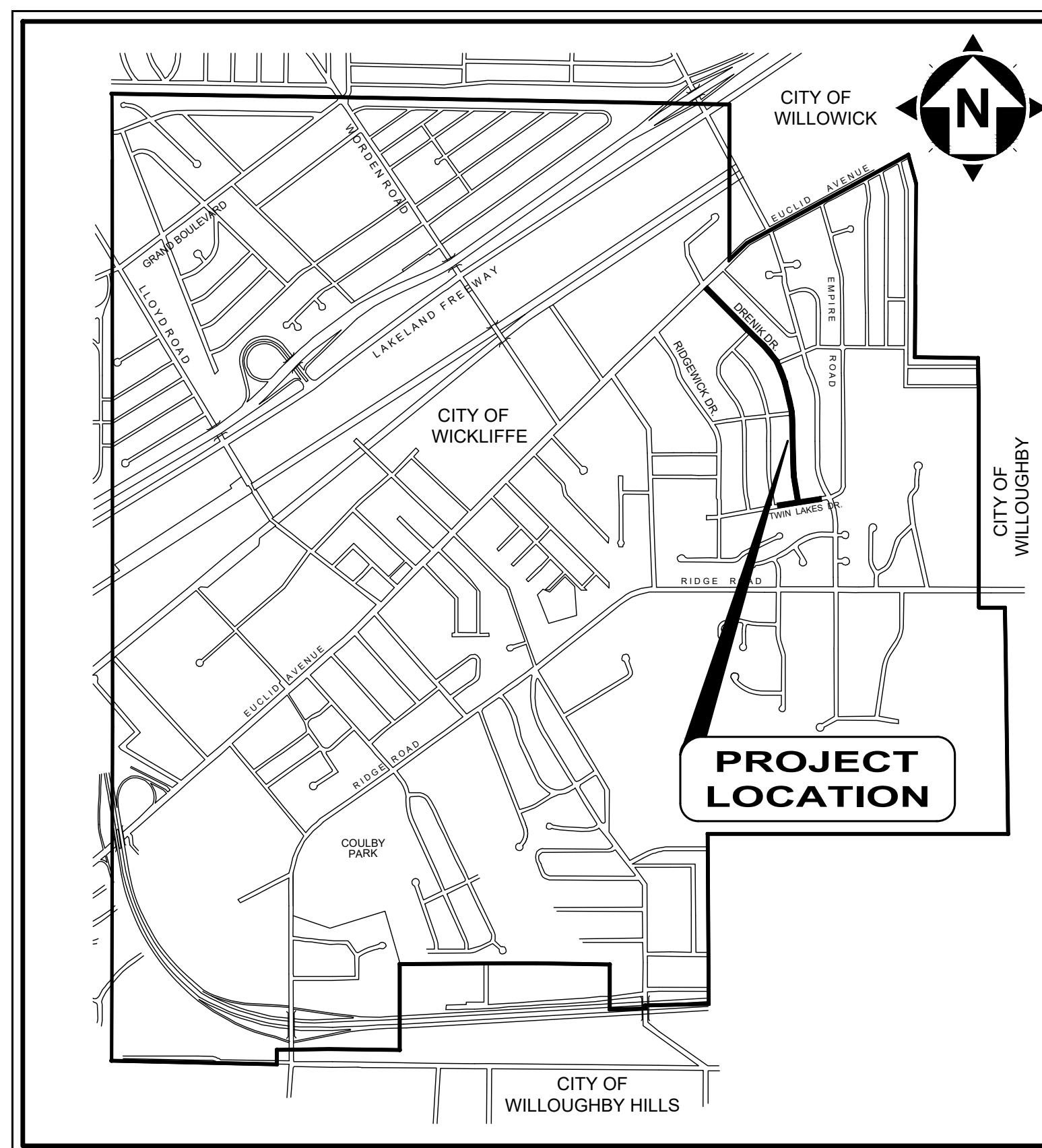


# CITY OF WICKLIFFE DRENIK DRIVE SANITARY SEWER LINING

## ODOD PROJECT No. DEV--2021 - 182313 LAKE COUNTY, OHIO

FEBRUARY 2024

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**LOCATION MAP**  
NOT TO SCALE



**CITY OFFICIALS:**

JOSEPH SAKACS . . . . . MAYOR

**COUNCIL-AT-LARGE**

EDWARD LEVON PRESIDENT  
MARIA SALOTTO  
MATTHEW C. JAWORSKI

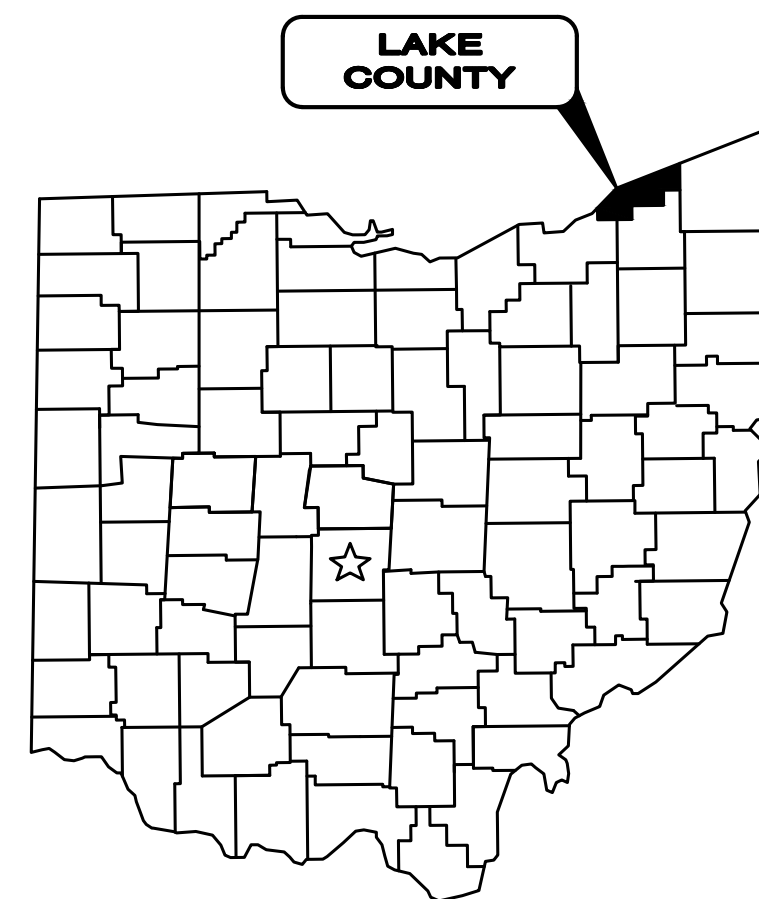
**WARD COUNCIL**

JAMES BALA, WARD I  
RANDY GERHARDSTEIN, WARD II  
THOMAS THIELMAN, WARD III  
SHERRY KOSKI, WARD IV

**CITY ADMINISTRATORS:**

RONALD STRAUZER . . . . . SERVICE DIRECTOR  
JEREMY IOSUE . . . . . LAW DIRECTOR  
CHLONDRA HUNTER . . . . . FINANCE DIRECTOR  
RAYMOND SACK . . . . . BUILDING COMMISSIONER  
TIMOTHY STOPP . . . . . RECREATION DIRECTOR  
JONATHON BUSH . . . . . POLICE CHIEF  
CHRISTOPHER GROSSMAN . . . . . FIRE CHIEF  
PETER J. FORMICA . . . . . CITY ENGINEER

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL  
1-800-362-2764  
(TOLL FREE)



1. THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.
2. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.
3. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.

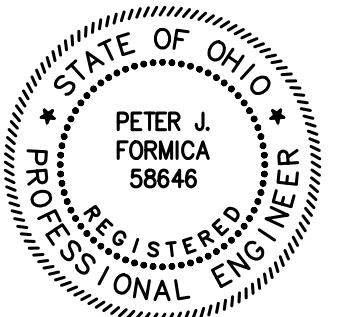


*Peter J. Formica*

PETER J. FORMICA

P.E. No. 58646

2/1/2024  
DATE



**GENERAL NOTES**

- MATERIALS OF WORK FOR "AS DIRECTED" ITEMS SHALL NOT BE ORDERED FOR THE DELIVERY TO THE PROJECT OR WORK PERFORMED UNTIL AUTHORIZED BY THE ENGINEER.
- MANHOLES, CATCH BASINS, MONUMENT BOXES, WATER VALVE BOXES AND OTHER CASTINGS SHALL BE RAISED OR LOWERED FLUSH WITH THE FINISHED SURROUNDING SURFACE. ANY METER OR VALVE BOX ENCOUNTERED WITHIN THE WORK SITE SHALL BE EXPOSED AND ADJUSTED TO GRADE PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID.
- BEFORE THE CITY WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTY RETAINER, THE CONTRACTOR SHALL FURNISH THE CITY A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTOR HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY WHEN NEEDED OR ORDERED BY THE OWNER WATER OR CALCIUM CHLORIDE PER ODOT 616 FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE ORIGINATING FROM HIS CONSTRUCTION ACTIVITIES. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL. THE COST OF DUST CONTROL SHALL BE INCLUDED IN THE UNIT BID PRICES FOR ALL ITEMS OF THE PROPOSAL.
- THE CONTRACTOR SHALL PROVIDE A PRE-CONSTRUCTION VIDEO TAPE SURVEY OF THE ENTIRE PROJECT AREA. ANY DAMAGE DEEMED TO HAVE BEEN CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT HIS OWN EXPENSE. ALL COSTS ASSOCIATED FOR THIS WORK, INCLUDING THE VIDEO TAPE SURVEY, SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.
- ALL WORK SHALL, AT ALL TIMES, BE SUBJECT TO THE DIRECT SUPERVISION OF THE WICKLIFFE CITY ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE. ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT.

**CONSTRUCTION OBSERVATION**

- THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT CONTACTING MR. TOM GWYDIR (440) 530-2306 A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY TO ARRANGE FOR OBSERVATION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MR. TOM GWYDIR TO AVOID UNNECESSARY OBSERVATION COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR THE TIME INCURRED.

**TRENCH EXCAVATION AND BACKFILL**

- ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION.
- BACKFILL FOR ALL UNDERGROUND UTILITIES INSTALLED UNDER PAVEMENT, OR WITHIN A 1:1 ZONE OF INFLUENCE PARALLEL OR TRANSVERSE TO PAVEMENT, SHALL BE "COMPACTED GRANULAR BACKFILL" AS DESCRIBED IN SPECIFICATION SECTION 02235 AND IN ACCORDANCE WITH THE PLANS. BACKFILL IN OTHER AREAS SHALL BE AS DESCRIBED IN SPECIFICATION SECTION 312323.13 - "COMPACTED BACKFILL" OR SECTION 02235 - "COMPACTED GRANULAR BACKFILL". THE OWNER AND THE ENGINEER DO NOT GUARANTEE NOR SUGGEST THE INSITU MATERIAL TO BE EXCAVATED WILL BE SUITABLE OR IN ITS PRESENT STATE WILL CONSIST OF THE PROPER MOISTURE CONTENT TO ACHIEVE THE COMPACTION REQUIREMENTS. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE BACKFILL MATERIAL HE WILL USE. UPON REQUEST, THE OWNER WILL PROVIDE ACCESS TO THE SITE FOR THE CONTRACTOR TO CONDUCT SUCH INVESTIGATION AND TESTS DEEMED NECESSARY TO MAKE HIS DETERMINATION. NO EXTRA PAYMENT WILL BE MADE TO DISPOSE OF UNSUITABLE MATERIAL OR FURNISH AND PLACE SUITABLE MATERIAL MEETING THE REQUIREMENTS OF SECTION 312323.13 "COMPACTED BACKFILL" OR SECTION 02235 "COMPACTED GRANULAR BACKFILL".
- SLAG PRODUCTS WILL NOT BE PERMITTED FOR BEDDING OR BACKFILL MATERIAL.
- ALL UTILITY LINES CROSSING THE NEW WATER TRENCH, I.E. STORM SEWERS, STORM LATERALS, SANITARY SEWERS, SANITARY

LATERALS, WATER MAINS, WATER SERVICE CONNECTIONS, GAS MAINS, GAS SERVICE CONNECTIONS, UNDERGROUND OBT CONDUITS, CABLE T.V. LINES SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS OR REMOVED AND REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK, EVEN IF NOT SHOWN ON THE PLANS.

- ALL EXISTING SEWER CASTINGS REMOVED ON THIS PROJECT SHALL REMAIN THE PROPERTY OF THE CITY OF WICKLIFFE AND SHALL BE DELIVERED BY THE CONTRACTOR TO A SITE DESIGNATED BY THE CITY.
- ALL EXISTING TEST TEE MARKINGS ENCOUNTERED ON THE SIDEWALK AND/OR CURB DURING CONSTRUCTION SHALL BE REFERENCED AND RESTORED, MARKED WITH A SAW CUT SYMBOL ON THE SIDEWALK. ( + ) FOR STORM TEE AND ( Δ ) FOR SANITARY TEE.
- BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 9" IN DEPTH. BACKFILL MATERIAL SHALL BE PLACED WITH 2% OF THE OPTIMUM MOISTURE. THE ENGINEER MAY ORDER THE REMOVAL, REFILLING, RECOMPACTION AND RETESTING OF ALL BACKFILL NOT MEETING THE REQUIREMENTS OF THE CONTRACT.
- BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED USING MACHINE MOUNTED COMPACTION EQUIPMENT IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT ODOT 203.
- NO BACKFILLING OF ANY TRENCHES OR EXCAVATIONS WILL BE PERMITTED WITHOUT TAMPING EQUIPMENT BEING USED. FLOODING, JETTING OR PUDDLING OF BACKFILL WILL NOT BE PERMITTED.

**WORK HOURS**

- NO WEEKEND WORK OR WORK BETWEEN THE HOURS OF 9:00 PM TO 7:00 AM SHALL BE PERMITTED UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY.

**PROVIDING CONTINUOUS ACCESS TO RESIDENCES AND BUSINESSES**

- TWO WEEKS PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COMPLETE SCHEDULE OF CONSTRUCTION OPERATIONS ALONG WITH PLANS SHOWING TRAFFIC CONTROL FOR EACH PHASE OF CONSTRUCTION. INCLUDED SHALL BE DETAILS OF THE PROPOSED METHODS TO MAINTAIN SAFE AND CONTINUOUS ACCESS FOR PASSENGER VEHICLES, TRUCKS AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES AND INTERSECTING STREETS. THESE PLANS SHALL INCLUDE ALL TEMPORARY MATERIALS NECESSARY TO PROVIDE SAFE, ADEQUATE DRIVE SURFACES TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ODOT ITEM 614, MAINTAINING TRAFFIC. PLANS MUST BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO COMMENCING ANY WORK
- SHOULD THE ENGINEER, AT ANY TIME PRIOR TO OR DURING CONSTRUCTION, DEEM ANY PART OF THE CONTRACTOR'S PLANS FOR SAFE AND CONTINUOUS ACCESS TO RESIDENCES AND BUSINESSES INADEQUATE, ADDITIONAL MATERIALS, CLOSURES AND/OR DIVERSIONS SHALL BE REQUIRED AT NO ADDITIONAL COST TO THE CITY.

