

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT RALEIGH, NORTH CAROLINA

NEUSE RIVER EAST PARALLEL INTERCEPTOR

HAZEN CONTRACT No. 32426-000
TOWN OF KNIGHTDALE PROJECT #ZCP-3-20
NOVEMBER 2020

Project Data Sheet



DEVELOPMENT SERVICES DEPARTMENT

Development Services Customer Service Center | 1 Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2495
Litchford Satellite Office | 8320 - 130 Litchford Road | Raleigh, NC 27601 | 919-996-4200

GENERAL INFORMATION

Development Name: Neuse River East Parallel Interceptor **Proposed Use:** Public Sanitary Sewer

Property Address(es): Multiple

Wake County Property Identification Number(s) (PIN) for each parcel to which these guidelines will apply:

PIN #	PIN #	PIN #	PIN #

What is the project type? Apartment Bank Elderly Facility Hospital Hotel/Motel Industrial Building Mixed Residential Non-Residential Condo Office Religious Institution Residential Condo Retail School Shopping Center Single Family Residential Telecommunication Tower Townhouse Other

Scope of Work: Construction of 29,199 LF of gravity sewer along the Neuse River from the City of Raleigh NRRRF to Anderson Point Park.

FOR APARTMENTS, CONDOS, AND TOWNHOMES ONLY

1. Total number of townhouse lots: N/A Number attached: Number detached:

2. Total number of apartment or condominium units:

3. Total number of Congregate Care or Life Care Dwelling units:

4. Overall total number of dwelling units (from 1-3 above):

5. Number of bedroom units: 1BR 2BR 3BR 4BR or more

6. Overall unit(s) per acre densities per zoning district(s):

DEVELOPMENT TYPE AND SITE DATA TABLE (applicable to all developments)

Zoning Information	Building Information
Zoning District(s):	Proposed use of building(s):
If more than one district, provide acreage of each:	Proposed Sq. Ft. of building(s) gross:
Overlay District(s):	Existing Sq. Ft. of building(s) gross:
Total site acreage:	Total Sq. Ft. gross (existing and proposed):
Off street parking: Required Provided	Proposed height of building(s):
COA (Certificate of Appropriateness) case #	FAR (floor area ratio) %:
BOA (Board of Adjustment) case # A -	Building lot coverage %:
CUD (Conditional Use District) case # Z -	Inside City Limits? <input type="checkbox"/> Yes <input type="checkbox"/> No

STORMWATER INFORMATION

Existing impervious surface: acres/square feet

Proposed impervious surface: acres/square feet

Neuse River buffer: Yes No Wetlands: Yes No

Flood Hazard Area: Yes No If yes, Alluvial Soils: Yes Flood Study: FEMA Map Panel #:

Total disturbed area: acres/square feet

PAGE 1 OF 1

WWW.RALEIGHNC.GOV

REVISION 03.22.16

DISTURBED AREA BREAKDOWN:

- CITY OF RALEIGH - 4 acres
- TOWN OF KNIGHTDALE - 32 acres
- WAKE COUNTY - 79 acres

Number of Lot (s)	N/A
Lot Number (s) by Phase	N/A
Number of Units	N/A
Livable Buildings	N/A
Open Space?	N/A
Number of Open Space Lots	N/A
Public Water (LF)	0
Public Sewer (LF)	29199
Public Street (LF)	
Public Sidewalk (LF)	
Street Signs (LF)	
Water Service Stubs	0
Sewer Service Stubs	



Raleigh

Hazen

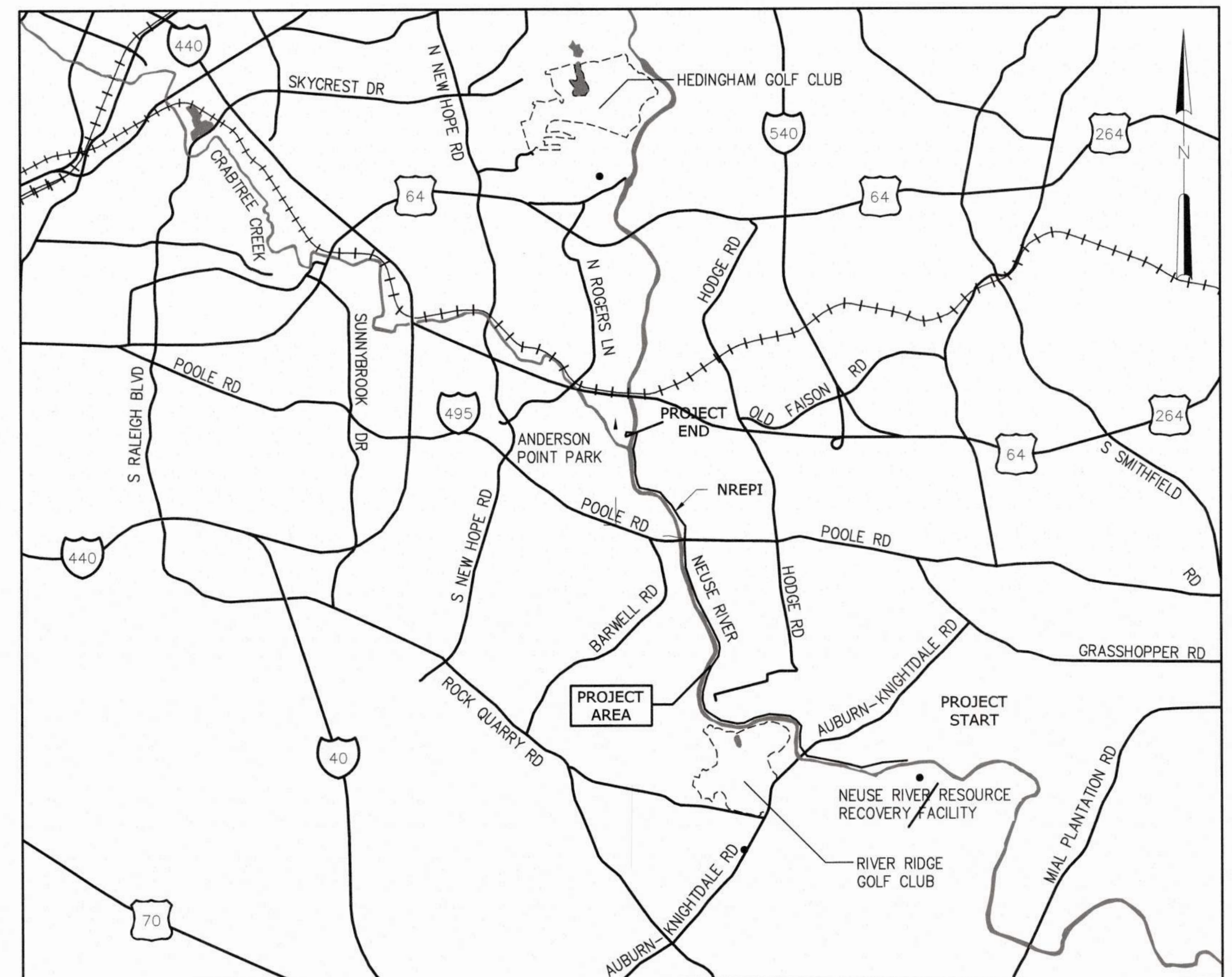
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381



320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CJS PROJECT NO. 001-002

FINAL DESIGN - ISSUED FOR BID



LOCATION MAP

1" = 5000'

a. **Town Approved Standards Shall Control.** In the event of a conflict or inconsistency between these construction drawings and the Town of Knightdale's Approved Standards for this project, the Approved Standards shall control. Town of Knightdale Approved Standards shall mean all development documents necessary for approval for the Property including, but not limited to, any special use permit, subdivision plan, site plan, subdivision plat(s), phasing schedule, Development Agreement, Utility Allocation Agreement, Annexation Agreement, the Town of Knightdale Standard Specification and Details Manual and applicable provisions of the North Carolina State Building Code.

b. **Professional Design Engineer Certification.** These improvements shall be constructed in accordance with the following drawings and with the Standard Specifications of the Town of Knightdale. I, _____, PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) _____ of these drawings.
Seal _____, PE
Date: _____

a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Works Department at (919) 996-2499, and the Public Utilities Department at (919) 996-4540 in at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected in a permit, or this notification failure.

Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

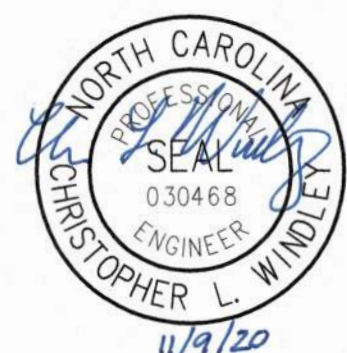
SITE PERMITTING APPROVAL

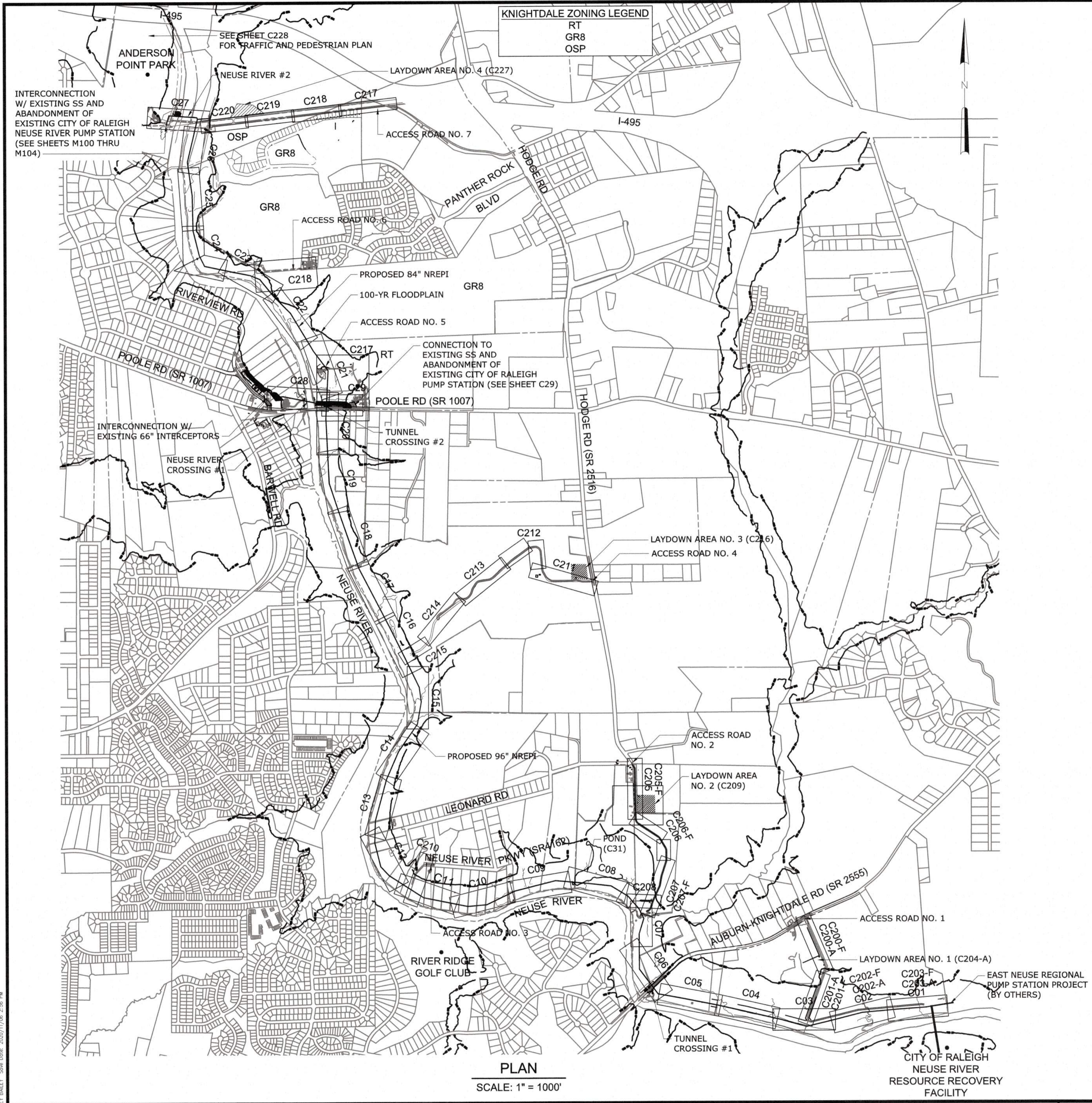
WATER AND SEWER PERMITS (IF APPLICABLE)
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan, the material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # _____
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan, the material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan, the material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all local, State, and Federal Rules and Regulations.
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval
Raleigh Water Review Officer





PLAN
SCALE: 1" = 1000'

CITY OF RALEIGH
NEUSE RIVER
RESOURCE RECOVERY
FACILITY

LINETYPE	
EXISTING	PROPOSED
W — WATER LINE	LOD — LIMITS OF DISTURBANCE
FM — SANITARY SEWER	PERMANENT EASEMENT
FM — FORCE MAIN	TCE — TEMPORARY CONSTRUCTION EASEMENT
E — ELECTRIC	CLEARING LIMITS
T — TELEPHONE	SF — SILT FENCE
GAS — NATURAL GAS	SSF — SUPER SILT FENCE
FOC — FIBER OPTIC CABLE	TPF — TREE PROTECTION FENCE
CATV — CABLE TV	SF / TPF — SILT FENCE / TREE PROTECTION FENCE
OHE — OVERHEAD ELECTRICAL	CLEAN WATER DIVERSION DITCH
UGE — UNDERGROUND ELECTRICAL	SEDIMENT CONTAINMENT TRENCH
X — FENCE	X — FENCE
STRUCTURE	INDEX CONTOUR
TREELINE	INTERMEDIATE CONTOUR
150 — INDEX CONTOUR	PROPERTY LINE
INTERMEDIATE CONTOUR	EASEMENT LINE
108 — 108 — TOP OF BANK	100 FP — 100-YR FLOODPLAIN
Z1 — Z1 — BUFFER ZONE 1	
Z2 — Z2 — BUFFER ZONE 2	

PROJECT CONTACT INFORMATION	
1. PROJECT OWNER: CITY OF RALEIGH RALEIGH WATER DENNIS LASSITER, PE CONSTRUCTION PROJECTS ADMINISTRATOR (919) 996-3474 Dennis.lassiter@raleighnc.gov	
2. PROJECT ENGINEERS: HAZEN & SAWYER TOM TANT, PE PROJECT DIRECTOR (919) 833-7152 ttant@hazenandsawyer.com	
CJS CONVEYANCE, PLLC CHRIS WINDLEY, PE PROJECT MANAGER (919) 890-3879 cwindley@cjsconveyance.com	
3. CITY OF RALEIGH PARK, RECREATION AND CULTURAL RESOURCES DAVID BENDER CAPITAL PROJECT MANAGER (919) 996-4798 David.bender@raleighnc.gov	
4. TOWN OF KNIGHTDALE PLANNING DEPARTMENT CHRIS HILLS, AICP, CZO (919) 217-2240 Chris.Hills@knightdalenc.gov	
5. WAKE COUNTY WATER QUALITY DIVISION MICHAEL ORBON, PE WATER QUALITY DIRECTOR (919) 850-7400 Michael.Orbon@wakegov.com	
6. NCDOT DISTRICT 1 OFFICE DISTRICT ENGINEER AMY NEIDRINGHUAS, PE (919) 733-3213 anneidringhuas@ncdot.gov	
7. DUKE ENERGY TRANSMISSION BRUCE PAIT (919) 431-4831 Bruce.Pait@duke-energy.com	
8. AQUA NORTH CAROLINA KYLE MCKAY (919) 653-6973 EXT. 56973 kcmckay@aquamerica.com	

MATERIALS		
ASPHALT PAVING	GRAVEL	WETLAND
CONCRETE	DIRT	RIPRAP

SYMBOLS	
EXISTING	PROPOSED
⊙ — SANITARY MANHOLE	● — SANITARY MANHOLE
⊕ — POWER POLE	⊙ — SANITARY MANHOLE (BY OTHERS)
⊗ — LIGHT POLE	— STONE RELIEF OUTLET
↑ — GUY WIRE	▨ — LEVEL SPREADER
⊗ — VALVE	⊕ — SCOUR HOLE
⊕ — WATER METER	▨ — CREEK FORD
⊕ — WATER VALVE	□ — PERMIT BOX
⊕ — GAS VALVE	□ — CONCRETE WASHOUT PIT
	▨ — AREAS STABILIZED WITHIN 7 DAYS
	W# — WETLAND IMPACT ID
	S# — STREAM IMPACT ID
	B# — BUFFER IMPACT ID

