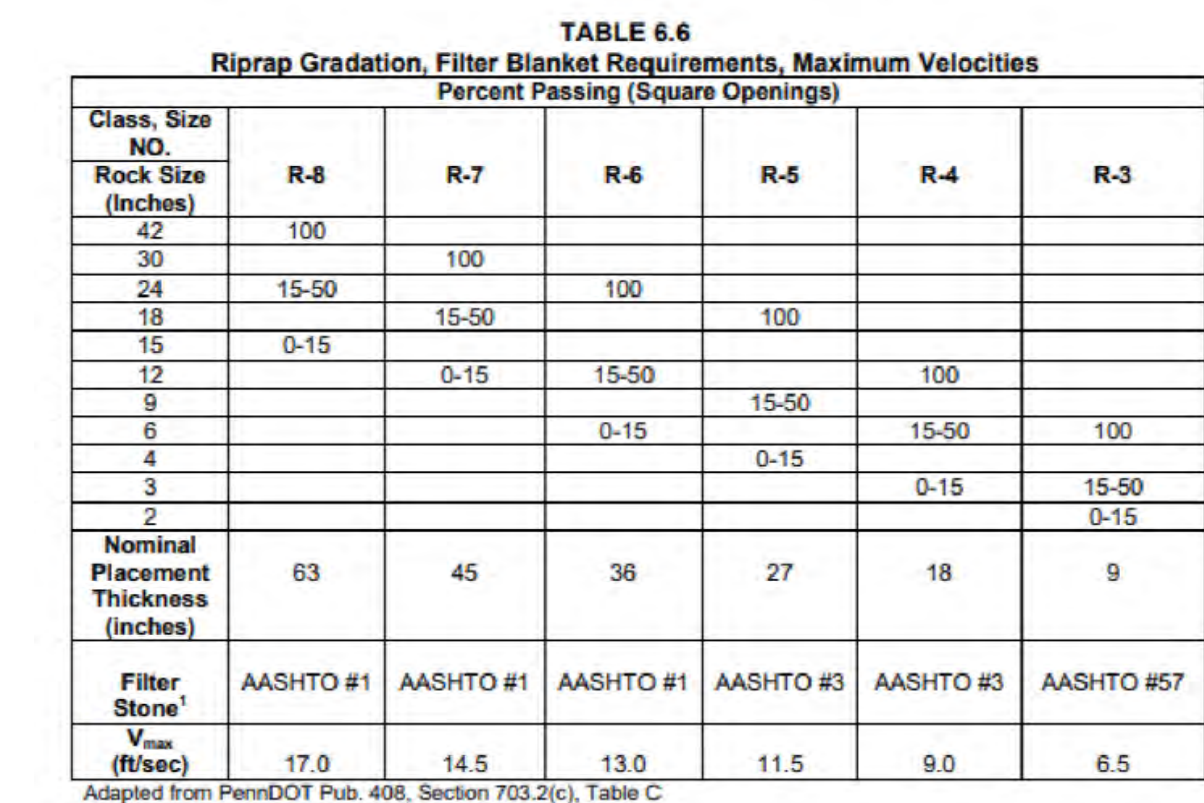
DRAWING DATE: 06/15/2022

THIS BAR IS 2 INCHES AT FULL SIZE

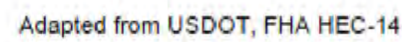
G-2

1 of 59



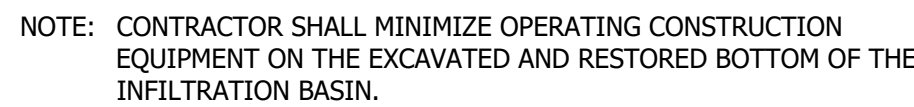


RIP RAP BANK PROTECTION  
N.T.S.



OUTLET NO.	PIPE DIA (IN)	RIPRAP		APRON		
		SIZE (R- )	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
RR#1	15"	R4	18"	8'-0"	3'-9"	7'-0"

RIP RAP APRON DETAIL  
N.T.S.



SCALE: 1" = 20'



## FILTER BAG INLET PROTECTION

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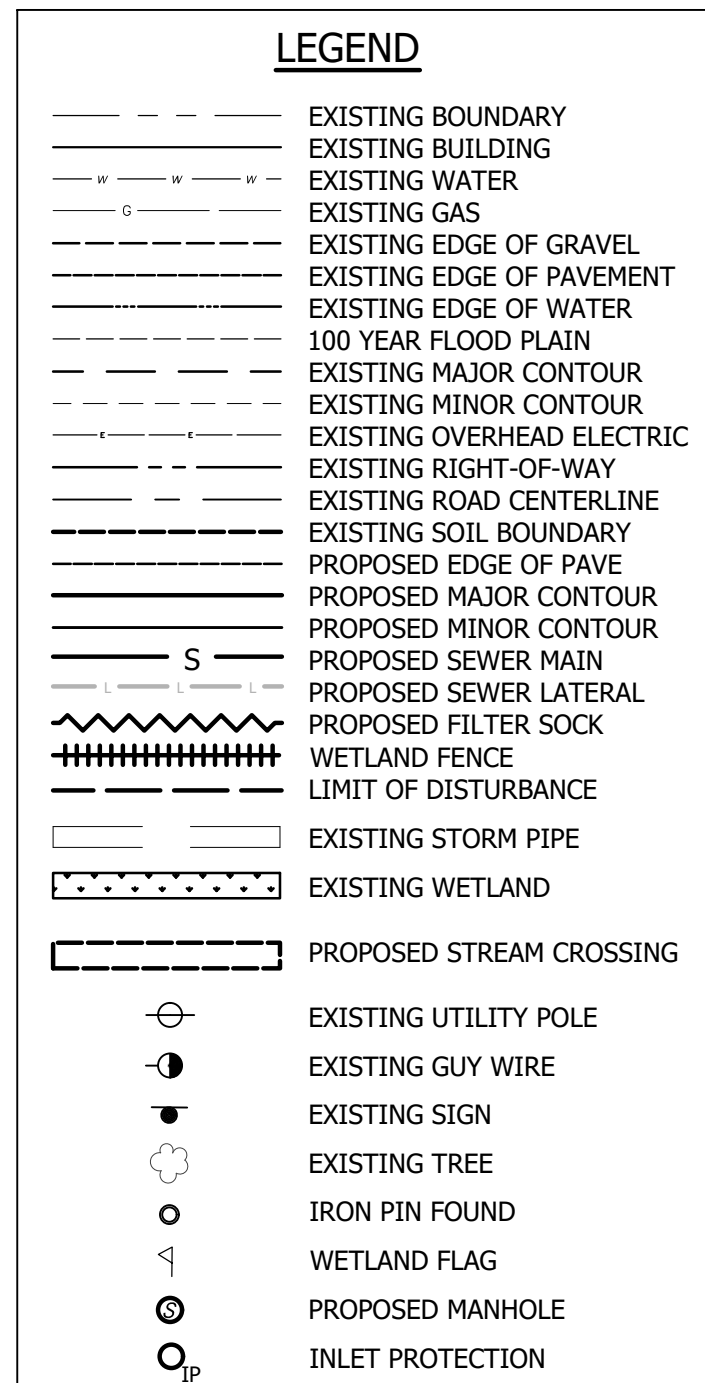
**SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA**

MC GUIRE PARK DRIVE  
EROSION CONTROL  
PLAN & DETAIL

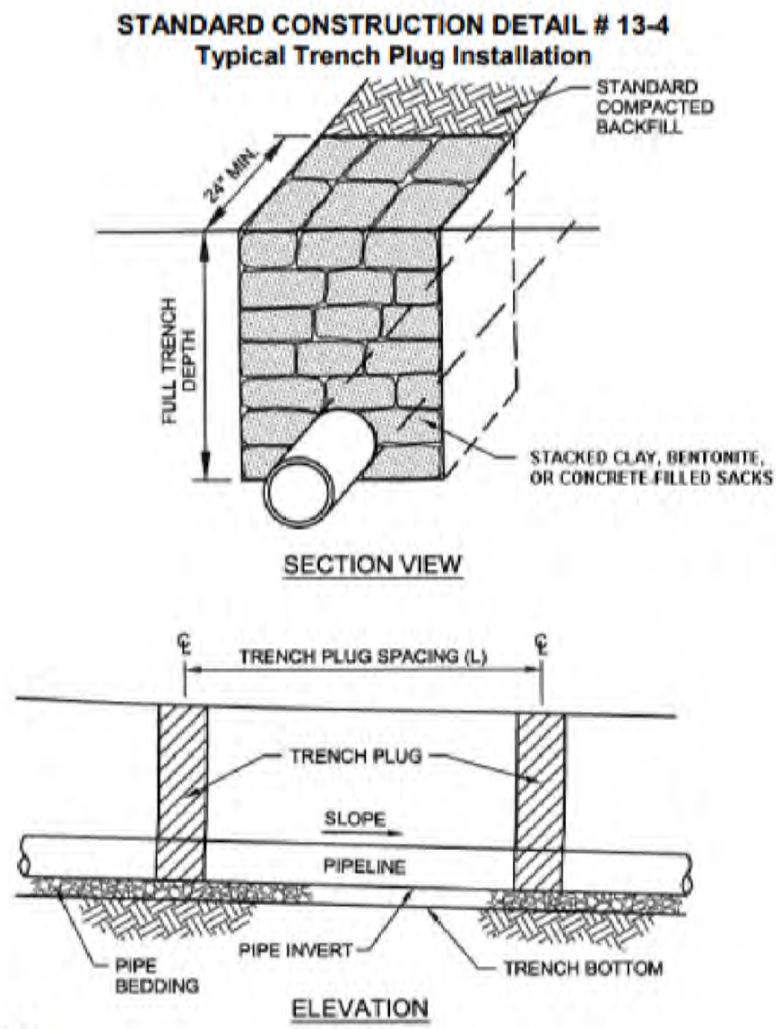
THIS BAR IS 2 INCHES AT FULL SIZE

# G-3

3 of 59







**TABLE 13.1**  
Maximum Spacing and Materials for Trench Plugs

Trench Slope (%)	Spacing L (FT)	Plug Material
< 5	1,000	* Clay, Bentonite, or Concrete Filled Sacks
5 - 15	500	* Clay, Bentonite, or Concrete Filled Sacks
15 - 25	300	* Clay, Bentonite, or Concrete Filled Sacks
25 - 35	200	* Clay, Bentonite, or Concrete Filled Sacks
35 - 100	100	* Clay, Bentonite, or Concrete Filled Sacks
> 100	50	* Cement Filled Bags (Wetted) or Mortared Stone

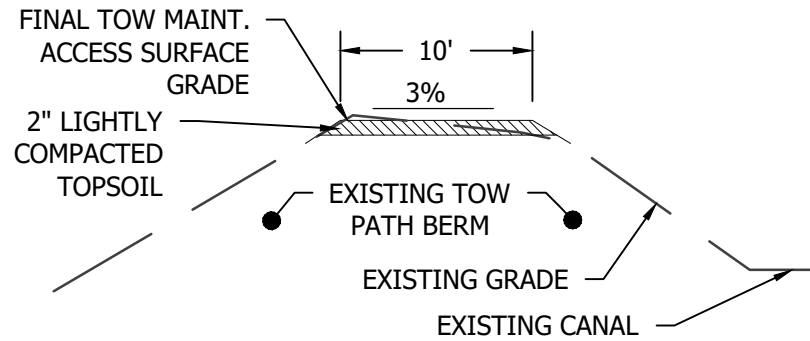
\*TOPSOIL MAY NOT BE USED TO FILL SACKS.

Impervious trench plugs are required for all stream, river, wetland, or other water body crossings.

**TRENCH PLUG DETAIL**  
N.T.S.

NOTES:

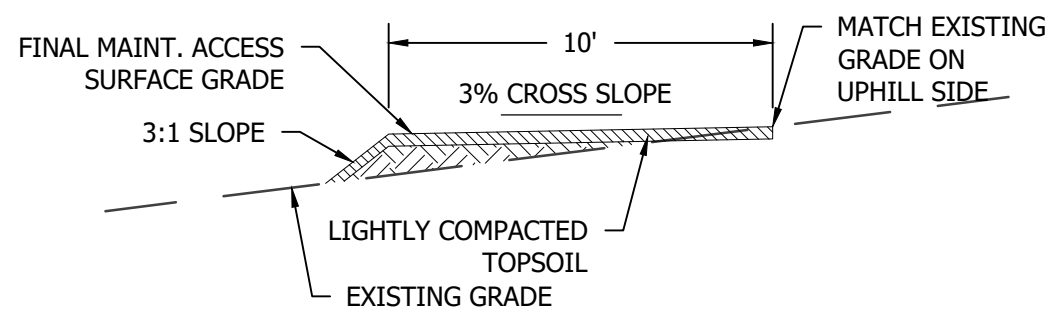
- USE TEMPORARY PADS OR MATS AS SHOWN IN THE TRENCH PLUG DETAIL AND WETLAND CROSSING MATERIALS DETAIL WHEN CROSSING WETLANDS TO MITIGATE POTENTIAL FOR RUTTING.
- EXCAVATE TOPSOIL WITH THE VEGETATIVE ROOT MASS CAREFULLY, AND STOCKPILE SEPARATELY FROM THE SUB SOIL, UNLESS THERE IS STANDING WATER, OR THE SOIL IS TOO SATURATED TO SEGREGATE.
- INSTALL TRENCH PLUGS INSIDE OF WETLAND BOUNDARIES ACCORDING TO THE PA DEP STD. DETAIL #13-4.
- ALL HYDRIC TOPSOIL EXCAVATED FROM WETLANDS IS TO BE SEGREGATED FROM EXCAVATION SUB SOILS AND PROTECTED FROM EROSION USING THE TEMPORARY SOIL STOCKPILE DETAIL ON SHEET G-5.
- CONTRACTOR WILL ADHERE TO ALL PA DEP BMPs DURING ALL ACTIVITIES THAT WILL IMPACT THE DELINEATED WETLANDS.



NOTES - TOW PATH SECTION NEAR TO FINAL GRADE:

- CLEAR TOP OF TOW PATH IN AREAS SHOWN ON THE DRAWINGS. CUT TREES LEVEL WITH GROUND.
- CUT/LEVEL TOP SURFACE OF TOW PATH AS NECESSARY TO PROVIDE 10' PATH WIDTH WHEN RESTORED WITH TOPSOIL.
- FINAL GRADE OF TOW PATH SHALL AVERAGE THE EXISTING GROUND ELEVATION.
- COMPACT TO TOP OF TOW PATH TO 95% DENSITY. REPLACE 2" OF TOPSOIL (LIGHTLY COMPACTED), SEED AND STABILIZE.
- SECTIONS THAT REQUIRE REPAIR SHALL BE LEVELED TO ALIGN WITH ADJACENT LEVEL AREAS WITH COMPACTED NATIVE FILL PRIOR TO PLACEMENT OF TOPSOIL.

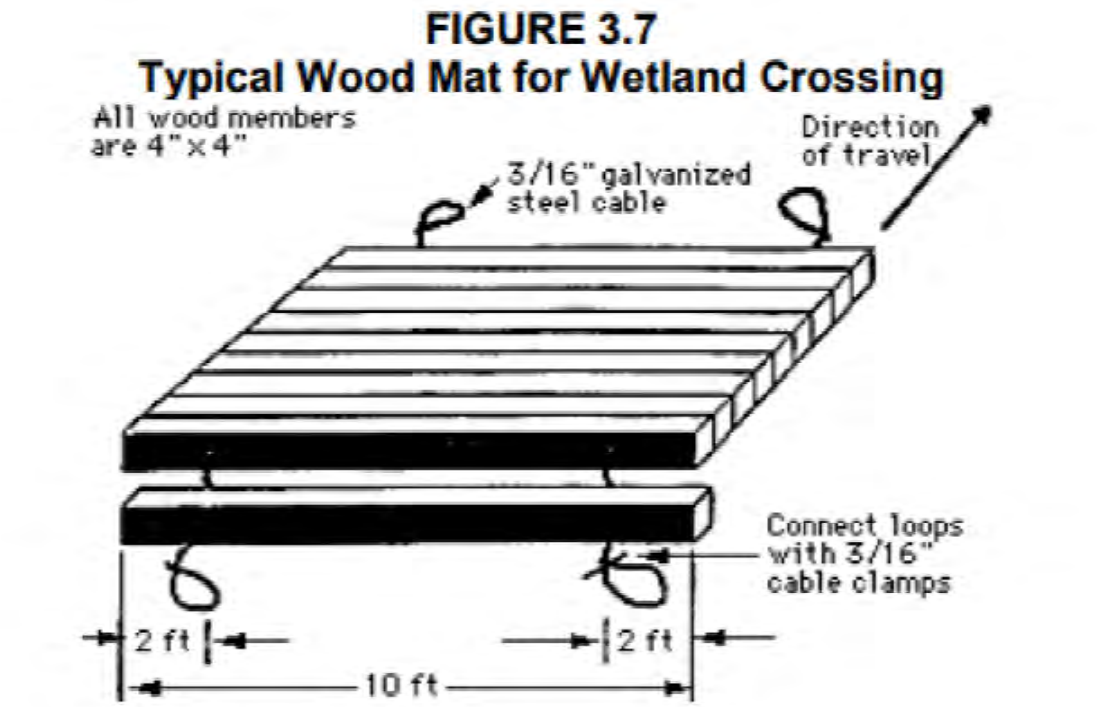
**TOW PATH - MAINTENANCE ACCESS DETAIL**  
NTS



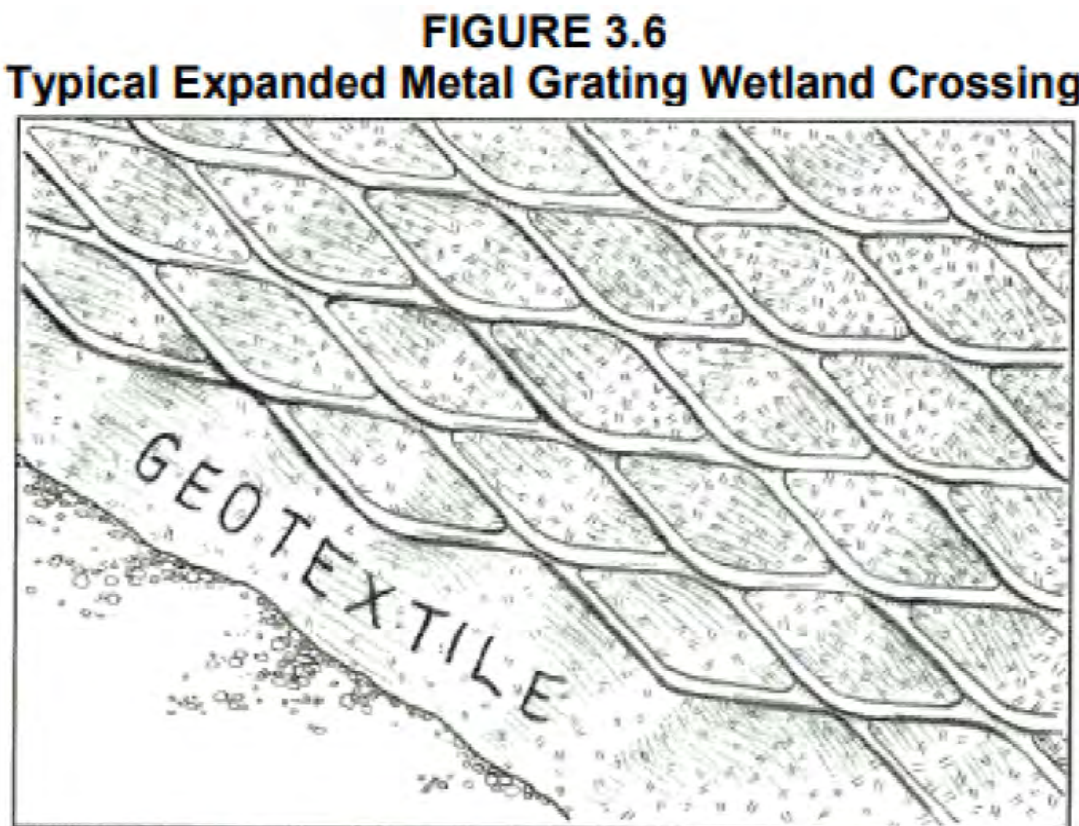
NOTES:

- REMOVE TOPSOIL FROM MAINTENANCE ACCESS ALIGNMENT AS SHOWN ON SHEET AC-4.
- COMPACT SUBGRADE.
- PLACE AND COMPACT NATIVE STRUCTURAL FILL UP TO 2" BELOW THE EXISTING GRADE ALONG THE UPHILL SIDE OF THE MAINTENANCE PATH.
- REPLACE TOPSOIL TO A LIGHTLY COMPACTED 2" THICKNESS, SEED AND STABILIZE.

**MAINTENANCE ACCESS DETAIL**  
NTS

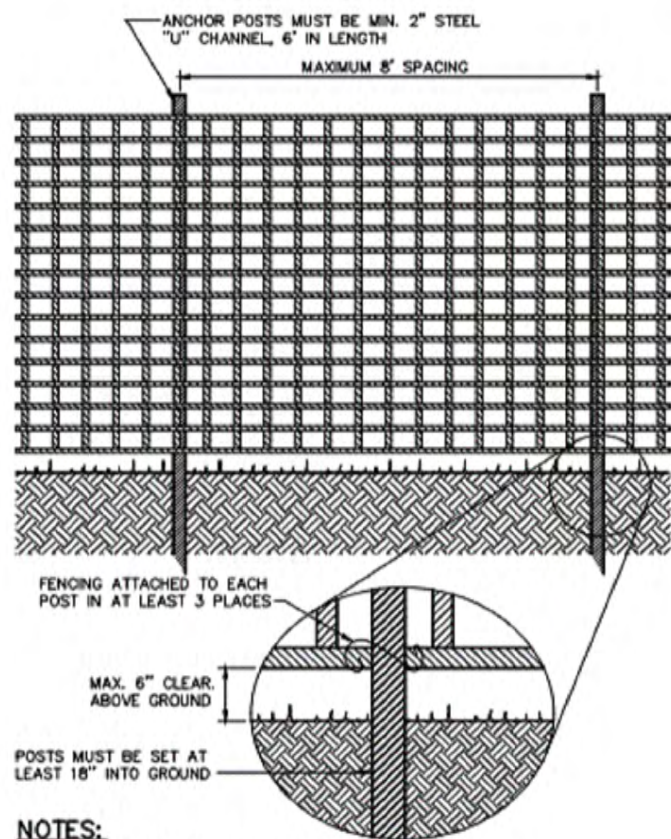


University of Minnesota FS 07009  
A geotextile underlayment shall be used under the wood mat.



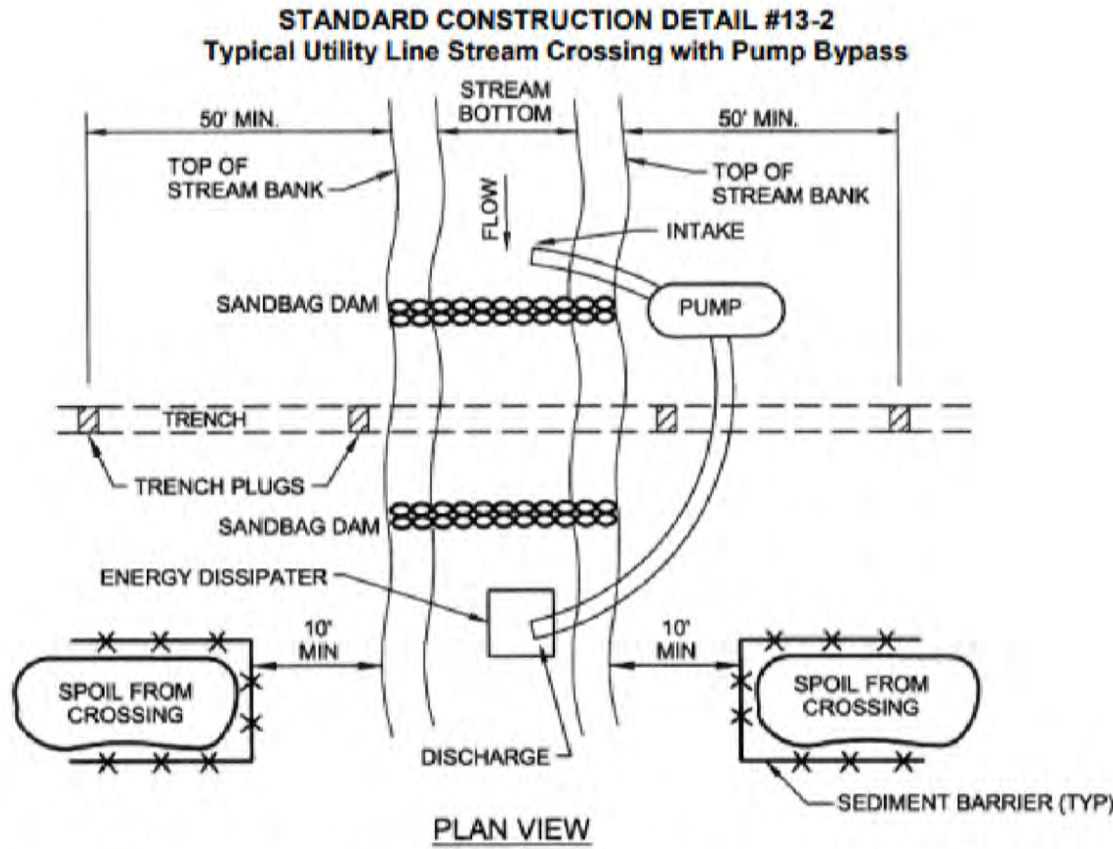
University of Minnesota FS 07011

**WETLAND CROSSING MATERIALS DETAIL**  
N.T.S.



NOTES:

- PROTECTION BARRIER SHALL BE 4' HIGH, CONSTRUCTED OF DURABLE AND HIGHLY VISIBLE MATERIAL (PLASTIC ORANGE CONSTRUCTION FENCE AND BLOW-FENCE MAY BE USED).
- PROTECTION BARRIERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE WORK AT THE SITE.
- ADDITIONAL WARNING SIGNS SHOULD ALSO BE PLACED ON THE FENCING AND IN APPROPRIATE AREAS NEAR THE WORK ZONE.



PA DEP  
Grubbing shall not take place within 50 feet of top-of-bank until all materials required to complete crossing are on site and pipe is ready for installation.

Bypass pump intake shall be maintained a sufficient distance from the bottom to prevent pumping of channel bottom materials.

Trench plugs shall be installed within the trench on both sides of the stream channel (Standard Construction Detail #13-4).

Water accumulating within the work area shall be pumped to a pumped water filter bag or sediment trap prior to discharging into any receiving surface water.

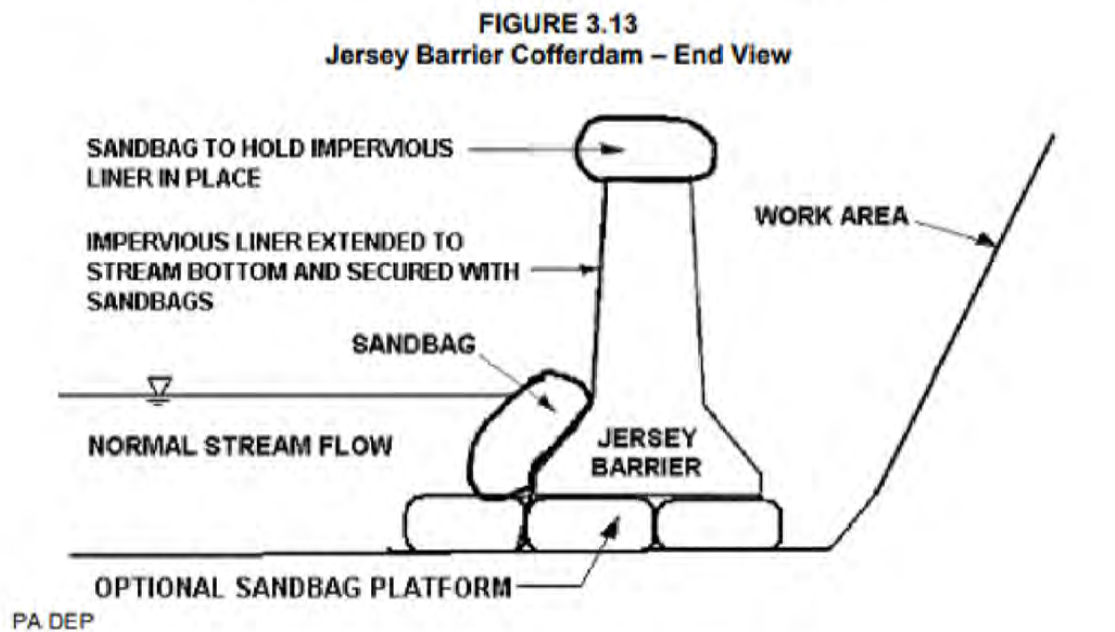
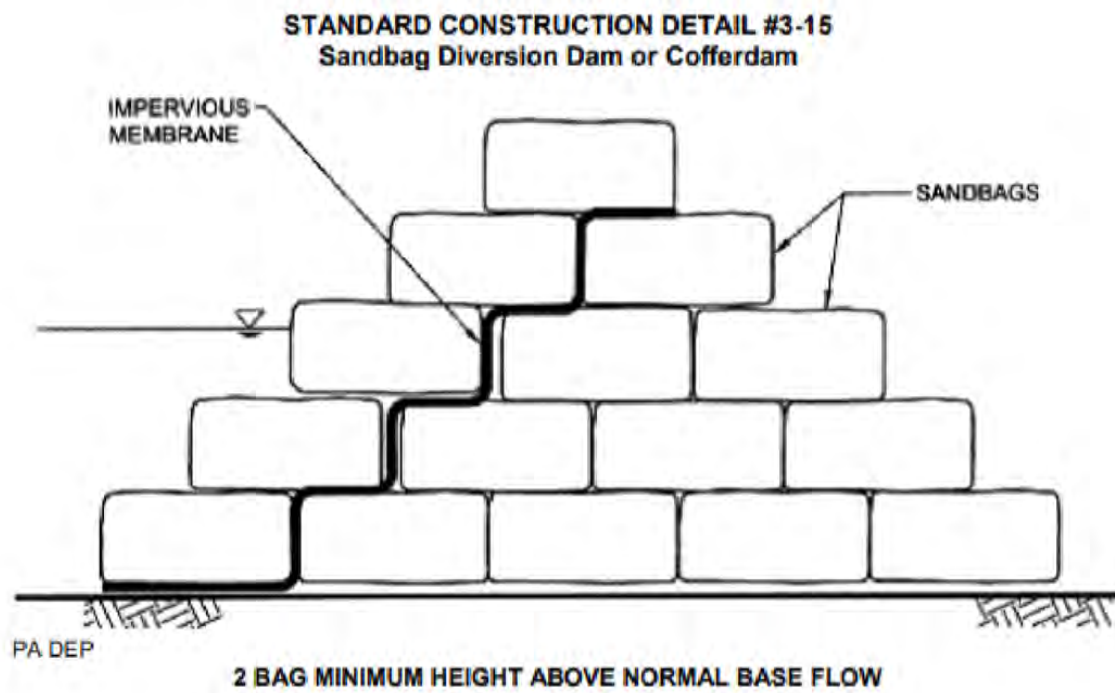
Hazardous or pollutant material storage areas shall be located at least 100 feet back from the top of streambank.

All excess excavated material shall be immediately removed from the stream crossing area.

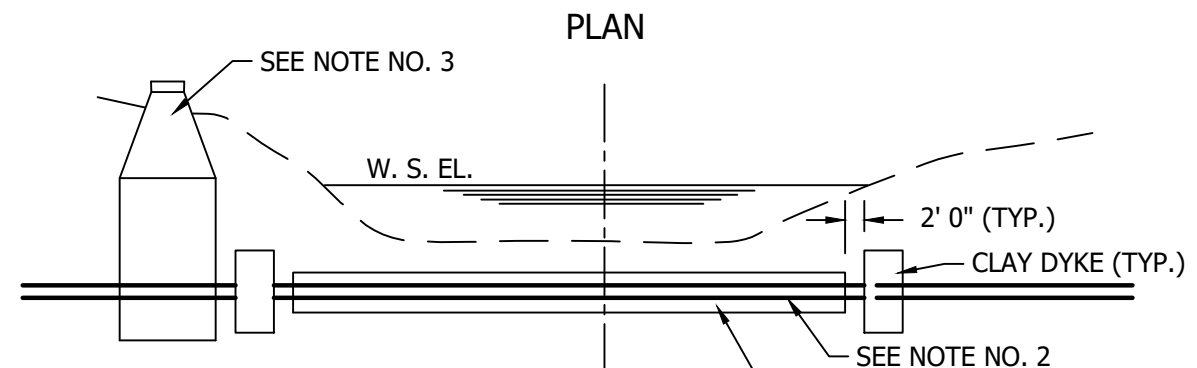
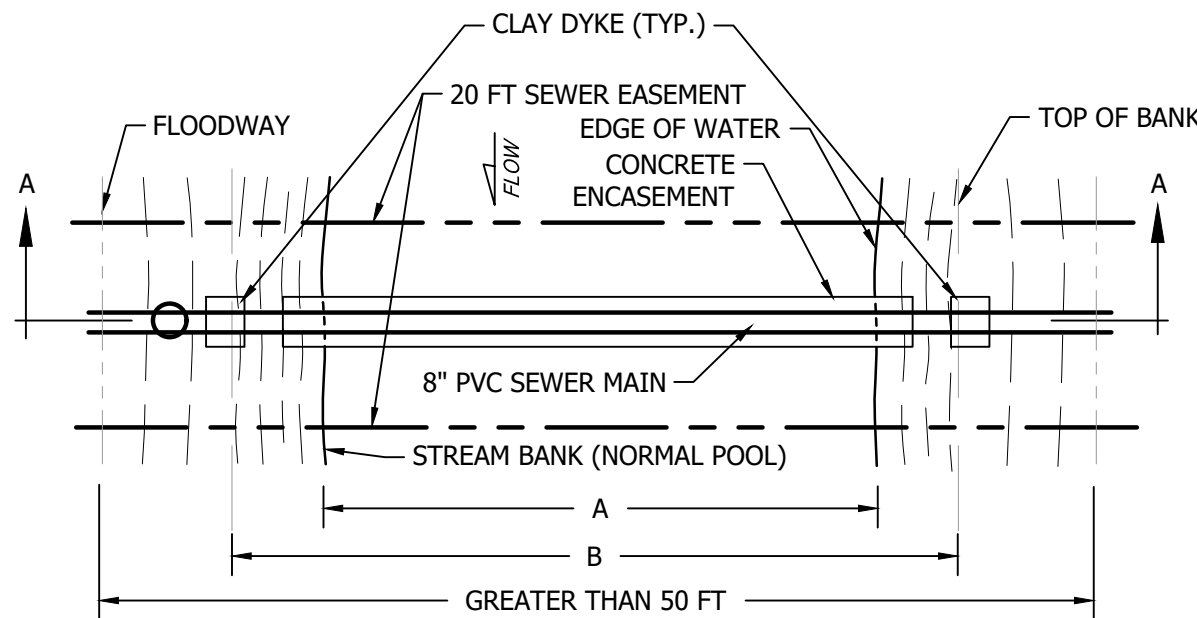
All disturbed areas within 50 feet of top-of-bank shall be blanketed or matted within 24 hours of initial disturbance for minor streams or 48 hours of initial disturbance for major streams unless otherwise authorized.

Appropriate streambank protection shall be provided within the channel.

**ESC STREAM CROSSING & PUMP BYPASS DETAIL**  
N.T.S.



**COFFER DAM STANDARD DETAIL**  
NTS



CROSSING DIMENSION TABLE

PIPE	A (FT)	B (FT)
1	21	41
2	9	26
3	9	21
4	10	15
5	7	24
6	6	17
7	6	23
8	6	21

ELEVATION

- NOTES:
- MINIMUM OF 3' COVER OVER UTILITY LINE OR ENCASMENT/SLEEVE/CONDUIT EXCEPT IN ROCK WHERE 1' COVER SHALL BE PROVIDED.
  - UTILITY LINE ENCASMENT/SLEEVE/CONDUIT SHALL BE INSTALLED WITH SUFFICIENT HORIZONTAL LENGTH TO ALLOW FOR FUTURE CHANNEL EXPANSION.
  - MANHOLES MAY NOT BE CONSTRUCTED WITHIN THE CHANNEL.

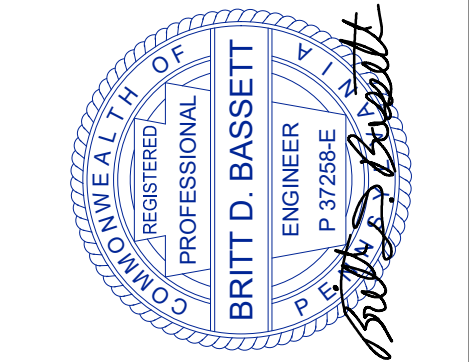
GENERAL NOTES:

- STREAMS WILL BE FLOUED OR PUMPED PAST THE OPEN TRENCH AT THE TIME THE CROSSING IS MADE.
- UTILITY CROSSINGS SHALL BE COMPLETED WITHIN 72 HOURS (START TO FINISH) INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS, AND STABILIZATION OF THE AREA 50 FT BACK FROM THE TOP OF EACH STREAM BANK.
- TRENCH PLUGS SHALL BE INSTALLED WITHIN THE TRENCH ON BOTH SIDES OF THE STREAM CHANNEL.
- FACILITIES FOR REMOVING SEDIMENT FROM THE PUMPED WATER SHALL BE AVAILABLE AT THE UTILITY LINE STREAM CROSSING SITE BEFORE THE TRENCHING COMMENCES AND MAINTAINED UNTIL TRENCH BACKFILLING IS COMPLETED.
- ASSEMBLY AREAS, TEMPORARY EQUIPMENT, AND NON-HAZARDOUS MATERIAL STORAGE AREA WILL BE LOCATED AT LEAST 50 FT BACK FROM THE TOP OF THE STREAM BANK. ALL EXCESS EXCAVATED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSINGS.
- BANK & EDGE OF WATER DIMENSIONS PER AERIAL SURVEY.

**TECHNICAL STREAM CROSSING DETAIL**  
NTS

DRAWING REVISIONS

NO.	REVISION	DATE
1	JOINT PERMIT/CH. 102 SUBMISSIONS	3/18/2022
2	JOINT PERMIT/CH. 102 SUBMISSIONS	6/17/2022
3	JOINT PERMIT	9/14/2022



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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA  
COUNTY

EROSION CONTROL  
DETAILS

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**G-4**  
4 of 68



GENERAL DESCRIPTION

THE TREATMENT PLANT WILL BE PLACED ON A PARCEL THAT IS THE PROPERTY OF SOUTH CENTRE TOWNSHIP. LOCATED APPROXIMATELY 1,200 FT EAST OF THE EXISTING BIG HEART PET FOOD BRANDS WASTEWATER TREATMENT FACILITY AND APPROXIMATELY 500 FT FROM THE NORTH BANK OF THE SUSQUEHANNA RIVER IN SOUTH CENTRE TOWNSHIP, COLUMBIA COUNTY, PENNSYLVANIA. THE 5 ± ACRE PARCEL IS BOUNDED BY THE SUSQUEHANNA RIVER AND PRIVATE PROPERTIES.

PHASE 1 OF THE COLLECTION SYSTEM WILL EXTEND THROUGH THE SOUTHWEST CORNER OF SOUTH CENTRE TOWNSHIP BOUNDED BY COLUMBIA BOULEVARD TO THE NORTH, I-80 TO THE EAST, SUSQUEHANNA RIVER TO THE SOUTH, AND BISSETTS LANE (WESTERLY TOWNSHIP BOUNDARY) TO THE WEST. THE COLLECTION SYSTEM IS LAID OUT TO PROVIDE ACCESS FROM ALL EXISTING RESIDENCES AND BUSINESSES. INTERCEPTORS ARE PROPOSED IN THE OLD CANAL SYSTEM THAT RUNS PARALLEL TO THE RIVER. THESE REPRESENT THE MOST SOUTHERLY LIMIT OF THE COLLECTION SYSTEM CONSTRUCTIOIN.

THE CURRENT LAND USE OF THE TREATMENT PLANT SITE IS VACANT (WOODED). THE EXISTING SITE TOPOGRAPHY IS GENTLY SLOPED IN A SOUTHERLY DIRECTION TOWARD THE SUSQUEHANNA RIVER WITH A STEEP SLOPE AT THE NORTHERLY PORTION OF THE PROJECT SITE. ADDITIONAL SITE FEATURES INCLUDE AN OLD CANAL THAT PARALLELS THE RIVER.

CURRENT LAND USE OF THE COLLECTION SYSTEM IS THE OLD CANAL SYSTEM, OPEN SPACE, LAWN AND ROAD AREAS.

THE SITE CURRENTLY DRAINS VIA OVERLAND AND SHALLOW CONCENTRATED FLOWS TOWARD SUSQUEHANNA RIVER. THIS PROJECT CONSISTS OF PLANNING POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) FACILITIES TO SAFELY CONVEY RUNOFF TO THE RIVER.

APPROXIMATELY 3.4 ACRES OF DISTURBANCE ARE ANTICIPATED TO COMPLETE THE PROJECT.

CONSTRUCTION SEQUENCE

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LAND OWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, AND A REPRESENTATIVE FROM THE COLUMBIA COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. CONSTRUCTION WILL BEGIN UPON RECEIPT OF ALL NECESSARY PERMITS AND/OR APPROVALS FROM ALL REGULATION GOVERNMENTAL AGENCIES. THE CONTRACTOR MUST VERIFY THE EXISTENCE, LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES. ALL UNDERGROUND UTILITY USERS MUST BE CONTACTED BY THE CONTRACTOR AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCING ANY EARTHWORK.

THE CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN FOR WHICH A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ON SITE: PRE-CONSTRUCTION MEETING, PERIODIC OBSERVATIONS DURING EARTHMOVING AND GENERAL SITE WORK, CONSTRUCTION OF INFILTRATION BASINS, SWALES AND FINAL INSPECTION.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY OF THE FOLLOWING IS INITIATED.

TREATMENT PLANT

1. MARK THE LIMITS OF DISTURBANCE IN THE FIELD BY FLAGGING OR FENCING. NO DISTURBANCE IS TO OCCUR OUTSIDE THESE LIMITS.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES.
3. INSTALL COMPOST FILTER SOCK SEDIMENT BARRIERS WHERE SHOWN ON THE PLAN.
4. STRIP TOPSOIL FROM AREAS TO BE GRADED. TOPSOIL SHALL BE STOCKPILED WITHIN THE LIMITS OF DISTURBANCE DELINEATED ON THE PLAN OR MOVED TO A SITE APPROVED FOR STOCKPILING FILL MATERIALS.
5. GRADE SITE.
6. WHEN SITE GRADING IS COMPLETED, REPLACE MINIMUM OF 6" OF TOPSOIL, SEED AND MULCH. IN AREAS WITH SLOPE 3:1 OR GREATER, APPLY EROSION CONTROL BLANKET.
7. FOLLOWING PERMANENT STABILIZATION OF ALL DISTURBED AREAS, REMOVE REMAINING TEMPORARY EROSION CONTROL BMP'S. THESE MAY ONLY BE REMOVED AFTER THE TRIBUTARY AREA TO A TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL FACILITY HAS BEEN COMPLETELY STABILIZED. THE COUNTY CONSERVATION DISTRICT SHALL BE AFFORDED THE OPPORTUNITY TO INSPECT AND APPROVE THE SITE BEFORE THE CONTRACTOR REMOVES TEMPORARY CONTROL MEASURES. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL PROCESS.

MCGUIRE PARK DRIVE INFILTRATION BASIN

1. MARK THE LIMITS OF DISTURBANCE IN THE FIELD BY FLAGGING OR FENCING. NO DISTURBANCE IS TO OCCUR OUTSIDE THESE LIMITS.
2. INSTALL THE ROCK CONSTRUCTION ENTRANCES.
3. INSTALL COMPOST FILTER SOCK SEDIMENT BARRIERS WHERE SHOWN ON THE PLAN.
4. STRIP TOPSOIL FROM AREAS TO BE GRADED. TOPSOIL SHALL BE STOCKPILED WITHIN THE LIMITS OF DISTURBANCE DELINEATED ON THE PLAN OR MOVED TO A SITE APPROVED FOR STOCKPILING FILL MATERIALS.
5. GRADE SITE.
6. WHILE EXCAVATING INFILTRATION BASIN, CONTRACTOR SHALL MINIMIZE DRIVING CONSTRUCTION EQUIPMENT IN THE INFILTRATION BASIN BOTTOM.
7. CONSTRUCT STORM SEWER AND INSTALL RIPRAP APRON AS SOON AS GRADING PERMITS. IMMEDIATELY INSTALL FILTER BAG INLET PROTECTION.
8. WHEN SITE GRADING IS COMPLETED, REPLACE MINIMUM OF 6" OF TOPSOIL, SEED AND MULCH. IN AREAS WITH SLOPE 3:1 OR GREATER, APPLY EROSION CONTROL BLANKET.
9. FOLLOWING PERMANENT STABILIZATION OF ALL DISTURBED AREAS, REMOVE REMAINING TEMPORARY EROSION CONTROL BMP'S. THESE MAY ONLY BE REMOVED AFTER THE TRIBUTARY AREA TO A TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL FACILITY HAS BEEN COMPLETELY STABILIZED. THE COUNTY CONSERVATION DISTRICT SHALL BE AFFORDED THE OPPORTUNITY TO INSPECT AND APPROVE THE SITE BEFORE THE CONTRACTOR REMOVES TEMPORARY CONTROL MEASURES. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL PROCESS.

COLLECTION SYSTEM

1. EXCAVATE FOR THE NEW COLLECTOR, AND PLACE ALL EXCAVATED MATERIAL ALONGSIDE THE TRENCH OR IN A DUMP TRUCK TO BE HAULED TO A STOCKPILE SITE. EXCAVATE NO MORE TRENCH PER DAY THAN CAN BE INSTALLED AND BACKFILLED IN A DAY.
2. THE CONTRACTOR SHALL PROVIDE AN EROSION CONTROL PLAN FOR ANY PROPOSED STOCKPILE LOCATION.
3. INSTALL THE NEW COLLECTOR AND LATERALS, AND BACKFILL WITH APPROPRIATE MATERIALS.
4. HAND-RAKE LIME, FERTILIZIE, SEED , AND MULCH DISTURBED AREAS, INCLUDING ANY SOIL STOCKPILES LEFT OVER AFTER CONSTRUCTION IS COMPLETE AS NOTED IN THE SITE STABILIZATION NOTES ON THIS PAGE.
5. PLEASE NOTE THAT VEGETATIVE GROWTH ON ALL DISTURBED AREAS SHALL BE CONSIDERED "ESTABLISHED" WHEN THE DISTURBED AREA HAS AT LEAST SEVENTY PERCENT (70%) VEGETATIVE COVER.
6. PORTIONS OF THE COLLECTION SYSTEM IN THE CANALS WILL REQUIRE THE FOLLOWING SEQUENCE.
  - A. DRAIN THE WATER FROM THE CANAL.
  - B. CONSTRUCT THE COLLECTION SYSTEM AS NOTED ABOVE.
  - C. CONSTRUCT ACCESS DRIVES AT MANHOLE LOCATIONS TO AN ELEVATION 1 FT ABOVE THE WATER SURFACE WITH COMPACTED STRUCTURAL FILL.

EROSION CONTROL BMP MAINTENANCE

EROSION CONTROL BMP'S SHALL BE MAINTAINED AS DESCRIBED IN THE DETAILS FOR THESE BMP'S ON G-2 & G-3 AS WELL AS PER NOTE 22 OF THE EROSION & SEDIMENT GENERAL REQUIREMENTS.

SURFACE STABILIZATION CRITERIA

FERTILIZATION, SEEDING AND MULCHING:

TEMPORARY COVER ON DISTURBED AREAS: DISTURBED AREAS WHICH ARE EITHER AT FINISH GRADE OR WILL BE REDISTURBED WITHIN ONE (1) YEAR PERIOD MUST BE SEEDED AND MULCHED WITH A TEMPORARY SEED MIXTURE.

PERMANENT COVER ON DISTURBED AREAS: DISTURBED AREAS WHICH ARE EITHER AT FINISH GRADE OR WILL NOT BE REDISTURBED WITHIN ONE (1) YEAR PERIOD MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE.

SITE PREPARATION OF MULCH AND MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE PENN STATE UNIVERSITY'S AGRONOMY GUIDE AND PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION FORM 408 SPECIFICATIONS (LATEST EDITION) SEC. 804. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES.

TEMPORARY COVER: SEED WITH THE TEMPORARY COVER FORMULA BELOW

PERMANENT COVER:

SLOPES LESS THAN 3:1 ARE TO BE SEEDED WITH PA DOT SEED FORMULA B LISTED BELOW

SLOPES 3:1 OR STEEPER ARE TO BE SEEDED WITH PA DOT SEED FORMULA D LISTED BELOW

SEEDING MAY BE APPLIED AS FOLLOWS:

SEED FORMULA APPLICATION PERIOD

TEMP COVER ANYTIME

FORMULAS B, D MARCH 15 - MAY 31 & AUGUST 1 - OCTOBER 1

DO NOT APPLY SEED IF SOIL IS FROZEN OR IF THERE IS A HIGH PROBABILITY OF THE SOIL BECOMING FROZEN FOR AN EXTENDED PERIOD OF TIME. SOD MAY BE PLACED IN LIEU OF SEEDING DURING NON-GERMINATION PERIODS.

A NON-GERMINATION PERIOD IS THE PERIOD OF TIME DURING A CALENDAR YEAR THAT SEED CANNOT BE APPLIED.

SOIL SUPPLEMENTS: SUPPLEMENTS ARE TO BE UNIFORMLY APPLIED TO ALL AREAS THAT PERMANENT COVER WILL BE APPLIED.

PERMANENT STABILIZATION

PULVERIZED AGRICULTURE LIMESTONE 2,480#/1,000 S.Y.

10-10-20 ANALYSIS COMMERCIAL FERTILIZER 210#/1,000 S.Y.

TEMPORARY STABILIZATION

PULVERIZED AGRICULTURAL LIMESTONE 410#/1,000 S.Y.

10-10-10 FERTILIZER 100#/1,000 S.Y.

MULCH: SEEDED AREAS ARE TO BE MULCHED AS SPECIFIED IMMEDIATELY AFTER APPLICATION OF SEED. ALL MULCH APPLICATIONS ARE TO BE IN ACCORDANCE WITH PA DOT SPECIFICATIONS PUBLICATION 408 (CURRENT REVISION) SECTION 805.

STRAW WITH ACCEPTABLE BINDER 1,240#/1,000 S.Y.

SEEDED AREAS THAT WASH OUT MUST BE FILLED AND REGRADED AS NECESSARY AND THEN PROCESSED. SOME TYPE OF ANCHORING METHOD SHOULD THEN BE USED TO HOLD SEED AND MULCH IN PLACE. THIS IS ESPECIALLY IMPORTANT AROUND WATER COURSES, IN SWALES, AND AREAS OF CONCENTRATED FLOW ON SLOPES.

TABLE A					
FORMULA AND SPECIES		MINIMUM %			
	% BY MASS	PURITY	GERMINATION	MAXIMUM % WEED SEED	SEEDING RATE # PER 1,000 SQUARE YDS
TEMPORARY COVER FORMULA					10.0 TOTAL
WINTER RYE (SECALE CEREALE)	50	98	70	0.10	5.0
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	50	98	90	0.15	5.0
FORMULA B (PERMANENT SEED)					42.0 TOTAL
PERENNIAL RYEGRASS MIXTURE (LOLIUM PERENNE). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT	20	97	90	0.10	8.5
CREeping RED FESCUE OR CHEWING FESCUE	30	97	85	0.10	12.5
KENTUCKY BLUEGRASS MIXTURE (POAPRANTENSIS). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 25% OF THE TOTAL BLUEGRASS COMPONENT	50	97	80	0.15	21.0
FORMULA D (PERMANENT SEED)					50.0 TOTAL
TALL FESCUE (FESTUCA ARUNDINACEA VER. KENTUCKY 31)	60	96	85	0.10	30.0
CREeping RED FESCUE OR CHEWING FESCUE	30	97	85	0.10	15.0
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	10	95	90	0.10	5.0
FORMULA E (MEADOWS, SLOPES AND BANKS)					X TOTAL
SWITCHGRASS, OR	X	60	60	X	X
BIG BLUESTEM, PLUS	X	60	60	X	X
BIRDSFOOT TREFOIL	X	98	80	X	X
WETLAND RESTORATION					150.0 TOTAL
ANNUAL RYEGRASS					50
ERNST OBL-FACW PERENNIAL FOOD AND COVER WETLAND					100

TRENCH WIDTHS AT PIPE INSTALLATIONS			
INSTALLATION DEPTH (FT)	MAXIMUM TRENCH TOP WIDTH (FT)	TRENCH AVERAGE WIDTH (FT)	LOD WIDTH (FT)
< 10	5	5	30
10 - 14	13	9	30
14 - 18	21	17	30
18 - 33	29	25	40

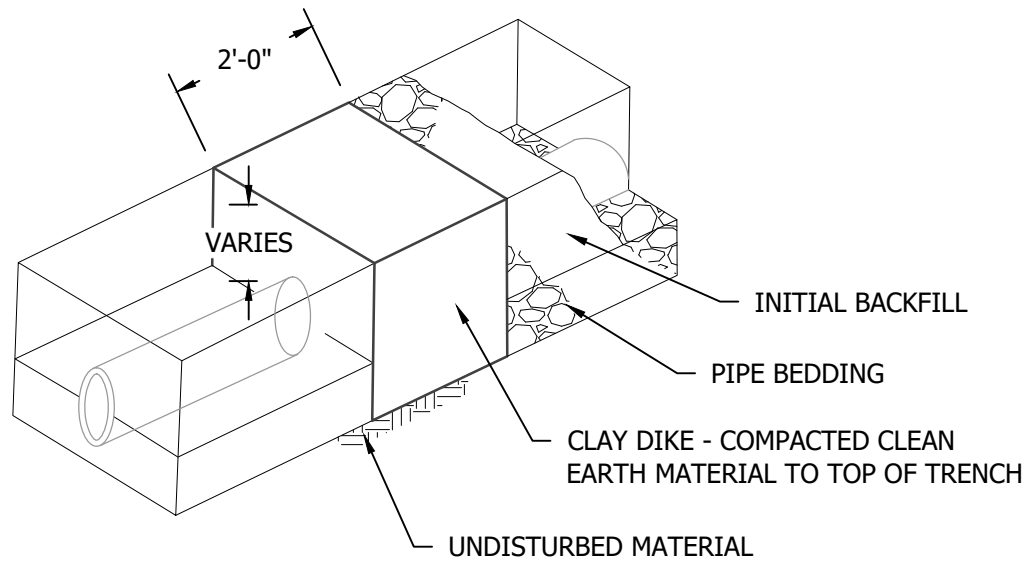
EROSION AND SEDIMENT GENERAL REQUIREMENTS

1. INTENT OF CONSERVATION PROGRAM: THE INTENT OF THIS PROGRAM IS TO PREVENT ACCELERATED EROSION OF THE EXPOSED SITE SOILS DURING THE CONSTRUCTION AND PERMANENT LIFE PERIODS OF THE DEVELOPMENT. THE PROGRAM REQUIRES RETENTION OF ALL SEDIMENTS ON THE CONSTRUCTION SITE WHILE MINIMIZING THE IMPACT OF DEVELOPMENT ON EXISTING STREAMS AND ADJACENT PROPERTY OWNERS.
2. THESE OBJECTIVES WILL BE ACHIEVED BY MINIMIZING THE EXPOSURE TIME OF POTENTIALLY EROSION SOILS TO RUNOFF AND INSTALLATION OF THE TEMPORARY AND PERMANENT CONSERVATION PRACTICES IN PROPER SEQUENCE WITH CONSTRUCTION. THE INTENT OF THIS PROGRAM SHOULD BE UNDERSTOOD AND IMPLEMENTED THROUGHOUT THE ENTIRE DEVELOPMENT. THE VARIOUS CONSTRUCTION TRADES SHOULD BE APPRAISED OF THIS PROGRAM AND DIRECTED TO PREVENT UNDUE DISTURBANCE OF PREPARED AND PROTECTED SURFACES.
3. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE OR ANY AREA OF THE SITE WHERE WORK HAS CEASED FOR 4 DAYS SHALL BE IMMEDIATELY SEEDED AND MULCHED IN ACCORDANCE WITH TEMPORARY SEEDING AND MULCHING SPECIFICATION, OR PERMANENT STABILIZATION.
4. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 102, EROSION CONTROL.
5. SHOULD UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS. EVERY PRECAUTION NECESSARY MUST BE TAKEN TO PREVENT DAMAGE TO ADJACENT PROPERTIES RESULTING FROM INCREASED RUNOFF AND/OR SEDIMENT DEPOSITION. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE, SILT FENCE AND SEED SHALL BE MAINTAINED ON THE SITE TO BE UTILIZED IMMEDIATELY SHOULD AN EMERGENCY EROSION PROBLEM DEVELOP.
6. EVERY PRECAUTION MUST BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PROTECT EXISTING TREES AND SHRUBS ADJACENT TO WORK AREAS FROM UNNECESSARY DAMAGE.
7. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES.
8. IF ANY OF THESE MEASURES CONTAINED WITHIN THIS PLAN PROVE INADEQUATE FOR REMOVING SEDIMENT FROM FLOWS PRIOR TO DISCHARGE OF STABILIZING OF THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR/APPLICANT TO ELIMINATE ALL SUCH PROBLEMS. SAID MEASURES SHALL BE APPROVED BY THE LOCAL SOIL CONSERVATION DISTRICT.
9. EROSION CONTROL BLANKET (ECB) IS TO BE USED ON ALL SWALES, AND ALL SEDIMENT BASINS, TRAPS AND BERMS. IN ADDITION, ALL SLOPES STEEPER THAN 3:1 MUST UTILIZE EROSION CONTROL BLANKET.
10. THE DEVELOPER MUST PREPARE ADDITIONAL EROSION AND SEDIMENTATION CONTROL PLANS FOR EACH SPOIL, BORROW OR WORK AREA NOT DETAILED IN THIS PLAN. THESE PLANS MUST BE APPROVED BY THE SOIL CONSERVATION DISTRICT PRIOR TO COMMENCING WORK.
11. A COPY OF THIS EROSION AND SEDIMENTATION CONTROL PLAN MUST BE POSTED AT THE CONSTRUCTION SITE IN ACCORDANCE WITH STATE LAW.
12. SOIL STOCKPILE HEIGHTS MUST NOT EXCEED 20 FEET AND SIDE SLOPES ARE TO BE 2:1 OR FLATTER. ALL SOIL STOCKPILES MUST BE IMMEDIATELY STABILIZED WITH TEMPORARY SEED AND MULCH.
13. UNTIL THE SITE IS STABILIZED, ALL EROSION SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITEE OR CO-PERMITEE SHALL INCLUDE THE FOLLOWING INFORMATION:
  - a. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
  - b. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE REOCCURRENCE OF THE NON-COMPLIANCE.
  - c. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADED, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.
14. ALL SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE PUMPED THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
15. THE EROSION AND SEDIMENTATION CONTROL PLAN SHOWS THE BASIC CONTROL MEASURES TO PREVENT EROSION AND SEDIMENTATION ON THE PROJECT SITE. EROSION AND SEDIMENTATION CONTROLS AND TEMPORARY AND PERMANENT SITE STABILIZATION SEEDING SHALL BE INSTALLED AND MAINTAINED AS DETAILED ON THE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND MAINTAIN CONTROL MEASURES, WHICH EFFECTIVELY PREVENT ACCELERATED EROSION AND SEDIMENTATION.
16. EXISTING SWALES, STREAMS, AND STORM DRAINS SUBJECT TO RUNOFF FROM THE WORK AREA WILL BE PROTECTED THROUGHOUT THE CONSTRUCTION SEQUENCE AND UNTIL ALL DISTURBED AREAS ARE STABILIZED.
17. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. STABILIZATION WILL BE SCHEDULED IMMEDIATELY AFTER ANY DISTURBANCE. IF DISTURBANCE OCCURS DURING NON-GERMINATING SEASONS TEMPORARY MEASURES OF STABILIZATION WILL APPLIED UNTIL SPRING WHEN SEEDING CAN OCCUR. TEMPORARY MEASURES WILL CONSIST OF MULCHING THE DISTURBED AREA IN ACCORDANCE WITH TABLE 11.6 ON THIS DRAWING OR APPLYING EROSION CONTROL BLANKET.
18. SEDIMENT REMOVAL FROM CONTROL STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE SEDIMENT SHALL BE PLACED ON AN UPSLOPE AREA, GRADED AND STABILIZED.
19. SEDIMENT WILL BE CONTROLLED USING SILT SOCKS. THE SILT SOCKS WILL BE INSTALLED AT EXISTING LEVEL GRADE. BOTH ENDS OF EACH SILT SOCK WILL BE EXTENDED AT LEAST 8-FEET UPSLOPE AT A 45-DEGREE ANGLE TO THE MAIN SILT SOCK ALIGNMENT. SEDIMENT WILL BE REMOVED WHERE ACCUMULATIONS REACHES ONE-HALF THE ABOVEGROUND HEIGHT OF THE SILT SOCK. SOIL SUPPLEMENTS, SEED AND MULCH WILL BE APPLIED IMMEDIATELY AFTER THE GRADING IS COMPLETE.
20. ALL CONSTRUCTION WASTE WILL BE PLACED IN DUMPSTERS AND HAULED OFF SITE, ANY RECYCLABLE MATERIALS SHALL BE RECYCLED WHENEVER POSSIBLE. EXCAVATED MATERIAL NOT INTEGRATED INTO ON-SITE FILL SHALL BE HAULED TO A SITE WITH AN APPROVED EROSION CONTROL PLAN.
21. REFER TO PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL FOR MORE DETAILS ON INSPECTION AND MAINTENANCE OF BMP'S.
22. MAINTENANCE OF EACH EROSION CONTROL BMP SHALL BE AS DIRECTED IN THE INDIVIDUAL BMP DETAILS PROVIDED IN THIS DRAWING SET.
23. PNDI COMMENTS:
  - A. PA FISH AND BOAT HAS NOTED THAT THERE ARE POSSIBLY RARE AND ENDANGERED MUSSELS IN THE STREAMS. CONTRACTOR TO HIRE A QUALIFIED MUSSEL SURVEYOR TO RELOCATE MUSSELS FROM THE AREAS OF DIRECT IMPACT. WHEN CONDUCTING IN-STREAM WORK.
  - B. U.S. FISH AND WILDLIFE SERVICE HAS IDENTIFIED AN EAGLE'S NEST ALONG THE SUSQUEHANNA RIVER SOUTH OF FOLK NURSERY (MAP COORDINATES 41.017326, -76.365457). WHEN CONSTRUCTING THE INTERCEPTOR IN THIS AREA, CONTRACTOR SHALL LIMIT WORK TO WITHIN THE PREVIOUSLY DISTURBED AREAS (CANAL AND TOW PATH) TO THE GREATEST DEGREE POSSIBLE WHEN WORKING WITHIN 660 FT OF THIS LOCATION. NO WORK WITHIN 660 FT OF THIS LOCATION FROM JANUARY 1 TO JULY 30.
24. ALL TOPSOIL IS TO BE SEGREGATED FROM SUBSOILS AND PROTECTED FROM EROSION UTILIZING THE TEMPORARY SOIL STOCKPILE DETAIL ON SHEET G-5.
25. CONTRACTOR WILL ADHERE TO ALL PADEP BMP'S DURING ALL ACTIVITIES THAT WILL IMPACT THE DELINEATED WETLANDS.

