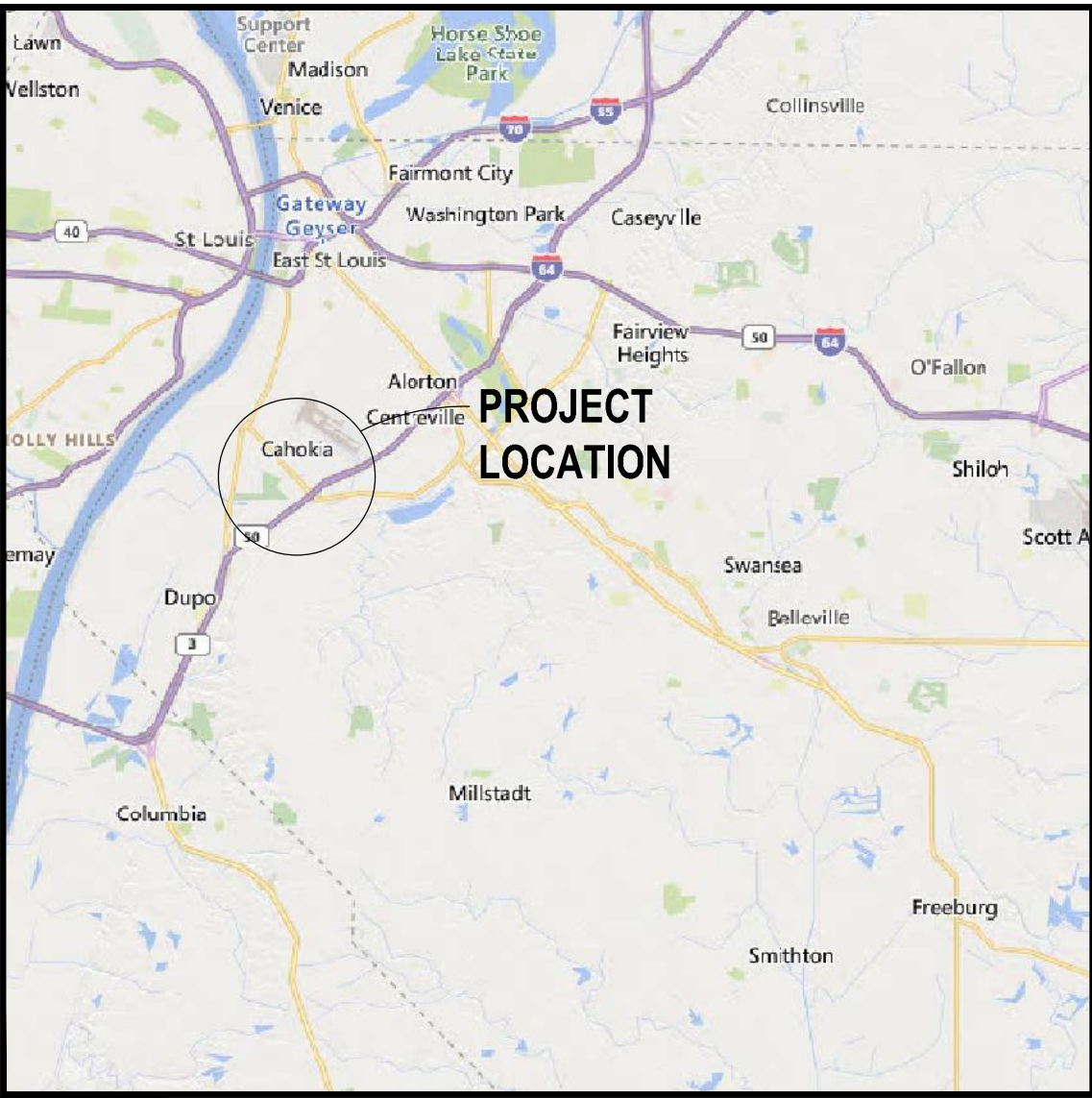


SEWER REPAIRS

CITY OF CAHOKIA HEIGHTS

ST. CLAIR COUNTY, ILLINOIS



UTILITIES

WATER - CITY OF CAHOKIA HEIGHTS	618-332-1222
SEWER - CITY OF CAHOKIA HEIGHTS	618-332-1222
ELECTRIC - AMEREN ILLINOIS	800-232-2477
GAS - AMEREN ILLINOIS	800-232-2477
TELEPHONE - SPECTRUM	888-959-8101
CABLE TV - SPECTRUM	888-959-8101
JULIE	800-982-0123

OWNER'S NAME

CITY OF CAHOKIA HEIGHTS
THE CITY OF CAHOKIA HEIGHTS
CITY HALL
103 MAIN STREET
CAHOKIA, ILLINOIS 62206
(618) 332-4258

ENGINEER / LAND SURVEYOR

THOUVENOT, WADE & MOERCHEN, INC.
4940 OLD COLLINSVILLE ROAD
SWANSEA, ILLINOIS 62226
(618) 624-4488
CZURLIENE@TWM-INC.COM



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

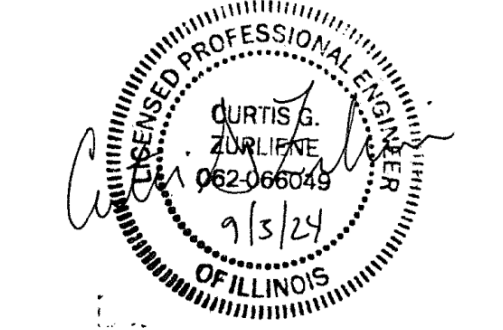
ILLINOIS	SWANSEA COLUMBIA GLEN CARBON PEORIA
MISSOURI	ST. CHARLES ST. LOUIS COLUMBIA
TENNESSEE	NASHVILLE CHATTANOOGA

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS

CITY OF CAHOKIA HEIGHTS

ST. CLAIR COUNTY, ILLINOIS

TITLE:

COVER SHEET

C-1

PROJECT CRITERIA

PRIOR TO COMMENCEMENT OF ANY WORK, OR ORDERING ANY MATERIALS, THE CONTRACTOR SHALL REVIEW ALL PLANS, SPECIFICATIONS, AND THE PROJECT SITE(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATION TO THESE PLANS OR OF ANY FIELD CONFLICTS.

SHOULD IT APPEAR THAT THE WORK TO BE PERFORMED OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY PRIOR TO COMMENCING WORK.

THESE PLANS AND SPECIFICATIONS ARE SUBJECT TO MODIFICATIONS DURING CONSTRUCTION WHEN CONDITIONS DEVELOP THAT WERE NOT APPARENT DURING THE DESIGN OF THE PLANS AND SPECIFICATIONS. ALL MODIFICATIONS MUST BE APPROVED BY ALL PERTINENT AGENCIES HAVING JURISDICTION OVER THIS PROJECT PRIOR TO CONSTRUCTION AN/OR IMPLEMENTATION OF PROPOSED CHANGES.

IN THE EVENT OF ANY DISCREPANCY BETWEEN ANY DRAWING OR ANY DRAWING AND SPECIFICATION AND FIGURES WRITTEN THEREON, THE CONTRACTOR SHALL NOTIFY ENGINEER FOR WRITTEN CLARIFICATION OF THE DISCREPANCY PRIOR TO COMMENCING THE WORK IN QUESTION. ONLY THOSE DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE UTILIZED FOR DETERMINATION OF LOCATION AND SIZES OF PROPOSED IMPROVEMENTS. DO NOT SCALE DRAWINGS.

CONTRACTOR SAFETY RESPONSIBILITIES

THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PROJECT SITE(S) CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL, OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

TWM, INC. SHALL NOT BE RESPONSIBLE FOR OR HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES IN CONNECTION WITH THE WORK.

CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING AND INSTALLING ANY AND ALL TRAFFIC BARRICADES, MARKERS, SIGNS, FLAGMEN, TRAFFIC POLICE, AND/OR OTHER FACILITIES AS MAY BE REQUIRED BY THE VARIOUS JURISDICTIONS HAVING AUTHORITY OVER THIS PROJECT TO PROTECT THE GENERAL PUBLIC. SIGNS AND PROTECTIVE DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO NOTIFY THE STATE AND LOCAL POLICE, EMERGENCY SERVICE AGENCIES, AMBULANCE SERVICES, AND FIRE DEPARTMENTS OF ANY PROPOSED TRAFFIC DIVERSIONS.

UTILITIES

ANY RELOCATION OF PUBLIC OR PRIVATE UTILITIES SHALL BE UNDERTAKEN IN ACCORDANCE WITH ALL REQUIREMENTS OF THE UTILITY COMPANY AND WITH REGARD TO THE REQUIRED FEES, BONDS, PERMITS, AGREEMENTS, WORKING CONDITIONS, SAFETY CERTIFICATIONS, ETC. OF SAID COMPANY OR JURISDICTION. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND JURISDICTIONS A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO ALLOW THE UTILITIES TO MARK THEIR SYSTEMS OR TO ALLOW THE PERTINENT JURISDICTIONS TIME TO COORDINATE THEIR STAFF, MATERIALS, AND EQUIPMENT TO CONDUCT INSPECTION.

ALL UTILITIES INCLUDING BUT NOT LIMITED TO FIRE HYDRANTS, VALVE PIT COVERS, VALVE BOXES, METER VAULTS, CURB STOP BOXES, FIRE OR POLICE CALL BOXES, TRAFFIC CONTROL SIGNALS OR OTHER UTILITY'S APPURTENANCES SHALL BE UN-OBSTRUCTED AND ACCESSIBLE DURING THE CONSTRUCTION PERIOD.

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING OR INSTALLED UTILITIES OR STRUCTURES DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY OR JURISDICTION TO ENSURE APPROPRIATE REPAIR IS MADE IN ACCORDANCE WITH THE UTILITY OR JURISDICTIONS REQUIREMENTS. CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT EXISTING UTILITIES.

UTILITIES AND APPURTENANCES TO REMAIN IN THEIR PRESENT LOCATION SHALL BE ADJUSTED TO GRADE.

UTILITY DISCLAIMER

THE TYPE, SIZE, AND LOCATION OF UTILITIES AS DELINEATED ON THESE DRAWINGS AND/OR CIVIL ENGINEERING DESIGN DOCUMENTS HAVE BEEN PLOTTED BY REVIEW OF AVAILABLE "AS-BUILT" OR RECORD DRAWINGS, FIELD SURVEY OF J.U.L.I.E. MARKED UTILITIES, OR FIELD SURVEY OF ABOVE-GROUND SURFACE UTILITY FEATURES. THE OWNER AND ENGINEER HAVE NOT UNDERTAKEN ANY EXPLORATORY INVESTIGATIONS TO CONFIRM OR VERIFY THE UTILITY LOCATION SHOWN ON THESE DOCUMENTS. THEREFORE, THE UTILITIES EXACT LOCATION, SIZE, TYPE, AND FUNCTION MUST BE CONSIDERED APPROXIMATE AND FIELD VERIFICATION OF UTILITIES BY THE CONTRACTOR MUST BE UNDERTAKEN.

THE OWNER AND ENGINEER FURTHER DO NOT WARRANT THAT ALL UTILITIES HAVE BEEN ILLUSTRATED ON THESE DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING J.U.L.I.E. AND ALL NON-MEMBER J.U.L.I.E. UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES FOR FIELD VERIFICATION OF ALL UTILITIES ON THE SITE PRIOR TO CONSTRUCTION. IF THE CONTRACTOR DETERMINES THAT A SUBSTANTIAL DISCREPANCY EXISTS BETWEEN FIELD VERIFIED UTILITIES AND THOSE PRESENTED ON THESE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER FOR CLARIFICATION AND PROJECT DIRECTION.

TITLE / RIGHT-OF-WAY DISCLAIMER

TWM DOES NOT WARRANT THAT THESE DOCUMENTS CONTAIN COMPLETE INFORMATION REGARDING EASEMENTS, RESERVATIONS, RESTRICTIONS, RIGHT-OF-WAY BUILDING LINE SETBACKS AND OTHER ENCUMBRANCES. FOR COMPLETE INFORMATION, A CERTIFIED TITLE REPORT, OPINION, OR COMMITMENT FOR TITLE INSURANCE SHOULD BE OBTAINED AND THOROUGHLY REVIEWED.

PARCEL LINES HAVE BEEN PLOTTED FROM AVAILABLE GEOGRAPHIC INFORMATION SYSTEMS (GIS) DATA. EASEMENT LINES HAVE BEEN PLOTTED BASED ON AVAILABLE SUBDIVISION PLAT INFORMATION, RELATIVE TO THE GIS PARCEL LINES.

GENERAL PROJECT SPECIFICATIONS

ALL WORK, INSTALLATION, PROCEDURES, MATERIALS, AND TESTING SHALL CONFORM TO THE FOLLOWING:

- STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION
- RECOMMENDED STANDARDS FOR WATER WORKS, LATEST EDITION
- ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS, LATEST EDITION
- ILLINOIS PLUMBING CODE, LATEST EDITION 77 IL. ADMINISTRATIVE CODE, PART 890
- STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION AND ALL SUPPLEMENTS
- IEPA, STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION
- ILLINOIS URBAN MANUAL, LATEST EDITION
- FHWA - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- UNITED STATES DISABILITY ACT AND THE ILLINOIS ADA
- ALL STATE, MUNICIPAL, AND LOCAL UNITS OF GOVERNMENT REGULATIONS HAVING JURISDICTION OVER THE PROJECT

TO THE EXTENT IN WHICH ANY INCONSISTENCIES, OR DISCREPANCIES EXIST BETWEEN THE LISTED SPECIFICATION, STANDARD, CODES, OR GUIDELINES BY GOVERNING BODIES AND/OR THESE PLANS AND SPECIFICATIONS, THE MOST STRINGENT SPECIFICATION AND/OR STANDARD SHALL BE BINDING AND APPLICABLE.

THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL IEPA-NPDES STORM WATER PERMIT REQUIREMENTS FOR CONSTRUCTION SITE ACTIVITIES, AND THE STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT SITE.

WHERE SECTION OR SUB-SECTION SURVEY MONUMENTS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AUTHORIZED SURVEYING AGENT HAVE WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

ALL ABANDONED UNDERGROUND STRUCTURES ENCOUNTERED SHALL BE REMOVED TO SUFFICIENT DEPTH TO ENABLE THE PERTINENT UTILITIES TO BE CONSTRUCTED.

ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR IN COMPLIANCE WITH ALL CITY, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL CONSTRUCTION MATERIALS AND DEBRIS RESULTING FROM THE CONSTRUCTION OPERATIONS.

ALL WORK, MATERIALS, AND INSTALLATION SHALL NOT BE DEEMED SATISFACTORY UNTIL SUCH TIME THAT APPROVAL IS OBTAINED FROM THE AGENCY HAVING JURISDICTION OVER THE PROJECT.

THE CONTRACTOR SHALL PROCEED AT HIS OWN RISK IN PERFORMING ANY WORK PRIOR TO VERIFYING OR RECEIVING ALL NECESSARY PERMITS.

VILLAGE OFFICIALS

MAYOR	CURTIS MCCALL SR.
CITY CLERK	RICHARD DUNCAN
CITY TREASURER	JAN SCOTT
ALDERMAN	DEMARIO WEEDEN
ALDERMAN	JAMES HAYWOOD
ALDERWOMAN	LISA VANMETER
ALDERWOMAN	GLORIA WARE
ALDERMAN	CLINTON LOVETT
ALDERWOMAN	TIFFANY PEARCE
ALDERMAN	JOSEPH JACKSON
DIRECTOR OF WATER & SEWER	DENNIS TRAITEUR
ASST. DIRECTOR OF WATER & SEWER	SHARLIN PHIEFFER

NO.	DRAWING TITLE
C-1	COVER SHEET
C-2	GENERAL NOTES
C-3	OVERVIEW MAP
C-4 C-5	QUANTITY TABLES
C-6	SITE 54 PLAN-PROFILE
C-7	SITE 67 PLAN-PROFILE
C-8	SITE 66 PLAN-PROFILE
C-9	SITE 69 PLAN-PROFILE
C-10	SITE 68 PLAN-PROFILE
C-11	SITE 70 PLAN-PROFILE
C-12 - C-13	SITE 72 PLAN-PROFILES
C-14	SITE 73 PLAN-PROFILE
C-15	SITE 74 PLAN-PROFILE
C-16	SITE 76 PLAN-PROFILE
C-17 - C-18	TYPICAL DETAILS

GENERAL

FOR THE PURPOSES OF THESE NOTES, THE TERMS "OWNER" AND "CITY" SHALL REFER TO THE CITY OF CAHOKIA HEIGHTS, AND THE TERM "ENGINEER" SHALL REFER TO THOUVENOT, WADE, AND MOERCHEN, INC.

EROSION AND SEDIMENTATION CONTROL

ALL WORK, INSTALLATION, PROCEDURES, MATERIALS, TESTING, ETC., FOR EROSION AND SEDIMENTATION CONTROL SHALL CONFORM TO THE STANDARD SPECIFICATIONS (EROSION).

THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE IEPA-NPDES STORM WATER PERMIT FOR THIS PROJECT FOR CONSTRUCTION SITE ACTIVITIES (IF PERMIT IS REQUIRED).

ANY EROSION AND SEDIMENT CONTROL PLAN CONTAINED IN THE PROJECT PLANS SHOULD BE CONSIDERED A GENERAL GUIDELINE TO BE UTILIZED FOR EROSION CONTROL PREVENTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL EROSION AND DISPLACED SEDIMENT DOES NOT MIGRATE OFF SITE. IF UNEXPECTED EROSION OR SEDIMENTATION OCCURS, OR IF THE EROSION PLAN STRUCTURES BECOME DAMAGED, THE CONTRACTOR SHALL PROVIDE SUFFICIENT MEASURES TO REPAIR, REPLACE, OR INSTALL EROSION CONTROL STRUCTURES TO INSURE OFF-SITE DAMAGE DOES NOT OCCUR. ANY SEDIMENT OR EROSION DAMAGE WHICH OCCURS OFF-SITE SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE PRECAUTION TO ENSURE THAT SEDIMENTATION DAMAGE WILL NOT OCCUR. THE CONTRACTOR SHALL RESTRICT THE AMOUNT OF LAND AREA GRADED AT ANY ONE TIME TO A MINIMUM. IT IS RECOMMENDED DURING AND AFTER GRADING, THAT A TEMPORARY VEGETATIVE COVER BE ESTABLISHED TO PROTECT THE BARE SOIL SURFACE.

EARTHWORK

ALL WORK, INSTALLATION, PROCEDURES, MATERIALS, TESTING, ETC. FOR EARTHWORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS (HIGHWAY).