**NOTIFICATION OF PROPERTY OWNERS**

- THE CONTRACTOR SHALL NOTIFY ALL RESIDENCES AND BUSINESSES ALONG THE PROJECT ROUTE IN WRITING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING WORK. SUCH NOTICE SHALL INCLUDE, AT A MINIMUM, A BRIEF PROJECT DESCRIPTION, TENTATIVE CONSTRUCTION SCHEDULE, LIMITS OF CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS AND PHONE NUMBER, AS WELL AS A CONTACT PERSON'S NAME AND EMERGENCY PHONE NUMBER WHERE HE COULD BE REACHED DURING NON-WORK HOURS. THE NOTICE SHALL ALSO REQUEST THAT THE PROPERTY OWNERS PROVIDE INFORMATION TO THE CONTRACTOR AND/OR CITY OF MENTOR REGARDING THE LOCATIONS OF ANY UNDERGROUND PET FENCING, LAWN SPRINKLER SYSTEMS, YARD LIGHTING, WIRING AND ANY OTHER FACILITIES THAT ARE UNDERGROUND IN THE VICINITY OF THE PROJECT. THE NOTICE SHALL BE REVIEWED AND APPROVED BY THE CITY OF MENTOR PRIOR TO BEING DISTRIBUTED. ALL COSTS ASSOCIATED WITH THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ODOT ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN.

**EXISTING UTILITIES**

- THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE RESPECTIVE UTILITIES AS REQUIRED BY O.R.C. SECTION 153.64.
- BEFORE ANY WORK IS STARTED THAT WILL INTERFERE WITH THE EXISTING UTILITIES, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE", AT 1-800-362-2764, FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE CITY OF WICKLIFFE, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITY LINES DURING THE ENTIRE PROJECT. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE

SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE CITY OF WICKLIFFE, INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS.

- WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THE MAINTENANCE OF THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE.
- DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.
- THE FOLLOWING UTILITY COMPANIES ARE KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS:

GAS:  
DOMINION EAST OHIO GAS  
320 SPRINGSIDE DRIVE, STE. 320  
AKRON, OHIO 44333  
PHONE: (330) 664-2409  
MR. BRYAN D. DAYTON

TELEPHONE:  
AT&T OHIO  
13630 LORAIN AVE., 2nd FLOOR  
CLEVELAND, OHIO 44111  
PHONE: (216) 476-6142  
EMAIL: PJ8191@ATT.COM

MR. JAMES JANIS

WATER:  
LAKE COUNTY UTILITY DEPARTMENT  
105 MAIN STREET  
PAINESVILLE, OHIO 44077  
PHONE: (440) 350-5775  
MR. RANDY ROTHLSBERGER P.E.

ELECTRIC:  
THE ILLUMINATING COMPANY  
6896 MILLER ROAD  
BRECKSVILLE, OHIO 44141  
PHONE: (440) 546-8706  
EMAIL: JMZASSICK@FIRSTENERGYCORP.COM  
MR. JOHN ZASSICK

OHIO UTILITY PROTECTION SERVICE  
106 WEST RYEN, ROOM 427  
YOUNGSTOWN, OHIO 44051  
PHONE: (800) 362-2746

CITY OF WICKLIFFE  
28730 RIDGE ROAD  
WICKLIFFE, OHIO 44092  
PHONE: (440) 943-7100

CABLE:  
CHARTER COMMUNICATIONS  
7820 DIVISION DRIVE  
MENTOR, OHIO 44060  
PHONE: (216) 575-8016  
EXT: (216) 555-1105  
EMAIL: EMIL.SYMISTER@CHARTER.COM  
MR EMIL SYMISTER  
CONSTRUCTION COORDINATOR

- NO INACTIVE SANITARY LATERALS SHALL BE RECONNECTED TO THE NEWLY LINED SEWER.
- THE CONTRACTOR SHALL EXPECT ONE UNDERGROUND GAS, WATER, STORM, SANITARY CONNECTION FOR EACH LOT (INCLUDING VACANT LOTS) ON BOTH SIDES OF THE STREET FOR THE ENTIRE PROJECT LENGTH. ELECTRIC, CABLE TV AND PHONE MAY ALSO BE FOUND UNDERGROUND WHETHER IT IS SHOWN OR NOT.

**SERVICE CONNECTIONS**

- ALL ACTIVE DRAINAGE PIPES ENCOUNTERED SHALL BE RECONNECTED TO EXISTING FACILITIES OR CONNECTED TO THE NEW FACILITIES.
- ALL EXISTING UTILITY SERVICE CONNECTIONS (SANITARY, STORM, WATER, GAS, ELECTRIC, TELEPHONE, ETC.) WHICH ARE DAMAGED DURING THE INSTALLATION OF PIPE SHALL BE REPAIRED WITH LIKE MATERIALS OR REPLACED, AS REQUIRED. THE COST OF UTILITY SERVICE CONNECTION REPAIR/REPLACEMENT SHALL BE INCLUDED IN THE UNIT PRICES FOR ALL ITEMS IN THE PROPOSAL.
- ALL UTILITY LINES CROSSING THE NEW TRENCH SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS; OR REMOVED, REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. IF ANY OF THESE LINES ARE DAMAGED DURING CONSTRUCTION, THEY SHALL BE REPLACED IN-KIND.
- THE CONTRACTOR SHALL BE REQUIRED TO BYPASS AND MAINTAIN THE FLOW TO/FROM ALL HOUSE UTILITY CONNECTIONS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL EXPECT ONE UNDERGROUND SEWER, GAS AND WATER CONNECTION FOR EACH LOT (INCLUDING VACANT LOTS) ON BOTH SIDES OF THE STREET FOR THE ENTIRE PROJECT LENGTH.
- THE COST OF UTILITY RELOCATION, REPLACEMENT, AND/OR SUPPORT SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF PROPOSED WATER MAIN.

**GRASS RESTORATION**

- PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL INVENTORY TREELAWNS FOR EXISTING ORNAMENTAL LANDSCAPE FEATURES INCLUDING LAWN SPRINKLER SYSTEMS AND IRON PINS. ANY LANDSCAPE FEATURE DISTURBED OR DAMAGED BY THE CONTRACTOR'S ACTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION. COST OF INVENTORY AND RESTORATION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR LAWN RESTORATION.
- RESTORATION OF TREELAWNS AND GRASS AREAS IN EASEMENTS SHALL BE PERFORMED BY A LANDSCAPE CONTRACTOR TO BE APPROVED BY THE CITY ENGINEER AND SERVICE DIRECTOR. THE LANDSCAPE CONTRACTOR MUST BE EXPERIENCED IN COMMERCIAL INSTALLATIONS AND PROVIDE REFERENCES AND OTHER DETAILED INFORMATION TO ENABLE THE OWNER TO JUDGE HIS EXPERIENCE AND CAPABILITY TO PERFORM THE WORK. GRASS AREAS TO BE RESTORED SHALL BE SEEDED UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS. THE SEED SHALL BE PLACED ON A FOUR (4) INCH BED OF COMPACTED TOPSOIL THAT HAS BEEN RAKED AND BROUGHT TO AN EVEN SURFACE. TOPSOIL SHALL BE SHREDDED AND BE FREE OF ROCKS, ROOTS AND WEEDS. THE CONTRACTOR SHALL PROVIDE TOPSOIL SAMPLES AND SOURCES OF SUPPLY TO THE ENGINEER FOR APPROVAL PRIOR TO DELIVERY OF THE MATERIAL TO THE JOB SITE.

**SEWER INSTALLATION**

- ALL SANITARY SEWER 21" AND UNDER AND ALL STORM SEWER 18" AND UNDER SHALL BE PVC, SDR 26 RESILIENT AND FLEXIBLE (PREMIUM) JOINTS UNLESS OTHERWISE SHOWN ON THE PLANS. ALL STORM SEWER 21" AND GREATER SHALL BE ASTM C76 REINFORCED CONCRETE PIPE, CL III, WITH ASTM C 443 RESILIENT AND FLEXIBLE (PREMIUM) UNLESS OTHERWISE SHOWN ON THE PLAN.
- THE MAINLINE SANITARY AND STORM SEWERS SHALL BE VISUALLY INSPECTED TWICE BY MEANS OF TELEVISION AND RECORDING ON VHS FORMAT VIDEOTAPE ALONG WITH AUDIO COMMENTARY. THE TELEVISION AND VIDEOTAPE RECORDING SHALL BE PERFORMED ONCE BEFORE PAVING OPERATIONS BEGIN AND ONCE AFTER THE PAVEMENT IS IN PLACE AND OPENED TO TRAFFIC. TELEVISION SHALL BE AS PER SPECIFICATION 330130.11. ANY DEFECT IN MATERIAL OR WORKMANSHIP REVEALED BY THE VISUAL-AID INSPECTION MUST BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE CITY AND TO THE FULL SATISFACTION OF THE CITY AND ENGINEER BEFORE ACCEPTANCE OF THE WORK AND RELEASE OF FINAL ESTIMATE AND PAYMENT THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TOTAL COST OF CLEANING ALL SEWERS PRIOR TO VISUAL INSPECTION. COST OF TELEVISION AND VIDEOTAPE OPERATION SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS OF THE PROPOSAL.

**PROPERTY PINS AND MONUMENTS**

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EMPLOY A REGISTERED SURVEYOR TO LOCATE, RECORD, AND MARK ALL EXISTING MONUMENTS AND PROPERTY CORNERS WITHIN THE CONSTRUCTION LIMITS. THIS COST SHALL BE DISTRIBUTED AMONG THE APPROPRIATE PROJECT PAY ITEMS. A LISTING OF THE PINS AND MONUMENTS SHALL BE SUPPLIED TO THE CITY ENGINEER PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL PINS AND MONUMENTS DURING CONSTRUCTION. IF PINS AND MONUMENTS ARE DISTURBED DURING CONSTRUCTION, THE CONTRACTOR SHALL HAVE THEM REPLACED BY THE REGISTERED SURVEYOR AT NO ADDITIONAL COST TO THE CITY.

**EROSION AND DUST CONTROL**

- SEE THE EROSION AND SEDIMENT CONTROL SHEET(S) FOR NOTES AND DETAILS.

**EXCESS EXCAVATION**

- ALL EXCESS EXCAVATION SHALL BE DISPOSED OF IN A LOCATION TO BE SELECTED BY THE CONTRACTOR. THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE CITY IF THE MATERIAL IS TO BE DISPOSED OF WITHIN THE CITY LIMITS.

**GARBAGE COLLECTION**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE TRANSFER OF ALL GARBAGE, GARBAGE CANS, AND RECYCLE BINS FROM THE DRIVEWAYS WITHIN THE CONSTRUCTION ZONE TO THE OPPOSITE SIDE OF THE ROADWAY. CONTRACTOR TO ALLOW ACCESS TO GARBAGE TRUCKS ONCE THE GARBAGE AND RECYCLABLE MATERIALS HAVE BEEN COLLECTED, ALL GARBAGE CANS AND RECYCLE BINS SHALL BE RETURNED TO THE APPROPRIATE DRIVEWAYS AND OUTSIDE OF THE CONSTRUCTION LIMITS, OR AS DIRECTED BY THE ENGINEER. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

**CITY OF WICKLIFFE**

**DRENK DRIVE**

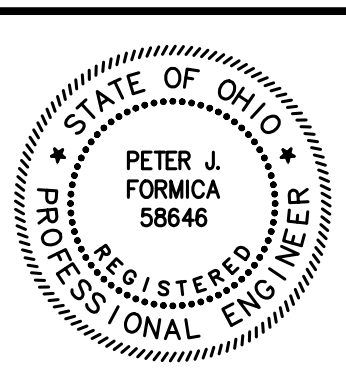
**SANITARY SEWER LINING**

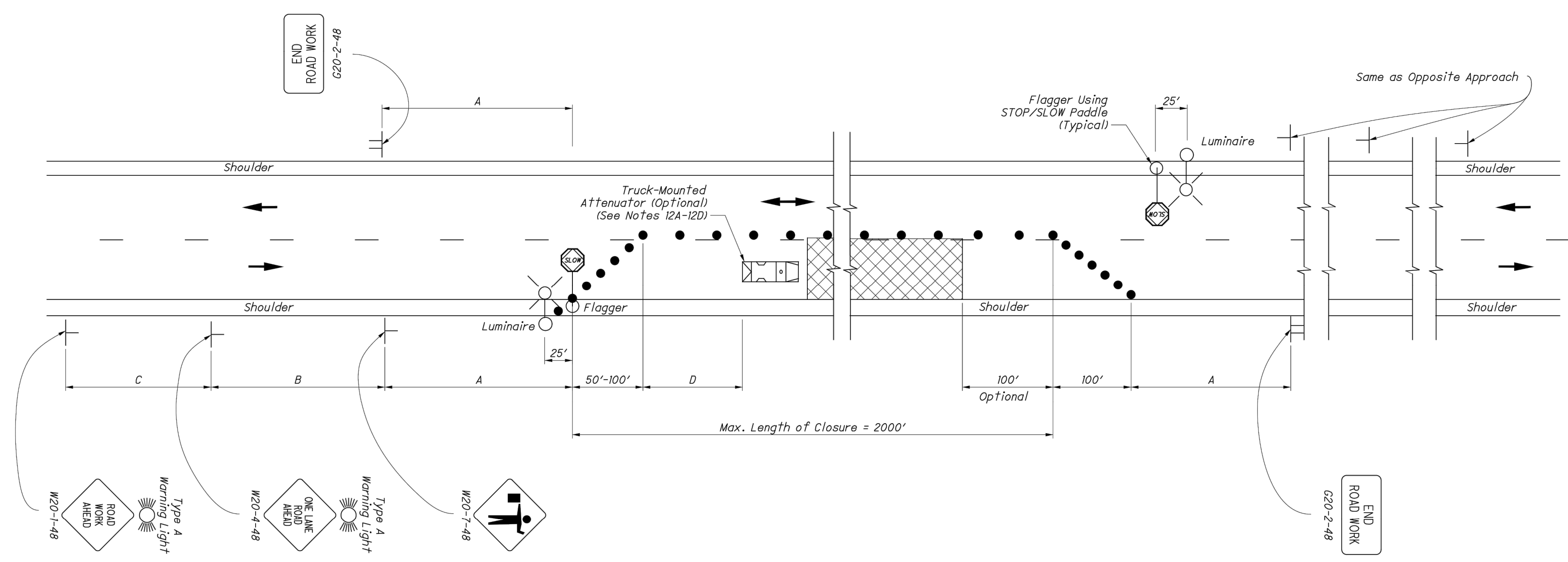
**LAKE COUNTY, OHIO**

ISSUED FOR: REVIEW SET  
ISSUE DATE: 2-1-24  
SCALE: AS SHOWN  
DESIGNED BY: PJF  
DRAWN BY: PJF  
CHECKED BY: PJF

**GENERAL NOTES**

PROJECT NO.	
232271	
DISCIPLINE	
CIVIL	
SHEET NAME	
GN-1	
SHEET	OF
2	16



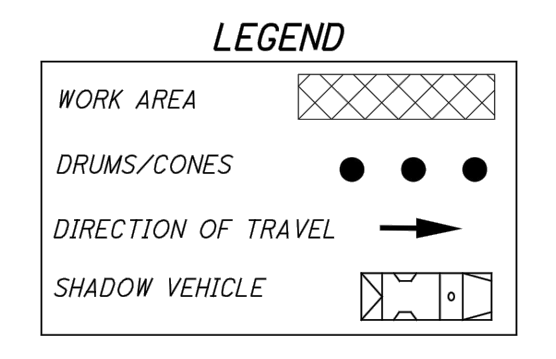


**TABLE I (SIGN SPACING)**

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT)		
	A	B	C
Two-Lane (< 40 MPH)	100	100	100
Two-Lane (45-50 MPH)	350	350	350
Two-Lane (55-60 MPH)	500	500	500

**TABLE II**

SPEED LIMIT (MPH)	BUFFER (D) (FT) MIN.
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570



**NOTES:**

**FLAGGERS**

1. Flaggers, one for each direction, shall be used to control traffic continuously for as long as a one lane operation is in effect. The flaggers shall be able to communicate with each other at all times.