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval

a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
**NEUSE RIVER EAST
PARALLEL INTERCEPTOR**

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	G01

PLOT DATE: 2020/11/06 4:36:32 PM BY: JETTY BAILEY
 File: C:\US\HAZEN-PW\KINGSTON\Drawn By: JETTY BAILEY

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY SIZE, DEPTH, LOCATION AND MATERIAL OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- THE UNDERGROUND UTILITIES INDICATED ON THE PLANS HAVE BEEN TAKEN FROM INFORMATION MADE AVAILABLE FROM THE VARIOUS UTILITY OWNERS AND LIMITED SUBSURFACE UTILITY INVESTIGATIONS. THIS INFORMATION IS NOT INCLUSIVE OF ALL EXISTING UNDERGROUND UTILITIES AND CABLES. THE CONTRACTOR IS ADVISED THAT ADDITIONAL UNDERGROUND UTILITIES AND CABLES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. PLEASE BE ADVISED THAT THE UNDERGROUND UTILITIES AND CABLES COULD CONFLICT WITH THE SEWER MAIN CONSTRUCTION AS SHOWN. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ALL POTENTIAL CONFLICTS.
- THE CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ANY UTILITIES, STRUCTURES, POWER POLES, PIPE LINES AND CONDUITS WHICH MAY BE ENCOUNTERED DURING COMPLETION OF THE WORK AT NO ADDITIONAL COST TO THE OWNER. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR OR UTILITY OWNER (WHERE REQUIRED) TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND COMPLY WITH THE CITY'S CURRENT HANDBOOK.
- CONTRACTOR SHALL REMOVE/RESET/REPLACE ALL DISTURBED MAILBOXES, SIGNS, PROPERTY IRONS, ETC. IN LIKE KIND OR BETTER CONDITION. COST INCURRED FOR THESE INCIDENTAL ITEMS SHALL BE INCLUDED IN UNIT PRICE BID ITEMS. PROPERTY IRONS/MONUMENTS MUST BE REPLACED BY A N.C. PLS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL PROCEDURES, PRACTICES, AND METHODS OF CONSTRUCTION AS DICTATED BY THE CITY OF RALEIGH AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
- CONTRACTOR TO INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
- ACCESS TO EACH RESIDENCE AND BUSINESS SHALL BE MAINTAINED AT ALL TIMES.
- CONTRACTOR TO PLACE ALL SPOIL MATERIAL ON THE UPHILL SIDE AWAY FROM ALL ROAD SIDE DITCHES, CREEKS AND WATER COURSES DURING CONSTRUCTION.
- ALL DISTURBED DITCH LINES SHALL BE RESHAPED, RESEDED, MULCHED AND TACK COAT APPLIED, TO PRE-CONSTRUCTION LINE, GRADE, AND SHAPE UNLESS SHOWN OTHERWISE.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE PROJECT AND UNTIL A GOOD STAND OF GRASS IS ESTABLISHED. SEE DETAIL EC.1.1 AND EC.1.2 FOR ADDITIONAL DETAILS.
- CONTRACTOR TO MINIMIZE PLACEMENT OF EXCAVATION MATERIAL ON ROAD DURING CONSTRUCTION. CONTRACTOR TO COVER ASPHALT WITH SAND OR SCREENINGS PRIOR TO PLACEMENT OF EXCAVATED MATERIAL ON PAVEMENT. ALL STREETS SHALL BE CLEANED DAILY, UNLESS THE SECTION OF ROAD IS CLOSED TO TRAFFIC.
- NO NEW SEWER SHALL BE LOCATED WITHIN A 25 FOOT RADIUS OF AN EXISTING POTABLE WATER WELL. IF THE SEWER DESIGN CONFLICTS WITH THIS RULE, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY. CONTRACTOR SHALL NOT PROCEED WITH SEWER INSTALLATION IN AREA OF CONFLICT UNTIL DIRECTED TO DO SO BY ENGINEER IN WRITING.
- ALL LAND DISTURBANCES SHALL BE MAINTAINED WITHIN THE PERMANENT AND TEMPORARY EASEMENTS AS INDICATED ON THE PLANS. IF CONTRACTOR REQUIRES ADDITIONAL AREA FOR CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL NOTIFY ENGINEER AS SOON AS POSSIBLE AND NOT OCCUPY ADDITIONAL AREA UNTIL THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS REVISED AND APPROVED BY NCDEQ. CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED W/PERMIT MODIFICATIONS. IN CERTAIN CIRCUMSTANCES ADDITIONAL PERMITS MAY BE REQUIRED AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- REINFORCED SILT FENCE OUTLETS AND WOODMATS OR TEMP. BRIDGE SHALL BE USED AT ALL STREAM AND DITCH CROSSINGS UNLESS THE CONTRACTOR CHOOSES TO INSTALL THE DESIGNATED CREEK/STREAM FORD CROSSING PER THE PLANS AND SPECIFICATIONS. PROVIDE REINFORCED OUTLETS ALONG PERIMETER SILT FENCE IN LOW LYING AREAS AND AT SHARP ANGLE CHANGES LESS THAN 90 DEGREES. ALL WOODMATS OR TEMP BRIDGES MUST REMAIN IN PLACE UNTIL CROSSING IS STABILIZED AS SHOWN ON THE PLANS.
- ALL INGRESS AND EGRESS TO PROJECT AREA MUST BE PERFORMED THROUGH TEMPORARY CONSTRUCTION ENTRANCES.
- AT CHANNEL OR STREAM CROSSINGS CONTRACTOR SHALL PROVIDE RIP-RAP AS SHOWN. AT LOCATIONS NOT REQUIRING RIP-RAP CONTRACTOR SHALL PROVIDE APPROPRIATE TEMPORARY GROUND COVER IMMEDIATELY FOLLOWING LAND DISTURBANCE OR UTILIZE BIODEGRADABLE STRAW BLANKET UNTIL GROUND COVER CAN BE ESTABLISHED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING STORM DRAINAGE DURING CONSTRUCTION, SUCH THAT PRE-EXISTING DRAINAGE CAPACITY IS CONTINUOUSLY PROVIDED. TEMPORARY STORM BASINS, PIPES, AND PUMPS SHOULD BE USED IF NECESSARY. PERMANENT STORM DRAINAGE STRUCTURES AND PIPES SHALL BE REPLACED AS SOON AS POSSIBLE.
- CONTRACTOR SHALL TAKE STEPS NECESSARY TO PROTECT EXISTING UTILITIES FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION INCLUDING BLASTING. A PORTION OF THE CONSTRUCTION WILL OCCUR PARALLEL TO THE CITY'S EXISTING SEWER MAINS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGED UTILITIES, SPILLS, CONTAMINATIONS, CLEANUP, VIOLATIONS, FINES, ETC. CAUSED BY CONSTRUCTION OF THIS PROJECT (INCLUDING BLASTING).
- CONTRACTOR SHALL FIELD VERIFY ALIGNMENT AND ELEVATION OF EACH EXISTING SANITARY SEWER LINE THAT INTERCONNECTS TO THE NEW SEWER MAIN(S) PRIOR TO RELEASING MANHOLES FOR MANUFACTURE. ADVISE ENGINEER OF ANY DISCREPANCIES.
- CREEK CROSSINGS AND DITCHES REQUIRING RIP-RAP SHALL HAVE THE RIP-RAP PLACED WITHIN 24-HOURS OF PIPE INSTALLATION IN THAT AREA.
- CONTRACTOR SHALL NOT USE GREENWAY OUTSIDE LIMITS OF DISTURBANCE SHOWN ON PLANS FOR CONSTRUCTION RELATED ACTIVITIES, OTHER THAN FOR TEMP. ACCESS SHOWN ON PLANS.
- WHERE GREENWAY NEEDS TO BE REPLACED, CONTRACTOR SHALL COORDINATE WITH OWNER'S FIELD REPRESENTATIVE FOR FINAL ALIGNMENT.
- PIPE CLASSES SPECIFIED ON THE PROFILES ARE BASED UPON LIMITED GEOTECHNICAL DATA AND ARE THE REQUIRED MINIMUM. FINAL PIPE CLASSES WILL BE CONFIRMED BY THE ENGINEER PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY THE CITY OF RALEIGH PARKS & REC. DEPT. A MINIMUM OF 45 DAYS PRIOR TO CONSTRUCTION AND COORDINATE GREENWAY DETOURS/CLOSURES WITH DEPT. STAFF.
- 100-YR FLOOD ELEVATION INFORMATION INDICATED IN PIPE PROFILE AND USED FOR COMPLIANCE TO FEMA FLOOD RULES IS BASED ON THE CURRENT FIRM 100-YR BASE FLOOD ELEVATIONS.
- ALL STORM DRAINAGE TO BE REPLACED AT THE EXISTING ELEVATION AND LOCATIONS UNLESS NOTED OTHERWISE.
- IN INSTANCES THE PLANS REFER TO OBJECTS AS "TO BE REMOVED AND REPLACED", IT IS THE INTENT OF THE NOTE TO MEAN THAT THE OBJECTS WILL BE REMOVED AND REPLACED AS MUCH THAT HAS BEEN DISTURBED, OR AS NECESSARY.
- CONTRACTOR SHALL BYPASS PUMP TO REMOVE FLOW FROM ALL EXISTING SANITARY SEWER LINES THAT HAVE TO BE CROSSED DURING INSTALLATION OF THE NEW SEWER. FLOW SHALL NOT BE RETURNED TO EXISTING SEWER UNTIL THE NEW SEWER LINE IS INSTALLED AND COMPLETELY BACKFILLED. CONTRACTOR WILL BE REQUIRED TO SUBMIT DETAILED TEMPORARY PIPE SUPPORT AND BYPASS PUMP PLAN FOR EACH PIPE TO BE CROSSED FOR APPROVAL BY OWNER AND ENGINEER PRIOR TO IMPLEMENTATION. IF THE CONTRACTOR PREFERENCES TO REMOVE AND REPLACE THE EXISTING PIPE, A DETAIL R/R PLAN MUST BE SUBMITTED FOR APPROVAL BY OWNER AND ENGINEER WITH BYPASS PUMP PLAN.
- CONTRACTOR MAY REMOVE TEMPORARY SLOPE DRAIN LINE TO INSTALL GRAVITY SEWER LINE. TEMPORARY SLOPE DRAINS SHALL BE REINSTALLED BY THE END OF THE DAY THAT THEY ARE REMOVED.
- WATER AND SEWER SERVICES TO REMAIN ACTIVE AT ALL TIMES EXCEPT DURING CONNECTION OF SERVICE TO NEW MAIN. COORDINATE ANY SERVICE INTERRUPTION WITH CORPUD AND OWNER/OCCUPANT.
- ON ALL OFFSET MANHOLE VENT STACKS, CONTRACTOR SHALL COORDINATE LOCATION OF THE VENT W/OWNER'S FIELD REPRESENTATIVE PRIOR TO INSTALLATION.
- SILT BAGS WILL BE USED FOR DEWATERING WORK AREAS INCLUDING DEWATERING SUMP AND BASINS.
- ALL MANHOLE FRAME AND COVERS SHALL BE WATER TIGHT AND LOCKABLE PER THE DETAILS.

SEE SHEET G03 FOR ADDITIONAL GENERAL NOTES

INDEX OF DRAWINGS

DRAWING NUMBER	DESCRIPTION	DRAWING NUMBER	DESCRIPTION
GENERAL		SITE ACCESS CONT.	
G01	COVER	C213F	PERMANENT ACCESS ROAD @ HODGE RD NO. 4
G02	KEY MAP AND LEGEND	C214F	PERMANENT ACCESS ROAD @ HODGE RD NO. 4
G03	SHEET INDEX AND GENERAL NOTES	C215F	PERMANENT ACCESS ROAD @ HODGE RD NO. 4
	GENERAL NOTES	C217	"LIMITED" ACCESS ROAD NO. 5
		C218	"LIMITED" ACCESS ROAD NO. 6
		C219	ACCESS ENTRANCE ROAD @ HODGE RD NO. 7
		C220	ACCESS ENTRANCE ROAD @ HODGE RD NO. 7
		C221	ACCESS ENTRANCE ROAD @ HODGE RD NO. 7
		C222	ACCESS ENTRANCE ROAD @ HODGE RD NO. 7
		C223	ACCESS EXIT ROAD @ HODGE RD NO. 7
		C224	ACCESS EXIT ROAD @ HODGE RD NO. 7
		C225	ACCESS EXIT ROAD @ HODGE RD NO. 7
		C226	ACCESS EXIT ROAD @ HODGE RD NO. 7
		C227	LAYDOWN AREA NO. 4 @ HODGE RD
		C228	ANDERSON POINT PARK TRAFFIC AND PEDESTRIAN CONTROL PLAN
		C229	GREENWAY CLOSURE PLAN
		C230	BYPASS PUMPING AREA PLAN
		MECHANICAL	
		M100	BOTTOM PLAN - DEMOLITION
		M101	TOP PLAN - DEMOLITION
		M102	DEMOLITION SECTION
		M103	DEMOLITION - REPRESENTATIVE PHOTOS
		M104	DEMOLITION - REPRESENTATIVE PHOTOS
		STRUCTURAL - DROP SHAFT STRUCTURE	
		S1	GENERAL STRUCTURAL NOTES
		S10	FOUNDATION AND LOWER INTERMEDIATE PLANS
		S11	UPPER INTERMEDIATE AND TOP PLANS
		S12	SECTIONS
		S13	SECTIONS AND DETAILS
		S14	SECTIONS AND DETAILS
		S15	DETAILS
		STRUCTURAL - WEIR STRUCTURE	
		S20	BOTTOM AND INTERMEDIATE PLANS
		S21	TOP PLAN
		S22	SECTION
		S23	SECTION
		S24	DETAILS
		SD1	STANDARD DETAILS SHEET 1
		SD2	STANDARD DETAILS SHEET 2
		ELECTRICAL	
		E01	LEGEND, SYMBOLS, GENERAL NOTES, AND PLAN
		E02	PANEL SCHEDULES AND RISER DIAGRAMS
		E03	STANDARD DETAILS
		STANDARD DETAILS	
		D01	SANITARY SEWER DETAILS
		D02	SANITARY SEWER DETAILS
		D03	SANITARY SEWER DETAILS
		D04	SANITARY SEWER DETAILS
		D05	EROSION CONTROL AND STORMWATER DETAILS
		D06	EROSION CONTROL AND STORMWATER DETAILS
		D07	EROSION CONTROL AND STORMWATER DETAILS
		D08	EROSION CONTROL AND STORMWATER DETAILS
		D09	EROSION CONTROL AND STORMWATER DETAILS
		D10	EROSION CONTROL AND STORMWATER DETAILS
		D11	EROSION CONTROL AND STORMWATER DETAILS
		D12	PERMANENT STREAM AND WETLAND CROSSING DETAILS
		D13	STREAM STABILIZATION AND PUMP AROUND DETAILS
		###	#####
		<p>CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.</p> <p>City of Raleigh Development Approval _____</p>	
		<p>Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.</p> <p>By: _____ Date: _____ Town Engineer</p> <p>These plans are approved by the Town of Knightdale and serve as construction plans for this project.</p> <p>By: _____ Date: _____ Administrator</p>	

FINAL DESIGN

PLOT DATE: 2020/11/09 4:26:47 PM BY: ACF BAILEY
 FILE: C:\BAILEY\PROJECTS\RALEIGH\G03.dwg Saved By: ACF BAILEY Date: 2020/11/09 12:33 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR



Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	G02

GENERAL NOTES

STANDARD UTILITY NOTES (AS APPLICABLE):

- 1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
a) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER.
b) WHEN INSTALLING WATER &/ OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'.
c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
d) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS.
f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/ OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
7. INSTALL 3/4" COPPER* WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
8. INSTALL 4" PVC* SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW AT EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
9. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWARD VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMR FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
11. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
12. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION.
13. CROSS-SECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICE SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH

THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV.