CLEARING AND GRUBBING IS TO BE CONSIDERED INCIDENTAL TO THE CONTRACT PRICE UNLESS A LINE ITEM IS PROVIDED ON THE BID FORM. ORGANIC DEBRIS CLEARED AND GRUBBED ON THE SITE SHALL BE REMOVED FROM THE SITE.

ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE REMOVED FROM AREAS WHICH ARE TO BE OCCUPIED BY STRUCTURES, PAVEMENT, SIDEWALKS, ETC. THESE MATERIALS MAY BE STOCKPILED BY THE CONTRACTOR FOR PLACEMENT FOR LANDSCAPING AND FINAL SEEDING.

GENERAL NOTES

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE GOVERNMENTAL ENTITY AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES OR WORK REQUIRING INSPECTION OR APPROVAL BY THE AFFECTED UNITS OF GOVERNMENT.

ALL TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WARNING SIGNS, TRAFFIC CONTROL SIGNS, AND REGULATORY SIGNS SHALL CONFORM TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SECTION BLR 18-4.

CONTRACTOR TO LEAVE SITE IN A CONDITION EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITIONS.

ALL WORK AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE RIGHT-OF-WAY, EASEMENT, OR DELINEATED AREAS BY WHICH ACCESS HAS BEEN GRANTED BY THE PROPERTY OWNER. THE CONTRACTOR SHALL NOT DISTURB PROPERTY OUTSIDE OF THESE AREAS. SHOULD PROPERTY OUTSIDE RIGHT-OF-WAY BE DISTURBED OR DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE PROPERTY.

SANITARY SEWER PIPE

POLYVINYL CHLORIDE (PVC) SANITARY SEWER PIPE SHALL CONFORM TO ASTM D 3034, TYPE PSM FOR SIZES 6" TO 15". STANDARD DIMENSION RATIO (SDR) OF THE PIPE SHALL BE SDR 26. THE PIPE SHALL BE MADE OF PVC PLASTIC HAVING A MINIMUM CELL CLASSIFICATION OF 12454-C, AND SHALL HAVE A MINIMUM PIPE STIFFNESS OF ONE HUNDRED AND FIFTEEN (115) POUNDS PER INCH.

SANITARY SEWER PIPE, FITTINGS, JOINTS, AND GASKETS

SANITARY SEWER PIPE AND FITTINGS SHALL BE OF THE SAME MATERIAL AS THE PIPE. FITTINGS FOR SERVICE LATERALS SHALL BE WYES AND SHALL BE SIX (6) INCHES INSIDE DIAMETER. ALL TERMINAL FITTINGS SHALL BE FITTED WITH A PLUG OF THE SAME MATERIAL AS THE PIPE AND GASKETED WITH THE SAME GASKET MATERIAL AS THE PIPE JOINT. THE PLUG SHALL BE SECURED TO WITHSTAND STANDARD AIR TESTING PRESSURES AS DESCRIBED HEREIN.

JOINTS SHALL BE IN CONFORMANCE WITH ASTM D3212 STANDARD SPECIFICATIONS FOR PLASTIC SEWER PIPE UTILIZING FLEXIBLE ELASTOMETRIC SEALS.

GASKETS SHALL BE MOLDED FROM A HIGH GRADE PROPERLY VULCANIZED, ELASTOMETRIC COMPOUND CONSISTING OF EITHER A BASIC NATURAL OR SYNTHETIC RUBBER. GASKETS FOR PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM F477 AND BE MOLDED INTO A CIRCULAR FORM OR EXTRUDED TO THE PROPER SECTION, THEN SPLICED INTO CIRCULAR FORM, AND SHALL BE MAKE OF A PROPERLY CURED HIGH GRADE ELASTOMETRIC COMPOUND.

GASKETS SHALL BE FACTORY INSTALLED AND CHEMICALLY BONDED TO THE BELL END OF THE PIPE. FIELD INSTALLED GASKETS AND FIELD CUT BEVELED LEINGTHS OF PIPE SHALL NOT BE ALLOWED, EXCEPT TO PROVIDE A FIELD ADJUSTED PIPE TO ALLOW PLACEMENT OF A MANHOLE. THIS PROCEDURE SHALL BE UNDERTAKEN IN STRICT CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDED EQUIPMENT AND MATERIALS.

LUBRICANT SHALL BE SUITABLE FOR LUBRICATING THE JOINT COMPONENTS. IT SHALL HAVE NO DETERIORATING EFFECT ON THE GASKET OR PIPE MATERIAL, AND NO DETRIMENTAL EFFECT ON THE QUALITY OF WASTEWATER TO BE CARRIED BY THE PIPE.

BEDDING, HAUNCHING, AND INITIAL BACKFILL MATERIAL

BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL FOR ALL SANITARY SEWER PIPE SHALL BE CLASS 1 MATERIAL (ANGULAR 1/4 TO 1/2 INCH-GRADED STONE) IN ACCORDANCE WITH ASTM D 2321. THE AGGREGATE BEDDING AND HAUNCHING MATERIAL SHALL BE CA-6 AGGREGATE CONFORMING TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD, AND BRIDGE CONSTRUCTION."

BEDDING MATERIAL SHALL BE PLACED AT A MINIMUM DEPTH OF FOUR (4) INCHES BENEATH THE PIPE. HAUNCHING MATERIAL SHALL BE PLACED FROM THE TOP OF THE BEDDING TO THE CENTERLINE OF THE PIPE. INITIAL BACKFILL SHALL BE PLACED FROM THE HAUNCHING TO MINIMUM OF ONE FOOT ABOVE THE TOP OF THE PIPE. BEDDING, HAUNCHING AND INITIAL BACKFILL AGGREGATE SHALL BE PLACED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN DEPTH AND COMPACTED TO MAXIMUM DENSITY.

FINAL BACKFILL

BACKFILL MATERIAL SHALL CONSIST OF EARTH EXCAVATED MATERIAL OR SELECT GRANULAR MATERIAL. FINAL BACKFILL FOR TRENCHES AND EXCAVATION MADE IN EXISTING OR PROPOSED PAVEMENTS, AND FOR ALL TRENCHES OUTSIDE OF EXISTING OR PROPOSED PAVEMENTS WHERE THE INNER EDGE OF THE TRENCH IS WITHIN TWO (2) FEET OF THE EDGE OF PAVEMENT CURB, GUTTER, CURB AND GUTTER, STABILIZED SHOULDER OF SIDEWALK SHALL BE MADE WITH SELECT CA-6 SELECT GRANULAR BACKFILL. THE SELECT GRANULAR BACKFILL SHALL BE A CA-6 AGGREGATE CONFORMING TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD, AND BRIDGE CONSTRUCTION."

FINAL BACKFILL MATERIAL SHALL BE PLACED FROM ONE (1) FOOT ABOVE THE TOP OF THE PIPE TO THE PAVEMENT SUB-GRADE OF FINISHED SURFACE GRADE. THE MATERIAL SHALL BE DEPOSITED IN UNIFORM LAYERS NOT EXCEEDING SIX (6) INCHES IN THICKNESS (LOOSE MEASURE) AND EACH LAYER SHALL BE COMPACTED BY RAMMING OR TAMPING. FILL SHALL BE COMPACTED IN EIGHT (8) INCH LOOSE LIFTS TO A MINIMUM DRY DENSITY OF 95% OF THE MATERIAL'S STANDARD PROCTOR MINIMUM DRY DESITY AS DETERMINED BY ASTM D 698.

SANITARY SEWER MANHOLES

MANHOLES SHALL BE CONSTRUCTED OF PRE-CAST CONCRETE AND CONFORM TO ASTM C-478. CONES AND SECTIONS SHALL BE SUBSTANTIALLY FREE FROM FRACTURES, LARGE OR DEEP CRACKS SURFACE ROUGHNESS.

JOINTS BETWEEN PRE-CAST SECTIONS SHALL BE DESIGNED FOR RUBBER GASKETS OR BITUMINOUS JOINT MATERIAL AS SHOWN ON THE SANITARY SEWER DETAIL DRAWINGS.

MANHOLES SHALL BE CONSTRUCTED WITH SILICA FUME ADMIXTURE SPECIFICALLY TO PREVENT HYDROGEN SULFIDE CORROSION OF THE PRE-CAST CONCRETE. SUBMITTALS DETAILING THE TYPE OF SILICA FUME ADMIXTURE AND ITS SUITABILITY FOR THIS APPLICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. RHEOMAC SF100TM AND RHEOOUILD 1000 TM OR APPROVED EQUALS SHALL BE USED IN THE MANUFACTURE OF THE MANHOLE COMPONENT SECTIONS. THE ADMIXTURE SHALL BE ADDED AT A RATE OF 8% OF WEIGHT OF THE CEMENT.

THE PRE-CAST BASE SECTION SHALL BE MONOLITICALLY CONSTRUCTED WITH A PRE-CAST INVERT TO ALIGN ALL SEWER PIPES TO THE ELEVATIONS AS SHOWN ON THE PLANS.

MANHOLE STEPS SHALL BE FURNISHED AND INSTALLED AND SHALL BE POLYPROPYLENE COATED STEEL REINFORCING RODS WITH LOAD AND PULLOUT RATINGS MEETING OSHA STANDARDS.

PIPE CONNECTIONS SHALL BE FLEXIBLE WATERTIGHT CONNECTIONS CONFORMING TO ASTM C-923. "STANDARD SPECIFICATIONS" FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE AND PIPE.

CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF GRAY IRON CASTINGS ASTM A-48 AND SHALL BE OF THE MANUFACTURER DETAILED ON THE PLANS.

REPAIR NOTES

- UNLESS OTHERWISE NOTED, THE GENERAL RECOMMENDED PROCEDURE FOR POINT REPAIRS SHALL BE AS FOLLOWS:
- CONTRACTOR TO NOTIFY THE CITY IN SUFFICIENT TIME FOR THE CITY TO PROVIDE AT LEAST 72 HOURS NOTICE TO AFFECTED RESIDENTS PRIOR TO THE CONTRACTOR MOBILIZING TO A SITE. THE CITY WILL NOTIFY ALL IMPACTED RESIDENTS OR BUSINESSES OF THE WORK TO BE CONDUCTED IN THE AREA.
 - IT IS RECOMMENDED THAT CONTRACTOR POTHOLE REPAIR AREAS TO VERIFY SEWER SIZE AND MATERIALS. EXISTING SIZES AND MATERIALS MAY NOT BE AS SHOWN ON THE PLANS, OR MAY NOT BE CONSISTENT OVER THE EXTENT OF THE REPAIR.
 - IF DEWATERING IS NEEDED, CONTRACTOR SHALL DEWATER SITE TO SPECIFICATIONS.
 - CONTRACTOR SHALL ESTABLISH BYPASS PUMPING PER THE PROJECT SPECIFICATIONS AS NEEDED TO PERFORM THE REPAIR.
 - CONTRACTOR TO BEGIN EXCAVATION IN THE VICINITY OF THE REPAIR POINT(S) INDICATED ON THE PLANS. FAILED/COLLAPSED OR OTHERWISE NON-FUNCTIONAL SEWER IS TO BE REMOVED UNTIL SUITABLE PIPE IS FOUND. ONCE FAILED SEWER HAS BEEN REMOVED IN THE AREA OF REPAIR, IT IS RECOMMENDED THAT CONTRACTOR USE A PUSH CAMERA OR SIMILAR METHOD TO VERIFY NO ADDITIONAL FAILURES ARE PRESENT IN THE REACH BEING REPAIRED. ADDITIONAL FAILURES WITHIN THE REACH DISCOVERED VIA THIS METHOD ARE TO BE BROUGHT TO THE ATTENTION OF THE CITY AND THE ENGINEER. ADDITIONAL REPAIRS MUST BE APPROVED BY THE CITY AND THE ENGINEER, AND DOCUMENTED VIA AN APPROVED CHANGE ORDER OR SIMILAR DIRECTIVE, PRIOR TO COMMENCING THE ADDITIONAL WORK.
 - FAILED SEWER IS TO BE REPLACED WITH NEW SEWER PER THE PLANS AND SPECIFICATIONS. ANY DISRUPTED SERVICE CONNECTIONS SHALL BE REINSTATED/REESTABLISHED.
 - AFTER REPAIR IS COMPLETE, CONTRACTOR TO JET CLEAN AND CCTV REPAIRED REACH TO DOCUMENT AS-BUILT CONDITIONS.
 - IF THE REACH HAS BEEN IDENTIFIED FOR CIPP, THE REACH SHALL BE CIPP LINED PER THE PLANS AND SPECIFICATIONS. ANY LATERALS DISRUPTED WILL BE REINSTATED AND LINED.
 - CONTRACTOR TO PROVIDE POST-CIPP CCTV INSPECTION VIDEOS TO DOCUMENT AS-BUILT CONDITIONS.
 - SITE TO BE RESTORED TO PRE-CONSTRUCTION CONDITIONS OR BETTER, PER PLANS AND SPECIFICATIONS.
 - CCTV VIDEOS AND RECORD DRAWINGS TO BE PROVIDED TO CITY AND ENGINEER FOR REVIEW AND APPROVAL.

WHEN A NEW MANHOLE IS PLACED, OR A NEW REACH OF SEWER (DEFINED AS BEING ENTIRELY NEW SEWER PIPE BETWEEN TWO MANHOLES), THE NEW MANHOLE OR SEWER REACH SHALL BE SUBJECT TO TESTING REQUIREMENTS AS NOTED ON THE PLANS AND IN THE SPECIFICATIONS. TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR; RESULTS TO BE PROVIDED TO THE CITY AND THE ENGINEER FOR REVIEW AND APPROVAL.

SEWER REACHES AS SHOWN ON THE PLAN-PROFILES REPRESENT APPROXIMATE SEWER GRADES, AS MEASURED BETWEEN MANHOLES. ACTUAL SEWER GRADES MAY VARY. CONTRACTOR TO ENSURE AS PART OF REPAIR THAT SEWER REACH IS ABLE TO GRAVITY FLOW IN THE INTENDED DIRECTION THROUGHOUT THE REACH WITHOUT IMPEDIMENT.

ALL SEWER SERVICE LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING SERVICE LINES AND TIE IN NEW SEWER TAPS AS SITE CONDITIONS DICTATE.

RECORD DRAWINGS

RECORD DRAWINGS SUBMITTAL SHALL CONSIST OF TWO (2) SETS OF "RED-LINED" PLANS

RED-LINED PLAN SUBMITTALS SHALL BE A SET OF MARKED-UP "FOR CONSTRUCTION" PLAN SET EITHER WITH HANDWRITTEN OR DIGITALLY WRITTEN ANNOTATION.

TOP OR RIM ELEVATION, INVERT ELEVATION, AND HORIZONTAL LOCATION (NORTHING AND EASTING) OF EACH MANHOLE OR STRUCTURE.

ALL PIPE SIZES, MATERIAL TYPE(S) AND INVERT ELEVATIONS ENTERING EACH MANHOLE.

LINEAR DISTANCES ALONG SEWER MAIN FROM STRUCTURE TO STRUCTURE, ALONG WITH RECALCULATED PIPE SLOPES.

LINEAR DISTANCES OF REPAIRS, WYES, AND TEES FROM THE NEAREST DOWNSTREAM MANHOLE.

HORIZONTAL LOCATIONS (NORTHING AND EASTING) OF SERVICE CONNECTIONS ALONG SEWER MAIN AND SERVICE OR LATERAL LINES INTO BUILDINGS OR STUB TERMINALS. SERVICE OR LATERAL LINES SHALL INCLUDE PIPE LENGTH, MATERIAL TYPE AND SIZE AND APPROXIMATE DEPTH FROM FINISHED GROUND ELEVATION TO THE PIPE INVERT.

FINAL ACCEPTANCE

PRIOR TO ACCEPTING THE SANITARY SEWERS, ON THE PROJECT, THE FOLLOWING ITEMS SHALL BE COMPLETE/SUBMITTED:

JET CLEANING OF SEWER MAINS MUST BE SCHEDULED AND COMPLETED BY AN APPROVED PROCEDURE FROM THE CITY. ALL SEWER MAINS NEED TO BE TELEVISED USING SIMULATED FLOW CONDITIONS. A VIDEO AND WRITTEN REPORT NEEDS TO BE SUBMITTED TO THE CITY FOR REVIEW.

SUBMISSION OF RECORD DRAWINGS (AS BUILT) SHOWING; CONSTRUCTED MANHOLE INVERT ELEVATIONS, MANHOLE LOCATIONS, REPAIR LOCATIONS, TEE/WYE LOCATIONS REFERENCED TO DOWNSTREAM MANHOLE.

SUBMISSION OF RECORD DRAWINGS. (TWO PAPER COPIES)

SUBMISSION OF THE FIELD TESTING CERTIFICATION FORM,

A FIELD INSPECTION BY CITY PERSONNEL OR THE CITY'S ENGINEER MUST BE COMPLETED. NOTE: THIS INSPECTION MAY RESULT IN A 'PUNCH LIST' OF ITEMS THAT WILL NEED TO BE REMEDIED/CORRECTED PRIOR TO ISSUANCE OF ACCEPTANCE.