WWTP SOIL DATA						
SOIL TYPE	ABBR.	ROADFILL SOURCE	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING	DRAINAGE CLASS	DEPTH TO SOIL RESTRICTIVE LAYER (INCHES)
CHENANGO GRAVELLY SANDY LOAM	CgA	LOW STRENGTH	A	NO	WELL DRAINED	>80
MIDDLEBURY SILT LOAM	Md	WETNESS	B/D	NO	MODERATELY WELL DRAINED	60-99

MCGUIRE PARK DRIVE SOIL DATA						
SOIL TYPE	ABBR.	ROADFILL SOURCE	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING	DRAINAGE CLASS	DEPTH TO SOIL RESTRICTIVE LAYER (INCHES)
CHENANGO GRAVELLY SANDY LOAM	CgA	LOW STRENGTH	A	NO	WELL DRAINED	>80
CHANANGO GRAVELLY SANDY LOAM	CgB2	LOW STRENGTH	A	NO	WELL DRAINED	>80

TABLE 11.6 Mulch Application Rates				
Mulch Type	Application Rate (Min.)			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Straw	3 tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 - 6 tons	185 - 275 lb.	1,650 - 2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations above

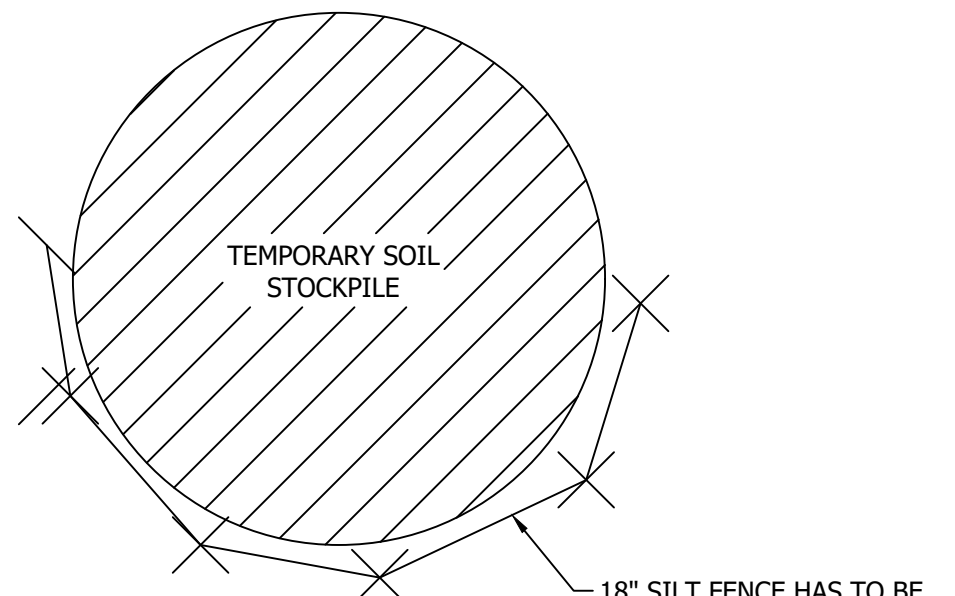


NOTES:

1. CLAY DIKE SHALL CONSIST OF CLAY CONTAINING NO MORE THAN 15% (BY VOLUME) STONE NOT LARGER THAN TWO (2) INCHES IN DIAMETER. CLAY SHALL BE PLACED IN SIX (6) INCH LIFTS AND COMPACTED BY MECHANICAL TAMPER TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT
2. DOES NOT APPLY TO CLAY DIKES PLACED TO ISOLATE WETLANDS AND PREVENT DRAINAGE

CLAY DIKE DETAIL

N.T.S.



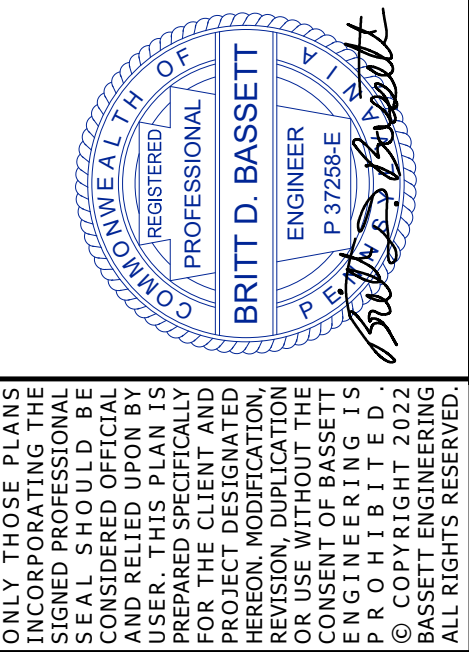
NOTES:

1. SOIL STOCK PILE HEIGHTS MUST NOT EXCEED 20 FEET AND SIDE SLOPES ARE TO 2:1 OR FLATTER. ALL SOIL STOCKPILES MUST BE IMMEDIATELY STABILIZED WITH TEMPORARY SEED AND MULCH.
2. TOPSOIL & SUBSOILS ARE TO BE STOCKPILED SEPARATELY & PROTECTED AS SHOWN IN THIS DETAIL.

TEMPORARY SOIL STOCKPILE DETAIL

N.T.S.

DRAWING REVISIONS			
NO.	REVISION	DATE	
1	JOINT PERMIT SUBMISSION	3/18/2022	
2	JOINT PERMIT/CH. 102 SUBMISSIONS	6/17/2022	
	JOINT PERMIT SUBMISSIONS	9/14/2022	



SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

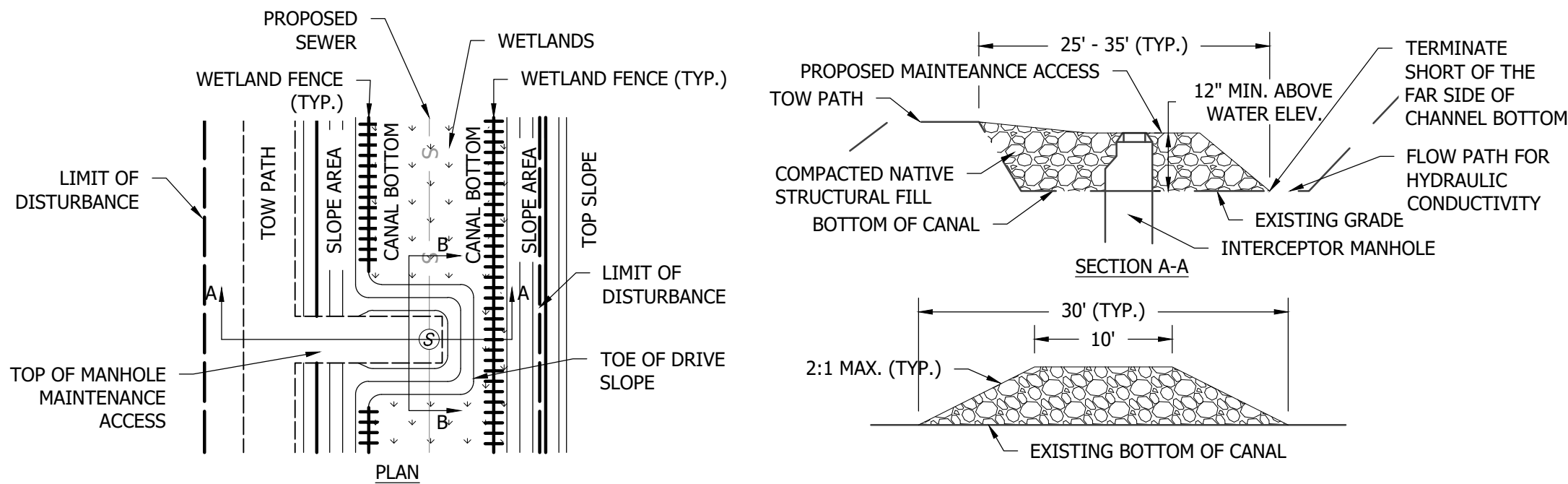
EROSION CONTROL  
NOTES

DRAWING DATE: 03/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

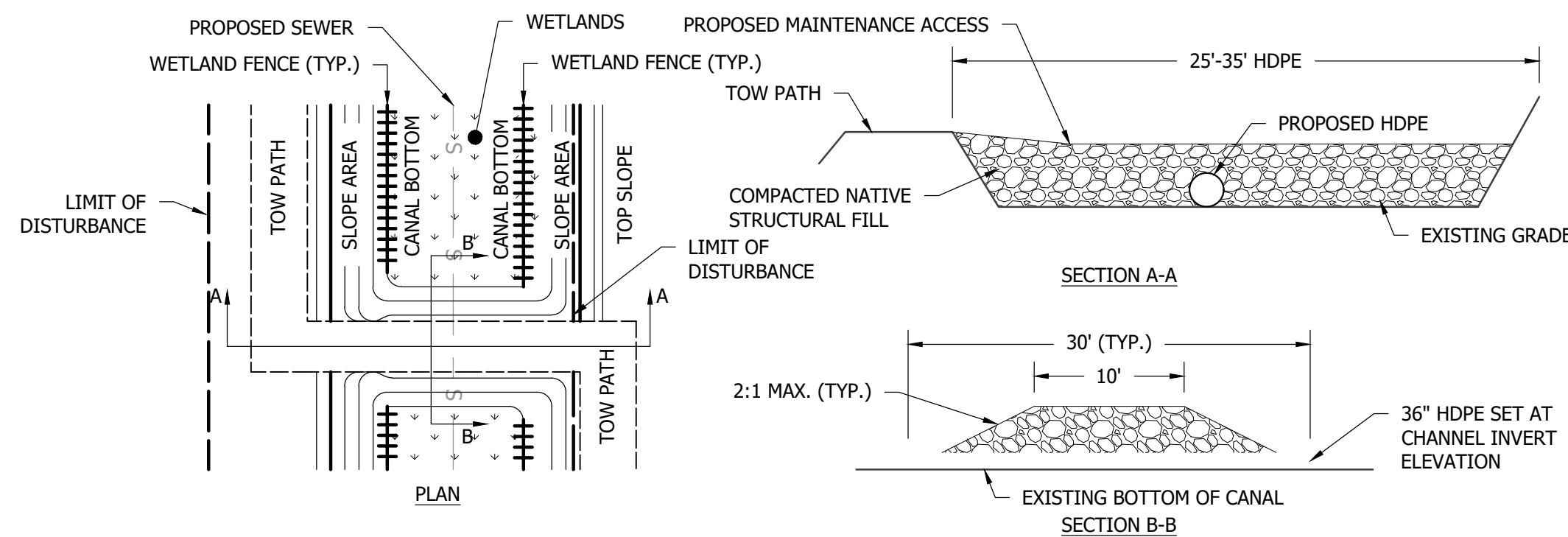
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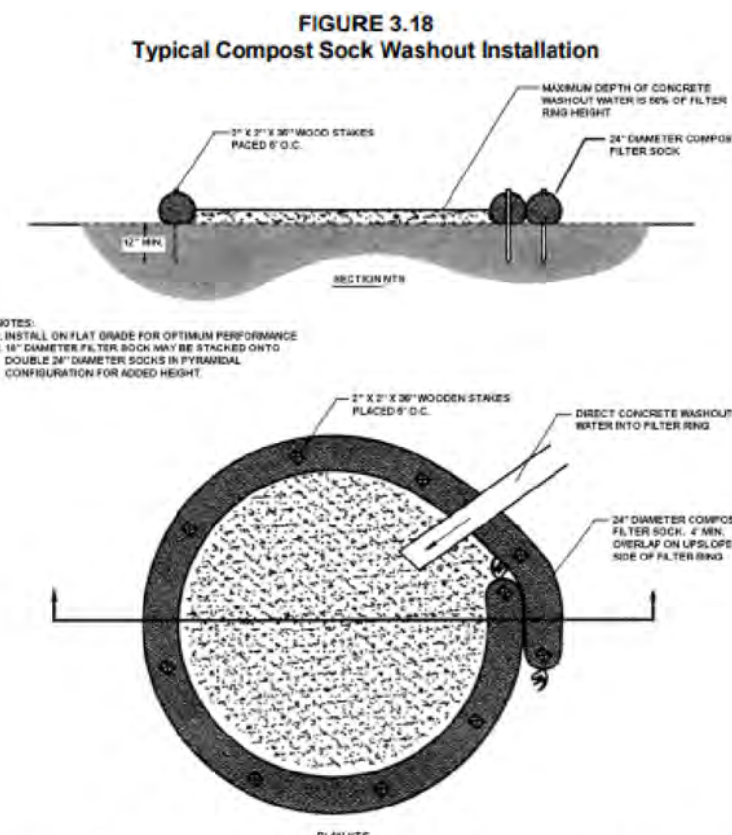
NOTES:  
1. CONSTRUCT MAINTENANCE ACCESS PERPENDICULAR TO THE TOW PATH TO MINIMIZE IMPACT IN CANAL.

CANAL MANHOLE ACCESS DRIVE DETAIL  
N.T.S.



NOTES:  
1. CONSTRUCT MAINTENANCE ACCESS PERPENDICULAR TO THE TOW PATH TO MINIMIZE IMPACT IN CANAL.

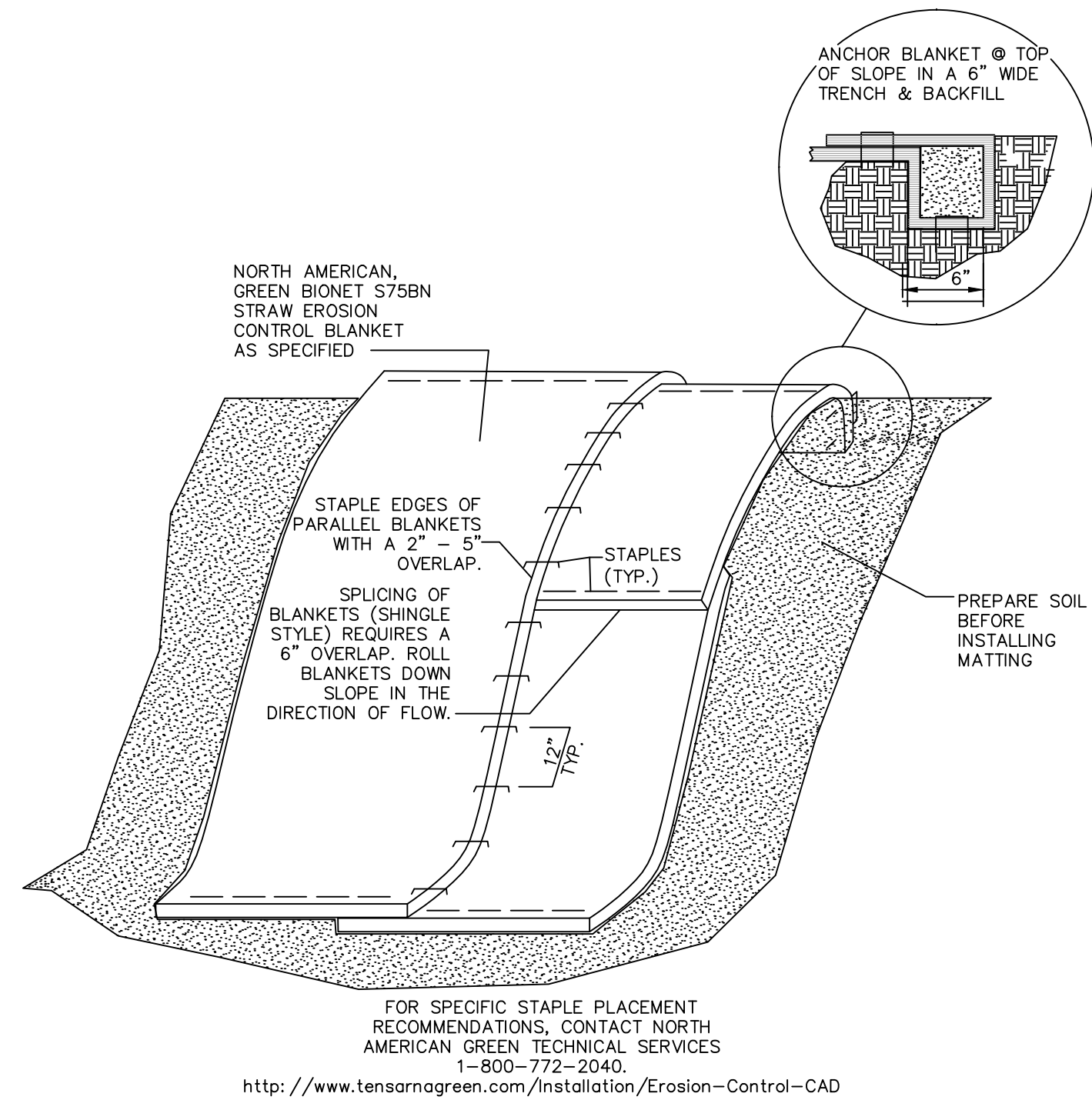
CANAL MANHOLE ACCESS DETAIL  
N.T.S.



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.  
Adapted from Filtraxx.

COMPOST SOCK WASHOUT  
N.T.S.

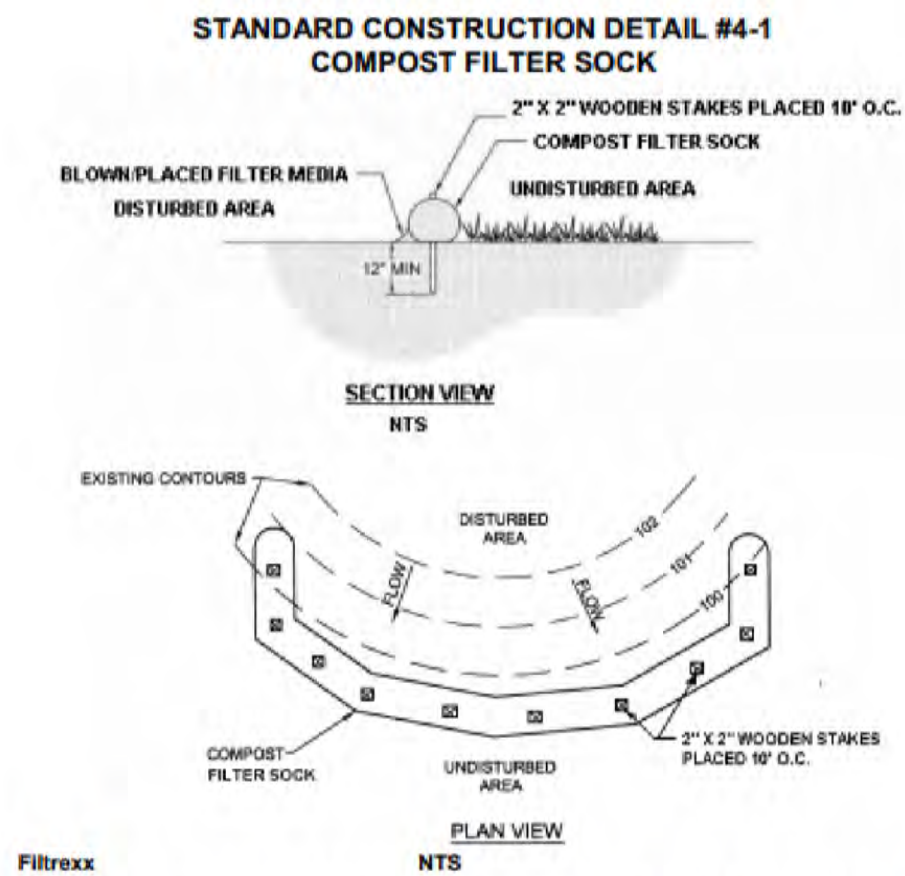
EROSION CONTROL BLANKET LOCATIONS					
SHEET #	PROFILE #	PIPE #	STA	LINEAR FT.	GROUND SLOPE
LR-5	LR-5	1		48	25.97%
LR-8	LR-8A	11		43	14.80%
LR-8	LR-8B	13		15	28.54%
LR-9	LR-9B	46		30	25.54%
LR-26	LR-26	106		2	9.25%
AC-12	AC-12	41		50	4.66%
AC-18	AC-18	37		23	16.78%
EI-1	LAT	1	1+42	145	24.60%
EI-1	LAT	4	10+5	126	14.79%
EI-1	LAT	4	11+19	220	18.26%
EI-1	LAT	4	12+74	85	9.53%
EI-2	LAT	6	15+89	75	1.76%
EI-2	LAT	6	18+15	80	8.17%
EI-2	LAT	7	19+24	82	8.65%
EI-2	LAT	7	20+49	40	8.16%
EI-2	LAT	7	21+71	42	1.87%
EI-2	LAT	8	23+80	123	4.76%
EI-2	LAT	8	24+75	85	3.16%
EI-3	LAT	10	29+16	25	0.40%
EI-4	LAT	15	41+38	84	1.54%
EI-4	LAT	16	44+82	82	13.29%
AI-1	LAT	1	0+75	159	15.94%
AI-1	LAT	1	1+12	125	16.76%
AI-1	LAT	2	5+04	86	16.97%
AI-1	LAT	3	9+59	360	24.41%
AI-1	LAT	4	11+61	319	27.85%
AI-2	LAT	5	15+75	215	18.68%
AI-2	LAT	5	17+15	240	27.85%
AI-2	LAT	5	18+95	230	27.65%
AI-2	LAT	7	23+58	210	19.33%
AI-3	LAT	8	26+14	125	15.45%
AI-3	LAT	8	28+24	155	18.63%
AI-3	LAT	9	29+86	150	18.72%
AI-3	LAT	9	30+52	165	16.96%
AI-3	LAT	9	31+54	165	16.79%
AI-3	LAT	9	32+40	164	14.80%
AI-3	LAT	10	33+53	153	14.61%
AI-3	LAT	10	34+75	157	11.26%
AI-3	LAT	10	35+48	153	9.37%
AI-3	LAT	11	37+61	134	11.56%
AI-3	LAT	11	38+62	135	13.55%
AI-3	LAT	11	39+61	128	12.44%
AI-4	LAT	11	40+70	118	14.71%
AI-4	LAT	12	41+70	106	16.50%
AI-4	LAT	12	42+71	95	19.22%
AI-4	LAT	12	44+1	88	19.08%
AI-4	LAT	13	45+13	99	17.34%
AI-4	LAT	13	46+25	111	18.25%
AI-4	LAT	13	47+73	109	18.52%
AI-4	LAT	13	48+91	105	25.11%
AI-4	LAT	14	50+72	56	21.00%
AI-5	LAT	15	55+15	210	30.87%
AI-5	LAT	17	63+84	355	27.17%
AI-6	LAT	18	66+32	20	0.31%
AI-6	LAT	19	68+56	160	5.84%
AI-6	LAT	21A	73	33	2.71%



FOR SPECIFIC STAPLE PLACEMENT RECOMMENDATIONS, CONTACT NORTH AMERICAN GREEN TECHNICAL SERVICES 1-800-772-2040.

<http://www.tensarogreen.com/installation/Erosion-Control-CAD>

EROSION CONTROL BLANKET DETAIL  
N.T.S.



Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of Table 4.2.

Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1). Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.

Traffic shall not be permitted to cross filter socks.

Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the manner described elsewhere in the plan.

Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.

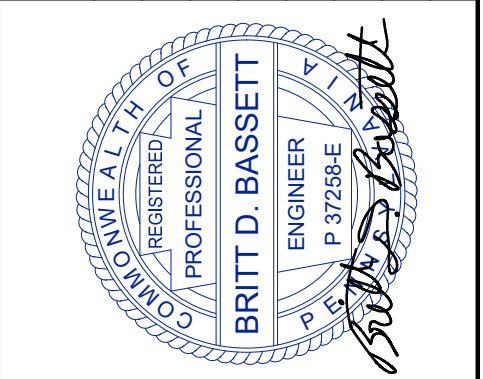
Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

COMPOST FILTER SOCK STANDARD DETAIL  
N.T.S.

# DRAWING REVISIONS

NO.	REVISION	DATE
1	JOINT PERMIT/CH. 102 SUBMISSIONS	3/15/2022
2	JOINT PERMIT/CH. 102 SUBMISSIONS	7/18/2022
3	JOINT PERMIT	9/14/2022



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570-368-2131

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

EROSION CONTROL  
PLAN & DETAILS

DRAWING DATE: 10/19/2022

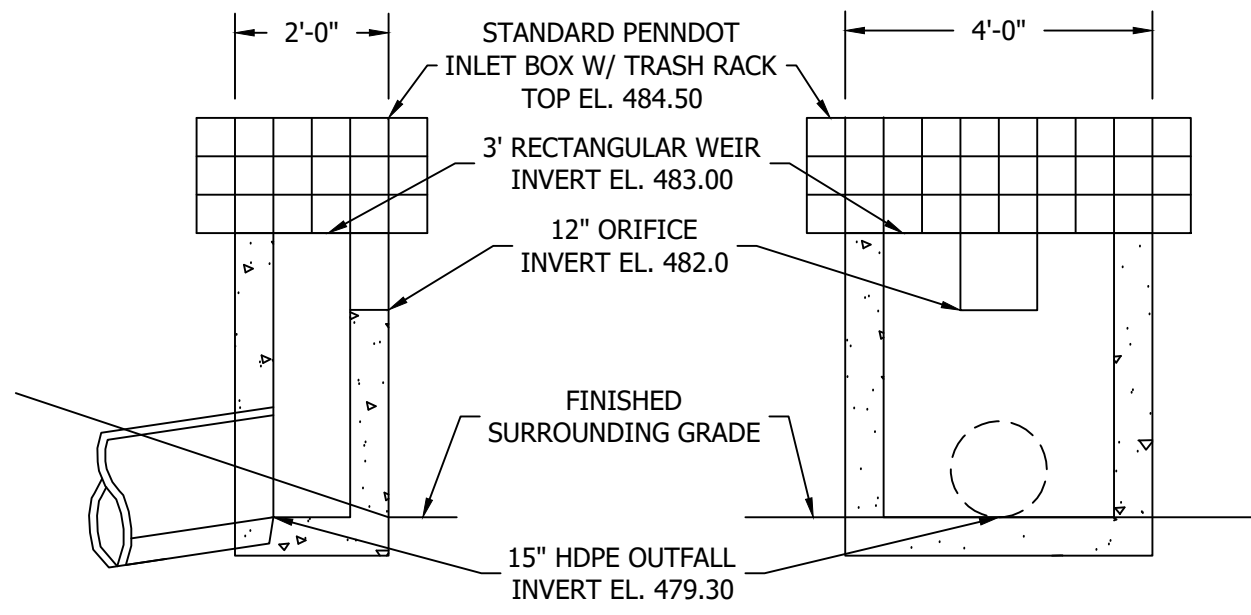
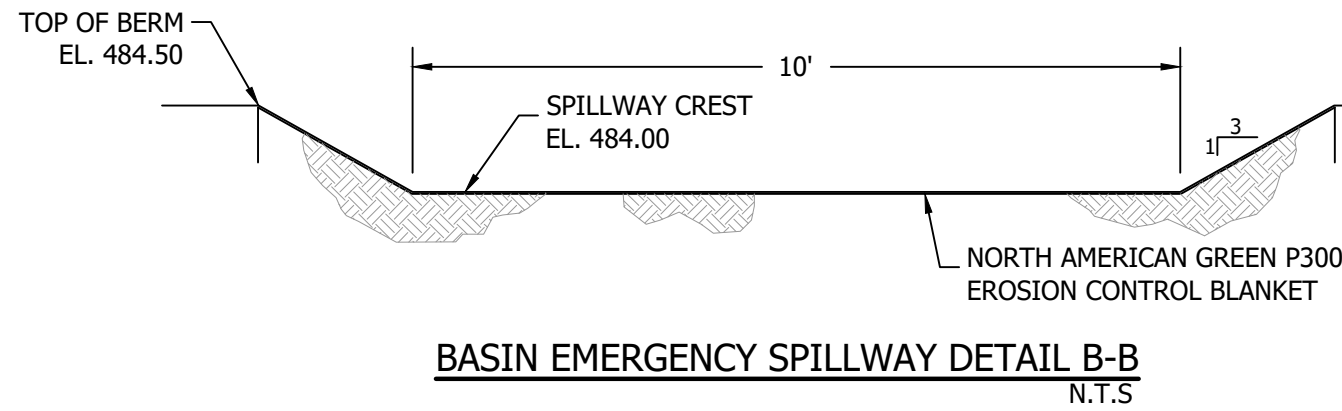
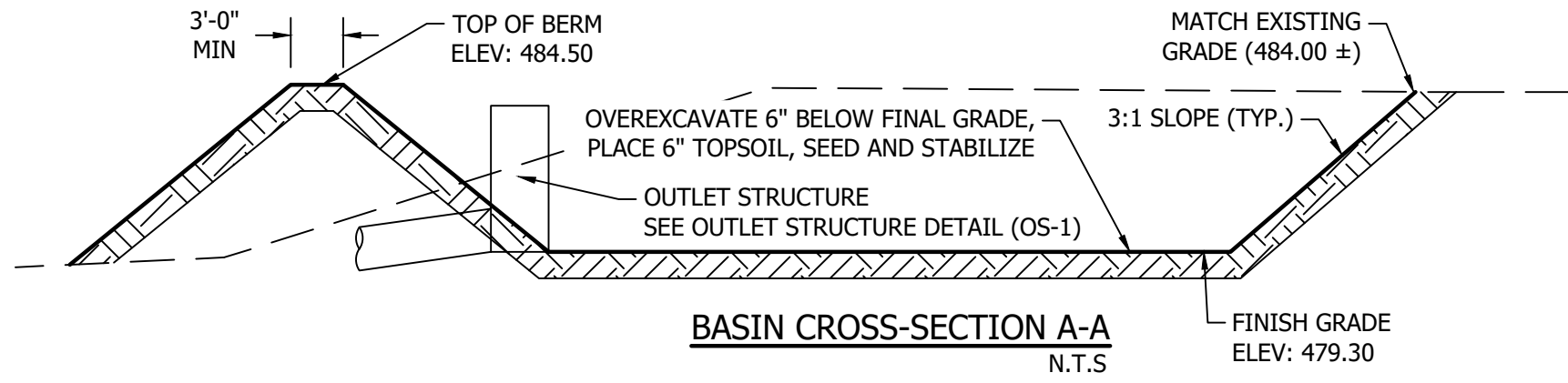
THIS BAR IS 2 INCHES AT FULL SIZE

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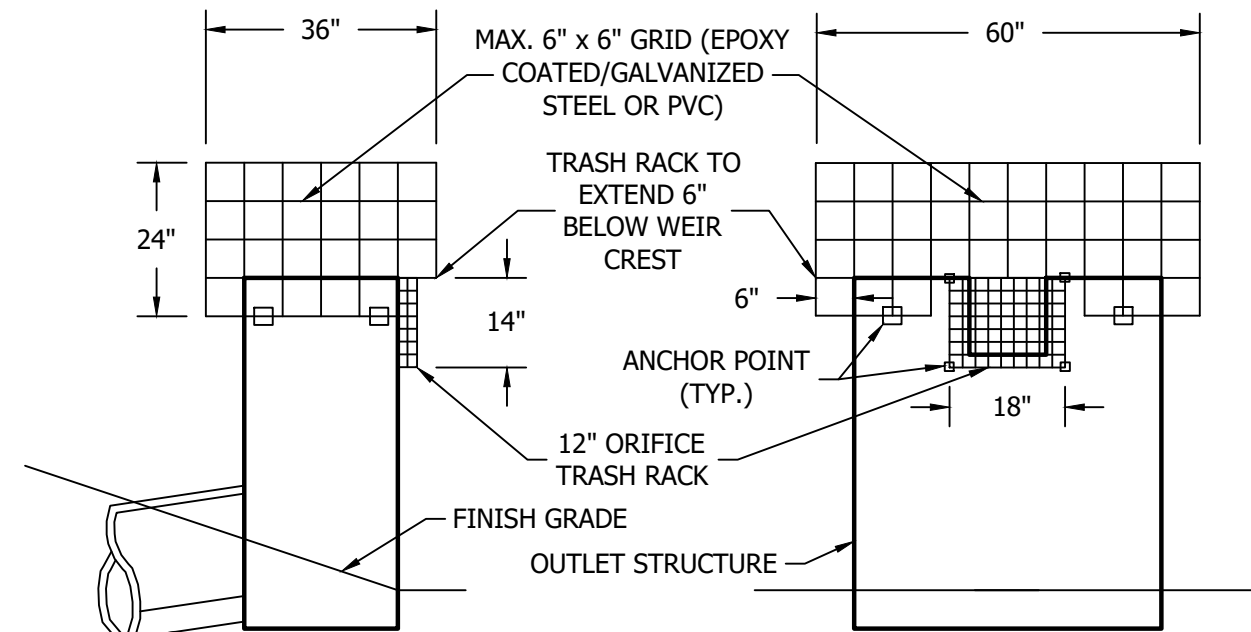






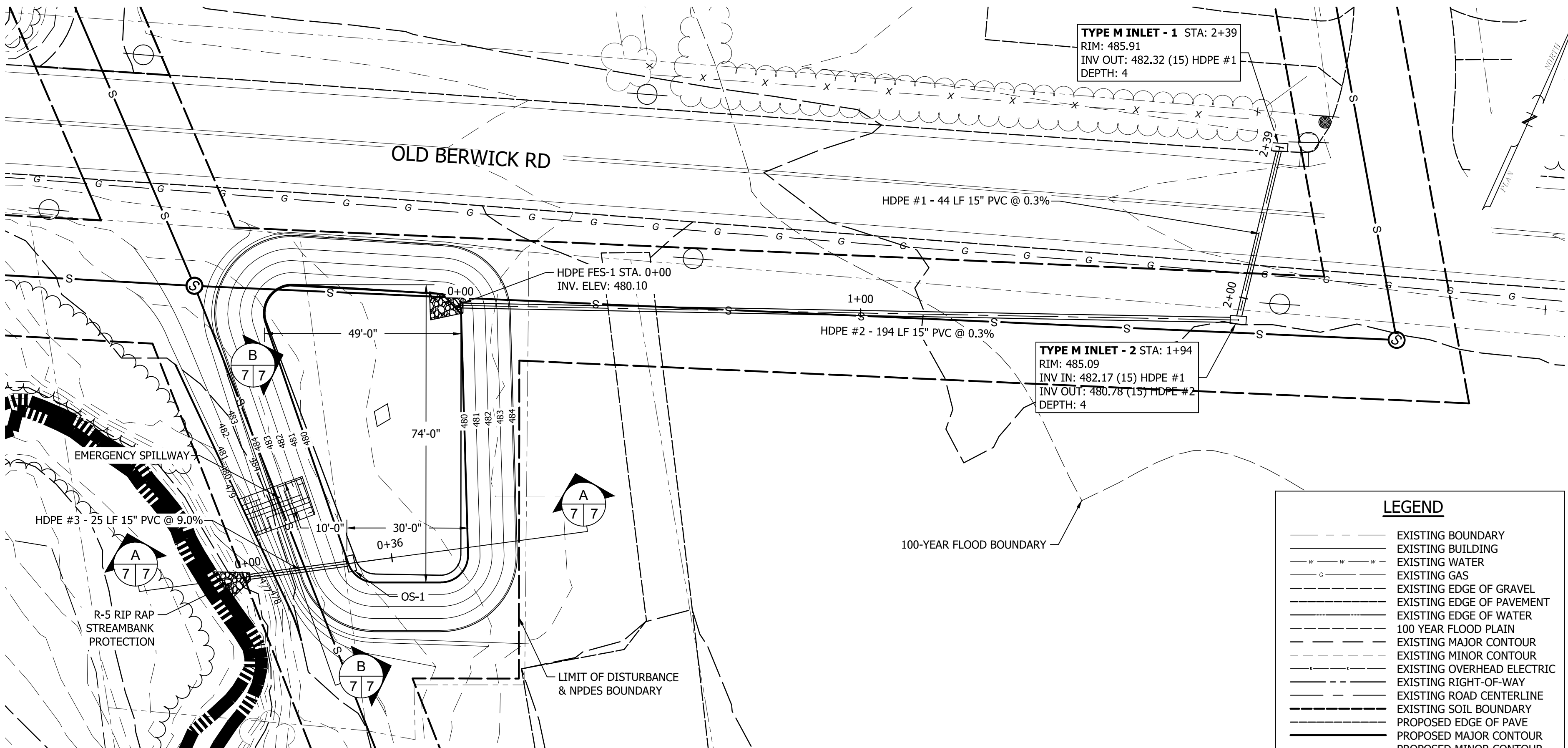


**BASIN OUTLET CONTROL STRUCTURE (OS-1)**  
SCALE: 1" = 30'

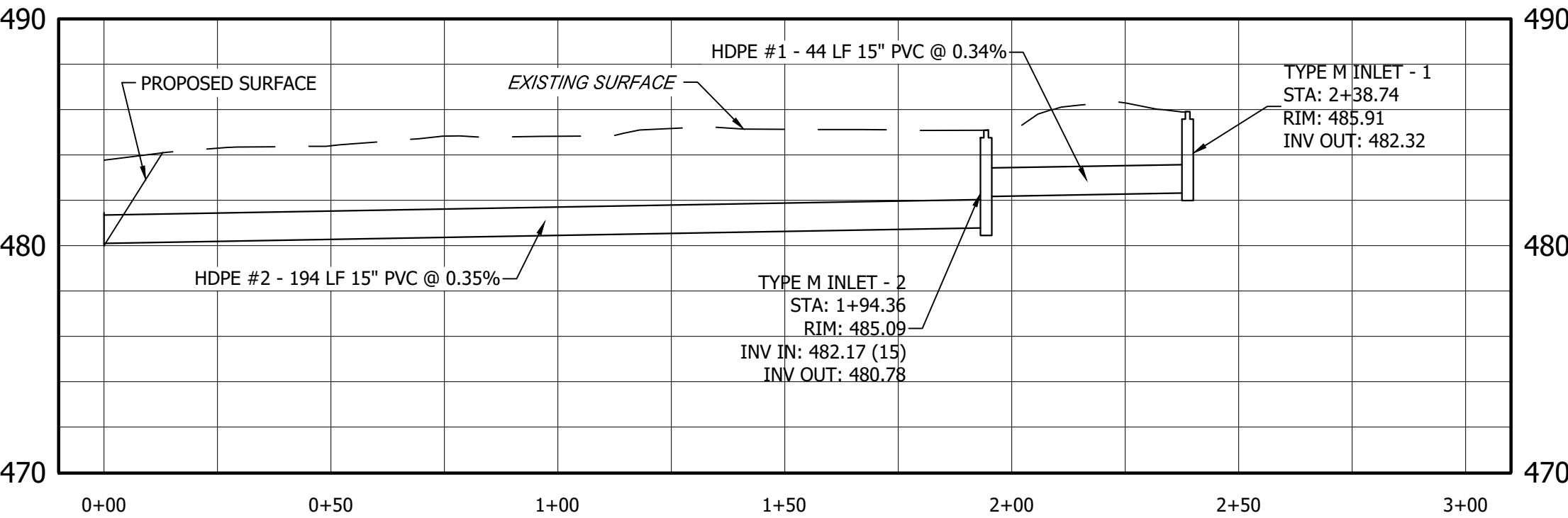


NOTE:  
1. ANCHOR TRASH RACKS TO THE OUTLET STRUCTURE WITH STAINLESS STEEL HARDWARE BY AT LEAST TWO POINTS ON EACH SIDE OF THE OUTLET STRUCTURE.

**TRASH RACK DETAIL**  
SCALE: 1" = 30'



NOTE: CONTRACTOR SHALL MINIMIZE OPERATING CONSTRUCTION EQUIPMENT ON THE EXCAVATED AND RESTORED BOTTOM OF THE INFILTRATION BASIN.  
SCALE: 1" = 20'



**McGUIRE DRIVE COLLECTION SYSTEM PROFILE**  
SCALE: 1" = 50'

**BMP CONSTRUCTION SEQUENCE**

1. EXCAVATE STORMWATER MANAGEMENT BASIN. PROTECT BASIN BOTTOM FROM COMPACTION BY CONSTRUCTION VEHICLES.
2. INSTALL BASIN OUTLET STRUCTURE, EMERGENCY SPILLWAY, ENERGY DISSIPATER AND SLOPE MATTING. \*
3. CONSTRUCT STORM SEWERS AND INLETS AS SOON AS GRADING PERMITS.
4. SEED AND STABILIZE ALL DISTURBED AREAS AS SOON AS GRADING PERMITS.

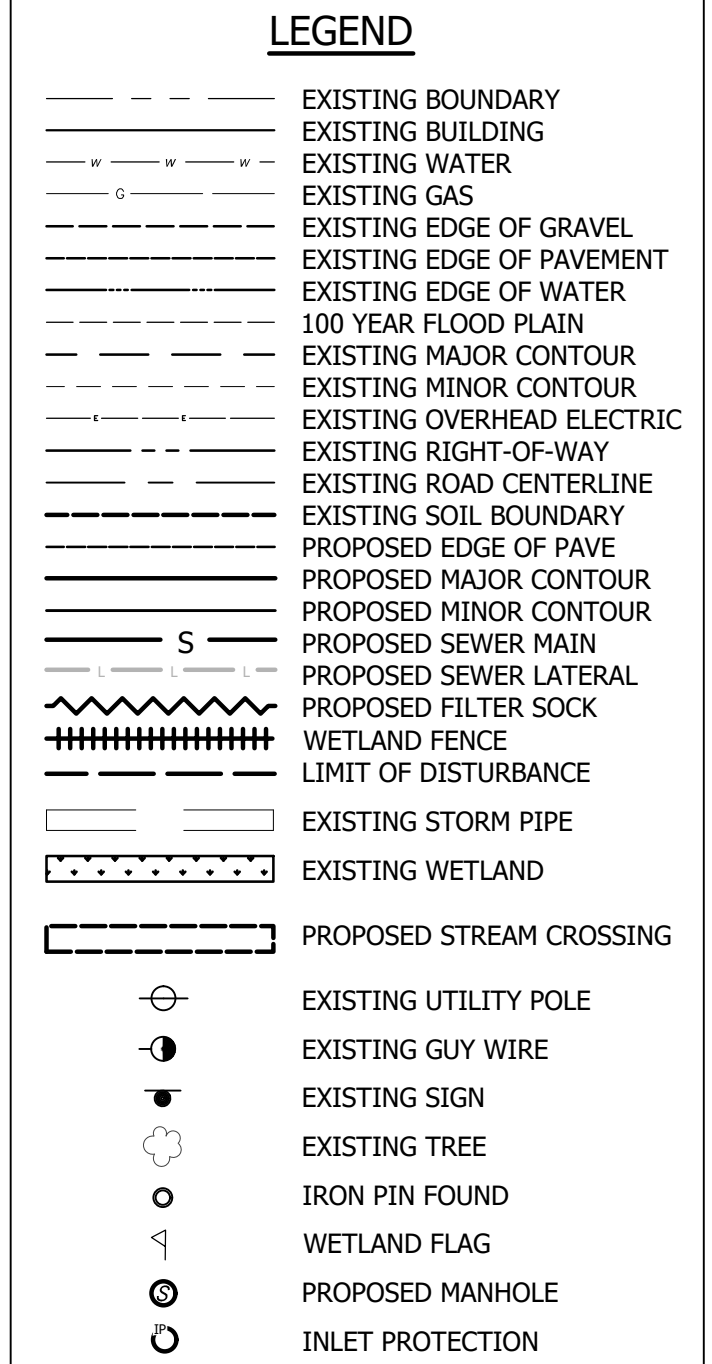
\* CRITICAL STAGE WHEN THE ENGINEER OR DESIGNEE SHALL INSPECT THE BMP AT THIS STAGE.

**BASIN CONSTRUCTION SEQUENCE:**

1. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT LADEN WATER FROM ENTERING INLETS AND PIPES.
2. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
3. DEMOLISH ROCK OR EXISTING OBSTRUCTIONS TO BE AT LEAST 2 FT. BELOW THE BOTTOM OF THE PROPOSED BASIN.
4. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
5. INSTALL OUTLET CONTROL STRUCTURE.
6. SEED AND STABILIZE TOPSOIL. VEGETATE WITH MEADOW SEED MIX.
7. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

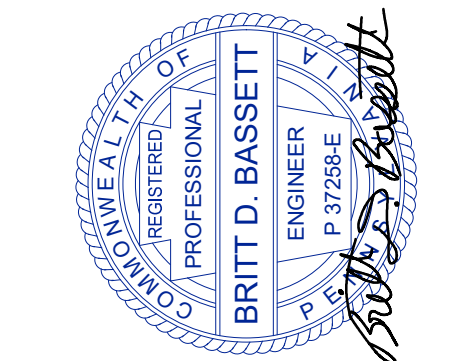
**BMP MAINTENANCE AND INSPECTION:**

1. INSPECT AND CLEAN CATCH BASINS AND INLETS (UPGRADIENT OF INFILTRATION BASIN) AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS.
2. MAINTAIN THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION BASIN IN GOOD CONDITION, AND REVEGETATE ANY BARE SPOTS AS SOON AS POSSIBLE.
3. DO NOT PARK OR DRIVE VEHICLES ON THE INFILTRATION BASIN, AND TAKE CARE TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS.
5. INSPECT BASIN FOR ACCUMULATION OF SEDIMENT AND DEBRIS, DAMAGE TO OUTLET CONTROL STRUCTURE, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS.
6. IMMEDIATELY REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE. PROPERLY DISPOSE OF SEDIMENT.
7. IMMEDIATELY BEGIN REPAIR OF DAMAGE TO BASIN OUTLET STRUCTURE AND BERM.
8. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
9. MOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPECIES.
10. SOUTH CENTRE SHALL COMPLETE INSPECTIONS, AND GENERATE WRITTEN REPORTS WITHIN 30 DAYS OF THE INSPECTION. THE INSPECTIONS SHALL OCCUR (AT MINIMUM) ANNUALLY FOR THE FIRST 5 YEARS, ONCE EVERY 3 YEARS THEREAFTER, AND DURING OR IMMEDIATELY FOLLOWING THE CESSATION OF A 10 YEAR STORM EVENT. THE REPORT WILL CONTAIN THE DATE & TIME OF THE INSPECTION, THE LOCATION OF THE BMP, FACILITY OR STRUCTURE INSPECTED, OBSERVATIONS ON PERFORMANCE, AND RECOMMENDATIONS FOR IMPROVING PERFORMANCE, IF APPLICABLE.



- NOTES:
1. THE OPERATION AND MAINTENANCE (O&M) AGREEMENT FOR THIS PROJECT IS TO BE CONSIDERED A PART OF THIS PLAN WHETHER OR NOT IT APPEARS HEREON.
  2. AN AS-BUILT DRAWING SHALL BE PROVIDED FOR ALL STORMWATER MANAGEMENT FACILITIES PRIOR TO OCCUPANCY OF THE LAND OR STRUCTURES, OR THE RELEASE OF FINANCIAL SECURITY FOR SAID FACILITIES.
  3. NOTHING SHALL BE PLACED, PLANTED, OR SET WITHIN AN EASEMENT OR RIGHT-OF-WAY WHICH WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR RIGHT-OF-WAY, OR CONFLICT WITH ANY CONDITIONS ASSOCIATED WITH SUCH EASEMENT OR RIGHT-OF-WAY.
  4. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY EXISTING STORMWATER BMP, FACILITIES, AREAS, OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM, WITHOUT THE WRITTEN APPROVAL OF THE TOWNSHIP.
  5. NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER BMP, FACILITIES, AREAS, STRUCTURES, OR WITHIN A DRAINAGE EASEMENT THAT WOULD LIMIT OR ALTER THE FUNCTIONING OF THE BMP WITHOUT THE WRITTEN APPROVAL OF THE TOWNSHIP.
  6. THE APPROVED SWM SITE PLAN SHALL BE ON FILE AT THE PROJECT SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION ACTIVITY.
  7. THIS PROJECT IS DESIGNED TO:
    - A. PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM.
    - B. PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF.
    - C. MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME.
    - D. MINIMIZE IMPERVIOUS AREAS.
    - E. MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
    - F. MINIMIZE LAND CLEARING AND GRADING.
    - G. MINIMIZE SOIL COMPACTION.
    - H. UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.
  11. THE DEVELOPMENT AREA CONSISTS OF EXISTING STRUCTURES, ASPHALT DRIVE, LAWN, AND MEADOW.
  12. NO GEOLOGIC FEATURES AFFECTING CONSTRUCTION ARE WITHIN THE PROJECT AREA.
  13. THE NPDES PERMIT BOUNDARY IS DELINEATED HERE.
  14. THE PROJECT IS NOT WITHIN AN HQ OR EV WATERSHED.
  15. CONSTRUCTION WASTE SHALL BE STORED IN A DUMPSTER AND SHALL BE REMOVED FROM THE SITE.
  16. ALL EXISTING AND NATURAL WATERCOURSES, CHANNELS, DRAINAGE SYSTEMS, AND AREAS OF SURFACE WATER CONCENTRATION SHALL BE MAINTAINED IN THEIR EXISTING CONDITION UNLESS AN ALTERATION IS APPROVED BY THE APPROPRIATE REGULATORY AGENCY.
  17. THE DEVELOPMENT IS INSIDE THE FENCE OF A SECURE FACILITY, THEREFORE NO ADDITIONAL SAFETY FENCES AROUND THE STORMWATER MANAGEMENT BASIN ARE REQUIRED.
  18. AT ALL ROADWAY LOW POINTS, SWALES AND EASEMENTS SHALL BE PROVIDED BEHIND THE CURB OR SWALE AND THROUGH ADJACENT PROPERTIES TO CHANNELIZE AND DIRECT ANY OVERFLOW OF STORMWATER RUNOFF AWAY FROM DWELLINGS AND STRUCTURES.
  19. INLETS SHALL BE PLACED SO DRAINAGE CANNOT CROSS INTERSECTIONS OR STREET CENTERLINES.

DRAWING REVISIONS			
NO.	REVISION	DATE	
1	JOINT PERMIT SUBMISSION	3/18/2022	
2	JOINT PERMIT/CH. 102 SUBMISSIONS	6/17/2022	
	JOINT PERMIT SUBMISSIONS	9/14/2022	



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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

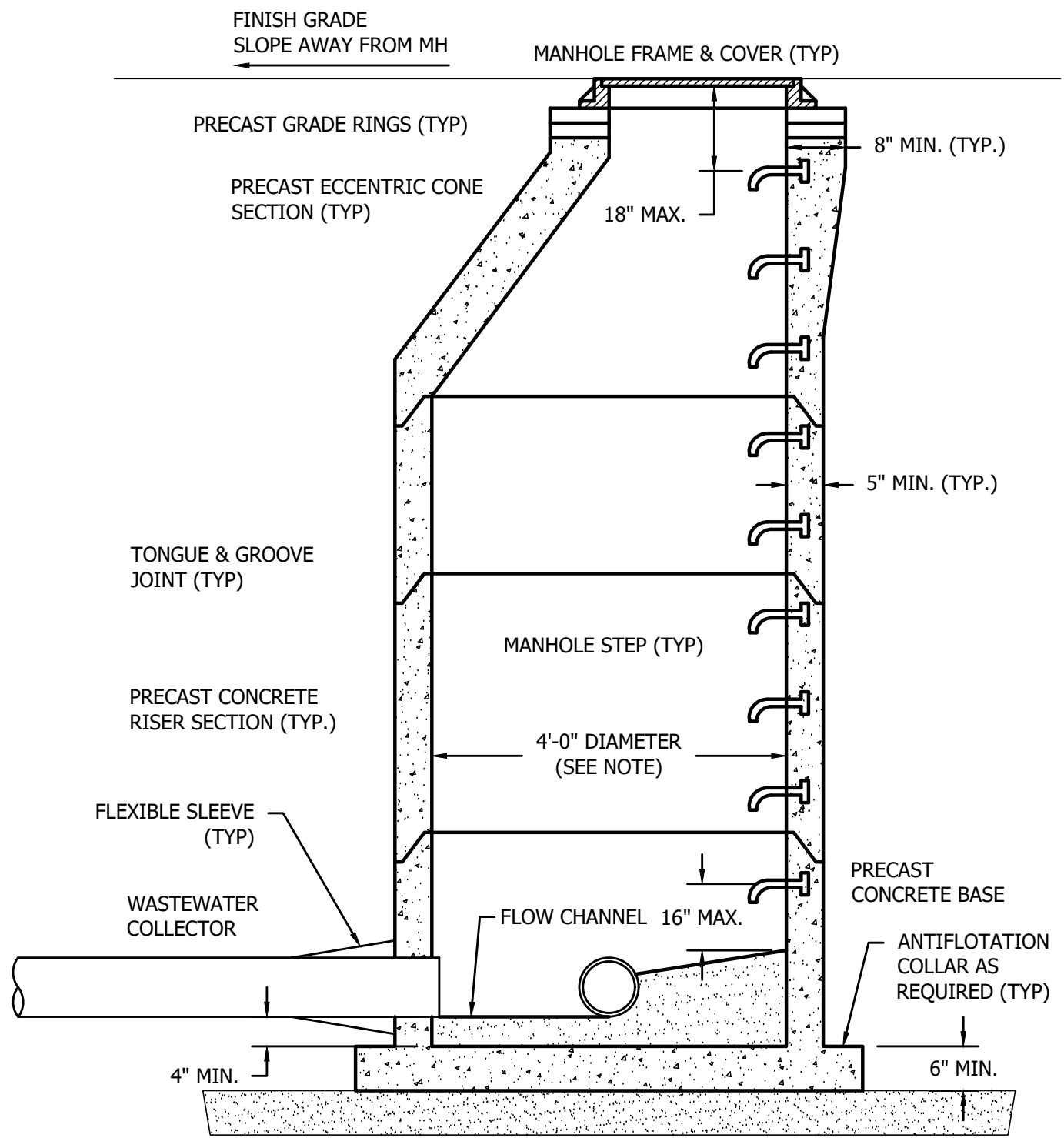
PCSM  
McGUIRE PARK DRIVE  
DETENTION BASIN

DRAWING DATE: 3/29/2022

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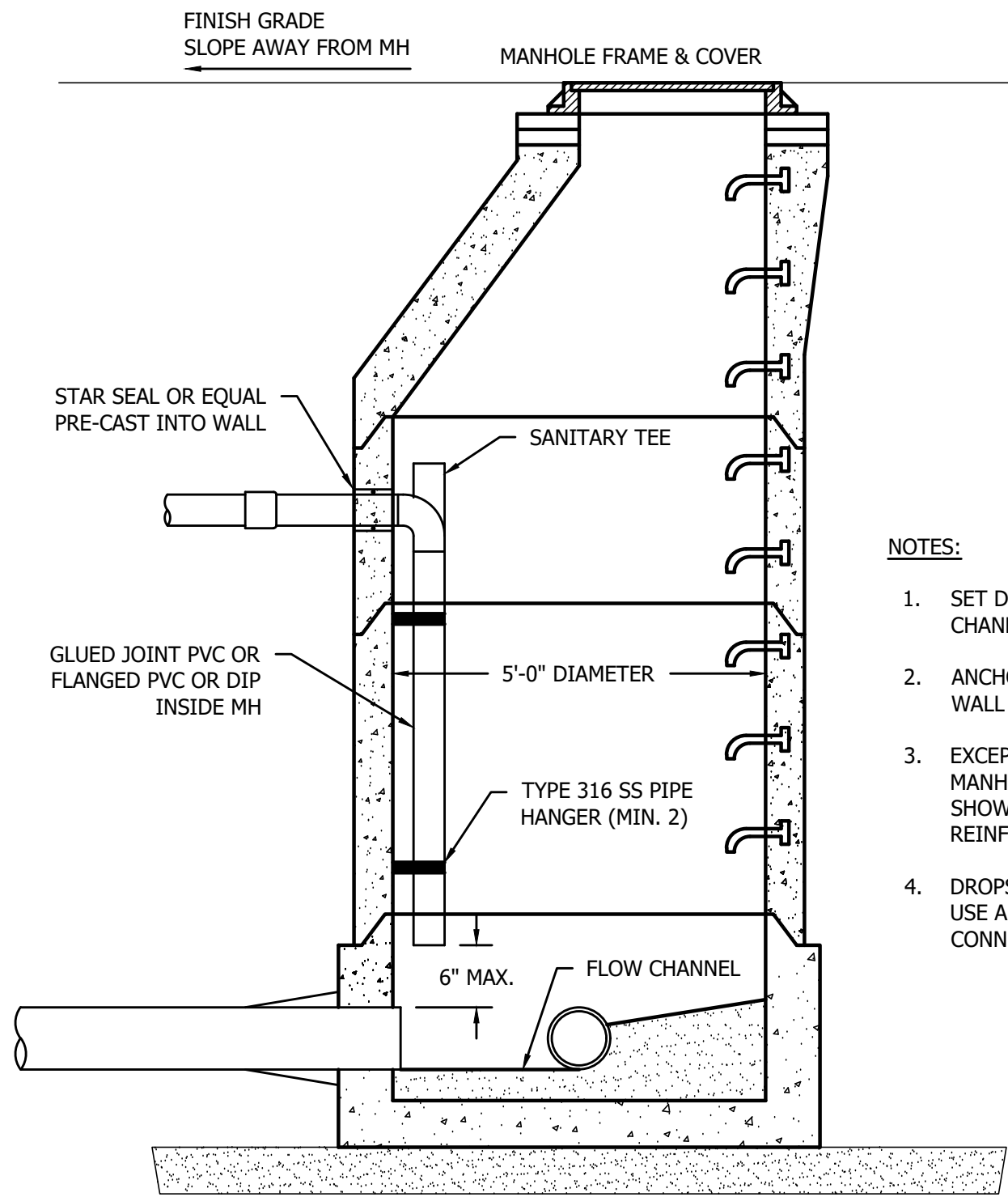
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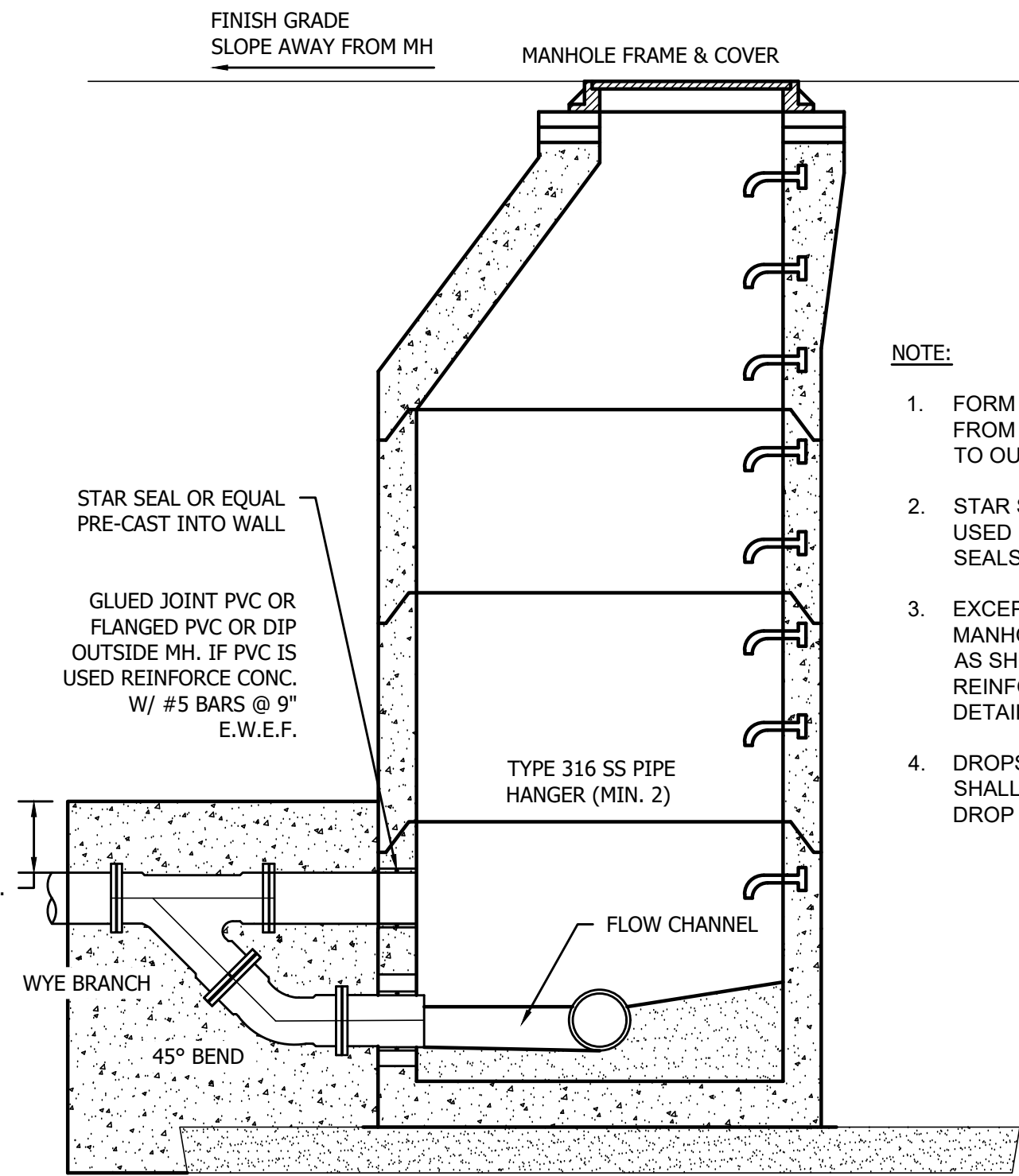
PRECAST REINFORCED CONCRETE MANHOLE  
NTS

- NOTES:
- CAST IRON FRAME & COVER. SEE DETAIL THIS SHEET. SECURE TO CONE SECTION W/ ANCHOR BOLTS. PACK MORTAR AROUND THE ENTIRE PERIMETER.
  - MANHOLE STEPS SHALL BE NEOPRENE RUBBER COATED STEEL PRECAST INTO THE CONCRETE. SET STEPS AT 90° ANGLE FROM MAIN FLOW CHANNEL.
  - SEAL JOINTS BETWEEN SECTIONS, GRADE RINGS, & FRAME W/ TWO ROWS OF BUTYL RUBBER SEALANT (RAM-NEK OR EQUAL.) FORCE SEALANT TO SQUEEZE OUT EACH FACE OF JOINT. PRESS ON COVER WITH BACKHOE BUCKET TO SEAL FRAME TO GRADE RINGS.
  - PAINT EXTERIOR W/ TWO COATS OF KOPPERS BITUMASTIC BLACK OR APPROVED EQUAL. FACTORY APPLICATION RECOMMENDED.
  - PRECAST FLOW CHANNEL. MIN. SLOPE OF BENCHES 1"/FT MIN, 2"/FT MAX. BENCH HEIGHT ALONG FLOW CHANNEL = DIAMETER OF OUTGOING PIPE.
  - SEAL PIPE PENETRATIONS W/ NEOPRENE RUBBER SLEEVE AND TWO (2) 1/2" WIDE STAINLESS STEEL BAND CLAMPS (POWER BOOT OR EQUAL.)
  - SET MH ON MIN. 6" AASHTO NO. 57 STONE COMPACTED TO 95% MODIFIED PROCTOR. BACKFILL OUTSIDE OF MH W/ #57 STONE TO 12" ABOVE TOP OF PIPE.
  - FOR MANHOLES SET WITH THE TOP ABOVE FINISH GRADE NO GRADE RINGS SHALL BE USED.
  - ALL EXCAVATION SLOPES SHALL CONFORM TO OSHA STANDARDS.
  - FINISH GRADE SHOWN IS APPROXIMATE - CONTRACTOR SHALL VERIFY PRIOR TO ORDERING MANHOLES. MANHOLES SHALL BE DESIGNED TO MINIMIZE THE USE OF GRADE RINGS.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL MANHOLE CONSTRUCTION REQUIREMENTS.
  - MANHOLES SET IN ROAD RIGHT-OF-WAY SHALL BE EITHER EXCAVATED WITH A MINIMUM OF 2'6" CLEARANCE ALL AROUND SO COMPACTION EQUIPMENT CAN WORK EFFECTIVELY OR FLOWABLE FILL SHALL BE USED.
  - 5'0" DIAMETER MANHOLES SHALL BE REQUIRED WHERE INTERNAL DROP PIPES ARE USED.