*EDIT TYPICAL SERVICE SIZE & MATERIAL AS APPROPRIATE

BYPASS PUMPING OPERATIONS

SEWER BYPASS PUMPING:

A BYPASS PLAN SEALED BY A NC PROFESSIONAL ENGINEER MUST BE SUBMITTED TO PUBLIC UTILITIES PRIOR TO PUMPING OPERATIONS TO COORDINATE WITH ADMINISTRATION ENGINEERING STAFF. PUMPS SHOULD BE SIZED TO HANDLE THE PEAK DAILY FLOW (2.5 TIMES THE AVERAGE DAILY FLOW WITH A MINIMUM OF 50 GPM) FOR THE LINE OR AREA OF WORK. THE CONTRACTOR SHALL SECURE PUMPS FROM A PUMP SUPPLIER ACCORDING TO THE PROVIDED FLOW INFORMATION. PUMPING OPERATIONS MUST BE MONITORED 24 HOURS A DAY FOR EACH DAY OF THE PUMPING OPERATION BY QUALIFIED PERSONNEL IN ORDER TO RESPOND TO PROBLEMS OR FAILURES. 100% REDUNDANCY IS REQUIRED FOR PUMPING OPERATIONS. IN ADDITION, BACK UP PUMPS AREA TO BE CONNECTED TO THE BYPASS FORCE MAIN TO FACILITATE IMMEDIATE USE UPON FAILURE OF THE PRIMARY PUMPS.

Table with 8 columns: Plan Sheet #, Ex. SS, Suction Manhole Rim, Suction Manhole Invert Out, Appoximate Pump Elevation, Discharge Manhole Rim, Average Dry Weather Flow (MGD), Wet Weather Peak Flow/Bypass Pump Capacity (MGD). Rows include C23/C30, C27, C27, C27/C30, C28/C230, C28/C230, C29.

RIVER CROSSING

- 1. CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION PLAN WITH DETAILED SEQUENCE OF WORK, COFFERDAM INSTALLATION AND REMOVAL, DEWATERING AND EROSION AND SEDIMENT CONTROL, EXCAVATION SUPPORT, ROCK REMOVAL, METHOD OF PIPE INSTALLATION AND BACKFILL, AND SITE RESTORATION FOR ENGINEER AND OWNER REVIEW PRIOR TO STARTING CONSTRUCTION.
2. A PLAN OF OPERATION FOR INCLEMENT WEATHER SHALL BE PROVIDED. THE PLAN SHALL DEMONSTRATE THE ABILITY TO REMOVE EQUIPMENT, BACKFILL THE TRENCH, AND RESTORE THE EXISTING CROSS-SECTION AREA OF THE NEUSE RIVER PRIOR TO OVERTOPPING THE COFFERDAM. SUFFICIENT EROSION CONTROL MEASURE SHALL BE INSTALLED ON DISTURBED AREAS TO PREVENT EROSION DURING THE PERIOD OF HIGH FLOW. WORK SHALL NOT COMMENCE UNTIL FLOWS HAVE SUBSIDED TO NORMAL DRY WEATHER FLOW AND NO INCLEMENT WEATHER IS FORECAST.
3. A MINIMUM 30 DAY NOTIFICATION SHALL BE PROVIDED TO THE OWNER, ENGINEER, AND U.S. ARMY CORPS OF ENGINEERS PRIOR TO BEGINNING WORK.
4. CONTRACTOR SHALL SUBMIT A MINIMUM QUALIFICATIONS PACKAGE FOR APPROVAL BY THE ENGINEER AND OWNER. THE CONTRACTOR AND ITS SUBCONTRACTORS PERFORMING THE WORK SHALL SHOW A MINIMUM OF ONE (1) PROJECT PERFORMED IN THE PAST TEN YEARS INSTALLING PIPELINES VIA OPEN-CUT ACROSS RIVERS OF MINIMUM OF 100 FEET IN WIDTH. REFERENCES SHALL BE INCLUDED FOR ALL PROJECTS.
5. CONSTRUCTION SHALL BE PERFORMED IN TWO PHASES. THE FIRST PHASE SHALL BEGIN ON THE SOUTH BANK OF THE RIVER WITH THE COFFERDAM SPANNING APPROXIMATELY 55 PERCENT OF THE RIVER WIDTH. UPON COMPLETION OF THE FIRST PHASE, CONTRACTOR SHALL INSTALL A WATERTIGHT PLUG, REMOVE THE COFFERDAM AND RESTORE AND STABILIZE THE BANK. THE SECOND PHASE SHALL BEGIN ON THE NORTH BANK OF THE RIVER WITH THE COFFERDAM SPANNING UP TO 60 PERCENT OF THE RIVER WIDTH. UPON COMPLETION OF THE SECOND PHASE, CONTRACTOR SHALL REMOVE THE COFFERDAM AND RESTORE AND STABILIZE THE BANK. ALL RESTORATION AND STABILIZATION ACTIVITIES SHALL BE PERFORMED WITHIN THE SAME DAY OF COMPLETING WORK ON THE DISTURBED AREA.
6. THE WORK SHALL ONLY BE PERFORMED BETWEEN THE DATES ALLOWED AND SPECIFIED IN THE APPROVED 404/401 PERMITS.

- 7. THE WIDTH OF THE COFFERDAM SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE AREA REQUIRED TO PERFORM THE WORK, BUT SHALL NOT EXTEND BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. CONTRACTOR SHALL MINIMIZE THE COFFERDAM AREA TO THE EXTENT PRACTICABLE.
8. BOULDERS AND LOOSE ROCK ON THE CHANNEL BED SHALL BE REMOVED AND STOCKPILED PRIOR TO PLACEMENT OF THE COFFERDAM. ANY FOREIGN MATERIAL NOT SUITABLE FOR THE INSTALLATION IN THE RIVER SHALL BE DISPOSED OF THE CONTRACTOR'S EXPENSE. AFTER THE COFFERDAM HAS BEEN INSTALLED, THE TOP 12 TO 18 INCHES OF BED MATERIAL WITHIN THE WORK AREA SHALL BE REMOVED AND STOCKPILED. UPON COMPLETION OF WORK, THE BED MATERIAL SHALL BE PLACED AND EXISTING GRADE REINSTATED. BOULDERS, LOOSE ROCK, OR OTHER ACCEPTABLE MATERIAL REMOVED FROM THE RIVER BOTTOM SHALL BE REINSTALLED IN A SIMILAR LOCATION AND FASHION AS WAS PRESENT PRIOR TO REMOVAL.
9. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER PER SPECIFICATION 02315 TRENCHING FOR UTILITIES. ALL WATER REMOVED FROM THE WORK AREA SHALL BE CONTAINED AND CONTROLLED PRIOR TO DISCHARGING INTO THE RIVER. ALL DEWATERING SHALL BE PERFORMED USING A SEDIMENT BAG, SETTLING BASIN, OR OTHER APPROVED MEASURE TO ACHIEVE TURBIDITY LIMIT. A TURBIDITY CONCENTRATION OF NOT MORE THAN 50 NTUS SHALL BE MAINTAINED. CONTRACTOR SHALL TEST DISCHARGED WATER NO LESS THAN ONCE EVERY 24 HOURS WHILE DEWATERING IS BEING PERFORMED, WITH THE RESULTS PROVIDED TO THE ENGINEER. IF A CONCENTRATION EXCEEDS 50 NTUS, CONTRACTOR SHALL INSTALL ADDITIONAL MEASURE(S) TO CONTAIN AND CONTROL TURBIDITY AND TEST THE DISCHARGED WATER TO ENCASE COMPLIANCE. AT NO POINT SHALL TURBID WATER, EXCAVATION MATERIAL, OR ANY OTHER FOREIGN MATERIAL BE DISCHARGED INTO THE RIVER. CONTRACTOR SHALL INSTALL A TURBIDITY CURTAIN ALONG THE DOWNSTREAM SIDE OF THE COFFERDAM THAT SHALL REMAIN IN PLACE WHILE WORK IN THE RIVER IS OCCURRING.
10. ENCASE THE CROSSING PIPE WITH CONCRETE AS SHOWN ON THE PLANS WITH 12 INCHES OF NCDOT CLASS A RIP RAP ABOVE THE ENCASEMENT BACKFILL REMAINING TRENCH WITH BED MATERIAL REMOVED AND STOCKPILED FROM CHANNEL BOTTOM DURING EXCAVATION.
11. IF UNSUITABLE FOUNDATION IS ENCOUNTERED, REMOVE UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION, OR TO A DEPTH OF 3 FEET MAX. CONFIRM WITH ENGINEER PRIOR TO BACKFILLING, REPLACE WITH STRUCTURAL FILL, PER SPECIFICATIONS.
12. PER THE SPECIFICATIONS, CONTRACTOR SHALL WARRANTY THE VEGETATION UP TO ONE YEAR AFTER INSTALLATION. BANK SHALL BE STABILIZED AND RE-VEGETATED PER DETAILS ON SHEET D13.

ACCESS ROAD CONSTRUCTION SEQUENCE:

- 1. ALL EROSION/SEDIMENTATION CONTROL AND TREE PROTECTION MEASURES ALONG THE PERIMETER OF THE ACCESS EASEMENT SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE ACTIVITIES ALONG THE PROPOSED ACCESS ROAD AND LAYDOWN AREA.
2. ONCE THESE MEASURES ARE COMPLETELY INSTALLED, GRADING OF THE ACCESS ROAD, INSTALLATION OF TEMPORARY STORM DRAINAGE PIPE, AND LIMITED CLEARING AND GRUBBING CAN BE INITIATED.
3. FOR INSTALLATION OF THE STORM DRAINAGE PIPES AS SHOWN ON THE DRAWINGS, THE WORK AREA WITHIN THE EXISTING CHANNEL/DRAINAGE WAY SHALL BE TEMPORARY ISOLATED USING COFFER DAMS AND PUMPS FOR PUMPING WATER ON THE UP-STREAM SIDE AROUND THE WORK AREA TO THE DOWNSTREAM SIDE. ALL WATER PUMPED AROUND SHALL BE FILTERED BY A SILT BAG OR OTHER MEASURE APPROVED BY THE ENGINEER. THE WORK AREA SHALL ALSO BE PROTECTED BY SILT FENCE INSTALLED ALONG THE EXISTING TOPS OF BANKS. THE WORK AREA SHALL BE PROPERLY DEWATERED SUCH THAT A STABLE SUBGRADE CAN BE ESTABLISHED FOR INSTALLATION OF THE STORM PIPE, BACKFILL AND FINISHED GRADING, AND PLACEMENT OF THE RIP RAP BANK STABILIZATION AT THE PIPE INLET AND OUTLET. ONCE THE INSTALLATION IS COMPLETED, ANY REMAINING SEDIMENT IN THE ISOLATED WORK AREA SHALL BE REMOVED AND THE TEMPORARY PUMP AROUND EQUIPMENT SHALL BE REMOVED.
4. ONCE THE ROAD SUBGRADE IS ESTABLISHED, STONE BASE SHALL BE PLACED AND COMPACTED INTO PLACE.
5. IMMEDIATELY FOLLOWING COMPACTION OF THE STONE ROAD, ANY DISTURBED AREA NOT COVERED BY THE STONE SHALL BE SEEDED WITH STRAW AND NET LINER TO ESTABLISH VEGETATIVE COVER AND STABILIZATION. WATERING OF THE SEEDED AND STRAWED AREA SHALL BE PERFORMED AS NECESSARY TO FACILITATE SEED GERMINATION AS SOON AS POSSIBLE.
6. ALL SILT FENCE, STONE CHECK DAMS, AND STONE RELIEF OUTLETS SHALL BE CHECKED AND MAINTAINED WEEKLY AND FOLLOWING RAIN EVENTS TO ENSURE THESE MEASURES REMAIN FULLY FUNCTIONAL. MAINTENANCE REQUIREMENTS SHALL BE IN ACCORDANCE WITH THOSE LISTED ON THE EROSION CONTROL DETAILS AND SPECIFIED IN THE TECHNICAL SPECIFICATIONS.

- 7. UNLESS OTHERWISE SHOWN, THE EXISTING AND PROPOSED EASEMENT BOUNDARIES SHOWN ON THE ACCESS ROAD SHEETS REPRESENT THE PERMITTED LIMITS OF DISTURBANCES. ALL WORK SHALL BE MAINTAINED WITHIN THESE LIMITS.

WETLAND - STREAM - RIPARIAN BUFFER IMPACT ID AND AREA TABLES

Two tables: WETLAND IMPACT ID AND AREA TABLES and BUFFER IMPACT ID AND AREA TABLES. Columns include Stream Impact ID, Stream Width, Impact Length, Duration, Access Road Impact, Stream Stabilization Impact, Drawing Number, Wetland Impact ID, Forested Area, Impact Area, Duration, Drawing Number, Buffer Impact ID, Zone 1 Impact, Zone 2 Impact, Duration, Drawing Number.

NOTES:

- 1. CORRESPONDING IMPACT ID'S FOR EACH WETLAND, STREAM, AND BUFFER ARE INDICATED AT THESE FEATURES ON PLAN SHEETS C01 THROUGH C28.
2. FOR DETAILED MAPPING OF THE PERMITTED IMPACT AREAS, REFER TO THE APPROVED 404/401 PERMITS IN THE APPENDICIES OF THE PROJECT MANUAL.



a. Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: [Signature] Date: [Date]
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: [Signature] Date: [Date]
Administrator



FINAL DESIGN

Table with 4 columns: REV, ISSUED FOR, DATE, BY. Rows include PROJECT ENGINEER: T. TANT, DESIGNED BY: C. WINDLEY, DRAWN BY: E. NG, CHECKED BY: T. TANT, and a scale bar 0 1/2" 1".



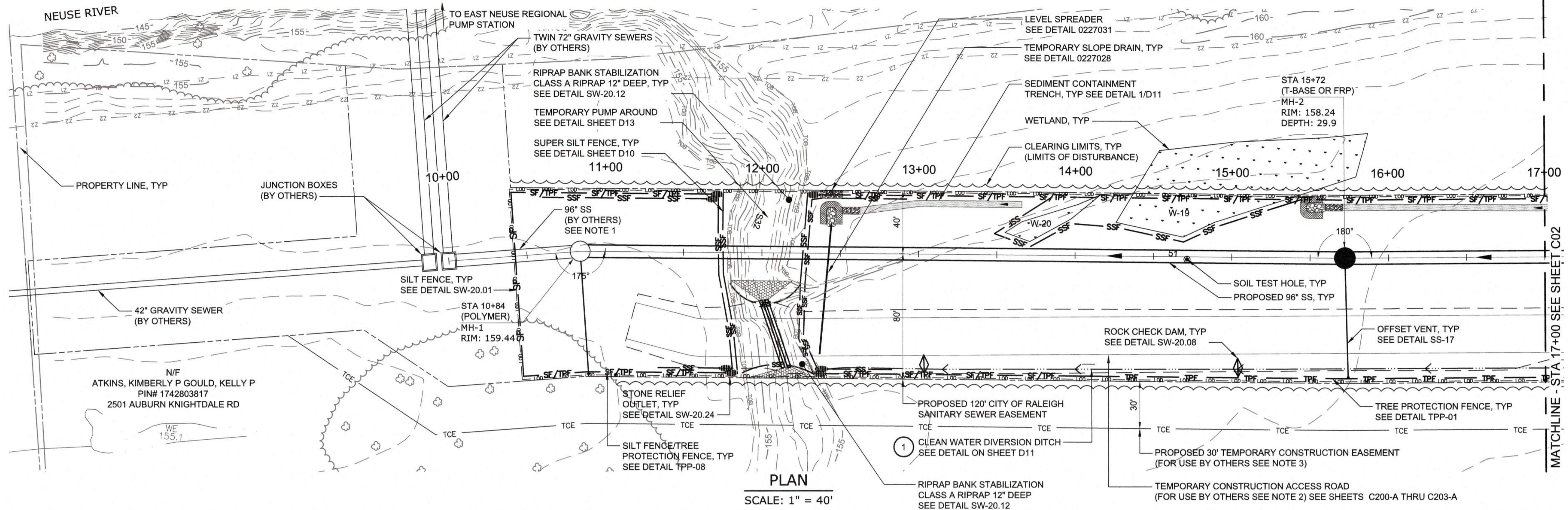
Hazen logo and address: HAZEN AND SAWYER, 4011 WESTCHASE BOULEVARD, SUITE 500, RALEIGH, NORTH CAROLINA 27607, LICENSE NO.: C-0381