LEGEND

	BENCHMARK		TRANSFORMER		WATER SURFACE INDICATOR
	MAILBOXES		AIR CONDITIONER		AIR RELEASE VALVE, SEWER
	RAILROAD CROSSING GATE		NATURAL GAS VALVE		LIFT STATION
	RAILROAD SIGNALS		NATURAL GAS RISER		VALVE VAULT
	SIGNS		NATURAL GAS METER		CLEAN OUT
	STOP SIGNS		PETROLEUM PIPE LINE SIGN		SANITARY SEWER MANHOLE
	TRAFFIC SIGNAL		MANHOLE, TELEPHONE		AIR RELEASE VALVE, WATER
	TRAFFIC SIGNAL VAULT		TELEPHONE RISER		BLOW-OFF HYDRANT
	TRAFFIC SIGNAL BOX		TELEPHONE RISER		BUTTERFLY VALVE
	TREES, GENERAL		CATCH BASIN		CURB BOX
	BUSHES		DITCH CHECK		FIRE HYDRANT
	TREES, EVERGREEN		DIRECTION OF FLOW		GATE VALVE
	WELL		DOWNSPOUT		WATER METER
	ORNAMENTAL LIGHT POLE		INLET		VALVE VAULT
	ELECTRIC MANHOLE		INLET, AREA INLET		PROPOSED FIRE HYDRANT
	ELECTRIC METER		INLET, BEEHIVE		PROPOSED WATER VALVE
	ELECTRIC JUNCTION BOX		INLET, OPEN		PROPOSED WATER METER
	CONTROLLER		STORM JUNCTION BOX		
	GROUND				
	POWER POLE				



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS	SWANSEA COLUMBIA GLEN CARBON PEORIA
MISSOURI	ST. CHARLES ST. LOUIS COLUMBIA
TENNESSEE	NASHVILLE CHATTANOOGA

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL

SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

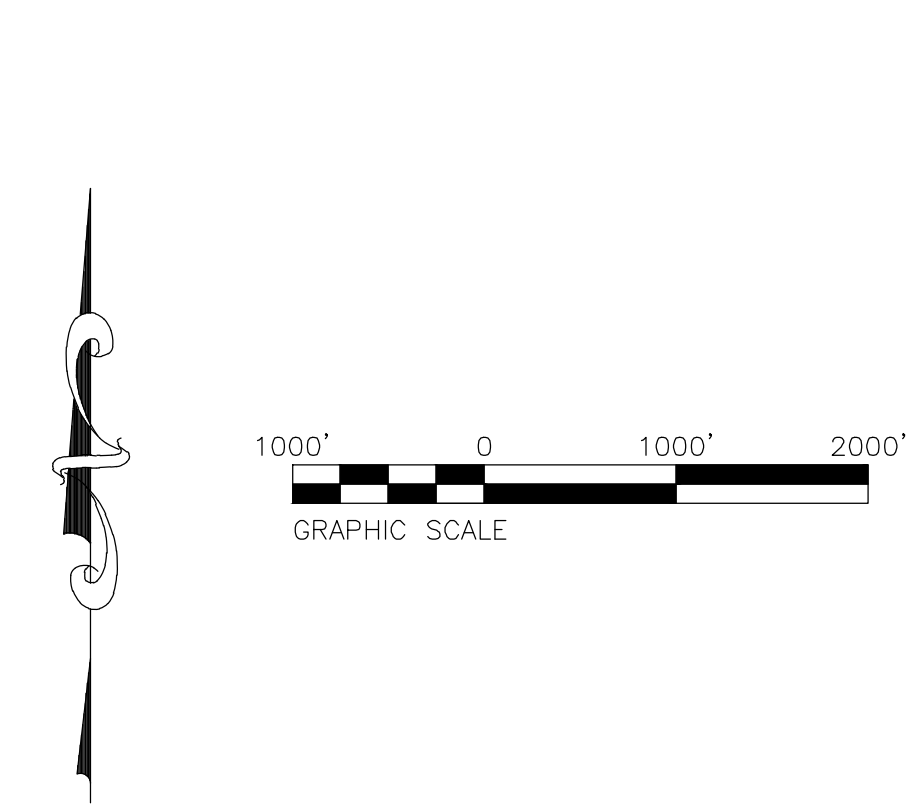
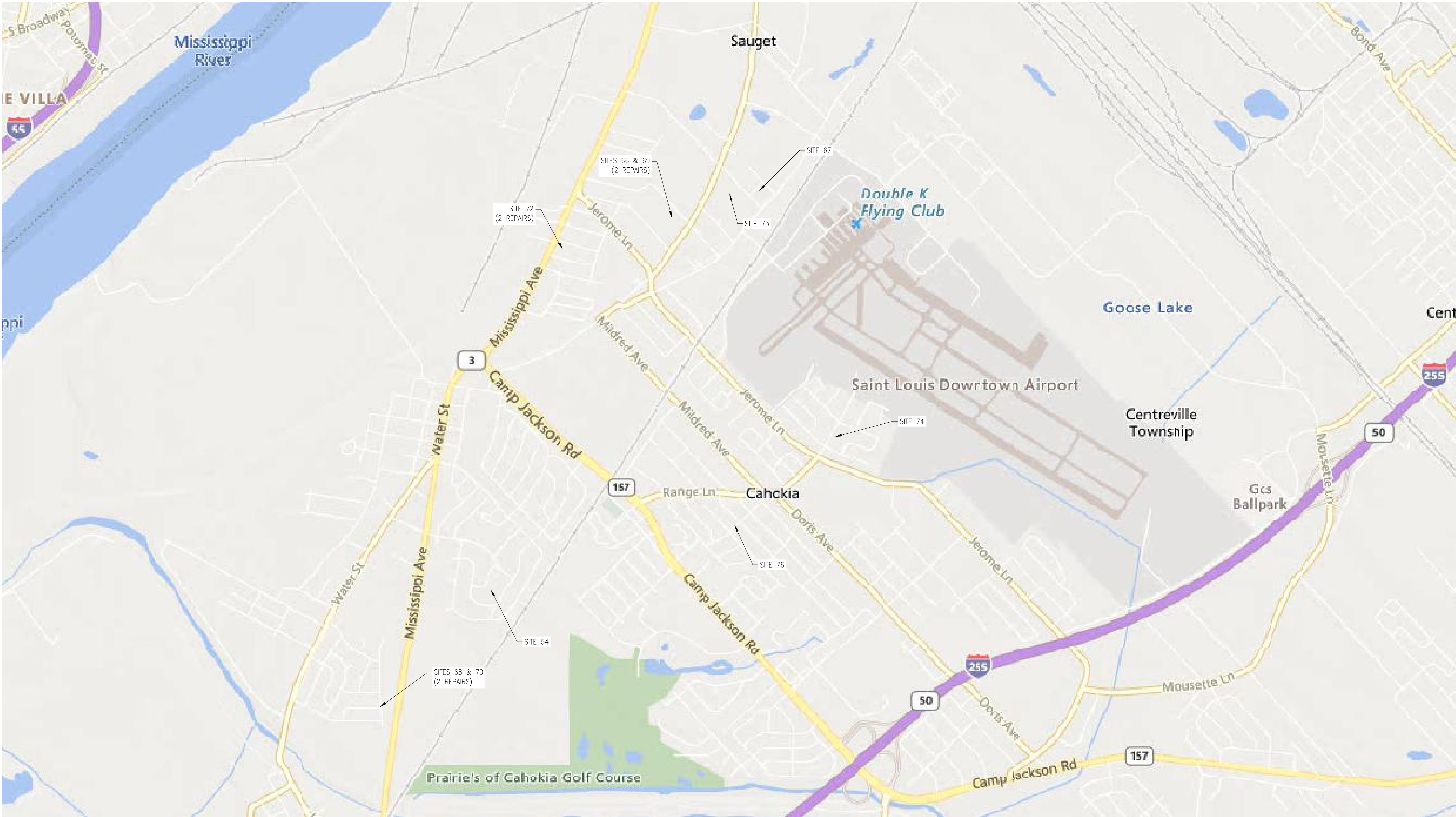
CAHOKIA HEIGHTS SEWER REPAIRS

CITY OF CAHOKIA HEIGHTS

ST. CLAIR COUNTY, ILLINOIS

TITLE:

GENERAL NOTES



SITE SUMMARY	
SITE NUMBER	ADDRESS
54	714 ST. MAUD DR
67	250 NADINE ST
66	148 EDWARDS ST (REAR EASEMENT)
69	148 EDWARDS ST (SIDE EASEMENT)
68	1134 ST MARGARET DR
70	ST. HENRY DR & ST. MARAGARET DR
72-1	3807 MISSISSIPPI AVE
72-2	26 JUDITH ST
73	222 JUDITH LN
74	1006 ST. PATRICK BLVD
76	1120 RICHARD DR (ELLEN ST)



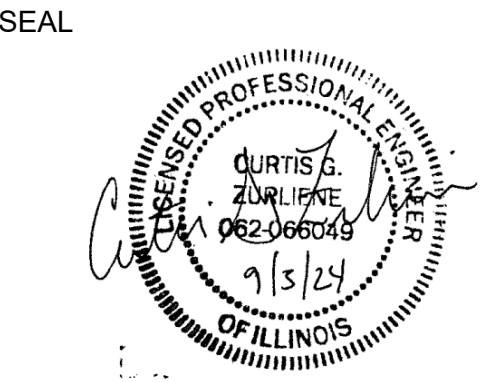
CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS	SWANSEA COLUMBIA GLEN CARBON PEORIA
MISSOURI	ST. CHARLES ST. LOUIS COLUMBIA
TENNESSEE	NASHVILLE CHATTANOOGA

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

OVERVIEW MAP

PL\2024\240857\1_CADD - DWG\4.3 Final\240857_cover.dwg Plotted By: czurliene

ESTIMATE OF QUANTITIES – COMPLETE PROJECT				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20100500	CLEARING/TREE REMOVAL	0.13	AC
1.2	20400800	FURNISHED EXCAVATION	100.0	CY
1.3	20800150	SELECT GRANULAR BACKFILL – CA6 AGGREGATE	258.0	CY
1.4	25000300	SEEDING	0.62	AC
1.5	25100105	MULCH – MULCH (METHOD 1)	0.62	AC
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	413.0	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8" PVC	733.0	LF
3.2	Z0057000	SANITARY SEWER – 10" PVC	20.0	LF
3.3	Z0057100	SANITARY SEWER – 12" PVC	70.0	LF
3.4	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	11.0	EA
3.5	X1200086	SANITARY SEWER – TO BE REMOVED – 4"	70.0	LF
3.6	X5510308	SANITARY SEWER – TO BE REMOVED – 8"	251.0	LF
3.7	X5509902	SANITARY SEWER – TO BE ABANDONED – 8"	140.0	LF
INCIDENTAL CONSTRUCTION				
4.1	60218400	MANHOLE CONSTRUCTION – STANDARD – 48" BARREL – TYPE 1 FRAME AND LID	7.0	EA
4.2	60500040	REMOVING MANHOLES	6.0	EA
4.3	60255500	MANHOLES TO BE ADJUSTED – TYPE 1 FRAME AND LID	1.0	EA
4.4	X0324769	PRIVATE SUBMERSIBLE LIFT STATION SYSTEM	1.0	EA
4.5	X1200274	BYPASS PUMPING	40.0	DAYS
4.6	X5021507	DEWATERING	53.0	DAYS
4.7	Z0000001	SITE RESTORATION	1.0	LS
4.8	66400205	CHAIN LINK FENCE – REMOVE AND REPLACE	410.0	LF
4.9	X3400002	DEMOLITION	1.0	LS
4.10	70100100	TRAFFIC CONTROL	1.0	LS
4.11	Z0000002	TEMPORARILY RELOCATED – STORAGE SHED	1.0	LS
ADD ALTERNATE ITEMS				
A1.1	Z0056900	SANITARY SEWER – CIPP – 8", 400ksi	750.0	LF
A1.2	Z5430206	SANITARY LATERAL CIPP LINING – 2'	19.0	EA

ESTIMATE OF QUANTITIES – SITE 54 – 714 ST MAUD DR				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20100500	CLEARING/TREE REMOVAL	0.01	AC
1.2	20800150	TRENCH BACKFILL – CA6 AGGREGATE	55.0	CY
1.3	25000300	SEEDING	0.08	AC
1.4	25100105	MULCH – MULCH (METHOD 1)	0.08	AC
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	65.0	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8"	235.0	LF
3.2	X5510308	SANITARY SEWER – TO BE REMOVED – 8"	93.0	LF
3.3	X5509902	SANITARY SEWER – TO BE ABANDONED – 8"	140.0	LF
3.4	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	2.0	EA
INCIDENTAL CONSTRUCTION				
4.1	60218400	MANHOLE CONSTRUCTION – STANDARD – 48" BARREL – TYPE 1 FRAME AND LID	3.0	EA
4.2	60500040	REMOVING MANHOLES	2.0	EA
4.3	66400205	CHAIN LINK FENCE – REMOVE AND REPLACE	160.0	LF
4.4	X5021507	DEWATERING	8.0	DAYS
4.5	X1200274	BYPASS PUMPING	5.0	DAYS

ESTIMATE OF QUANTITIES – SITE 66 – 148 EDWARDS ST (REAR EASEMENT)				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20100500	CLEARING/TREE REMOVAL	0.07	AC
1.2	20400800	FURNISHED EXCAVATION	40.0	CY
1.3	25000300	SEEDING	0.11	AC
1.4	25100105	MULCH – MULCH (METHOD 1)	0.11	AC
STRUCTURES				
2.1	Z0056900	SANITARY SEWER – 8" PVC	30.0	LF
INCIDENTAL CONSTRUCTION				
3.1	60255500	MANHOLES TO BE ADJUSTED – TYPE 1 FRAME AND LID	1.0	EA
3.2	X1200274	BYPASS PUMPING	3.0	DAYS
3.3	X5021507	DEWATERING	4.0	DAYS

ESTIMATE OF QUANTITIES – SITE 68 – 1134 ST. MARGARET DR				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20800150	SELECT GRANULAR BACKFILL – CA–6	120.0	CY
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	240.0	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8" PVC	80.0	LF
3.3	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	2.0	EA
INCIDENTAL CONSTRUCTION				
4.1	X1200274	BYPASS PUMPING	4.0	DAYS
4.2	X5021507	DEWATERING	5.0	DAYS
ADD ALTERNATE ITEMS				
A1.1	Z0056900	SANITARY SEWER – CIPP – 8"	270.0	LF
A1.2	Z5430206	SANITARY LATERAL CIPP LINING – 2'	8.0	EA

ESTIMATE OF QUANTITIES – SITE 67 – 250 NADINE ST				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20100500	CLEARING/TREE REMOVAL	0.01	AC
1.2	20400800	FURNISHED EXCAVATION	10.0	CY
1.3	25000300	SEEDING	0.05	AC
1.4	25100105	MULCH – MULCH (METHOD 1)	0.05	AC
STRUCTURES				
2.1	Z0056900	SANITARY SEWER – 8" PVC	20.0	LF
2.2	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	1.0	EA
INCIDENTAL CONSTRUCTION				
3.1	X1200274	BYPASS PUMPING	2.0	DAYS
3.2	66400205	CHAIN LINK FENCE – REMOVE & REPLACE	60.0	LF
3.3	X5021507	DEWATERING	3.0	DAYS
ADD ALTERNATE ITEMS				
A1.1	Z0056900	SANITARY SEWER – CIPP – 8"	162.0	LF
A1.2	Z5430206	SANITARY LATERAL CIPP LINING – 2'	1.0	EA

ESTIMATE OF QUANTITIES – SITE 69 – 148 EDWARDS ST (SIDE EASEMENT)				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20400800	FURNISHED EXCAVATION	10.0	CY
1.2	25000300	SEEDING	0.02	AC
1.3	25100105	MULCH – MULCH (METHOD 1)	0.02	AC
1.4	20800150	SELECT GRANULAR BACKFILL – CA–6	13.0	CY
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	8	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8" PVC	40.0	LF
INCIDENTAL CONSTRUCTION				
4.1	60218400	MANHOLE CONSTRUCTION – STANDARD – 48" BARREL – TYPE 1 FRAME AND LID	1.0	EA
4.2	60500040	REMOVING MANHOLES	1.0	EA
4.3	X1200274	BYPASS PUMPING	4.0	DAYS
4.4	X5021507	DEWATERING	5.0	DAYS

ESTIMATE OF QUANTITIES – SITE 70 – ST. HENRY DR. @ ST. MARGARET DR				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20800150	SELECT GRANULAR BACKFILL – CA–6	30.0	CY
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	85	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8" PVC	20.0	LF
INCIDENTAL CONSTRUCTION				
4.1	X1200274	BYPASS PUMPING	2.0	DAYS
4.2	X5021507	DEWATERING	3.0	DAYS
ADD ALTERNATE ITEMS				
A1.1	Z0056900	SANITARY SEWER – CIPP – 8"	318.0	LF
A1.2	Z5430206	SANITARY LATERAL CIPP LINING – 2'	10.0	EA



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA COLUMBIA GLEN CARBON PEORIA
MISSOURI ST. CHARLES ST. LOUIS COLUMBIA
TENNESSEE NASHVILLE CHATTANOOGA

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL

SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

TABLE OF QUANTITIES

PA\2024\240857\1 CADD - DWG\4.3 Env\240857_cover.dwg Plotted By: czurliene

ESTIMATE OF QUANTITIES – SITE 72–1 – 3807 MISSISSIPPI AVE				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20400800	FURNISHED EXCAVATION	40.0	CY
1.2	25000300	SEEDING	0.06	AC
1.3	25100105	MULCH – MULCH (METHOD 1)	0.06	AC
STRUCTURES				
2.1	Z0057100	SANITARY SEWER – 12” PVC	50.0	LF
2.2	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	1.0	EA
INCIDENTAL CONSTRUCTION				
3.1	X1200274	BYPASS PUMPING	5.0	DAYS
3.2	X5021507	DEWATERING	6.0	DAYS

ESTIMATE OF QUANTITIES – SITE 72–2 – 24 JUDITH ST				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	25000300	SEEDING	0.05	AC
1.2	25100105	MULCH – MULCH (METHOD 1)	0.05	AC
STRUCTURES				
2.1	Z0057000	SANITARY SEWER – 10” PVC	20.0	LF
INCIDENTAL CONSTRUCTION				
3.1	60218400	MANHOLE CONSTRUCTION – STANDARD – 48” BARREL – TYPE 1 FRAME AND LID	1.0	EA
3.2	60500040	REMOVING MANHOLES	1.0	EA
3.3	X1200274	BYPASS PUMPING	2.0	DAYS
3.4	X5021507	DEWATERING	3.0	DAYS
3.5	66400205	CHAIN LINK FENCE – REMOVE AND REPLACE	50.0	LF

ESTIMATE OF QUANTITIES – SITE 73 – 222 JUDITH LN				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	20100500	CLEARING/TREE REMOVAL	0.04	AC
1.2	25000300	SEEDING	0.14	AC
1.3	25100105	MULCH – MULCH (METHOD 1)	0.14	AC
STRUCTURES				
2.1	Z0056900	SANITARY SEWER – 8” PVC	158.0	LF
2.2	X1200086	SANITARY SEWER – TO BE REMOVED – 4”	70.0	LF
2.3	X5510308	SANITARY SEWER – TO BE REMOVED – 8”	158.0	LF
INCIDENTAL CONSTRUCTION				
3.1	60218400	MANHOLE CONSTRUCTION – STANDARD – 48” BARREL – TYPE 1 FRAME AND LID	2.0	EA
3.2	60500040	REMOVING MANHOLES	2.0	EA
3.3	X1200274	BYPASS PUMPING	6.0	DAYS
3.4	X5021507	DEWATERING	7.0	DAYS
3.5	X0324769	PRIVATE SUBMERSIBLE LIFT STATION SYSTEM	1.0	EA

ESTIMATE OF QUANTITIES – SITE 74 – 1006 ST. PATRICK BLVD.				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	25000300	SEEDING	0.08	AC
1.2	25100105	MULCH – MULCH (METHOD 1)	0.08	AC
STRUCTURES				
2.1	Z0057100	SANITARY SEWER – 12” PVC	20.0	LF
INCIDENTAL CONSTRUCTION				
3.1	X1200274	BYPASS PUMPING	2.0	DAYS
3.2	66400205	CHAIN LINK FENCE – REMOVE AND REPLACE	120.0	LF
3.3	X5021507	DEWATERING	3.0	DAYS
3.4	Z0000002	TEMPORARILY RELOCATED – STORAGE SHED	1.0	LS

ESTIMATE OF QUANTITIES – SITE 76 – 1120 RICHARD DR				
ITEM NO	CODE NO	ITEM DESCRIPTION	QUANTITY	UNITS
EARTHWORK, LANDSCAPING, AND EROSION CONTROL				
1.1	25000300	SEEDING	0.03	AC
1.2	25100105	MULCH – MULCH (METHOD 1)	0.03	AC
1.3	20800150	SELECT GRANULAR BACKFILL – CA-6	40.0	CY
SURFACE COURSES, PAVEMENTS, REHABILITATION, AND SHOULDERS				
2.1	44201683	CLASS D PAVEMENT PATCHING	15	SY
STRUCTURES				
3.1	Z0056900	SANITARY SEWER – 8” PVC	150.0	LF
3.2	X1200016	SANITARY LATERAL – REPLACE/RECONNECT SEWER TAP	5.0	EA
INCIDENTAL CONSTRUCTION				
4.1	X1200274	BYPASS PUMPING	5.0	DAYS
4.2	X5021507	DEWATERING	6.0	DAYS
4.3	66400205	CHAIN LINK FENCE – REMOVE AND REPLACE	20.0	LF
4.4	X3400002	DEMOLITION	1.0	LS

SCHEDULE OF QUANTITIES

ALL ITEMS LISTED IN THE QUANTITY TABLES ARE TO BE COMPLETE: INCLUDES FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, EXCAVATION, INSTALLATION, AND ALL ANCILLARY MATERIALS, ETC. TO INSTALL A FULLY FUNCTIONAL AND IEPA OPERATIONALLY PERMITTED SANITARY SEWER SYSTEM OR SYSTEMS ALONG WITH RESTORATION OF ALL DISTURBED AREAS TO THEIR PRE-DISTURBED LINES, GRADE, AND EQUAL OR BETTER CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

FINAL VERIFICATION OF THE QUANTITIES LISTED ARE THE RESPONSIBILITY OF THE CONTRACTOR.