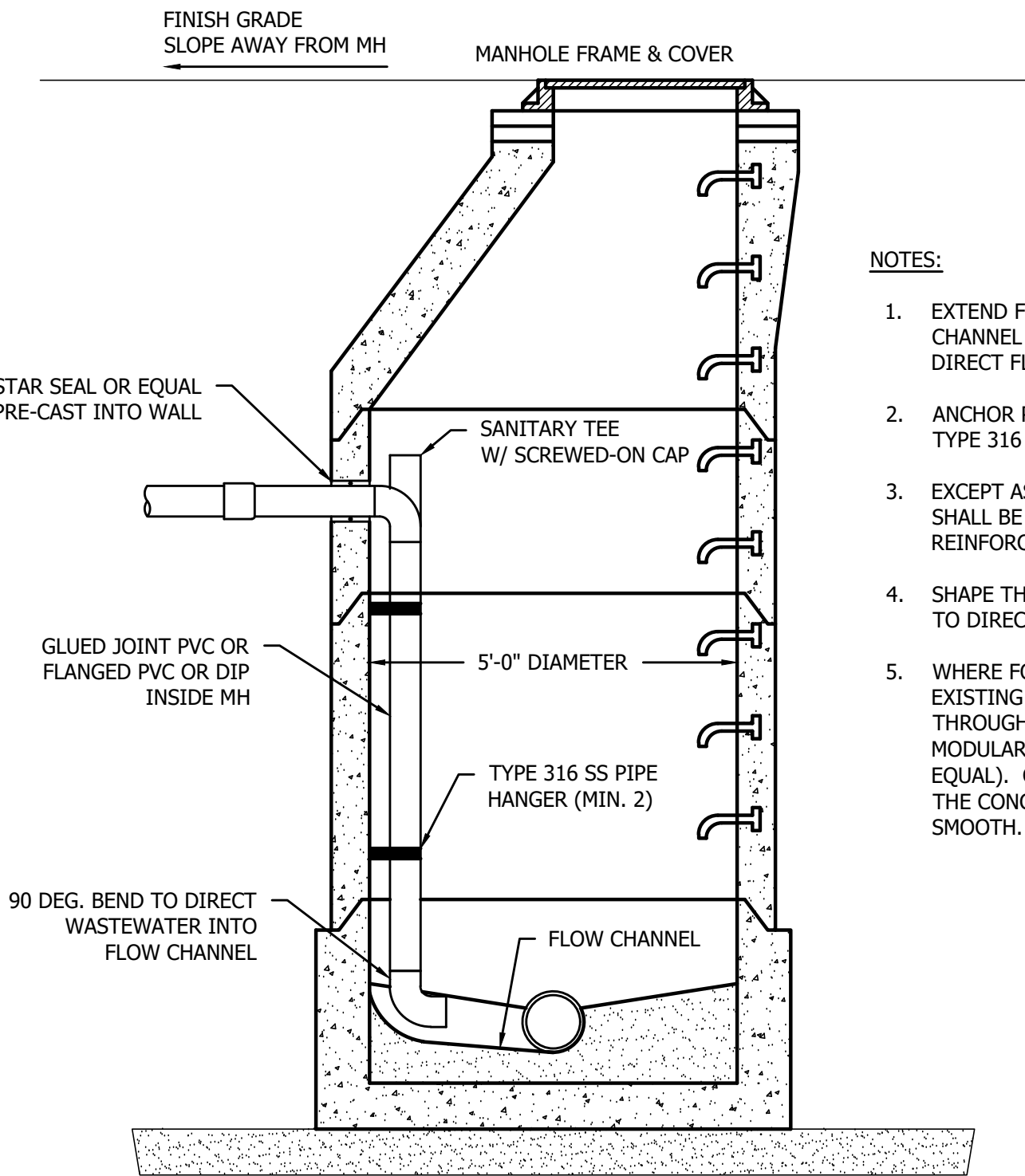
INTERNAL DROP PIPE  
NTS

- NOTES:
- SET DROP PIPE OVER A FLOW CHANNEL TO DISCHARGE INTO IT.
  - ANCHOR PIPE HANGER INTO WALL WITH TYPE 316 SS BOLTS.
  - EXCEPT AS MODIFIED HERE MANHOLE SHALL BE BUILT AS SHOWN ON PRECAST REINFORCED MANHOLE DETAIL.
  - DROPS OF LESS THAN 3 FT. SHALL USE AN EXTERNAL DROP PIPE CONNECTION.



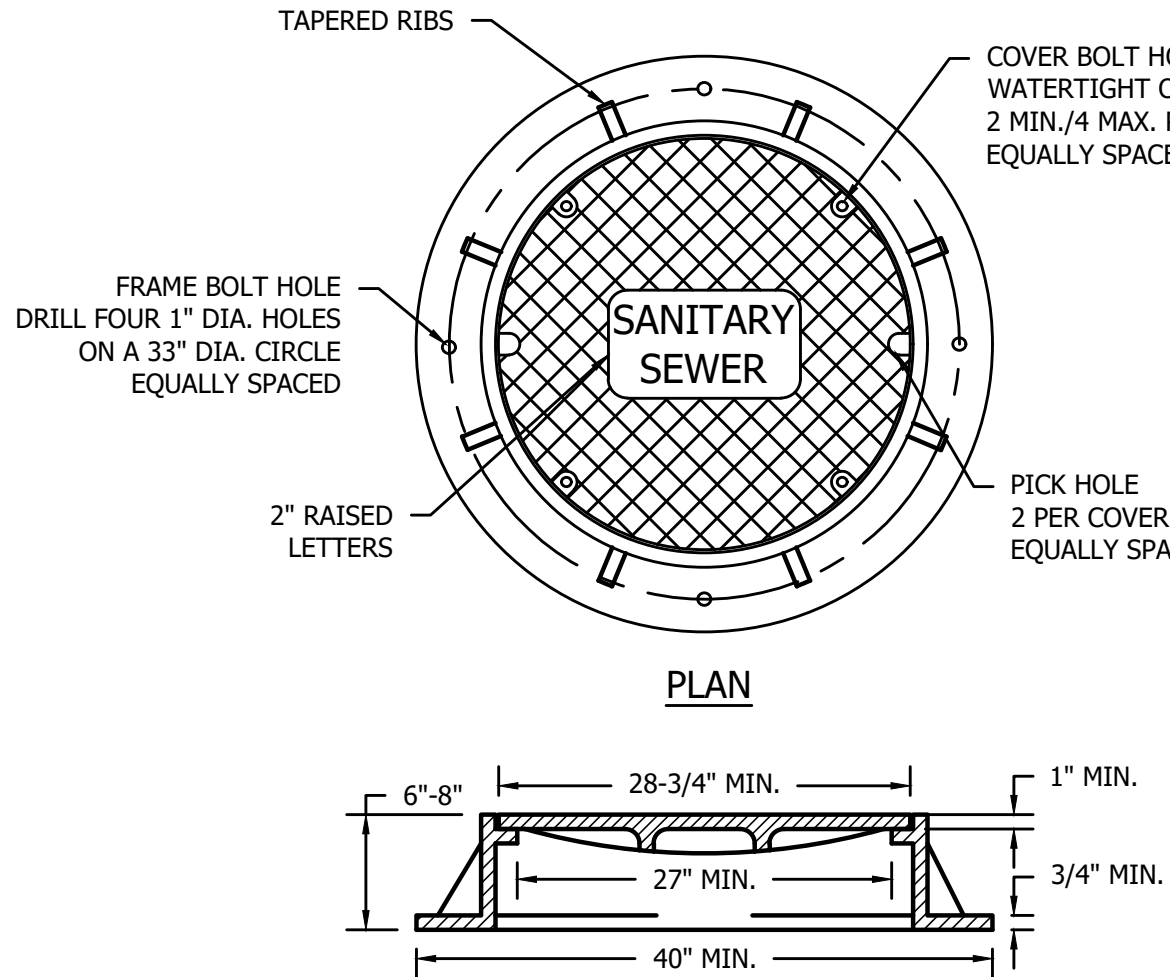
EXTERNAL DROP PIPE  
NTS

- NOTE:
- FORM FLOW CHANNEL FROM DISCHARGE OF DROP TO OUTLET PIPE.
  - STAR SEAL MAY BE ONLY BE USED IN LIEU OF BOOT SEALS ON DROP MH'S
  - EXCEPT AS MODIFIED HERE MANHOLE SHALL BE BUILT AS SHOWN ON PRECAST REINFORCED MANHOLE DETAIL.
  - DROPS OF LESS THAN 3 FT. SHALL USE AN EXTERNAL DROP PIPE CONNECTION.



FORCE MAIN DISCHARGE INTO MANHOLE  
NTS

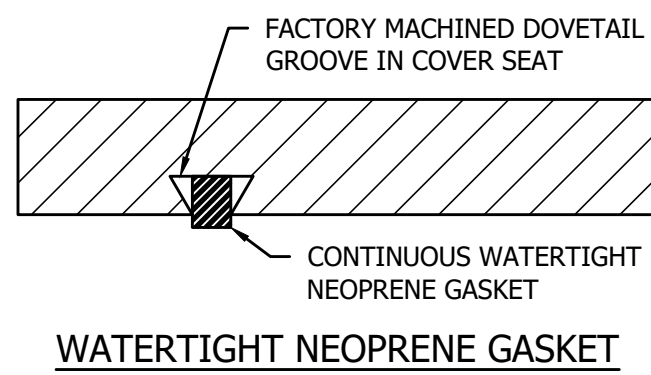
- NOTES:
- EXTEND FORCE MAIN INTO FLOW CHANNEL AND SET A 90 DEG. BEND TO DIRECT FLOW INTO IT.
  - ANCHOR PIPE HANGER INTO WALL WITH TYPE 316 SS BOLTS.
  - EXCEPT AS MODIFIED HERE MANHOLE SHALL BE BUILT AS SHOWN ON PRECAST REINFORCED MANHOLE DETAIL.
  - SHAPE THE FLOW CHANNEL TO EXTEND TO DIRECTLY BELOW THE FORCE MAIN.
  - WHERE FORCE MAINS DISCHARGE TO AN EXISTING MANHOLE, CORE DRILL THROUGH THE WALL AND SEAL WITH A MODULAR RUBBER SEAL (LINK-SEAL OR EQUAL). CHIP A FLOW CHANNEL INTO THE CONCRETE BASE AND GROUT SMOOTH.



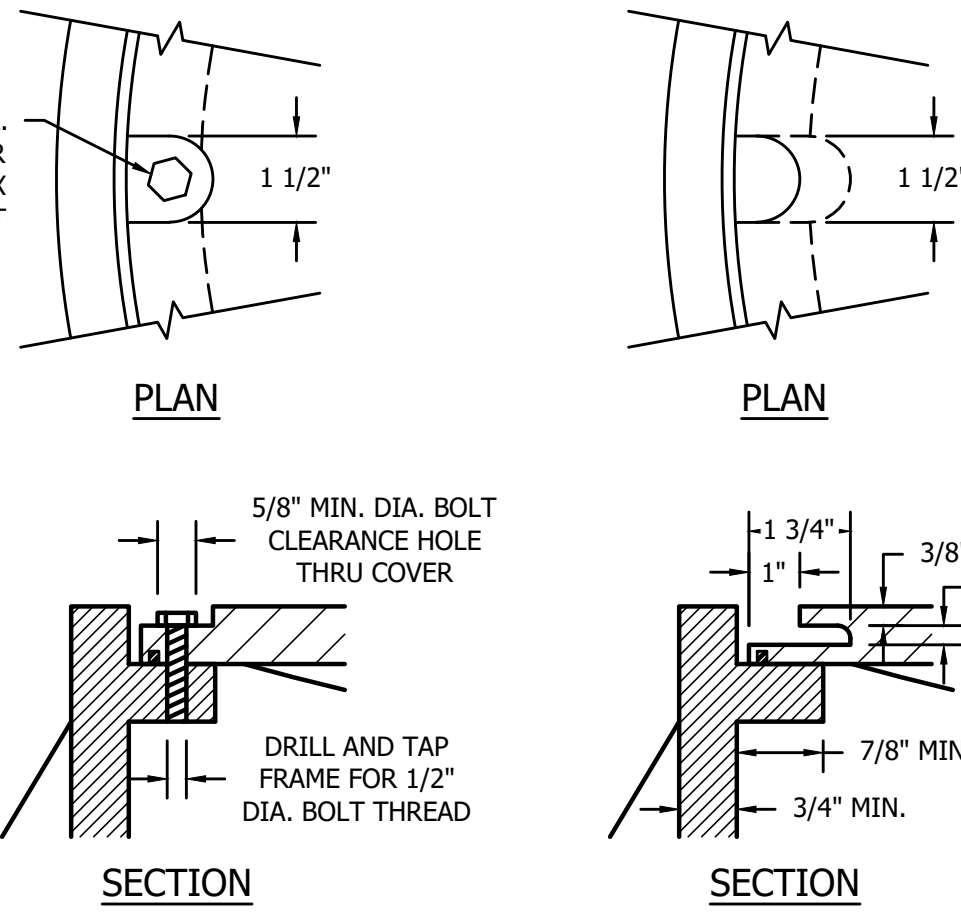
SECTION

- NOTES:
- COVERS SHALL HAVE INDENTED TOP WITH CONCEALED WATERTIGHT PICK HOLES (2 MIN).
  - ALL COVERS SHALL HAVE THE WORDS "SANITARY SEWER" CAST IN LETTERS MIN. 2" HIGH.
  - COVERS SHALL HAVE WATERTIGHT NEOPRENE GASKET ATTACHED TO BOTTOM.
  - PROVIDE HEAVY DUTY CAST IRON FRAME AND COVER SUITABLE FOR H2O LOADING.

STANDARD AND WATERTIGHT MANHOLE FRAME & COVER  
NTS

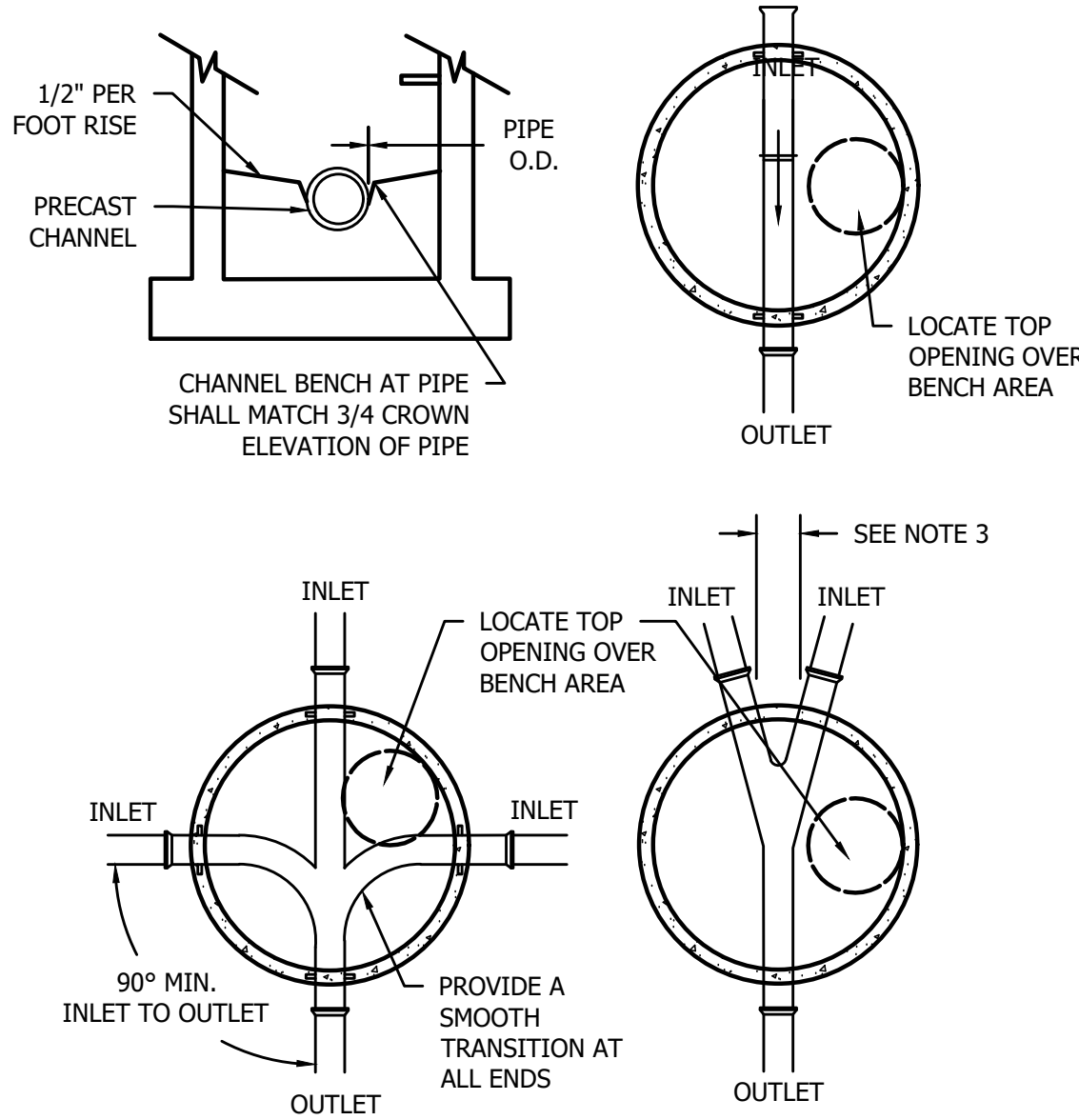


WATERTIGHT NEOPRENE GASKET



SECTION

SECTION



- NOTES:
- FOR NEW CONSTRUCTION A MAXIMUM OF THREE INLET PIPES AND ONE OUTLET PIPE MAY BE INSTALLED
  - NO LATERALS SHALL ENTER INTO MANHOLES EXCEPT AS SPECIFICALLY APPROVED BY THE AUTHORITY.
  - MINIMUM 12" SEPERATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION.
  - MINIMUM CHANNEL DROP THROUGH MANHOLE:  
STRAIGHT THROUGH - 0.1 FEET  
BEND - 0.1 FEET
  - THESE DETAILS APPLY TO CHANNELS FOR NEW MANHOLES AND REPLACEMENT/REPAIR CHANNELS FOR EXISTING MANHOLES.
  - CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE. NO OBSTRUCTION OF THE FULL PIPE OPENING SHALL BE ALLOWED.

MANHOLE CHANNELS  
NTS

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SOUTH CENTRE TOWNSHIP  
WW COLLECTION  
COLUMBIA COUNTY, PA

DETAILS

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

G-8

8 of 65

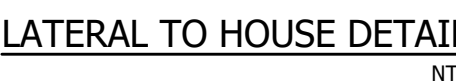
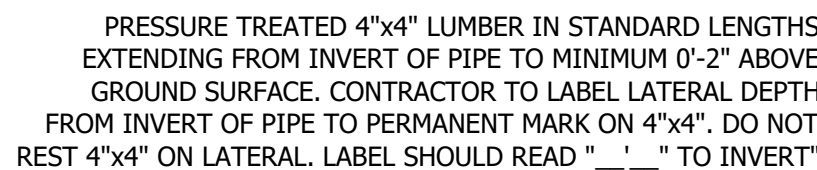




- NOTES:

1. REFER TO SPECIFICATIONS FOR MATERIALS AND METHOD OF CONSTRUCTION.
2. GRAVITY SEWER MAIN AND LATERALS ARE LOCATED BOTH IN AND OUTSIDE OF ROADS AND ROAD SHOULDERS. WHERE IN THE ROAD SHOULDER, PROVIDE PAVING SURFACING TO DEPTH AND FULL WIDTH SHOWN ON THIS DETAIL.
3. PENNDOT 2A OR 2RC FILL IS REQUIRED FOR THE FULL TRENCH DEPTH ONLY IN THE PADOT RIGHT-OF-WAY. SUITABLE NATIVE MATERIAL SHALL BE USED ELSEWHERE. USE APPROPRIATE SURFACING AS SHOWN ON OTHER DETAILS. EXTEND PAVEMENT (OR SUBBASE, AS APPROPRIATE) 12" PAST BOTH SIDES OF TRENCH, AS SHOWN.
4. IN LAWN AREAS BACKFILL TRENCH WITH NATIVE MATERIAL TO 3" ABOVE EXISTING GRADE AND SEED ACCORDING TO SPECIFICATIONS.
5. IN OPEN SPACES BACKFILL TRENCH WITH NATIVE MATERIAL TO 8" ABOVE EXISTING GRADE AND SEED ACCORDING TO SPECIFICATIONS.
6. ALL MATERIAL GRADATION MUST BE IN ACCORDANCE WITH PADOT FORM 408. HOWEVER, MATERIALS MUST BE FROM A PADOT APPROVED SOURCE ONLY WHEN WORKING IN THE PADOT RIGHT-OF-WAY.
7. REFER TO SPECIFICATIONS FOR ADDITIONAL CONSTRUCTION AND PIPE LAYING REQUIREMENTS.
8. IN PENNDOT ROADS CONTRACTOR SHALL SAW CUT PAVING FULL DEPTH NO MORE THAN 48 HOURS IN ADVANCE OF TRENCHING. SAW CUT TRENCH LIMITS PRIOR TO TRENCHING, THEN CUT MIN. 12" PAST FINAL TRENCH WIDTH PRIOR TO REPAVING.
9. THE TRENCH DIMENSIONS IDENTIFY THE MINIMUM AMOUNT OF PIPE BEDDING MATERIAL REQUIRED TO PROTECT THE PIPE. IF THE EXCAVATION OF A WIDER TRENCH IS NECESSARY, THERE WILL BE NO ADJUSTMENT IN QUANTITIES SHOWN.
10. ALL PROPOSED UTILITY CROSSINGS OF STOVER ROAD WILL BE INSTALLED USING DIRECTIONAL DRILL METHOD.

TYPICAL TRENCH SECTION - STORM PIPE



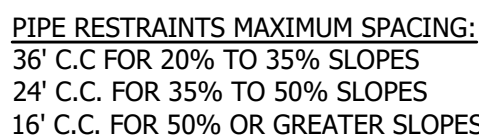
1. DRILL PIT REQUIRED AT EACH ROAD OR STREAM CROSSING.
2. WIDTH AND LENGTH OF PIT (DIM'S A & B) DETERMINED BY SIZE OF CONTRACTORS EQUIPMENT.

DIRECTIONAL DRILL PIT  
NTS



- ## NOTES

1. COLLECTOR SHALL BE ENCASED IN CONCRETE UNDER CREEK CROSSING AS IDENTIFIED ON PLAN AND PROFILE DRAWINGS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTIONS TO WASTEWATER COLLECTOR. END THE CASING JUST PRIOR TO PIPE JOINTS TO ALLOW FLEXIBILITY IN CASE PIPE SETTLES.
3. SET PIPE ON SOLID CMU'S TO ELEVATE PRIOR TO TYING REBAR AND POURING CONCRETE.
4. CONTRACTOR SHALL VERIFY INVERTS OF COLLECTOR AT CONNECTION POINTS PRIOR TO ENCASING PIPE.
5. TRENCH EXCAVATION, BACKFILL, & COMPACTION FOR CONCRETE ENCASED PIPE SHALL OTHERWISE BE IN ACCORDANCE WITH TYPICAL TRENCH SECTION.



## SLOPE RESTRAINT FOR PVC PIPE



- ## NOTES

1. MINIMUM CLEANOUT SIZE IS MAIN LINE DIAM. FOR PIPES 4" AND UNDER, 4" FOR 6" PIPES, AND 6" FOR ALL OTHER PIPES.
2. END THE CONCRETE ANCHOR BELOW THE CLEANOUT CAP. IN PAVEMENT, END THE CONCRETE LEVEL WITH THE TOP OF THE BASE COURSE. IN GRAVEL AND OPEN SPACE, END THE CONCRETE 2" BELOW FINISH GRADE.
3. CLEANOUTS SHALL BE MADE USING THE SAME MATERIAL AS THE PIPE THEY ARE ON, OR DIP OR GRAY CAST IRON. WHEN IRON PIPE FITTINGS AND RISER PIPES ARE USED, REINFORCING STEEL IS NOT REQUIRED AND THE CONCRETE CAN BE REDUCED TO A BASE PAD UNDER THE PIPE.
4. AN IN-LINE CLEANOUT IS SHOWN, SUCH AS MIGHT BE USED ON LONG STRAIGHT RUNS, AT BENDS OR AT PIPE JUNCTIONS. CLEANOUTS ON THE ENDS OF PIPES THAT MAY BE EXTENDED IN THE FUTURE SHALL HAVE A REMOVABLE CAP OR PLUG SET ON THE END. FOR CLEANOUTS ON DEAD-END LINES SUBSTITUTE A 45 BEND FOR THE SANITARY WYE. WHICH TYPE OF CLEANOUT SHALL BE USED WILL BE DETERMINED IN THE FIELD.
5. FLEXIBLE PIPE FITTINGS (MECHANICAL JOINT, PUSH-ON, OR A FLEXIBLE COUPLING) SHALL BE PROVIDED IMMEDIATELY BEFORE AND AFTER CLEANOUTS TO REDUCE THE RISK OF PIPE BREAKAGE DUE TO DIFFERENTIAL SETTLEMENT.
6. WHERE MULTIPLE PIPES JOIN CLEANOUTS SHALL BE SET ON THE MAIN LINE IMMEDIATELY UPSTREAM OF THE WYE WHERE THE BRANCH LINE JOINS, EXTEND THE CONCRETE PAST THE CONNECTING WYE.
7. ENDS OF ANCHORS MUST BE NEATLY FORMED. SIDES MAY BE POURED TO THE SIDES OF THE TRENCH WALLS OR FORMED AT THE CONTRACTORS DISCRETION. MINIMUM WIDTH IS THE DIAMETER OF THE MAIN PIPE PLUS 12".
8. CLEANOUTS MAY BE PRECONSTRUCTED AND SET COMPLETE.

## CLEANOUT DETAILS



1. PROVIDE CAST IRON LAMPHOLE FRAME AND COVER TO PROTECT CLEANOUT CAP FROM IMPACT DAMAGE
2. PROVIDE A 30" SQ. (OR DIA.) X 4" THK CONCRETE SLAB AROUND ANY CLEANOUT THAT IS IN OR NEAR A ROAD, DRIVEWAY, ETC. REINFORCE CONCRETE WITH 4x4 W5.5 WWF. SLABS MAY BE PRECAST WITH LAMP HOLE COVER FRAME SET FLUSH WITH TOP OF CONCRETE.
3. IN SIDEWALKS OR CONCRETE DRIVEWAYS, CAST COVER INTO THE CONCRETE.

### CLEANOUT COVER DETAIL

DRAWING REVISIONS		
NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022



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SOUTH CENTRE TOWNSHIP  
WW COLLECTION  
COLUMBIA COUNTY, PA

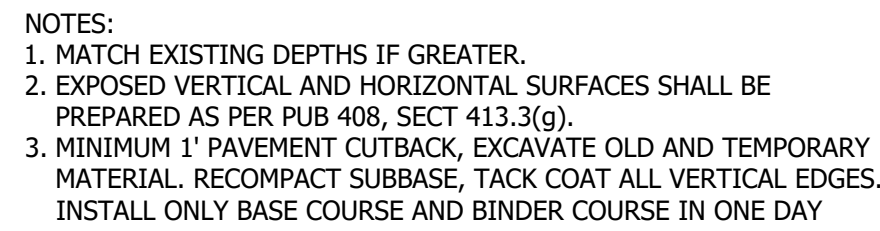
## DETAILS

DRAWING DATE: 10/19/2023

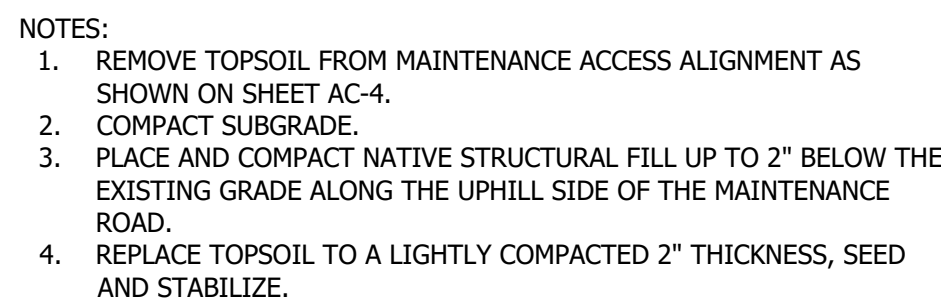
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9 of 65

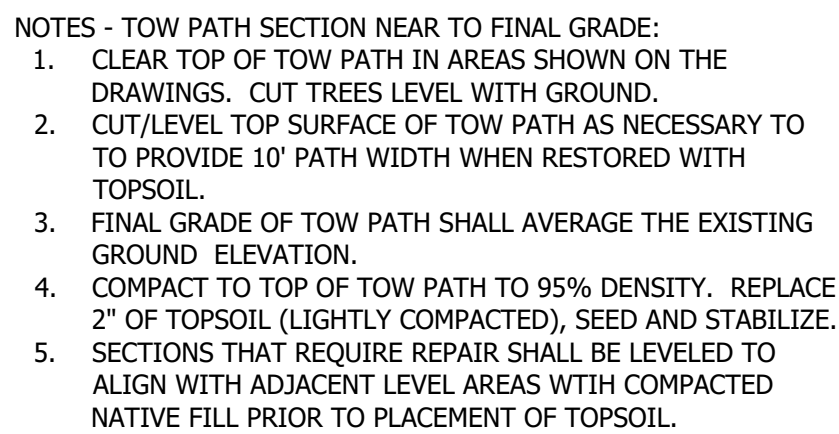




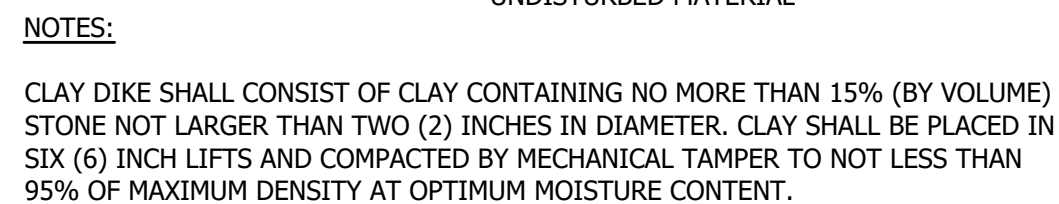
- CONCRETE SIDEWALK/DRIVEWAY SECTION  
NTS



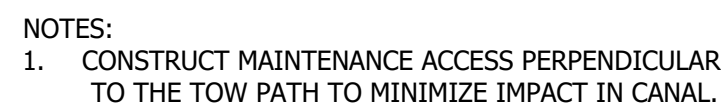
MAINTENANCE ACCESS DETAIL



TOW PATH - MAINTENANCE ACCESS DETAIL  
NTS



CLAY DIKE DETAIL



### CANAL MANHOLE ACCESS DRIVE DETAIL



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SOUTH CENTRE TOWNSHIP  
WW COLLECTIONS  
COLUMBIA COUNTY, PA  
COUNTY

## DETAILS

DRAWING DATE: 10/19/2022

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# G-10

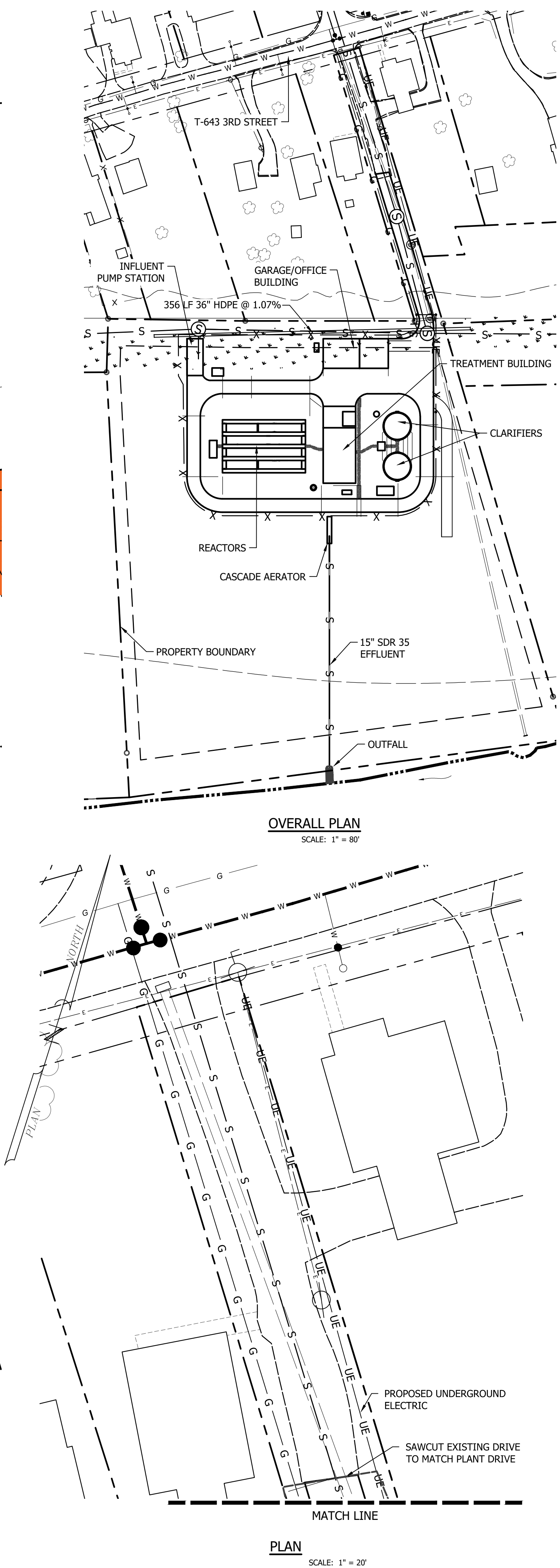
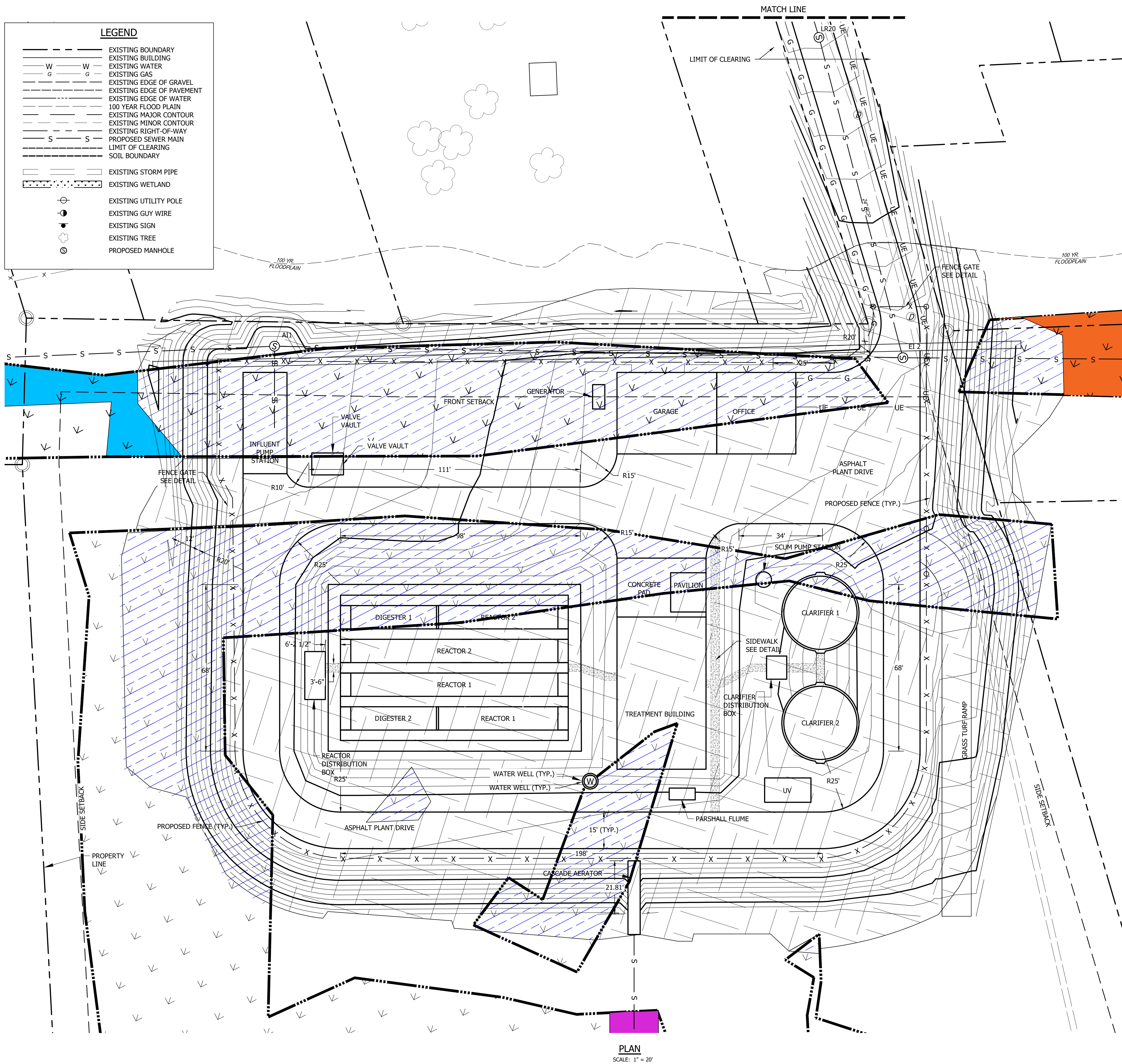
10 of 65







SEE NEXT SITE PLAN SHEET



DRAWING REVISIONS	
NO.	REVISION

BRITT D. BASSETT  
PROFESSIONAL ENGINEER  
P 27984-E

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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

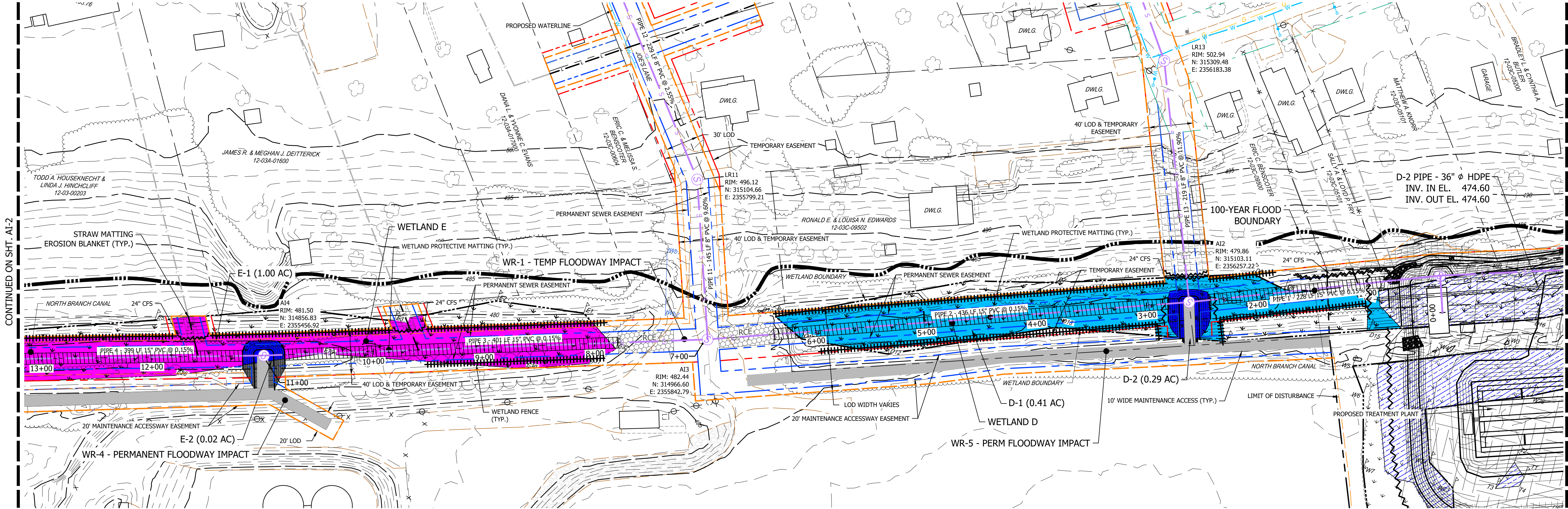
SITE PLAN

DRAWING DATE: 06/15/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**C-1**  
11 of 65

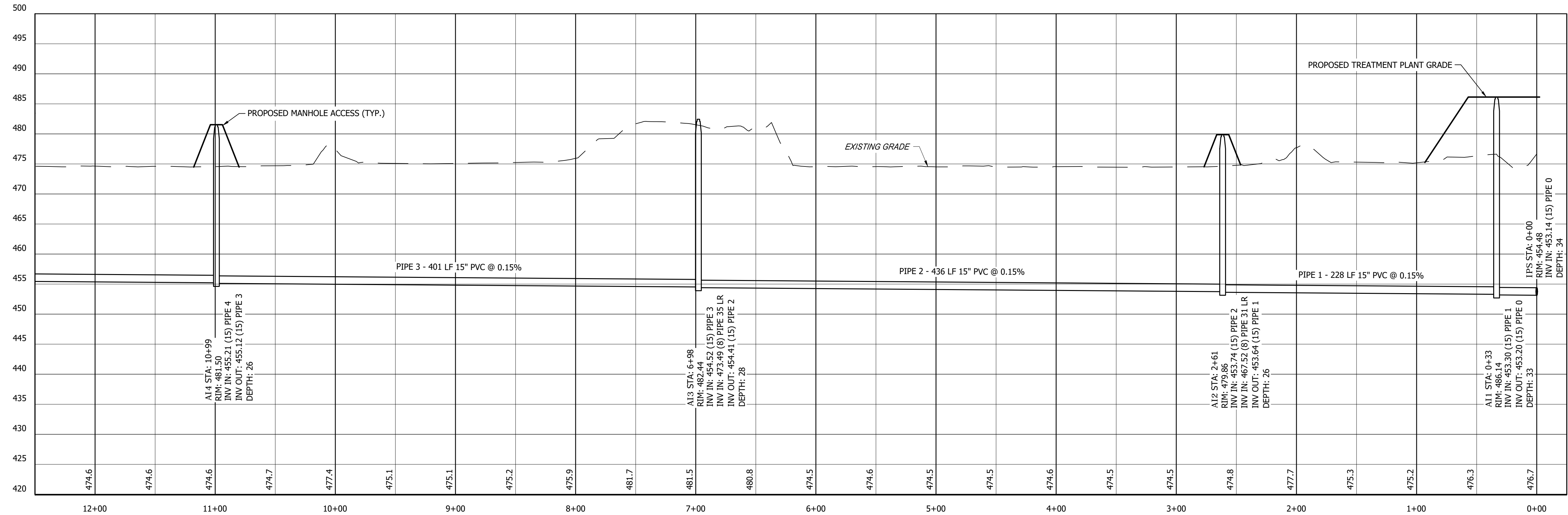
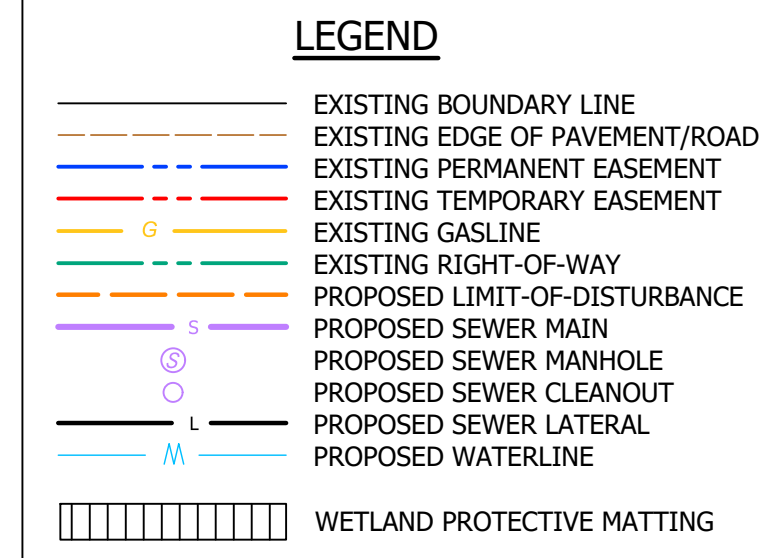




NOTES:  
WETLANDS ACREAGE PRESENT:  
WETLAND D: 0.88 AC TEMP PEM: 17,970 SF PERM PEM: 12,594 SF  
WETLAND E: 1.53 AC TEMP PEM: 43,431 SF PERM PEM: 3,510 SF  
WETLAND W: 0.87 AC PERM PFO: 16,539 SF  
WETLAND T: 0.01 AC PERM PEM: 299 SF

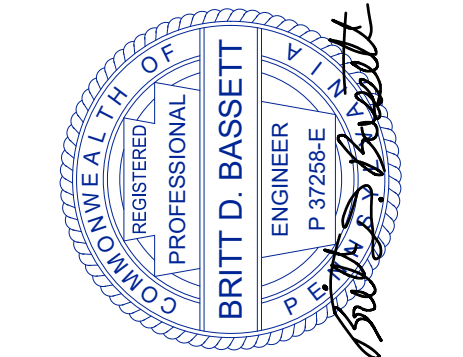
- SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

PLAN  
SCALE: 1" = 50'



PROFILE  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS			
NO.	REVISION	DATE	
0	30% DRAFT COLLECTION SYSTEM	08/17/2022	
1	50% DRAFT COLLECTION SYSTEM	09/07/2022	



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PLAN & PROFILE

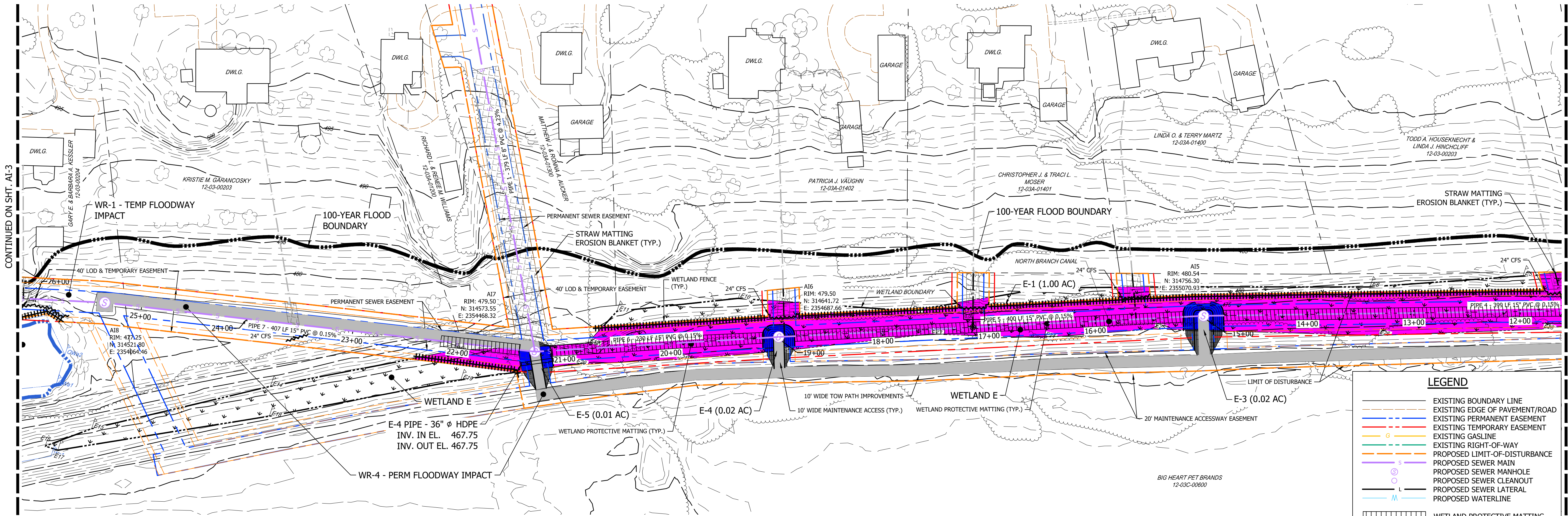
DRAWING DATE: 10/19/2022

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**AI-1**

11 of 68

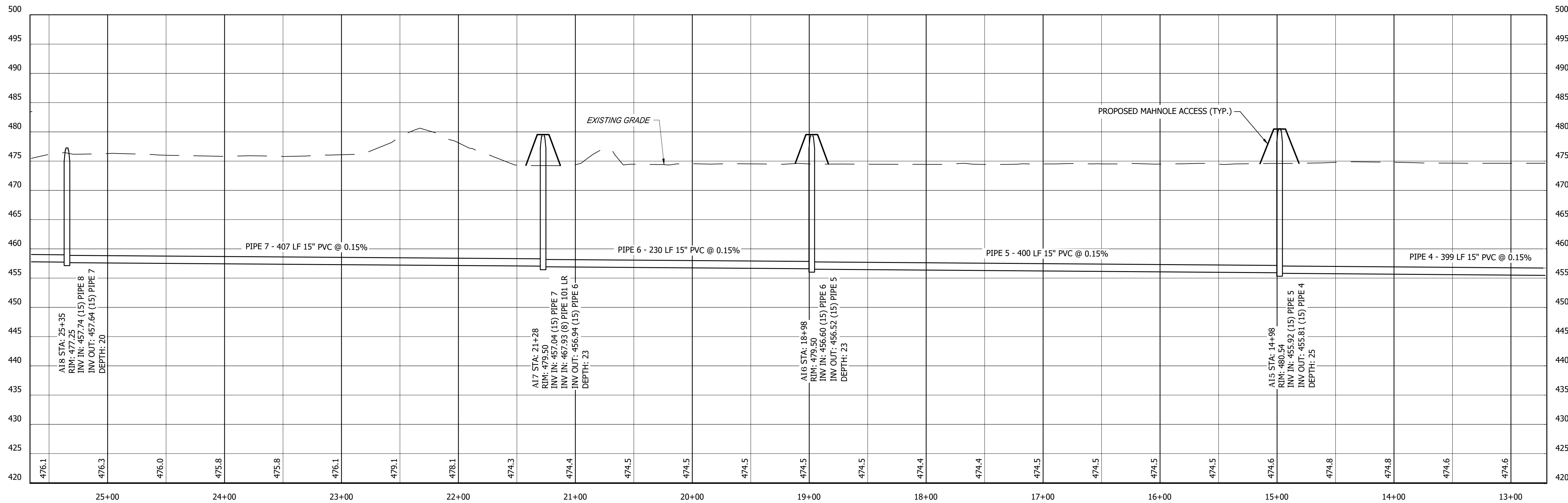




NOTES:  
WETLANDS ACREAGE PRESENT:  
WETLAND E: 1.53 AC TEMP PEM: 43,431 SF PERM PEM: 3,510 SF

1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

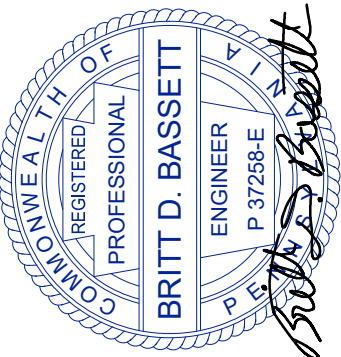
PLAN  
SCALE: 1" = 50'



PROFILE  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS

NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022



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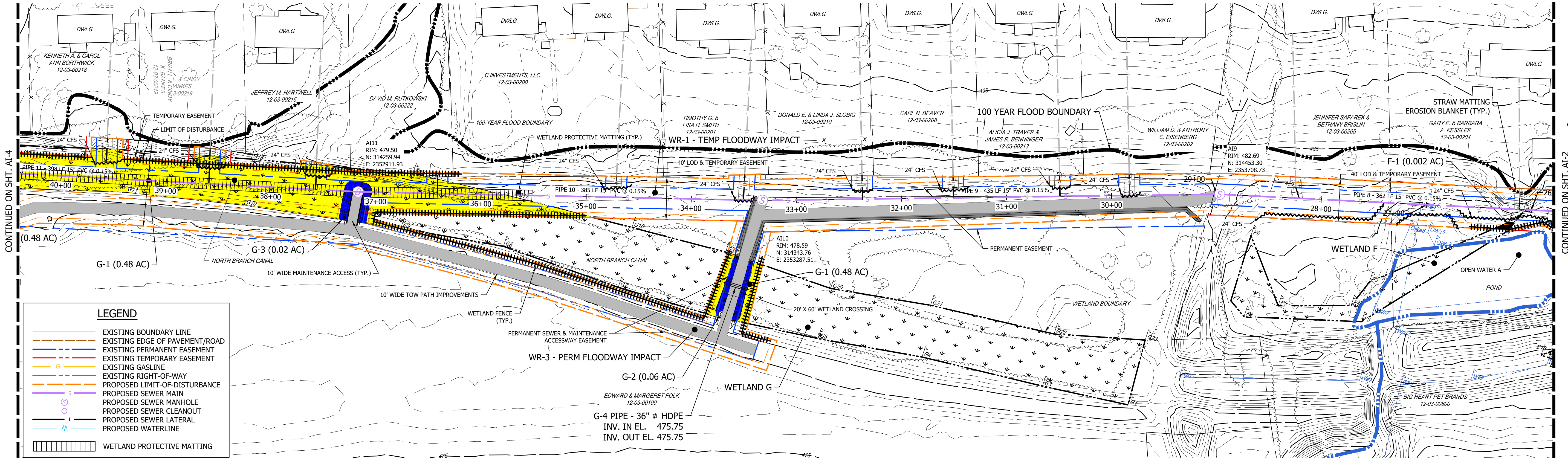
DRAWING DATE: 10/19/2022

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**AI-2**

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NOTES:

WETLANDS ACREAGE PRESENT:

WETLAND F: 0.08 AC TEMP PEM: 99 SF

WETLAND G: 1.34 AC TEMP PEM: 20,747 SF PERM PEM: 2,484 SF

OPEN WATER: 0.24 AC

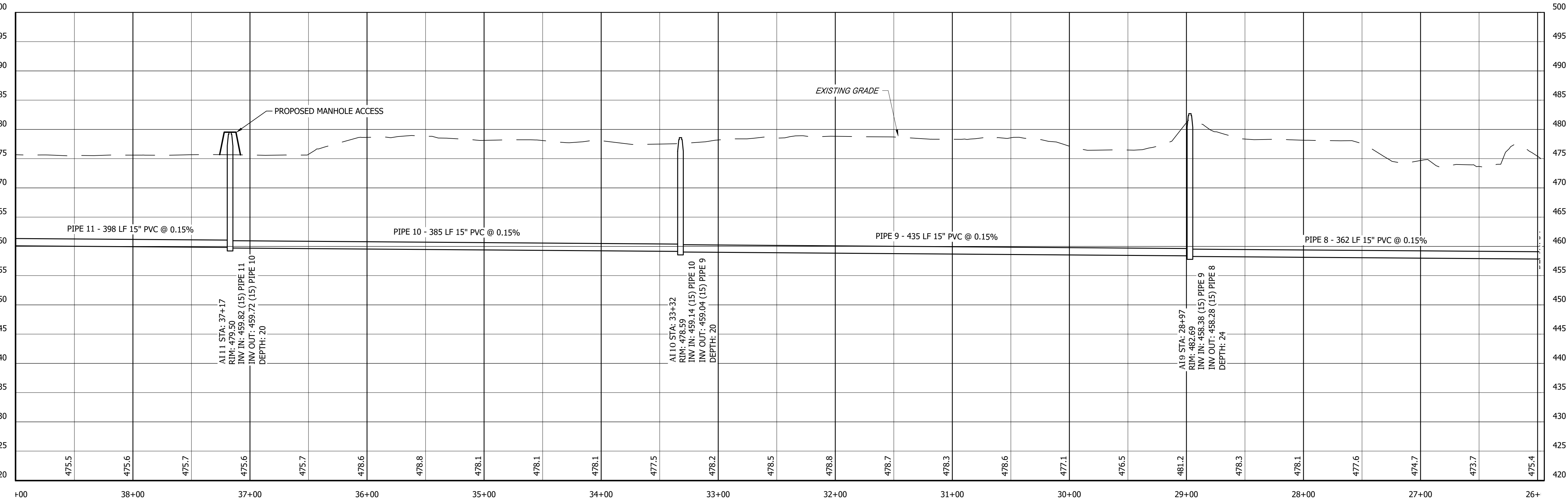
1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

PLAN

SCALE: 1" = 50'

NOTES:

NPDES PERMIT BOUNDARY INCLUDES EXTENT OF PROPOSED COLLECTION SYSTEM OFFSET 15 FT FROM PIPE CENTERLINES. NPDES PERMIT BOUNDARY ALSO EXTENDS 10 FT FROM THE CENTERLINE OF THE PROPOSED MAINTENANCE ACCESSSES.