**LENGTH OF CLOSURE**

2. Several small work areas close together should be combined into one work zone. However, the closure shall not be more than 2000' long unless approved by the Engineer. The minimum length between closures shall be 2000'. Only one side of the road shall be closed in any one work zone.

**SIGN LOCATION AND SPACING**

3A. The minimum spacing between work zone signs is shown in Table I. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.

3B. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200' for speeds of 45 mph or less and a minimum of 400' for speeds of 50 mph or greater.

3C. The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

**ADJUSTMENTS FOR SIGHT DISTANCE**

4. The location of the flagger station and the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

**BASIC SIGNING**

5A. ROAD WORK AHEAD (W20-1) signs shall be provided on entrance ramps or roadways entering the work limits.

5B. END ROAD WORK (G20-2) signs are only required for lane closures of more than 1 day. If it is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.

5C. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any ROAD WORK AHEAD (W20-1) or END ROAD WORK (G20-2) sign which falls within the limits of another traffic control zone shall be omitted or covered during the period when both projects are active.

**SIGNING DETAILS**

6A. The Advisory Speed (W13-1P) plaque shall be used when specified in the plan.

6B. 36" warning signs may be used when the approach speed limit is 40 mph or less.

**FLASHING WARNING LIGHTS**

7. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs and on the LANE CLOSED AHEAD (W20-5) signs are required whenever a night lane closure is necessary.

**DRUMS / CONES**

8A. Drum spacing shall be as follows:

a) Spacing along the closure shall be 40' center-to-center. b) Spacing along the approach taper shall be 10' center-to-center.

8B. Cones may be substituted for drums as follows:

a) Cones used for daytime traffic control shall have a minimum height of 28". b) Cones used for nighttime traffic control shall have a minimum height of 42". c) Use of cones at night shall be prohibited along tapers.

8C. Provisions shall be made to stabilize the cones and drums to prevent them from blowing over.

8D. A minimum of two drums shall be used to close the paved shoulder.

**(RESERVED FOR FUTURE USE)**

9A. (intentionally blank)

**AREA ILLUMINATION**

10A. Adequate area illumination of each flagger station shall be provided at night. Use of portable flood lighting is acceptable. Luminaires shall be located adjacent to each flagger station.

10B. To ensure the adequacy of floodlight placement and the elimination of glare, the Contractor and the Engineer shall drive through the worksite each night when the lighting is in place. Light placement and shielding shall be adjusted to the satisfaction of the Engineer.

**INTERSECTION / DRIVEWAY ACCESS**

11. Within the length of closure, provision shall be made to control traffic entering from intersecting streets and major drives as necessary to prevent wrong-way movements and to keep vehicles off of new pavement not ready for traffic. The Contractor shall:

a) Place across the closed lane, either three drums (cones) or barricades, and/or b) Provide an additional flagger at every public street intersection and major driveway.

Drums (cones) placed across the closed lane shall be located 25' beyond the projected pavement edges of the driveway or cross highway, as shown in Standard Construction Drawings (SCDs) MT-97.11 or MT-97.12. For barricades, see SCD MT-101.60.

Existing STOP signs shall be relocated as necessary to assure proper location for the traffic conditions.

The method of control shall be subject to the approval of the Engineer.

**SHADOW VEHICLE**

12A. The shadow vehicle shall be in place and unoccupied whenever workers are in the work area. This vehicle shall be removed from the pavement whenever workers are not in the work area.

12B. The shadow vehicle shall be equipped with a high-intensity yellow rotating, flashing, oscillating, or strobe light(s).

12C. The vehicle shall be equipped with a truck-mounted attenuator when called for in the plans.

12D. Other protective devices may be used in lieu of the shadow vehicle shown when approved by the Engineer.

**CHIP SEAL OPERATIONS**

13. For chip seal operations, additional signing shall be incorporated in the advanced warning area.

a) The LOOSE GRAVEL (W8-7) and FRESH TAR (W2-2) signs shall both be used in advance of the chip seal operation. b) Repeat the LOOSE GRAVEL sign with a 35 mph Advisory Speed (W13-1) plaque every half mile per CMS 422.09. c) The FRESH TAR and the LOOSE GRAVEL signs shall both be used for signing of side roads intersecting the work area.

**MAINTAINING TRAFFIC**

ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES FOR LOCAL TRAFFIC AND EMERGENCY VEHICLES. LOCAL ACCESS TO ABUTTING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. ACCESS TO ALL DRIVEWAYS SHALL ALSO BE MAINTAINED AT ALL TIMES.

PART WIDTH CONSTRUCTION, ONE LANE WIDTH, SHALL BE USED DURING THE PERFORMANCE OF PAVING OPERATIONS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY LOCAL ACCESS, VEHICULAR AND PEDESTRIAN, TO ALL ABUTTING PROPERTIES WITHIN THE PROJECT. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, BARRIERS, TEMPORARY PAVEMENT, LIGHTING, FLAGMEN, TEMPORARY GUARDRAIL, DETOUR AND CONSTRUCTION SIGNING AND OTHER TRAFFIC CONTROLS SO AS TO AVOID DAMAGE AND/OR INJURY TO AND ENSURE THE SAFETY OF VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION BOTH WITHIN AND OUTSIDE OF THE PROJECT LIMITS.

MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH ODOT ITEM 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. DETOUR ROUTES & SIGNAGE SHALL MEET THE APPROVAL OF THE CITY ENGINEER.

IN ORDER TO MAINTAIN LOCAL AND DRIVEWAY ACCESS, THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC COMPACTED SURFACE, TYPE A OR B IN ACCORDANCE WITH ODOT ITEM 410 LIMESTONE OR GRAVEL ONLY INCLUDING NECESSARY WATER AND CALCIUM CHLORIDE IN ACCORDANCE WITH ODOT ITEM 616 AS DIRECTED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR MAINTAINING TRAFFIC INCLUDING PROVIDING TRAFFIC COMPACTED SURFACES, OTHER TEMPORARY ROADWAYS, TRAFFIC CONTROL, AND ALL OTHER SAFEGUARDS. COST FOR MAINTAINING TRAFFIC INCLUDING ALL MATERIALS, LABOR AND EQUIPMENT FOR CONSTRUCTION, MAINTENANCE AND SUBSEQUENT REMOVAL SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS OF THE PROPOSAL.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

NOTICE OF CLOSURE SIGNS, FOR SEVERAL SIDE ROADS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN ON THE PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**PAVEMENT REPLACEMENT**

TRENCH EXCAVATION FOR PAVEMENT REPLACEMENT SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF REPLACEMENT SECTION WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

**LAW ENFORCEMENT OFFICER WITH PATROL CAR**

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC WITH THE CONCURRENCE OF THE PROJECT ENGINEER FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

WICKLIFFE POLICE DEPARTMENT  
28730 RIDGE ROAD  
WICKLIFFE, OH 44092  
(440) 943-1234

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR UNDER THE MAINTENANCE OF TRAFFIC LUMP SUM BID ITEM.

**CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE**

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC. A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE RW. THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. ALL EQUIPMENT AND STORED MATERIALS SHALL NOT CAUSE SIGNIFICANT SIGHT DISTANCE HAZARDS TO THE TRAVELING PUBLIC. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

**WINTER TRAFFIC LIMITATIONS**

TWO LANES IN EACH DIRECTION SHALL BE OPEN TO TRAFFIC.

**SUSPENSION OF WORK**

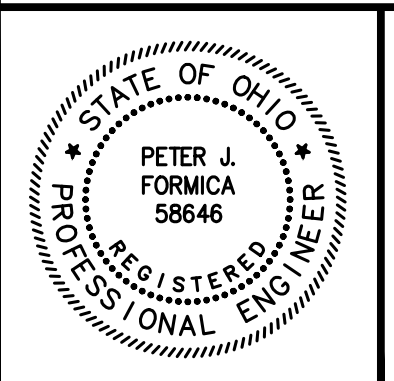
IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR MAINTENANCE OF TRAFFIC AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE MANUAL, THE ENGINEER MAY SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS. NO COMPENSATION WILL BE PAID FOR SUSPENSION OF WORK.

**METHOD OF PAYMENT**

PAYMENT FOR THE MAINTENANCE OF TRAFFIC ITEMS, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DETAILED IN THE PLANS.

**ALTERNATE MAINTENANCE OF TRAFFIC PLANS**

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATIVE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ENGINEER.



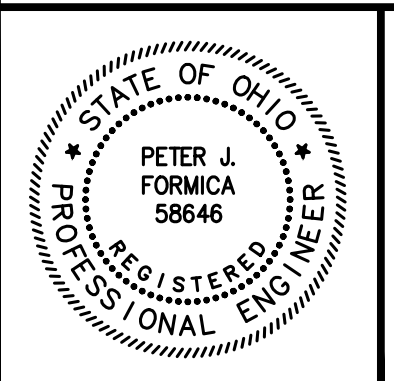
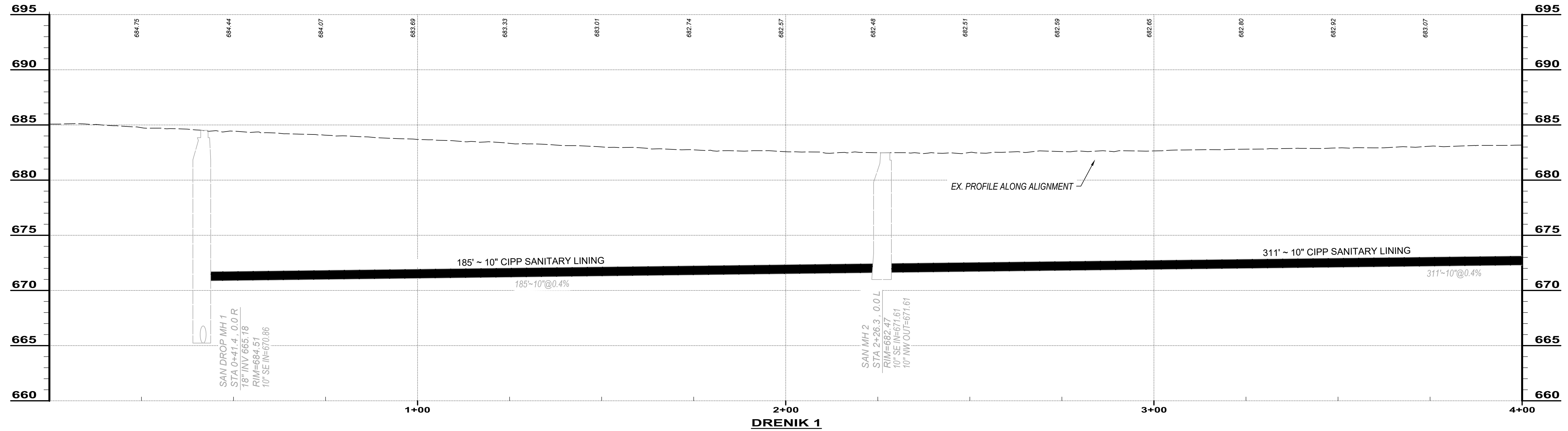
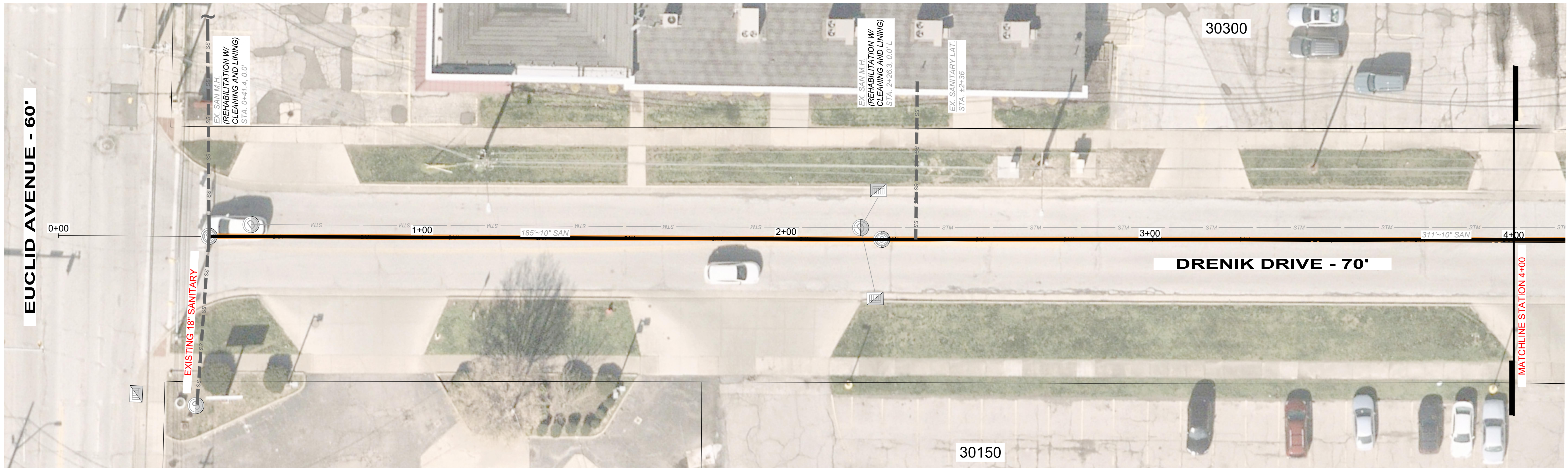
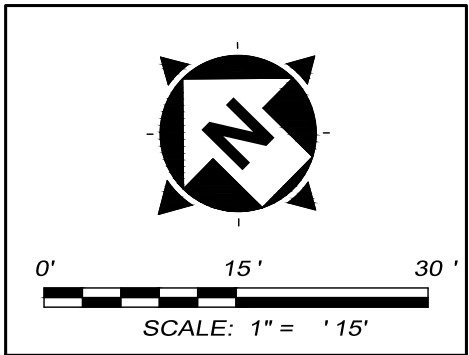
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
**LAKE COUNTY, OHIO**