ITEMS SUCH AS TRAFFIC CONTROL, MOBILIZATION, EROSION & SEDIMENT CONTROL, ETC, MAY NOT BE INCLUDED IN THE QUANTITY TABLES, BUT MAY BE INCORPORATED AS SEPARATE BID ITEMS OR AS ITEMS INCIDENTAL TO THE CONSTRUCTION OF OTHER BID ITEMS; SEE CONTRACT DOCUMENTS.



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS
MISSOURI
TENNESSEE

SWANSEA
COLUMBIA
GLEN CARBON
PEORIA

ST. CHARLES
ST. LOUIS
COLUMBIA

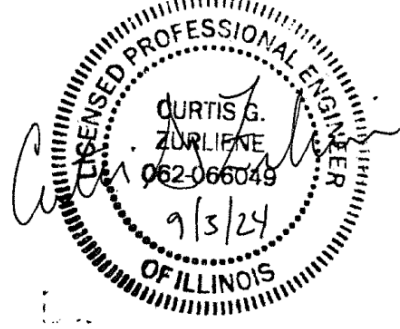
NASHVILLE
CHATTANOOGA

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

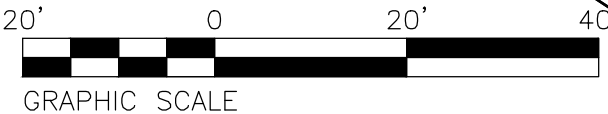
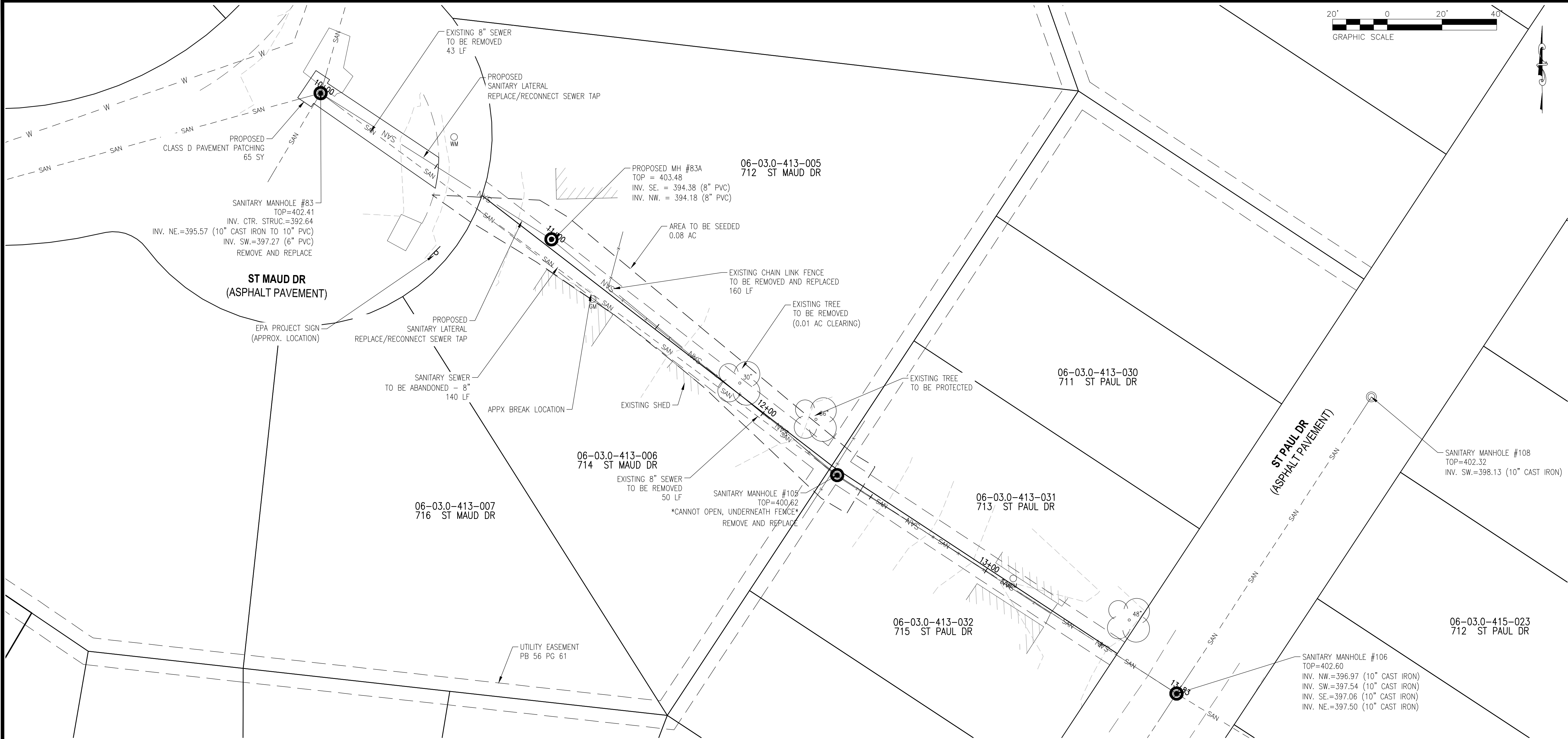
DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

TABLE OF QUANTITIES



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

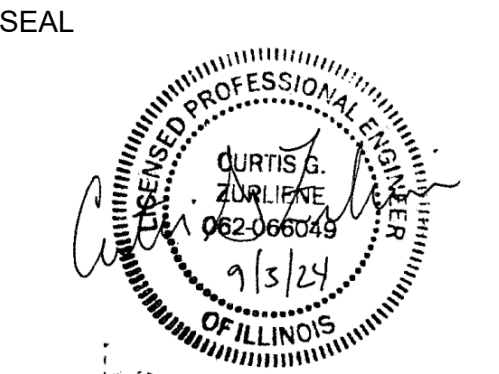
MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

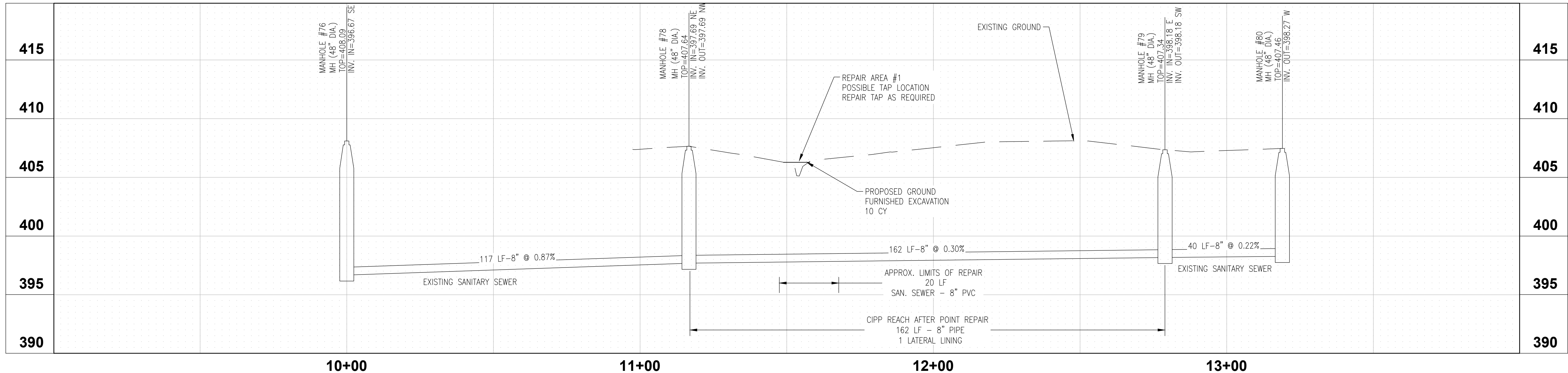
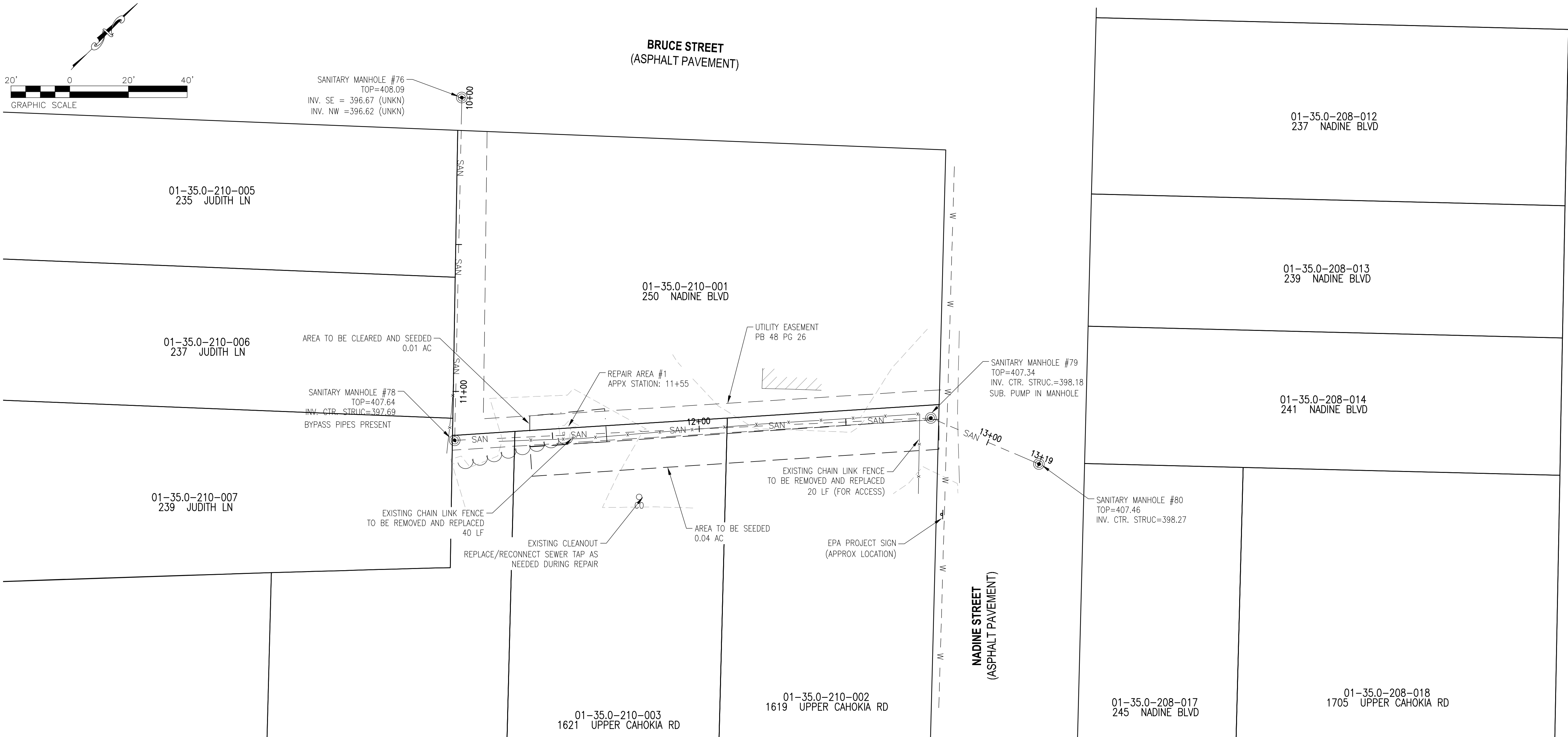
DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

SITE 54
714 ST. MAUD DR
PLAN-PROFILE



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

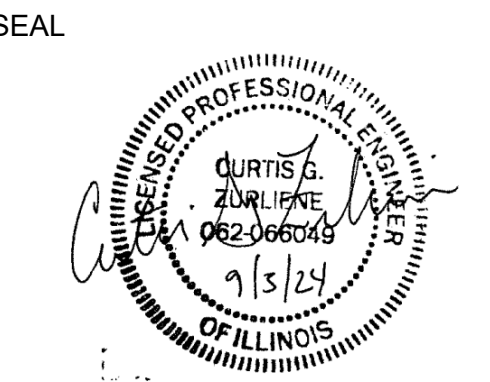
MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE & MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

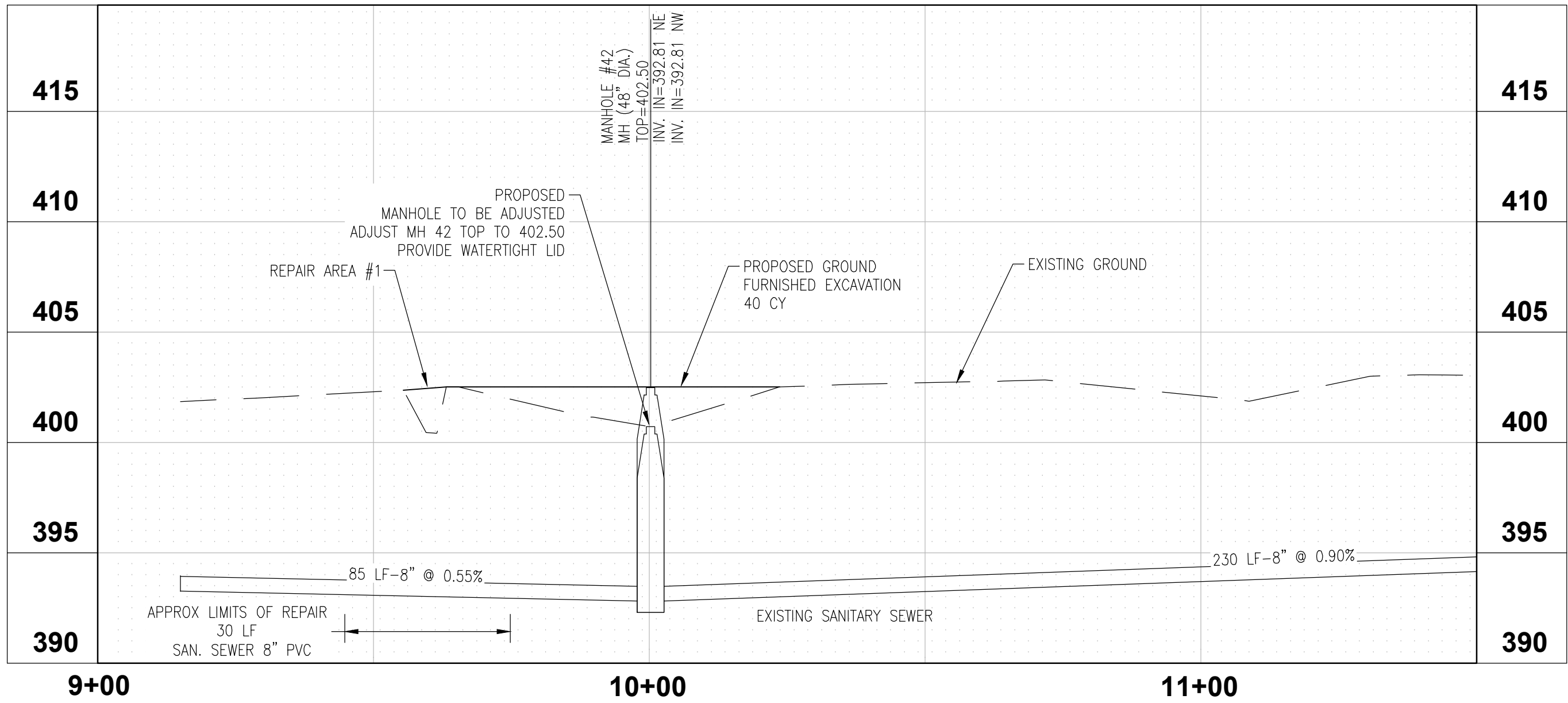
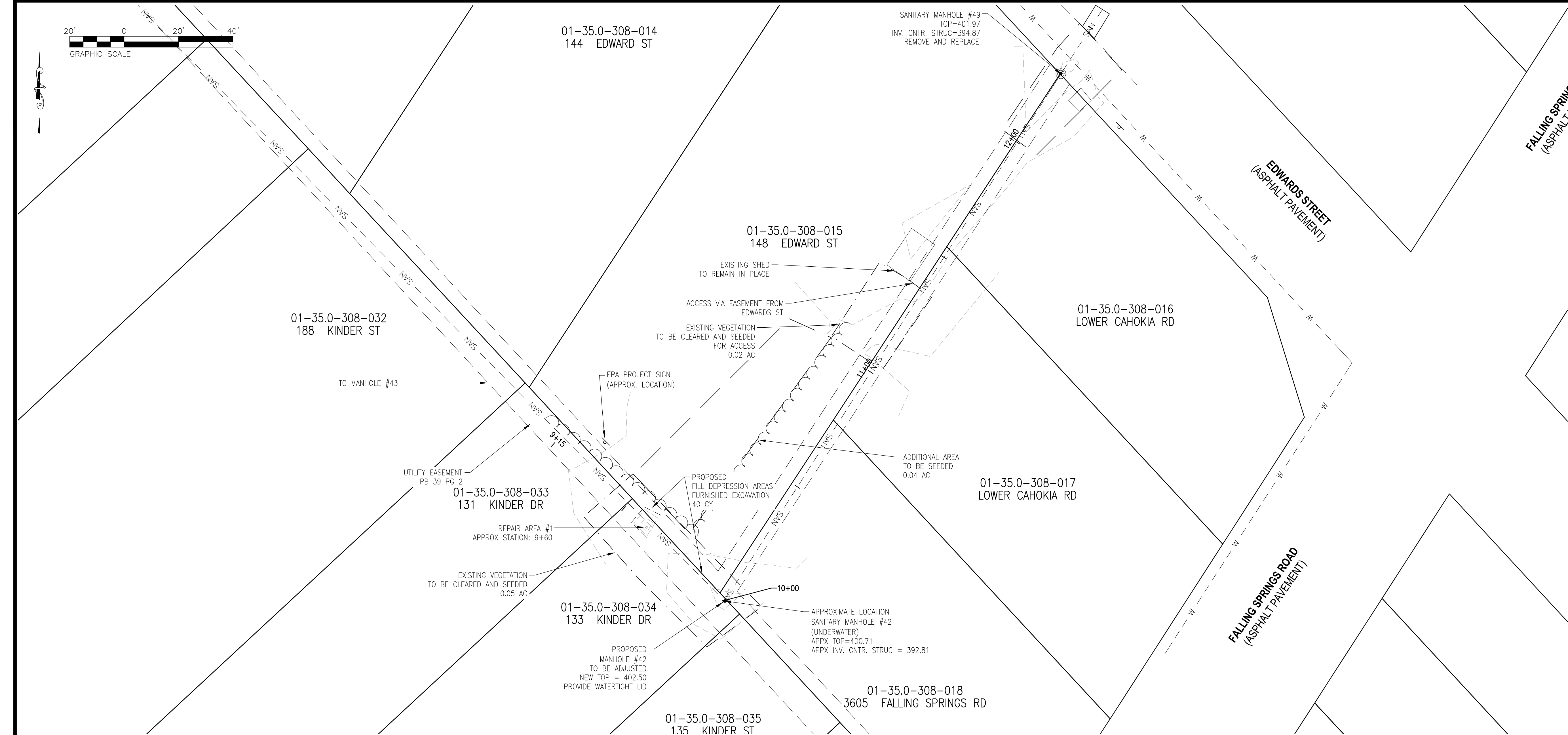
ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:
SITE 67
250 NADINE BLVD
PLAN-PROFILE