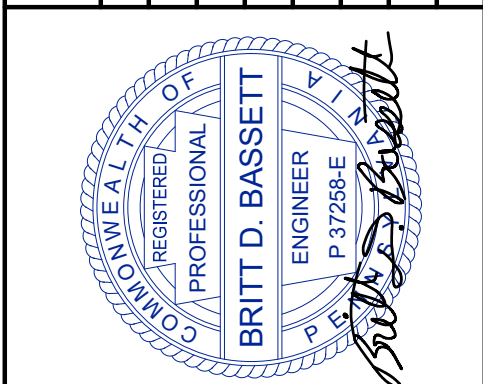


PROFILE

H SCALE: 1" = 50'

V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022



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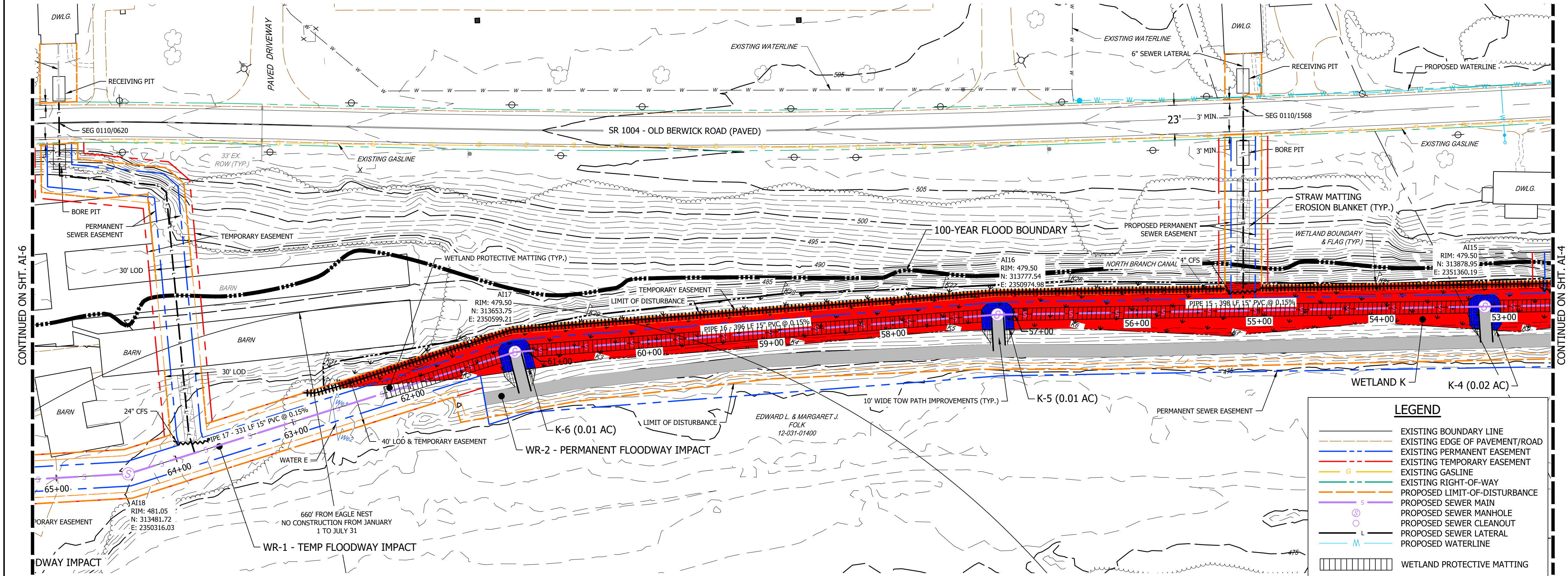
DRAFT FINAL ALIGNMENT  
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PLAN & PROFILE







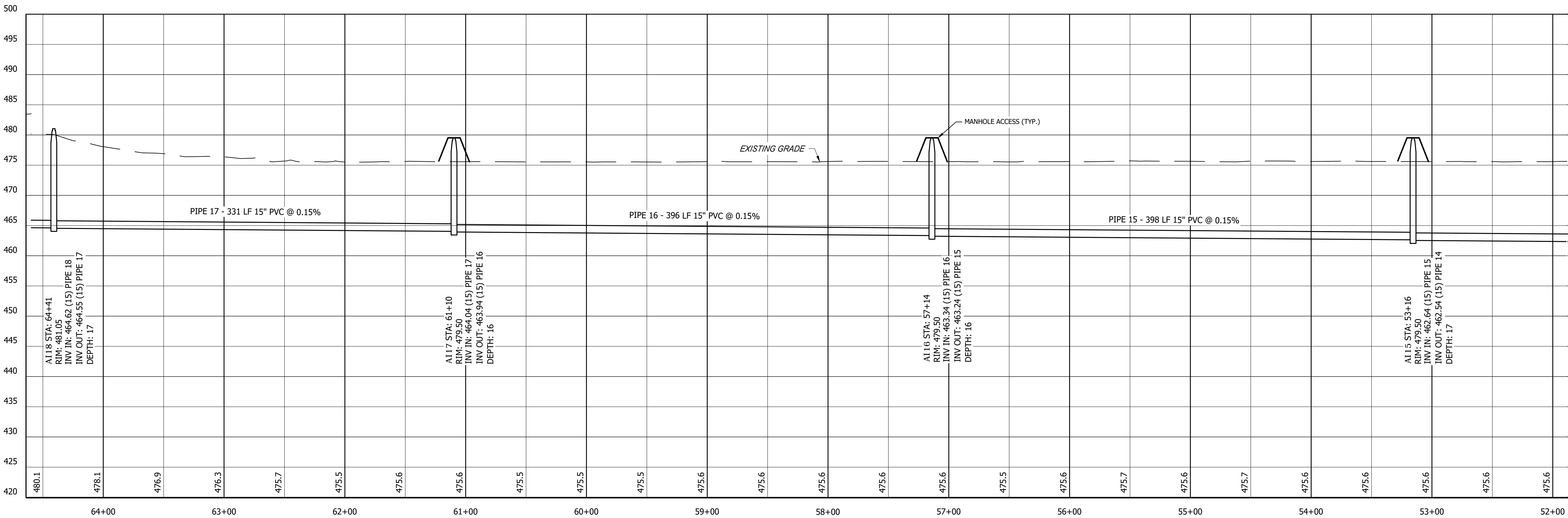
12/12/2023  
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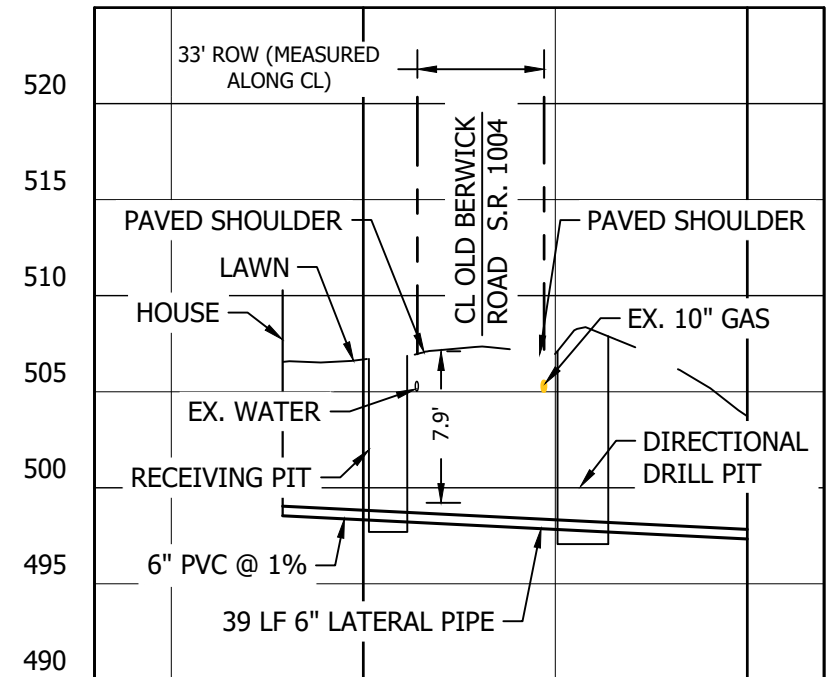
- NOTES:
- WETLANDS ACREAGE PRESENT:  
WETLAND K: 1.88 AC TEMP PEM: 69,648 SF PERM PEM: 3,236 SF  
WATER E: 34 LF
1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

PLAN  
SCALE: 1" = 50'

- NOTES:
1. NPDES PERMIT BOUNDARY INCLUDES EXTENT OF PROPOSED COLLECTION SYSTEM OFFSET 15 FT FROM PIPE CENTERLINES. NPDES PERMIT BOUNDARY ALSO EXTENDS 10 FT FROM THE CENTERLINE OF THE PROPOSED MAINTENANCE ACCESSSES.
2. U.S. FISH AND WILDLIFE SERVICE HAS IDENTIFIED AN EAGLE'S NEST ALONG THE SUSQUEHANNA RIVER SOUTH OF FOLK NURSERY (MAP COORDINATES 41.017326, -76.365457). WHEN CONSTRUCTING THE INTERCEPTOR IN THIS AREA, CONTRACTOR SHALL LIMIT WORK TO WITHIN THE PREVIOUSLY DISTURBED AREAS (CANAL AND TOW PATH) TO THE GREATEST DEGREE POSSIBLE WHEN WORKING WITHIN 660 FT OF THIS LOCATION. NO WORK WITHIN 660 FT OF THIS LOCATION FROM JANUARY 1 TO JULY 30. THIS RESTRICTION IS APPLICABLE TO CONSTRUCTION FROM MANHOLE AI-16 TO AI-19.



PROFILE  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'



NOTE: THE LATERAL ROAD PROFILE VIEW IS AT SR 1004, SEGMENT 0110, OFFSET 1568.

LATERAL PROFILE  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS

NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022



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WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
ALMEDIA INTERCEPTOR  
PLAN & PROFILE

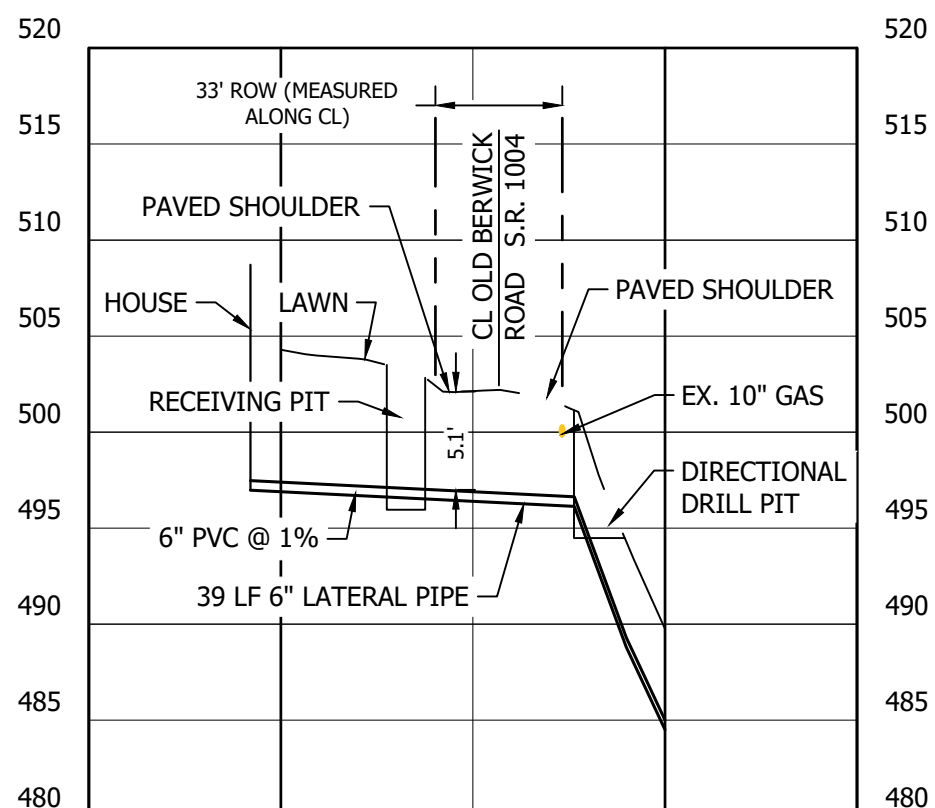
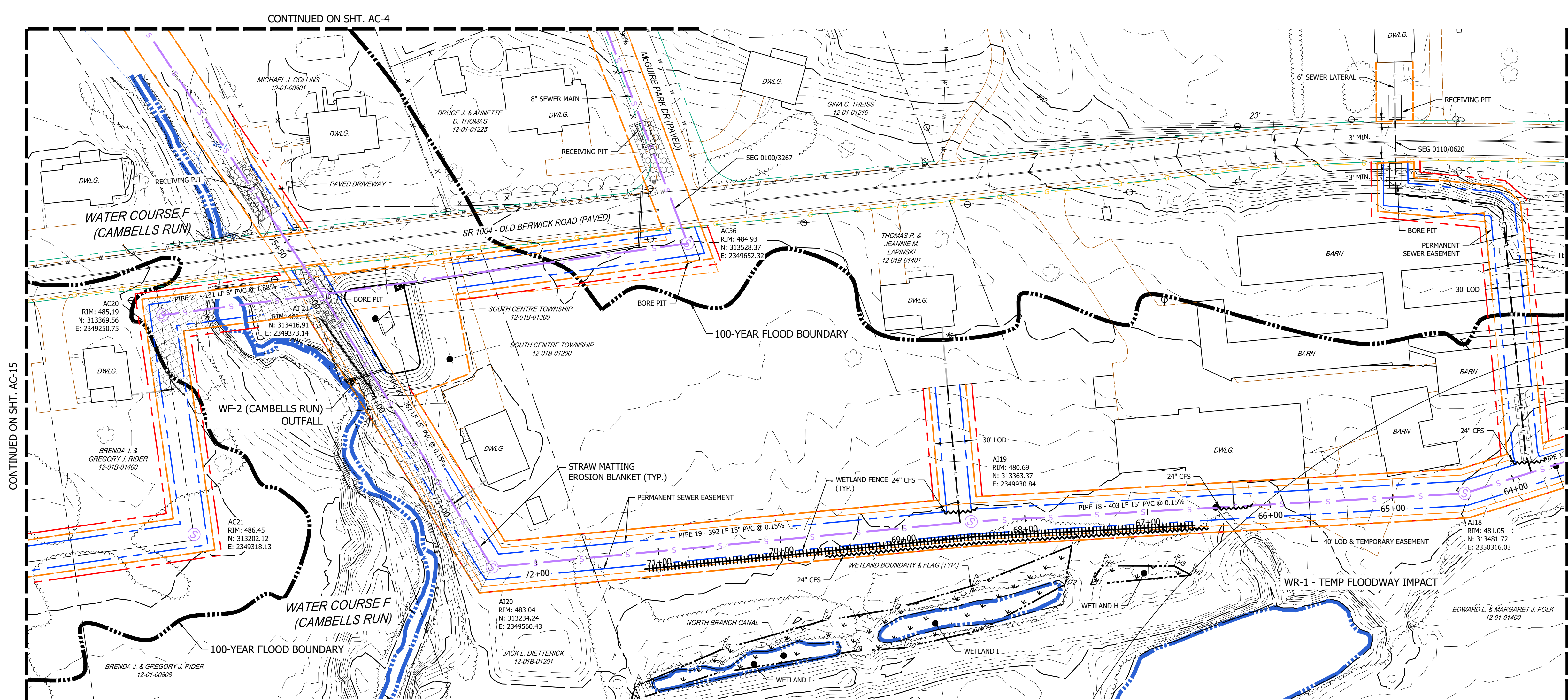
DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**AI-5**

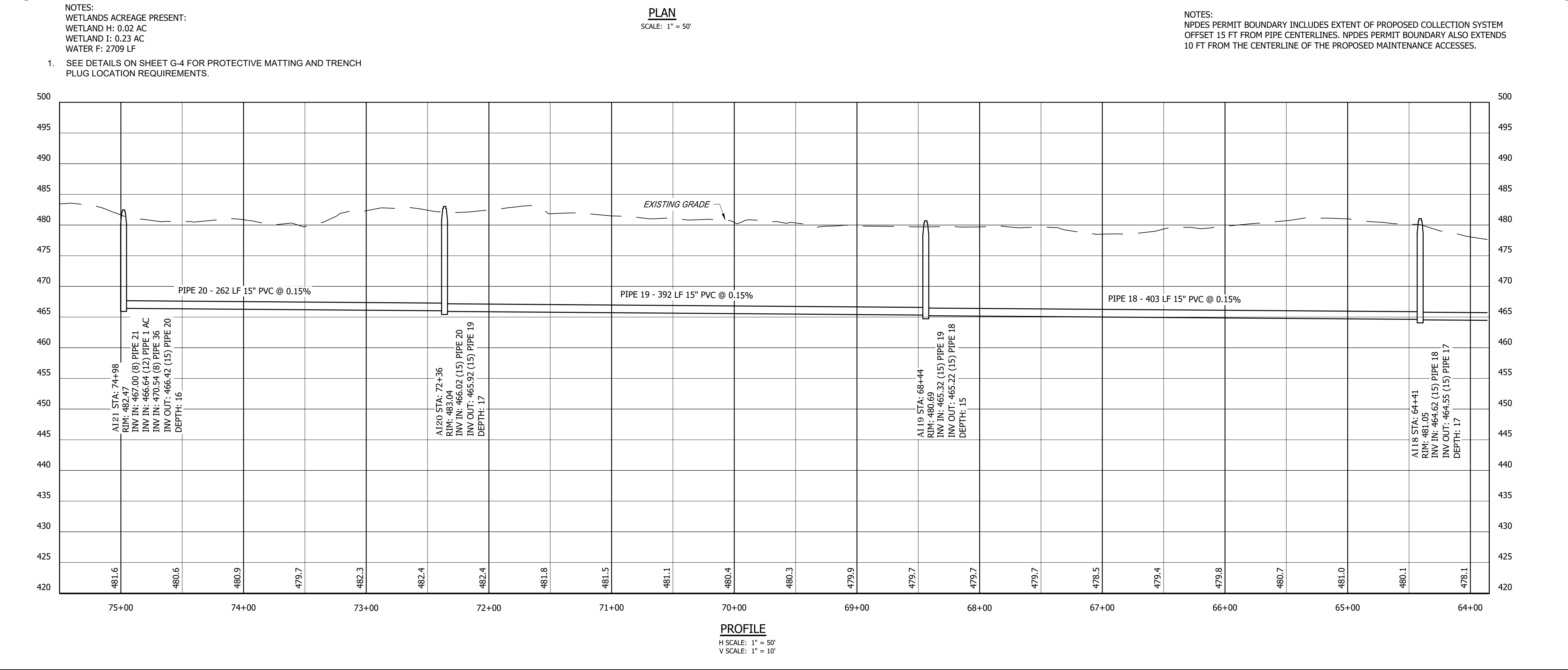
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LEGEND

---	EXISTING BOUNDARY LINE
---	EXISTING EDGE OF PAVEMENT/ROAD
---	EXISTING PERMANENT EASEMENT
---	EXISTING TEMPORARY EASEMENT
---	EXISTING GASLINE
---	EXISTING RIGHT-OF-WAY
---	PROPOSED LIMIT-OF-DISTURBANCE
---	PROPOSED SEWER MAIN
---	PROPOSED SEWER MANHOLE
---	PROPOSED SEWER CLEANOUT
---	PROPOSED SEWER LATERAL
---	PROPOSED WATERLINE



DRAWING REVISIONS

NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022

INCORPORATING THE SIGNED PROFESSIONAL SEAL OF BRITT D. BASSETT, PROFESSIONAL ENGINEER, P. 37298-E, FOR THE CLIENT AND FOR THE PROJECT. THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF BASSETT ENGINEERING, INC. ALL RIGHTS RESERVED.

BRITT D. BASSETT  
PROFESSIONAL ENGINEER  
P. 37298-E

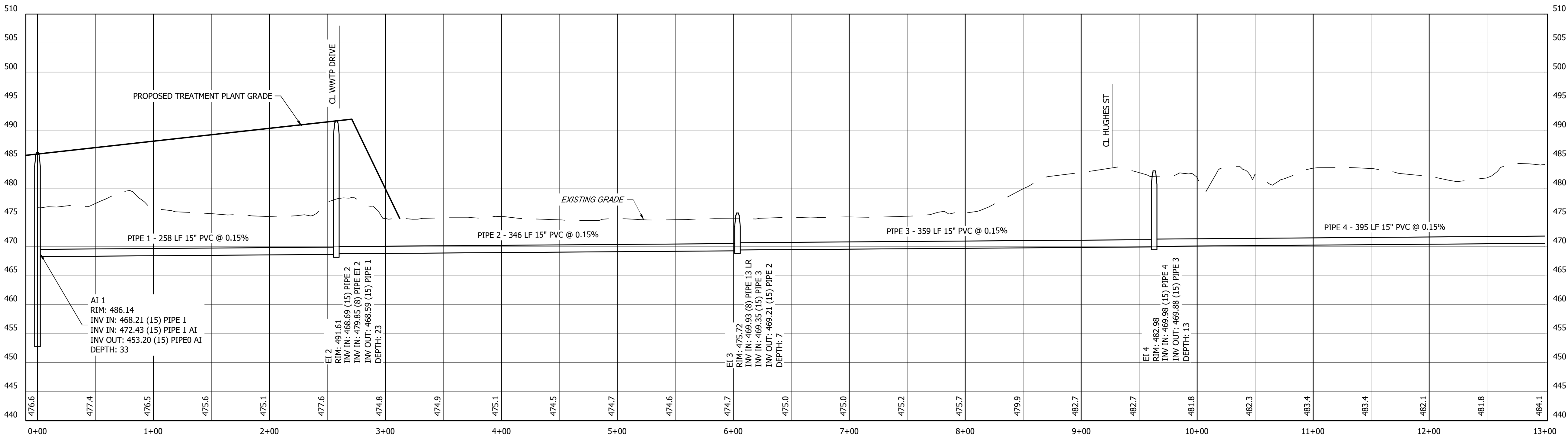
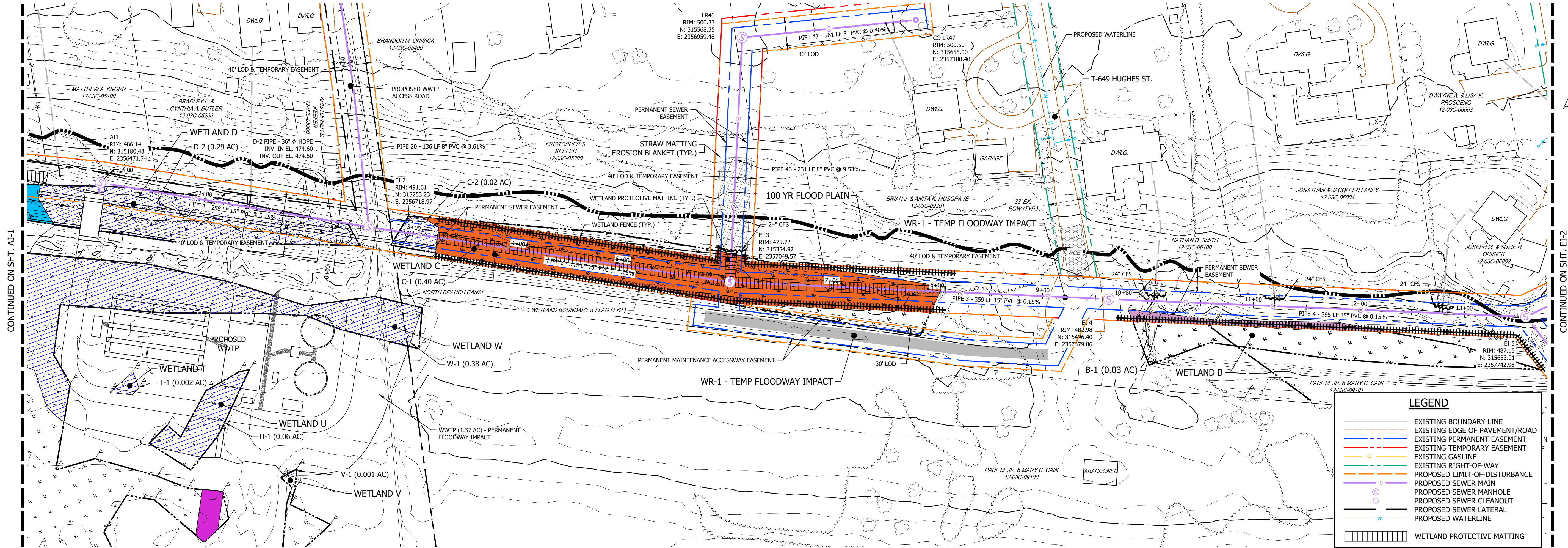
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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
ALMEDIA INTERCEPTOR  
PLAN & PROFILE

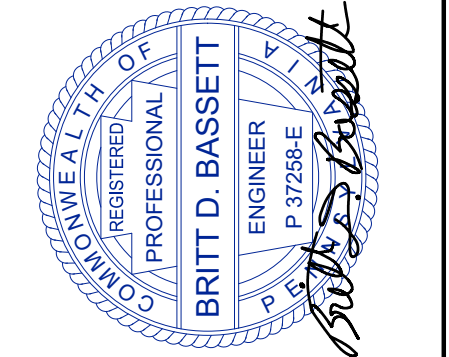


10/19/2022  
SPT DESIGN & ENGINEERING



DRAWING REVISIONS

NO.	REVISION	DATE



ANY THIRD PARTY INCORPORATING THIS DRAWING INTO ANY OTHER PROJECT IS THE USER'S RESPONSIBILITY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF THE PUBLIC. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC.

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COLUMBIA COUNTY, PA

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EAST INTERCEPTOR  
PLAN & PROFILE

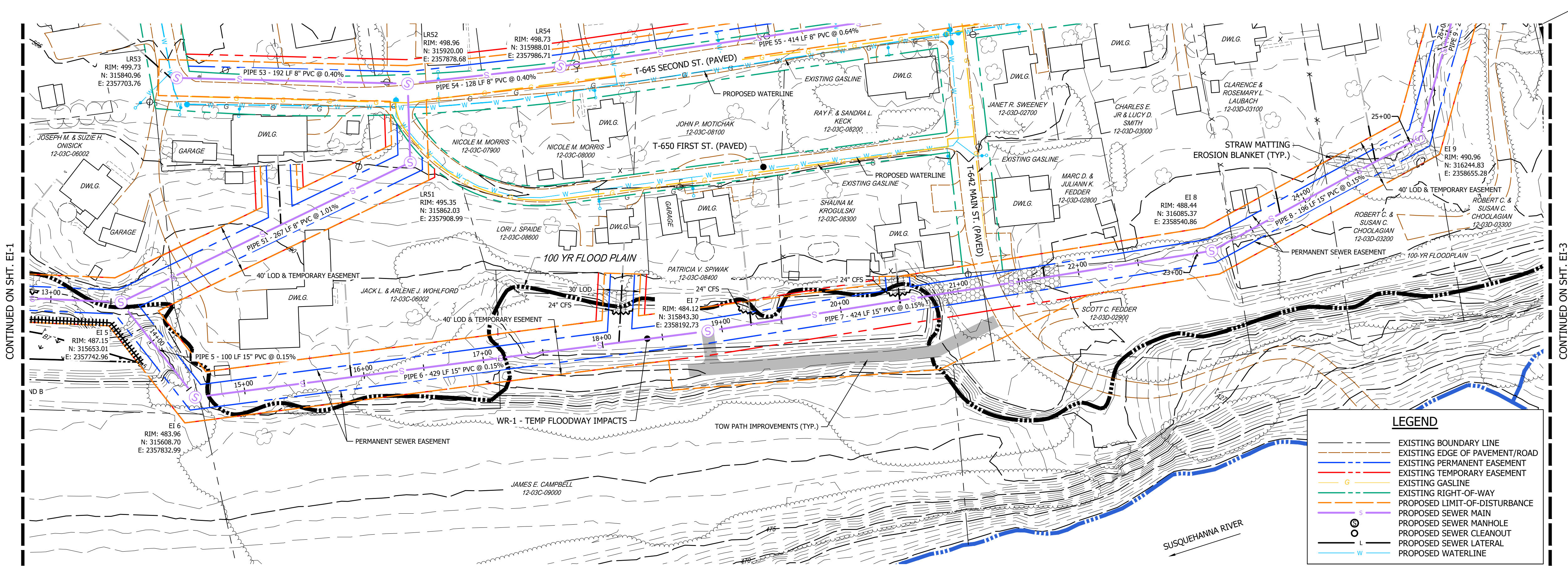
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EI-1

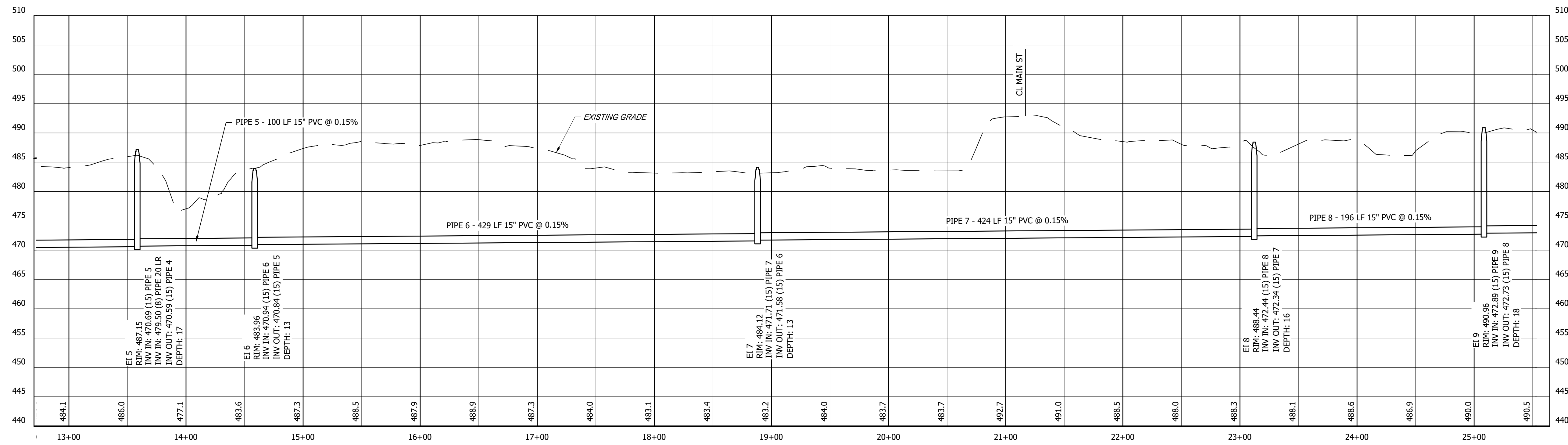
17 of 68





1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

PLAN  
SCALE: 1" = 50'



PROFILE  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS	
NO.	REVISION



ANY THREE PLANS INCORPORATING THE SIGNED PROFESSIONAL SEAL OF AN ENGINEER SHALL BE CONSIDERED OFFICIAL AND RELIED UPON BY THE CLIENT AND PREPARED SPECIALISTS FOR THE CLIENT AND PERFECT WORKMANSHIP. REVISION, DUPLICATION OR CONSTRUCTION WITHOUT THE SIGNED PROFESSIONAL SEAL OF AN ENGINEER IS PROHIBITED. BASSETT ENGINEERING, P.C. ALL RIGHTS RESERVED.

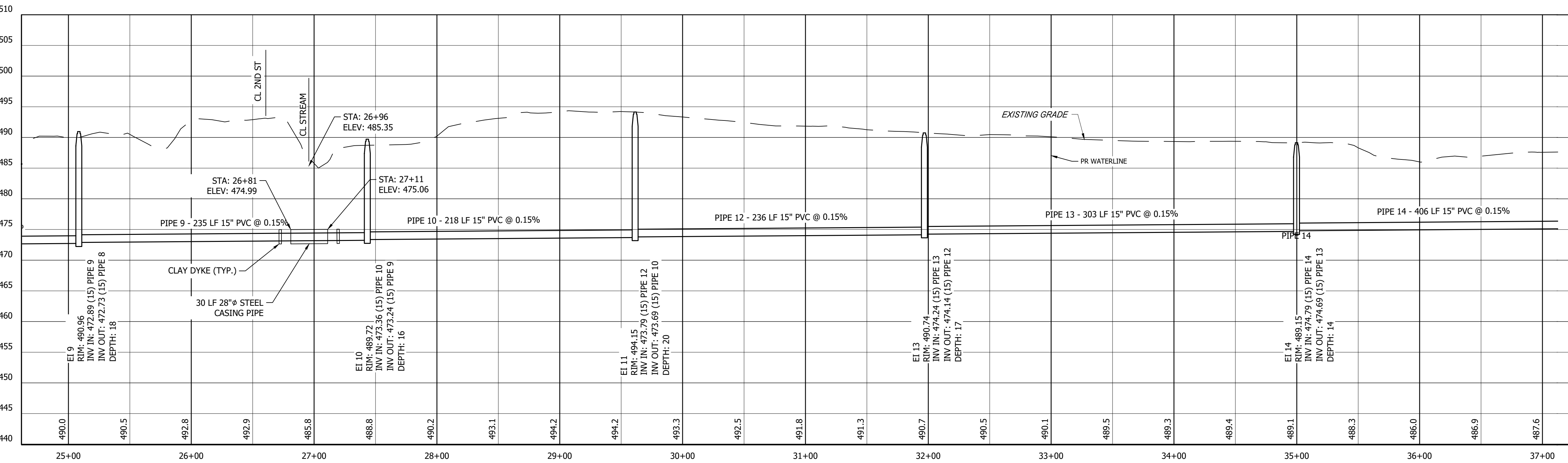
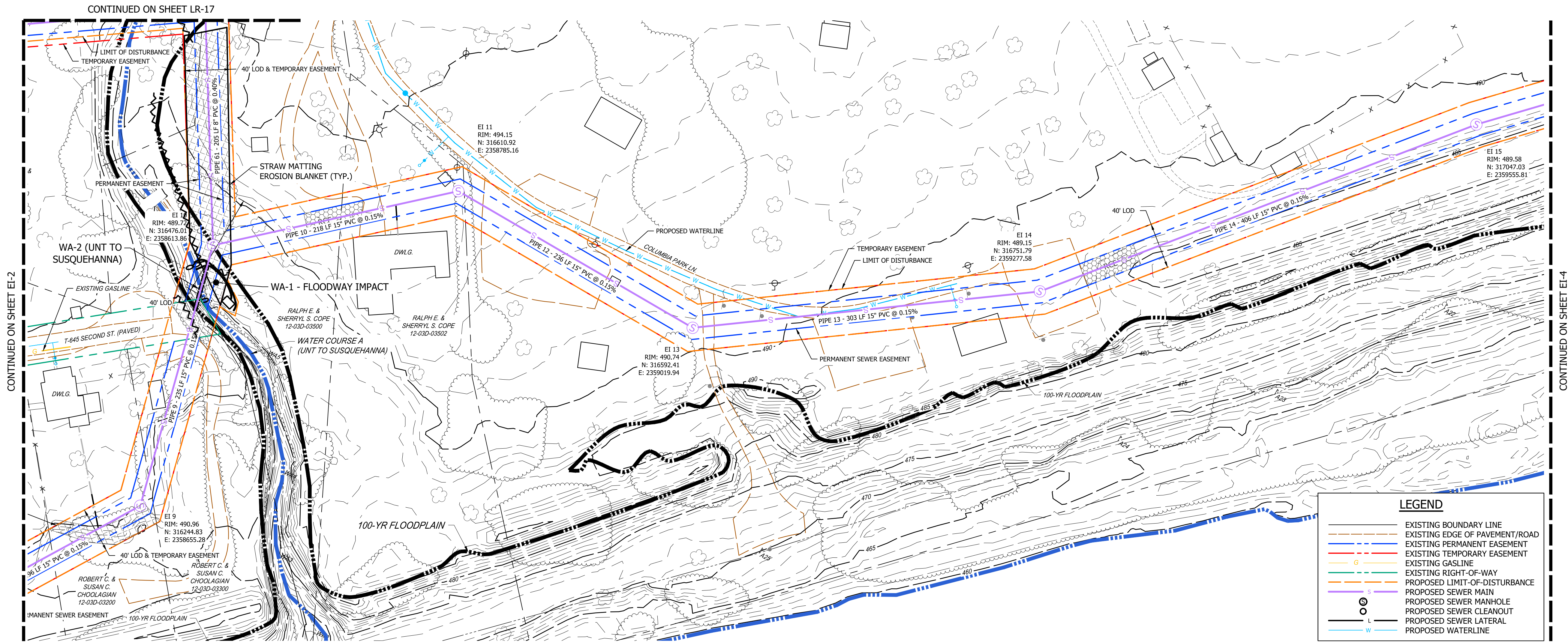
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WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
EAST INTERCEPTOR  
PLAN & PROFILE

DRAWING DATE: 10/19/2022  
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DRAWING REVISIONS

NO.	REVISION	DATE



I, THE UNDERSIGNED, HAVE INCORPORATED THE SIGNED PROFESSIONAL SEAL OF THE PROFESSIONAL ENGINEER, AND I HAVE CONSIDERED THE DESIGN AND REVISIONS HEREON, AND I HAVE REPRODUCED THE SAME FOR THE CLIENT AND FOR THE RECORD. I HAVE REVIEWED THE DESIGN AND REVISIONS HEREON, AND I HAVE REPRODUCED THE SAME FOR THE CLIENT AND FOR THE RECORD. I HAVE REVIEWED THE DESIGN AND REVISIONS HEREON, AND I HAVE REPRODUCED THE SAME FOR THE CLIENT AND FOR THE RECORD.

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**Engineering**  
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COLUMBIA COUNTY, PA

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EAST INTERCEPTOR  
PLAN & PROFILE

DRAWING DATE: 10/19/2022

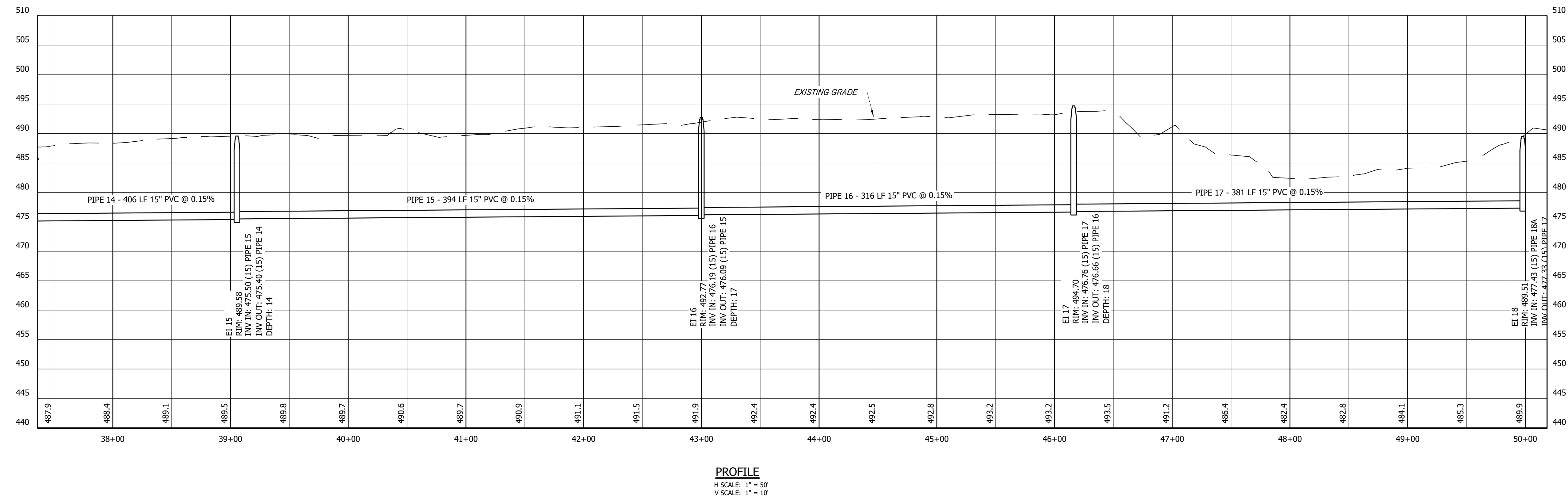
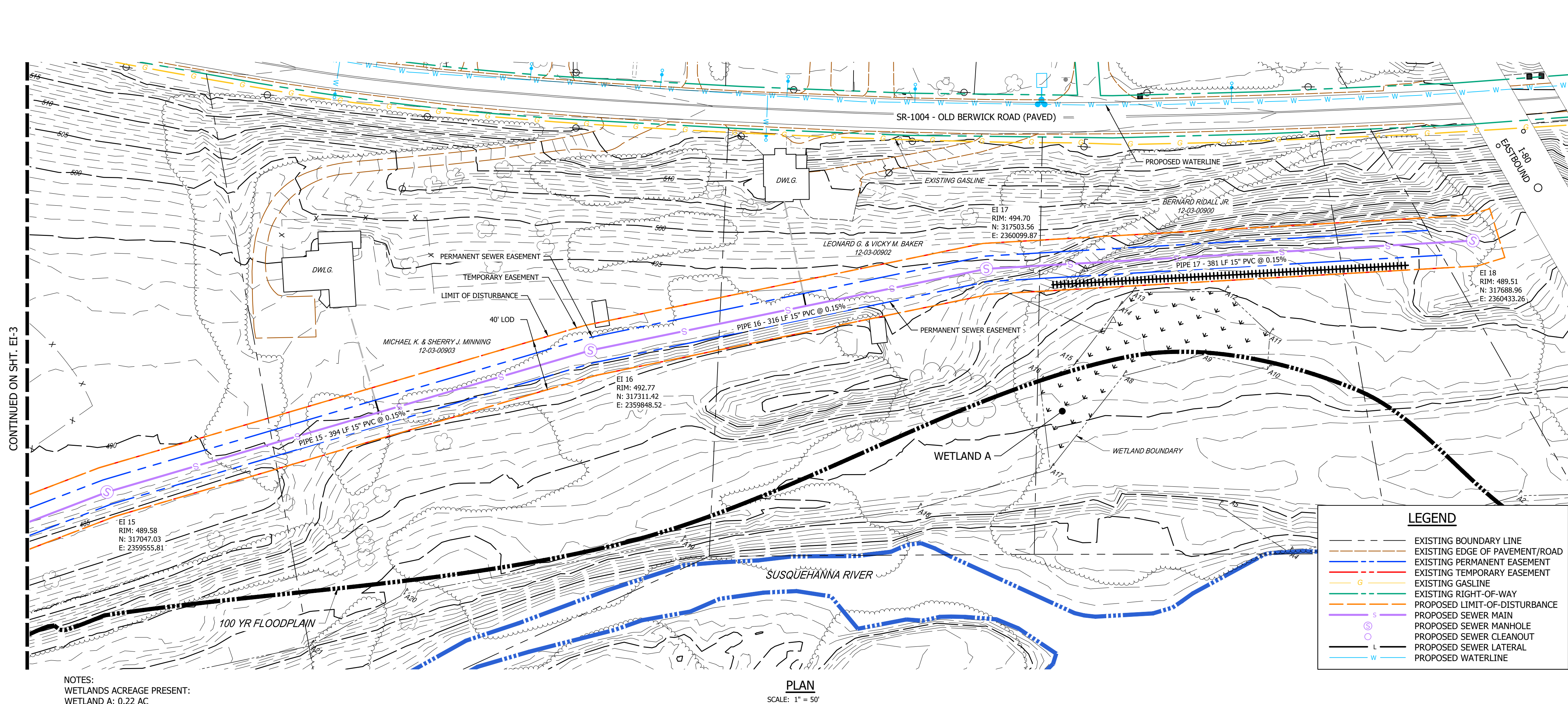
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EI-3

19 of 65



10/12/2023  
SET DESIGN & EIT DRAWING



DRAWING REVISIONS	
NO.	REVISION

BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P 37258-E

ANY THREE PLANS INCORPORATING THE SIGNED PROFESSIONAL SEAL OF AN ENGINEER SHALL BE CONSIDERED OFFICIAL AND RELIED UPON BY THE CLIENT AND PREPARED SPECIALISTS FOR THE CLIENT AND PERFECT NOTIFICATION OF ANY REVISION, MODIFICATION, OR CORRECTION TO THE ENGINEERING IS THE RESPONSIBILITY OF THE ENGINEER. ALL RIGHTS RESERVED.

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WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
EAST INTERCEPTOR  
PLAN & PROFILE

DRAWING DATE: 10/19/2022

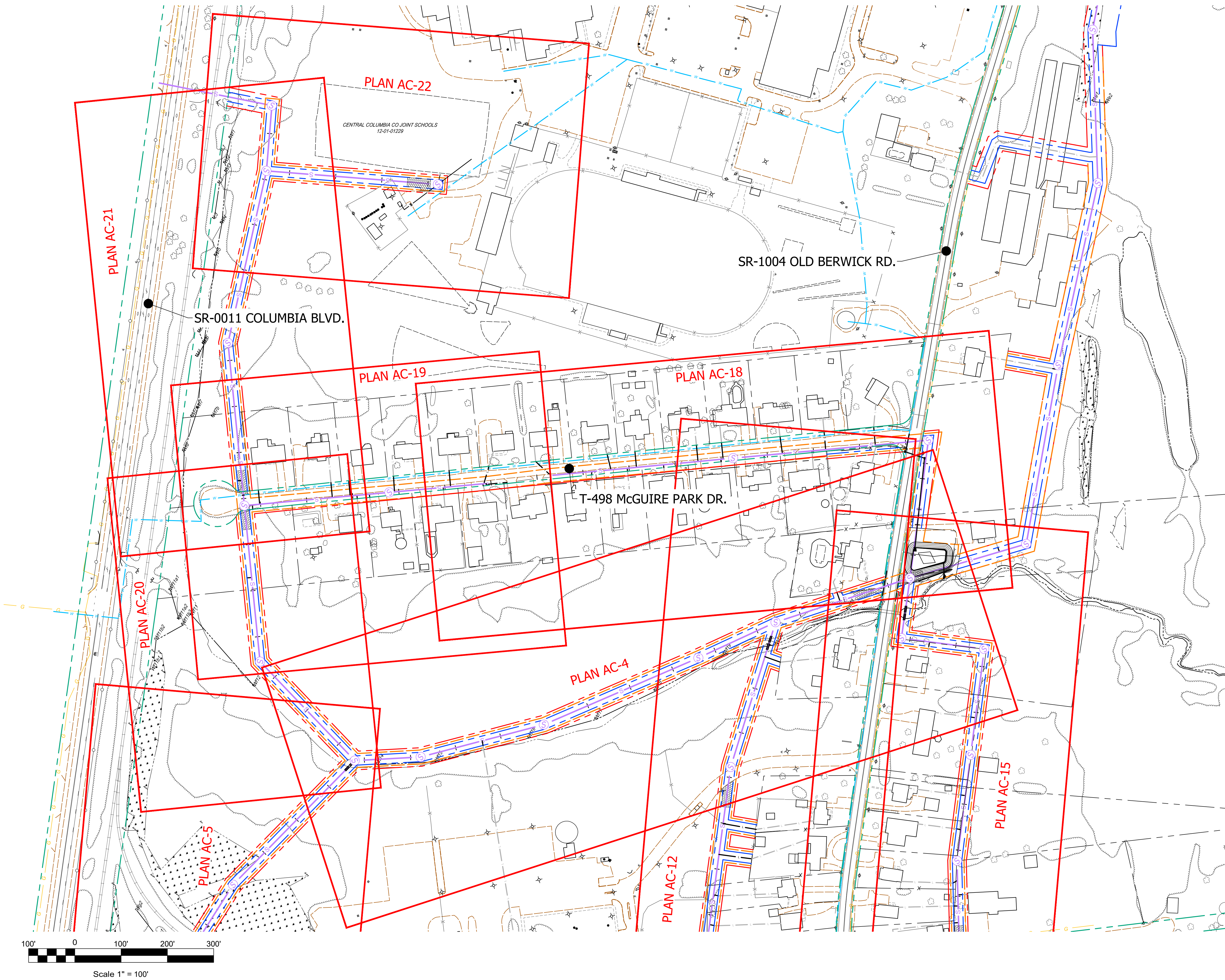
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**EI-4**

20 of 65



8/17/2022  
SET ALMEDIA COLL. DWG



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COLUMBIA COUNTY, PA

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ALMEDIA COLLECTION  
SYSTEM PLAN

DRAWING DATE: 10/19/2022  
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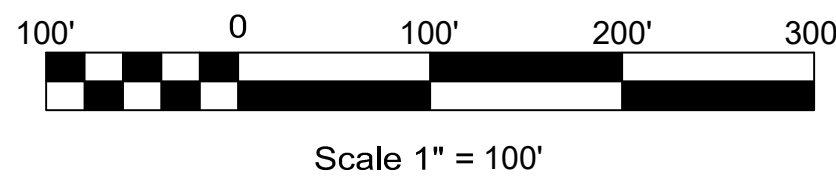
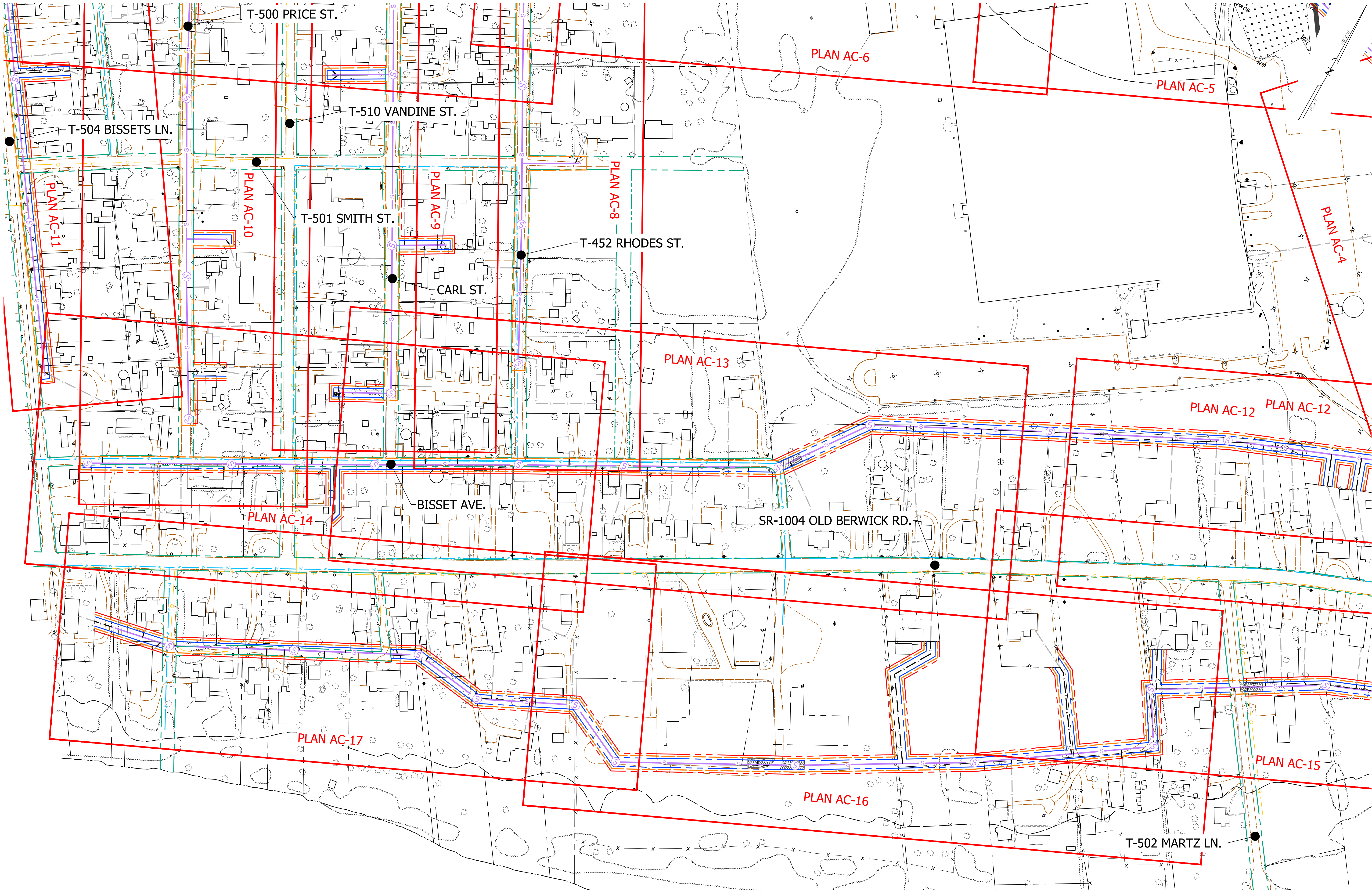
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21 of 68

DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022

BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P 37298E

PLAN, THESE PLANS INCORPORATING THE SIGNED PROFESSIONAL ENGINEER'S SEAL AND RELIED UPON BY THE CLIENT AND PREPARED SPECIALISTS FOR THE CLIENT AND REVISION, MODIFICATION, REVISION, DUPLICATION, OR ANY OTHER USE OF THESE PLANS WITHOUT THE WRITTEN CONSENT OF BASSETT ENGINEERING IS A VIOLATION OF THE PROFESSIONAL ENGINEERING ACT. © COPYRIGHT 2022 BASSETT ENGINEERING. ALL RIGHTS RESERVED.





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DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P 37298-E

ANY THESE PLANS INCORPORATING THE SIGNED PROFESSIONAL ENGINEER'S SEAL ARE CONSIDERED OFFICIAL AND RELIED UPON BY THE CLIENT AND PREPARED SPECIALLY FOR THE CLIENT AND REVISION, DUBLICATION OR REPRODUCTION OF THESE PLANS WITHOUT THE WRITTEN CONSENT OF BASSETT ENGINEERING IS A VIOLATION OF THE PROFESSIONAL ENGINEERING ACT. © COPYRIGHT 2022 BASSETT ENGINEERING. ALL RIGHTS RESERVED.