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**MAINTENANCE OF TRAFFIC**

PROJECT NO.	<b>232271</b>
DISCIPLINE	<b>CIVIL</b>
SHEET NAME	<b>MOT-1</b>
SHEET	<b>3</b>
OF	<b>16</b>



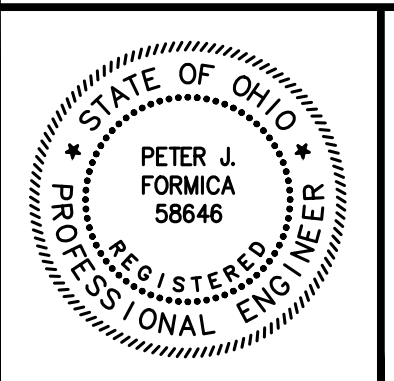
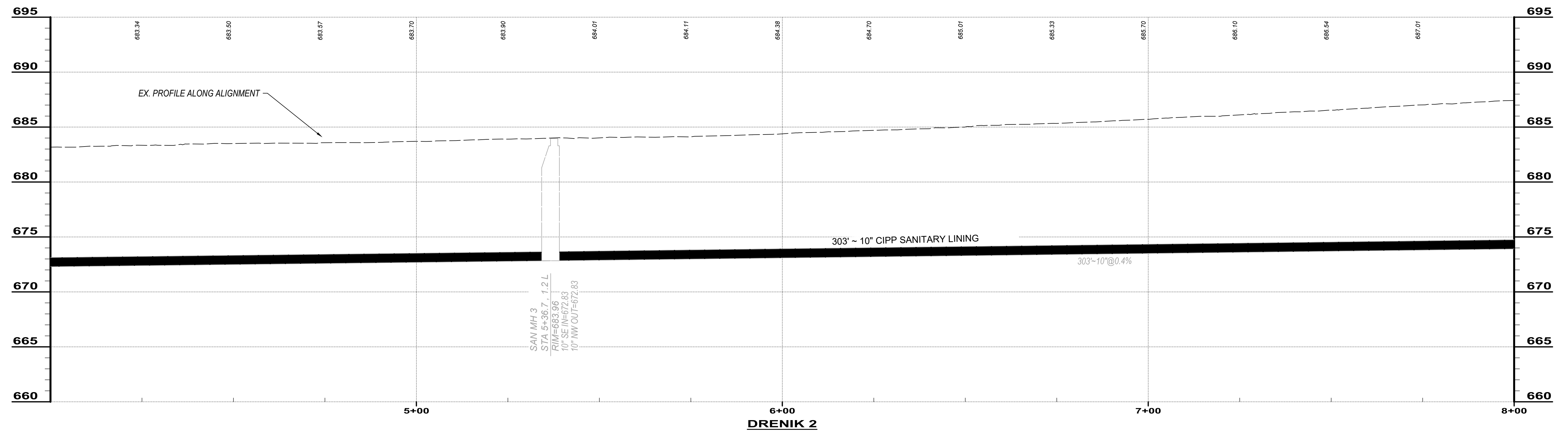
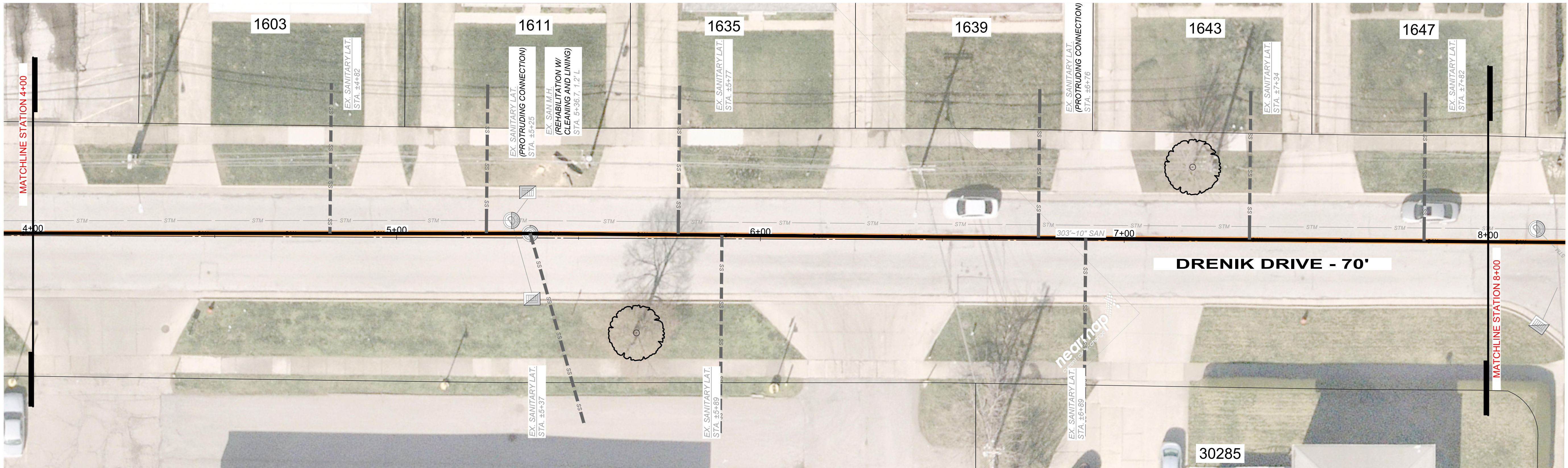
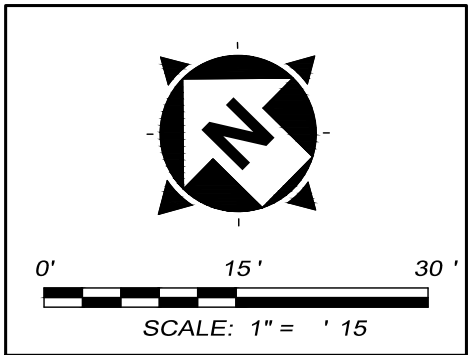
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
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SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENK DRIVE**  
**STA. 0+00 TO 4+00**

PROJECT NO.	<b>232271</b>
DISCIPLINE	<b>CIVIL</b>
SHEET NAME	<b>Drenik 1</b>
SHEET	OF
<b>4</b>	<b>16</b>



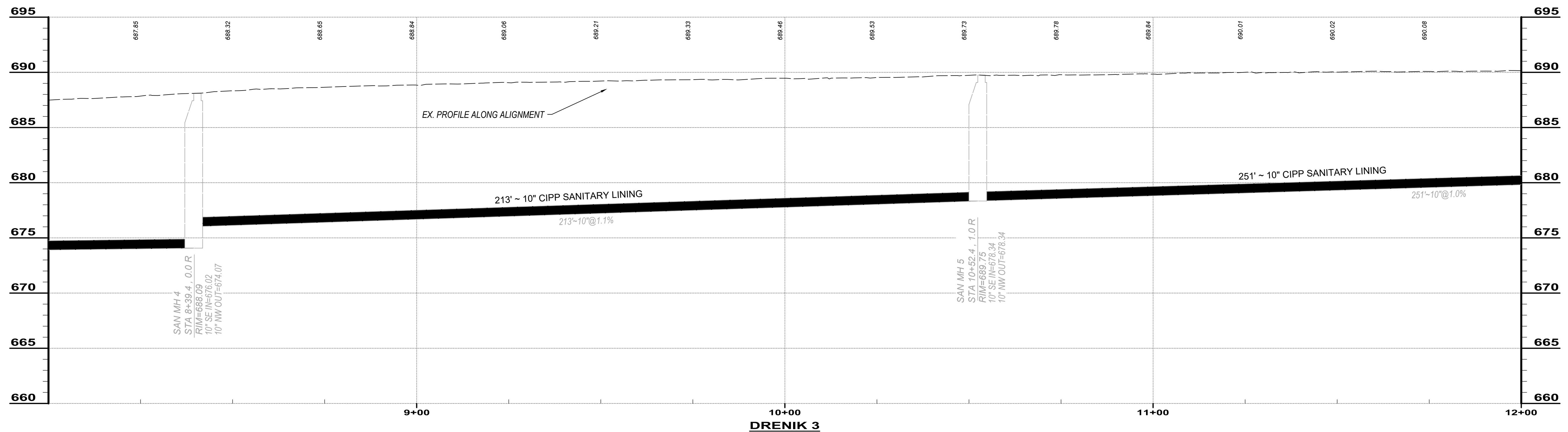
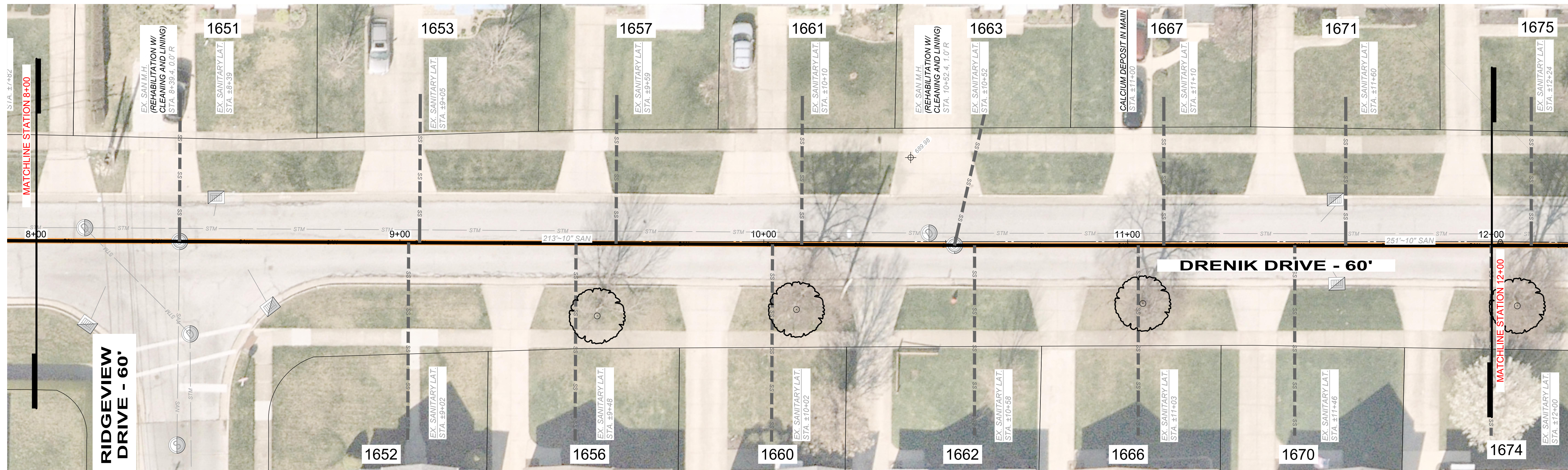
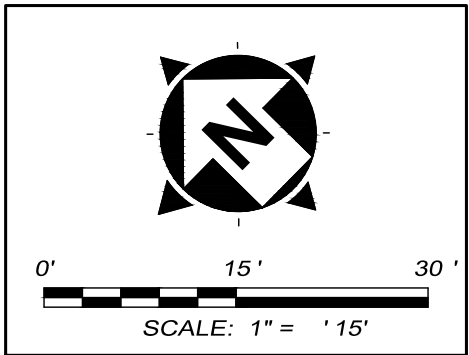
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENK DRIVE**  
**STA. 4+00 TO 8+00**

PROJECT NO.		<b>232271</b>
DISCIPLINE		<b>CIVIL</b>
SHEET NAME		<b>Drenk 2</b>
SHEET	OF	
<b>5</b>	<b>16</b>	



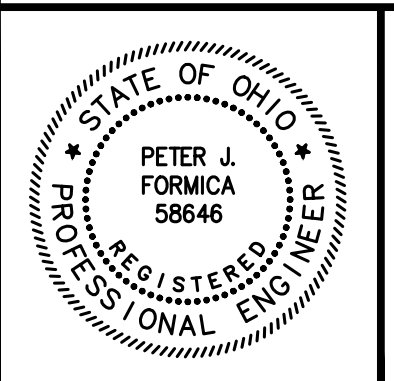
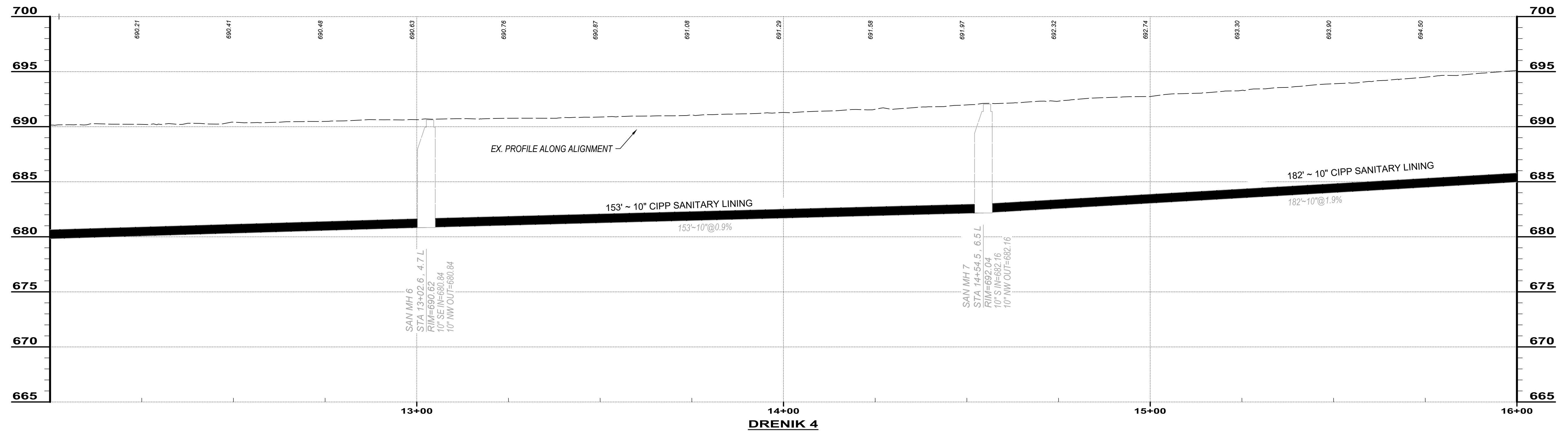
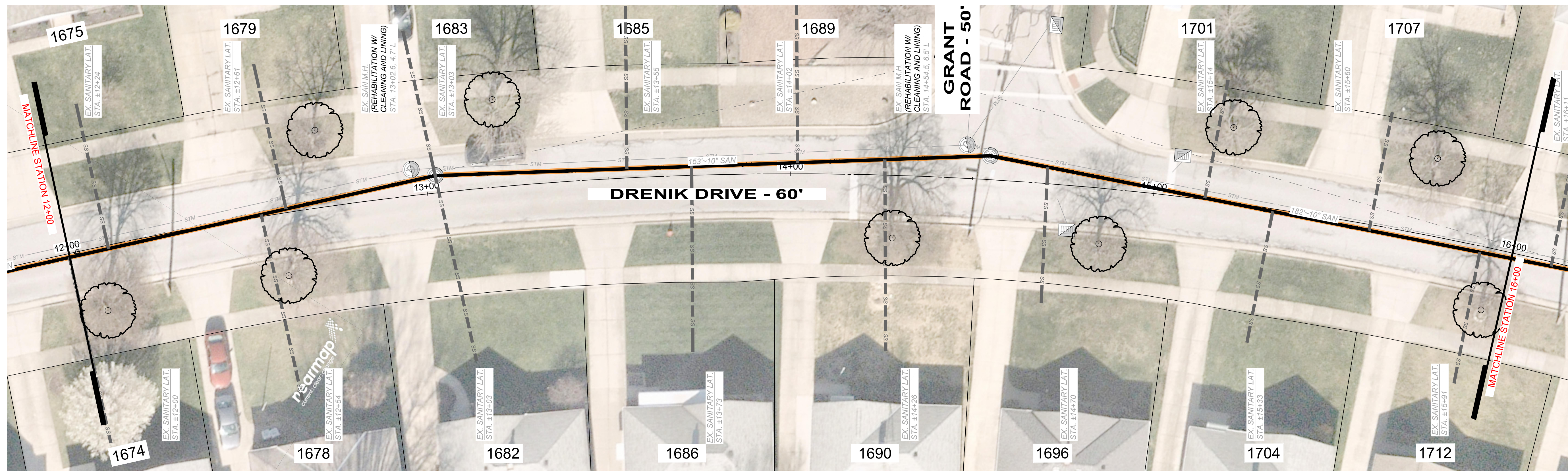
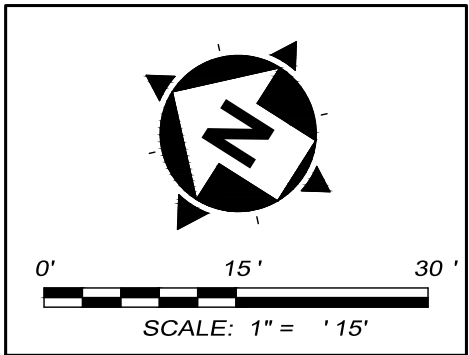
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**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENK DRIVE**  
**STA. 8+00 TO 12+00**