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

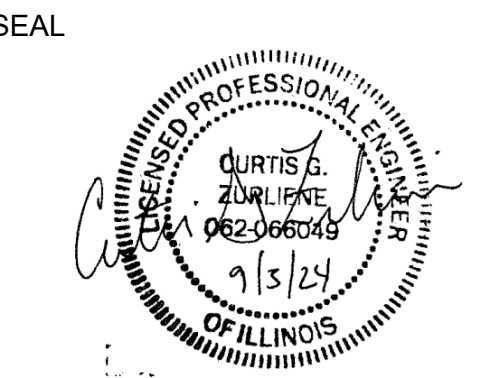
MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE & MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

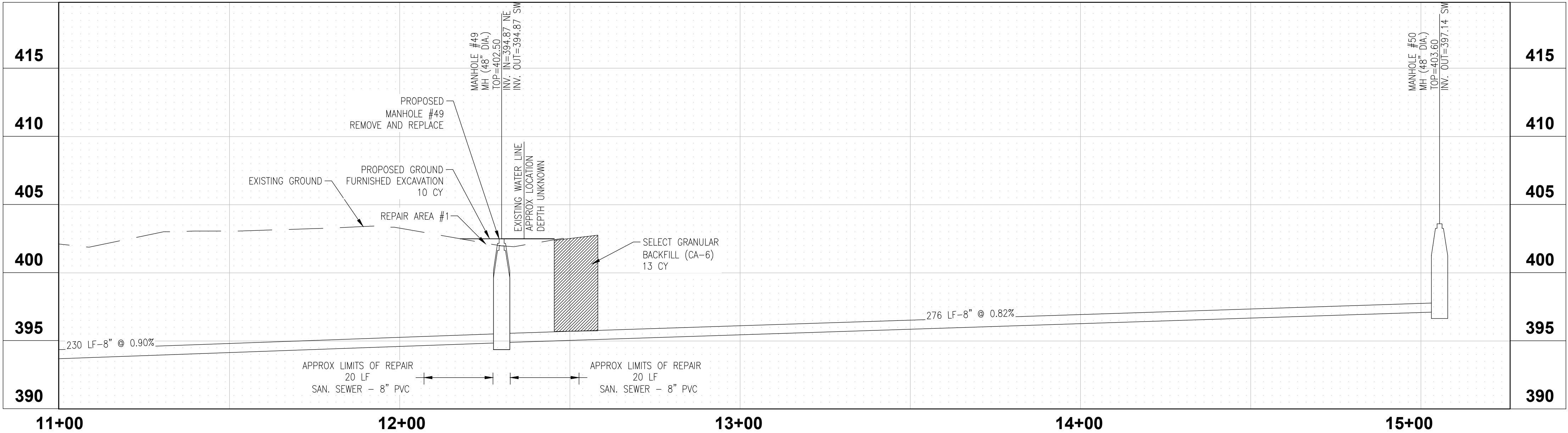
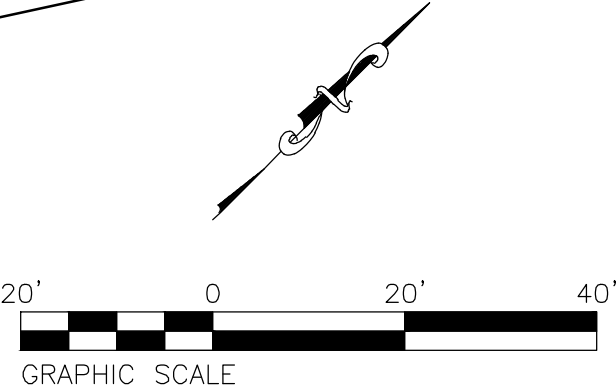
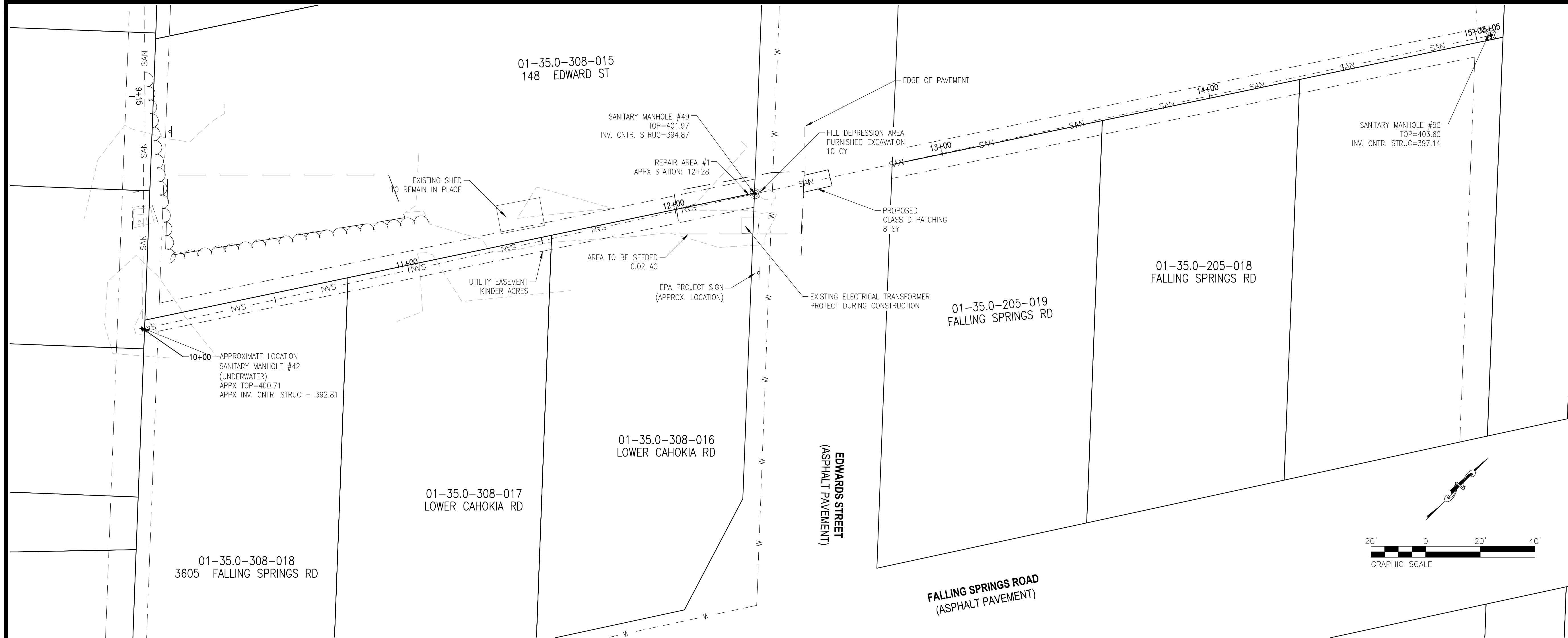
DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

SITE 66
148 EDWARDS ST
PLAN-PROFILE





**CONSULTING ENGINEERING
GEOSPATIAL SERVICES**

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

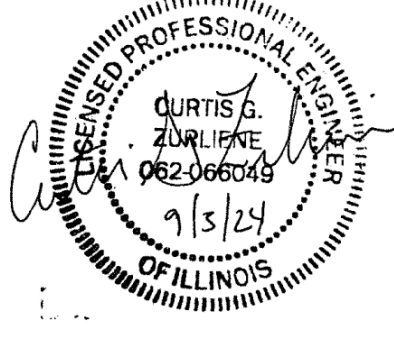
TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

**THOUVENOT, WADE
& MOERCHEN, INC.**

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR DATE OF ISSUANCE		
REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

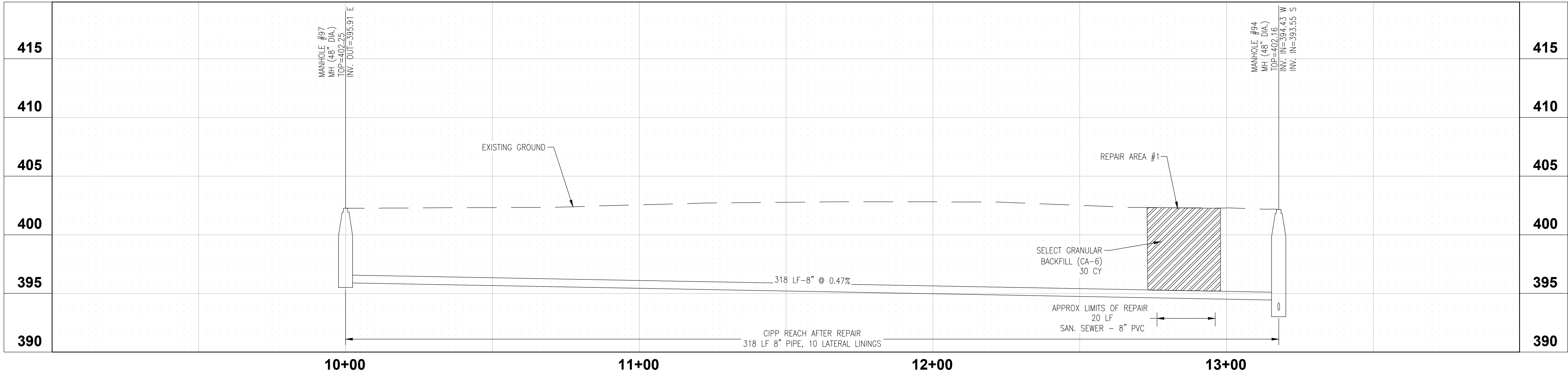
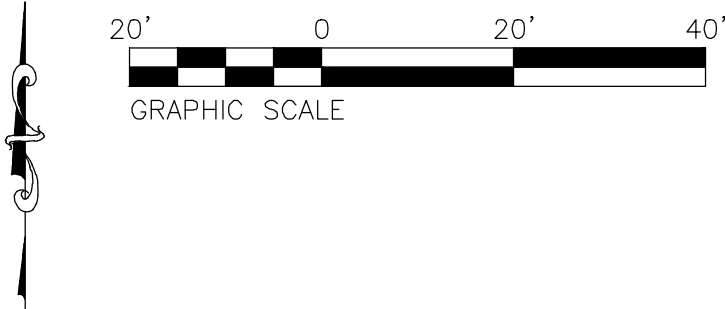
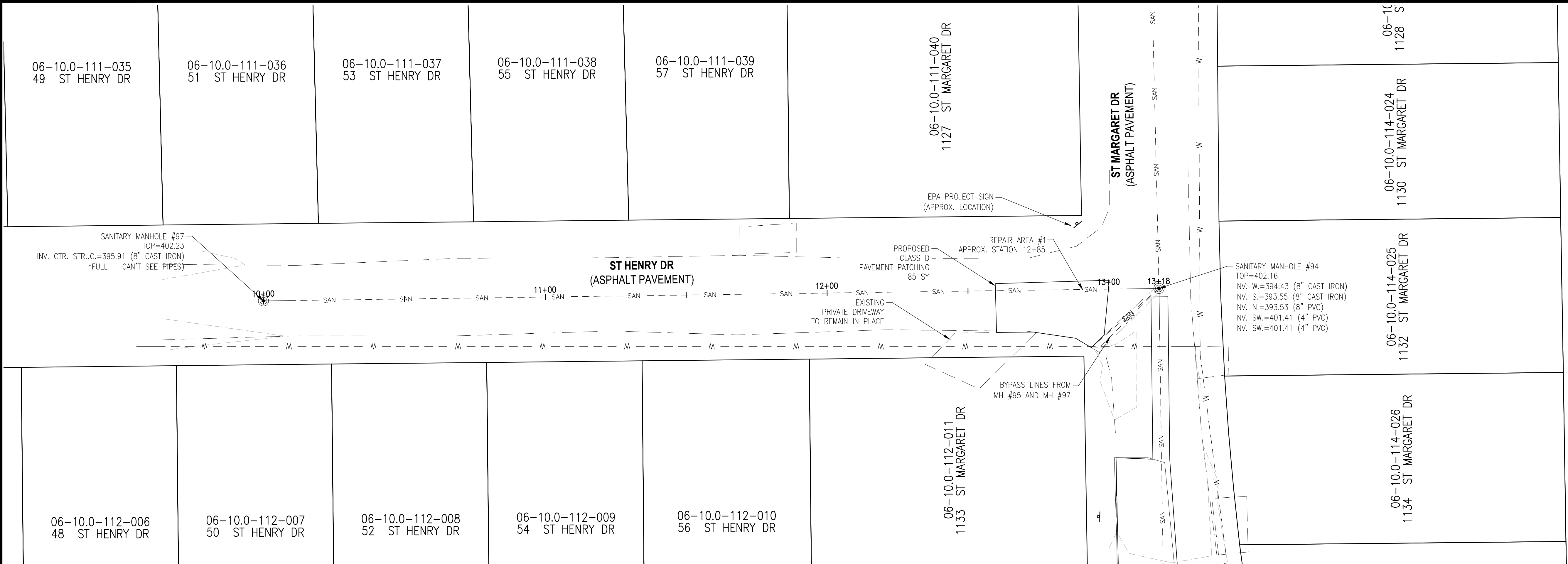
PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

SITE 69
148 EDWARDS ST
PLAN-PROFILE

P:\2024\240857\1_CADD - DWG\4.3 Env\240857_Site68-70PP.dwg Plotted By: zurliene



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

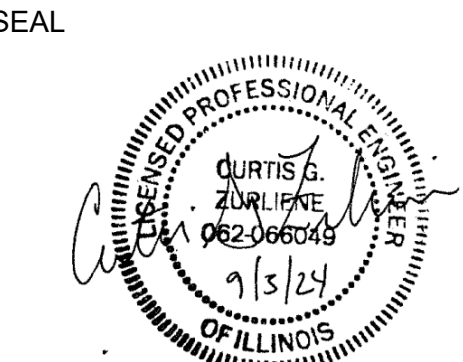
MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

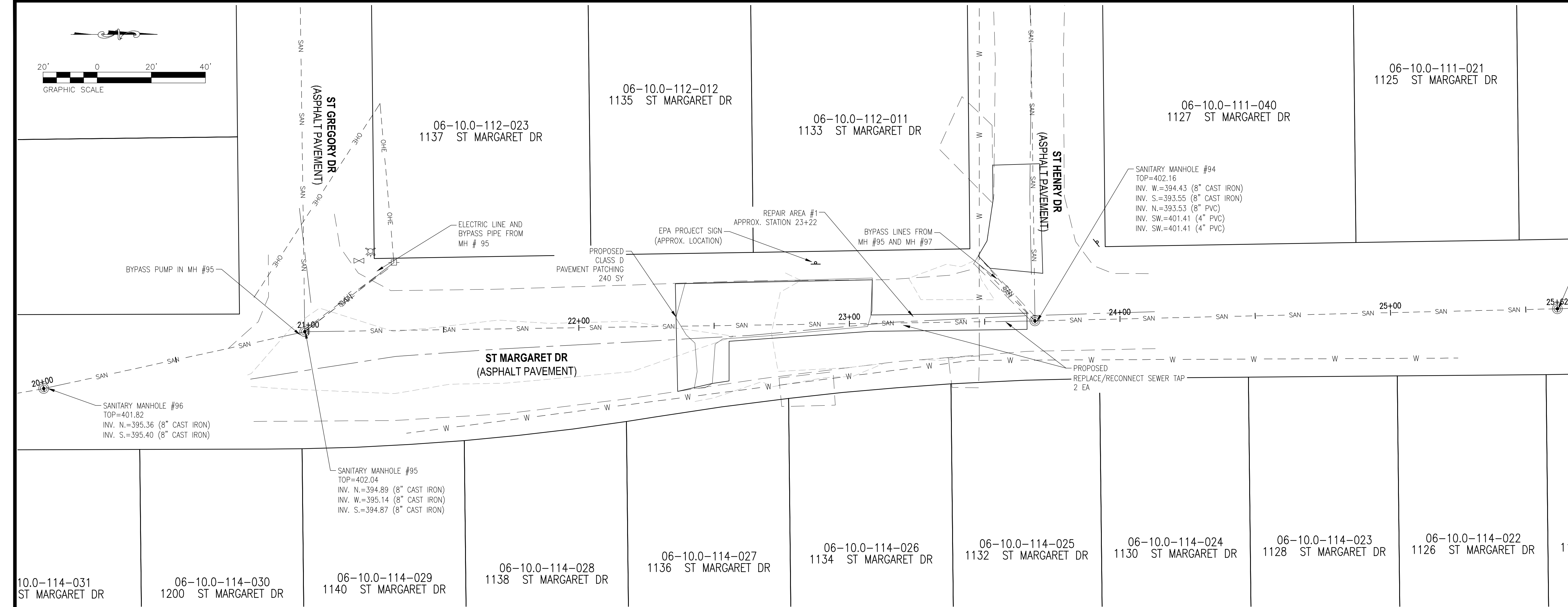
ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:
SITE 70
ST. HENRY & ST. MARGARET
PLAN-PROFILE