CJS Conveyance, PLLC logo and address: 320 S. ACADEMY STREET, CARY, NC 27511, LICENSE NO.: P-1611

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, NEUSE RIVER EAST PARALLEL INTERCEPTOR

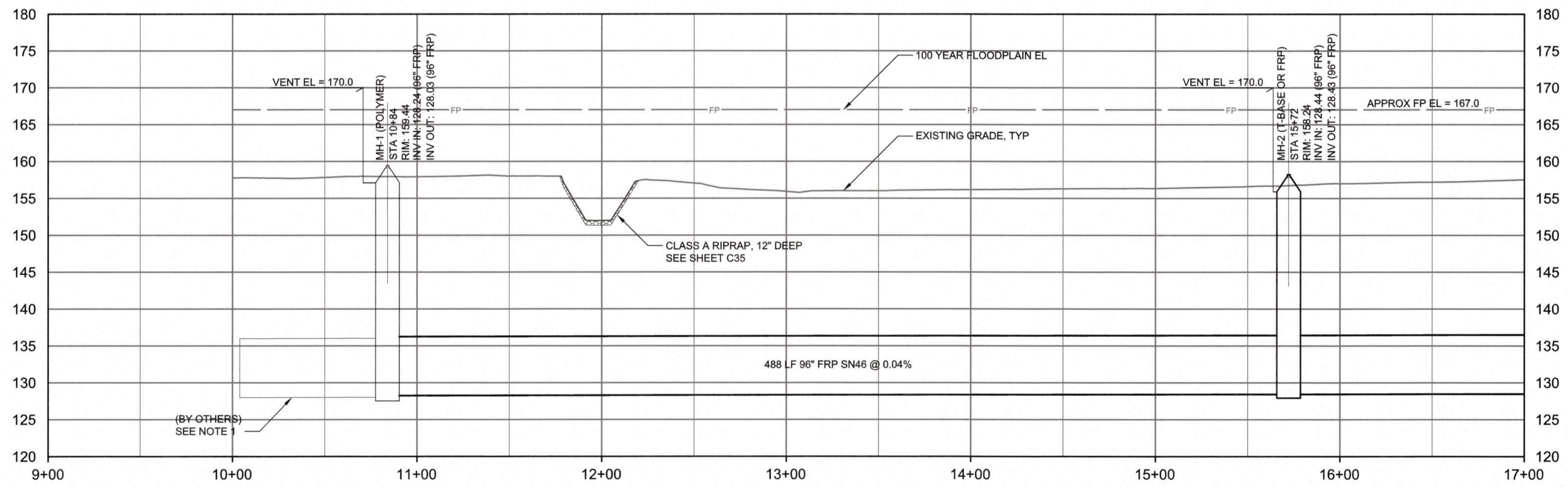
GENERAL NOTES

Table with 2 columns: DATE: NOVEMBER 2020, HAZEN NO.: 32426-000, CONTRACT NO.: 1, DRAWING NUMBER: G03



- NOTES:**
1. THE CONTRACTOR SHALL VERIFY THE LOCATION, SLOPE AND INVERT OF THE SS PRIOR TO ORDERING MH-1. OTHER MATERIAL AND STARTING CONSTRUCTION OF THE SANITARY SEWER.
 2. THE TEMPORARY ACCESS ROAD BY OTHERS SHALL BECOME AVAILABLE TO THE CONTRACTOR FOR HIS SOLE USE UPON NOTICE TO PROCEED. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 3. THE 30' TCE FOR USE BY OTHERS IS RESERVED FOR USE BY THE CONTRACTOR BUILDING THE JUNCTION BOXES IF CONSTRUCTION FOR THAT CONTRACT IS ON GOING CONCURRENTLY WITH THIS CONTRACT. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION. THE CONTRACTOR BUILDING THE JUNCTION BOXES WILL BE RESPONSIBLE FOR CLEARING, EROSION CONTROL, STREAM/BUFFER IMPACTS, AND PERMITTING.

PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection/ Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 4:38:40 PM BY: JOEY BAILEY
 FILE: C:\GIS\WATER\PROJECTS\2020\11\06\121525.DWG
 Scale: 2020/11/06 12:55 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

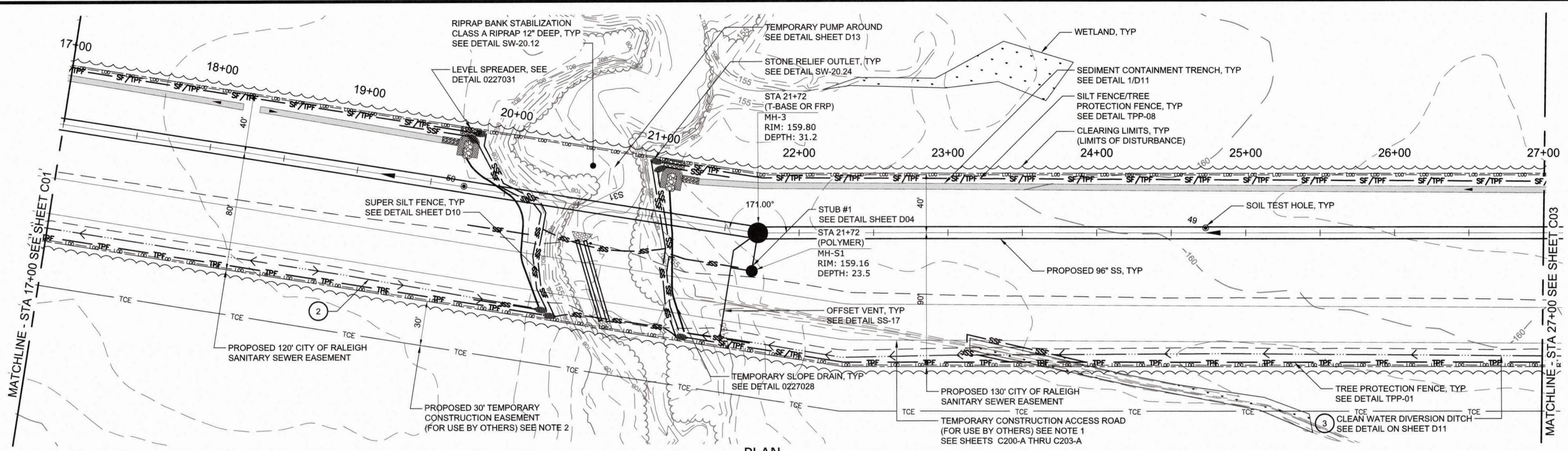
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

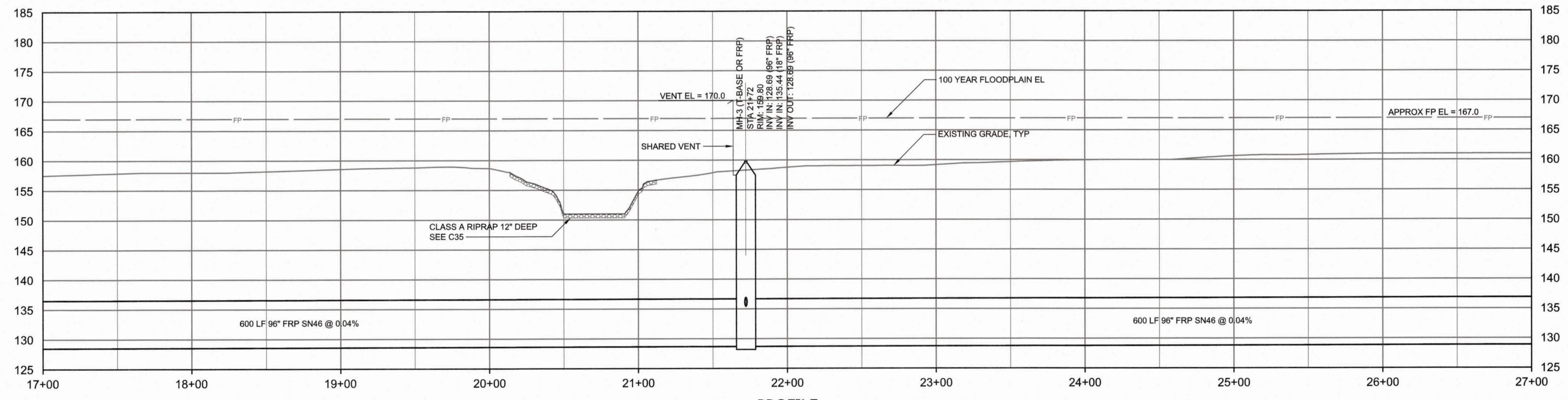
96" INTERCEPTOR
PLAN AND PROFILE
STATION 10+00 TO 17+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C01

- NOTES:**
1. THE TEMPORARY ACCESS ROAD OTHERS SHALL BECOME AVAILABLE TO THE CONTRACTOR FOR HIS SOLE USE UPON NOTICE TO PROCEED. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 2. THE 30' TCE FOR USE BY OTHERS IS RESERVED FOR USE BY THE CONTRACTOR BUILDING THE JUNCTION BOXES IF CONSTRUCTION FOR THAT CONTRACT IS ON GOING CONCURRENTLY WITH THIS CONTRACT. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION. THE CONTRACTOR BUILDING THE JUNCTION BOXES WILL BE RESPONSIBLE FOR CLEARING, EROSION CONTROL, STREAM/BUFFER IMPACTS, AND PERMITTING.



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been released for general compliance with applicable codes. The limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 4:46:09 PM BY: JOEY BAILEY
 File: C:\MSHAZEN\FW\MSH0817\02_Sewer_Bu_JOEY_BAILEY_Sewer.dwg Date: 2020/11/05 12:37 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

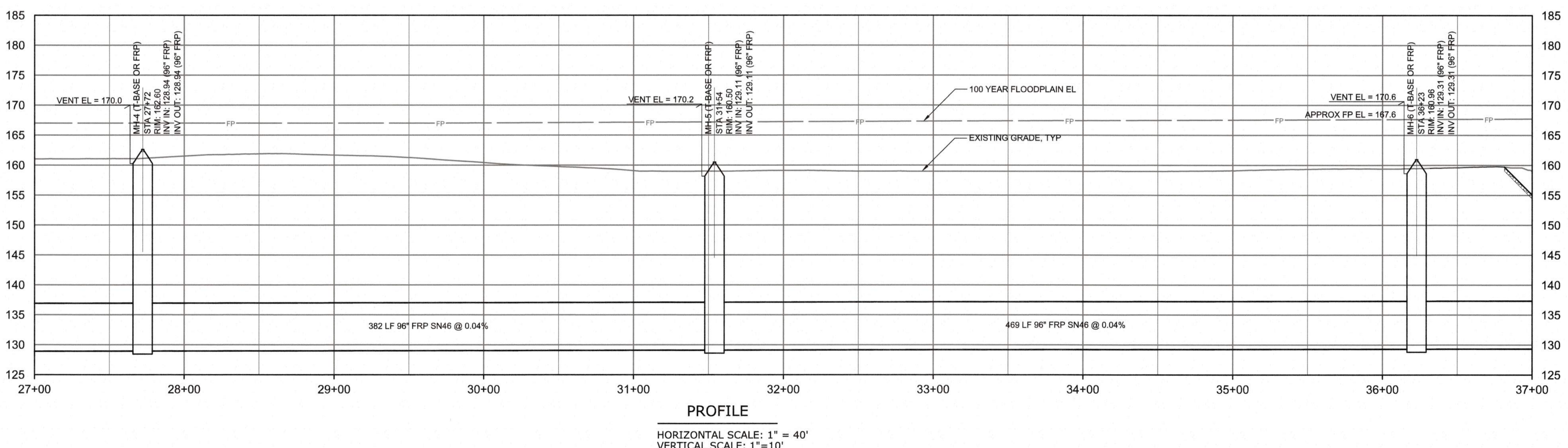
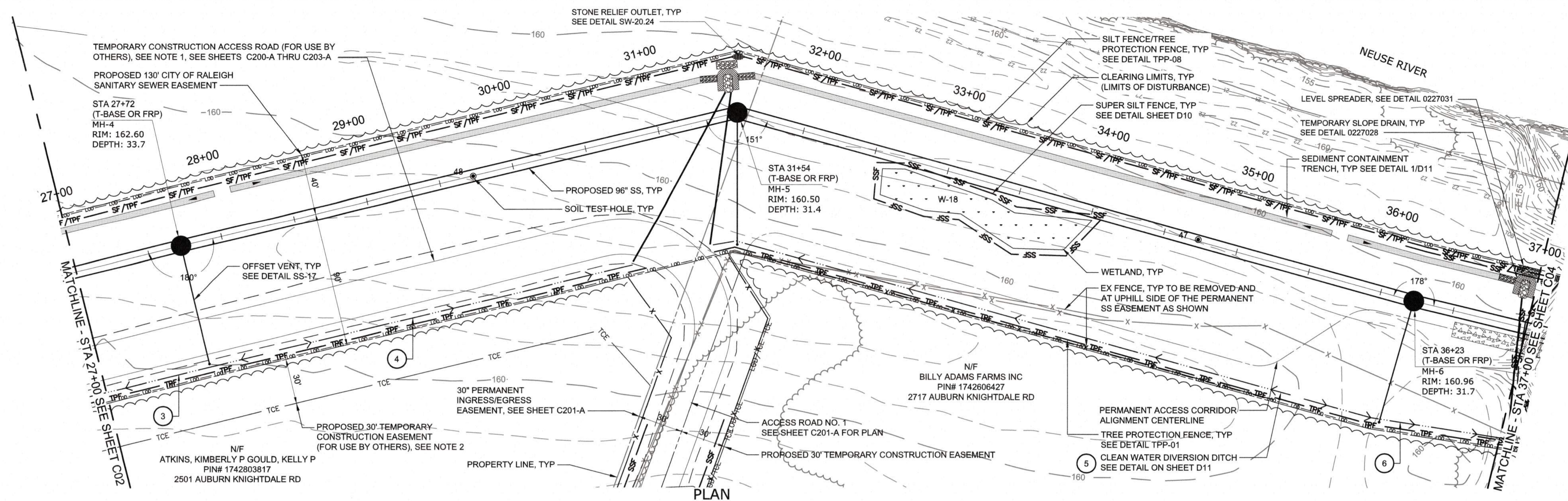
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
**NEUSE RIVER EAST
PARALLEL INTERCEPTOR**

**96" INTERCEPTOR
PLAN AND PROFILE
STATION 17+00 TO 27+00**

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C02

NOTES:

1. THE TEMPORARY ACCESS ROAD OTHERS SHALL BECOME AVAILABLE TO THE CONTRACTOR FOR HIS SOLE USE UPON NOTICE TO PROCEED. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. THE 30' TCE FOR USE BY OTHERS IS RESERVED FOR USE BY THE CONTRACTOR BUILDING MH-1 AND THE JUNCTION BOXES IF CONSTRUCTION FOR THAT CONTRACT IS ON GOING CONCURRENTLY WITH THIS CONTRACT. REFER TO SECTION 01900 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.



Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of the electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 4:16:38 PM BY: JCEY BAILEY
C:\GIS\PROJECTS\2020\11\06\11061249.Plot

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



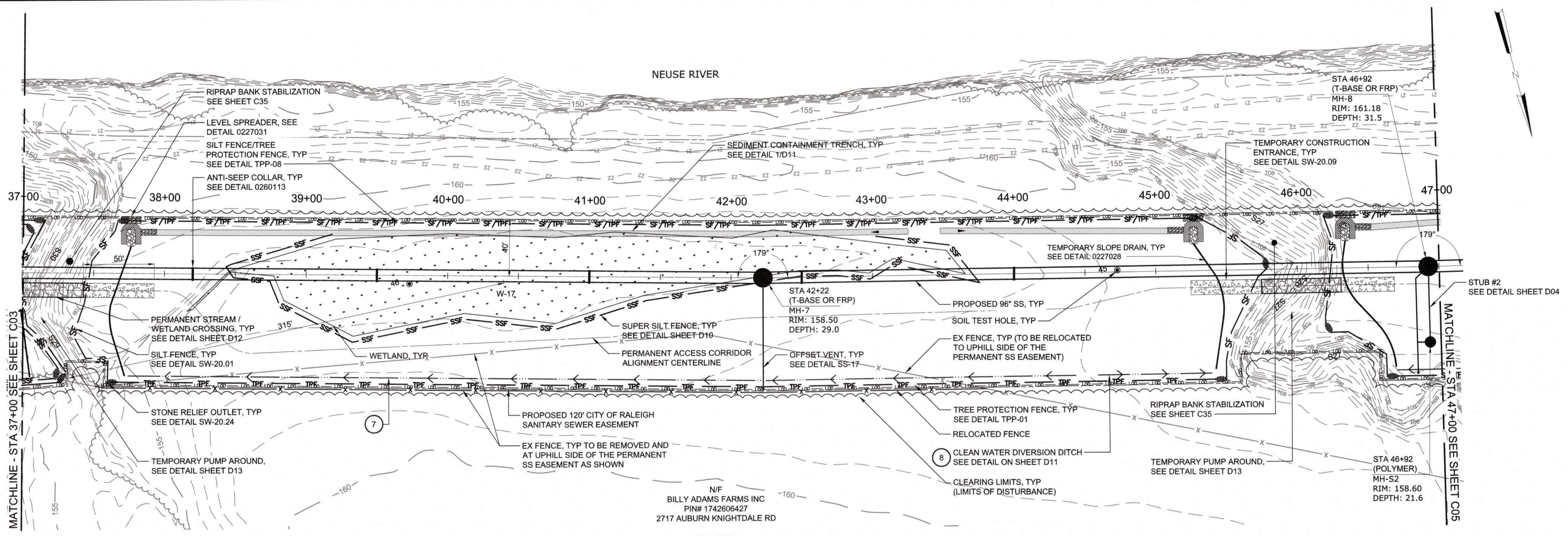
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

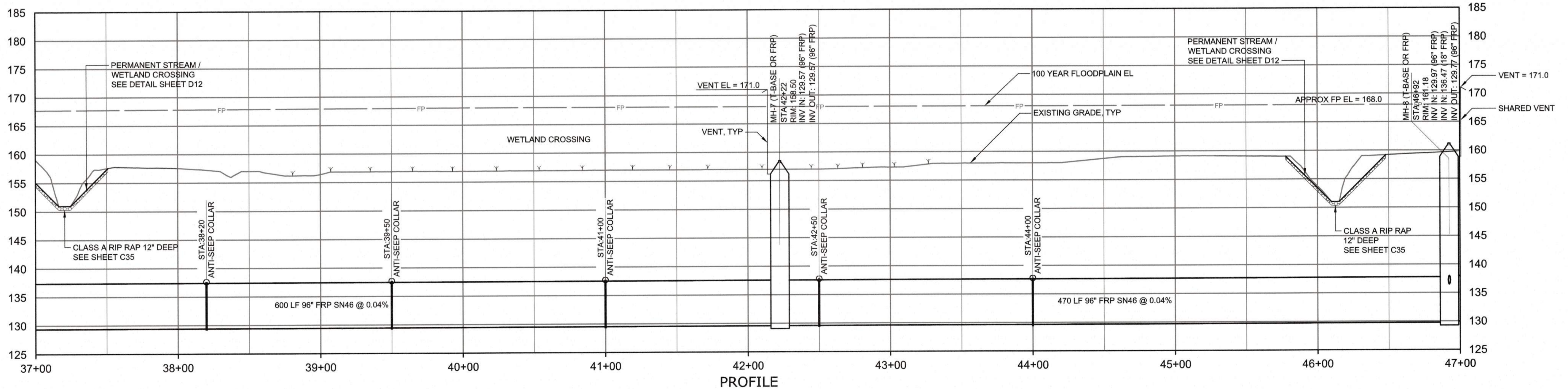
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 27+00 TO 37+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C03



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/09 4:45:05 PM BY: JECY BAILEY
 FILE: C:\BAY\NORTH-CAROLINA\PROJECTS\11700\11700_12.51.PLM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

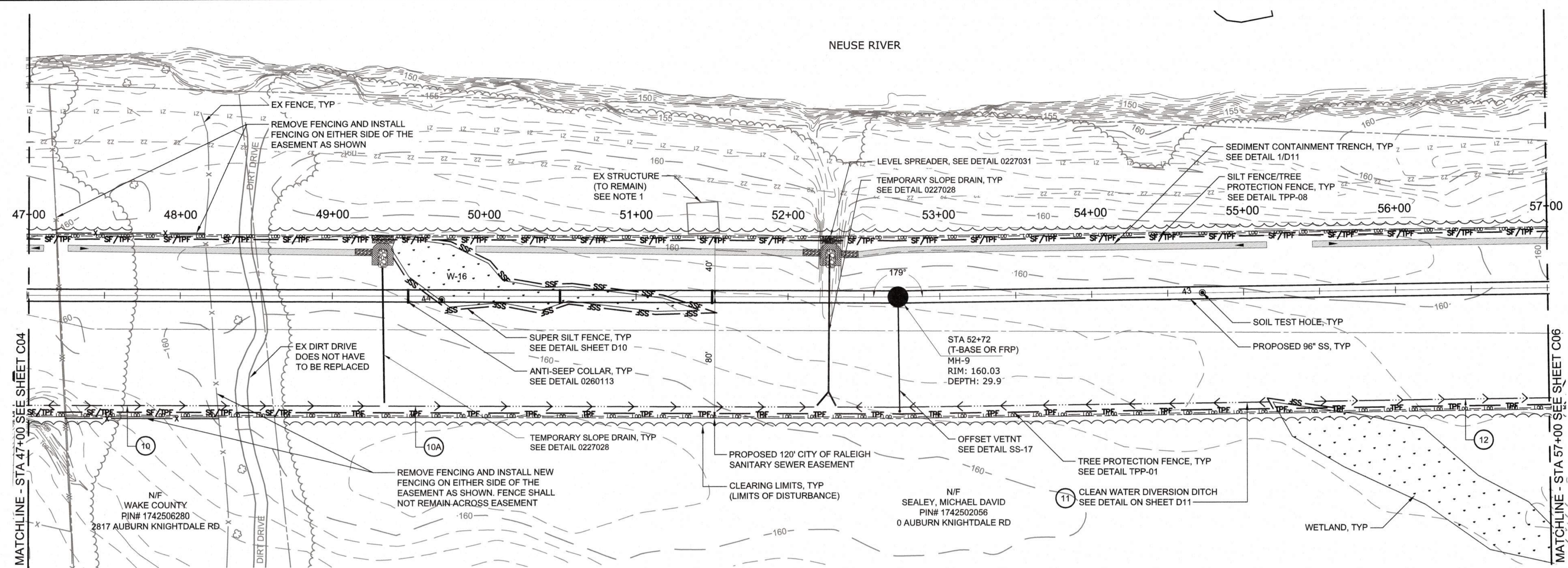
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

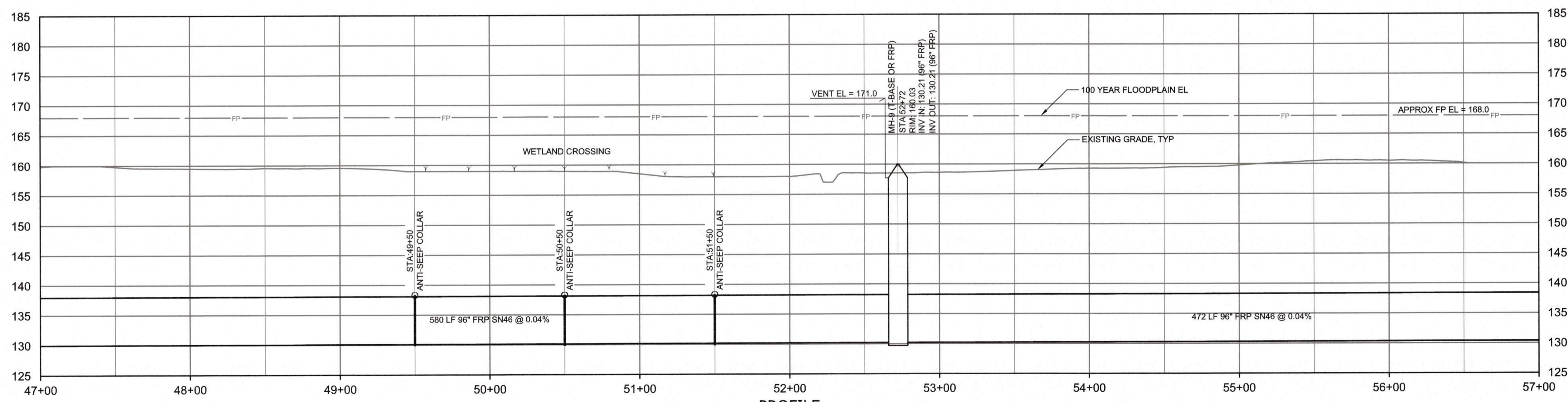
96" INTERCEPTOR
PLAN AND PROFILE
STATION 37+00 TO 47+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C04

NOTES:
 1. THE EXISTING STRUCTURE HAS EXISTING WATER AND ELECTRIC SERVICE WHICH MAY BE ACTIVE. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER TO DETERMINE THE LOCATION AND STATUS OF THE SERVICES PRIOR TO WORKING WITHIN 100 FEET OF THE STRUCTURE.



PLAN
 SCALE: 1" = 40'



PROFILE
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 10'

Public
Sewer Collection/ Extension System
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
 City of Raleigh Public Utilities Department Permit # _____
 Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval _____



BEFORE YOU DIG!
 CONTACT ONE-CALL CENTER
 CALL 811
 OR
 1-800-632-4949

FINAL DESIGN

PLOT DATE: 2020/11/06 4:44:24 PM BY: JET BAILEY
 FILE: C:\BAY\WORK\PROJECTS\96\"

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR
	DATE
	BY



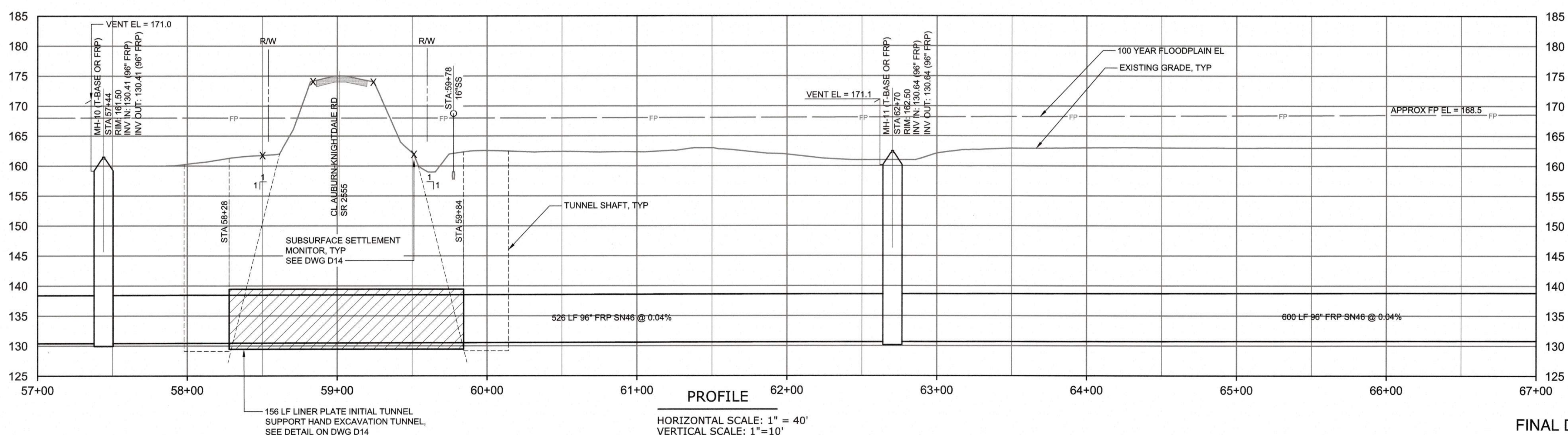
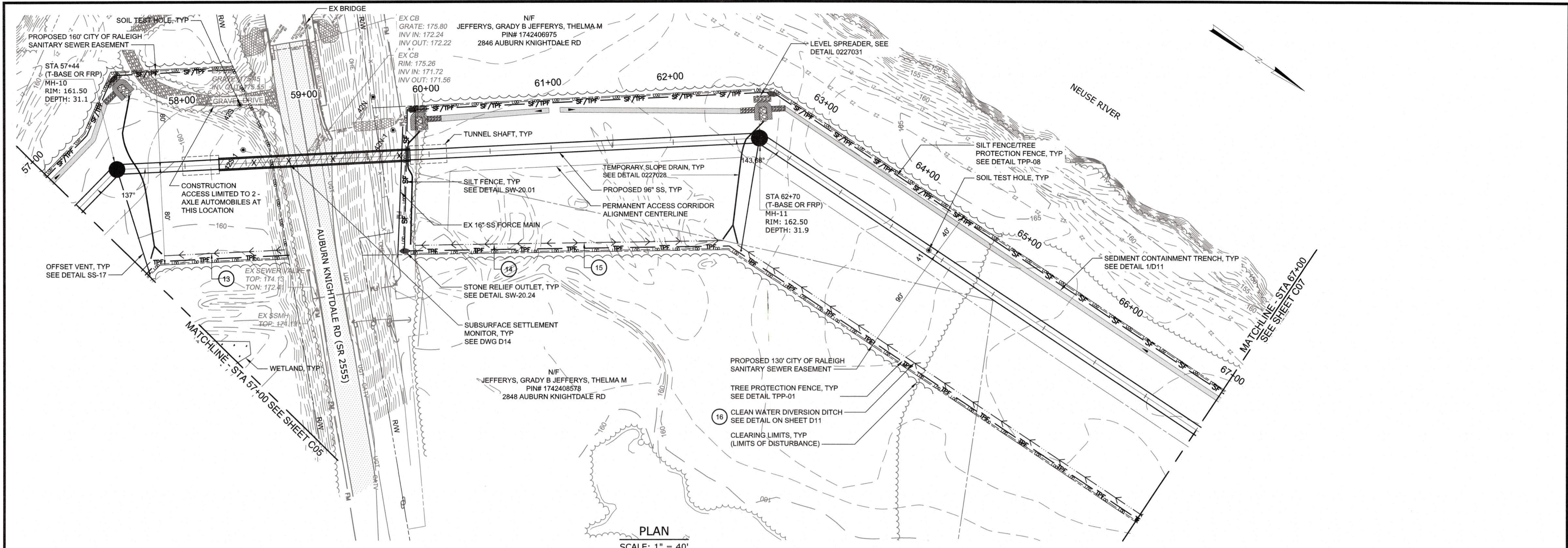
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

96" INTERCEPTOR
 PLAN AND PROFILE
 STATION 47+00 TO 57+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C05



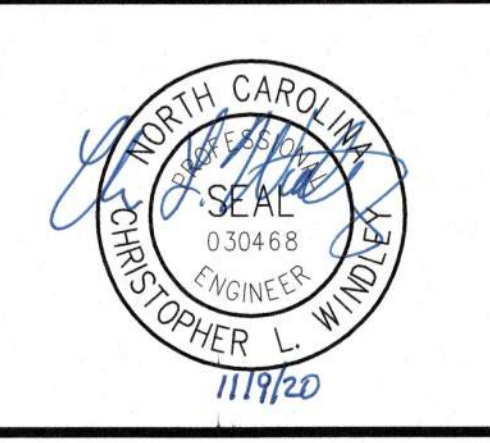
Public
Sewer Collection/ Extension System
 The City of Raleigh consents to the construction and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
 City of Raleigh Public Utilities Department Permit # _____
 Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval _____