PROJECT NO.	<b>232271</b>
DISCIPLINE	<b>CIVIL</b>
SHEET NAME	<b>Drenk 3</b>
SHEET	<b>6</b>
OF	<b>16</b>



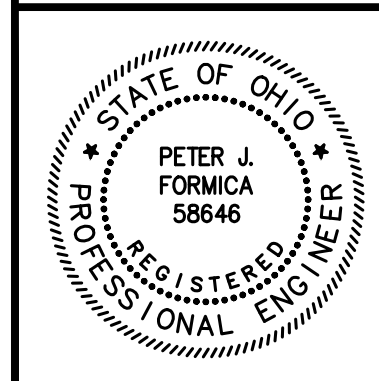
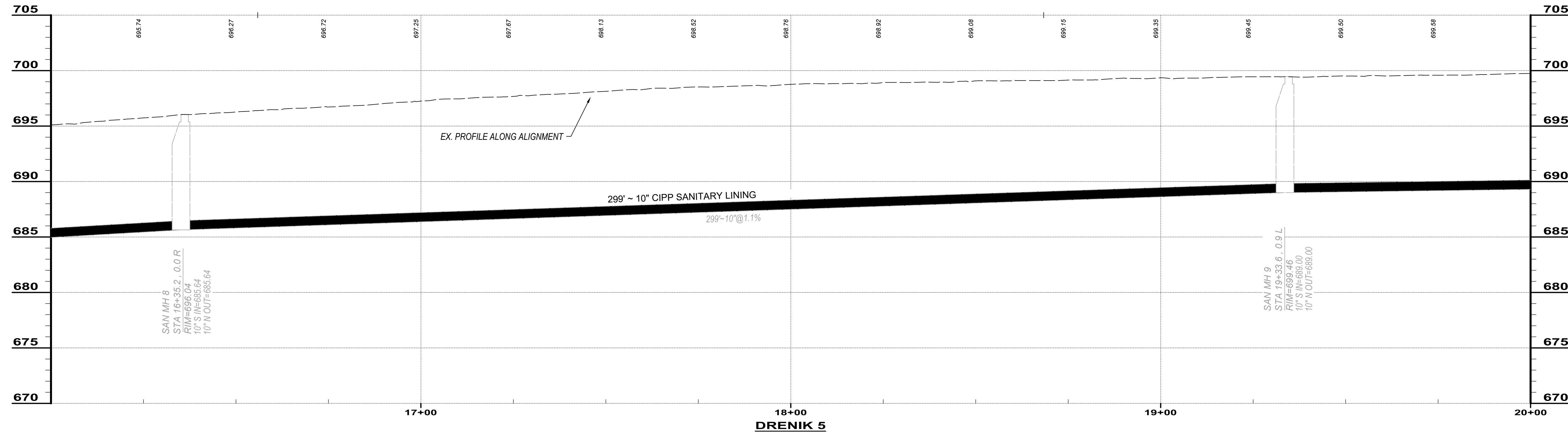
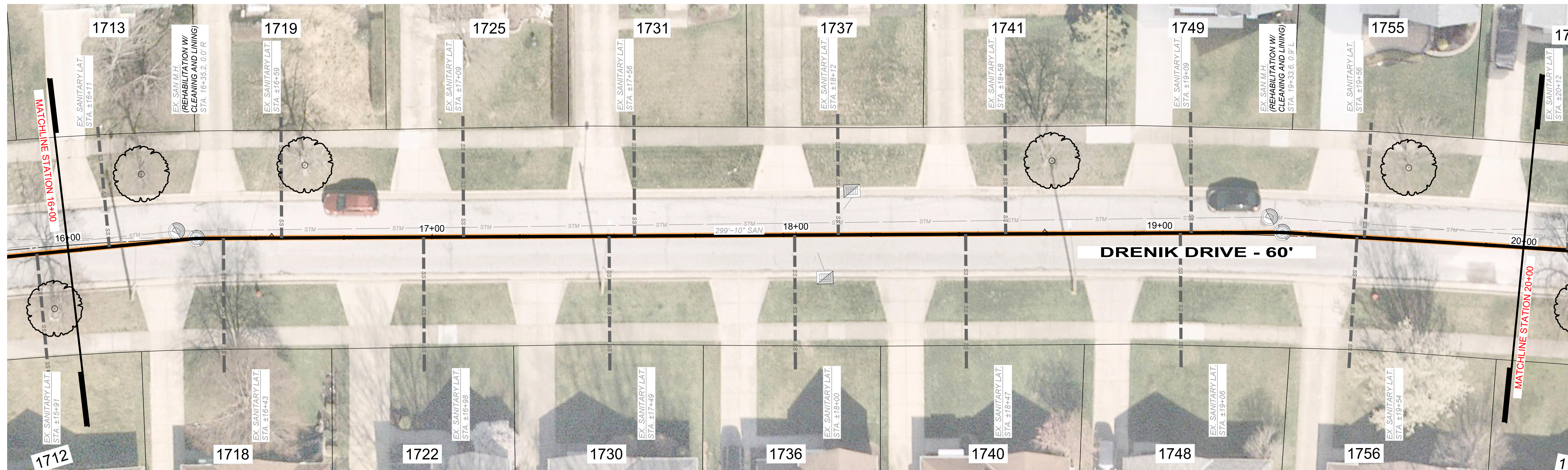
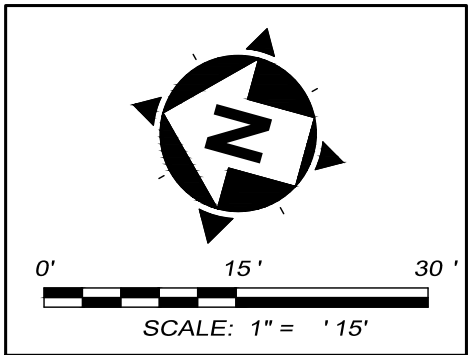
NO	REVISION	DATE

CITY OF WICKLIFFE  
**DRENIK DRIVE  
 SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR: REVIEW SET  
 ISSUE DATE: 2-1-24  
 SCALE: AS SHOWN  
 DESIGNED BY: PJF  
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**DRENIK DRIVE  
 STA. 12+00 TO 16+00**

PROJECT NO. <b>232271</b>	
DISCIPLINE <b>CIVIL</b>	
SHEET NAME <b>Drenik 4</b>	
SHEET <b>7</b>	OF <b>16</b>



NO	REVISION	DATE

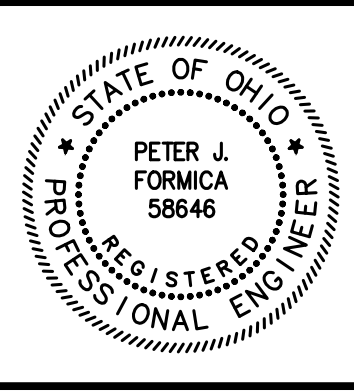
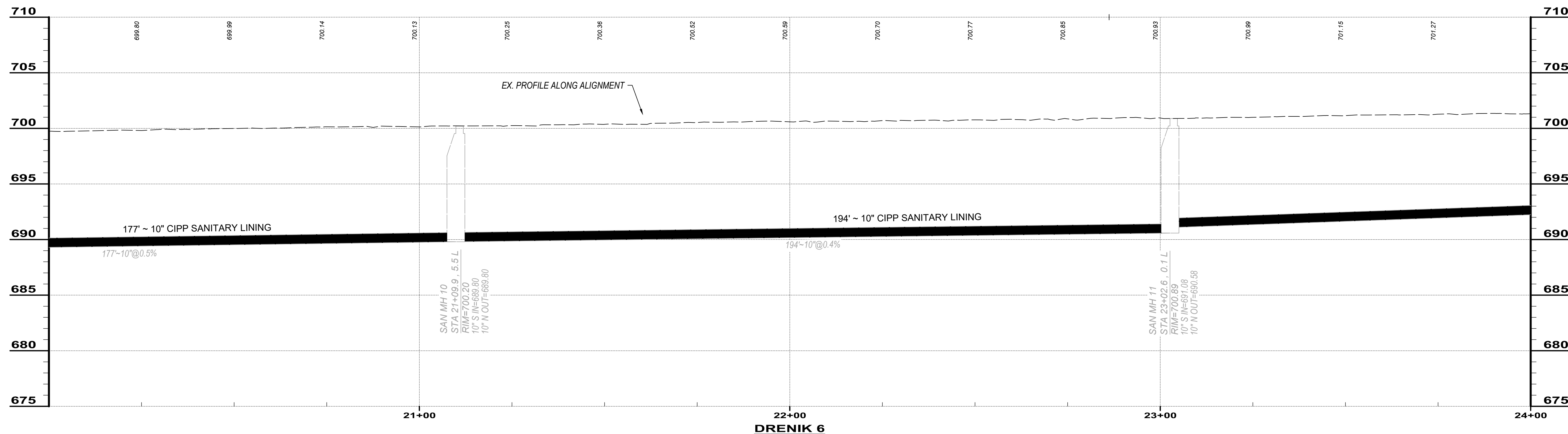
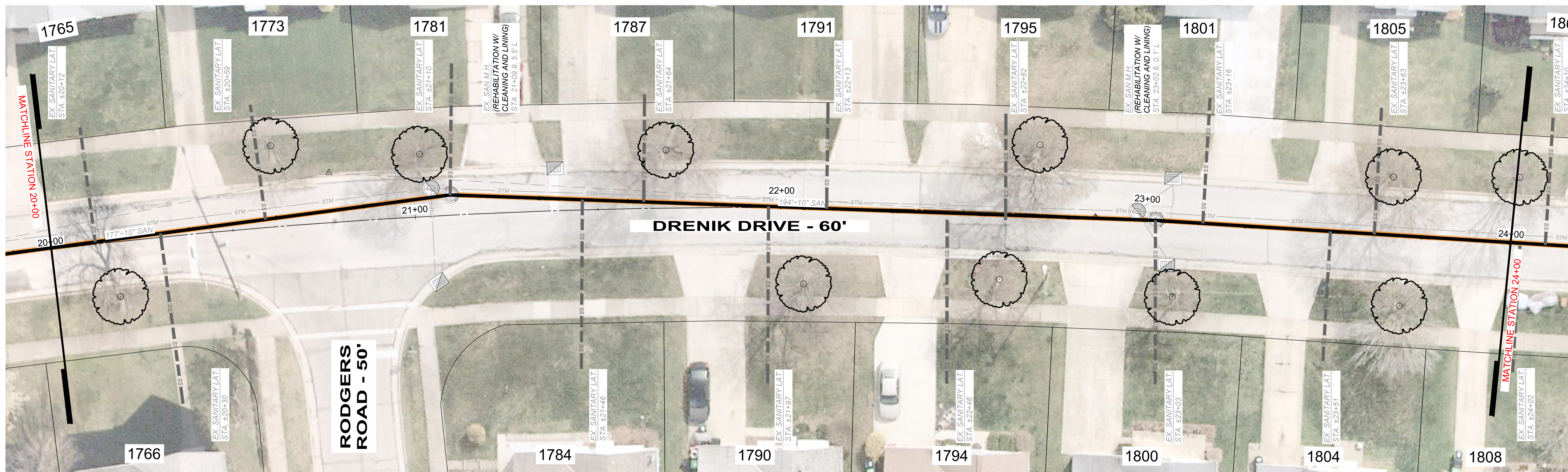
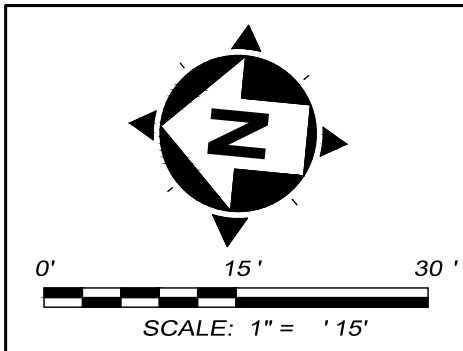
**CITY OF WICKLIFFE**  
**DRENİK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENİK DRIVE**  
**STA. 16+00 TO 20+00**

PROJECT NO.		<b>232271</b>
DISCIPLINE		<b>CIVIL</b>
SHEET NAME		<b>Drenik 5</b>
SHEET	OF	
<b>8</b>	<b>16</b>	