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COLUMBIA COUNTY, PA

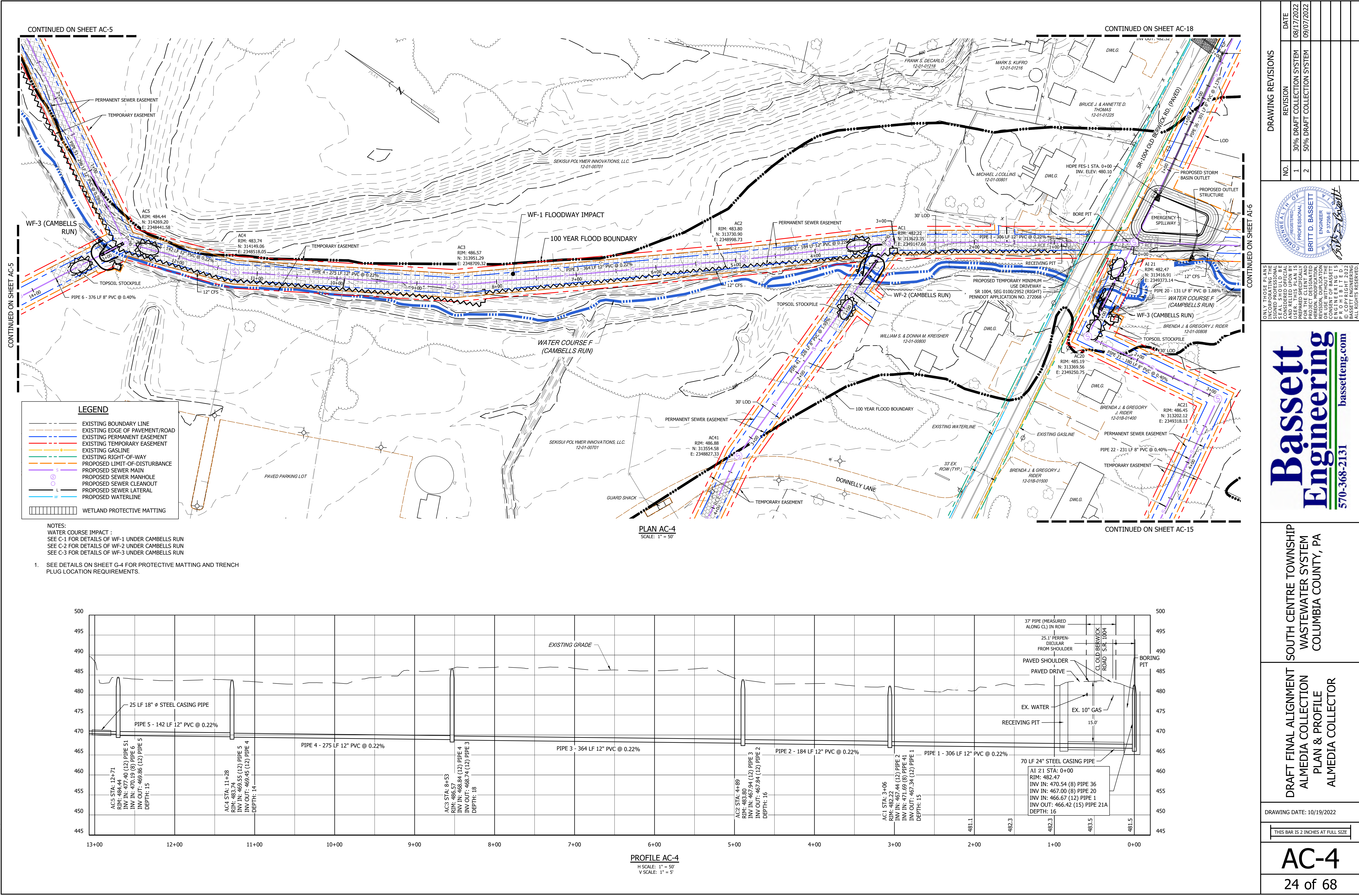
DRAFT FINAL ALIGNMENT  
ALMEDIA COLLECTION  
SYSTEM PLAN

DRAWING DATE: 10/19/2022  
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DRAWING REVISIONS			
NO.	REVISION	DATE	
1	30% DRAFT COLLECTION SYSTEM	08/17/2022	
2	50% DRAFT COLLECTION SYSTEM	09/07/2022	

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COLUMBIA COUNTY, PA

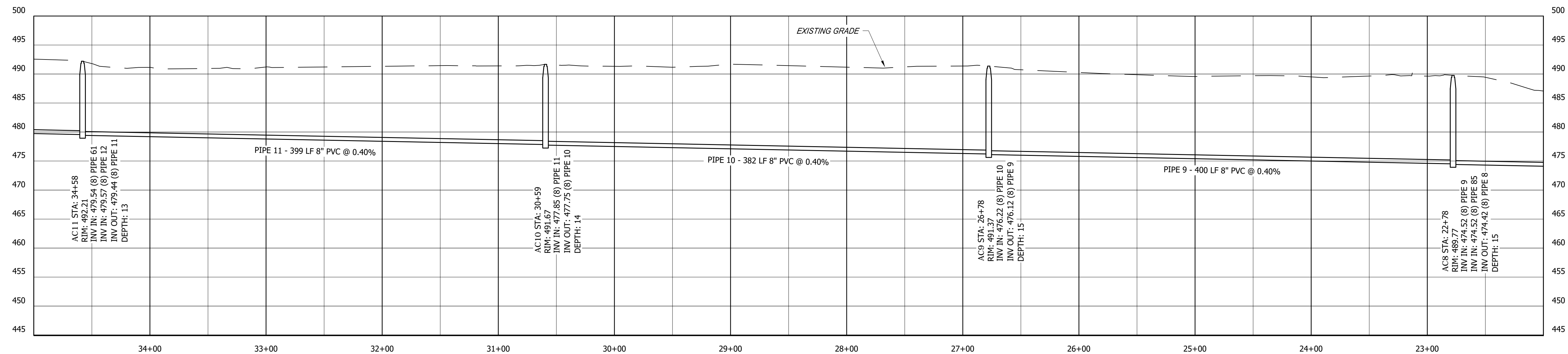
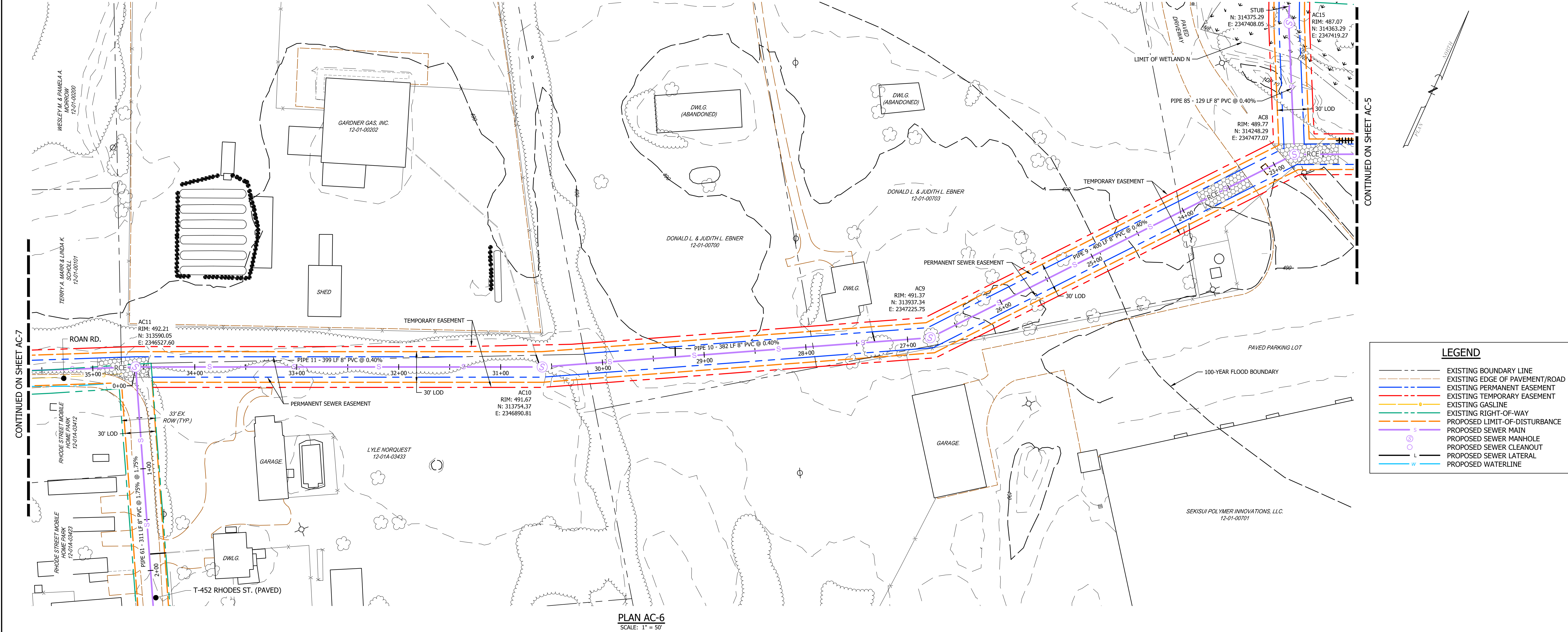
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PLAN & PROFILE  
ALMEDIA COLLECTOR



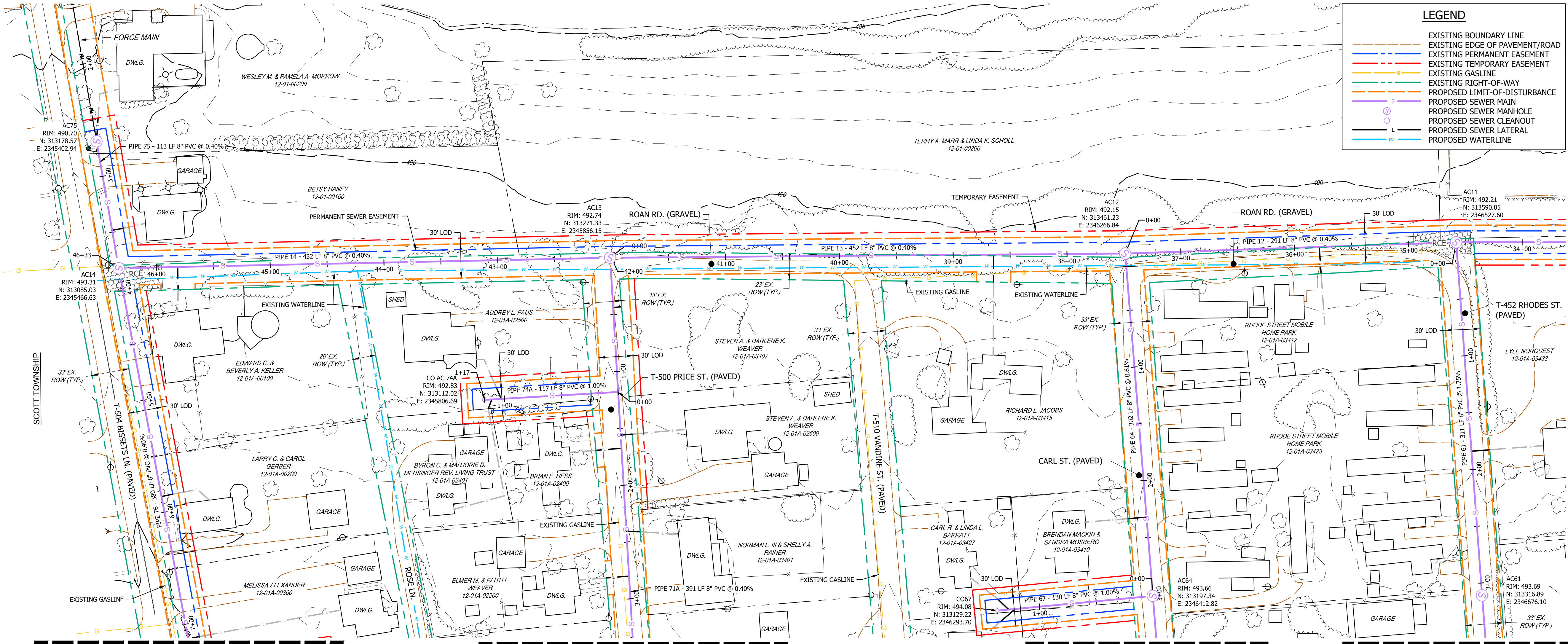




SET ALMEDA COLL. DWG 8/16/2022







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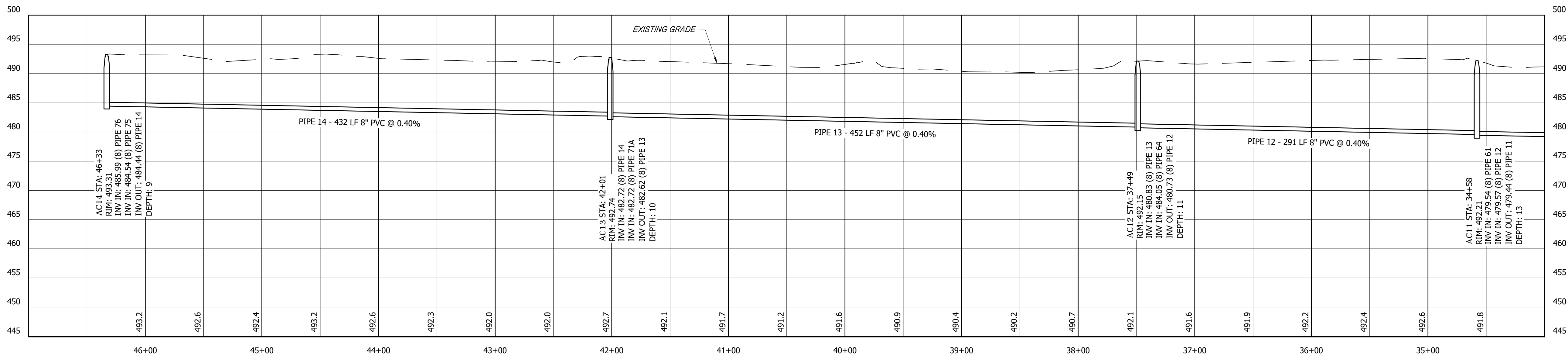
CONTINUED ON SHEET AC-11

CONTINUED ON SHEET AC-10

PLAN AC-7  
SCALE: 1" = 50'

CONTINUED ON SHEET AC-9

CONTINUED ON SHEET AC-8

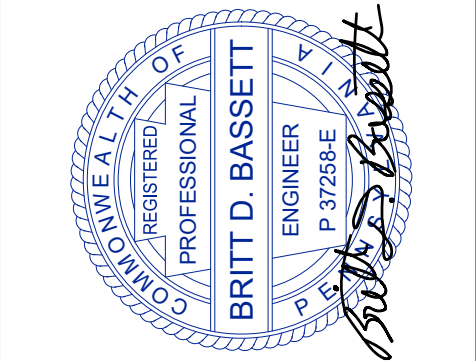


PROFILE AC-7  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



I, THE UNDERSIGNED, A PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT I AM THE DESIGNER OF THIS PROJECT AND I AM A MEMBER IN GOOD STANDING OF THE PROFESSIONAL ENGINEERING SOCIETY OF THE STATE OF MARYLAND. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AS THIS PROJECT. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AS THIS PROJECT. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AS THIS PROJECT.

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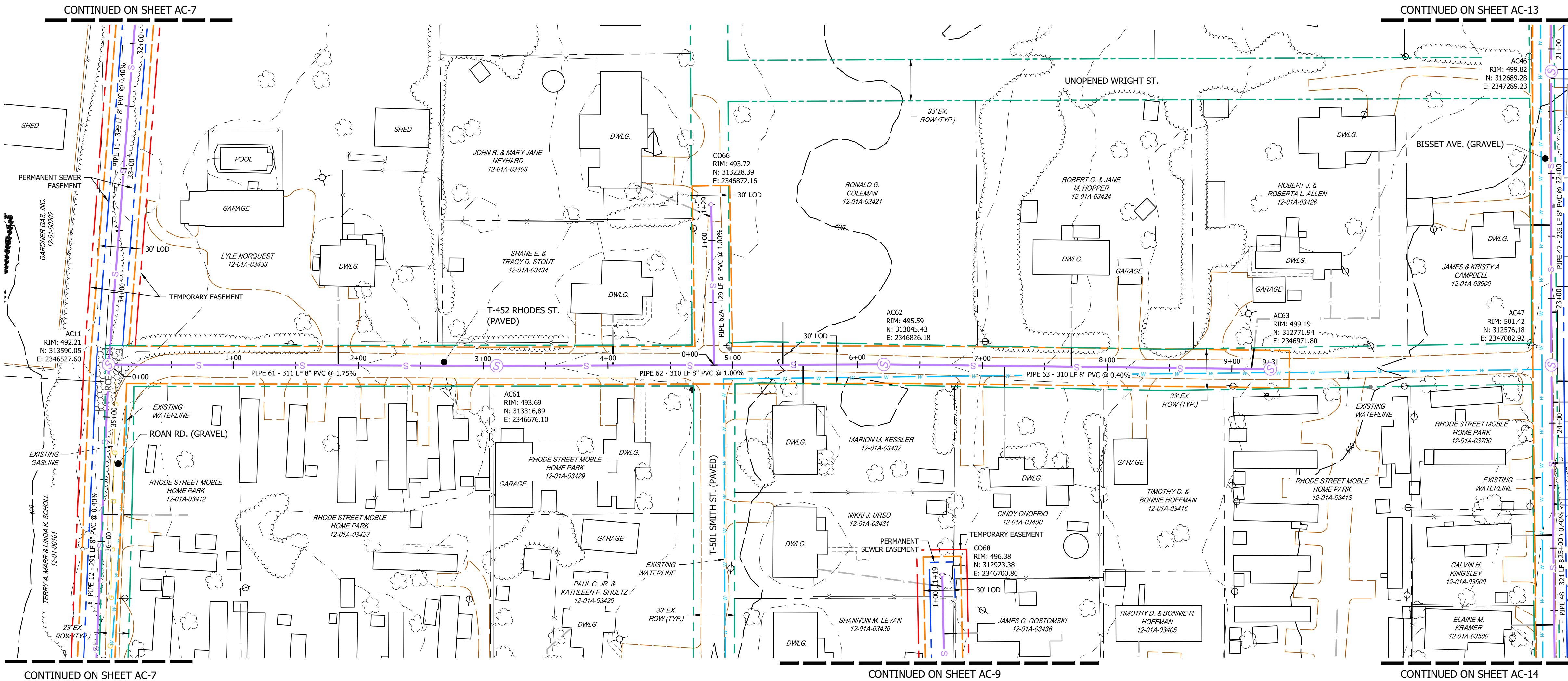
SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

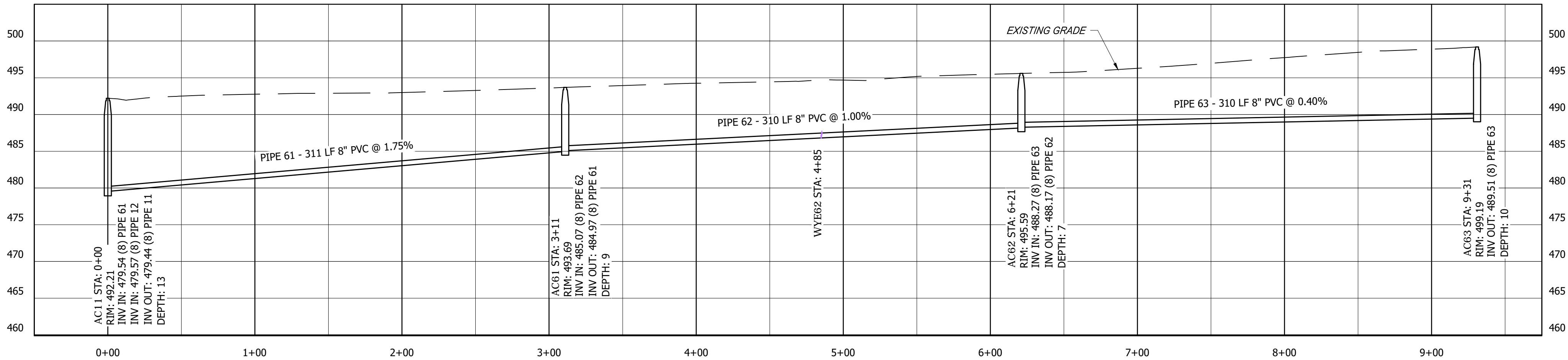
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AC-7  
27 of 68





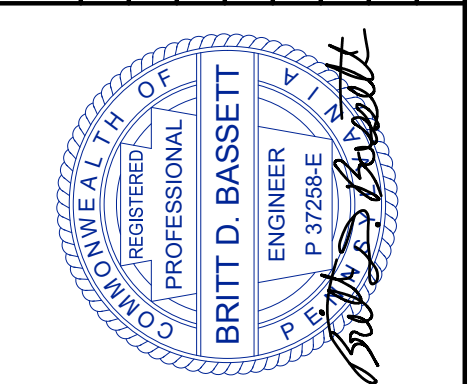
PLAN AC-8  
SCALE: 1" = 50'



PROFILE AC-8  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM



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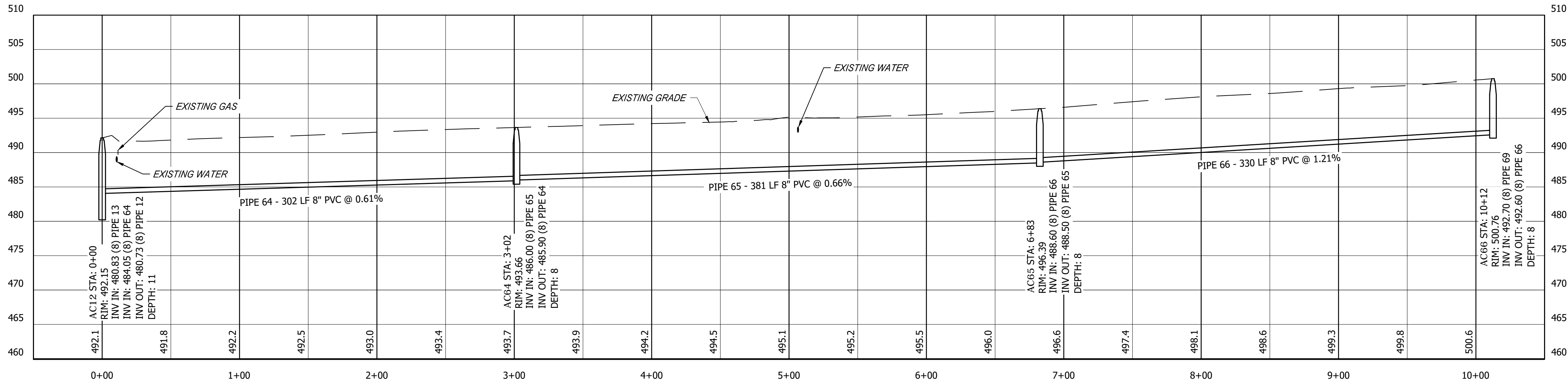
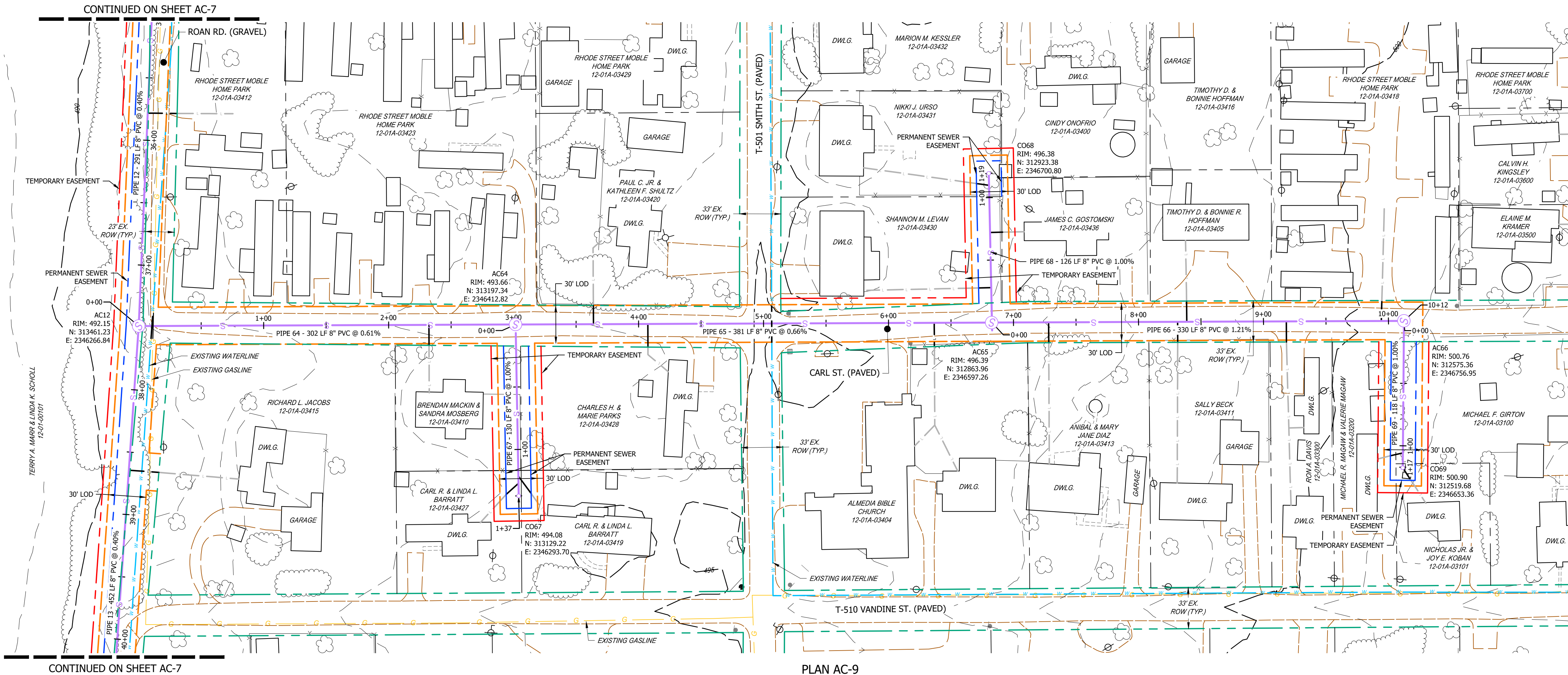
SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

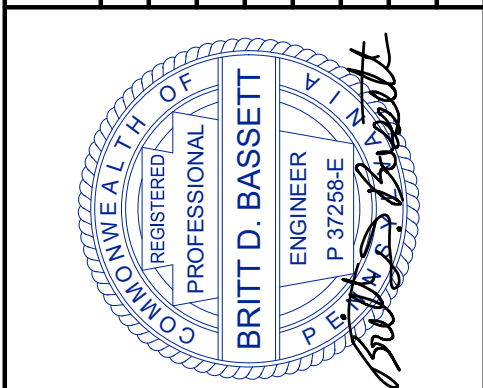
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**AC-8**  
28 of 68





DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



I, THE UNDERSIGNED, BRITT D. BASSETT, A PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT I AM THE DESIGNER OF THE ABOVE PROJECT, AND I AM NOT PROVIDING ANY SERVICES TO THE CLIENT THAT ARE BEYOND THE SCOPE OF MY PROFESSIONAL ENGINEERING LICENSE. I AM NOT PROVIDING ANY SERVICES TO THE CLIENT THAT ARE BEYOND THE SCOPE OF MY PROFESSIONAL ENGINEERING LICENSE. I AM NOT PROVIDING ANY SERVICES TO THE CLIENT THAT ARE BEYOND THE SCOPE OF MY PROFESSIONAL ENGINEERING LICENSE.



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PLAN & PROFILE  
CARL STREET

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

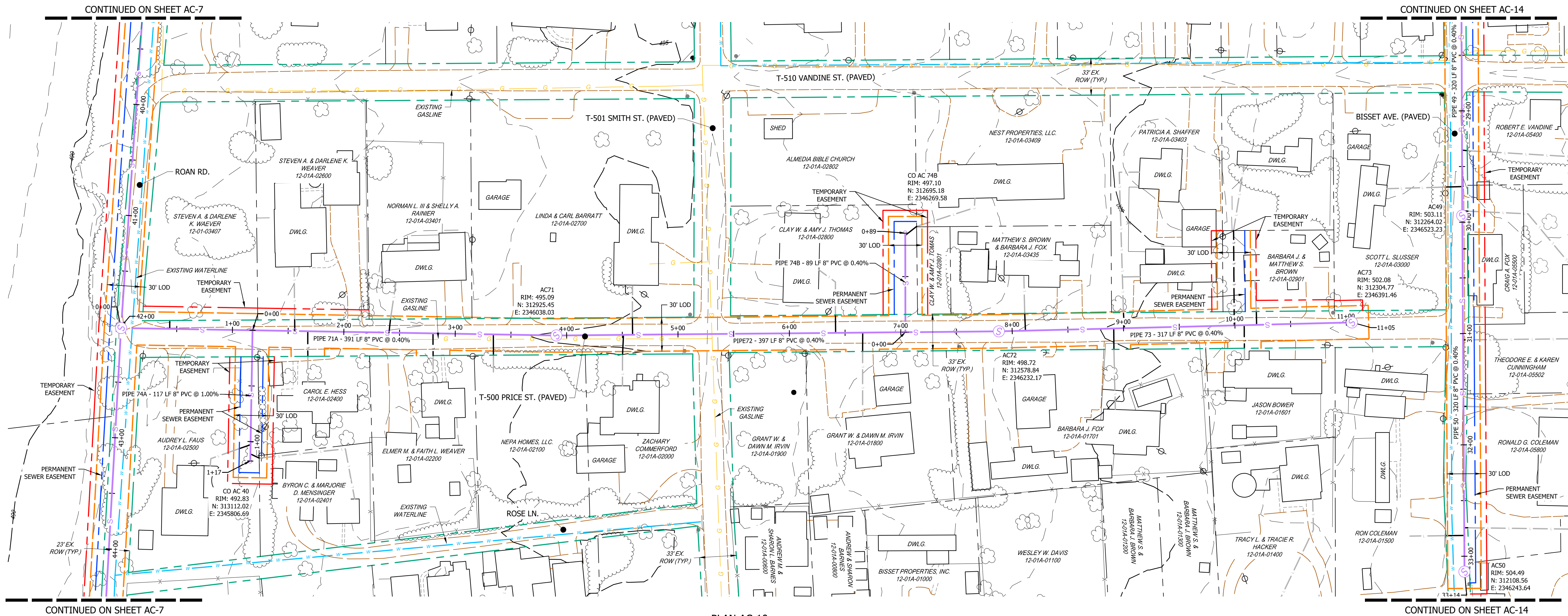
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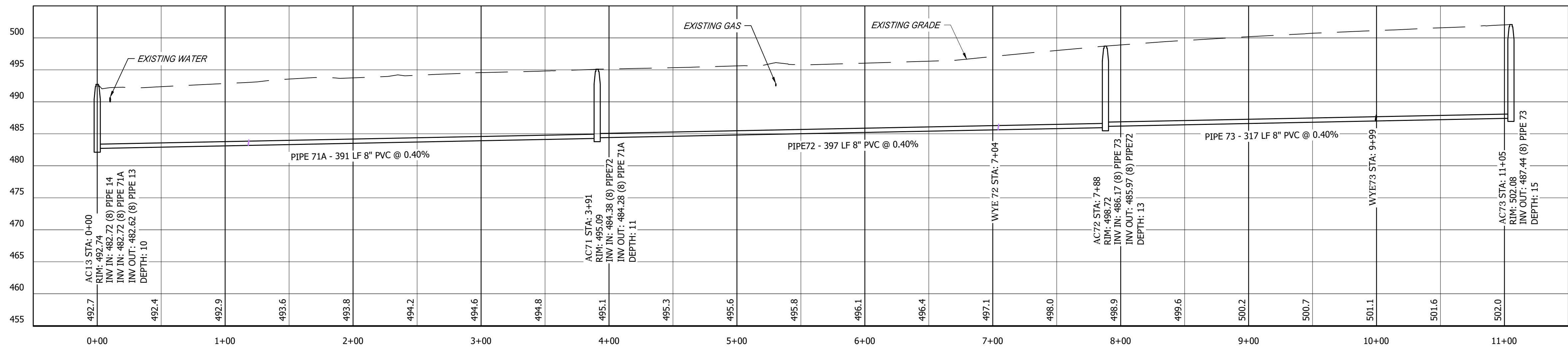
AC-9

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PLAN AC-10  
SCALE: 1" = 50'



PROFILE AC-10  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM



I, THE UNDERSIGNED, BRITT D. BASSETT, A PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT I AM THE DESIGNER OF THE ABOVE TITLED PROJECT AND I AM A MEMBER IN GOOD STANDING OF THE PROFESSIONAL ENGINEERING SOCIETY OF PENNSYLVANIA. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AND PLACE AS THE ABOVE TITLED PROJECT. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AND PLACE AS THE ABOVE TITLED PROJECT. I AM NOT PROVIDING ANY DESIGN OR CONSTRUCTION SERVICES TO ANY OTHER PROJECTS AT THE SAME TIME AND PLACE AS THE ABOVE TITLED PROJECT.

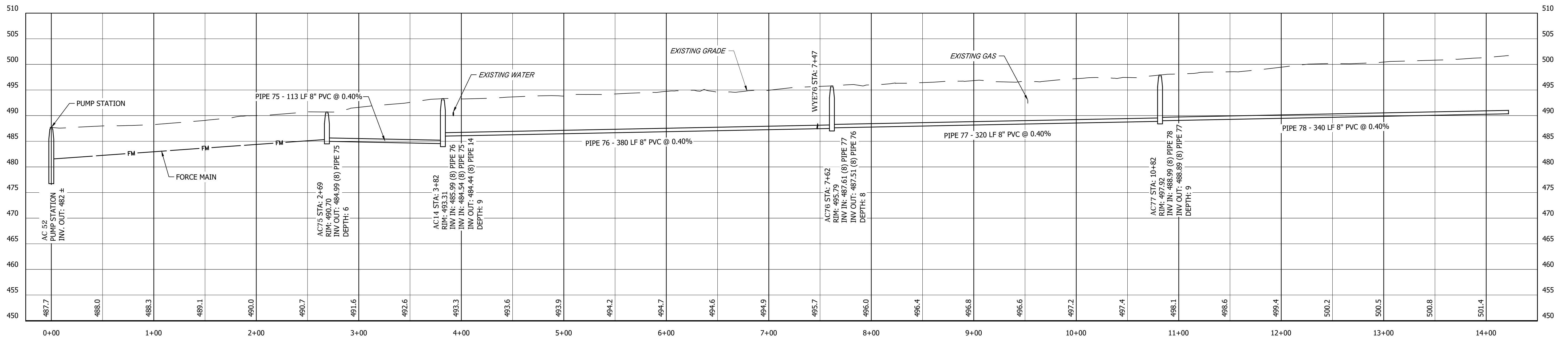
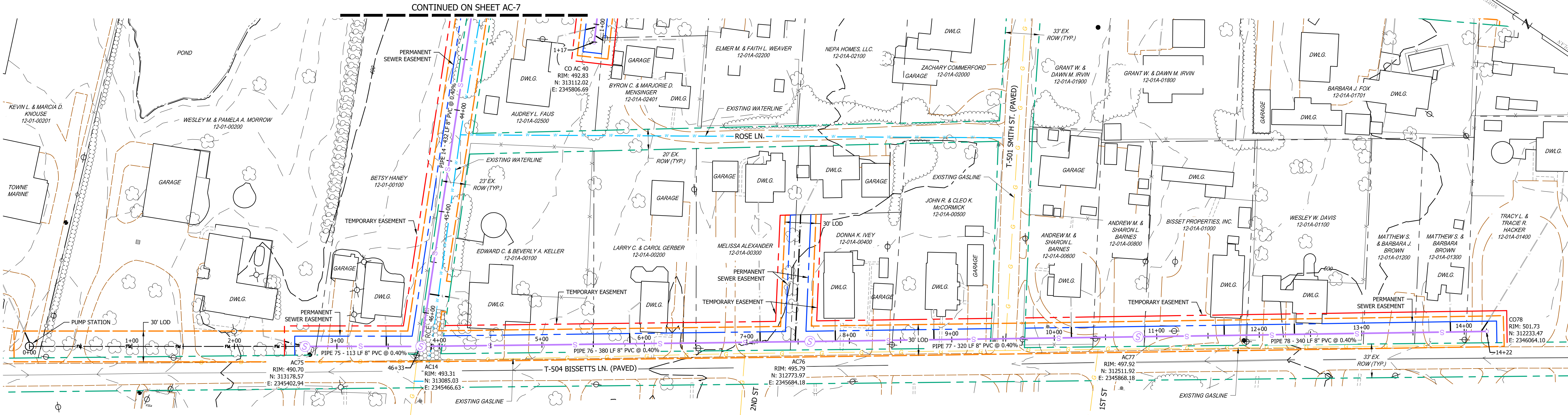
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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

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PLAN & PROFILE  
PRICE STREET

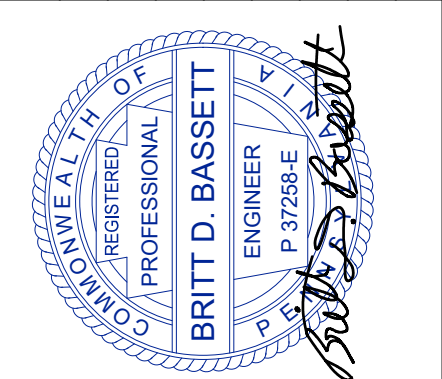
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LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM



I, THE UNDERSIGNED, BRITT D. BASSETT, A PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT I AM THE DESIGNER OF THE ABOVE WORK, AND THAT I AM A MEMBER IN GOOD STANDING OF THE PROFESSIONAL ENGINEERING SOCIETY OF SOUTH CAROLINA. I AM NOT PROVIDING THIS CERTIFICATION FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE. I AM NOT PROVIDING THIS CERTIFICATION FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE.

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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

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ALMEDIA COLLECTION  
PLAN & PROFILE  
BISSETTS LANE

DRAWING DATE: 10/19/2022

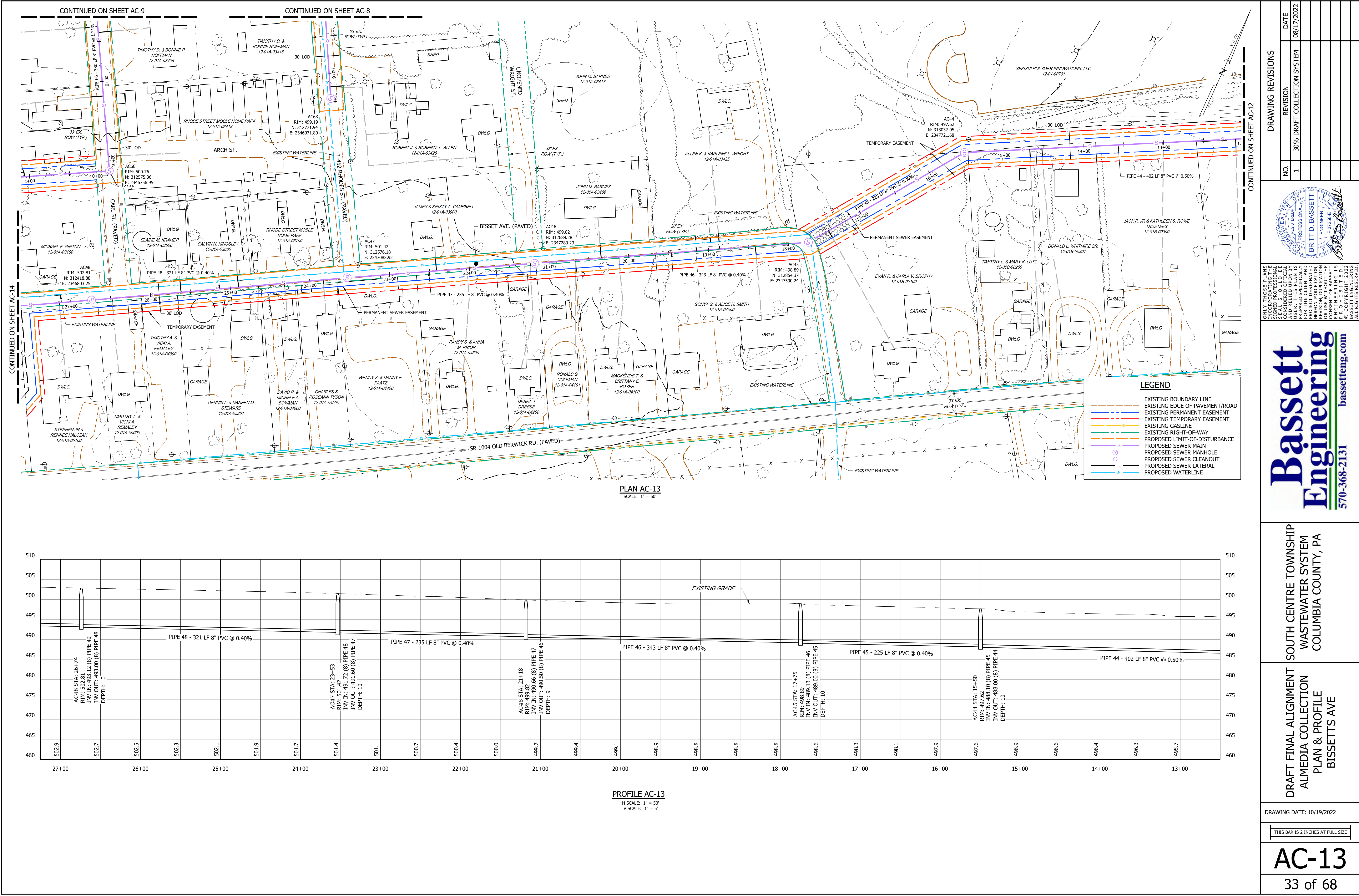
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**AC-11**  
31 of 68

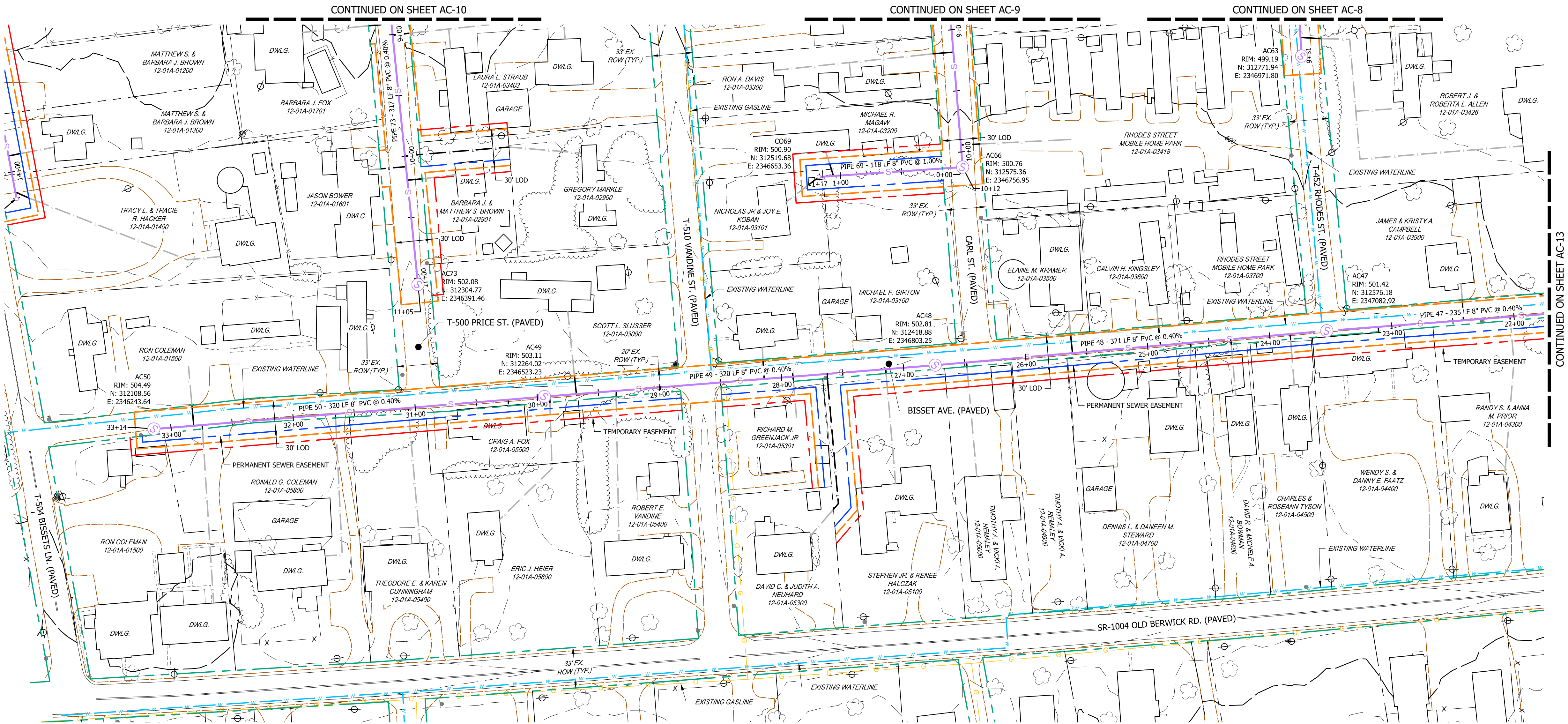




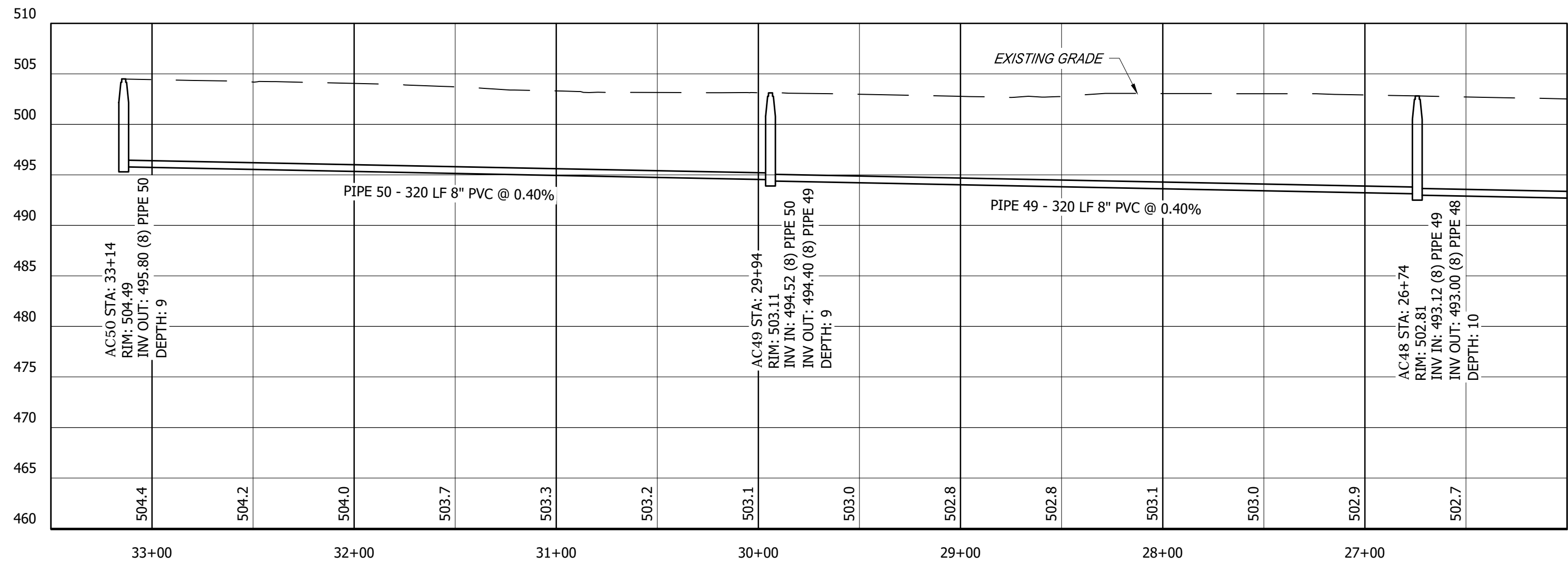








PLAN AC-14  
SCALE: 1" = 50'

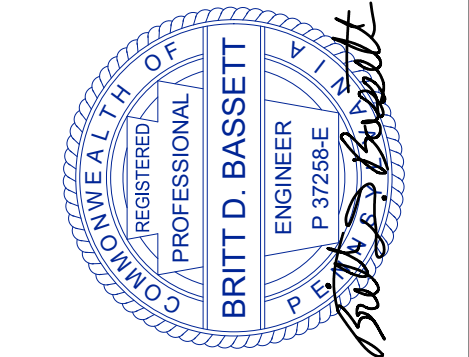


PROFILE AC-14  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



I, THE UNDERSIGNED, HAVE INCORPORATED THE REVISIONS TO THIS DESIGN AND CONSIDERED THE DESIGN AS SHOWN ON THIS DRAWING TO BE THE FINAL DESIGN AND RELIED UPON BY THE CLIENT AND OTHERS. I HAVE PREPARED SPECIAL NOTES FOR THE CLIENT AND OTHERS TO BE USED IN CONSTRUCTION OF THE PROJECT. I HAVE REVIEWED THE REVISIONS AND CONFIRMED THAT THEY DO NOT AFFECT THE DESIGN OR THE SAFETY OF THE PROJECT. I HAVE REVIEWED THE REVISIONS AND CONFIRMED THAT THEY DO NOT AFFECT THE DESIGN OR THE SAFETY OF THE PROJECT. I HAVE REVIEWED THE REVISIONS AND CONFIRMED THAT THEY DO NOT AFFECT THE DESIGN OR THE SAFETY OF THE PROJECT.

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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

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AC-14

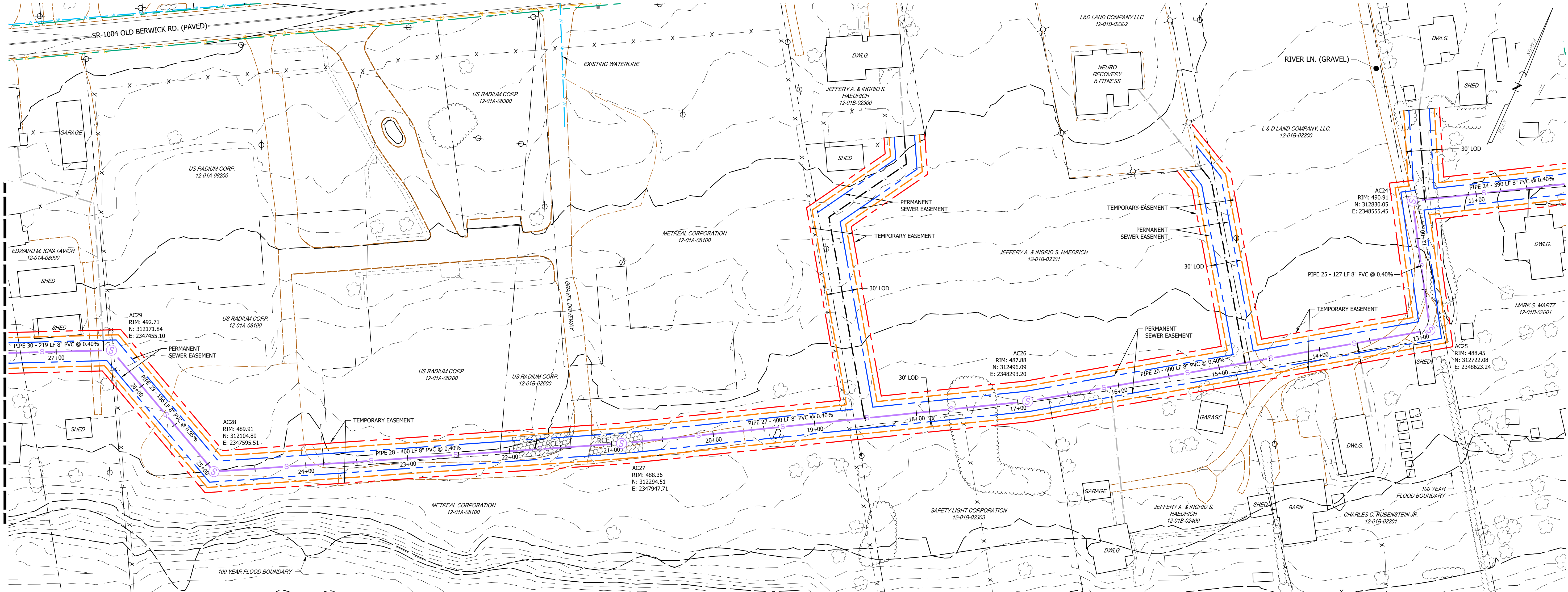
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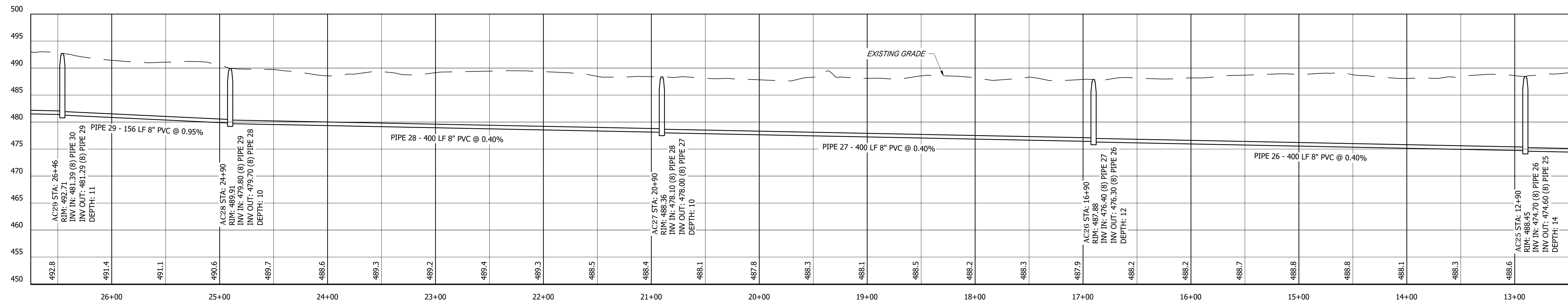




CONTINUED ON SHEET AC-17



PLAN AC-16  
SCALE: 1" = 50'

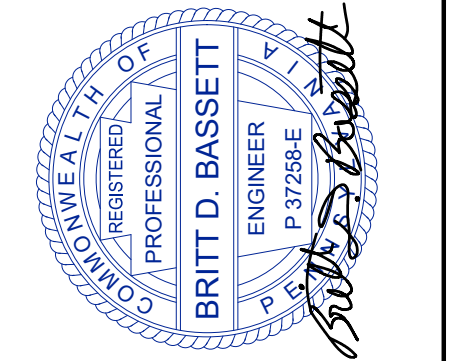


PROFILE AC-16  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
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	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



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PLAN & PROFILE  
ALMEDIA SOUTH

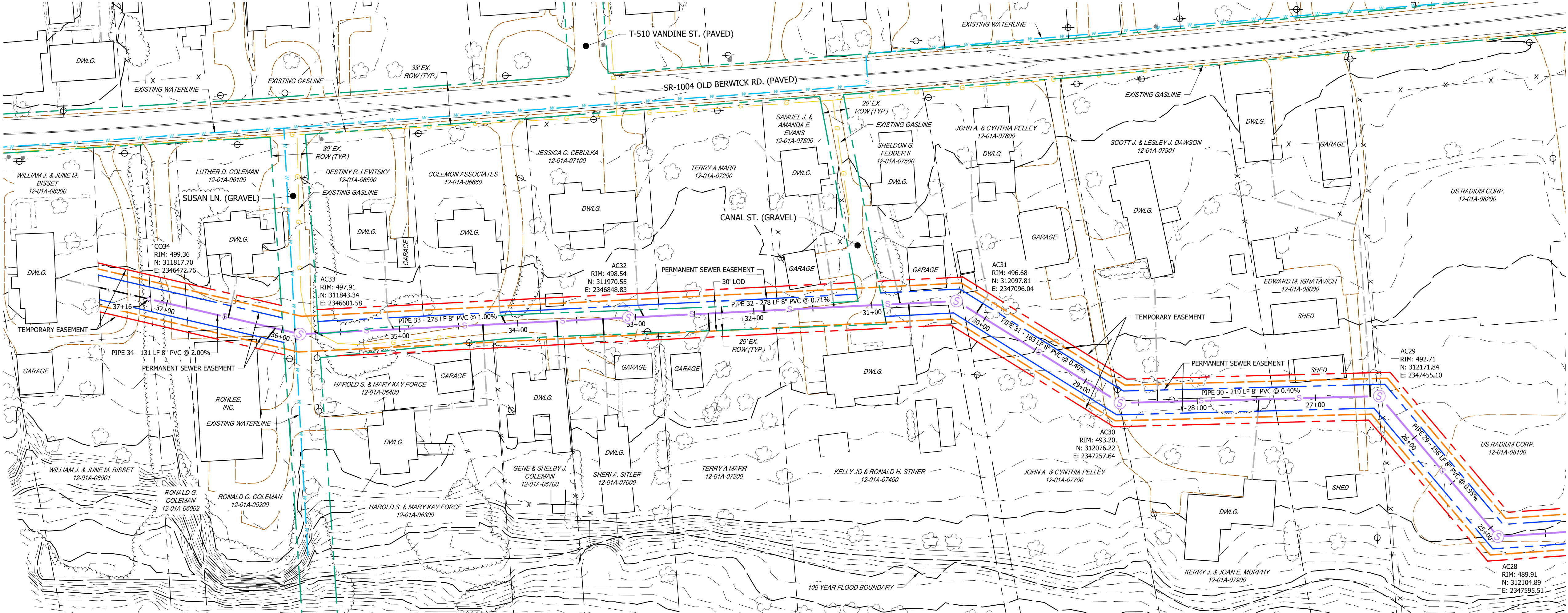
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WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

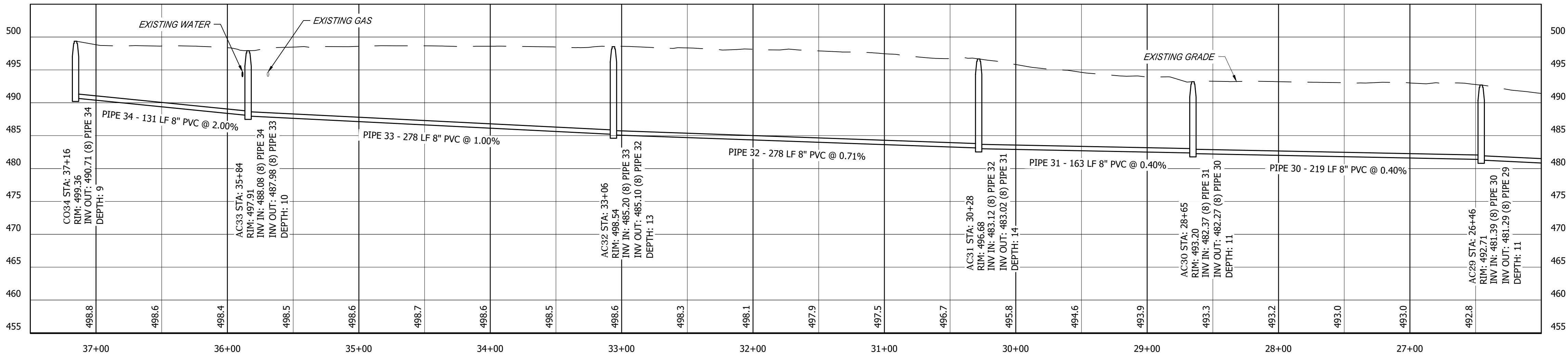
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**AC-16**  
36 of 68





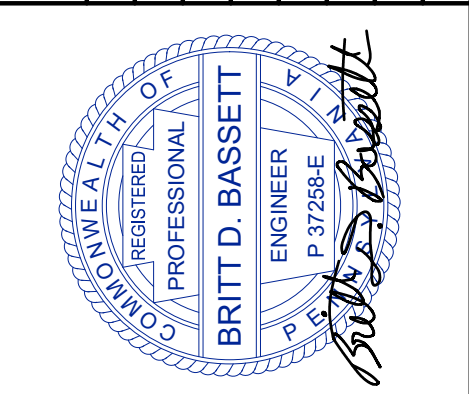
PLAN AC-17  
SCALE: 1" = 50'



PROFILE AC-17  
H SCALE: 1" = 50'  
V SCALE: 1" = 5'

LEGEND	
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	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM



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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
ALMEDIA COLLECTION  
PLAN & PROFILE  
ALMEDIA SOUTH

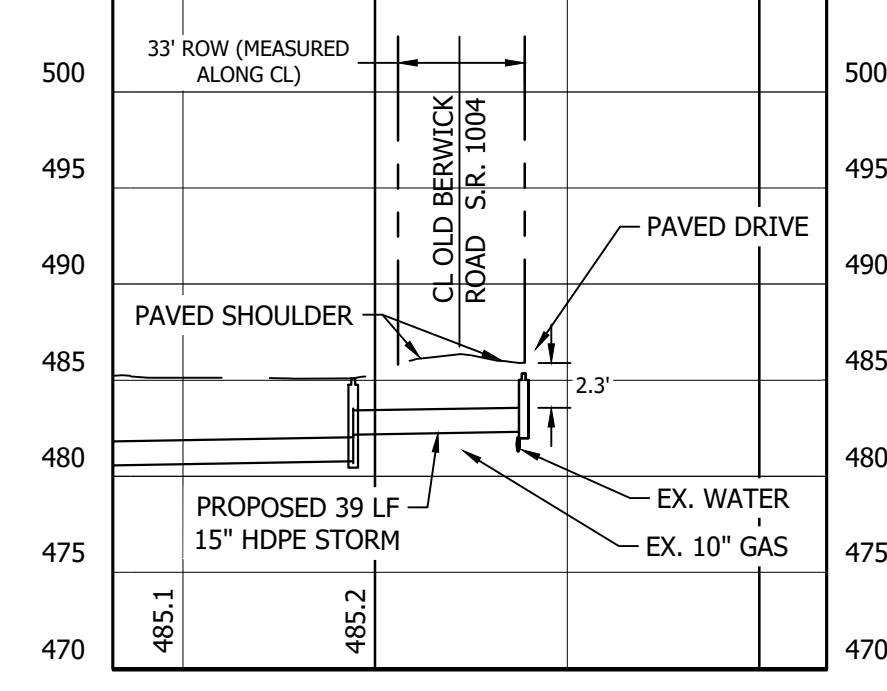
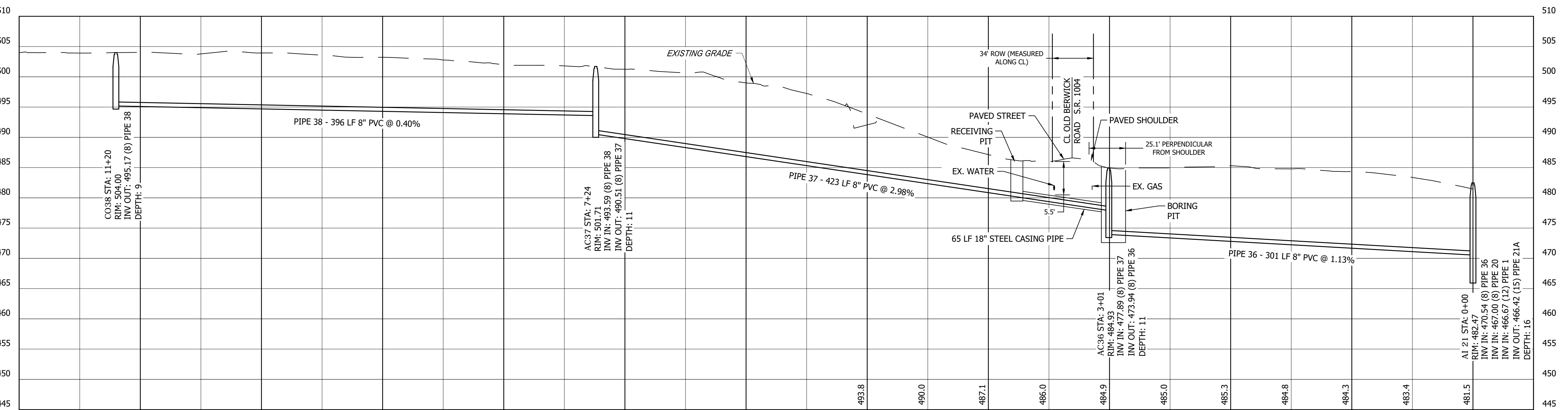
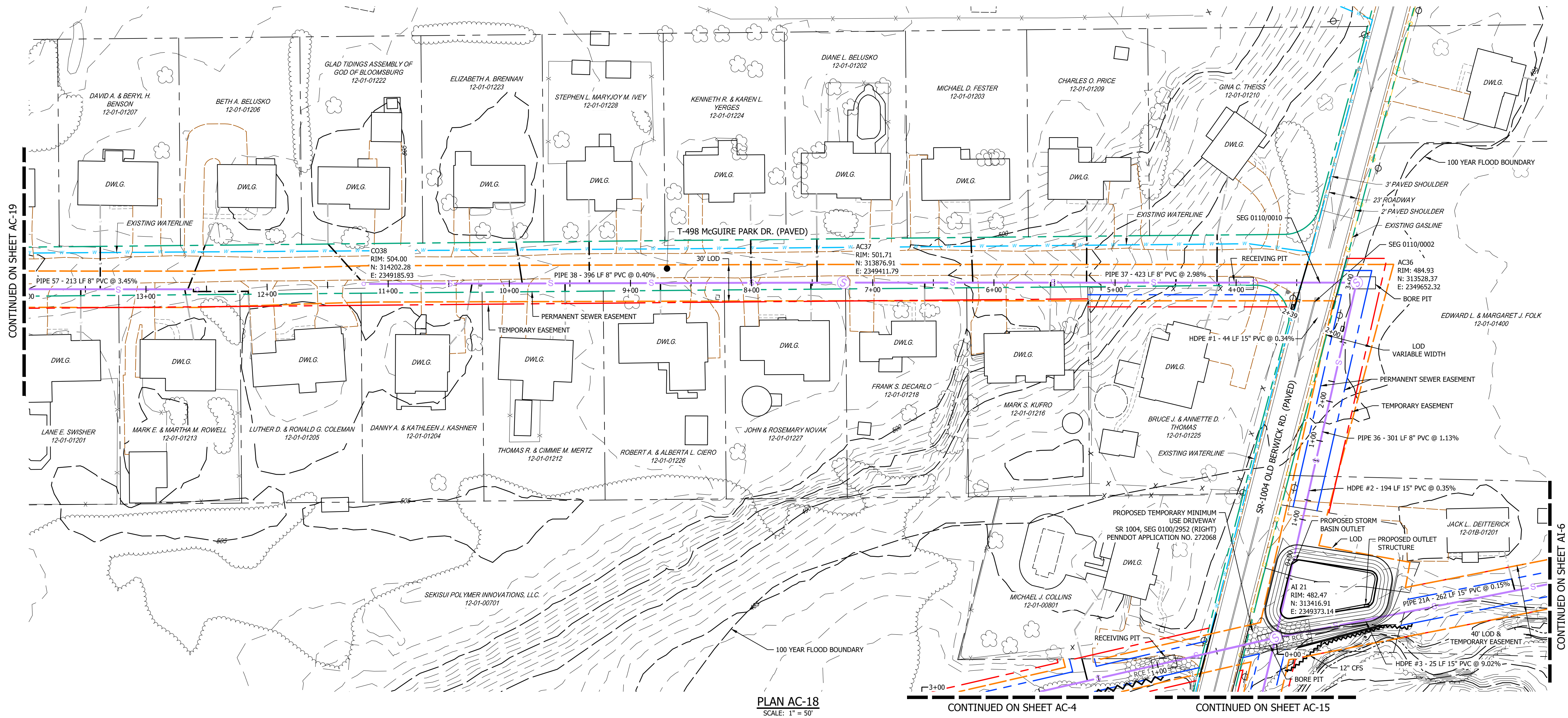
DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**AC-17**



SET: ALMEDIA COLLECTION  
8/16/2022



LEGEND	
	EXISTING BOUNDARY LINE
	EXISTING EDGE OF PAVEMENT/ROAD
	EXISTING PERMANENT EASEMENT
	EXISTING TEMPORARY EASEMENT
	EXISTING GASLINE
	EXISTING RIGHT-OF-WAY
	PROPOSED LIMIT-OF-DISTURBANCE
	PROPOSED SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER CLEANOUT
	PROPOSED SEWER LATERAL
	PROPOSED WATERLINE