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



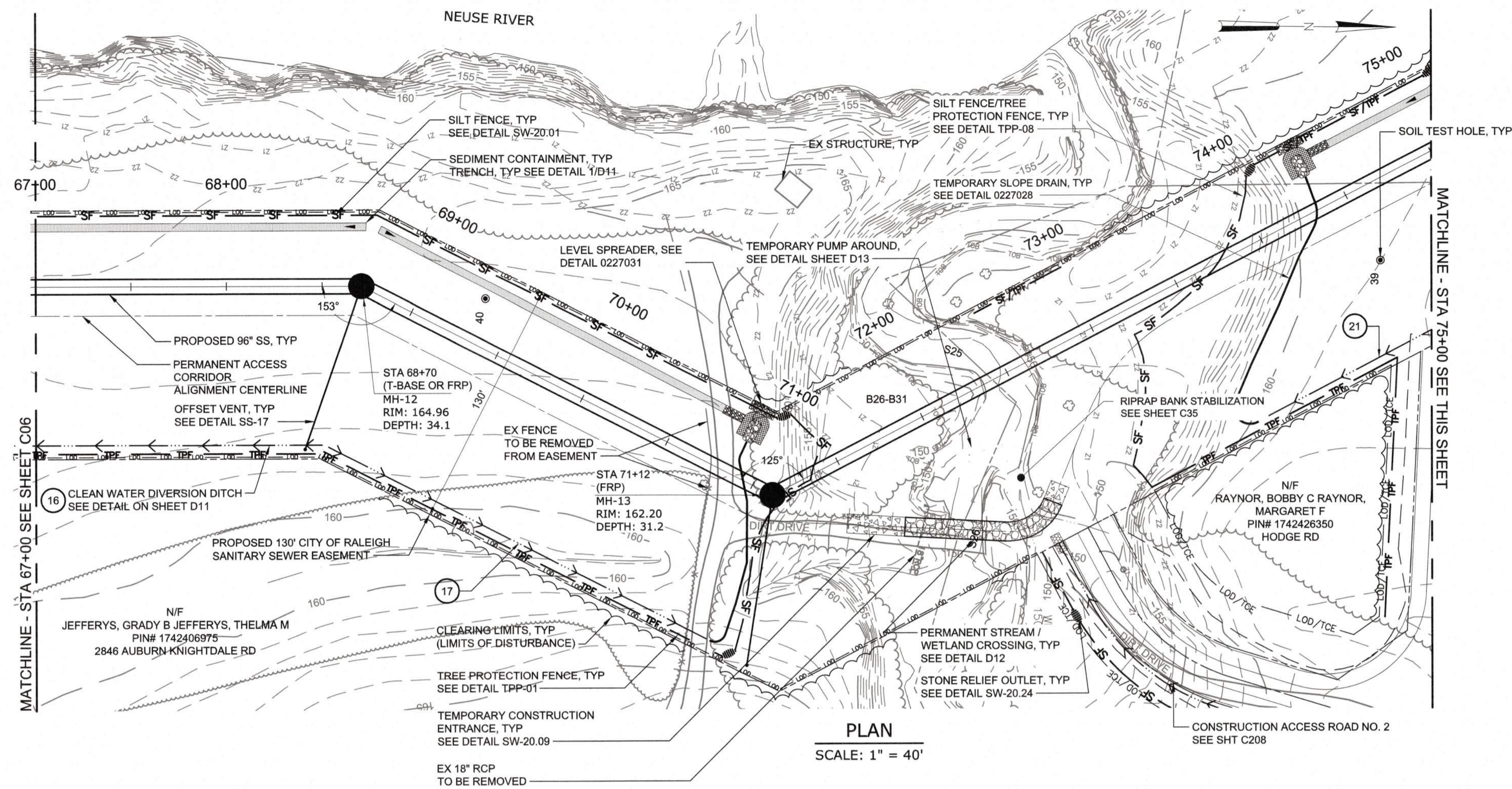
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

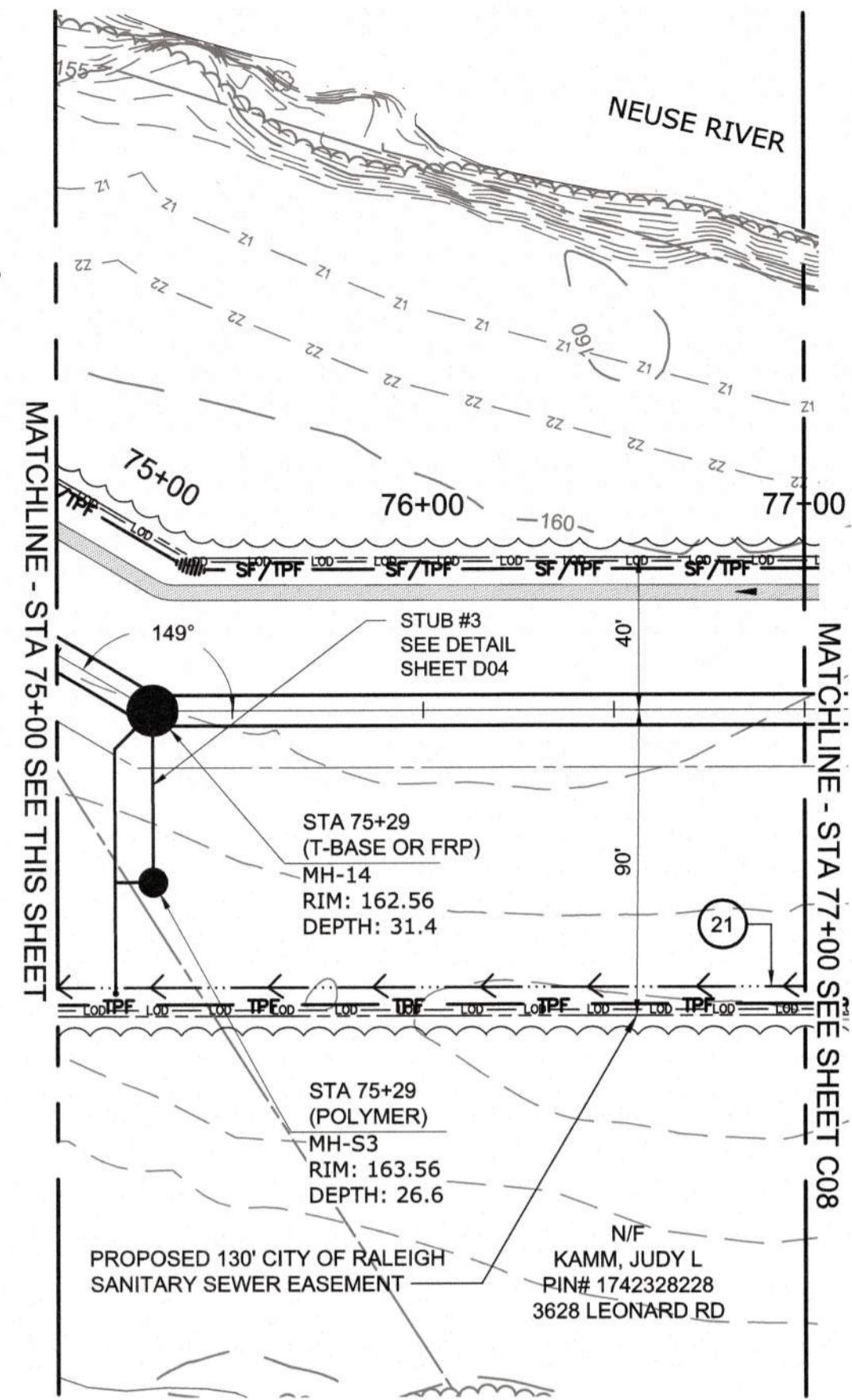
CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

96" INTERCEPTOR
 PLAN AND PROFILE
 STATION 57+00 TO 67+00

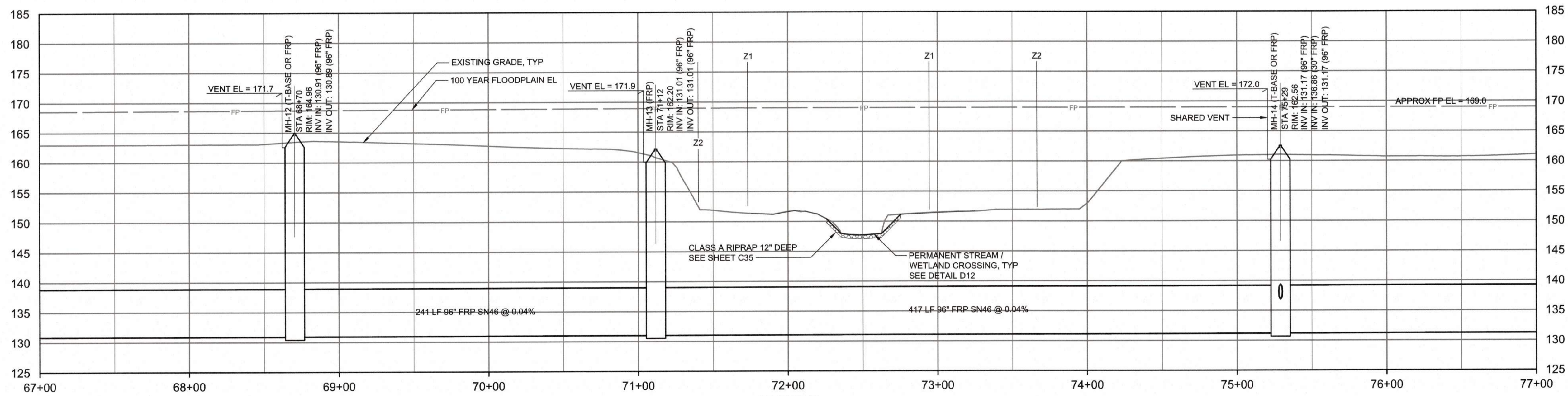
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C06



PLAN
SCALE: 1" = 40'



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection/Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed work have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



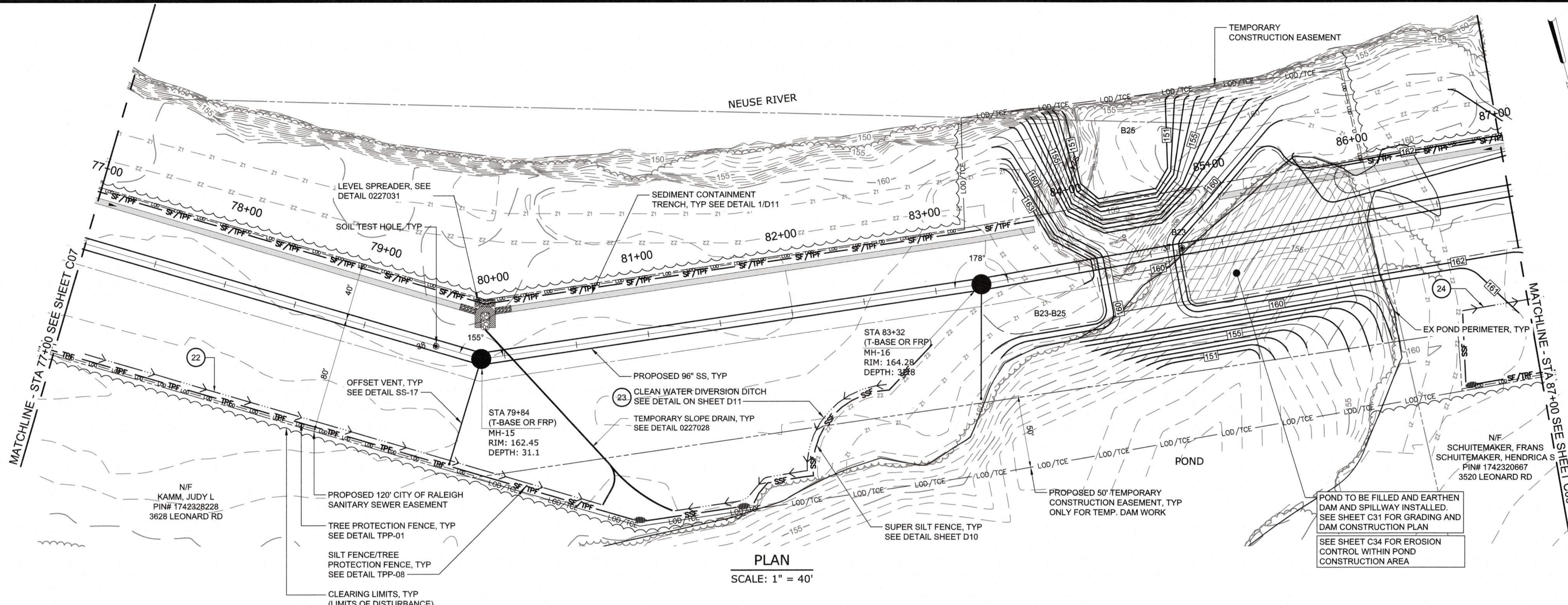
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

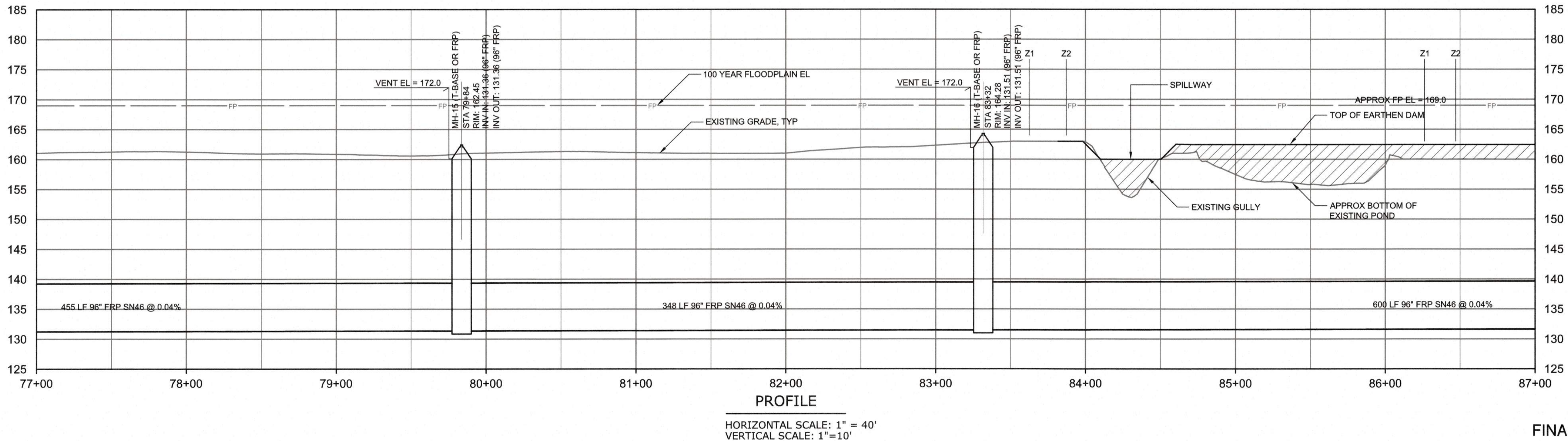
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
**NEUSE RIVER EAST
PARALLEL INTERCEPTOR**

**96" INTERCEPTOR
PLAN AND PROFILE
STATION 67+00 TO 77+00**

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C07



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 40'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