**CONSULTING ENGINEERING
GEOSPATIAL SERVICES**

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

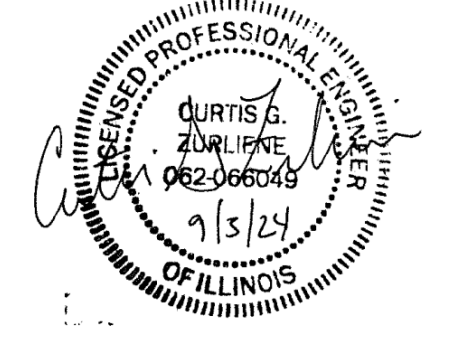
TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

**THOUVENOT, WADE
& MOERCHEN, INC.**

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G. ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

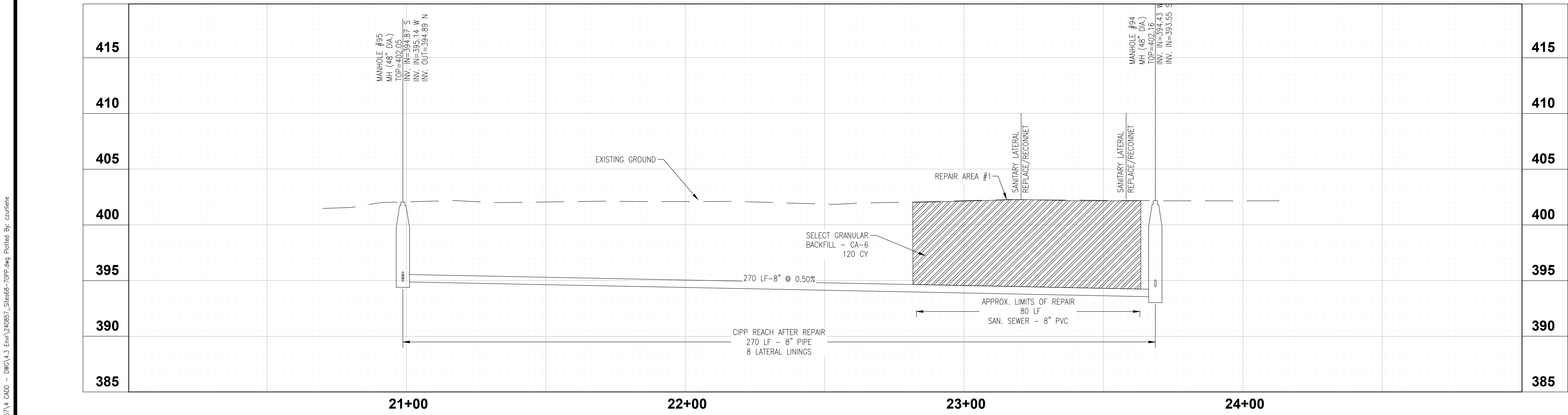
PROJECT:

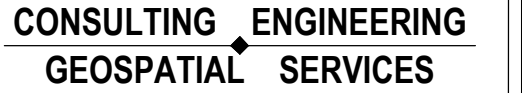
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

SITE 68
1134 ST MARGARET DR
PLAN-PROFILE

C-10





ILLINOIS	SWANSEA
	COLUMBIA
	GLEN CARBON
	PEORIA
	DECATUR

MISSOURI	ST. CHARLES
	ST. LOUIS
	COLUMBIA

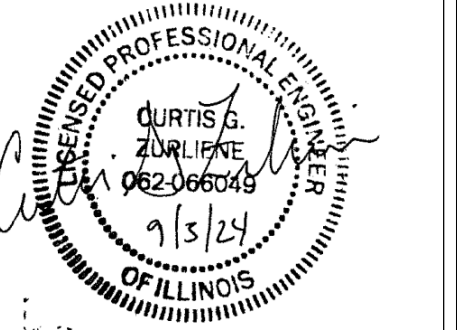
TENNESSEE | NASHVILLE
CHATTANOOGA
ATHENS

**THOUVENOT, WADE
& MOERCHEN, INC.**

SWANSEA OFFICE
1940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
C.L. PROF. DESIGN FIRM	184-001220
C.L. PROF. ENGR. CORP.	62-035370
C.L. PROF. STR. ENGR. CORP.	81-005202
C.L. PROF. LAND SURV. CORP.	048-000029
C.S. PROF. ENGR. FACILITY	E-3256
C.MO. PROF. ENGR. CORP.	001528
C.MO. LAND SURVEYING CORP.	000346
C.TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

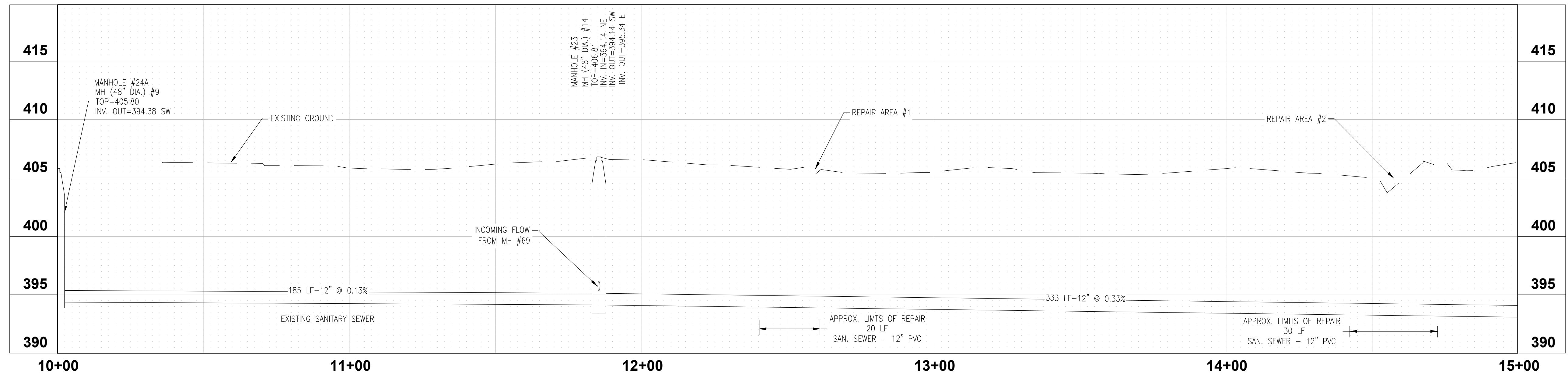
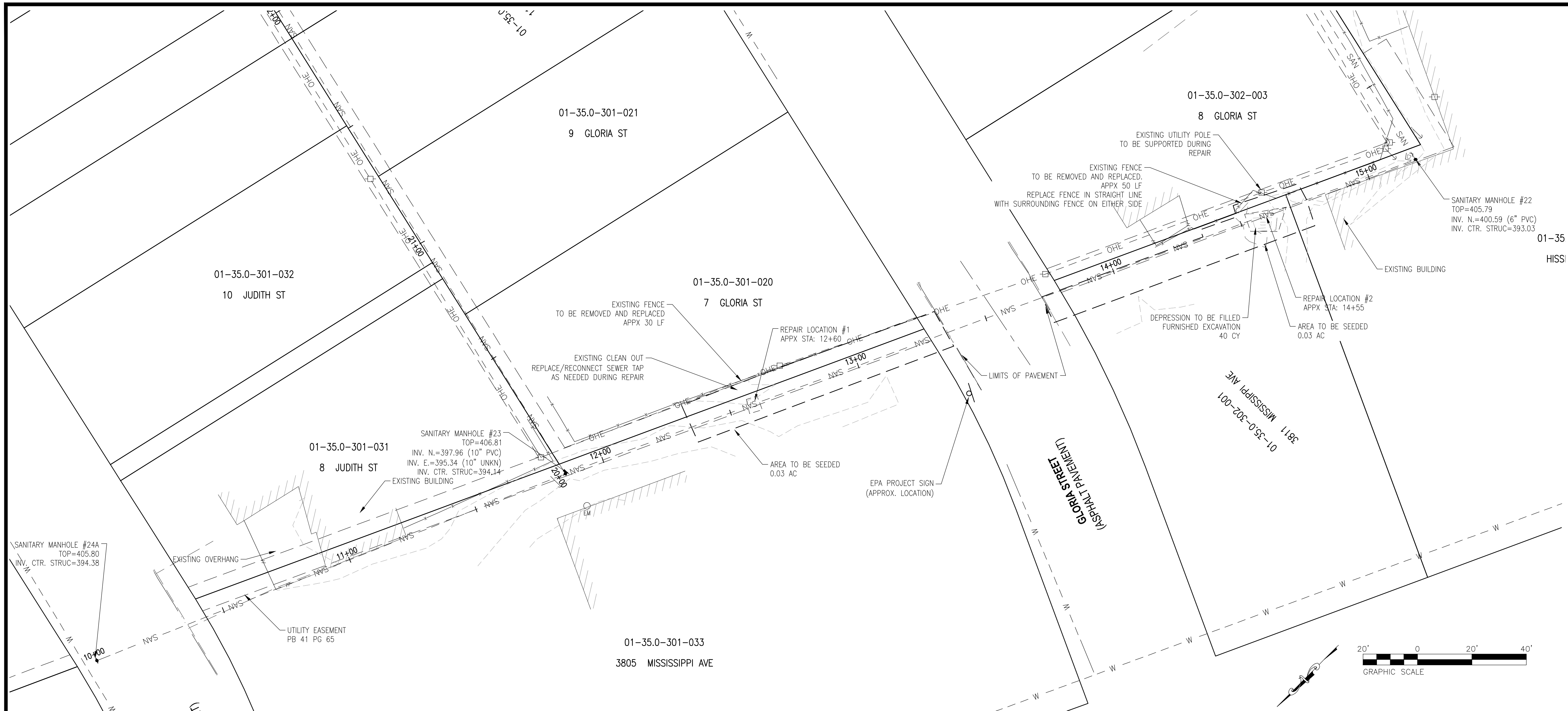
DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

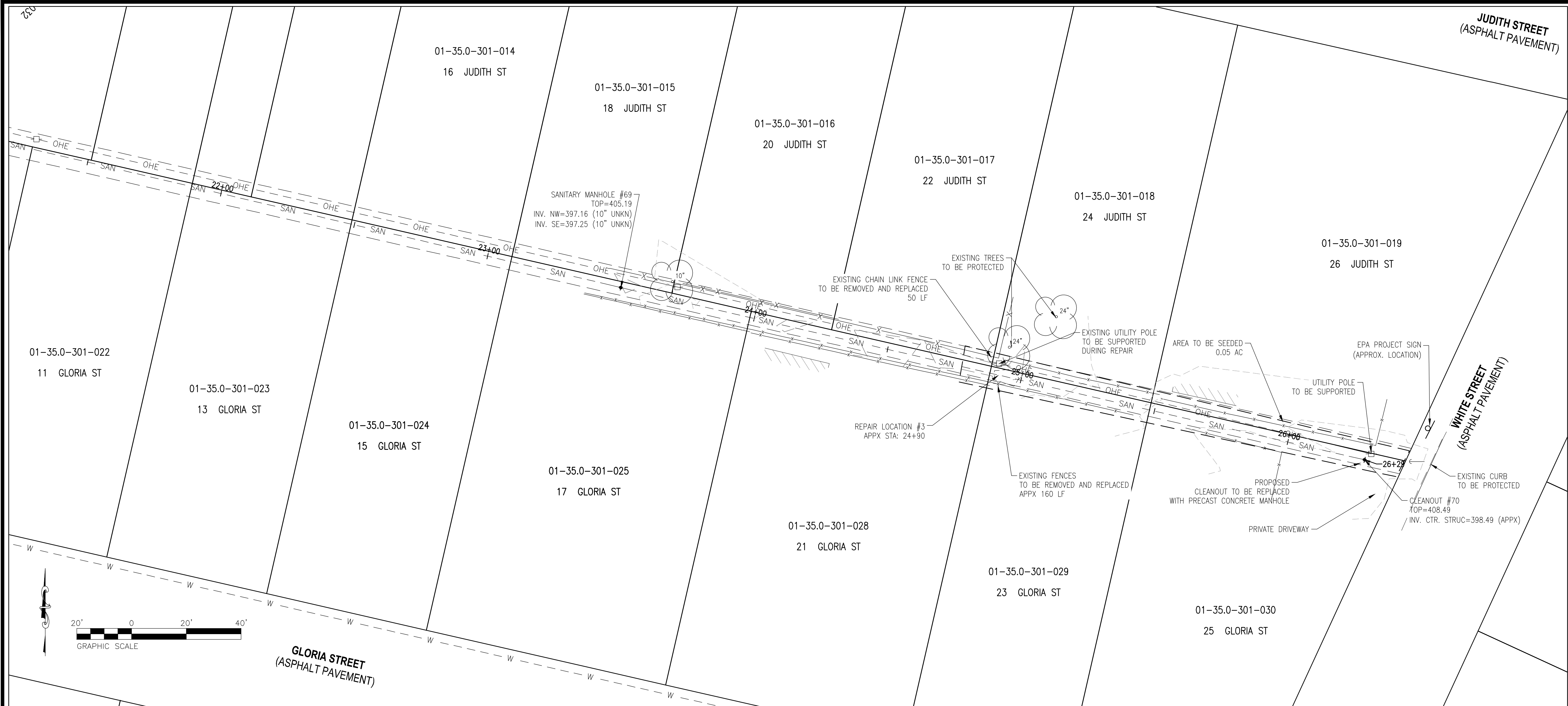
PROJECT:
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

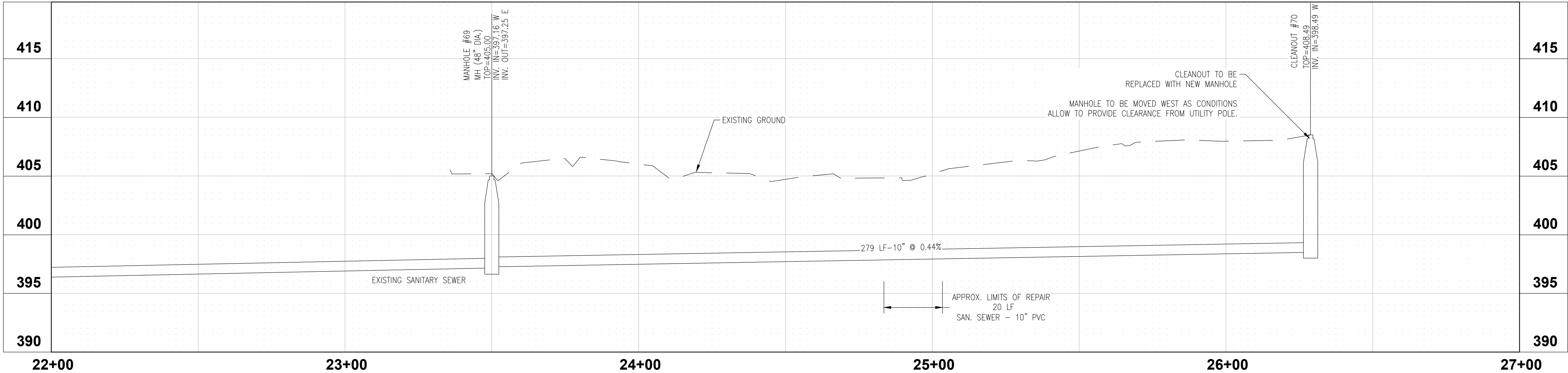
SITE 72-1
3807 MISSISSIPPI AVE
PLAN-PROFILE

C-12





P:\2024\240857\1_CADD - DWG\4.3 Final\240857_Site72.dwg Plotted By: caurliene





CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA


TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

**THOUVENOT, WADE
& MOERCHEN, INC.**

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR DATE OF ISSUANCE		
REV.	DATE	DESCRIPTION
△		
△		
△		
△		