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM

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REGISTERED PROFESSIONAL ENGINEER  
P. 37298-E

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COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
ALMEDIA COLLECTION  
PLAN & PROFILE  
MCQUIRE PARK DRIVE

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

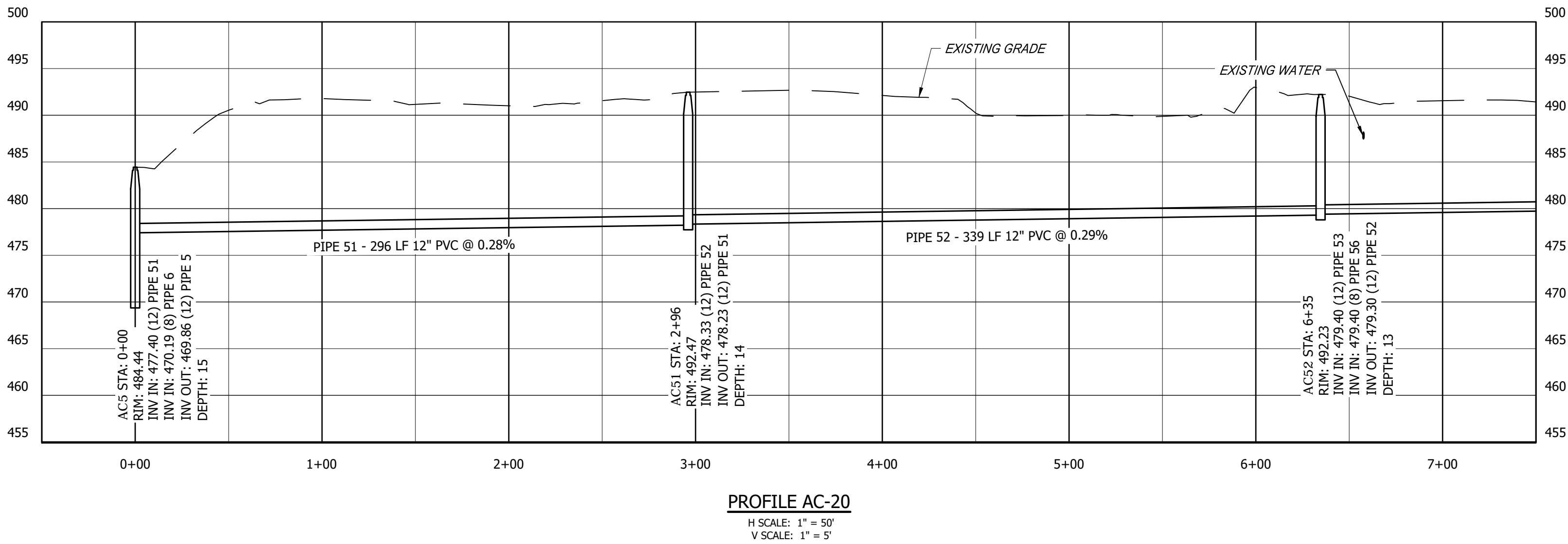
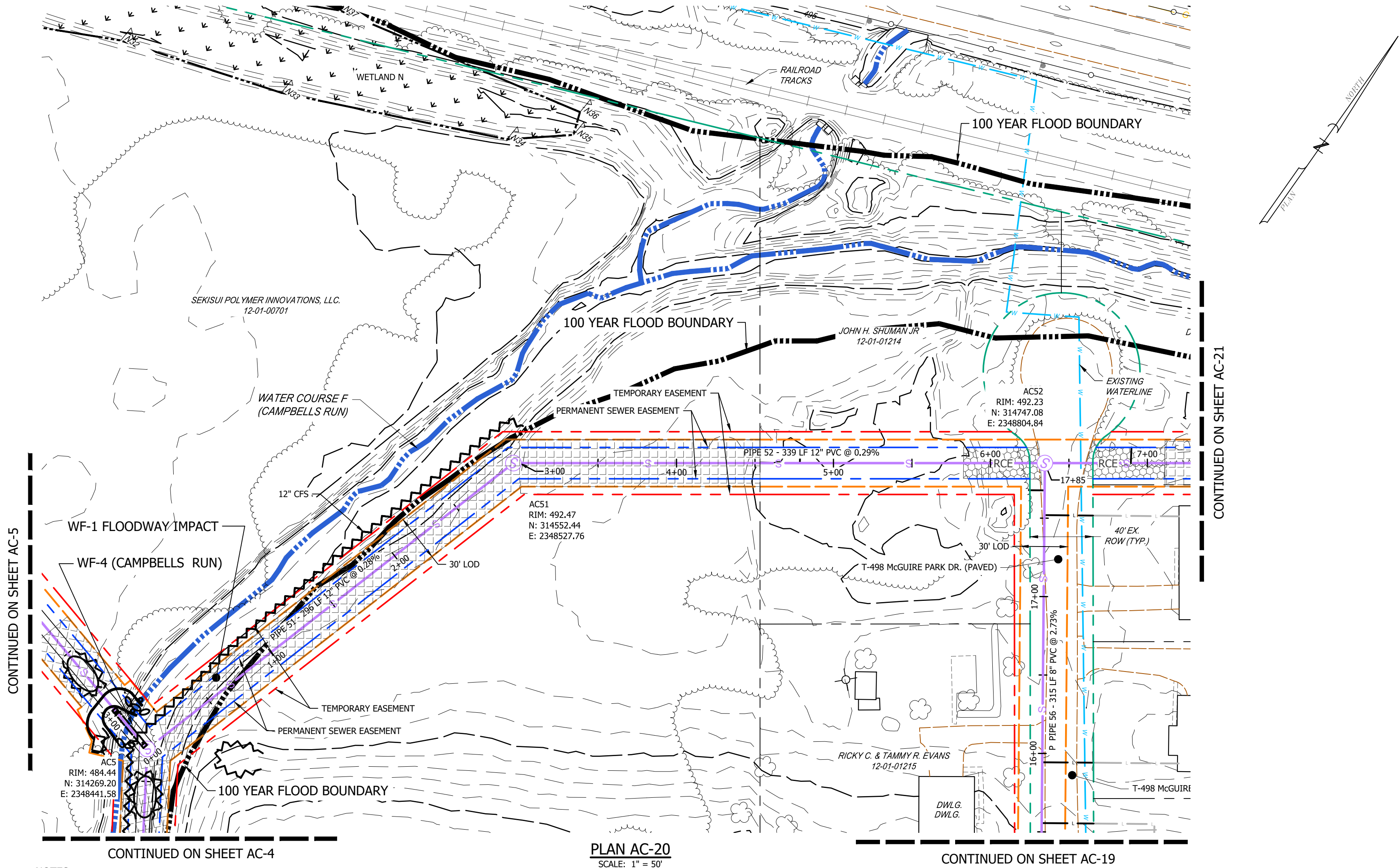
**AC-18**

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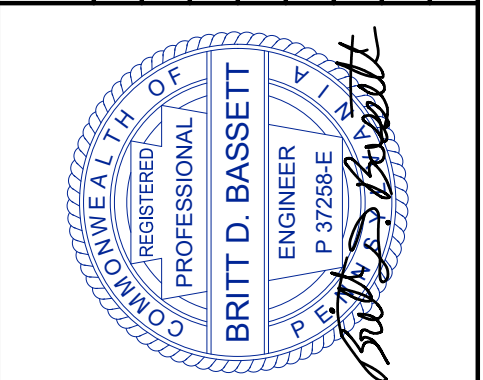






LEGEND	
---	EXISTING BOUNDARY LINE
---	EXISTING EDGE OF PAVEMENT/ROAD
---	EXISTING PERMANENT EASEMENT
---	EXISTING TEMPORARY EASEMENT
---	EXISTING GASLINE
---	EXISTING RIGHT-OF-WAY
---	PROPOSED LIMIT-OF-DISTURBANCE
---	PROPOSED SEWER MAIN
---	PROPOSED SEWER MANHOLE
---	PROPOSED SEWER CLEANOUT
---	PROPOSED SEWER LATERAL
---	PROPOSED WATERLINE
---	WETLAND PROTECTIVE MATTING

DRAWING REVISIONS	
NO.	REVISION
1	30% DRAFT COLLECTION SYSTEM
2	50% DRAFT COLLECTION SYSTEM



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COLUMBIA COUNTY, PA

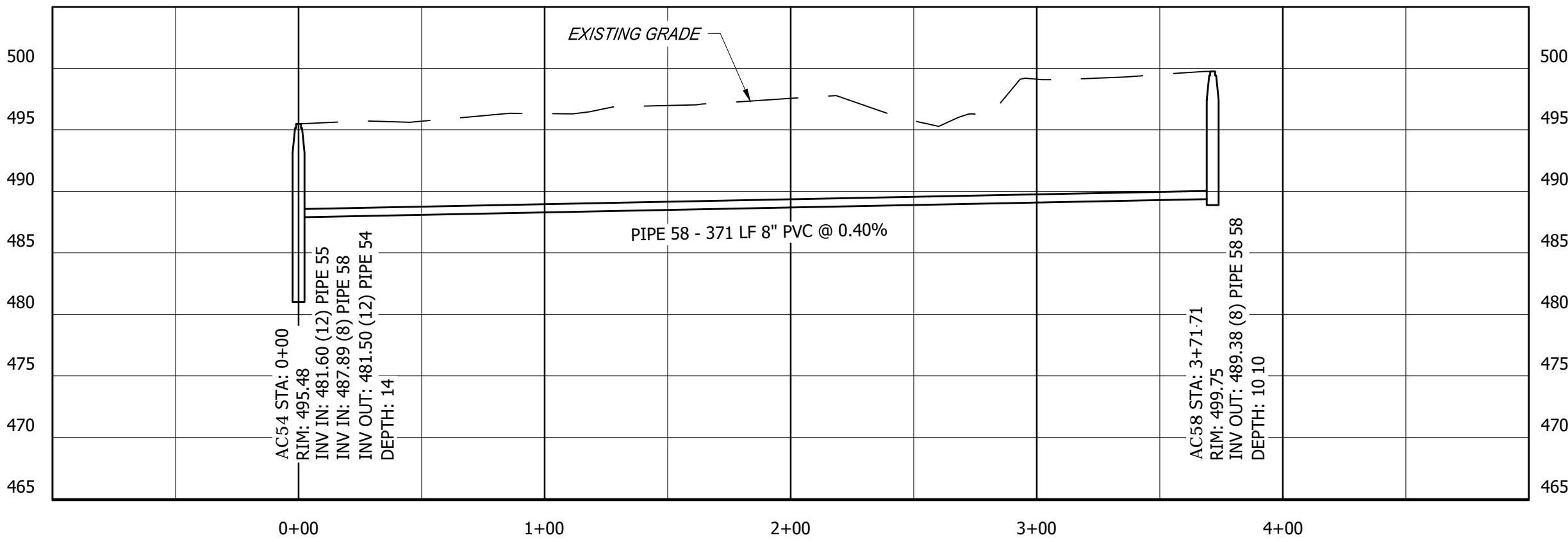
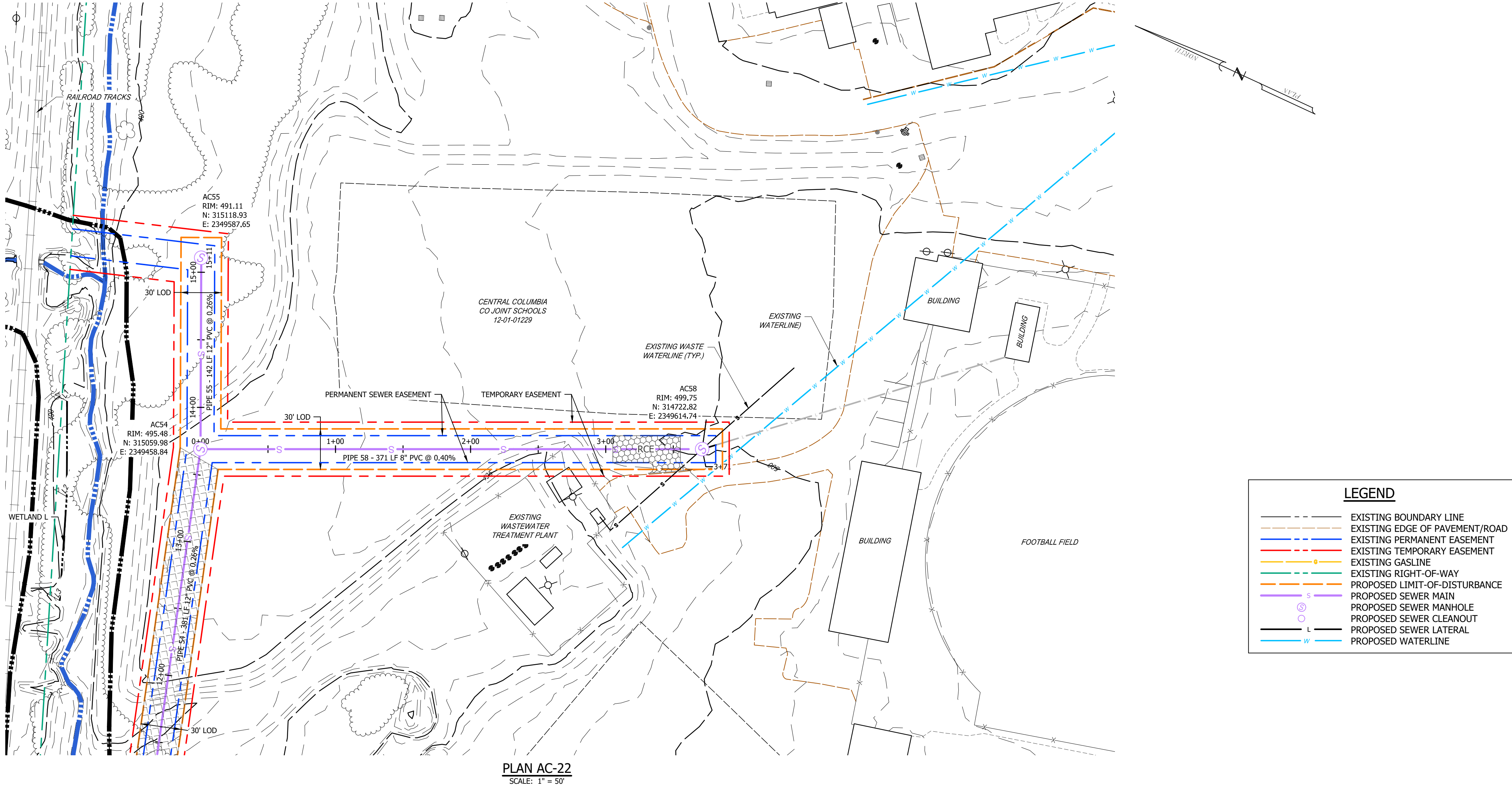
DRAFT FINAL ALIGNMENT  
ALMEDIA COLLECTION  
PLAN & PROFILE  
MCQUIRE COLLECTOR

DRAWING DATE: 10/19/2022  
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NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022



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COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
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PLAN & PROFILE  
HIGH SCHOOL COLLECTOR

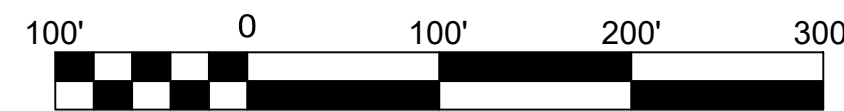
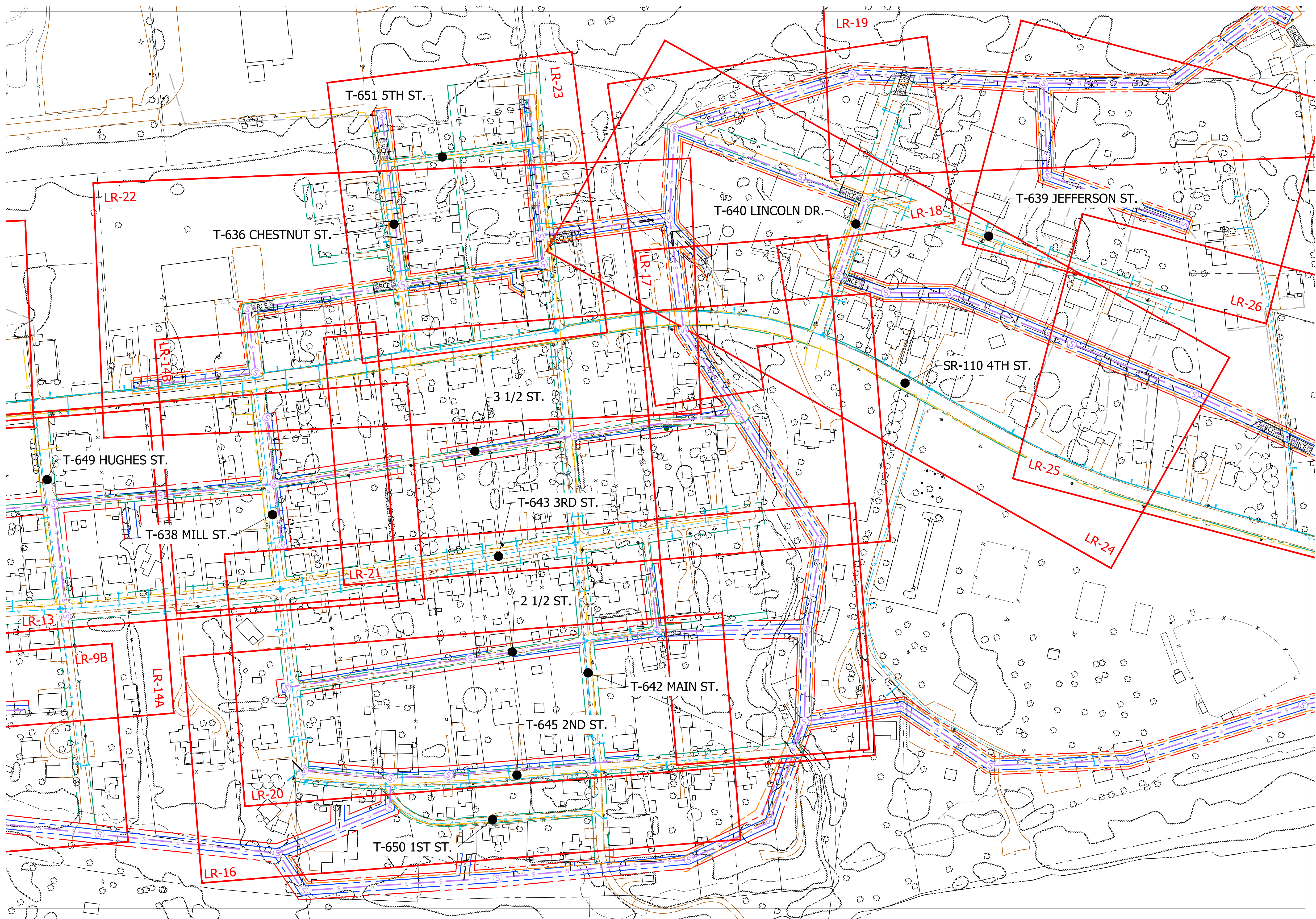
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THIS BAR IS 2 INCHES AT FULL SIZE

AC-22



8/17/2022  
DESIGN LINE RIDGE NORTH PLAINS



NOTE:  
NPDES PERMIT BOUNDARY INCLUDES EXTENT  
OF PROPOSED COLLECTION SYSTEM OFFSET  
15 FT FROM PIPE CENTERLINES

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**LR-1**

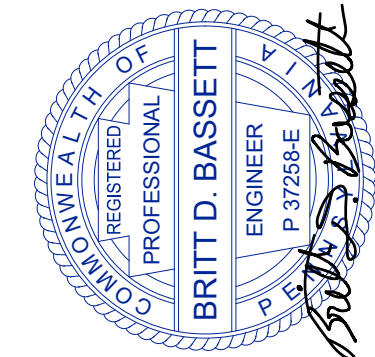
43 of 68

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
SYSTEM PLAN

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

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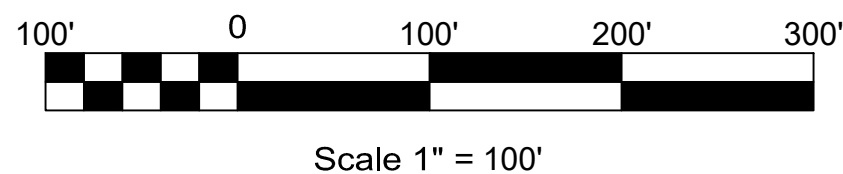
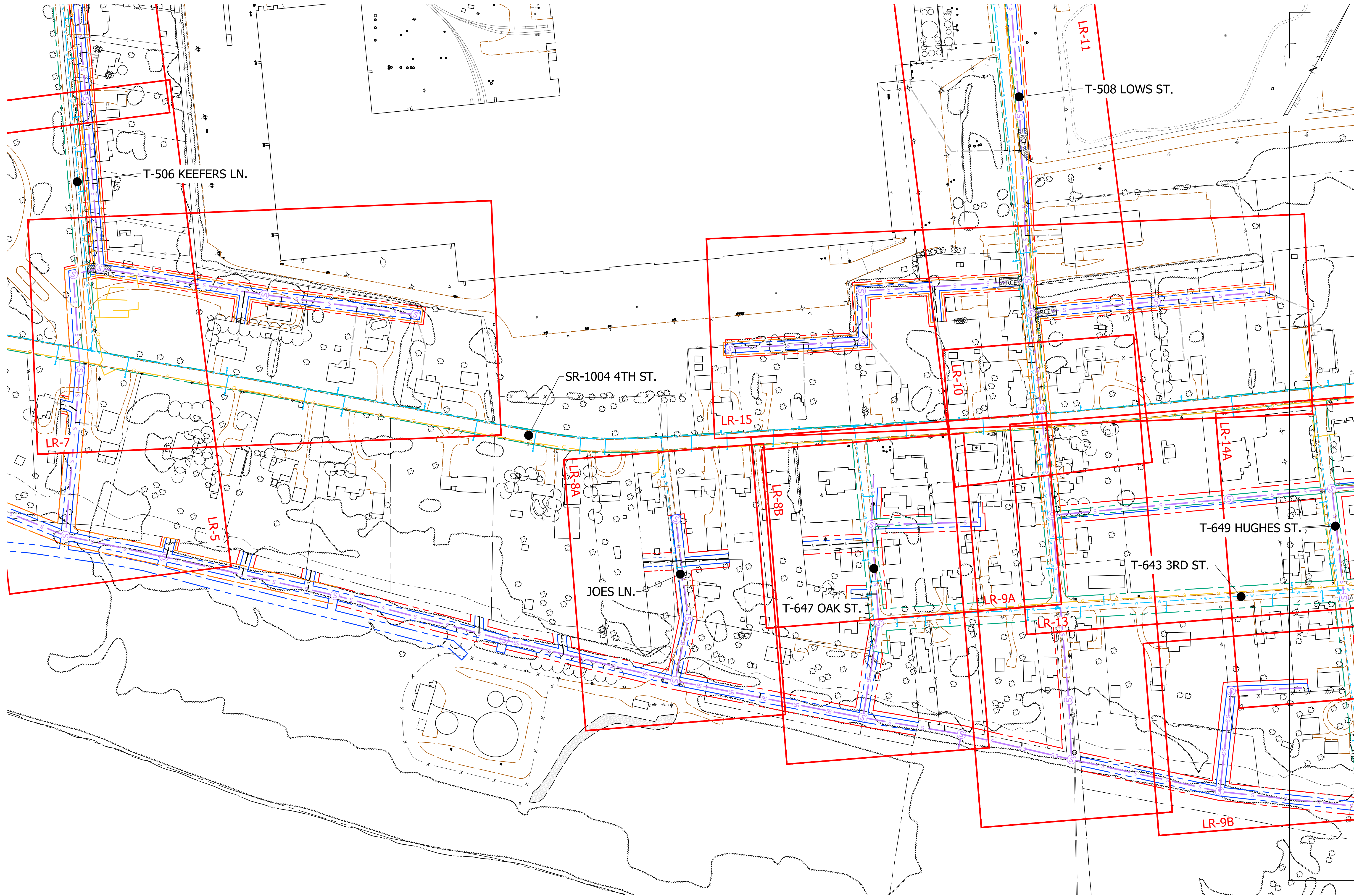


DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



DESIGN LINE RIDGE NORTH PLANS  
8/17/2022



NOTE:  
NPDES PERMIT BOUNDARY INCLUDES EXTENT  
OF PROPOSED COLLECTION SYSTEM OFFSET  
15 FT FROM PIPE CENTERLINES

DRAWING DATE: 10/19/2022

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LR-2

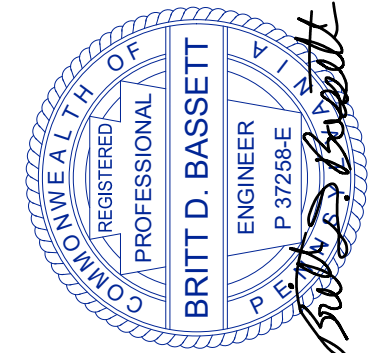
44 of 68

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
SYSTEM PLAN

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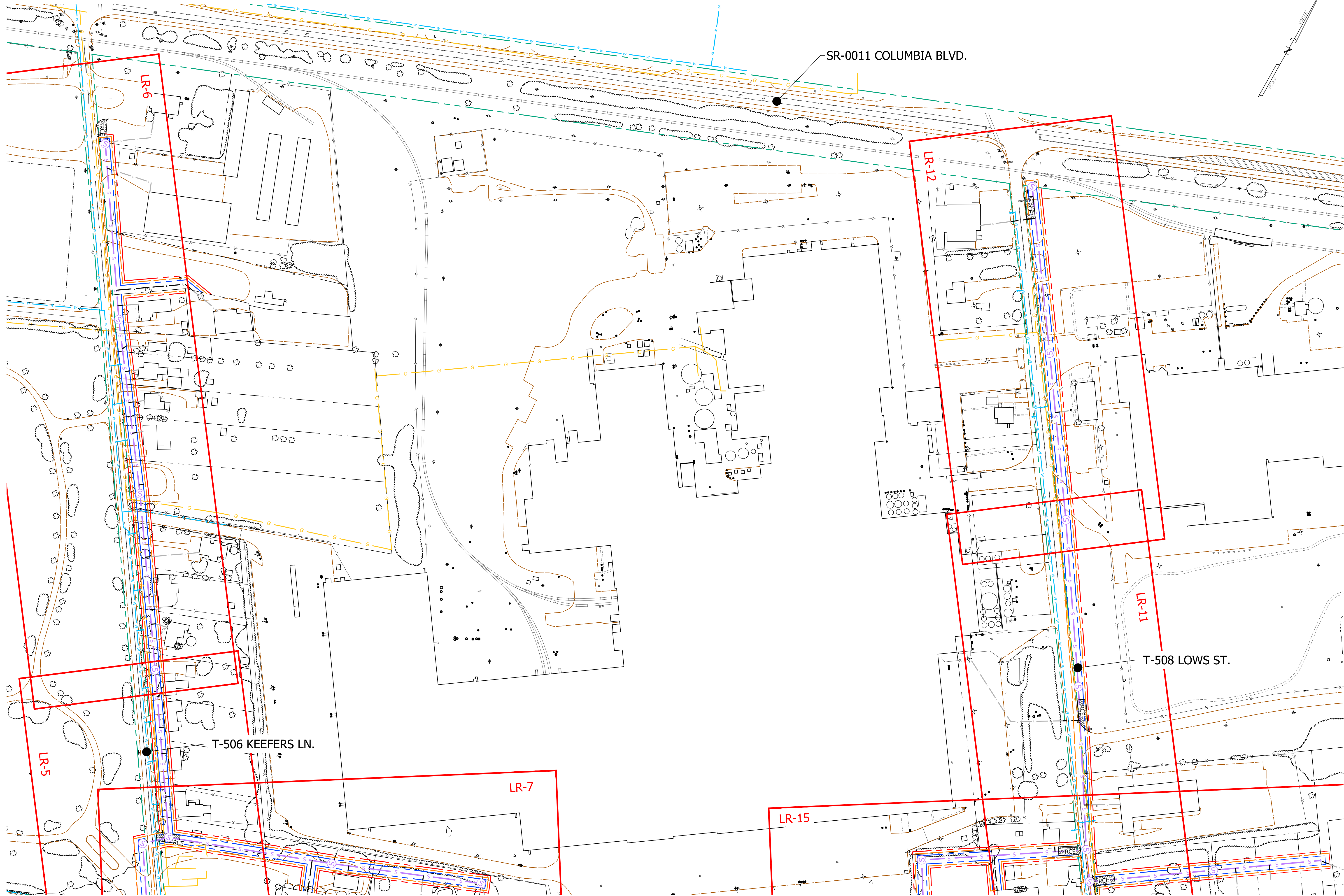


DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



DESIGN LINE RIDGE AND TOWNSHIP  
08/17/2022



NOTE:  
NIPDES PERMIT BOUNDARY INCLUDES EXTENT  
OF PROPOSED COLLECTION SYSTEM OFFSET  
15 FT FROM PIPE CENTERLINES

DRAWING DATE: 10/19/2022

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**LR-3**

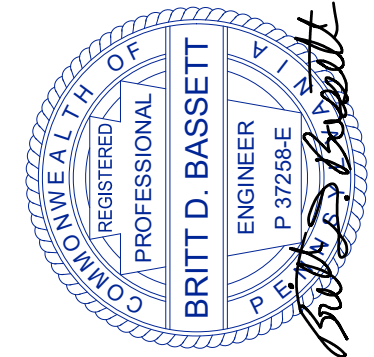
45 of 68

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
SYSTEM PLAN

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

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INCORPORATING THE  
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SEAL OF THE ENGINEER  
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1	30% DRAFT COLLECTION SYSTEM	08/17/2022







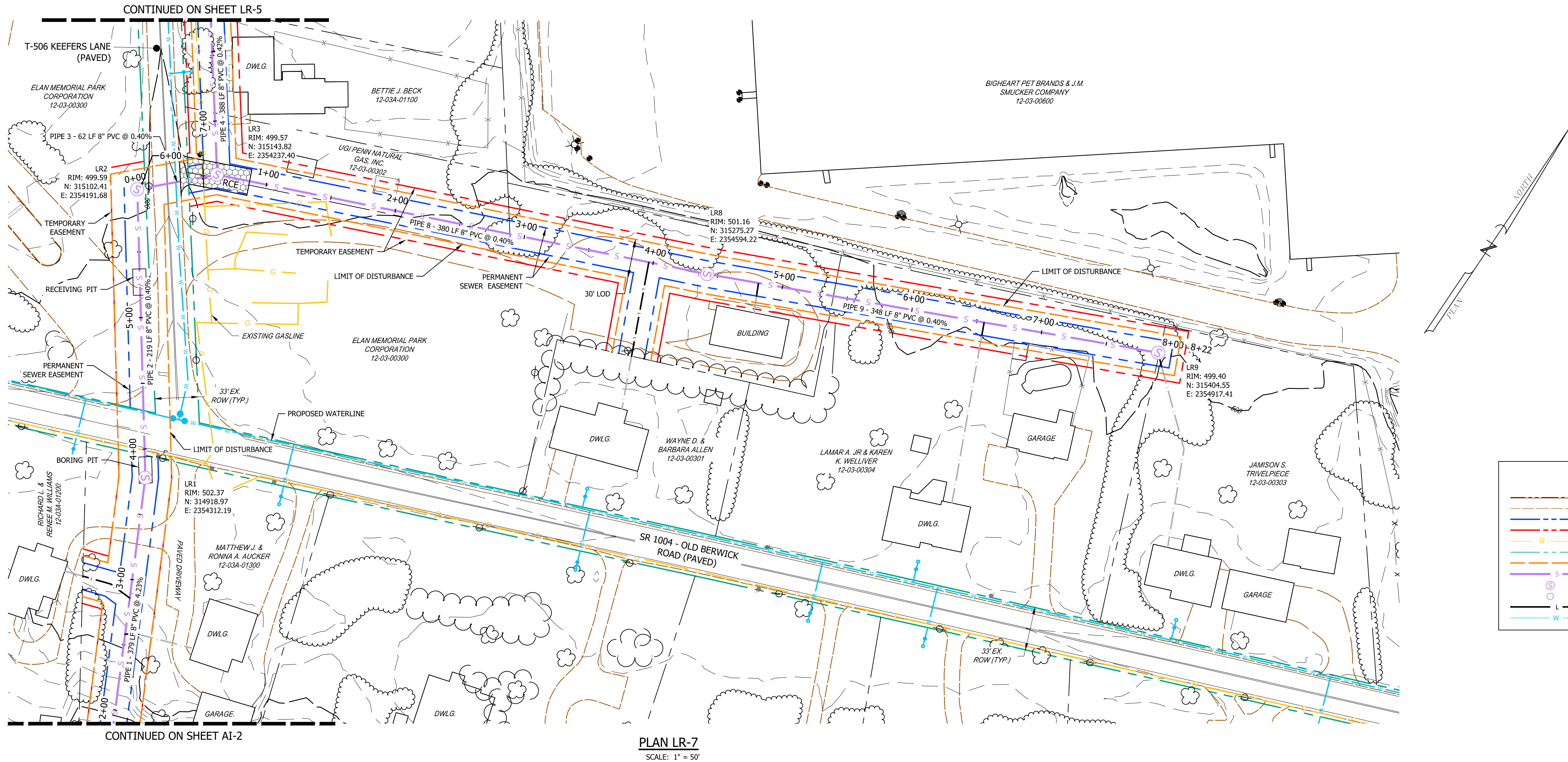
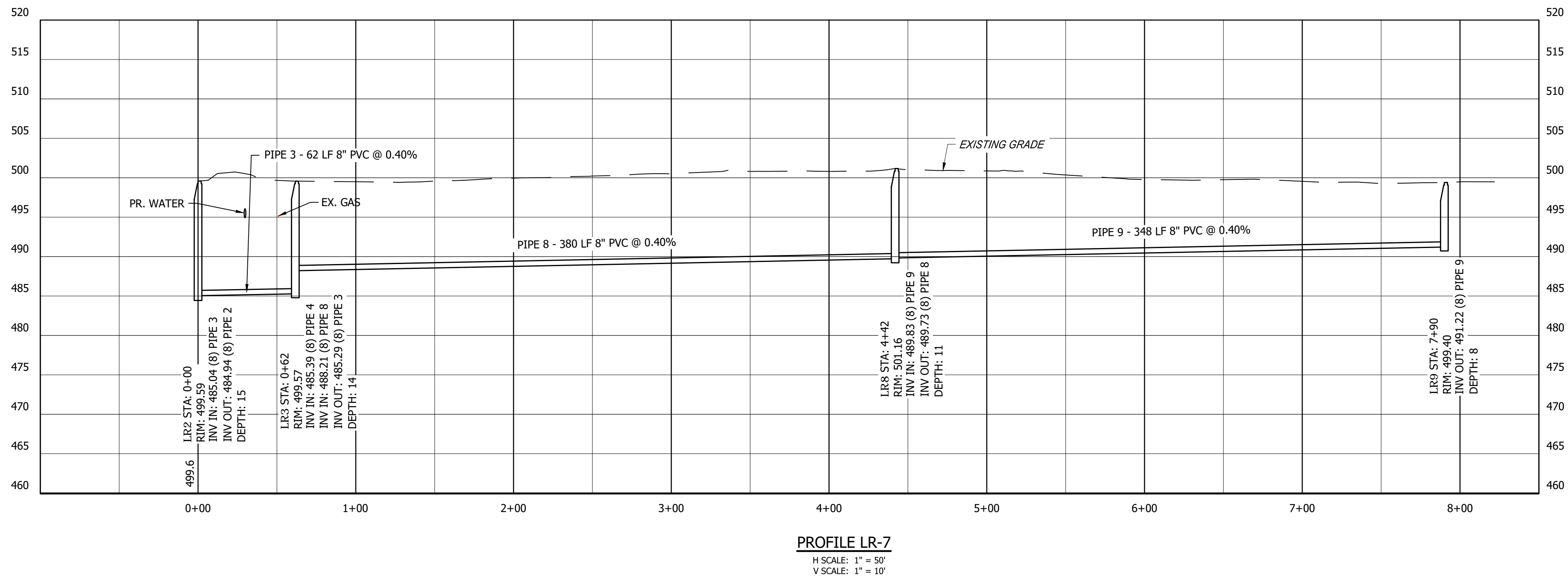








8/17/2022 DESIGNED BY: JESSIE WORTHINGTON



**LEGEND**

- EXISTING BOUNDARY LINE
- EXISTING EDGE OF PAVEMENT/ROAD
- EXISTING PERMANENT EASEMENT
- EXISTING TEMPORARY EASEMENT
- EXISTING GASLINE
- EXISTING RIGHT-OF-WAY
- PROPOSED LIMIT-OF-DISTURBANCE
- PROPOSED SEWER MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT
- PROPOSED SEWER LATERAL
- PROPOSED WATERLINE

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PLAN & PROFILE  
KEEFERS LANE SPUR

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

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**LR-7**  
46 of 65

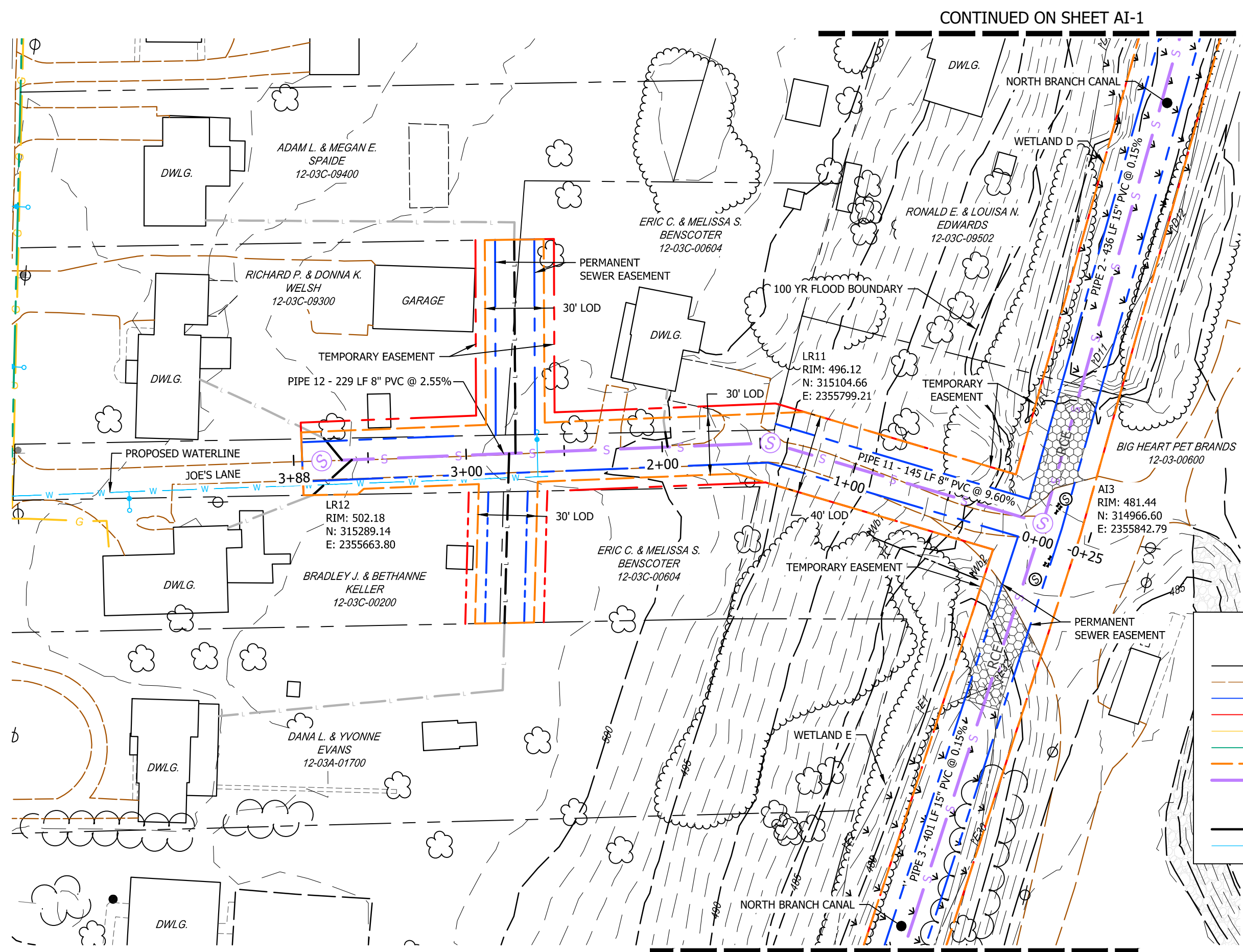
**DRAWING REVISIONS**

NO.	REVISION	DATE
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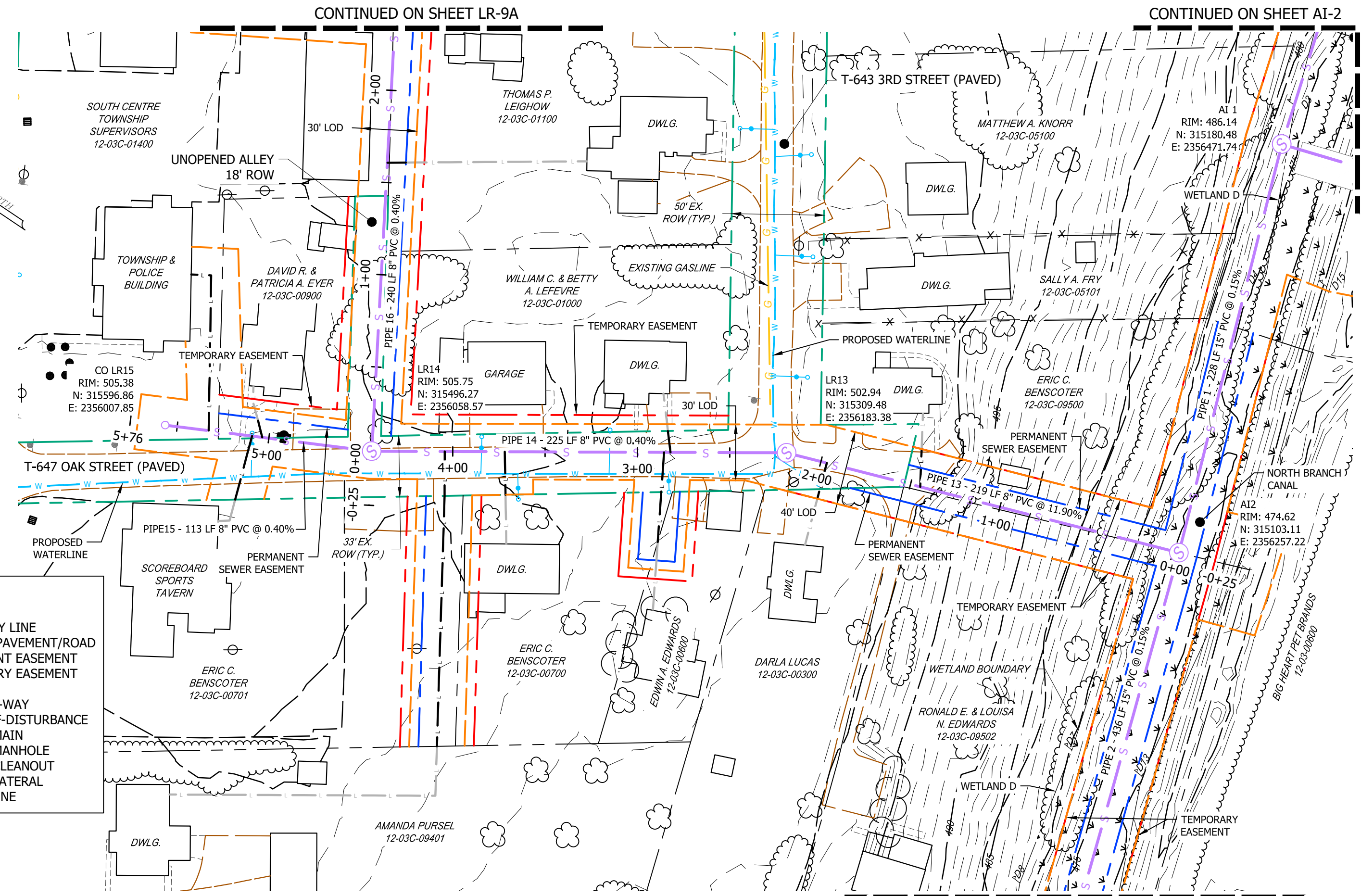
BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P 37258-E

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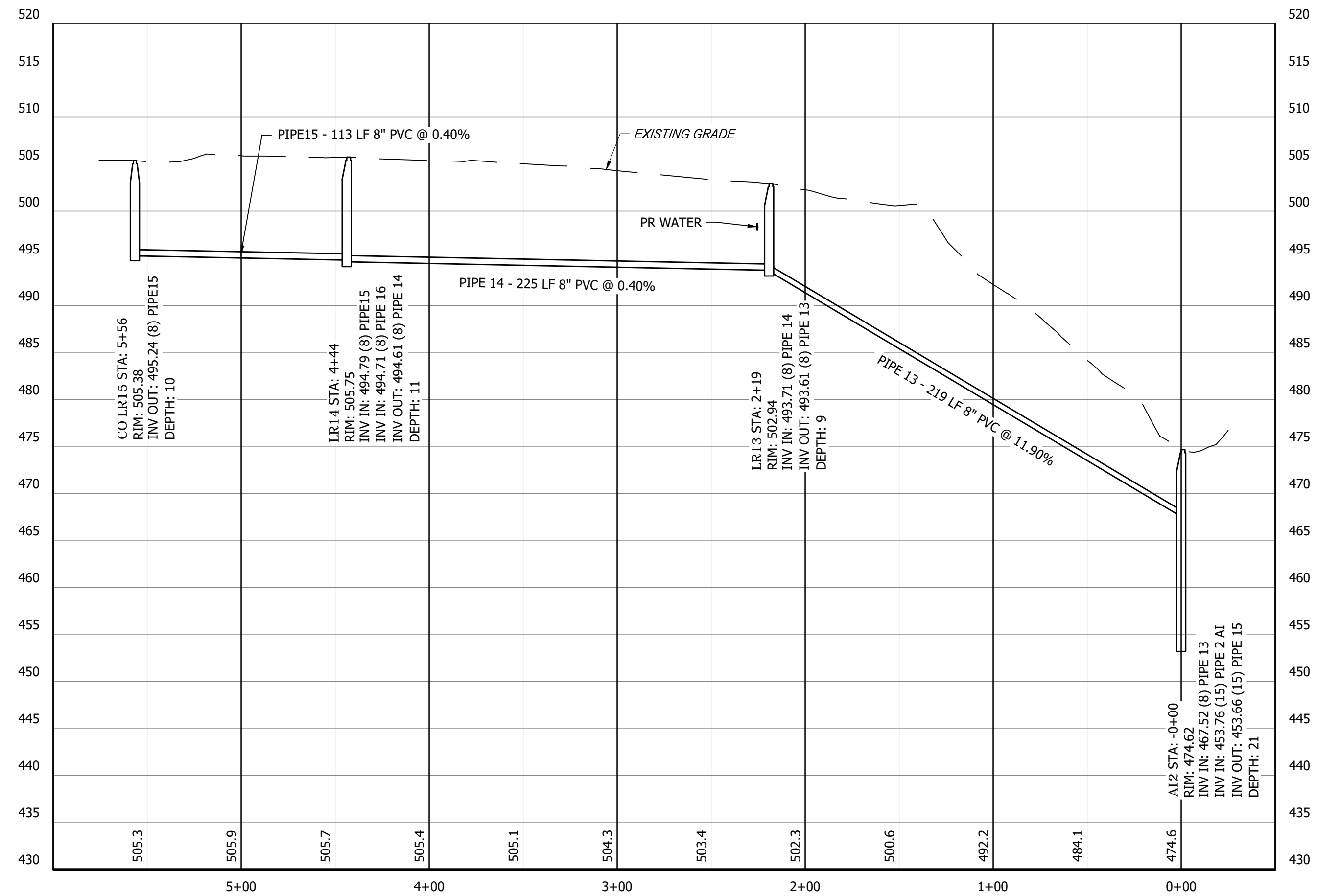
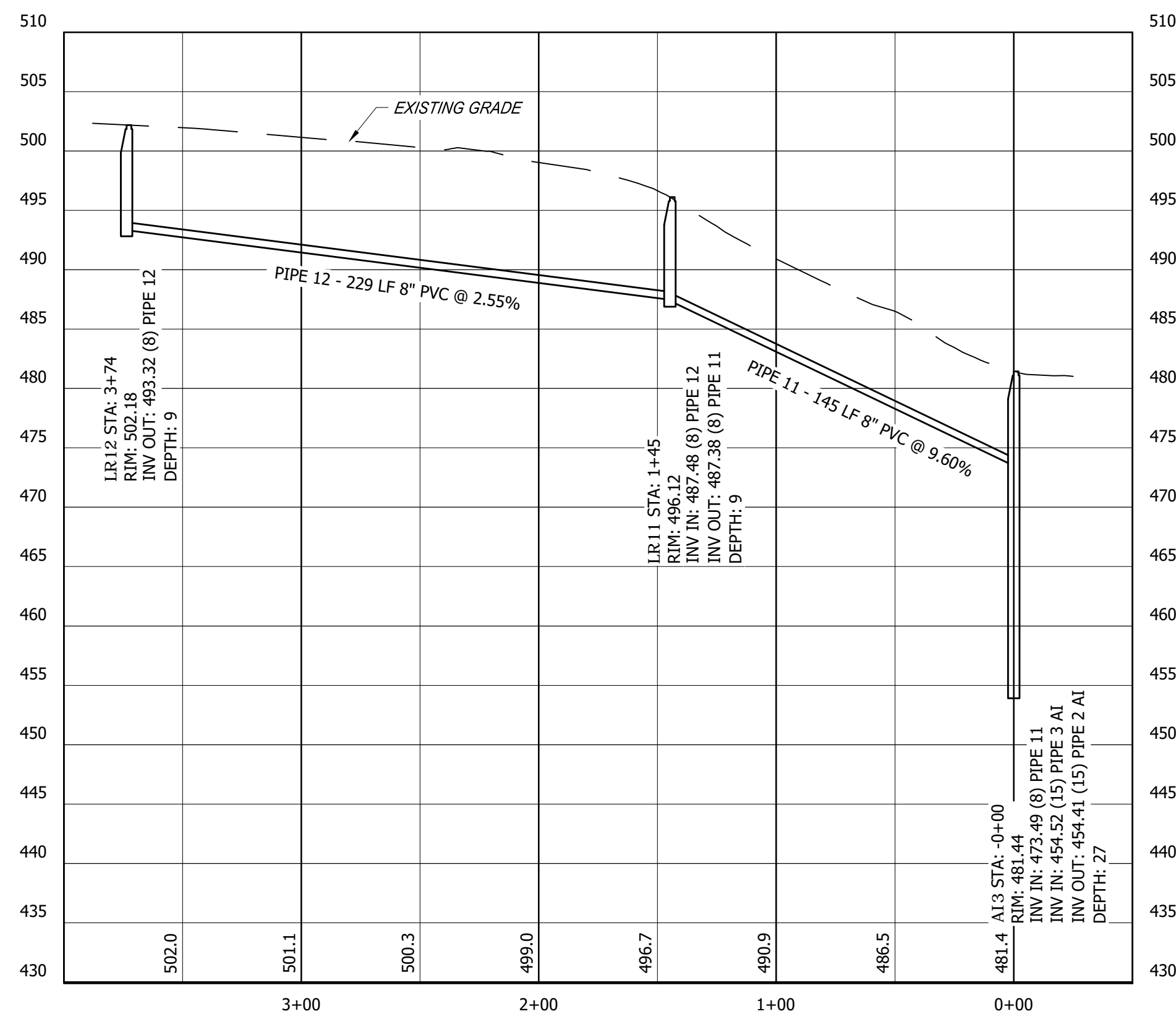




PLAN LR-8A  
SCALE: 1" = 50'

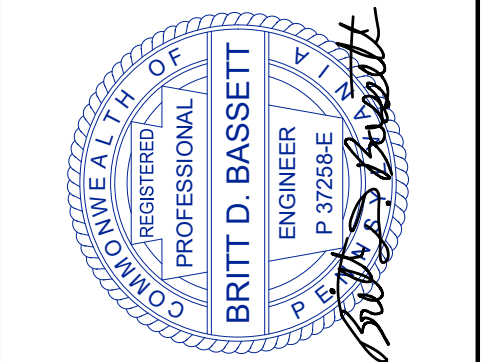


PLAN LR-8B  
SCALE: 1" = 50'



DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



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COLUMBIA COUNTY, PA

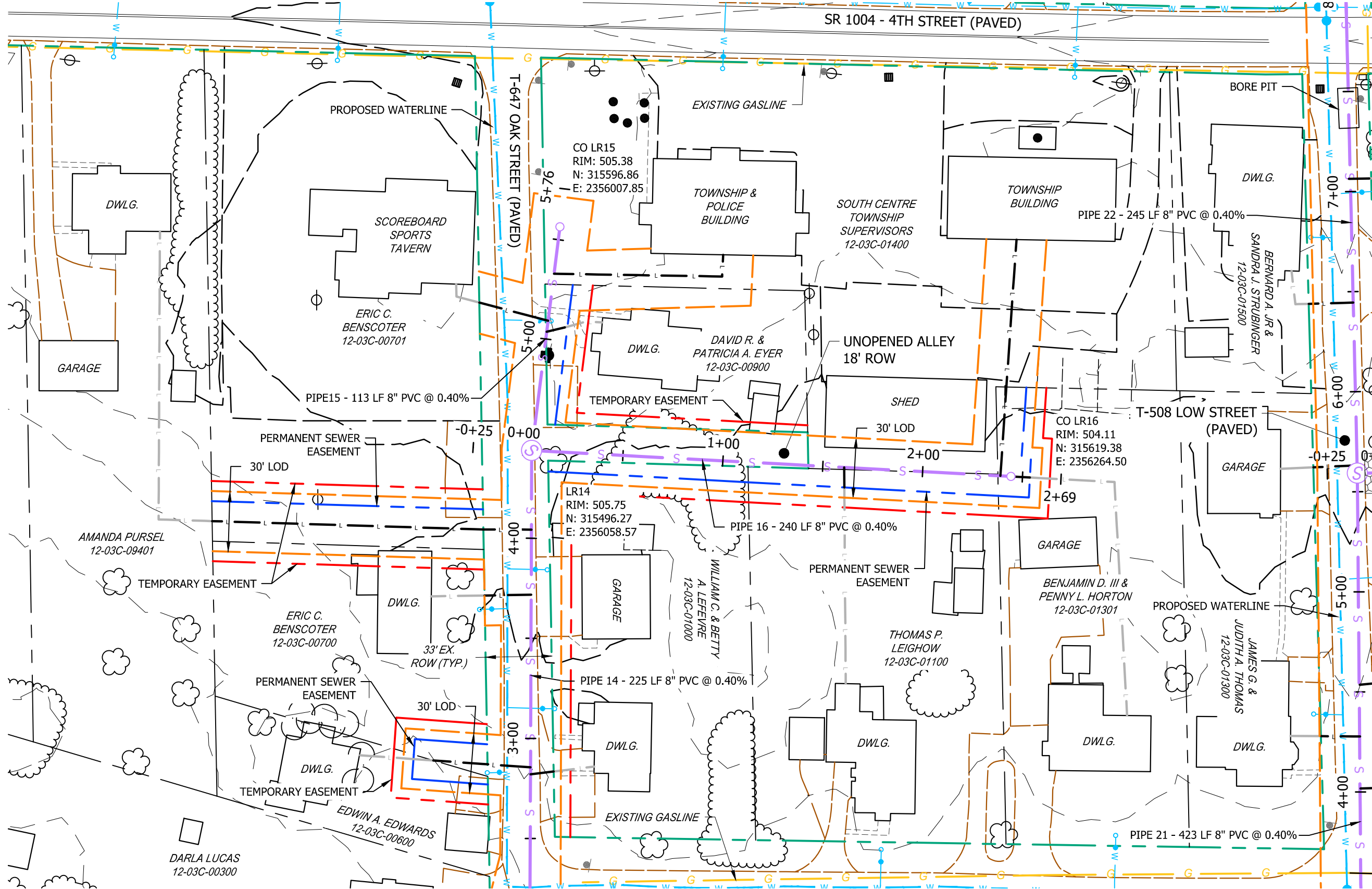
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LIME RIDGE COLLECTION  
PLAN & PROFILE  
JOES LANE & OAK STREET

DRAWING DATE: 10/19/2022

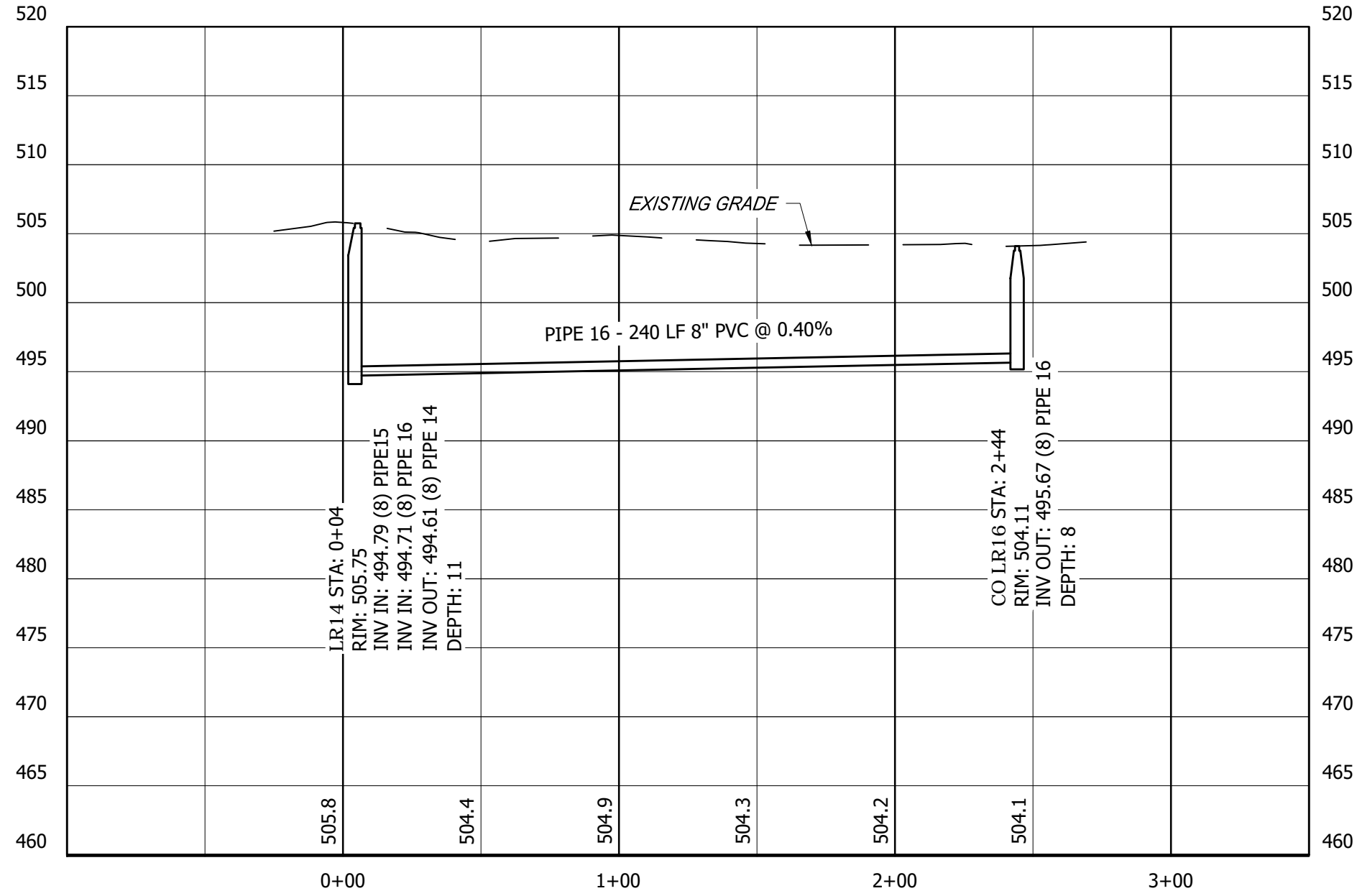
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**LR-8**  
50 of 68