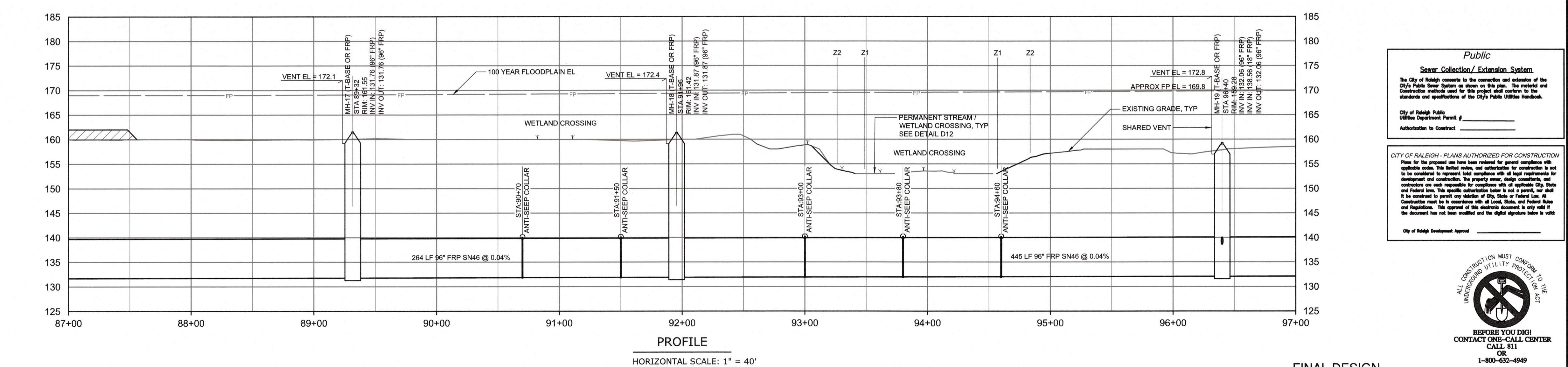
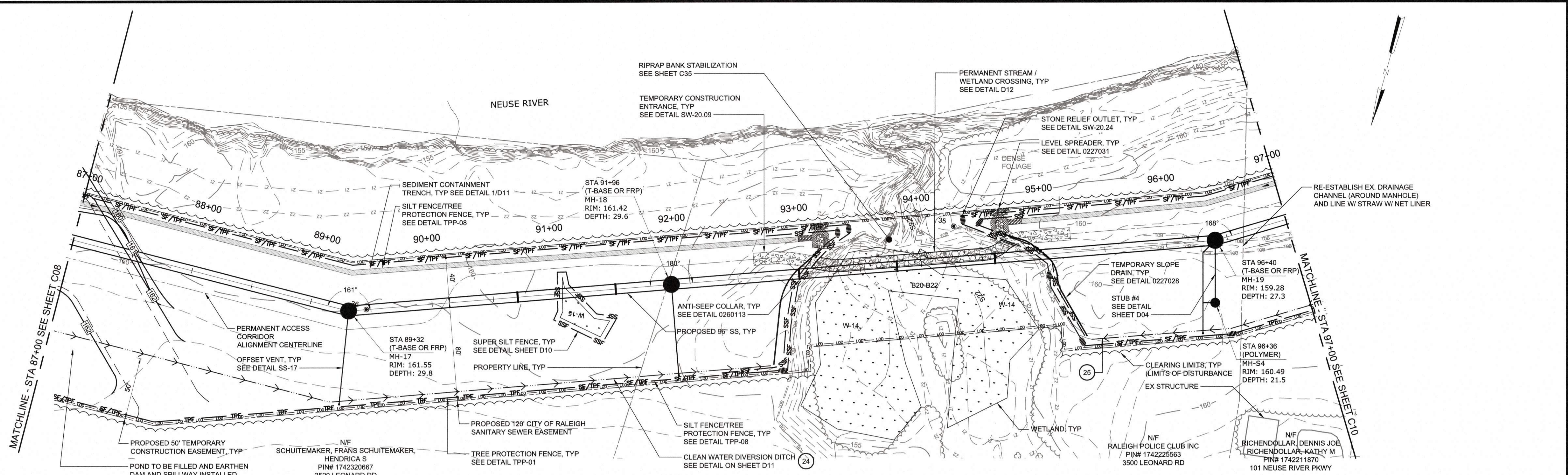
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 77+00 TO 87+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C08

PLOT DATE: 2020/11/06 4:49:31 PM BY: JOEY BAILEY
FILE: C:\MSW08\20\PROJECTS\NEUSE\DWG\96\"/>



Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
 Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be construed to represent total compliance with all local requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

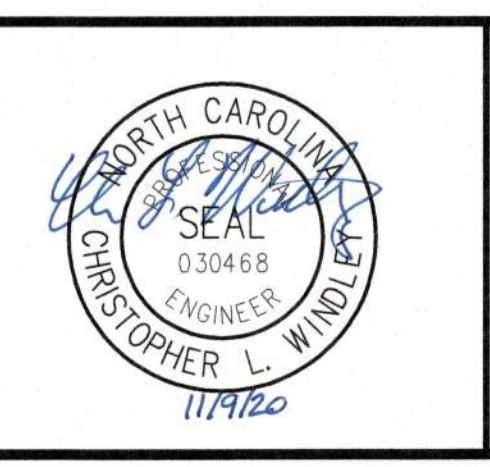
City of Raleigh Development Approval _____

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

BEFORE YOU DIG
CONTACT ONE-CALL CENTER
CALL 811
OR
1-800-632-4949

FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

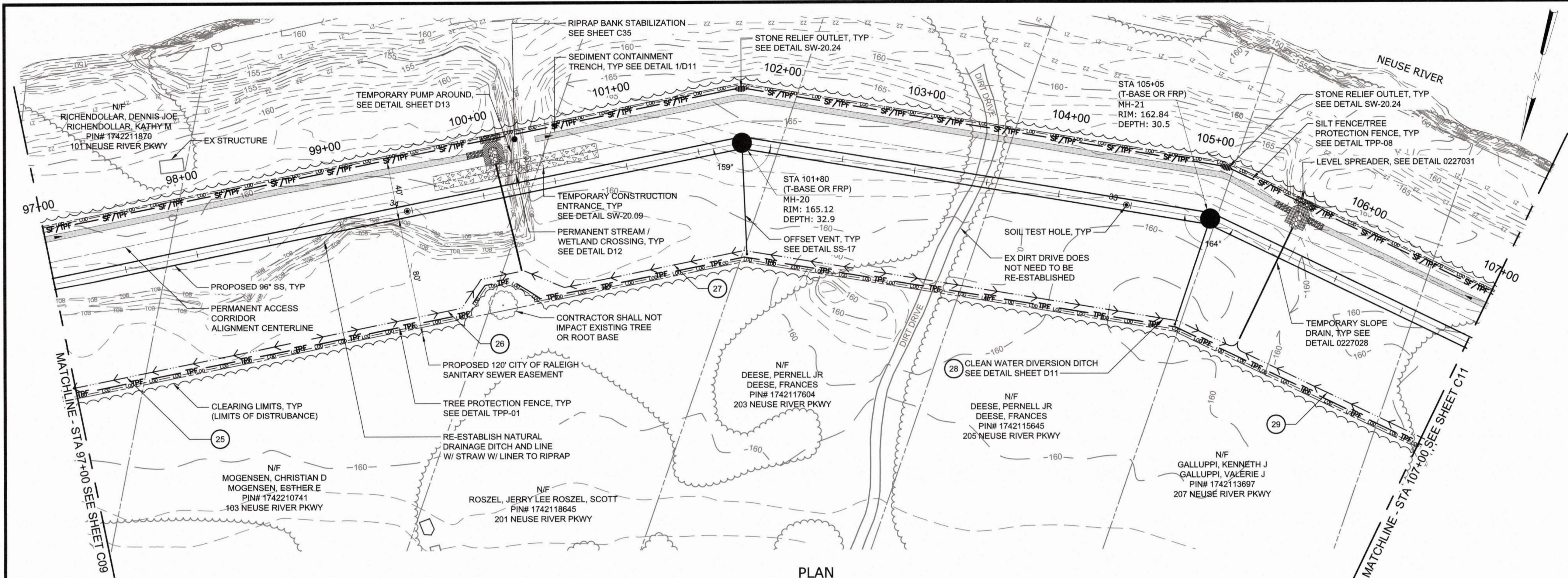
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

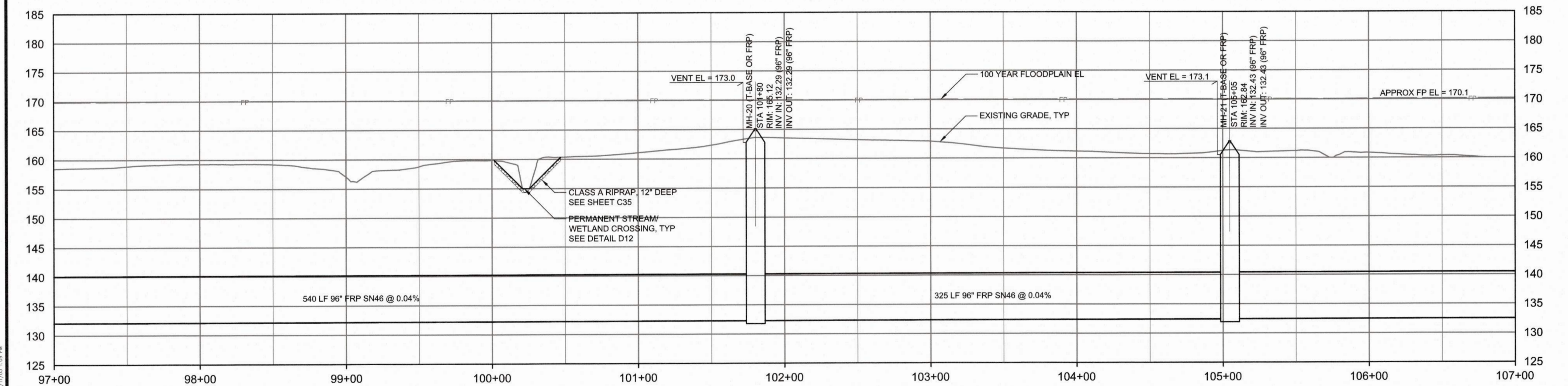
96" INTERCEPTOR
PLAN AND PROFILE
STATION 87+00 TO 97+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C09

PLOT DATE: 2020/11/06 4:51:03 PM BY: JOE BAILEY
 File: C:\MSWHAZEN\PM\N0381657\039 Saved By: JOE BAILEY Date: 2020/11/05 1:05 PM



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

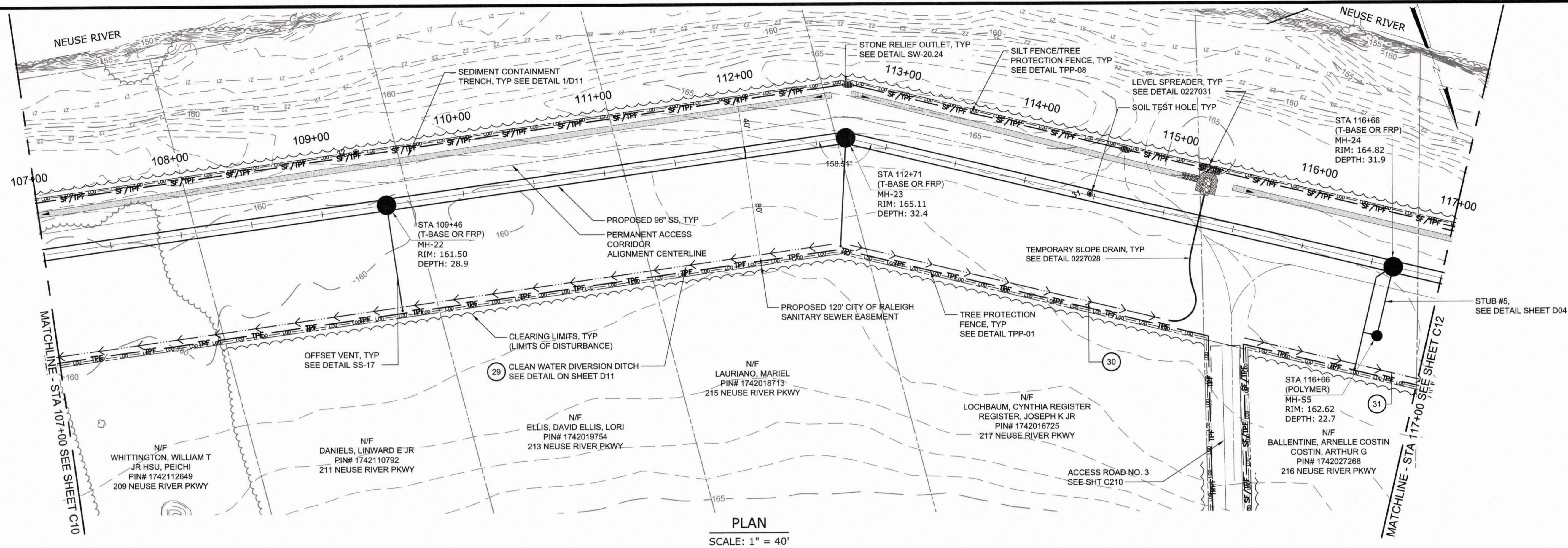
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

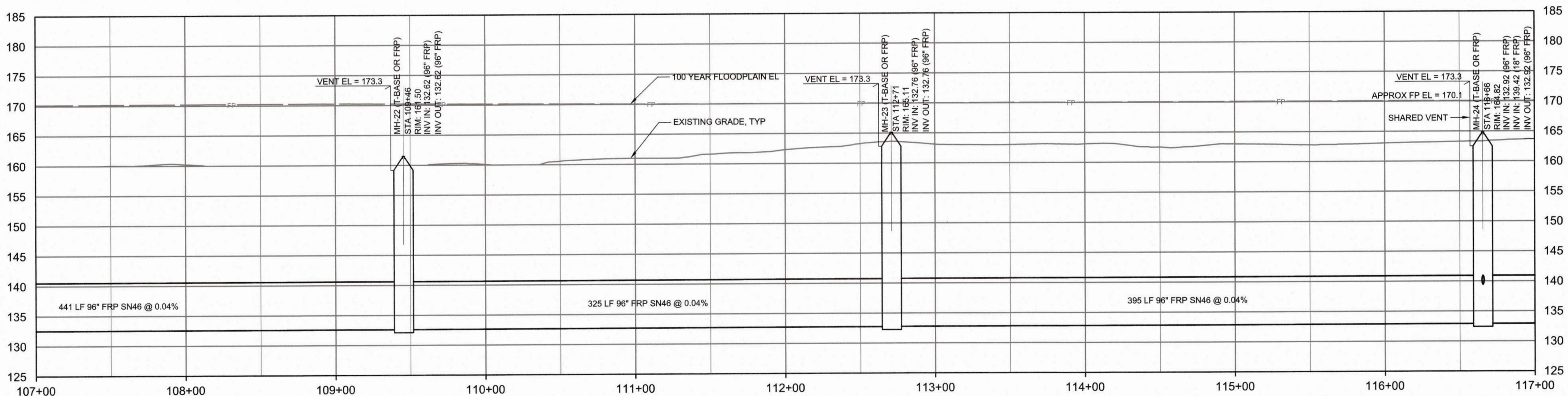
96" INTERCEPTOR
PLAN AND PROFILE
STATION 97+00 TO 107+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C10

PLOT DATE: 2020/11/09 4:55:39 PM
 FILE: C:\GIS\HAZEN\PROJECTS\96" INTERCEPTOR\96" INT PLAN AND PROFILE.dwg
 PLOT BY: JACOB BAILEY
 PLOT DATE: 2020/11/09 1:09 PM



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered as representation of total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



BEFORE YOU DIG!
CONTACT ONE-CALL CENTER
CALL 811
OR
1-800-632-4949

FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

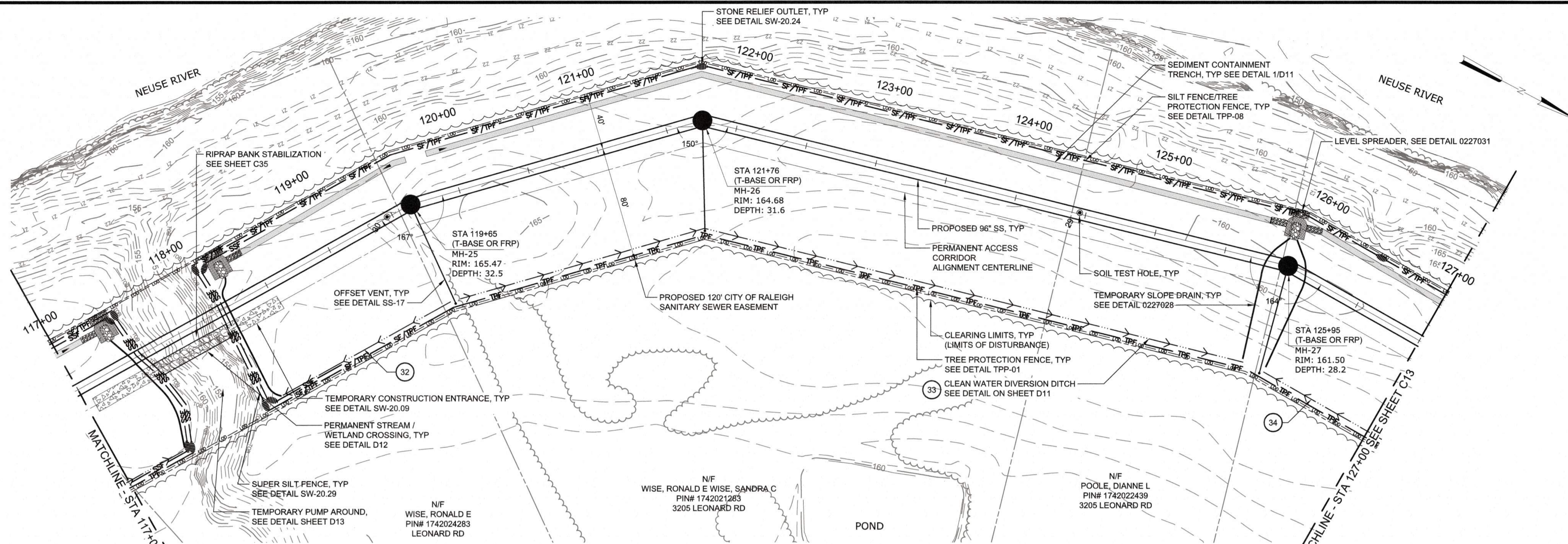
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
**NEUSE RIVER EAST
PARALLEL INTERCEPTOR**