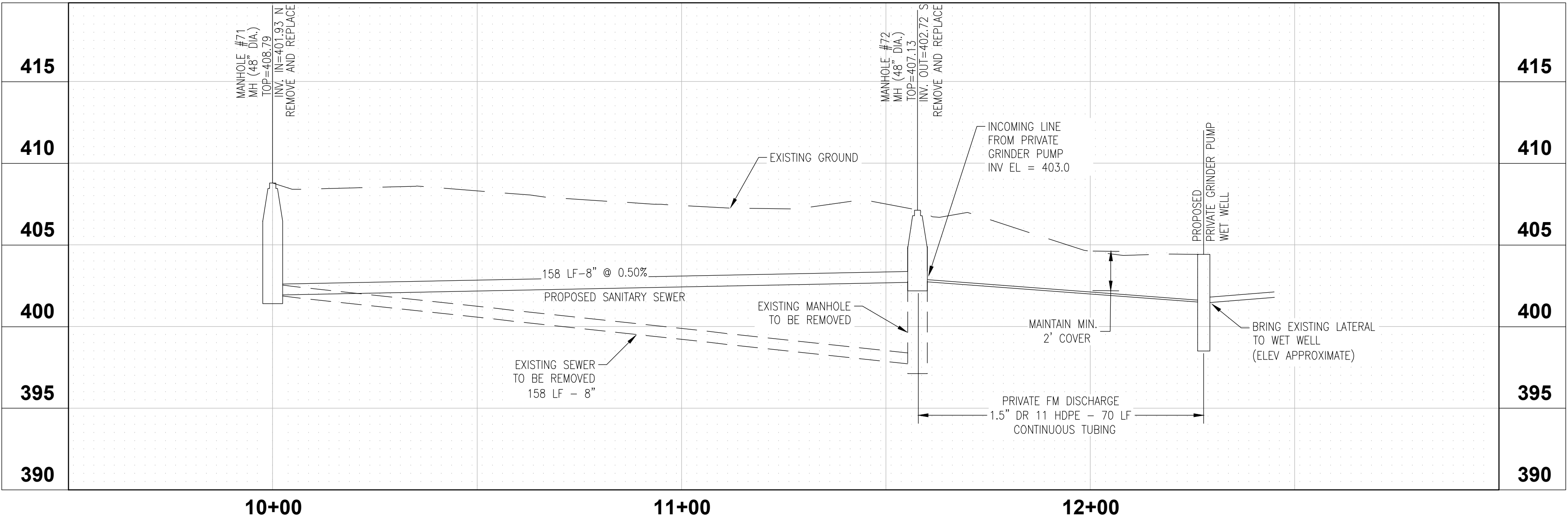
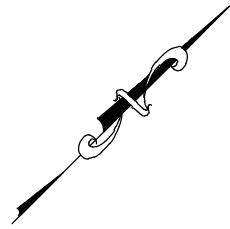
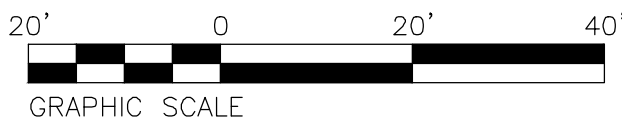
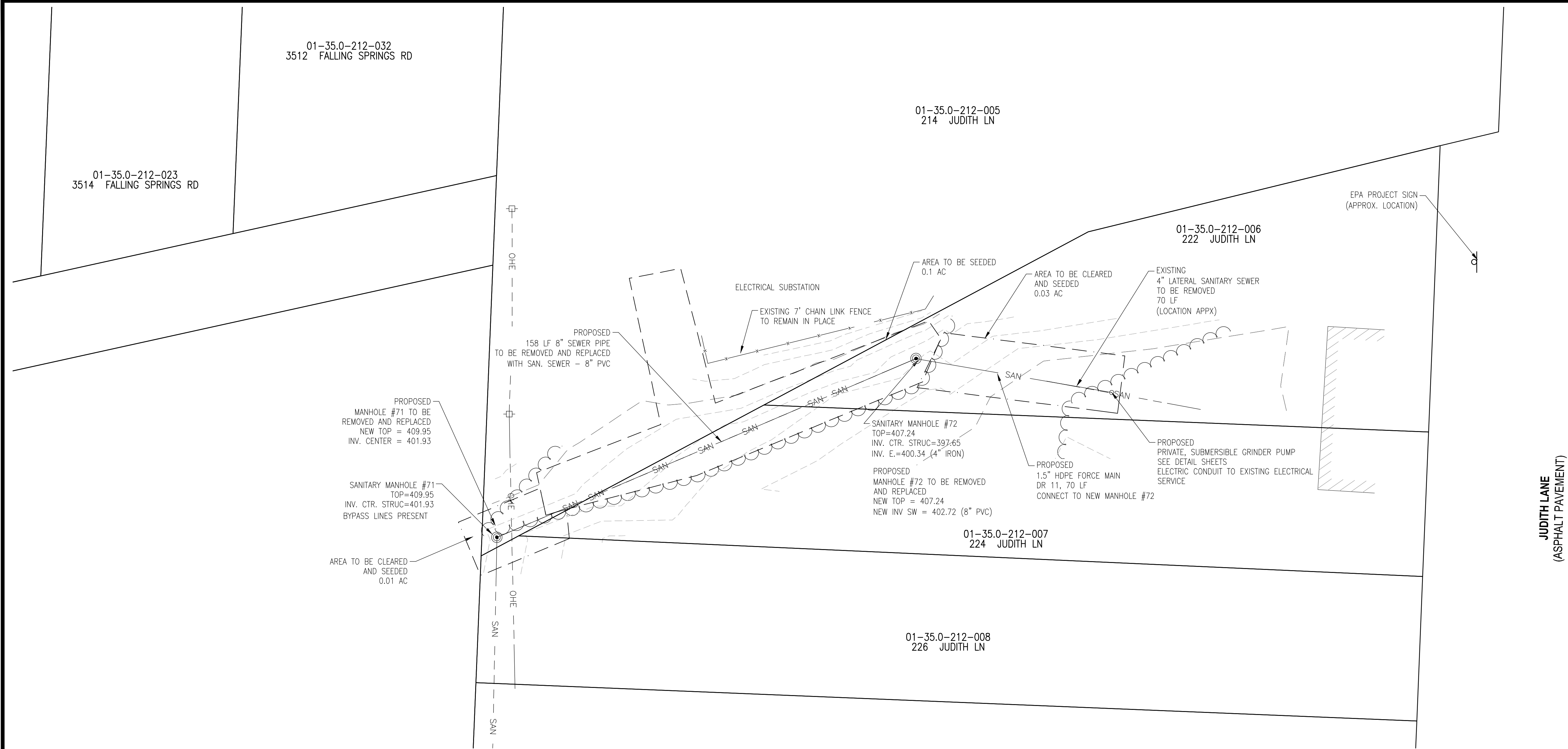
DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

SITE 72-2
24 JUDITH ST
PLAN-PROFILE



CONSULTING ENGINEERING
GEOSPATIAL SERVICES

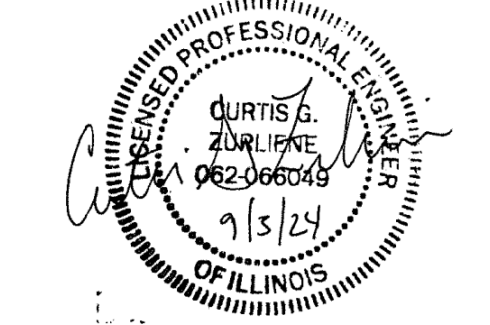
ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR
MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA
TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL



SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

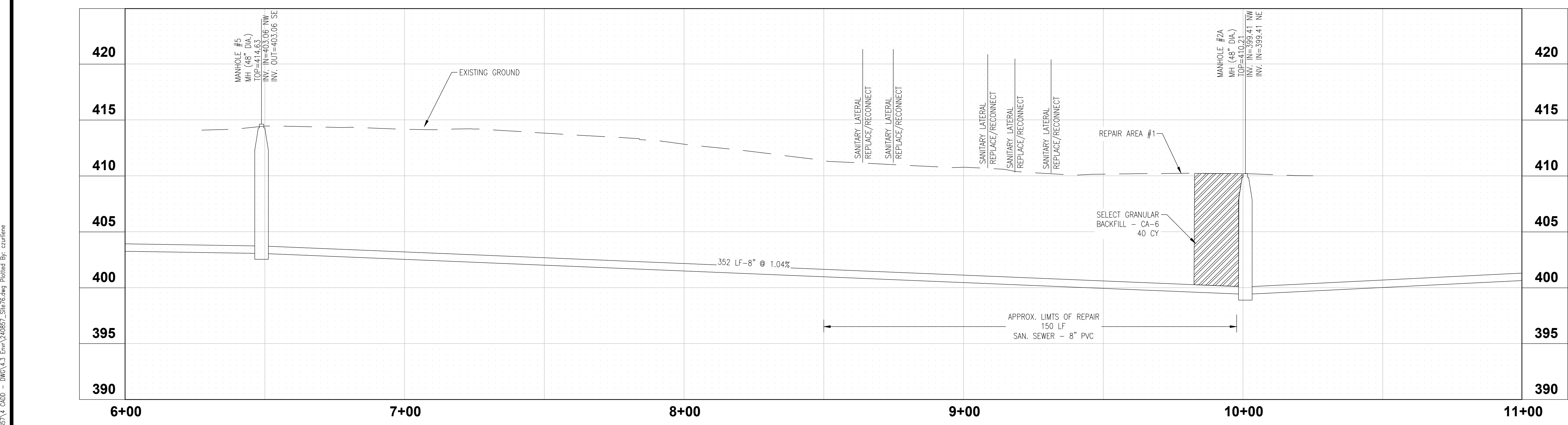
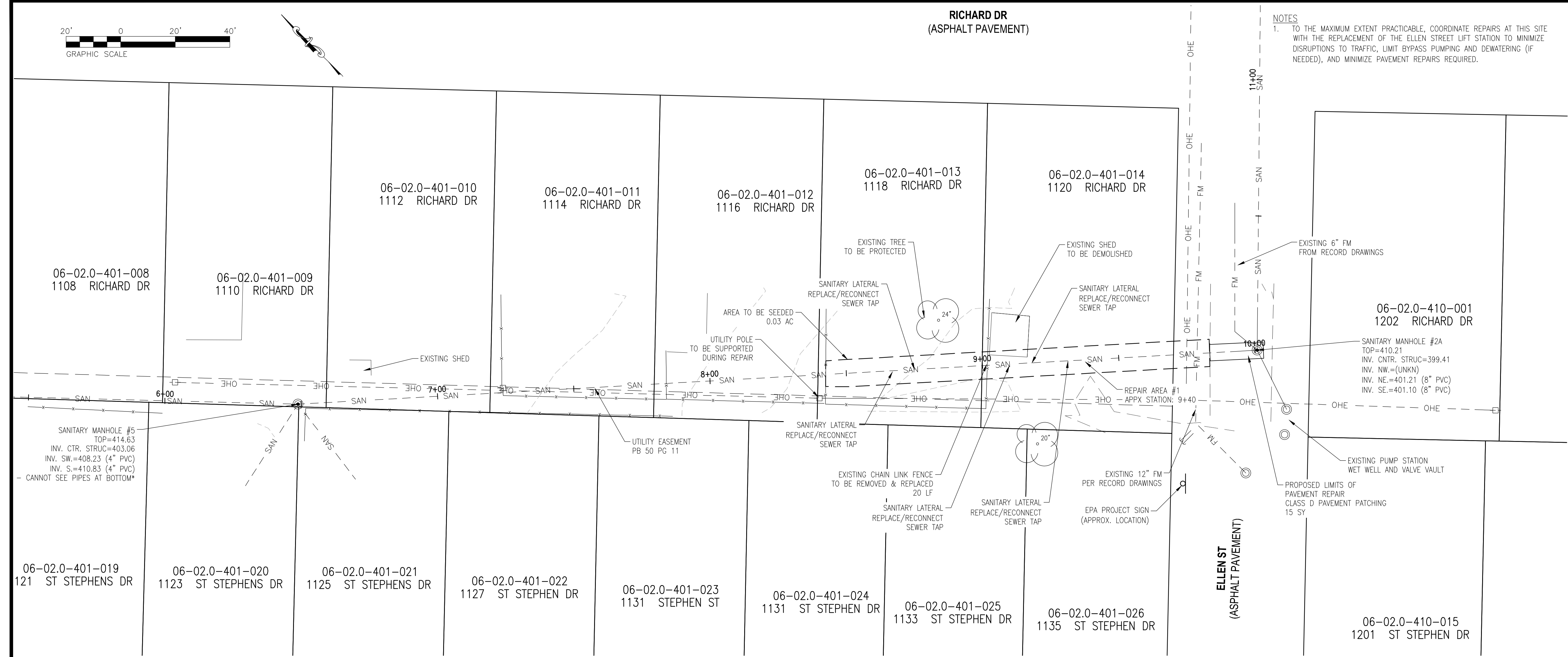
ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:
SITE 73
222 JUDITH LN
PLAN-PROFILE



TWM

CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

MISSOURI ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE NASHVILLE
CHATTANOOGA
ATHENS

**THOUVENOT, WADE
& MOERCHEN, INC.**

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL

SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR
DATE OF ISSUANCE

REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:

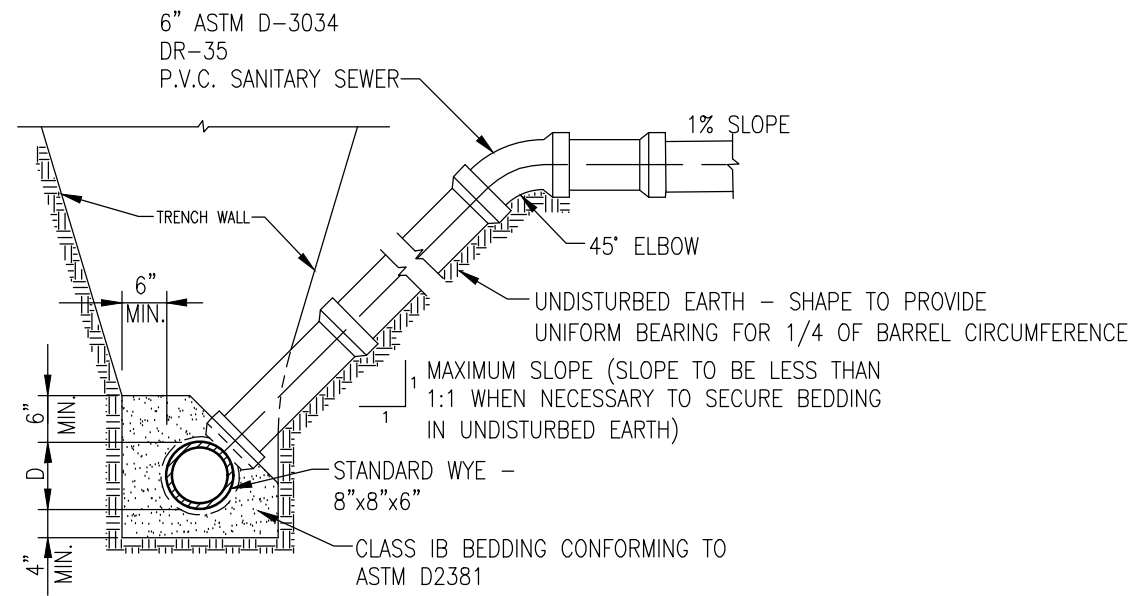
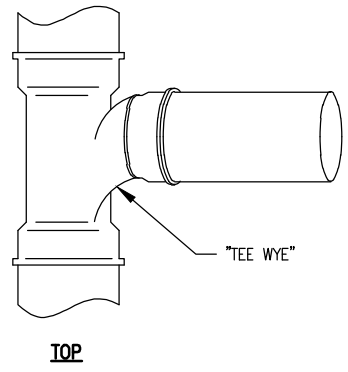
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:

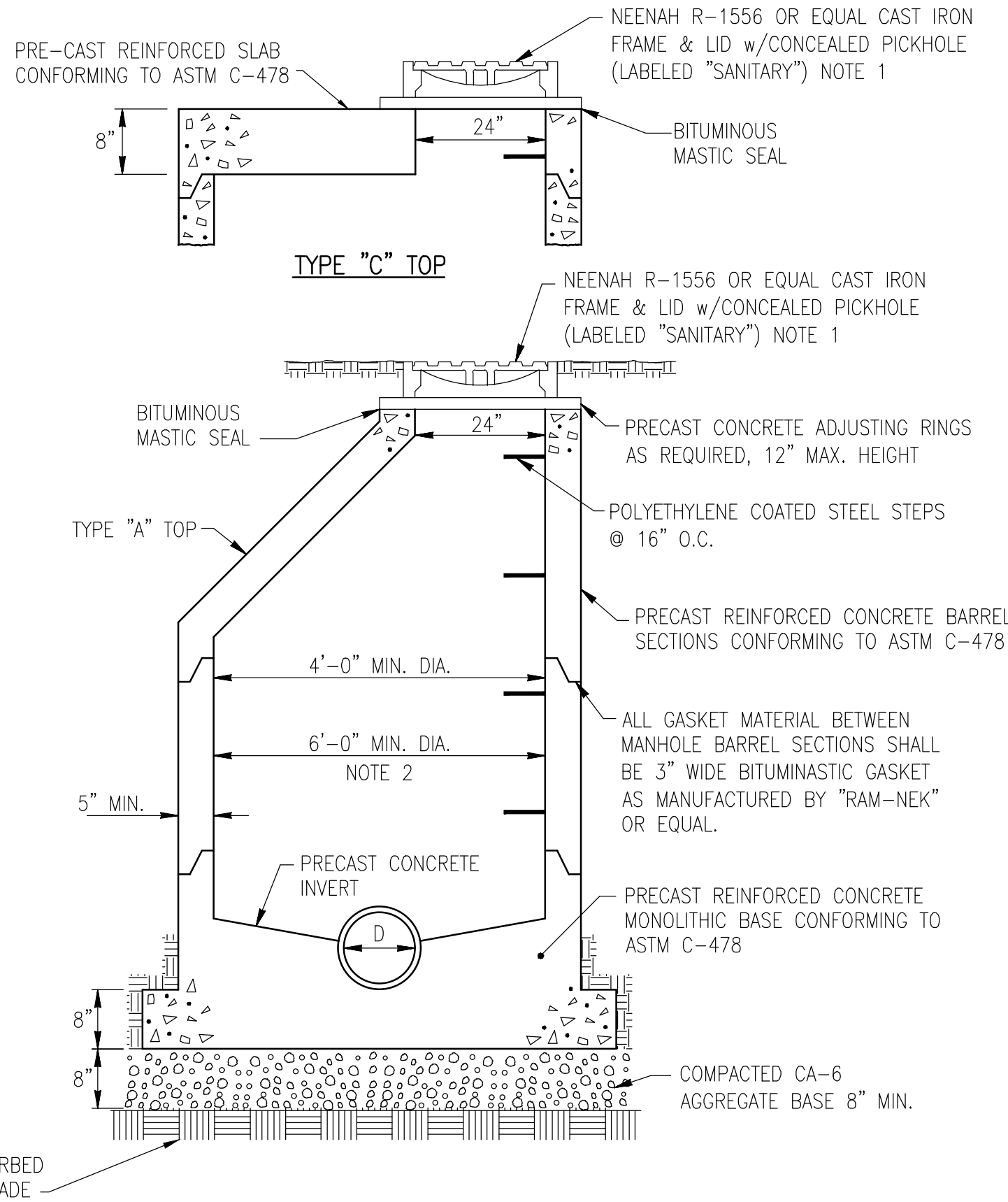
SITE 76
1120 RICHARD DR / ELLEN ST
PLAN-PROFILE