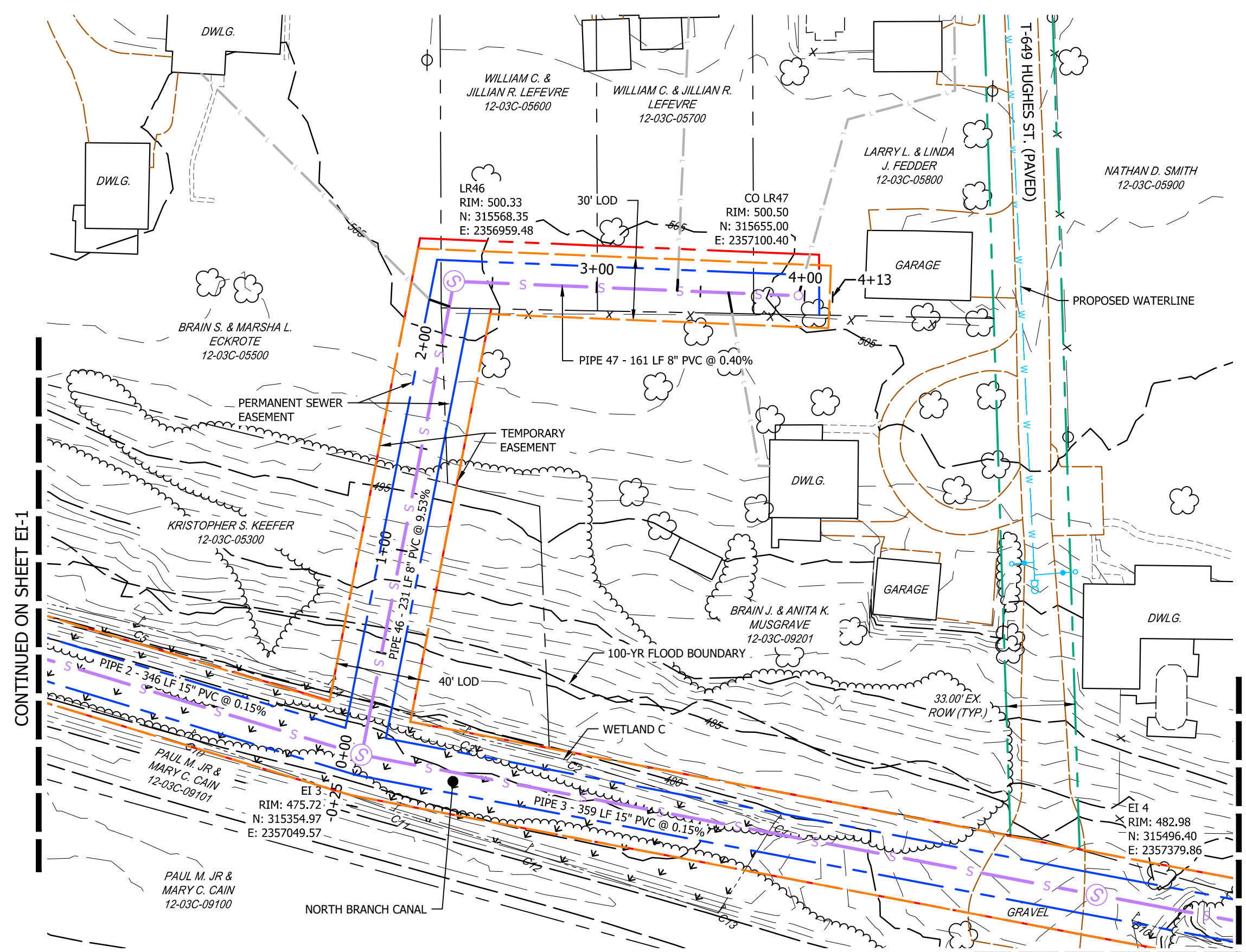




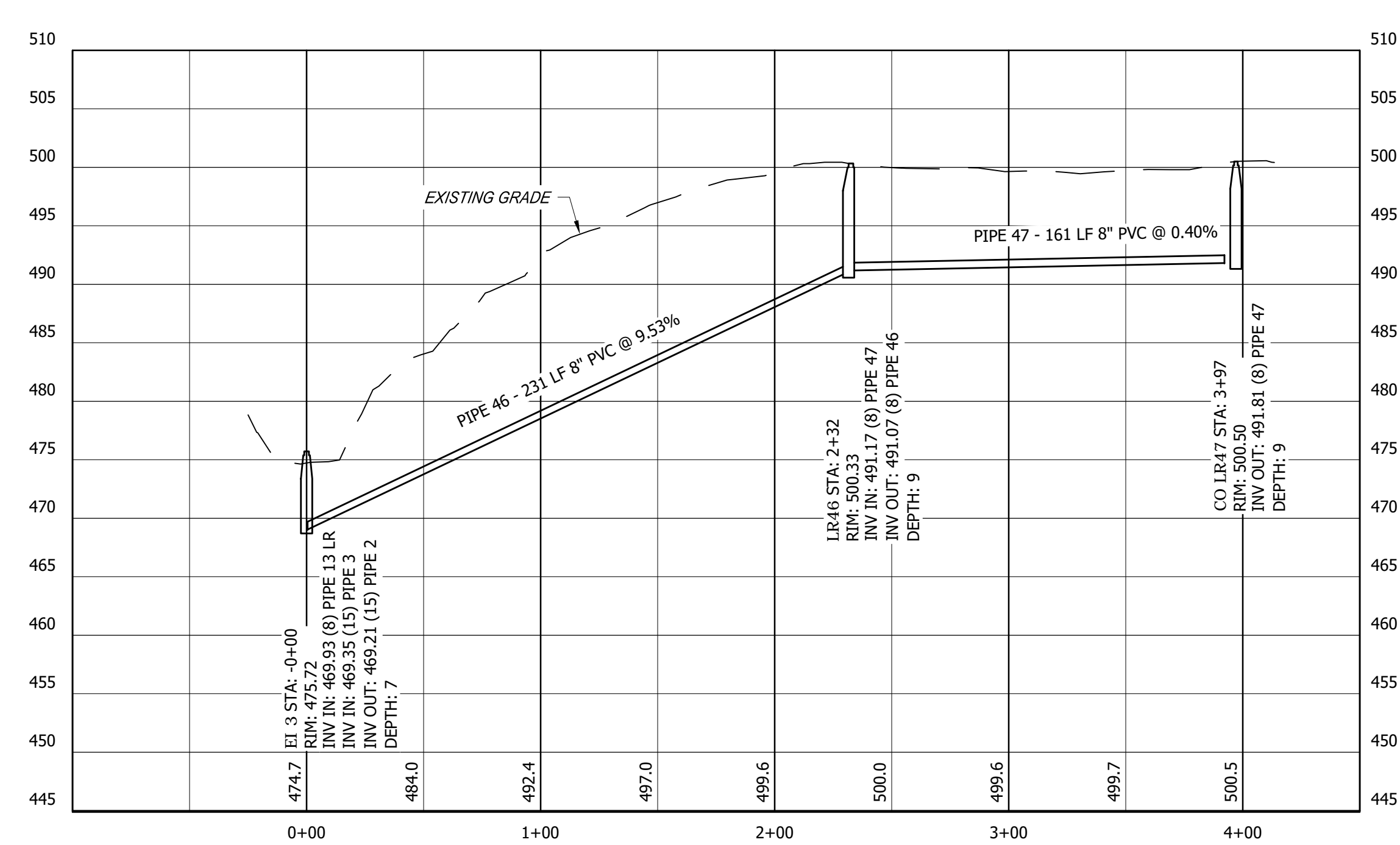
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**PLAN LR-9A**  
SCALE: 1" = 50'



**PROFILE LR-9A**  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'



**PLAN LR-9B**  
SCALE: 1" = 50'



**PROFILE LR-9B**  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS			
NO.	REVISION	DATE	
1	30% DRAFT COLLECTION SYSTEM	08/17/2022	

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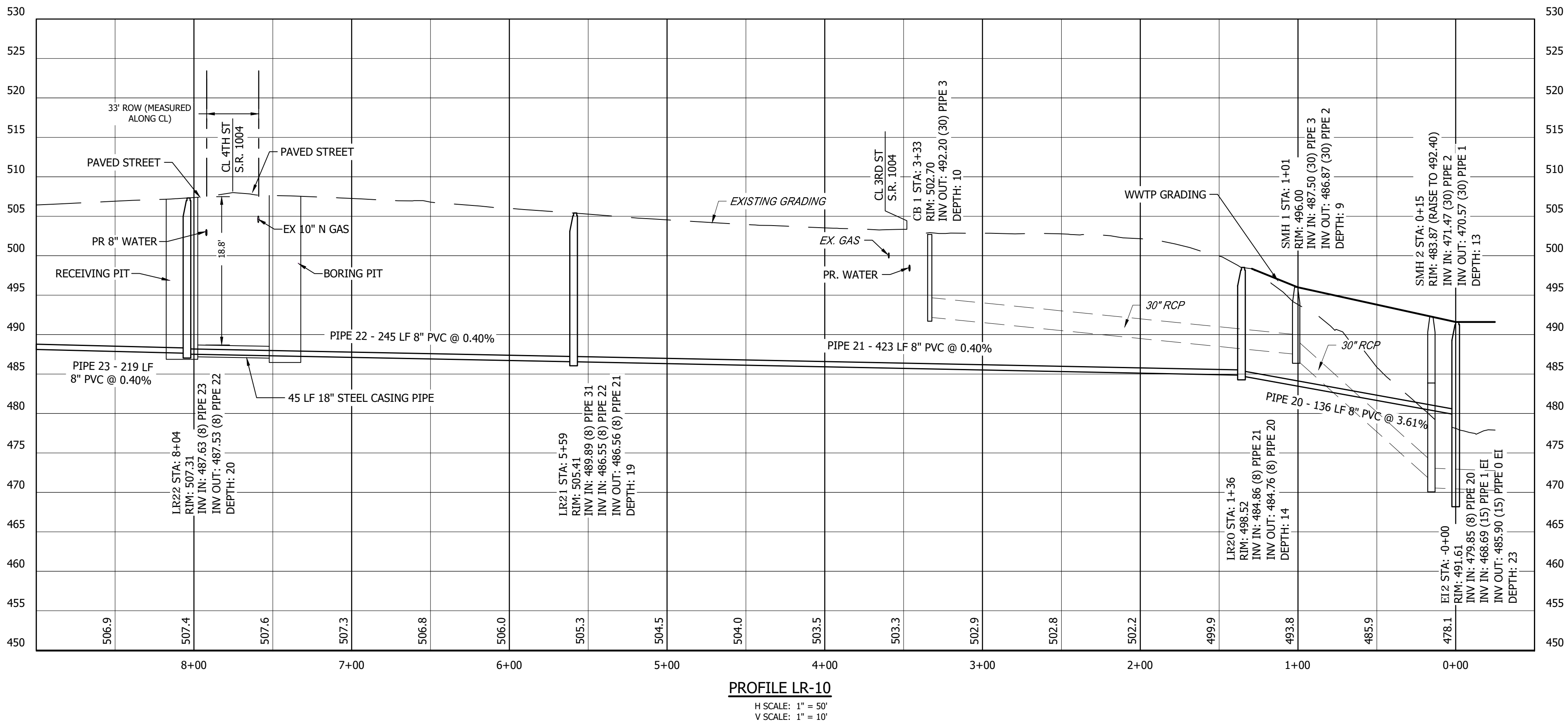
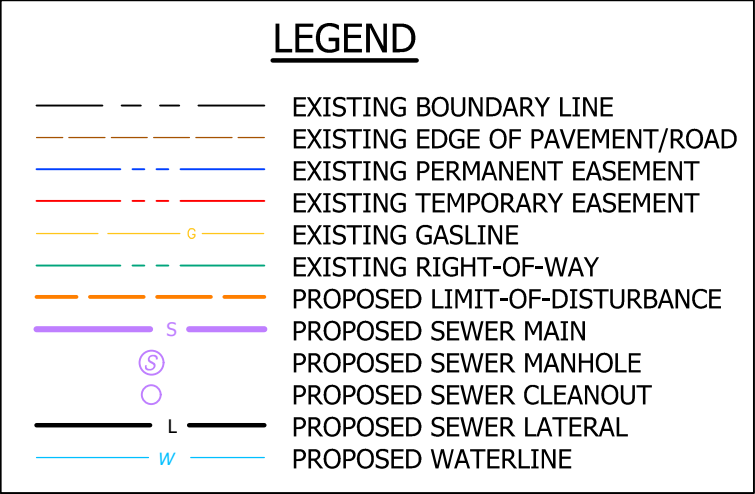
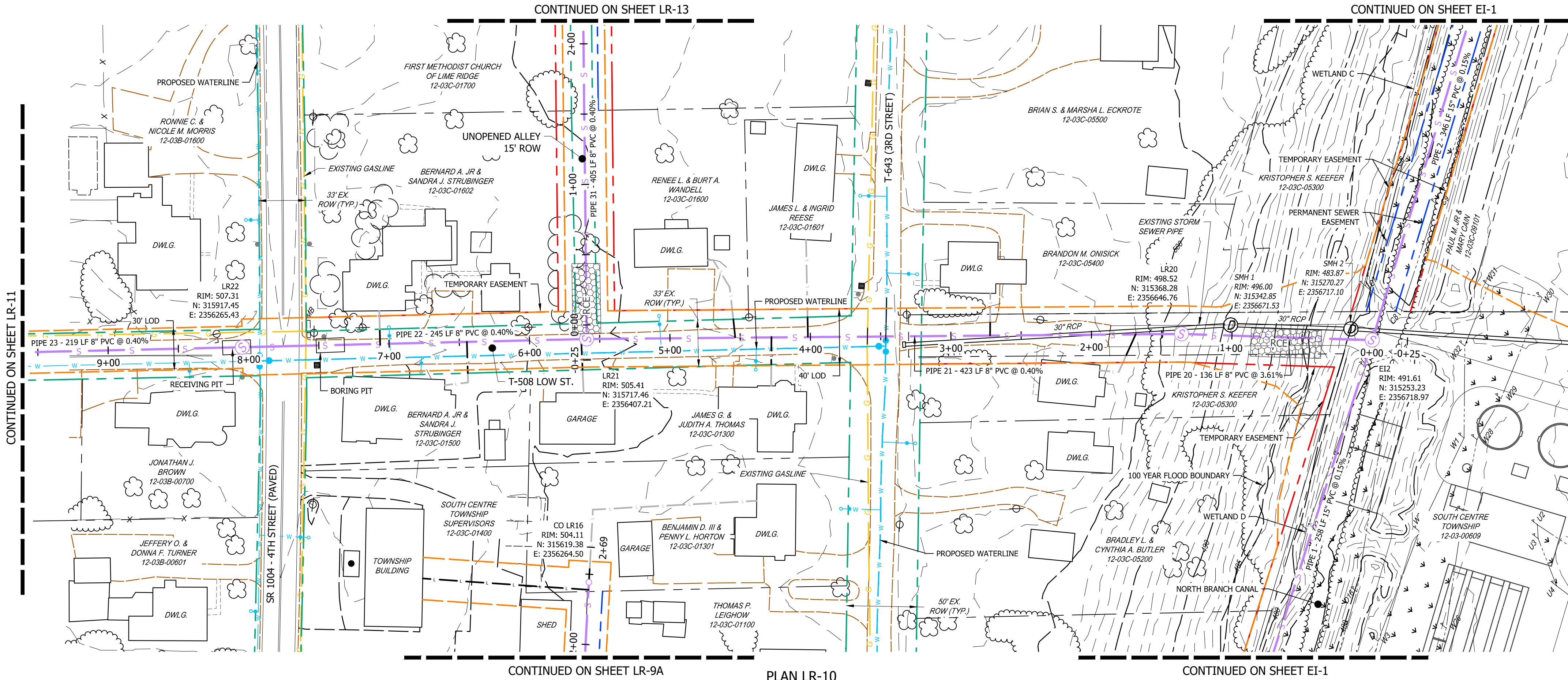
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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE

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DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022

STATE OF PENNSYLVANIA  
INCORPORATING THE  
SIGNED PROFESSIONAL  
ENGINEER'S SEAL  
AND RELIED UPON BY  
THE CLIENT AND  
PREPARED SPECIALLY  
FOR THE CLIENT AND  
REVISION, DEDICATED  
TO THE PROFESSION  
OF ENGINEERING IS  
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LIME RIDGE COLLECTION  
PLAN & PROFILE  
LOW STREET

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

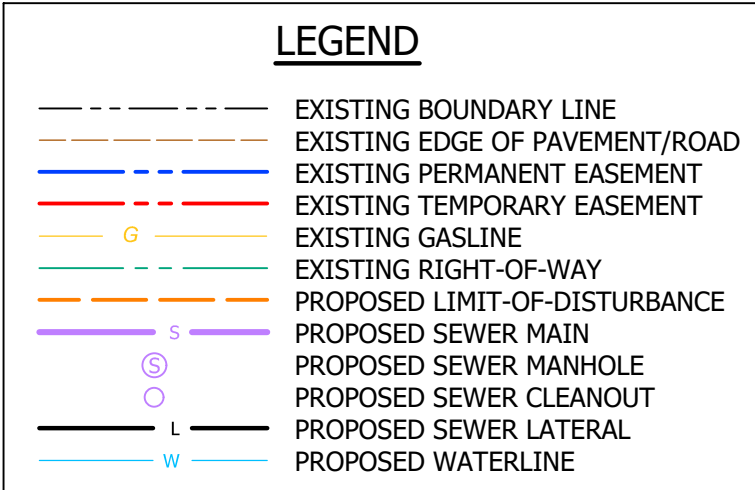
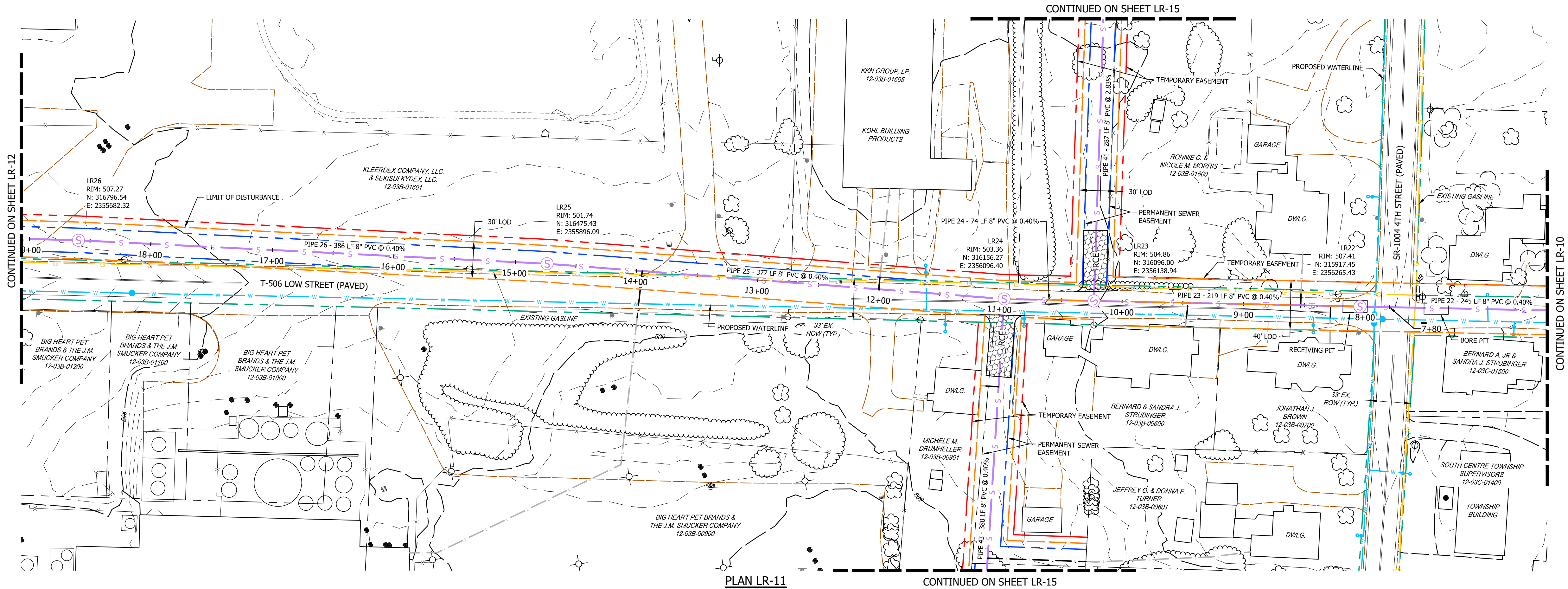
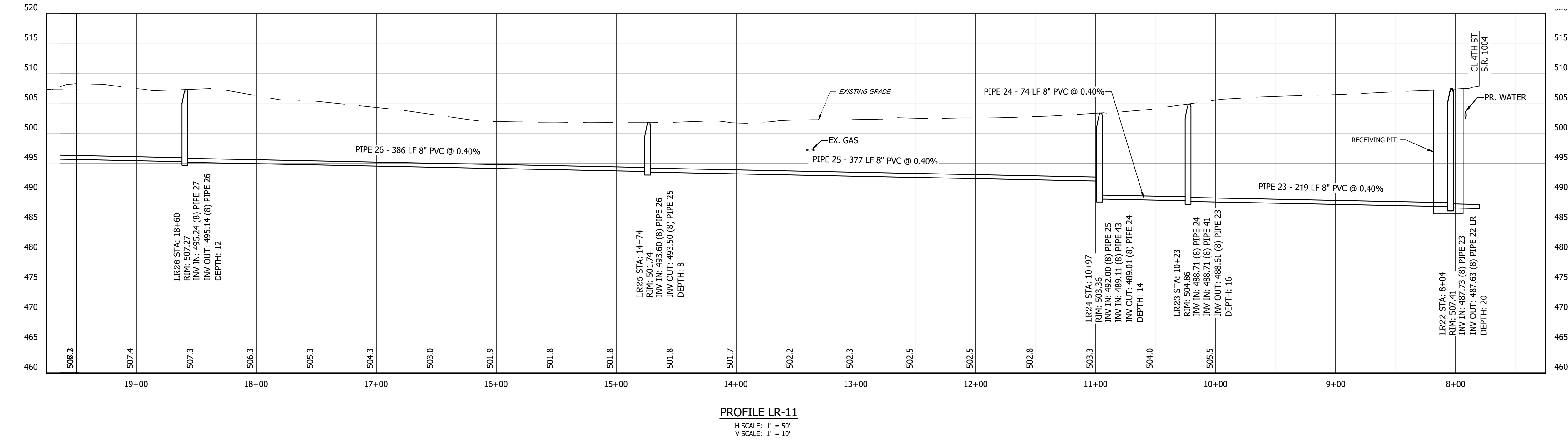
DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

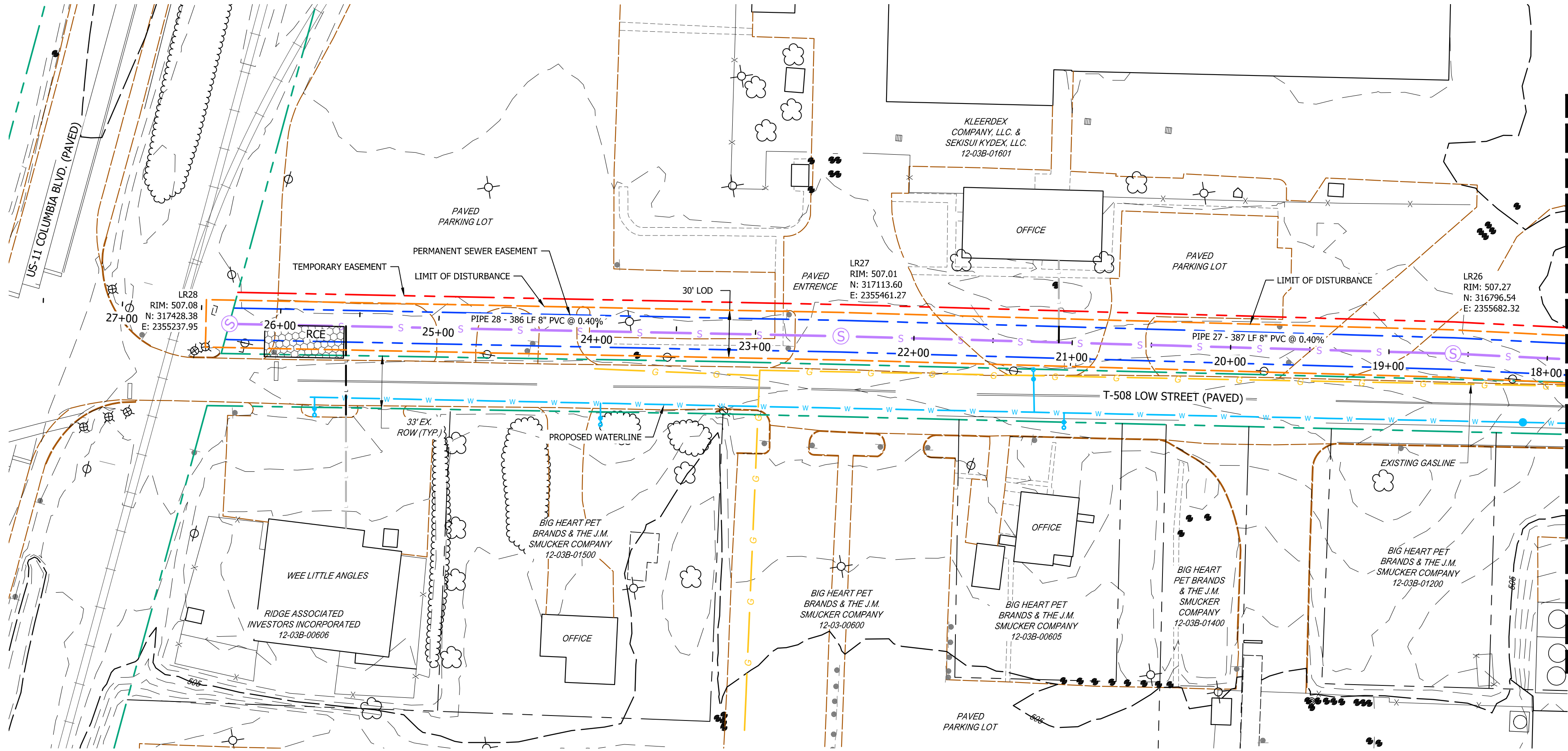
LR-10

52 of 68

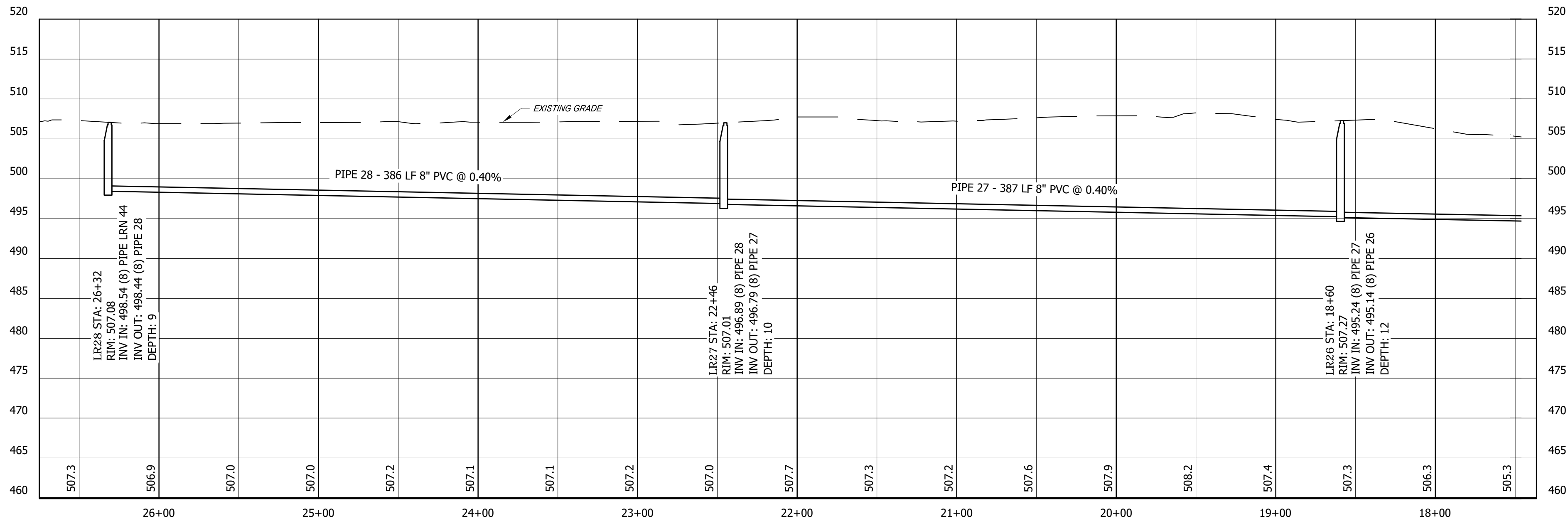
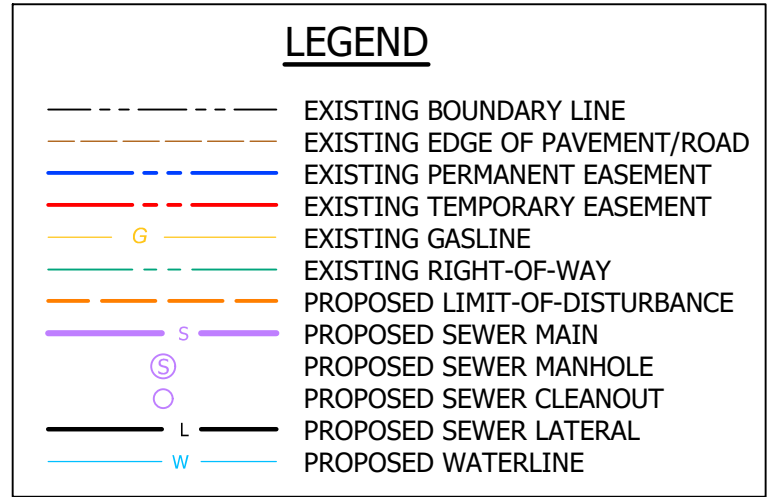








CONTINUED ON SHEET LR-11



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LIME RIDGE COLLECTOR  
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LOW STREET

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE

**LR-12**

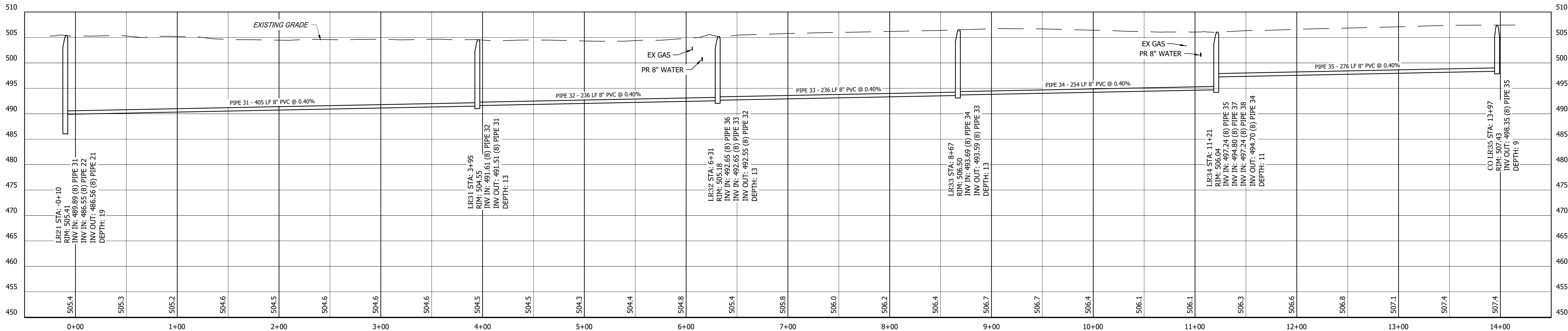
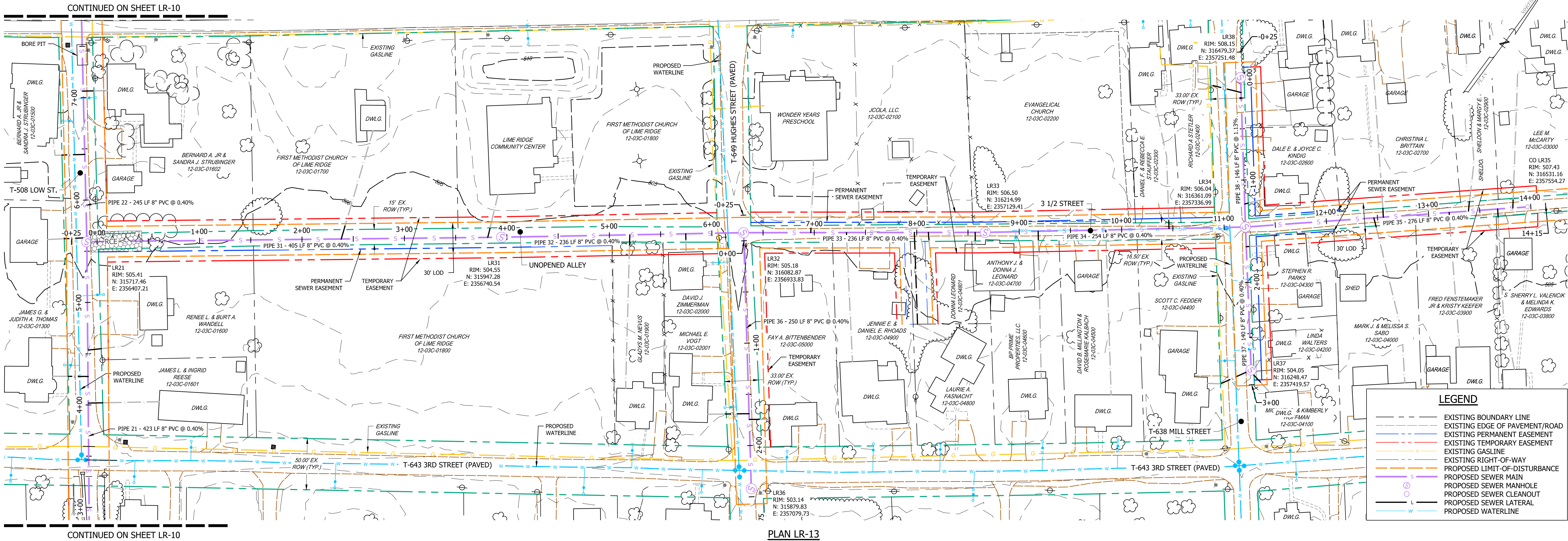
54 of 65

DRAWING REVISIONS		
NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/17/2022

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BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P. 37298-E





DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE  
3 1/2 STREET (WEST)

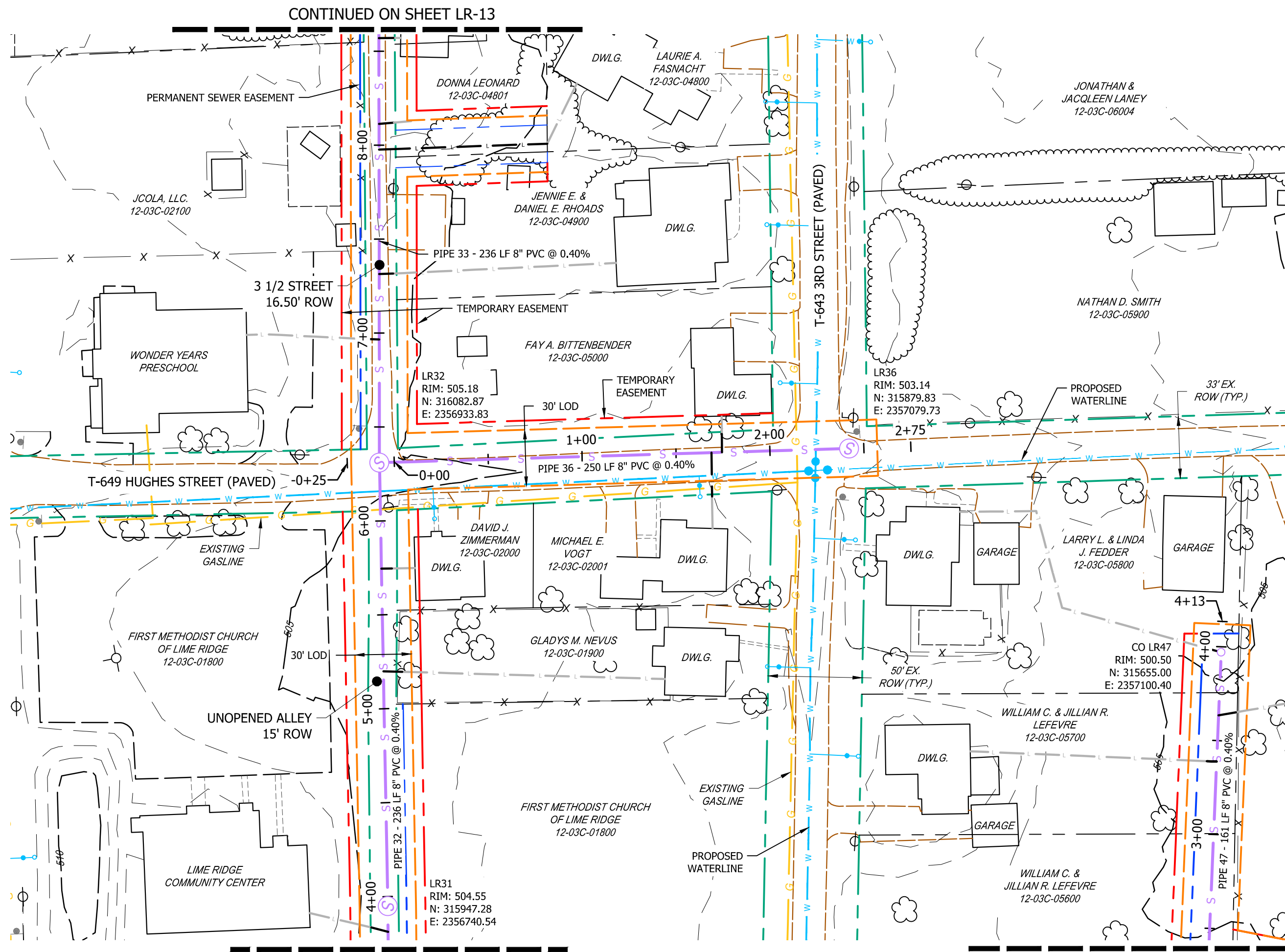
DRAWING DATE: 10/19/2022

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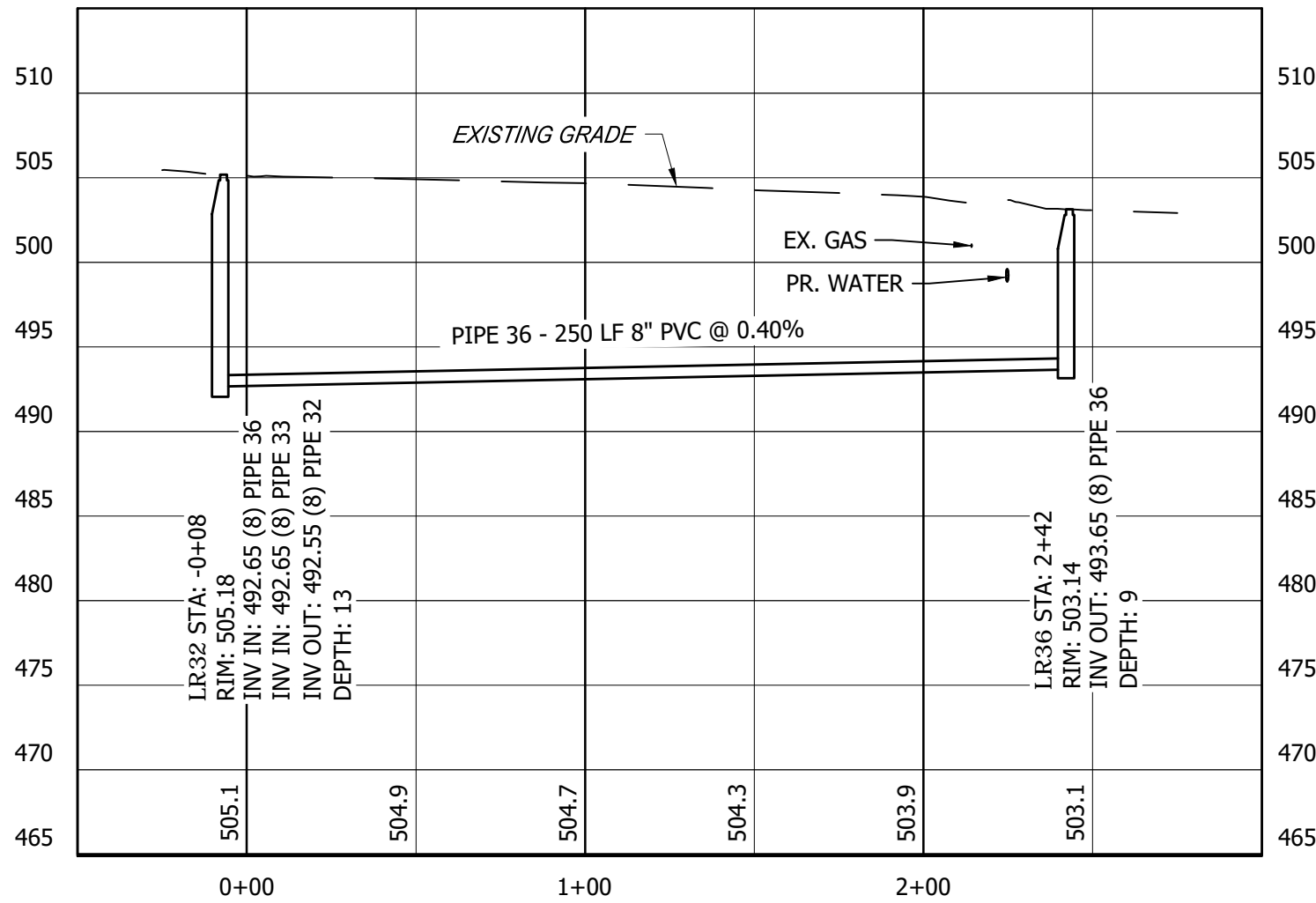
LR-13

55 of 68

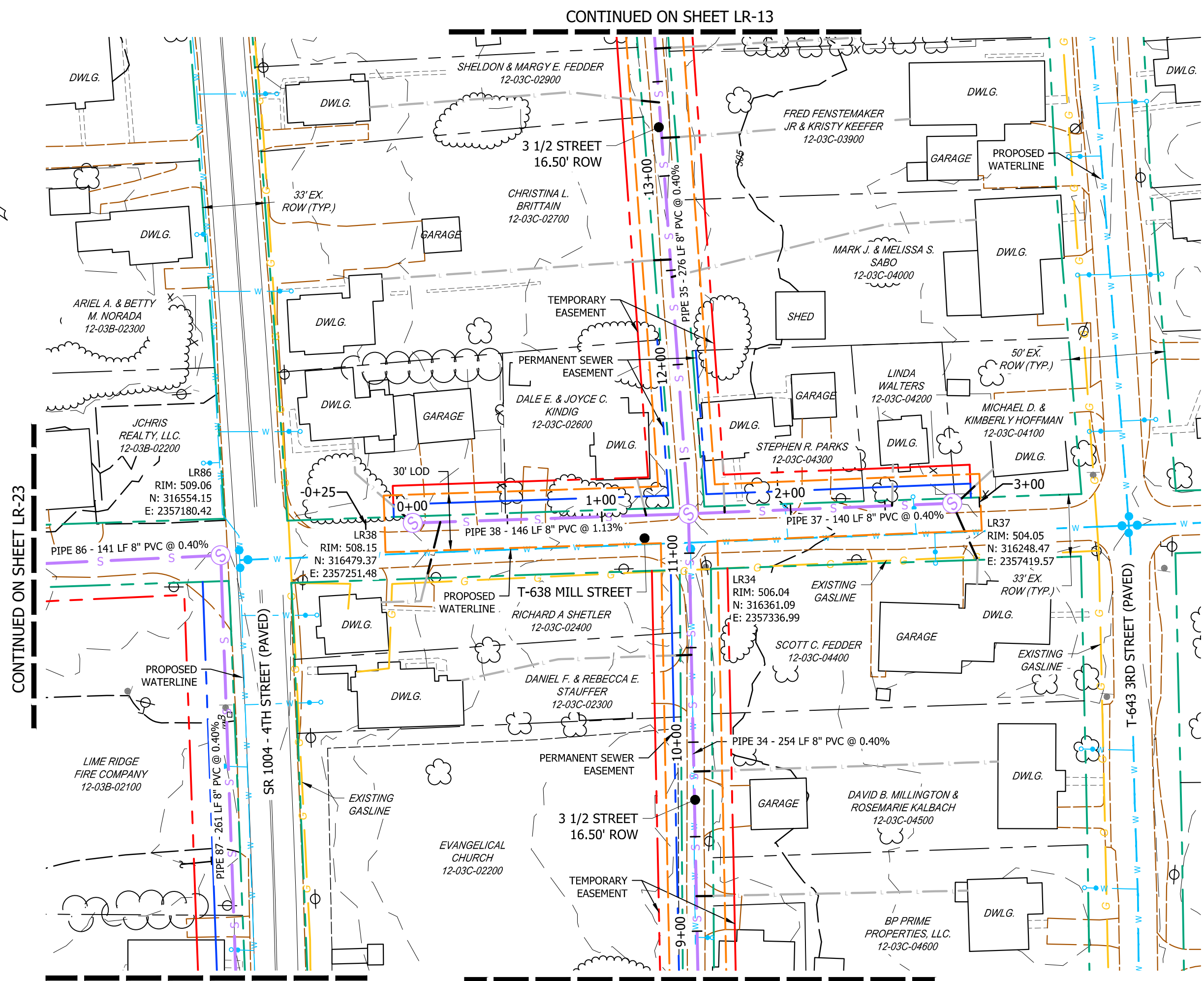
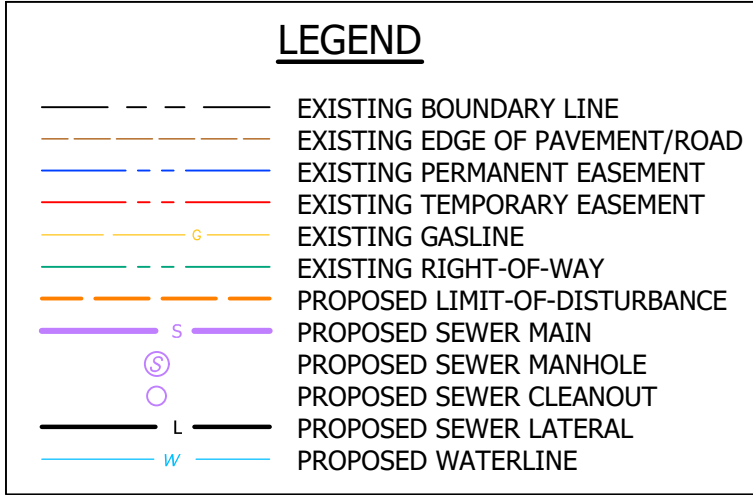




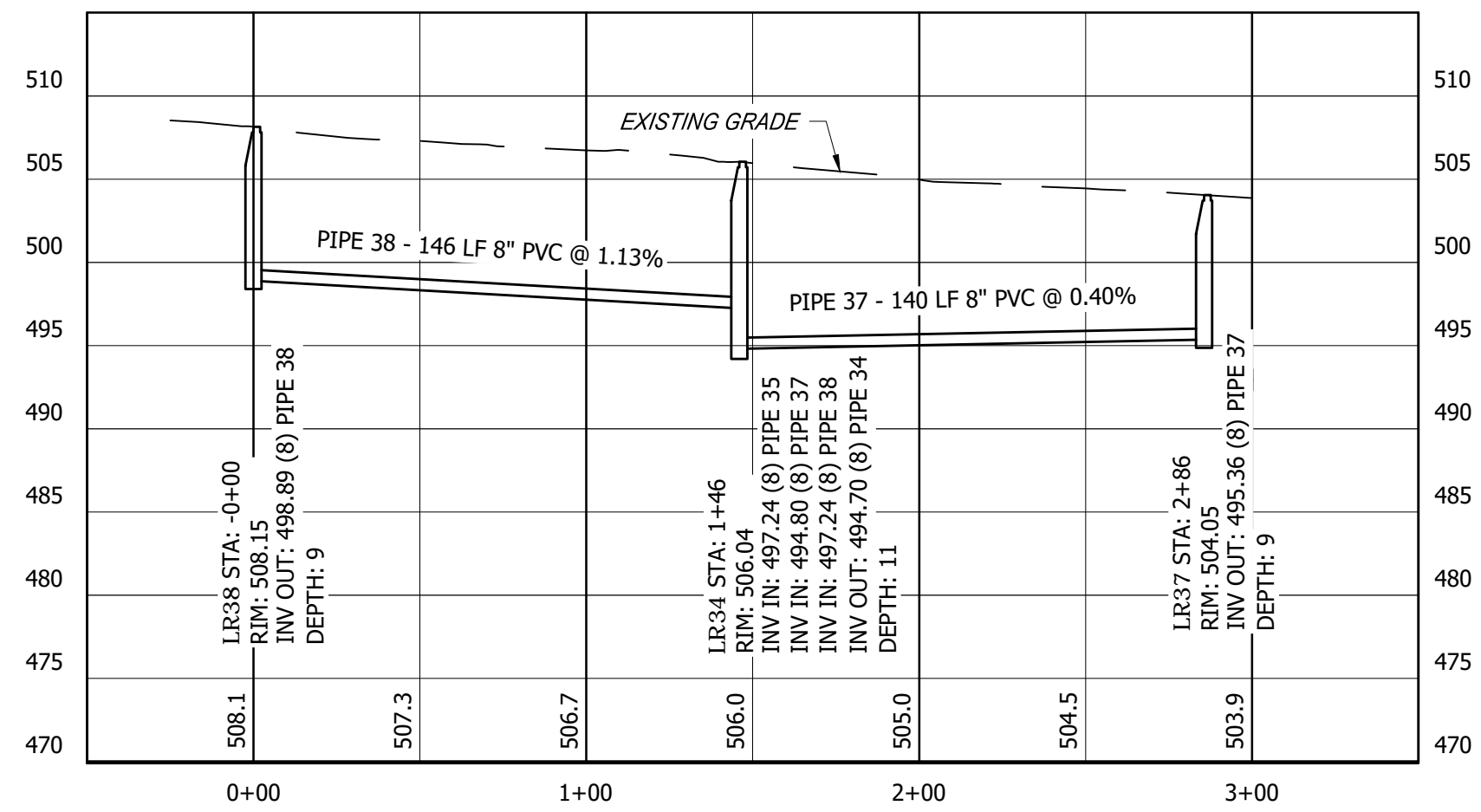
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SCALE: 1" = 50'



PROFILE LR-14A  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'



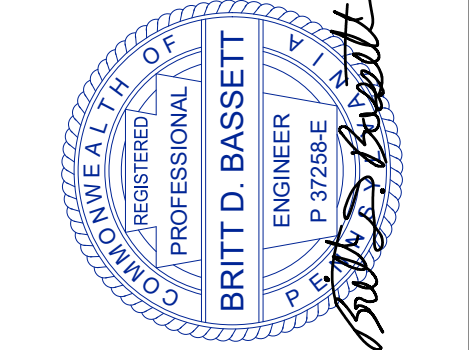
PLAN LR-14B  
SCALE: 1" = 50'



PROFILE LR-14B  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS

NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022



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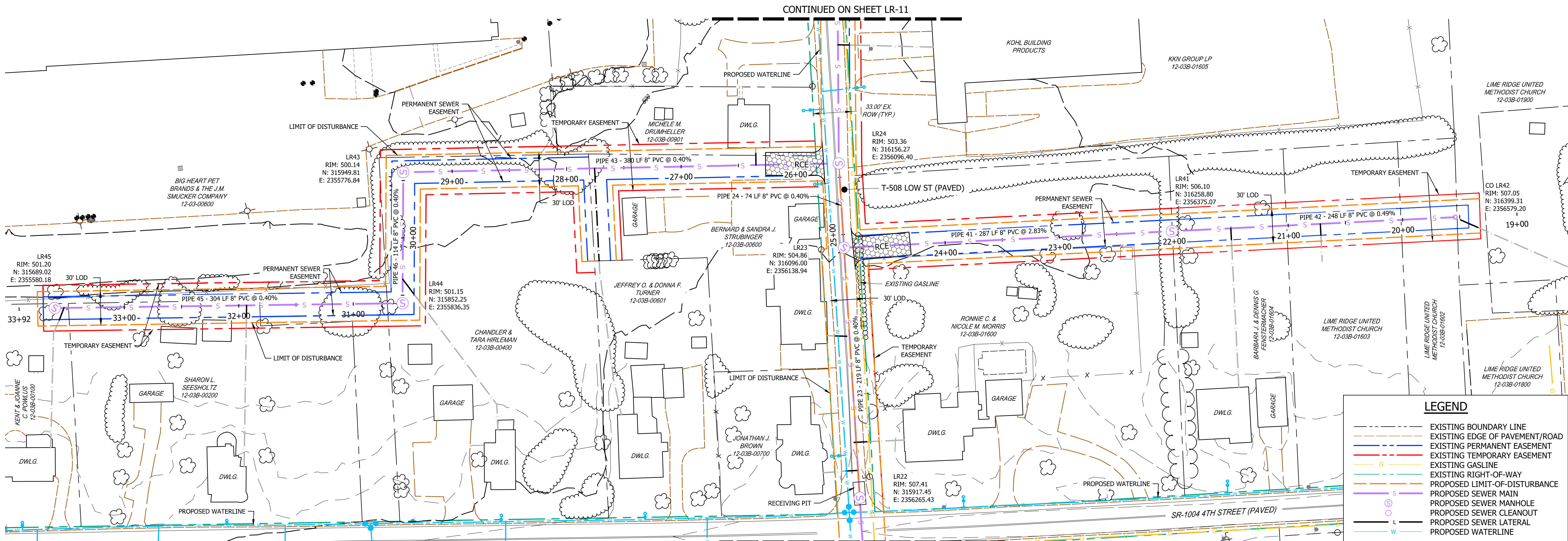
DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE  
HUGHES & MILL STREETS

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

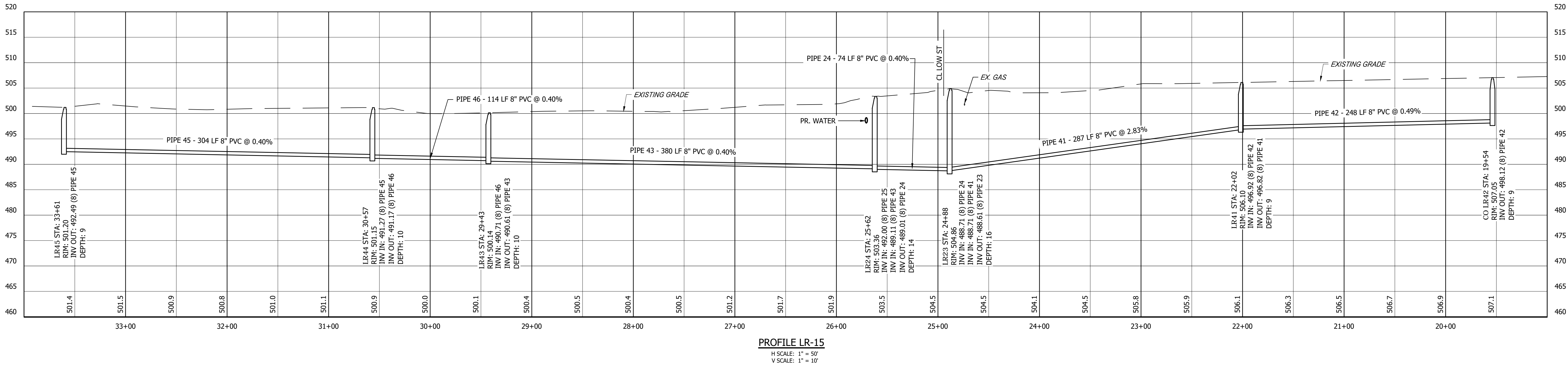
DRAWING DATE: 10/19/2022

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PLAN LR-15  
SCALE: 1" = 50'



PROFILE LR-15  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS			
NO.	REVISION	DATE	
0	30% DRAFT COLLECTION SYSTEM	08/17/2022	



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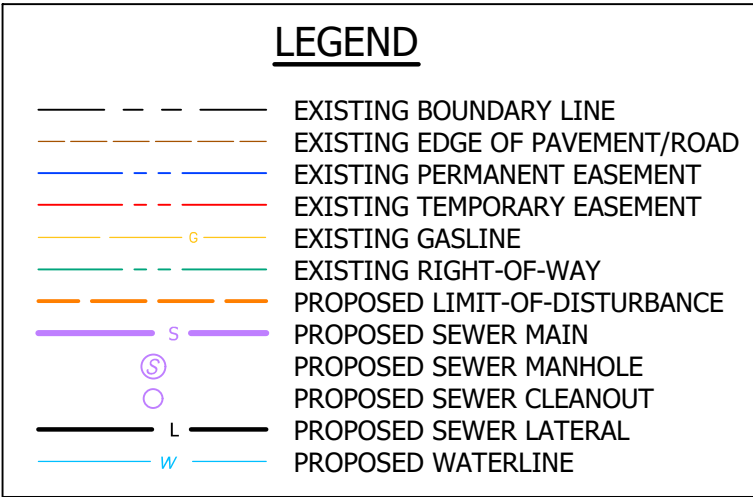
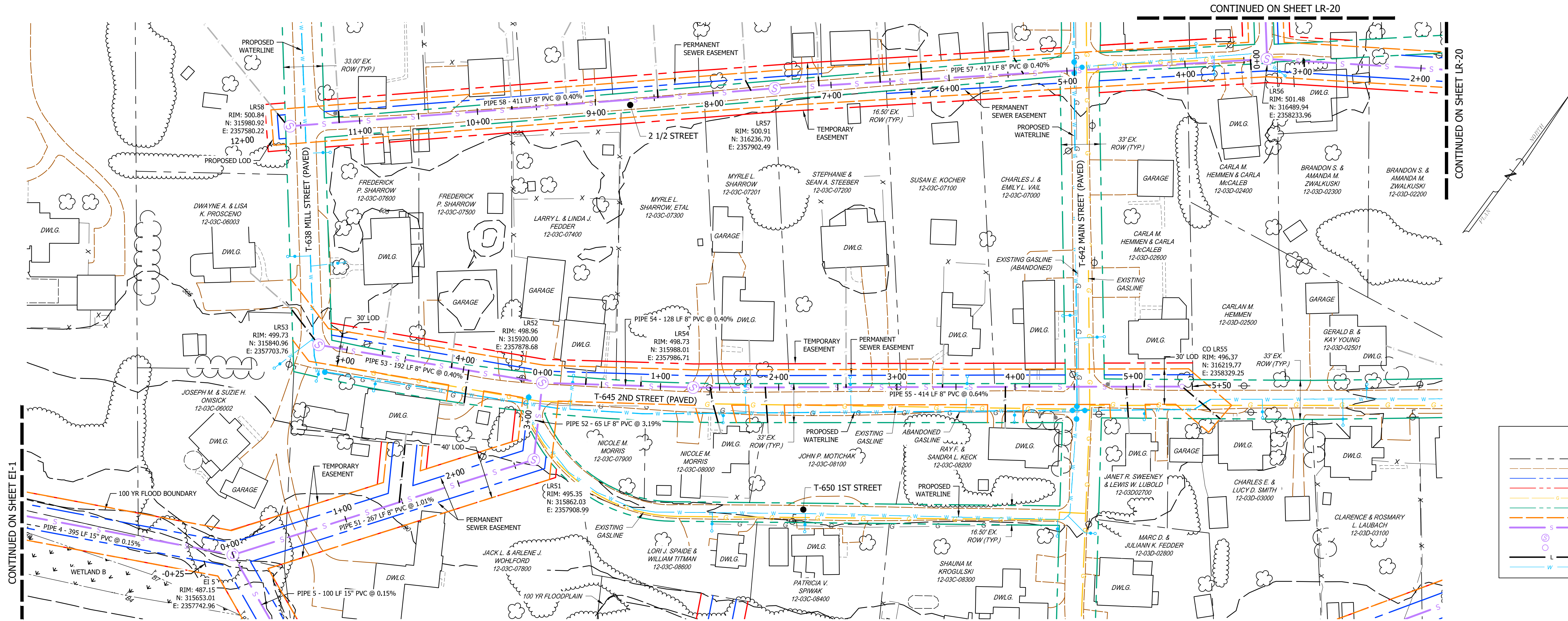
SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
LOW STREET SPURS