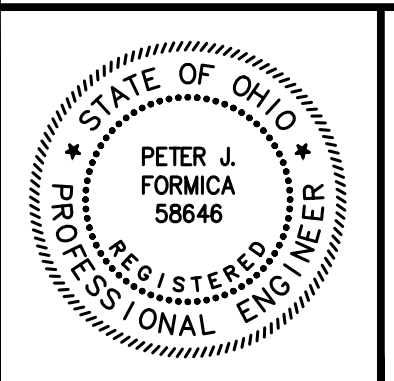
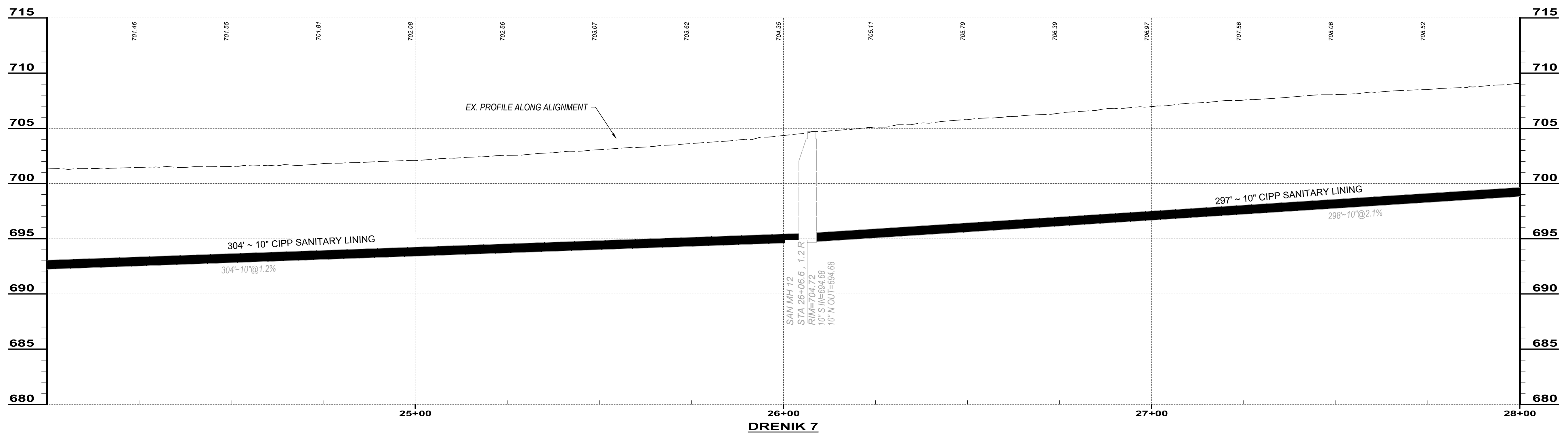
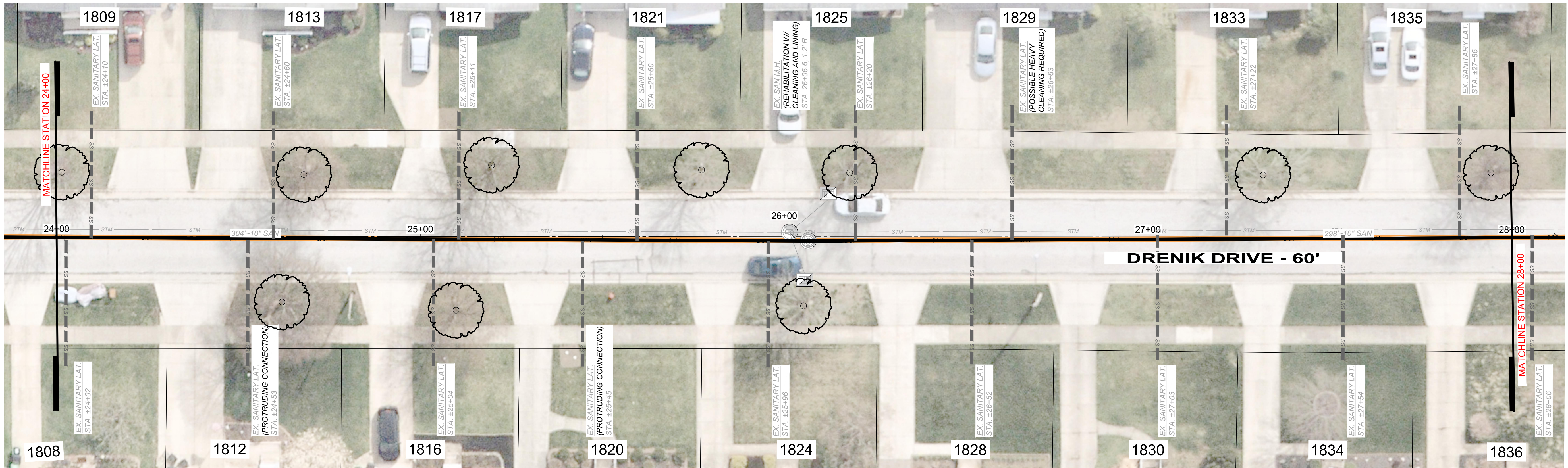
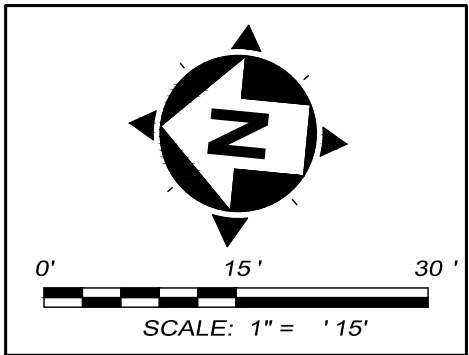
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENIK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR: REVIEW SET  
 ISSUE DATE: 2-1-24  
 SCALE: AS SHOWN  
 DESIGNED BY: PJF  
 DRAWN BY: PJF  
 CHECKED BY: PJF

**DRENIK DRIVE**  
**STA. 20+00 TO 24+00**

PROJECT NO.	
232271	
DISCIPLINE	
CIVIL	
SHEET NAME	
Drenik 6	
SHEET	OF
9	16



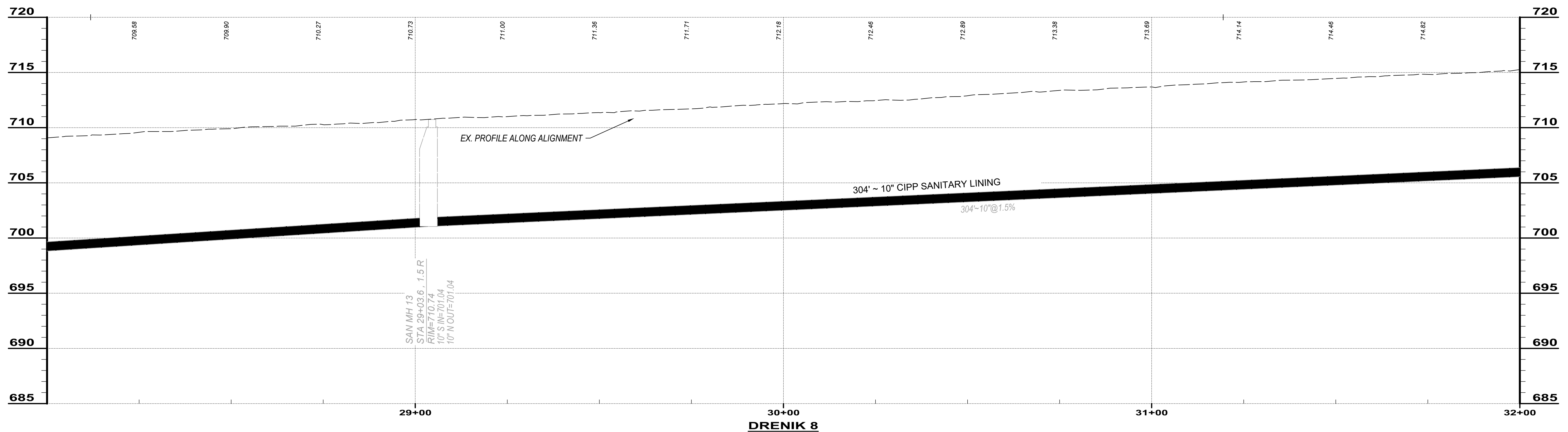
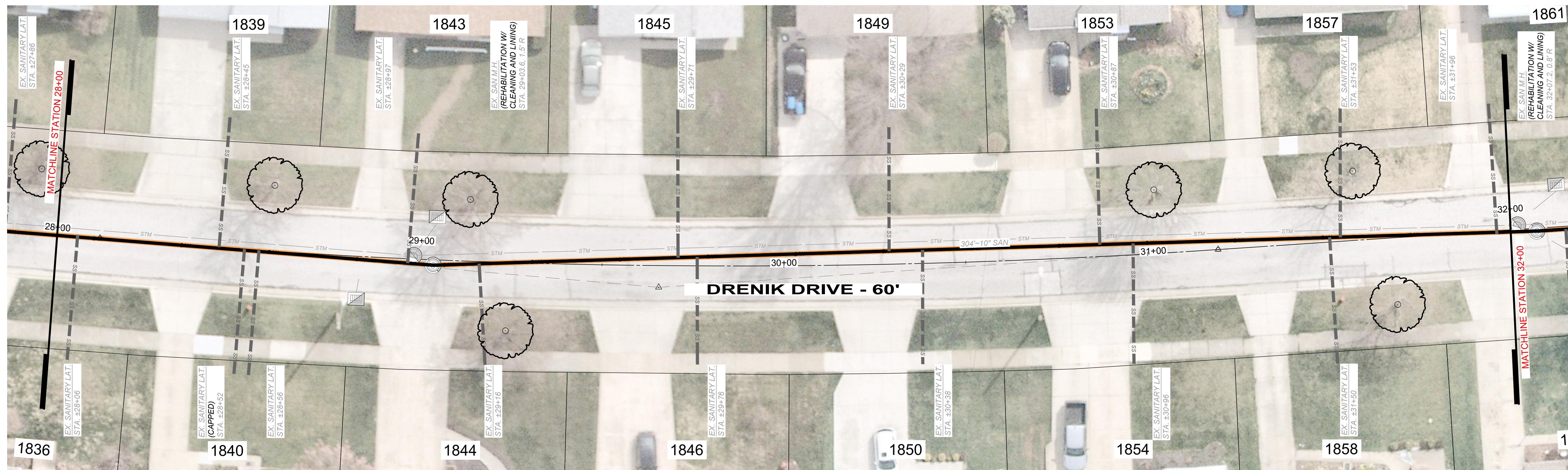
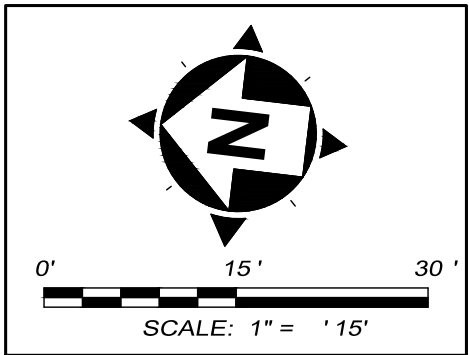
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENK DRIVE**  
**STA. 24+00 TO 28+00**

PROJECT NO.		<b>232271</b>
DISCIPLINE		<b>CIVIL</b>
SHEET NAME		<b>Drenik 7</b>
SHEET	OF	
<b>10</b>	<b>16</b>	



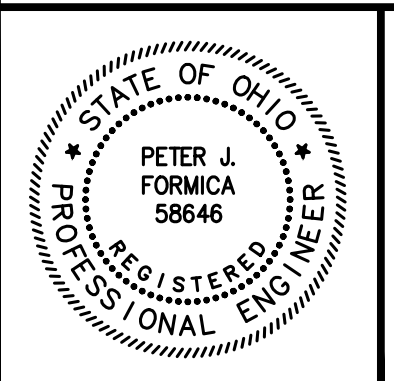
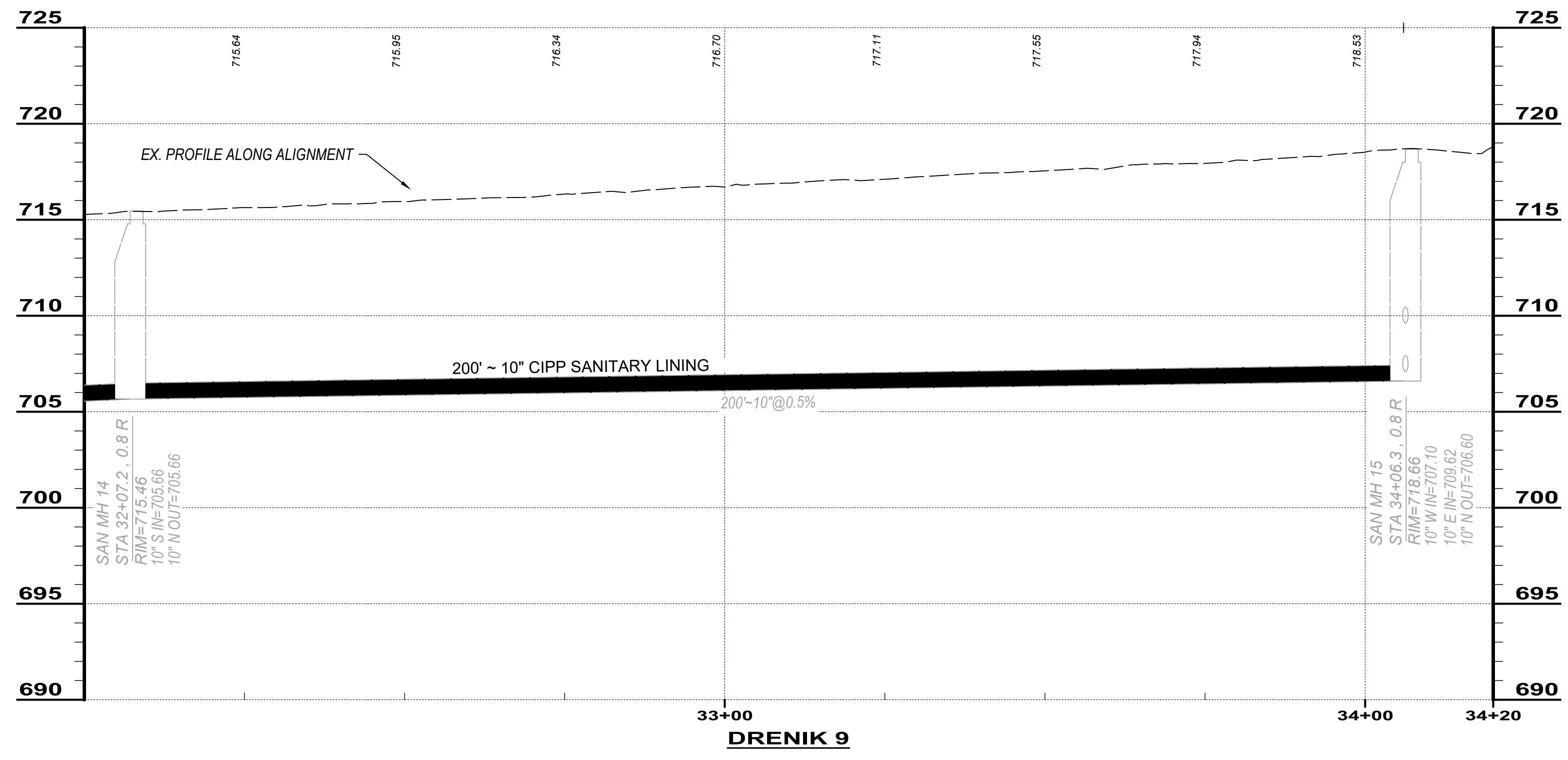
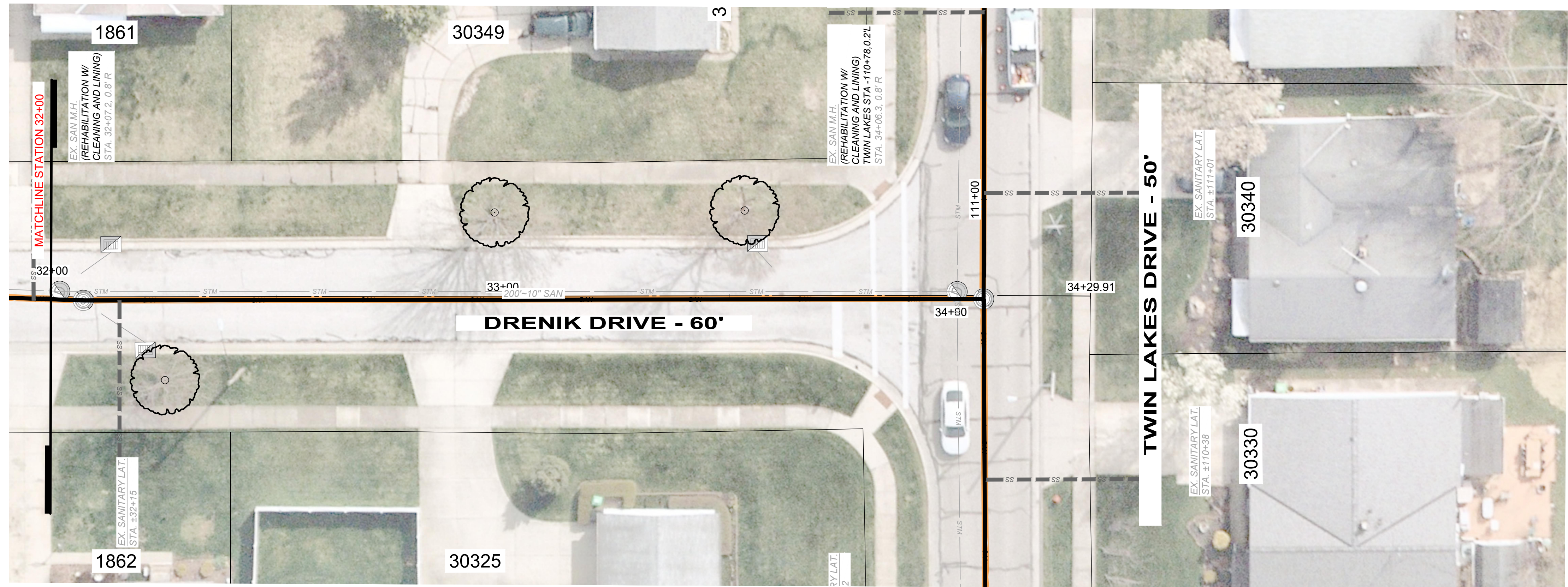
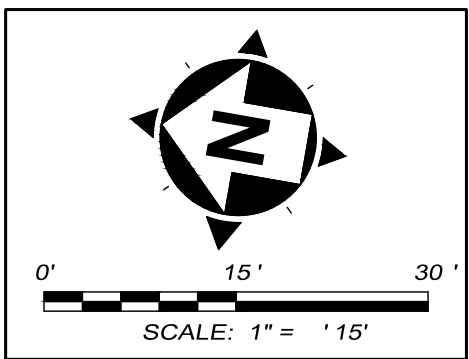
NO	REVISION	DATE