C-16

P:\2024\240857\1_CADD - DWG\4.3_Frm\240857_Site76.dwg Plotted By: czaurlie

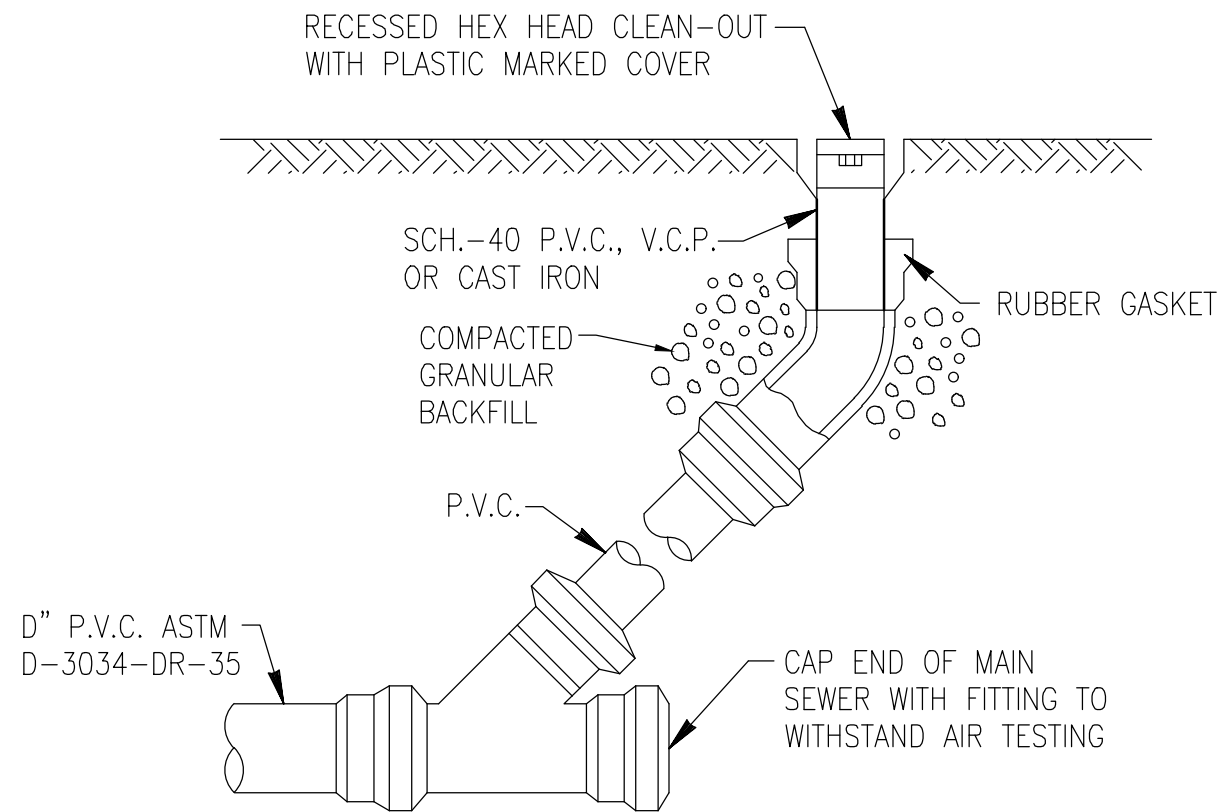


SANITARY SEWER LATERAL



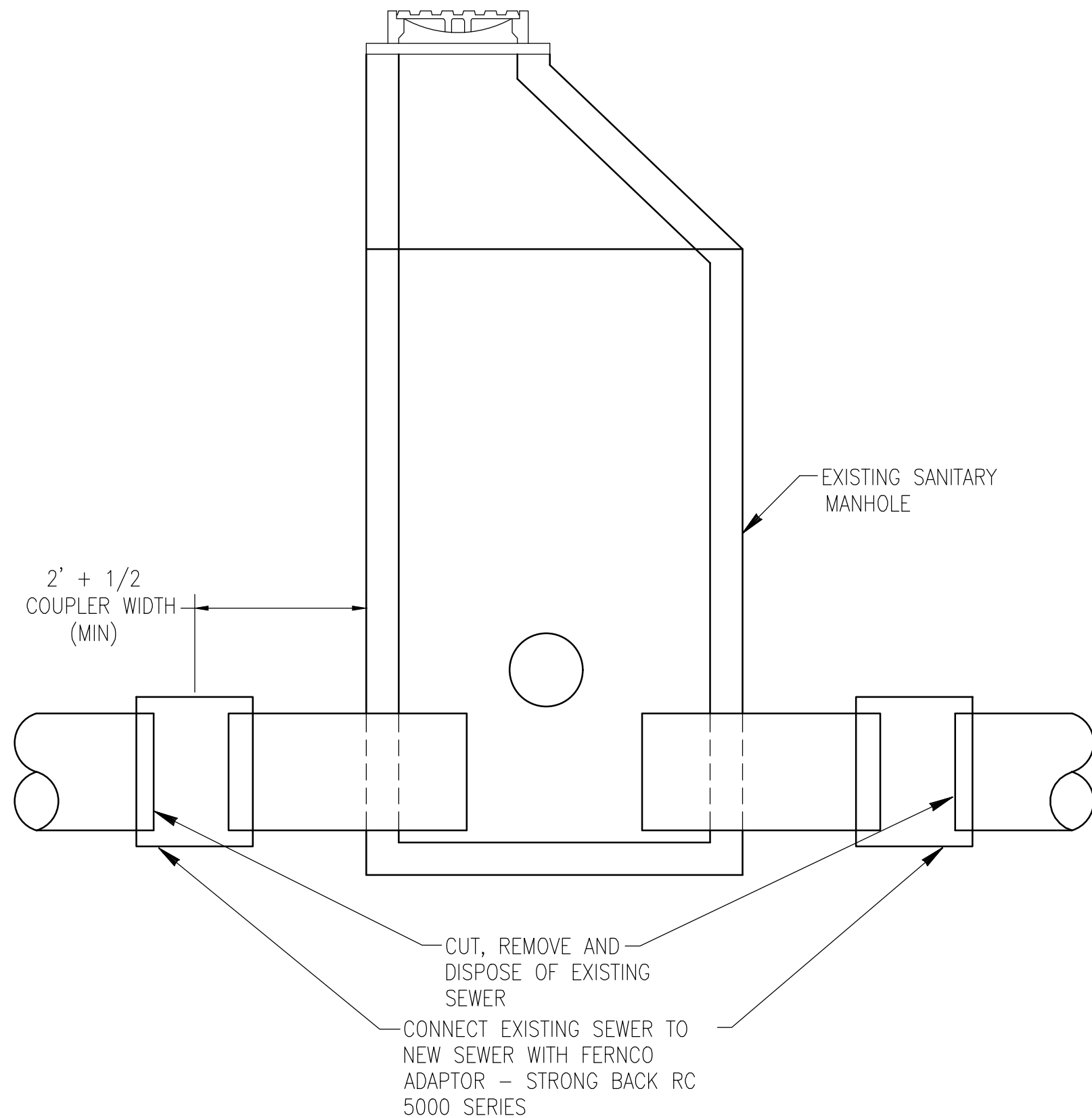
- NOTES:
- 1) MANHOLES LOCATED IN AREAS SUBJECT TO SURFACE WATER SHALL BE FITTED WITH BOLT DOWN WATERPROOF FRAMES AND COVERS W/ ELASTOMERIC SEAL
 - 2) MANHOLES WITH PIPES 27" - 36" OR WHERE GEOMETRY OF PIPE CONFIGURATION REQUIRES SHALL BE A MINIMUM OF 6' IN DIAMETER.

SANITARY SEWER MANHOLE

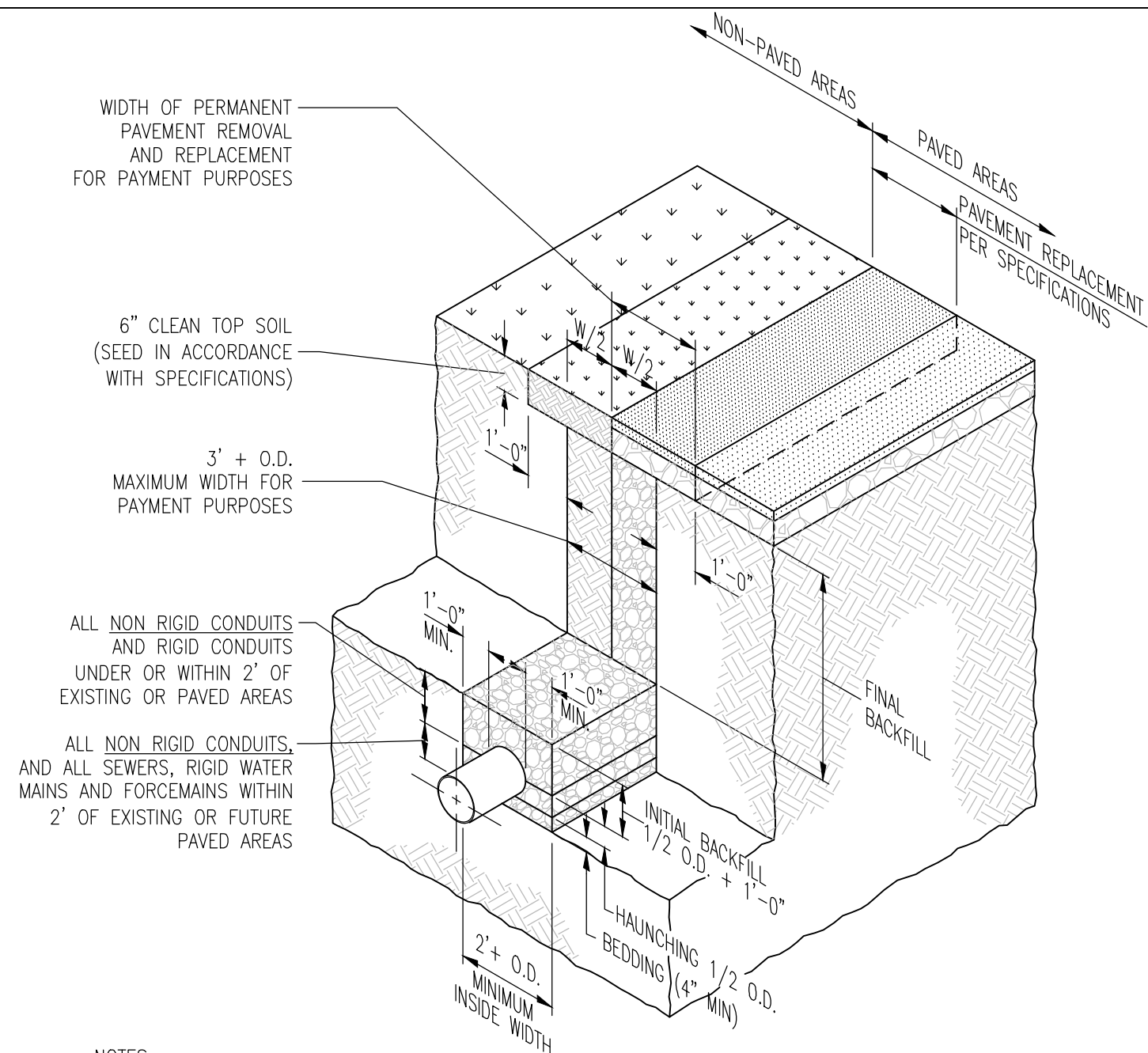


SANITARY SEWER CLEANOUT
IN NON-PAVED AREAS

- NOTES
1. WHEN USING REPAIR COUPLERS NEAR AN EXISTING MANHOLE, MINIMUM "STUB" OUT OF MANHOLE SHALL BE 1/2 COUPLER WIDTH + 2 FEET.
 2. WHEN CONNECTING EXISTING PIPES TO A NEW MANHOLE, PROVIDE RESILIENT CONNECTORS AT THE MANHOLE WITH A MINIMUM STUB OF NEW PIPE PER NOTE 1, AND CONNECT TO EXISTING PIPES USING APPROVED COUPLER.
 2. CONTRACTOR TO VERIFY ALL PIPE SIZES AND MATERIALS PRIOR TO REPAIR.



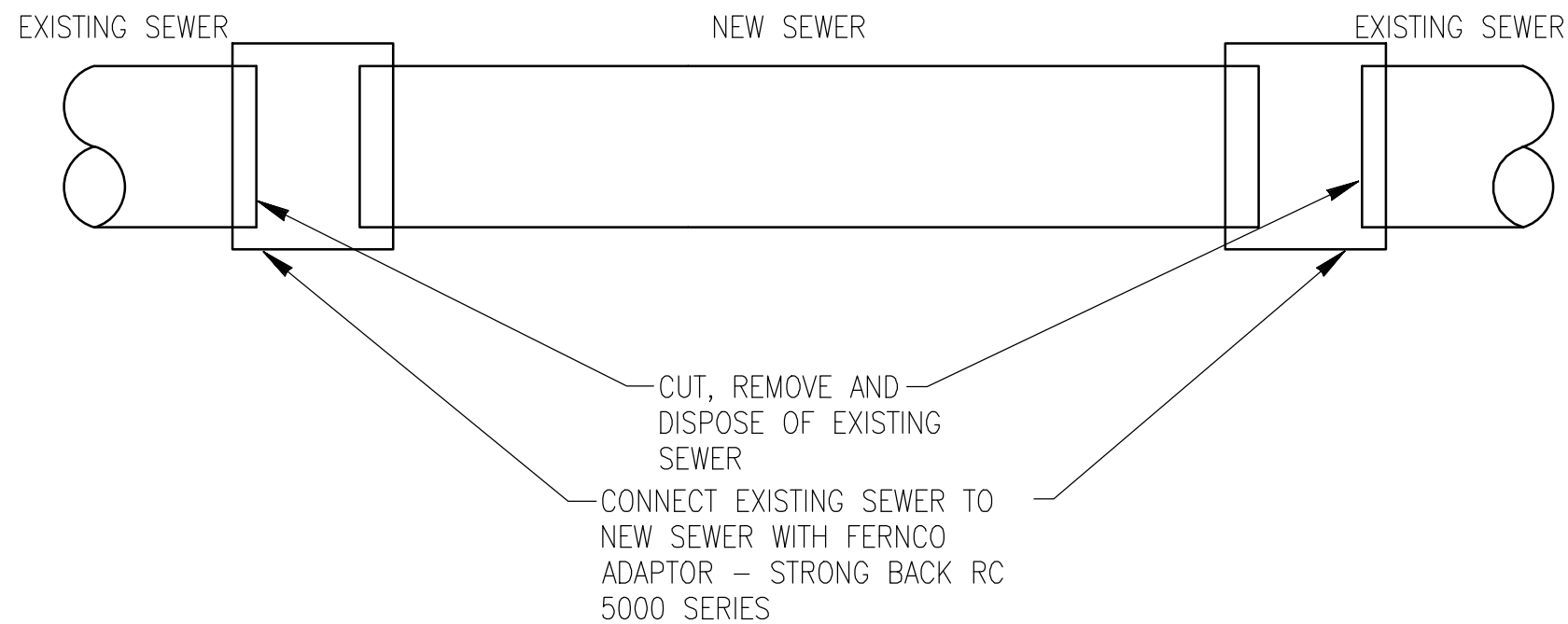
SEWER REPAIR CONNECTIONS
AT NEW/EXISTING MANHOLES



- NOTES:
1. CONTRACTOR SHALL EXCAVATE TRENCH, PROVIDE BEDDING, AND TRENCH BACKFILL IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" AND O.S.H.A. REQUIREMENTS.
 2. BEDDING, HAUNCHING, INITIAL, AND FINAL BACKFILL
- BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL BE CRUSHED GRAVEL OR STONE, GRADATION CA-6, CLASS 1B, CONFORMING TO THE IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION, AND TO ASTM D2321-05 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW INSTALLATIONS."
- FINAL BACKFILL UNDER PAVEMENT OR STRUCTURAL AREAS SHALL BE CRUSHED GRAVEL OR STONE, GRADATION CA-6, CLASS 1B, CONFORMING TO THE IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION, AND TO ASTM D2321-05 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW INSTALLATIONS."
- FINAL BACKFILL UNDER NON-PAVEMENT OR STRUCTURAL AREAS SHALL BE CASE I EXCAVATED MATERIALS FREE FROM ORGANICS, CLODS, FROZEN, OR DELETERIOUS MATERIALS.
- BEDDING, HAUNCHING, INITIAL BACKFILL, AND FINAL BACKFILL SHALL BE EXTENDED A DISTANCE OF THREE (3) FEET BEYOND THE EDGE OF EXISTING STRUCTURAL AREAS (I.E. PAVEMENT, CURB & GUTTER, SIDEWALK, STRUCTURAL AREAS, ETC.)

SANITARY SEWER
BEDDING AND BACKFILL

- NOTES
1. CONTRACTOR TO VERIFY ALL PIPE SIZES AND MATERIALS PRIOR TO REPAIR.
 2. ALL BROKEN, COLLAPSED, DEFORMED, OR OTHERWISE IRREPARABLE SEWER SHALL BE REMOVED AT TIME OF REPAIR.
 3. UPON ENCOUNTERING SEWER SUITABLE FOR CONNECTIONS, ONLY AS MUCH SEWER SHALL BE EXPOSED AS NEEDED TO MAKE THE CONNECTIONS. EXISTING, EXPOSED SEWER TO REMAIN IN PLACE SHALL BE SUPPORTED THROUGHOUT THE REPAIR WITH CONCRETE BLOCKING OR OTHER SUITABLE METHOD UNTIL THE PIPE CAN BE SUFFICIENTLY RE-BEDDED, HAUNCHED, AND BACKFILLED.
 4. COUPLINGS TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.



SEWER REPAIR CONNECTIONS
ALONG SEWER MAIN

CONSULTING ENGINEERING
GEOSPATIAL SERVICES

ILLINOIS

SWANSEA
COLUMBIA
GLEN CARBON
PEORIA
DECATUR

MISSOURI

ST. CHARLES
ST. LOUIS
COLUMBIA

TENNESSEE

NASHVILLE
CHATTANOOGA
ATHENS

THOUVENOT, WADE
& MOERCHEN, INC.

SWANSEA OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS
62226-2025
TEL (618) 624-4488
WWW.TWM-INC.COM

PROF. LICENSE	NUMBER
IL. PROF. DESIGN FIRM	184-001220
IL. PROF. ENGR. CORP.	62-035370
IL. PROF. STR. ENGR. CORP.	81-005202
IL. PROF. LAND SURV. CORP.	048-000029
KS. PROF. ENGR. FACILITY	E-3256
MO. PROF. ENGR. CORP.	001528
MO. LAND SURVEYING CORP.	000346
TN. PROF. ENGR. FIRM	8974

SEAL

SIGNATURE: CURTIS G ZURLIENE
DATE SIGNED: 9/3/2024
LICENSE EXPIRATION: 11/30/2025

ISSUED FOR DATE OF ISSUANCE		
REV.	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: CGZ
DESIGNED BY: CGZ
CHECKED BY:
APPROVED BY:
PROJECT NO: 240857

PROJECT:
CAHOKIA HEIGHTS SEWER REPAIRS
CITY OF CAHOKIA HEIGHTS
ST. CLAIR COUNTY, ILLINOIS

TITLE:
TYPICAL DETAILS

P:\2024\240857\4 CADD - DWG\4.3 Envr\240857_Details.dwg Plotted By: czurliene