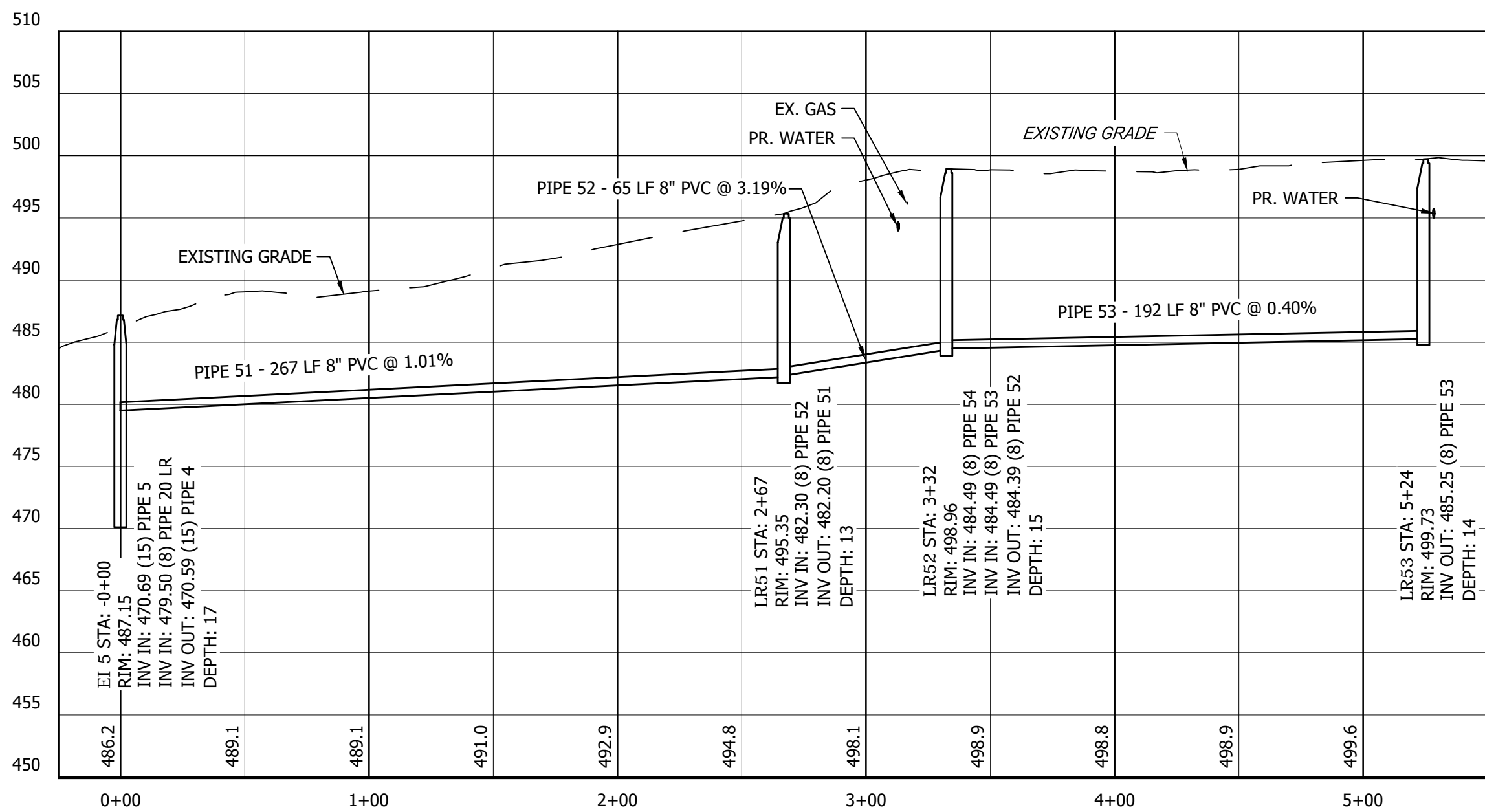
DRAWING DATE: 10/19/2022

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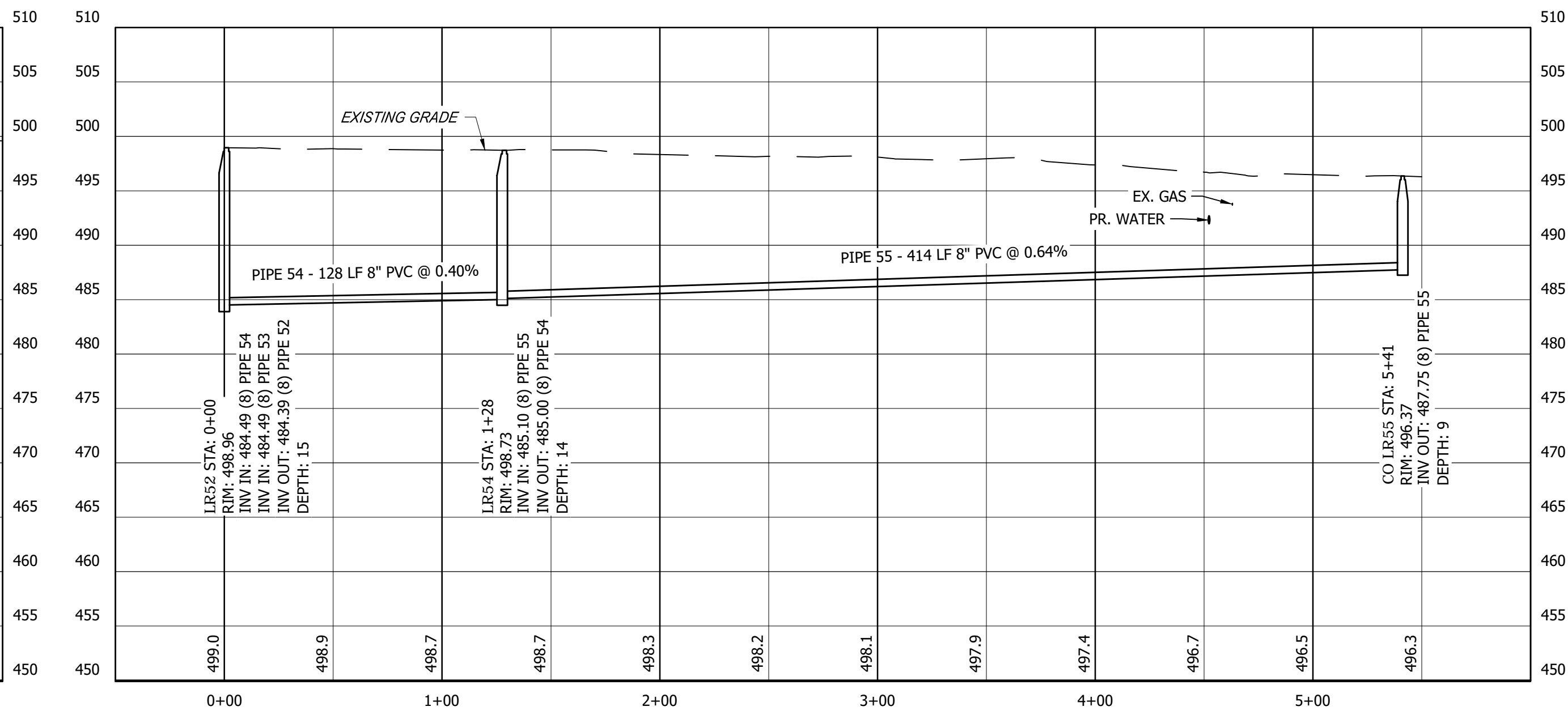




PLAN LR-16  
SCALE: 1" = 50'



PROFILE LR-16A  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'



PROFILE LR-16B  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022

STATE OF PENNSYLVANIA  
INCORPORATING THE  
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FOR THE CLIENT AND  
REPRESENTATIVE  
REVISION, DUBLIN, OHIO  
CONSULTING ENGINEER  
P 37258-E  
BRITT D. BASSETT  
ENGINEER  
P 37258-E  
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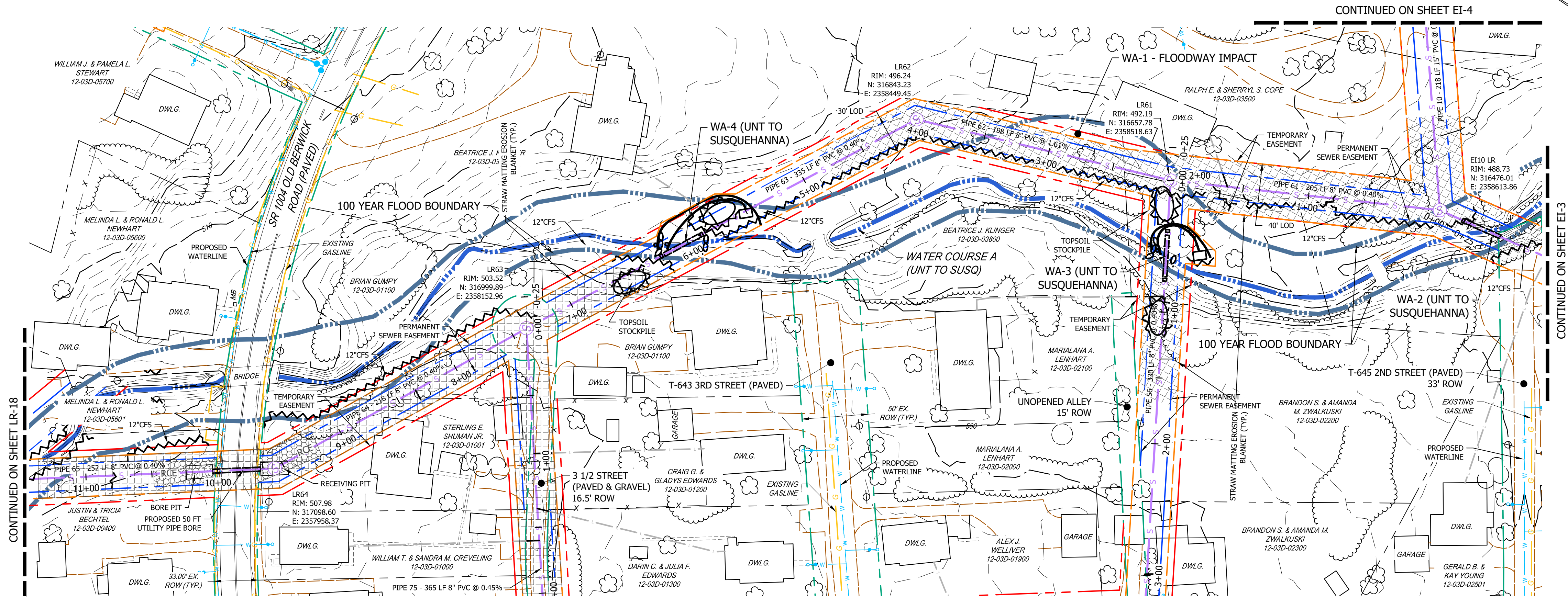
DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE  
2ND STREET

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAWING DATE: 10/19/2022

THIS BAR IS 2 INCHES AT FULL SIZE



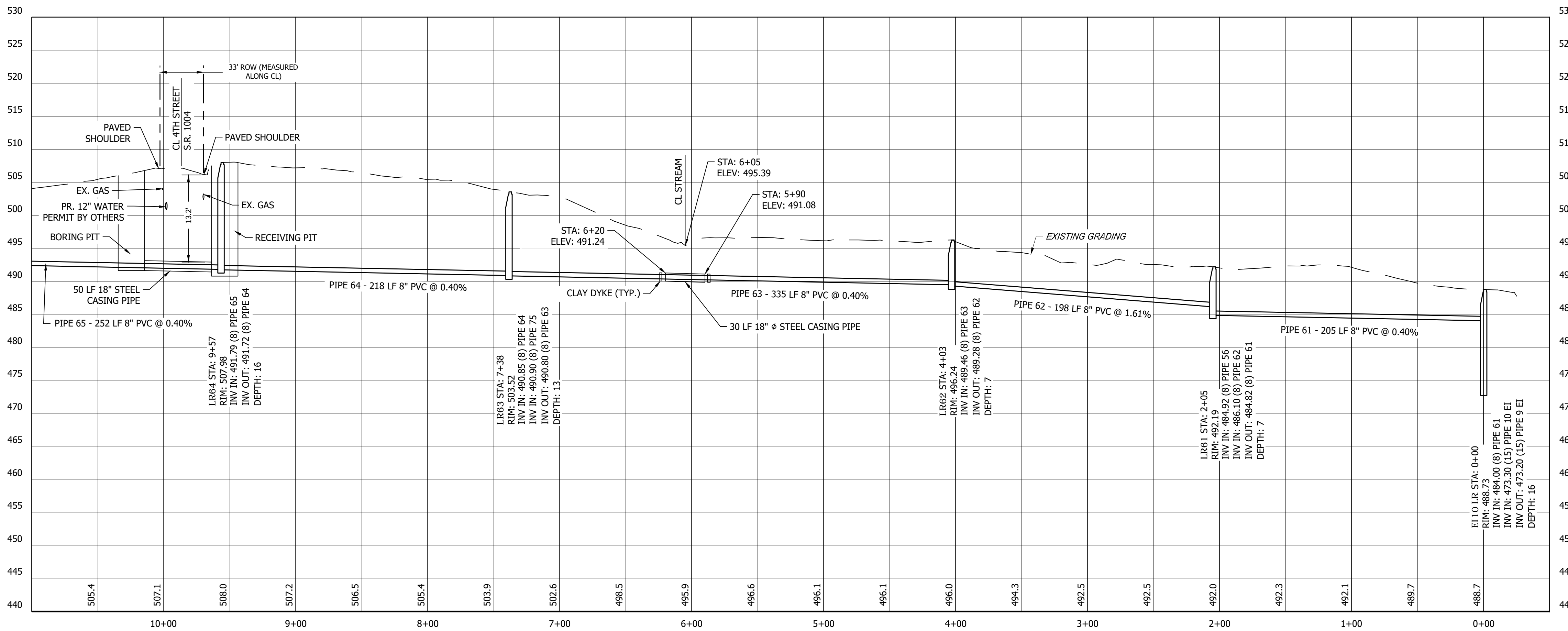


**LEGEND**

- EXISTING BOUNDARY LINE
- EXISTING EDGE OF PAVEMENT/ROAD
- EXISTING PERMANENT EASEMENT
- EXISTING TEMPORARY EASEMENT
- EXISTING GASLINE
- EXISTING RIGHT-OF-WAY
- PROPOSED LIMIT-OF-DISTURBANCE
- PROPOSED SEWER MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT
- PROPOSED SEWER LATERAL
- PROPOSED WATERLINE

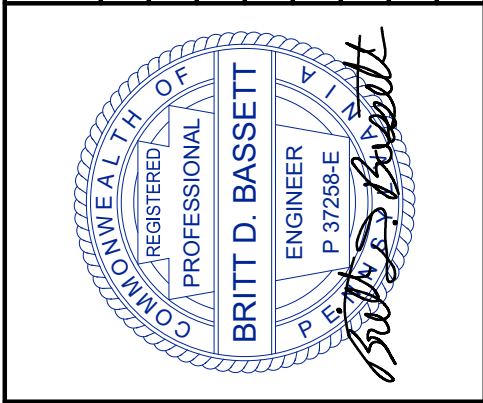
- NOTES:
- WATER COURSE IMPACT: SEE C-4 FOR DETAILS OF WA-2 UNDER UNT TO SUSQUEHANNA
  - SEE C-5 FOR DETAILS OF WA-3 UNDER UNT TO SUSQUEHANNA
  - SEE C-6 FOR DETAILS OF WA-4 UNDER UNT TO SUSQUEHANNA
1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

**PLAN LR-17**  
SCALE: 1" = 50'



**PROFILE LR-17**  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022



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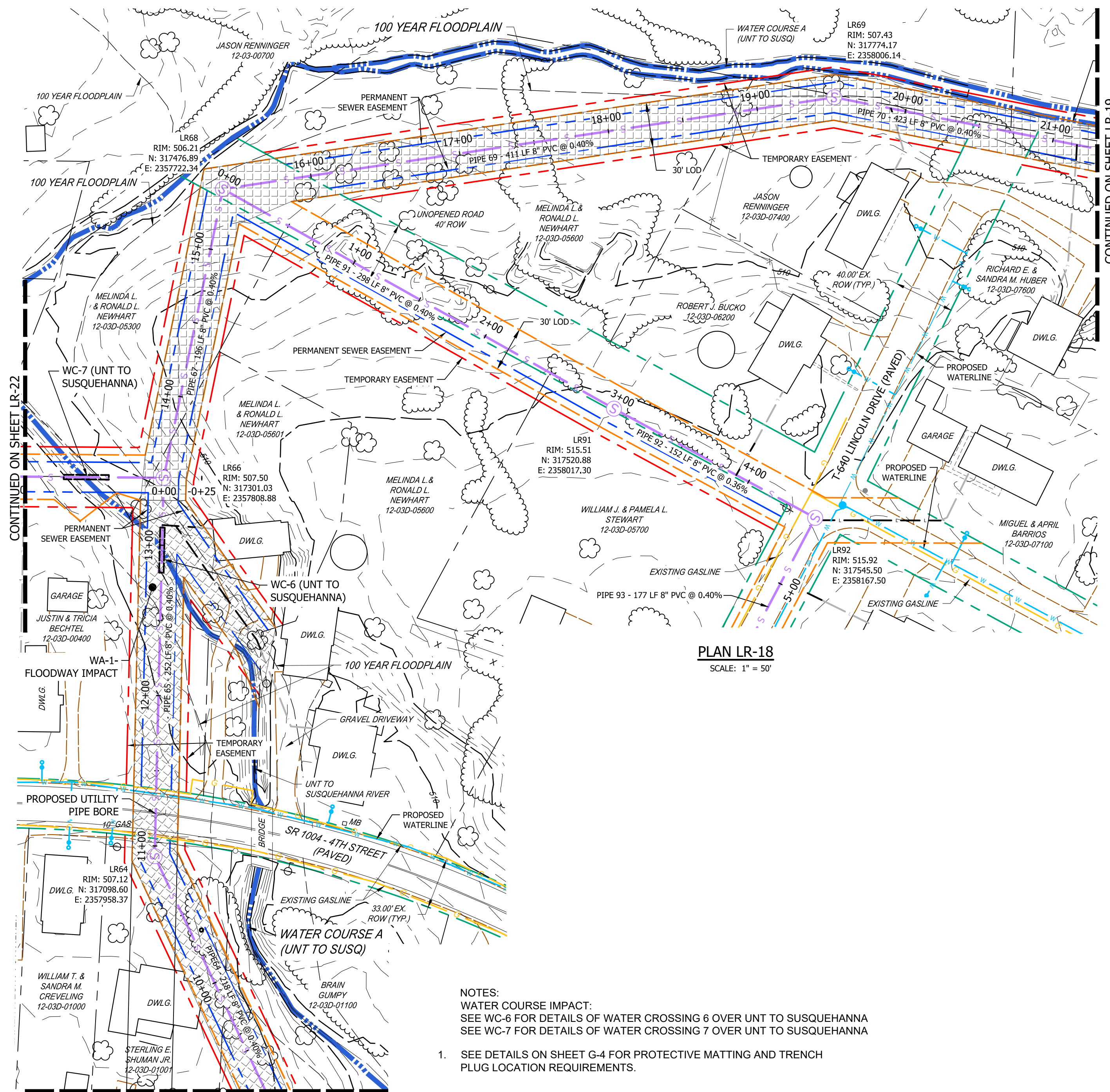
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570-368-2131

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE  
UNNAMED TRIBUTARY

DRAWING DATE: 10/19/2022  
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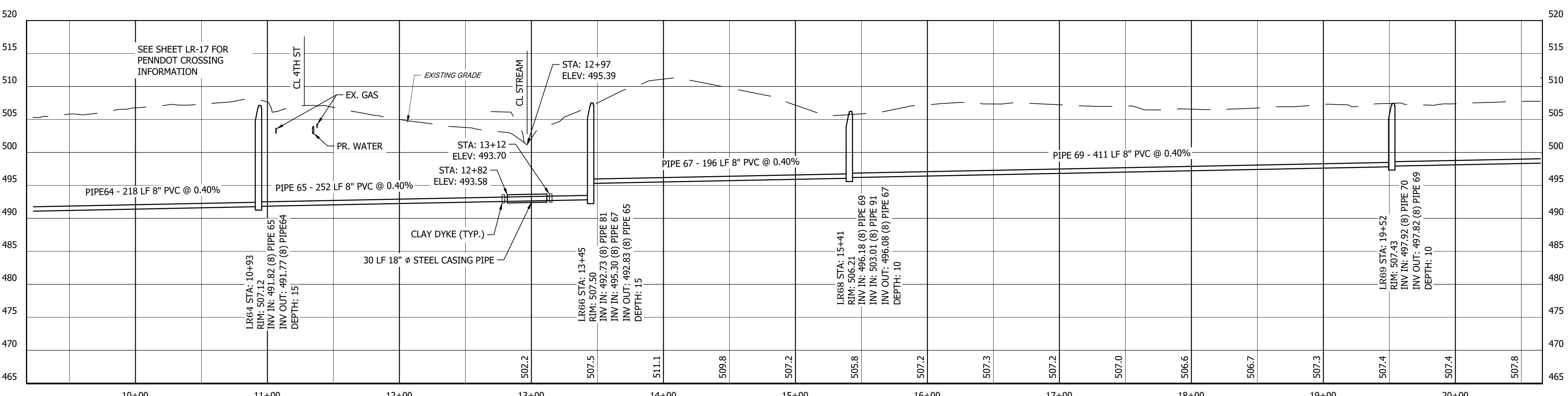


**LEGEND**

- EXISTING BOUNDARY LINE
- EXISTING EDGE OF PAVEMENT/ROAD
- EXISTING PERMANENT EASEMENT
- EXISTING TEMPORARY EASEMENT
- EXISTING GASLINE
- EXISTING RIGHT-OF-WAY
- PROPOSED LIMIT-OF-DISTURBANCE
- PROPOSED SEWER MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT
- PROPOSED SEWER LATERAL
- PROPOSED WATERLINE

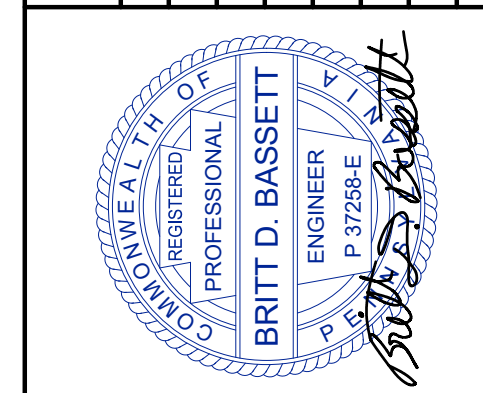
NOTES:  
WATER COURSE IMPACT:  
SEE WC-6 FOR DETAILS OF WATER CROSSING 6 OVER UNT TO SUSQUEHANNA  
SEE WC-7 FOR DETAILS OF WATER CROSSING 7 OVER UNT TO SUSQUEHANNA

1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH  
PLUG LOCATION REQUIREMENTS.



**PROFILE LR-18**  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
0	30% DRAFT COLLECTION SYSTEM	08/19/2022
1	50% DRAFT COLLECTION SYSTEM	09/07/2022



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COLUMBIA COUNTY, PA

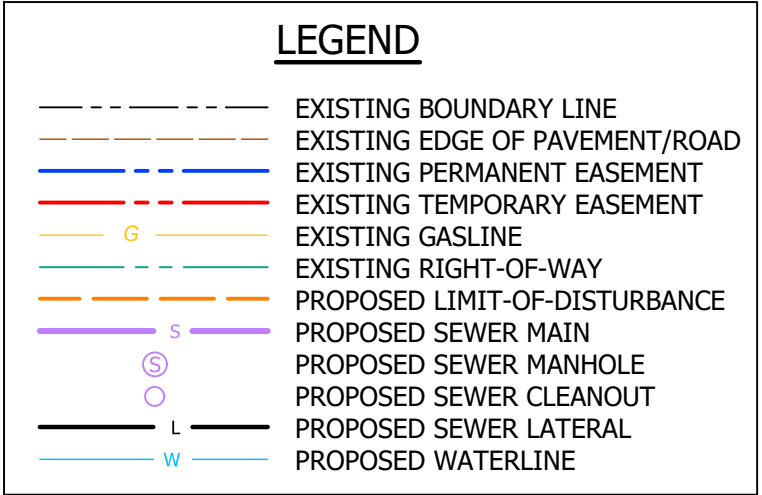
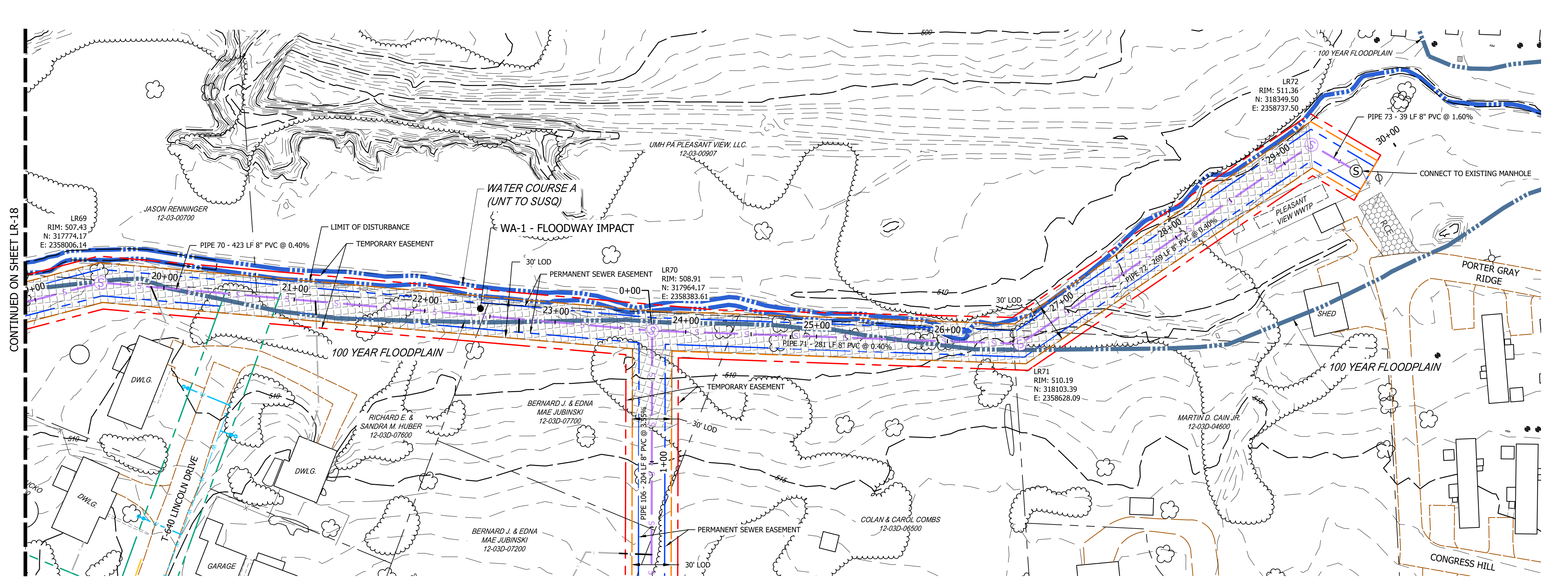
DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
UNNAMED TRIBUTARY

DRAWING DATE: 10/19/2022

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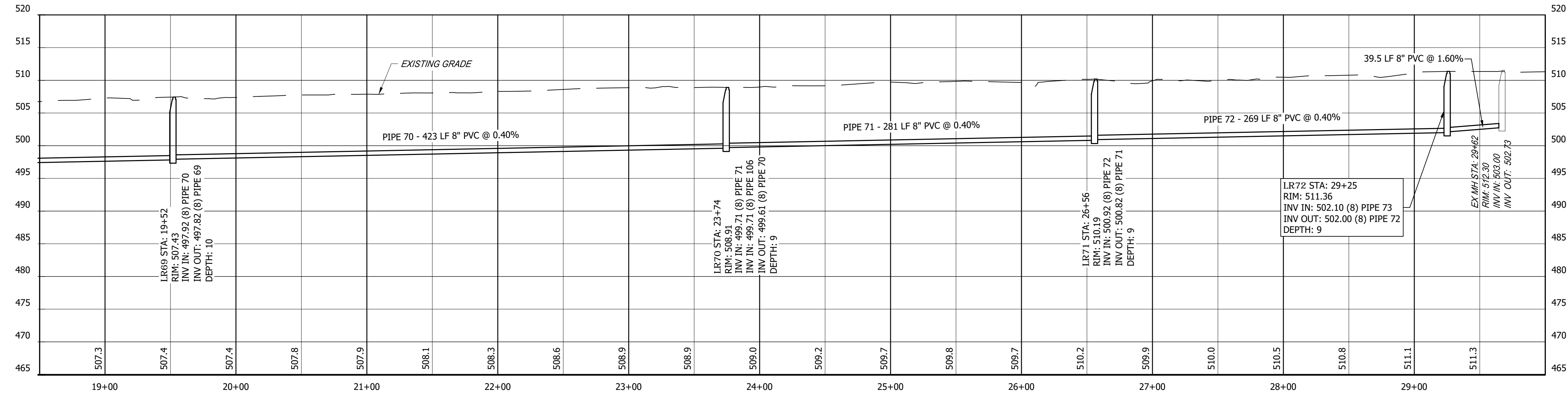


DESIGN LINE EDGE NORTH PLANE  
10/16/2022



1. SEE DETAILS ON SHEET G-4 FOR PROTECTIVE MATTING AND TRENCH PLUG LOCATION REQUIREMENTS.

PLAN LR-19  
SCALE: 1" = 50'



PROFILE LR-18  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022

BRITT D. BASSETT  
REGISTERED PROFESSIONAL ENGINEER  
P 37298-E

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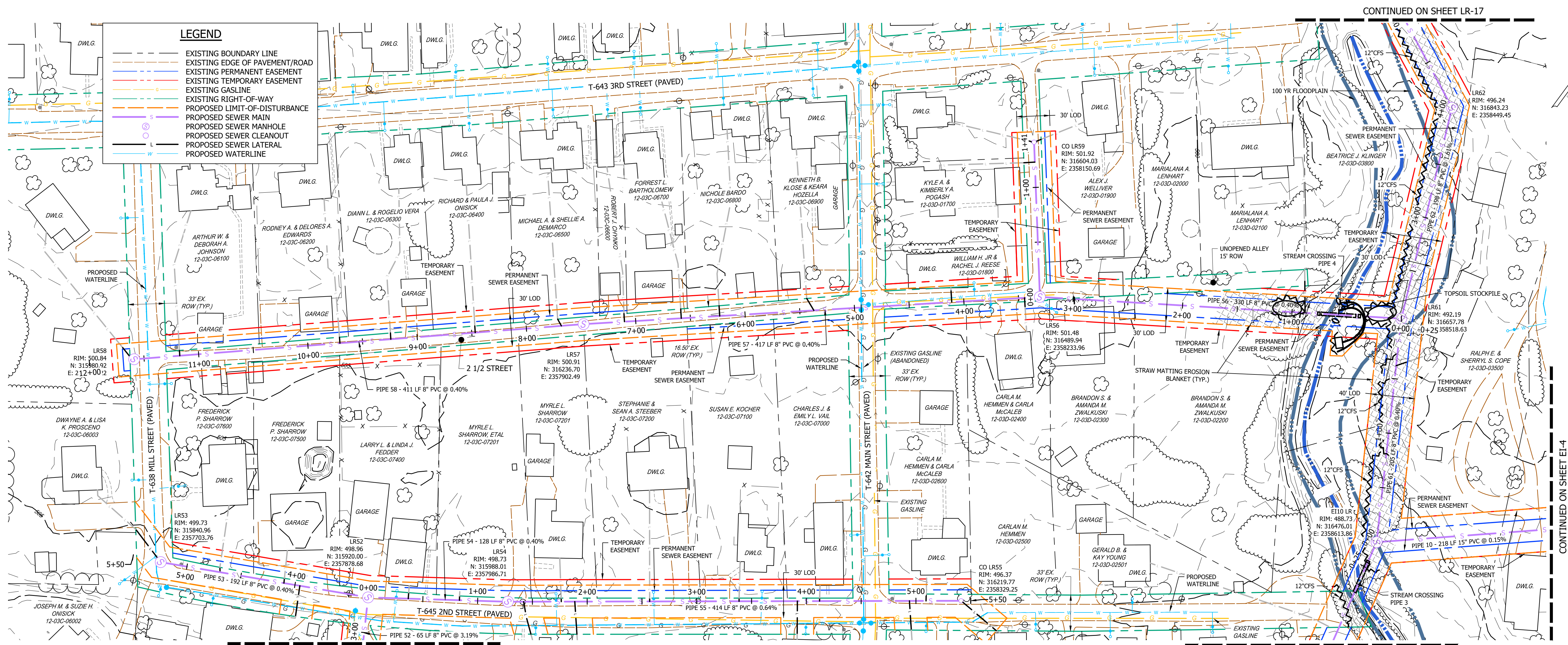
DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
UNNAMED TRIBUTARY

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

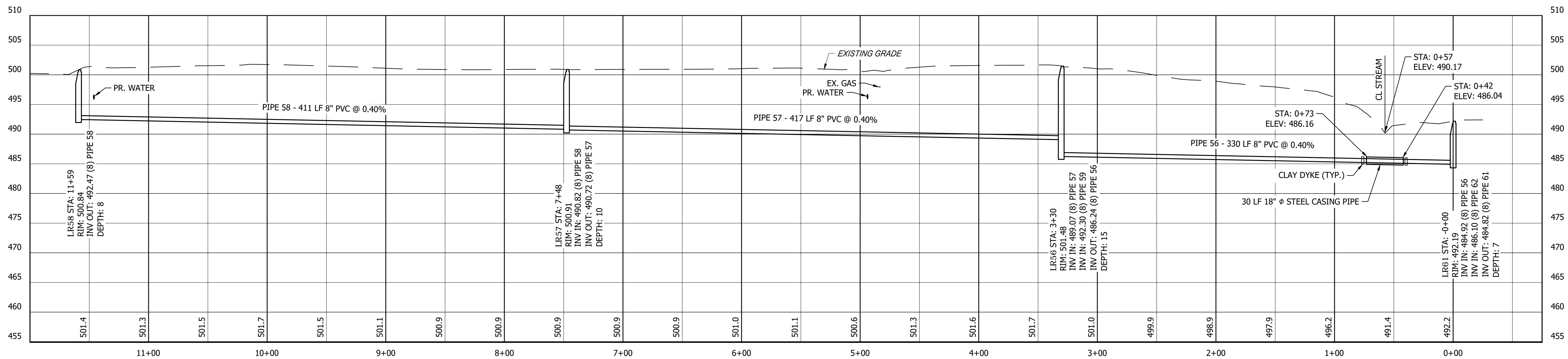
DRAWING DATE: 10/19/2022

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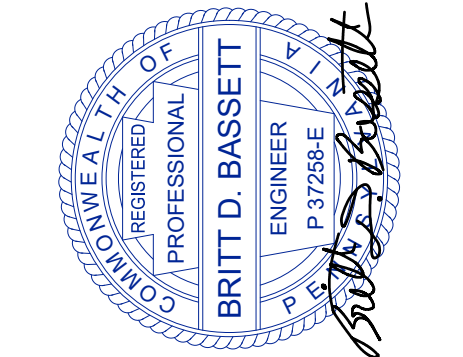
PLAN LR-20  
SCALE: 1" = 50'



PROFILE LR-20  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS

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1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022



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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

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LIME RIDGE COLLECTION  
PLAN & PROFILE  
2 1/2 STREET

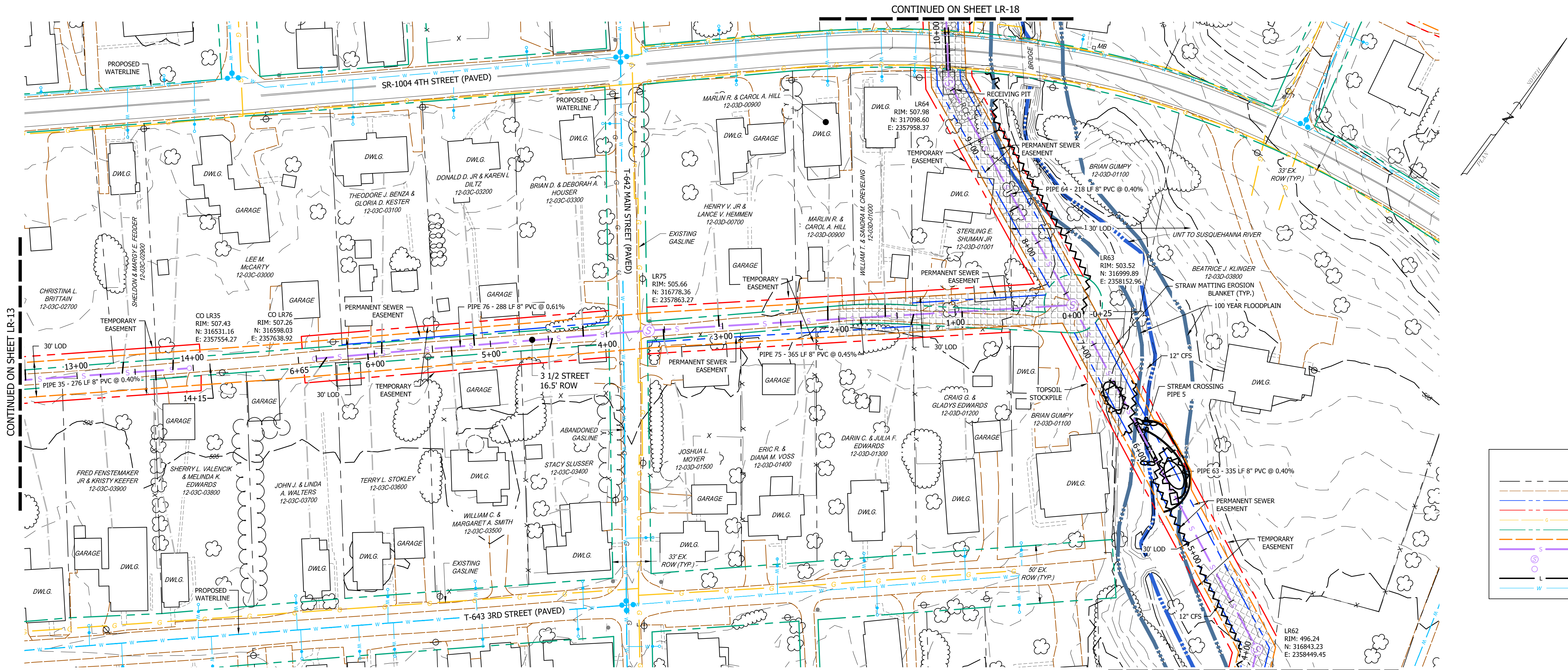
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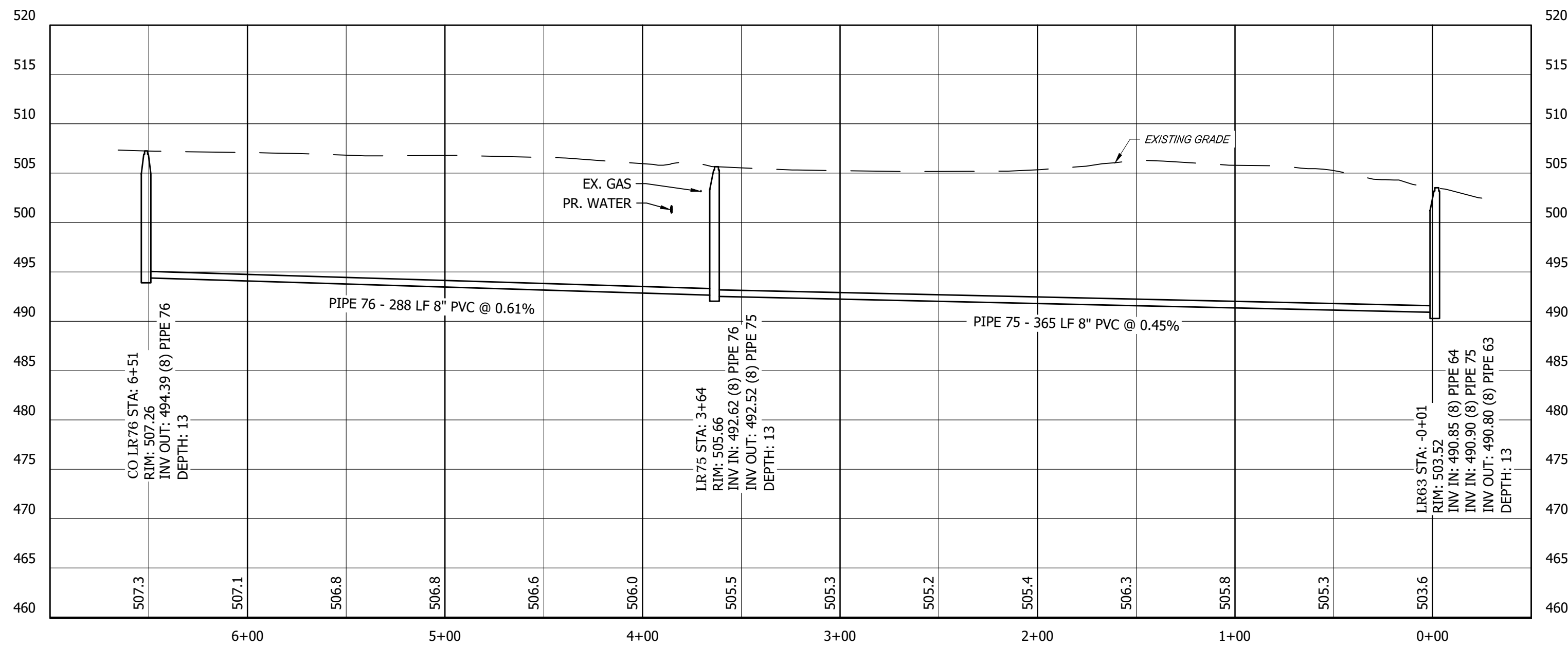
**LR-20**

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PLAN LR-21  
SCALE: 1" = 50'



PROFILE LR-21  
H SCALE: 1" = 50'  
V SCALE: 1" = 10'

DRAWING REVISIONS		
NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022



SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTION  
PLAN & PROFILE  
3 1/2 STREET (EAST)

DRAWING DATE: 10/19/2022

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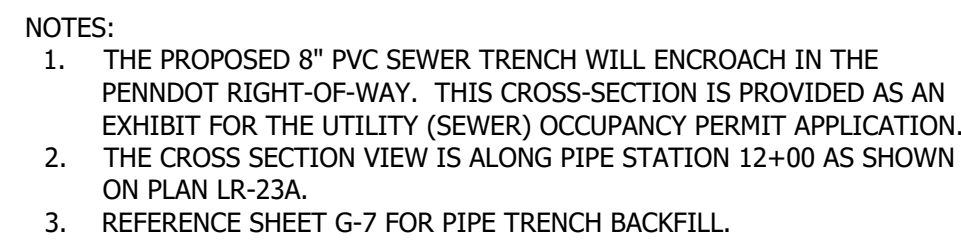
LR-21

63 of 68

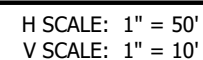
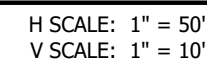








H SCALE: 1" = 30'  
V SCALE: 1" = 10'



SCALE: 1" = 50'

CONTINUED ON SHEET LR-22



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**SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA**

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
CHESTNUT & MAIN  
STREETS

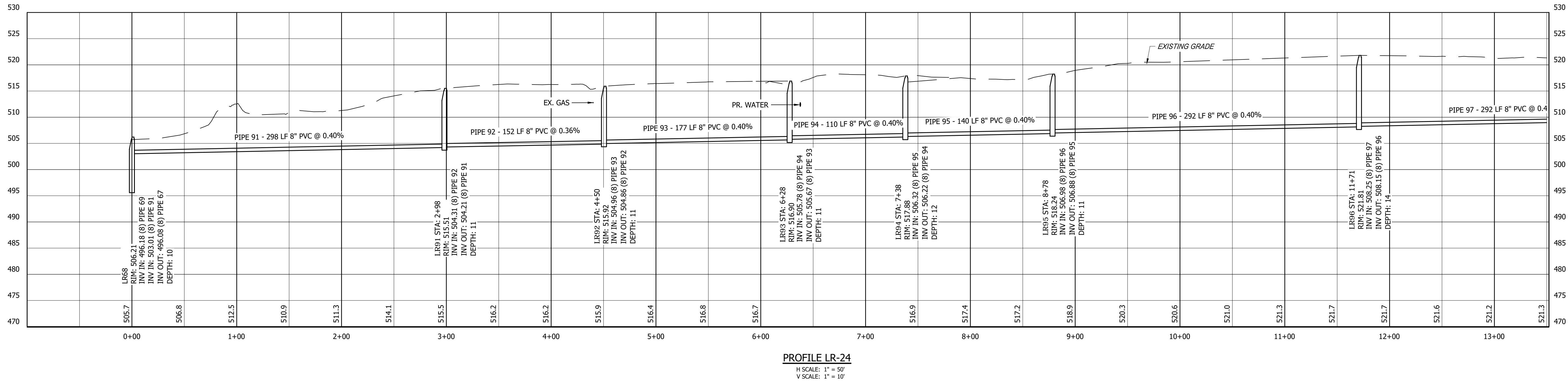
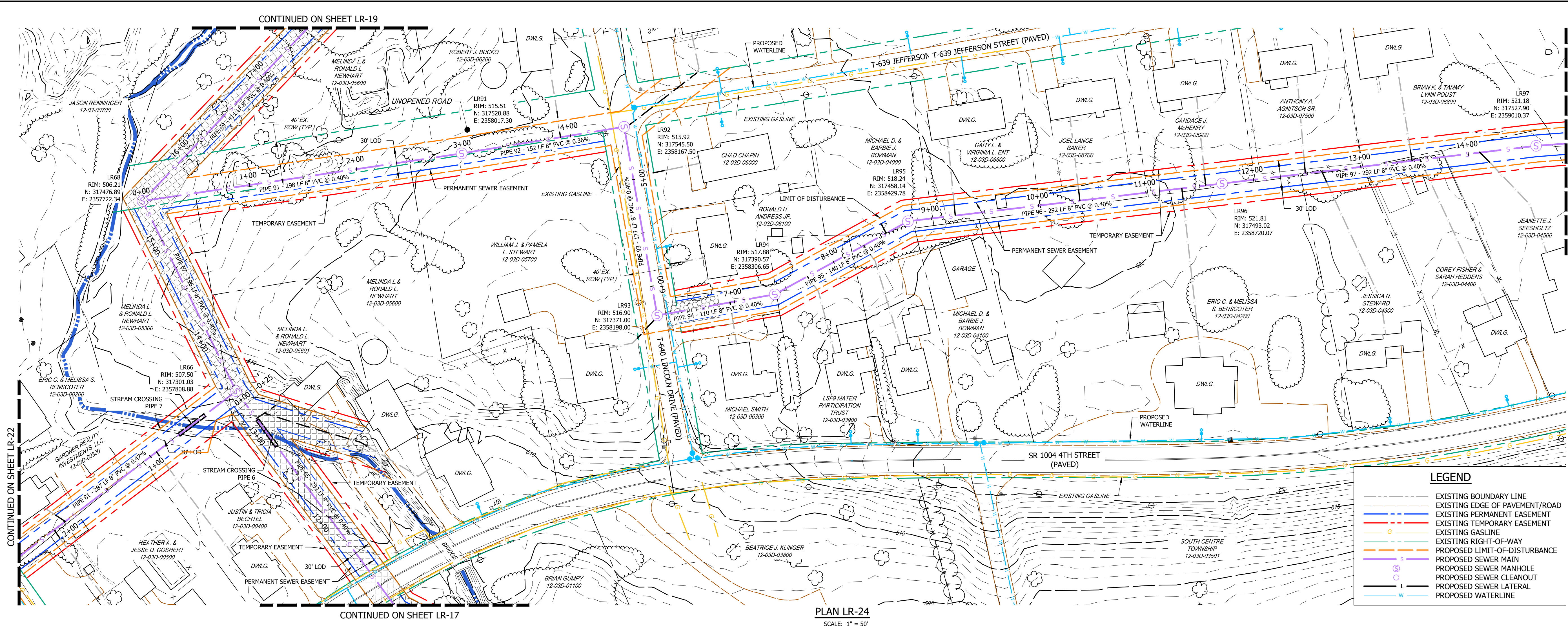
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# LR-23

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2	50% DRAFT COLLECTION SYSTEM	09/07/2022	



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SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

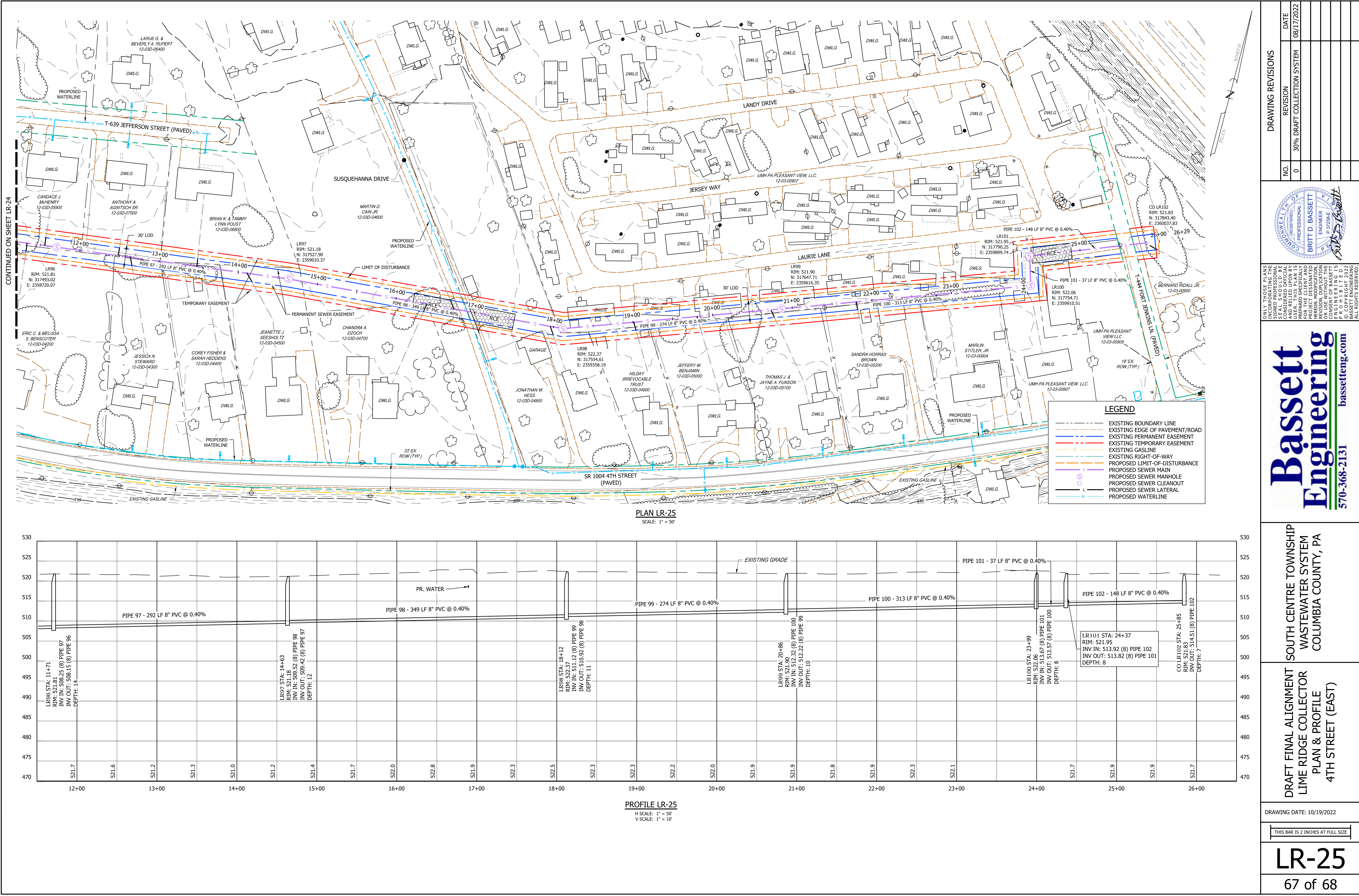
DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
4TH STREET (EAST)

DRAWING DATE: 10/19/2022

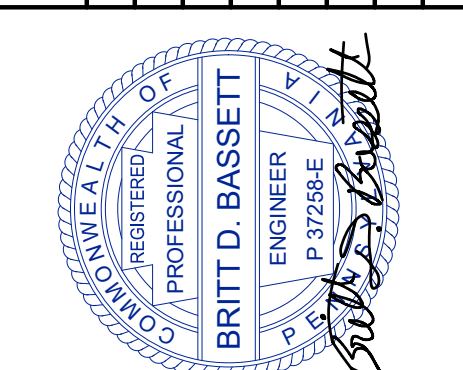
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**LR-24**  
66 of 68





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0	30% DRAFT COLLECTION SYSTEM	08/17/2022	



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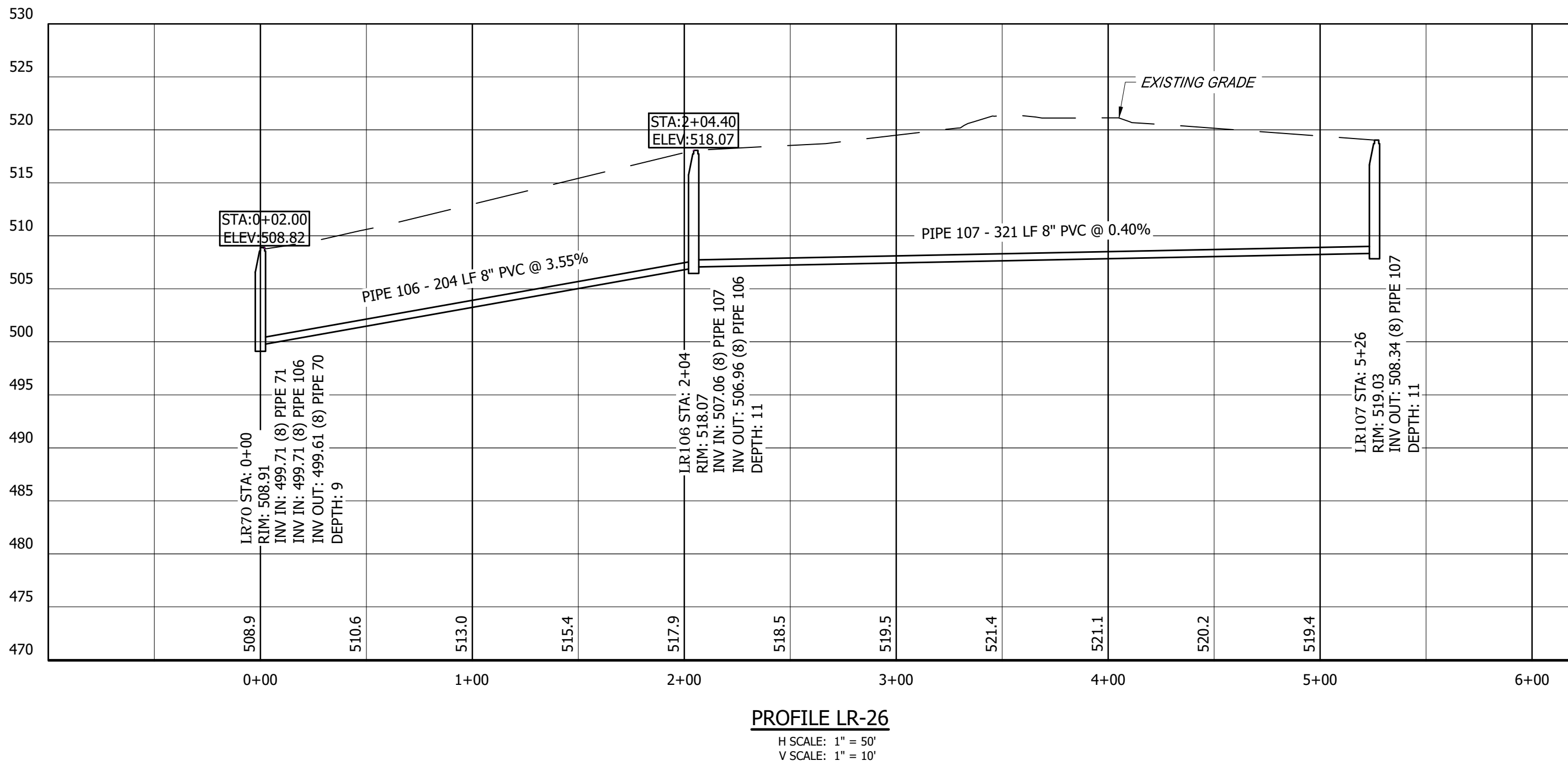
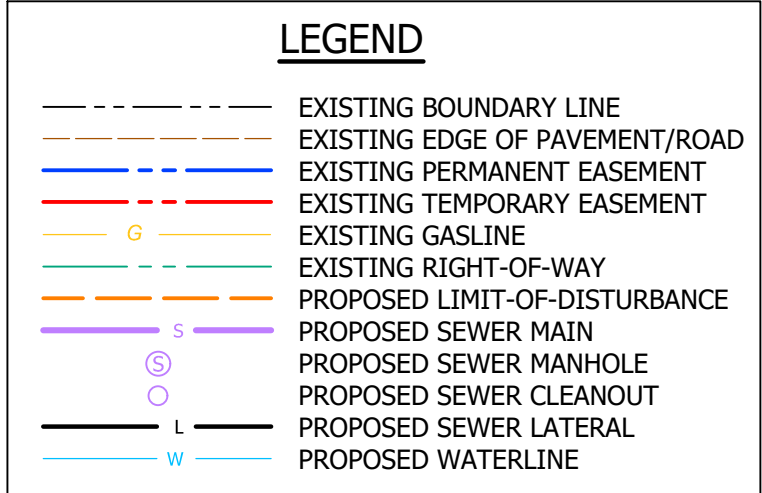
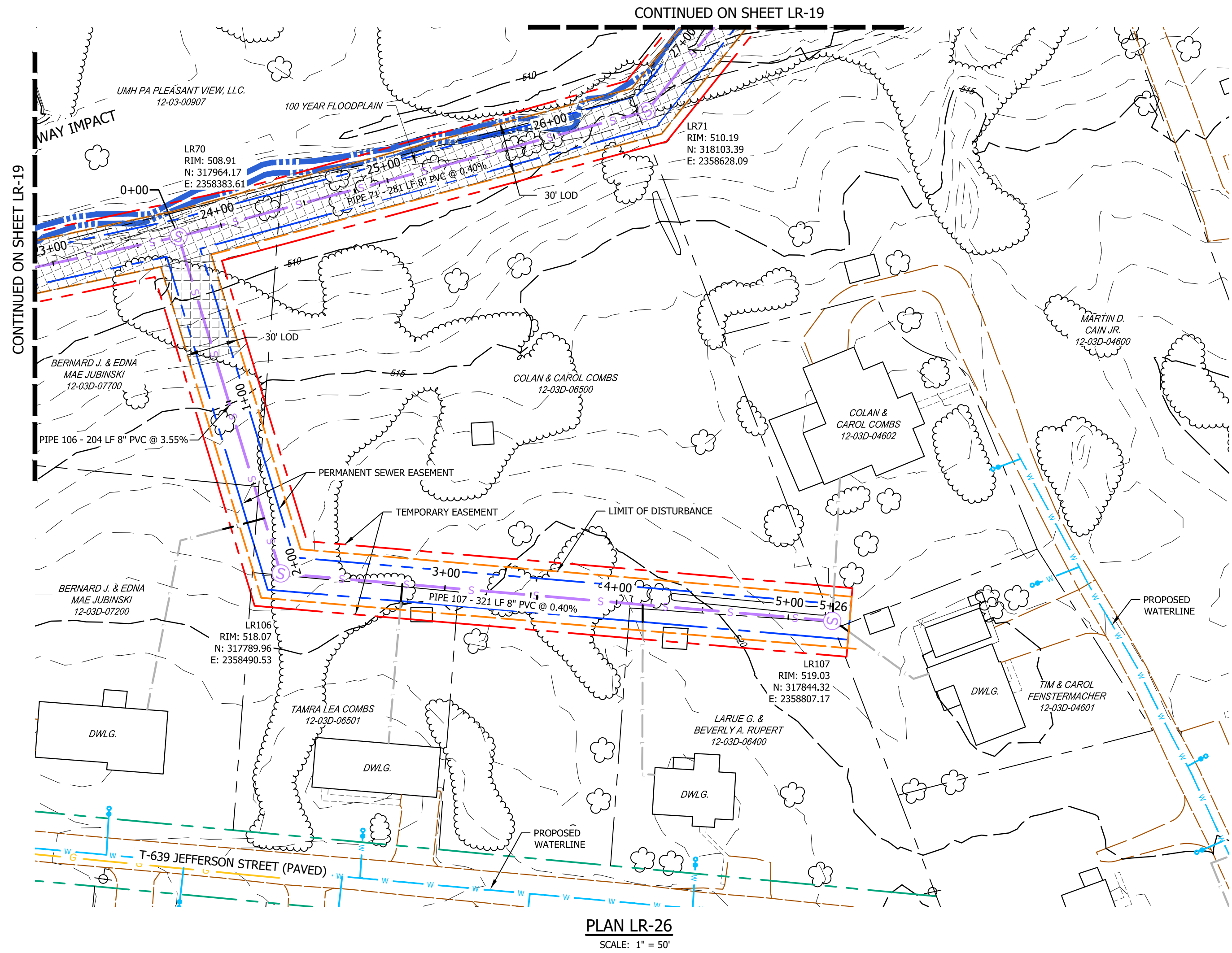
SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

DRAFT FINAL ALIGNMENT  
LIME RIDGE COLLECTOR  
PLAN & PROFILE  
4TH STREET (EAST)



DESIGN LINE EDGE NORTH ARROWS

10/19/2022



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LIME RIDGE COLLECTOR  
PLAN & PROFILE  
UNT SPUR

SOUTH CENTRE TOWNSHIP  
WASTEWATER SYSTEM  
COLUMBIA COUNTY, PA

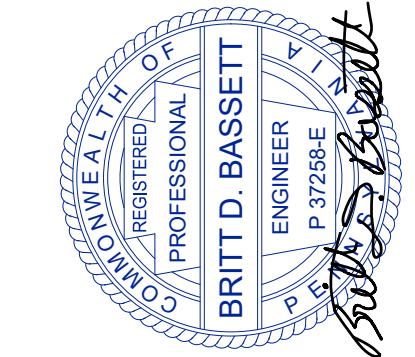
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LR-26

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NO.	REVISION	DATE
1	30% DRAFT COLLECTION SYSTEM	08/17/2022
2	50% DRAFT COLLECTION SYSTEM	09/07/2022