CITY OF WICKLIFFE  
**DRENIK DRIVE  
 SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR: REVIEW SET  
 ISSUE DATE: 2-1-24  
 SCALE: AS SHOWN  
 DESIGNED BY: PJF  
 DRAWN BY: PJF  
 CHECKED BY: PJF

**DRENIK DRIVE  
 STA. 28+00 TO 32+00**

PROJECT NO. <b>232271</b>	
DISCIPLINE <b>CIVIL</b>	
SHEET NAME <b>Drenik 8</b>	
SHEET <b>11</b>	OF <b>16</b>



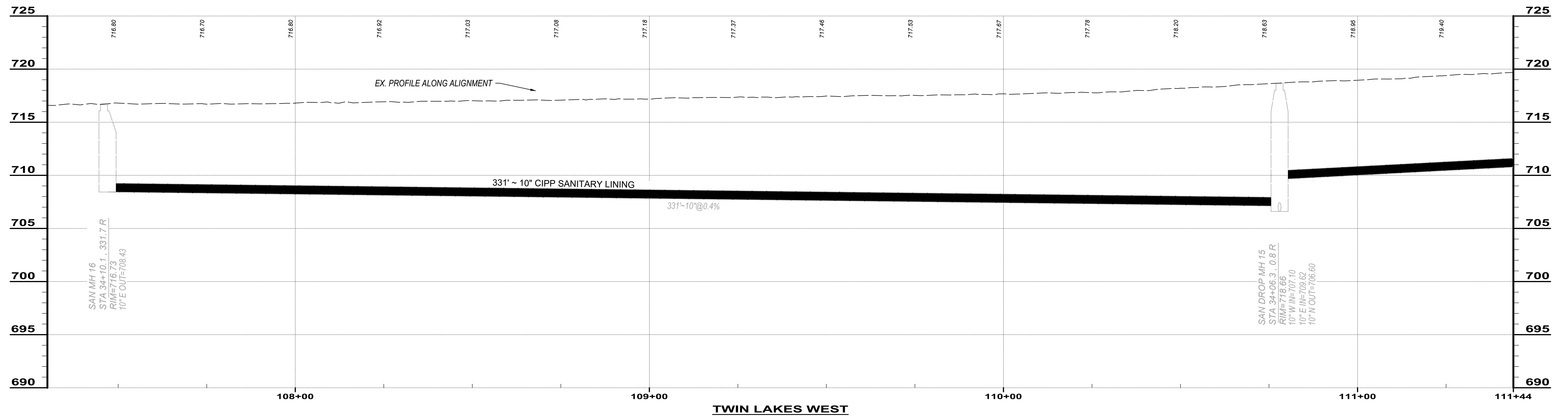
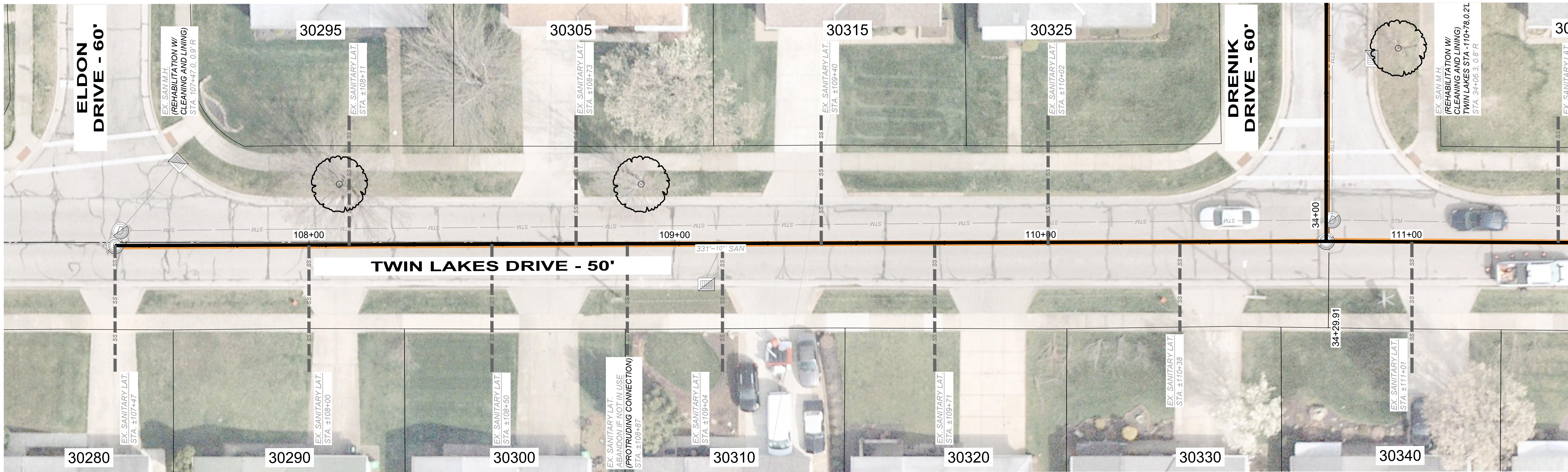
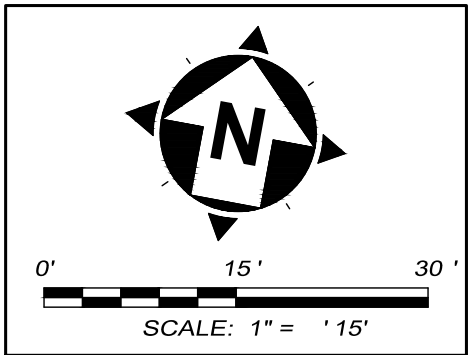
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CITY OF WICKLIFFE  
**DRENİK DRIVE  
 SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
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DRAWN BY:	PJF
CHECKED BY:	PJF

**DRENİK DRIVE  
 STA. 32+00 TO 34+30**

PROJECT NO. <b>232271</b>	
DISCIPLINE <b>CIVIL</b>	
SHEET NAME <b>Drenik 9</b>	
SHEET <b>12</b>	OF <b>16</b>



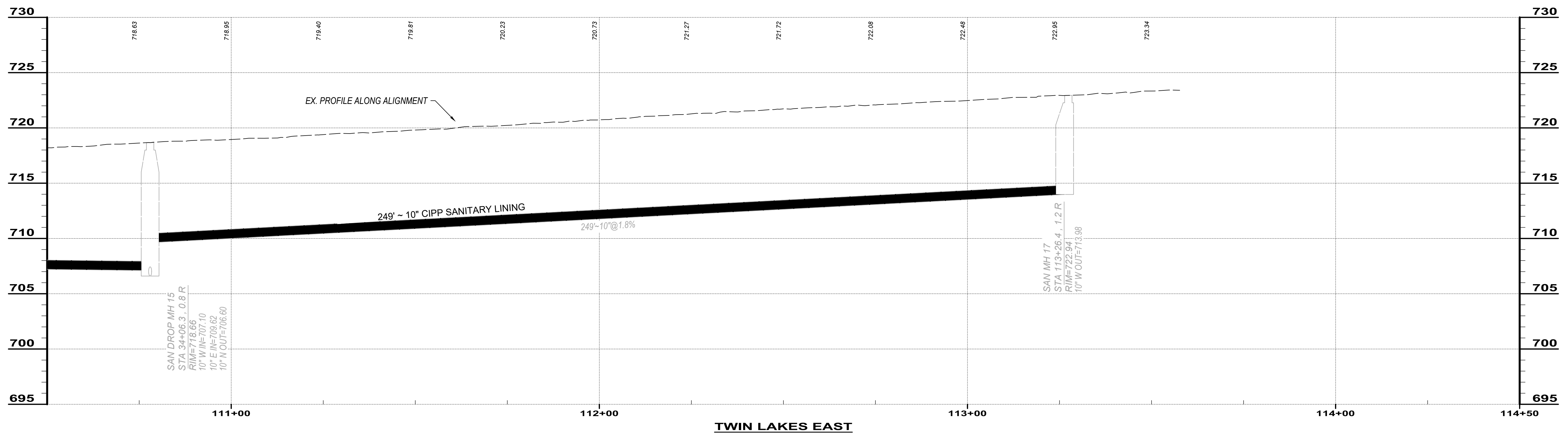
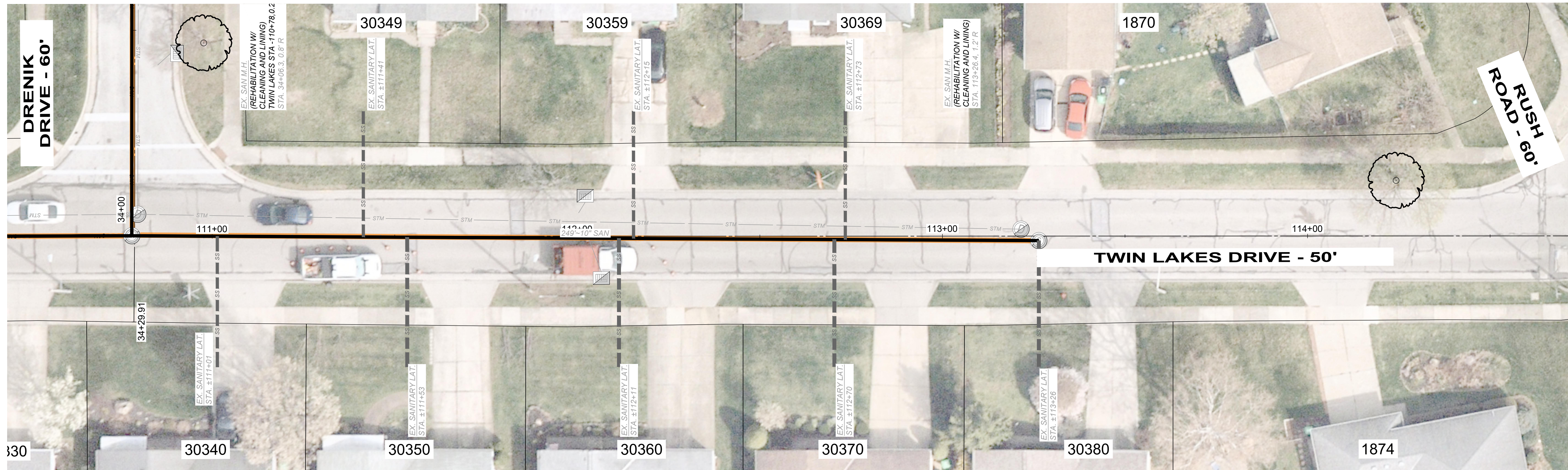
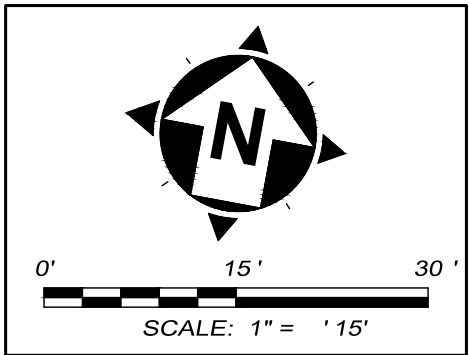
NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENK DRIVE**  
**SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

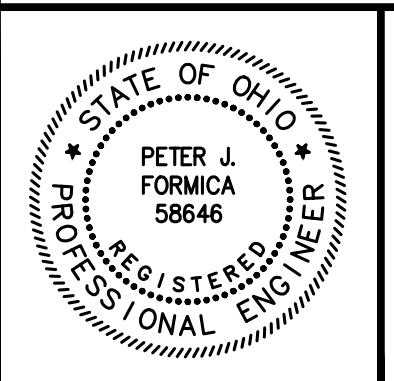
ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
DESIGNED BY:	PJF
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CHECKED BY:	PJF

**TWIN LAKES DRIVE**  
**WEST OF DRENK**

PROJECT NO.	232271
DISCIPLINE	CIVIL
SHEET NAME	Twin Lakes W
SHEET	13
OF	16



TWIN LAKES EAST



NO	REVISION	DATE

CITY OF WICKLIFFE  
**DRENK DRIVE  
 SANITARY SEWER LINING**  
 LAKE COUNTY, OHIO

ISSUED FOR:	REVIEW SET
ISSUE DATE:	2-1-24
SCALE:	AS SHOWN
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**TWIN LAKES DRIVE  
 EAST OF DRENK**

PROJECT NO.		<b>232271</b>
DISCIPLINE		<b>CIVIL</b>
SHEET NAME		<b>Twin Lakes E</b>
SHEET	OF	
<b>14</b>	<b>16</b>	



**RESTORATION/SEDIMENTATION AND EROSION CONTROL**

- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND OTHER AREAS AS SHOWN ON PLANS SHALL BE PROPERLY RESTORED WITH 4" OF TOPSOIL, SEEDING AND MULCHING PER THE SPECIFICATIONS.
- IN ALL DISTURBED AREAS THE CONTOURS WILL BE RESTORED IN A MANNER THAT MAINTAINS EXISTING DRAINAGE PATTERNS. FOLLOWED BY SEEDING AND MULCHING. IF, DUE TO WEATHER, FINAL GRADING CANNOT BE ACCOMPLISHED IMMEDIATELY, TEMPORARY SEEDING & MULCHING, WITHIN SEVEN DAYS, WILL BE USED UNTIL FINAL RESTORATION CAN OCCUR.
- SILT FENCING SHALL BE EXTRA STRENGTH SYNTHETIC FILTER FABRIC HAVING A MINIMUM FLOW RATE OF 0.3 GA/SQ.FT/MINUTE AND SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F. TO 120°F. SEE STANDARD DETAIL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING INSPECTIONS OF ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER ALL STORMS THAT PRODUCE MORE THAN ONE-HALF (1/2") INCH TOTAL RAINFALL. ANY NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY. THE CONTRACTOR SHALL DOCUMENT ALL INSPECTIONS AND ANY REPAIRS THAT ARE DONE TO MAINTAIN EFFICIENCY.
- CONTRACTOR SHALL REMOVE DAILY ALL MUD, SOIL AND DEBRIS THAT MAY BE TRACKED ONTO EXISTING STREETS, DRIVES OR WALKS BY HIS EQUIPMENT OR THAT OF SUBCONTRACTORS OR SUPPLIERS.

**NOTES:**

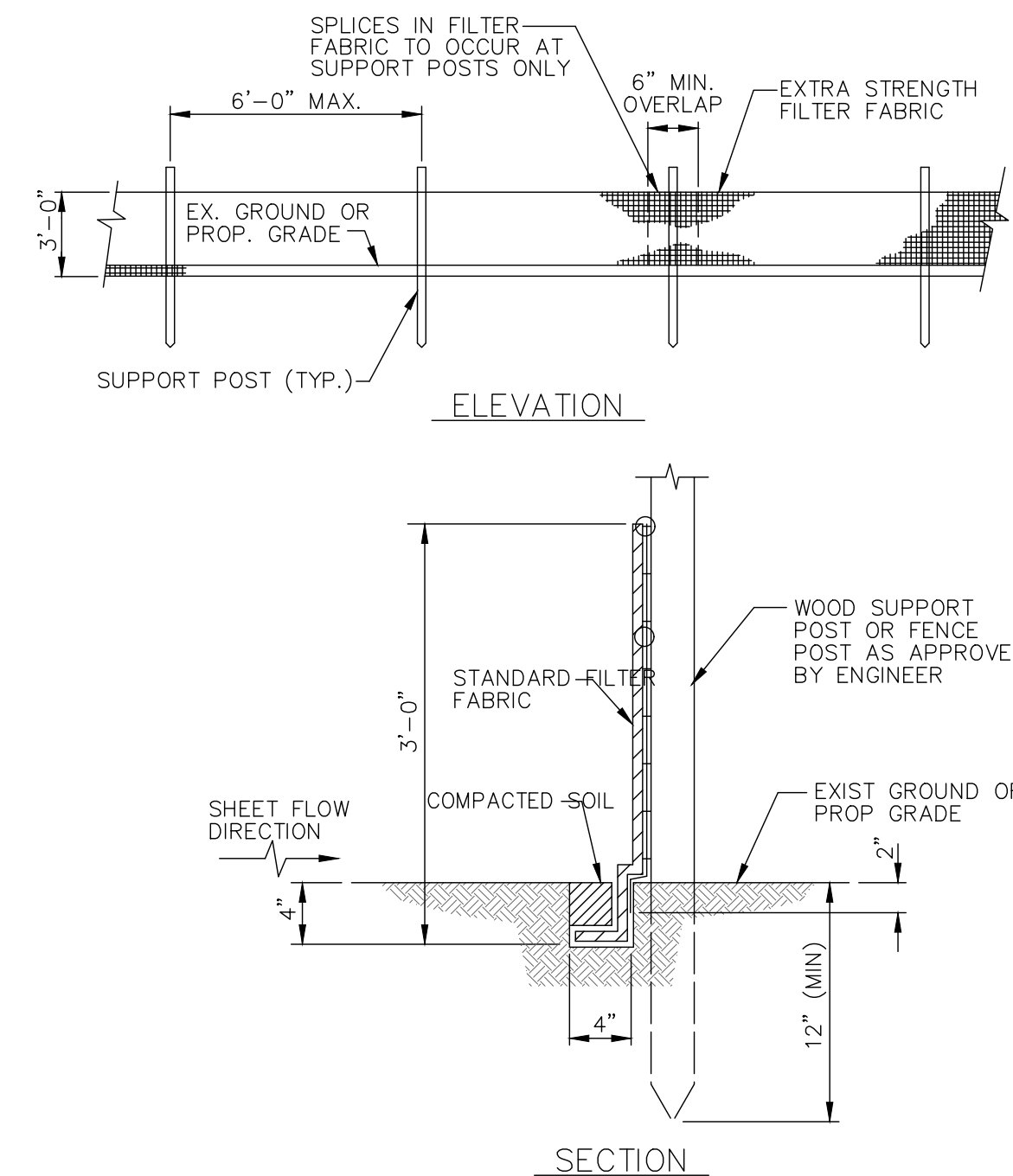
- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
- WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH-DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
- SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
- MAINTENANCE - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE:
  - THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
  - ACCUMULATED SEDIMENT SHALL BE REMOVED, OR
  - OTHER PRACTICES SHALL BE INSTALLED.

- SILT FENCE MATERIALS
  - FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2 X 2 INCH HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FEET.

B. SILT FENCE FABRIC (SEE CHART BELOW):

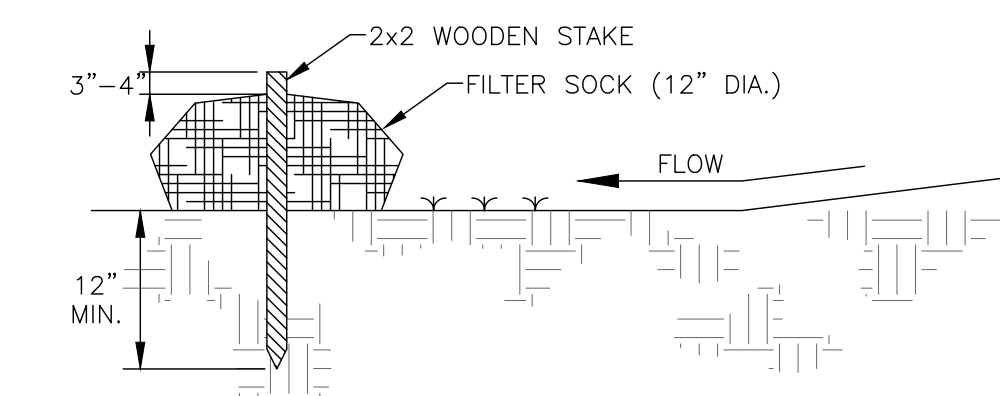
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MINIMUM	ASTM D 1682
MULLEN BURST STRENGTH	190 PSI MINIMUM	ASTM D 3786
SLURRY FLOW RATE	0.3 GAL./MIN./F2 MAXIMUM	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MINIMUM	ASTM-G-26

**SILT FENCE  
DETAIL**  
NOT TO SCALE



**EROSION AND DUST CONTROL**

- SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY HYDRO SEEDING AND MULCHING IMMEDIATELY UPON COMPLETION OF EXCAVATION OR FILL AND FINISH GRADING IN ACCORDANCE WITH ODOT ITEM 659 OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BEGIN THE RESTORATION PROCESS AS SOON AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZING EACH DISTURBED AREA WITH PERENNIAL VEGETATION INSTALLED ACCORDING TO SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL REMOVE DAILY ALL MUD, SOIL AND DEBRIS THAT MAY BE TRACKED ONTO EXISTING STREETS OR DRIVES BY HIS EQUIPMENT OR THAT OF SUBCONTRACTORS OR SUPPLIERS.
- ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOOD PLAIN OR OTHER ENVIRONMENTALLY SENSITIVE AREA.
- EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY WHEN NEEDED OR ORDERED BY THE OWNER WATER OR CALCIUM CHLORIDE PER ODOT 616 FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE ORIGINATING FROM HIS CONSTRUCTION ACTIVITIES. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL. THE COST OF DUST CONTROL SHALL BE INCLUDED IN THE UNIT BID PRICES FOR ALL ITEMS OF THE PROPOSAL.
- OTHER EROSION AND SEDIMENT CONTROL PRACTICES SHALL MINIMIZE SEDIMENT LADEN WATER ENTERING ACTIVE STORM DRAIN SYSTEMS, UNLESS THE STORM DRAIN SYSTEM DRAINS TO A SEDIMENT POND. INLET PROTECTION IS MANDATORY WHERE SEDIMENT SETTLING PONDS WILL NOT BE IMPLEMENTED.



**MATERIALS:**

COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".

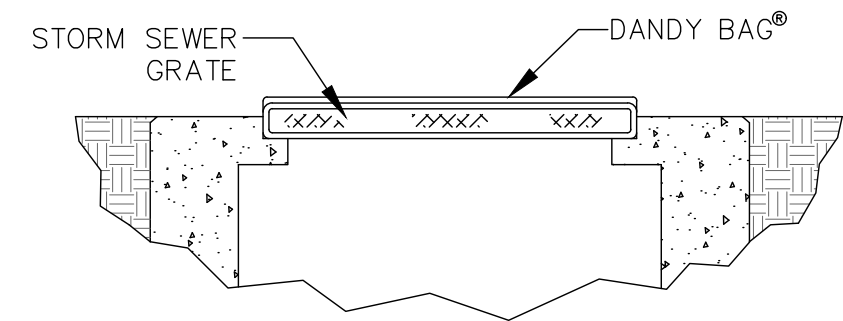
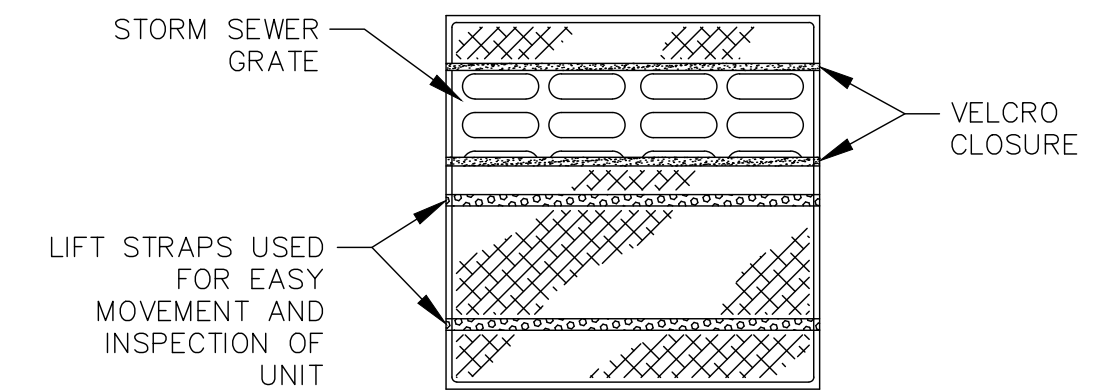
**INSTALLATION:**

- FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES; GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1; ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
- FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
- FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

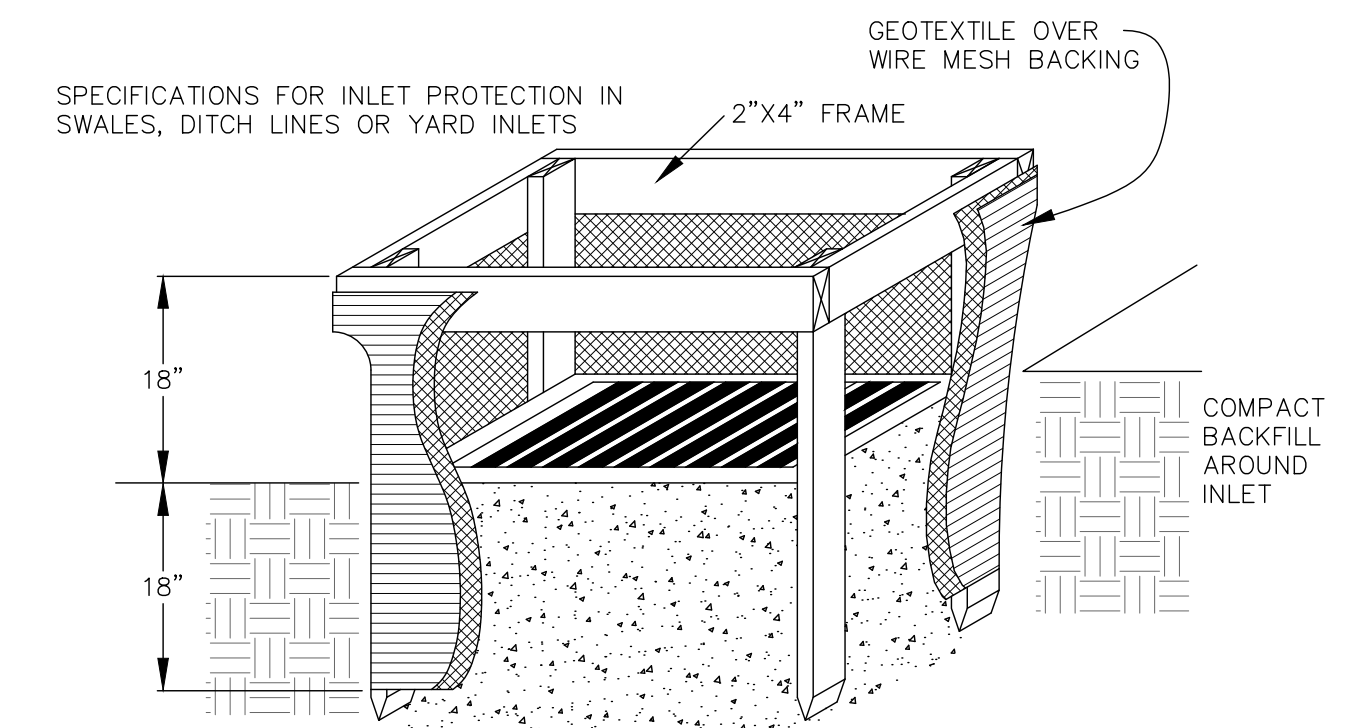
**MAINTENANCE:**

- ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
- REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
- WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
- REMOVAL - FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

**FILTER SOCK  
(SILT FENCE ALTERNATE)**  
NO SCALE



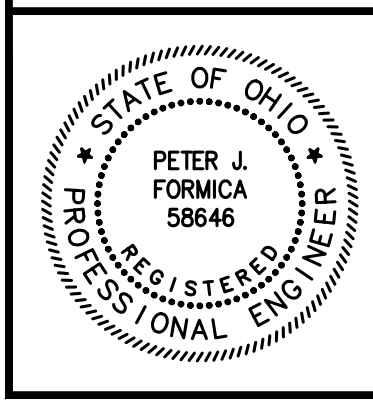
**DANDY BAG  
(INLET PROTECTION ALTERNATE)**  
NOT TO SCALE



**SPECIFICATIONS FOR INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS**

- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
- THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
- THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-BY-4-INCH CONSTRUCTION-GRADE LUMBER. THE 2-BY-4-INCH POSTS SHALL BE DRIVEN 1 FOOT INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-BY-4-INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
- WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
- GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
- BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
- A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

**INLET PROTECTION**  
NOT TO SCALE



NO	REVISION	DATE

**CITY OF WICKLIFFE**  
**DRENIK DRIVE  
SANITARY SEWER LINING**  
**LAKE COUNTY, OHIO**

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**EROSION AND SEDIMENT  
CONTROL**

PROJECT NO.	<b>232271</b>
DISCIPLINE	<b>CIVIL</b>
SHEET NAME	<b>ESC-1</b>
SHEET	OF
<b>16</b>	<b>16</b>