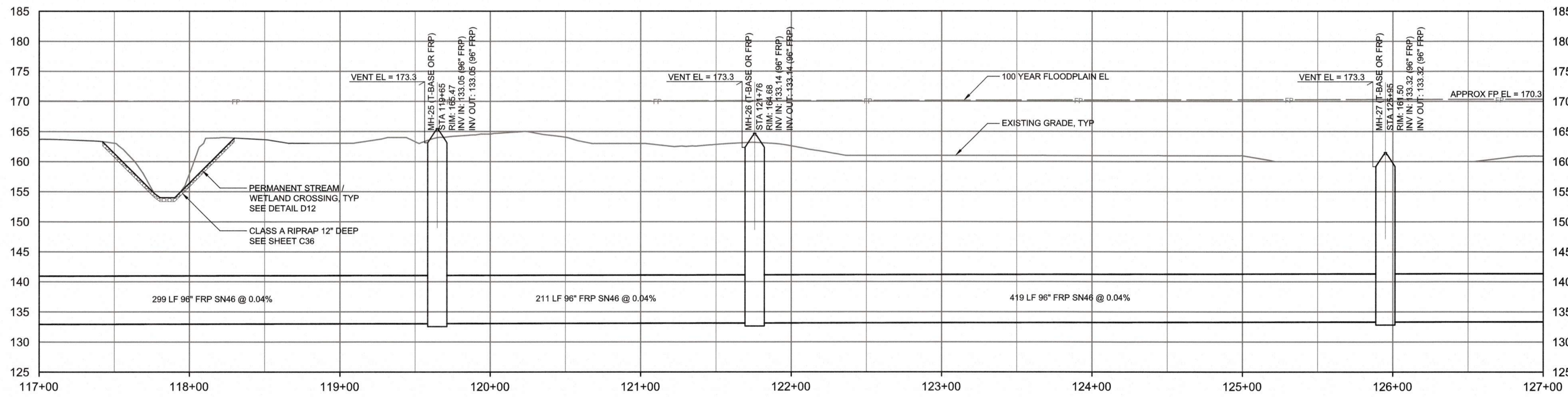
**96" INTERCEPTOR
PLAN AND PROFILE**
STATION 107+00 TO 117+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C11

PLOT DATE: 2020/11/09 4:54:02 PM BY: JOEY BAILEY
 FILE: C:\BAY\PROJECTS\2020\32426\DWG\C11.dwg Saved By: JOEY BAILEY Date: 2020/11/09 4:52 PM



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

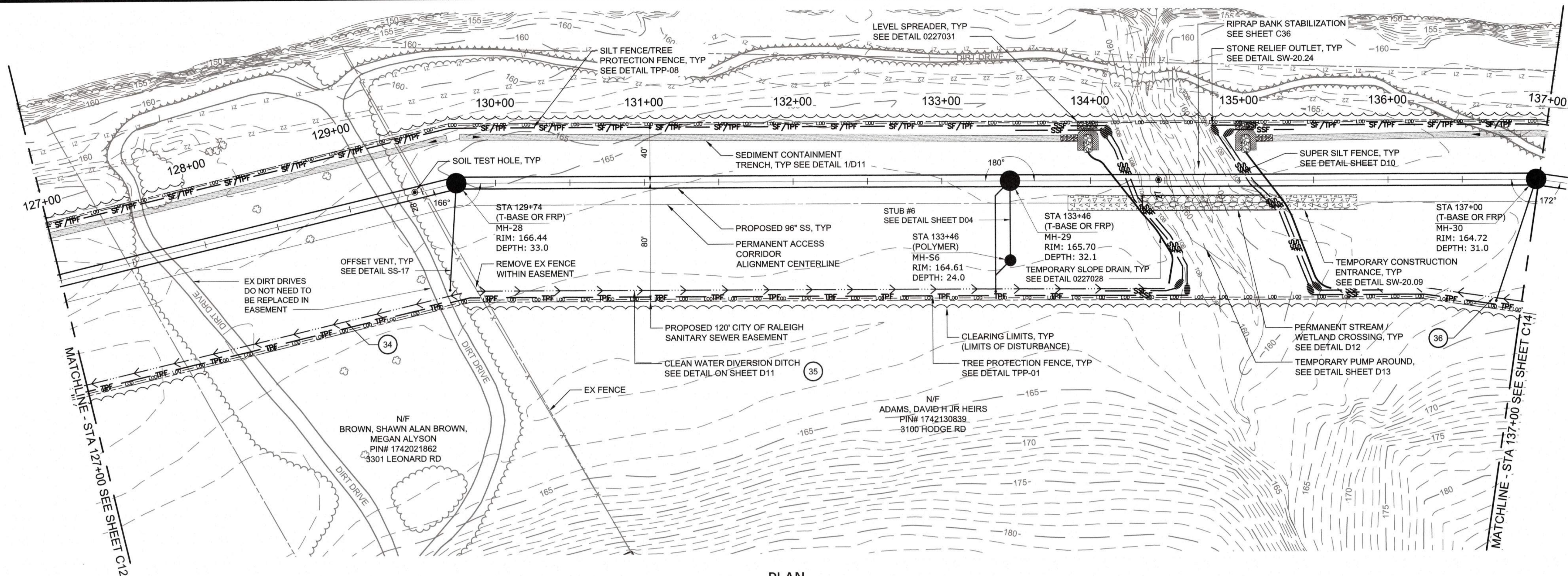
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

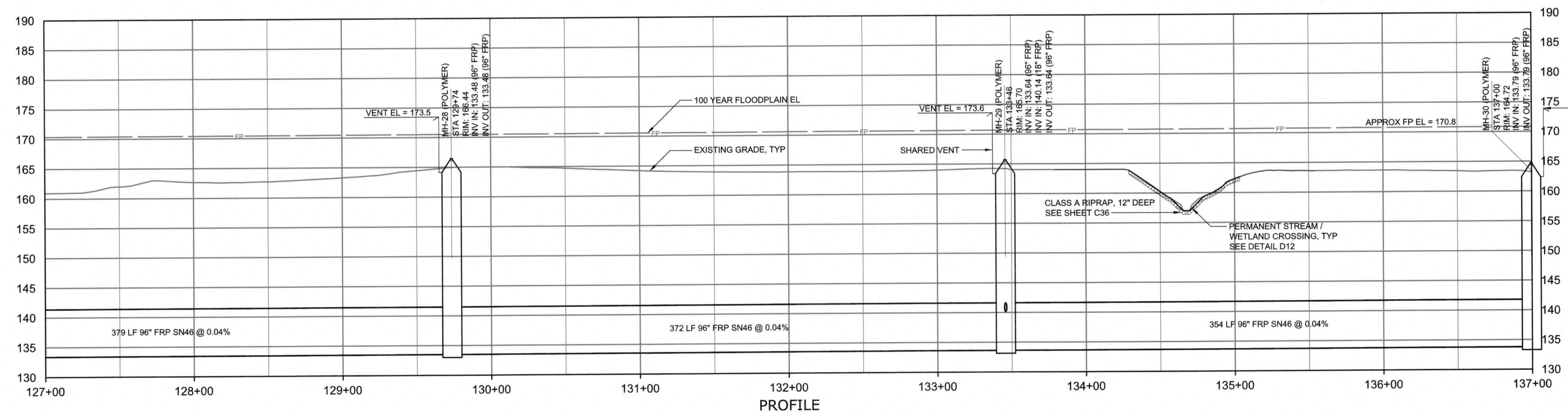
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 117+00 TO 127+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C12



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed work have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/04 4:57:03 PM BY: JEF/BAK/PL
 FILE: C:\WORK\2020\11\04\137+00\137+00.dwg Scale Date: 2020/11/04 1:17 PM

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

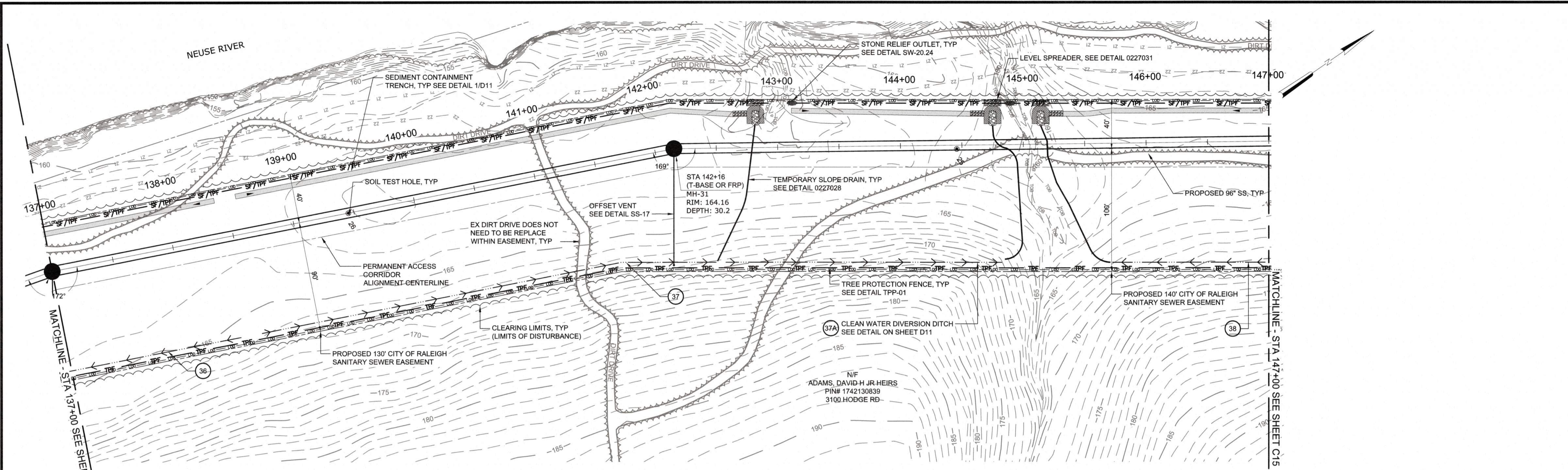
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

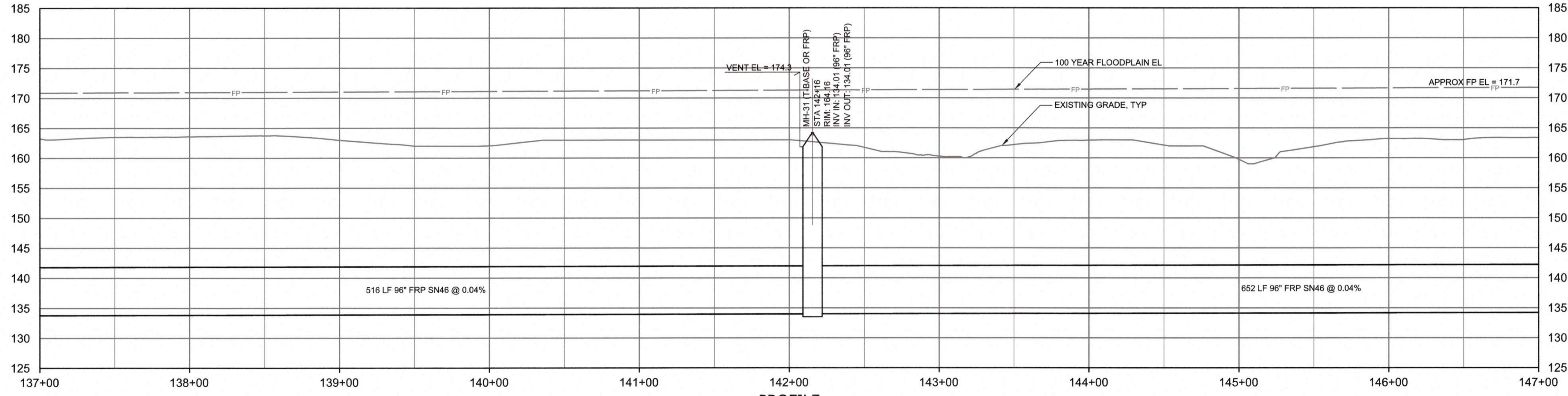
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 127+00 TO 137+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C13



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

FINAL DESIGN

Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



PLOT DATE: 2020/11/06 4:58:31 PM BY: JESTY BAILEY
FILE: C:\WORK\HATCH\174\HATCH\174.dwg Saved By: JESTY BAILEY

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

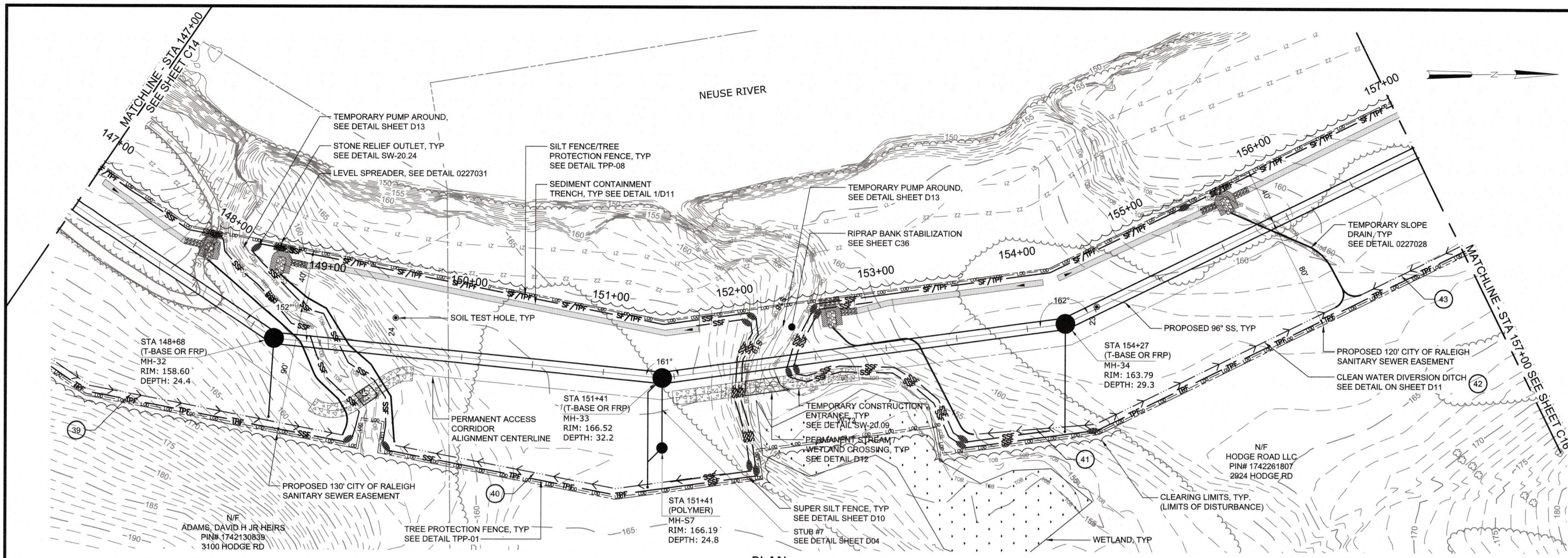
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

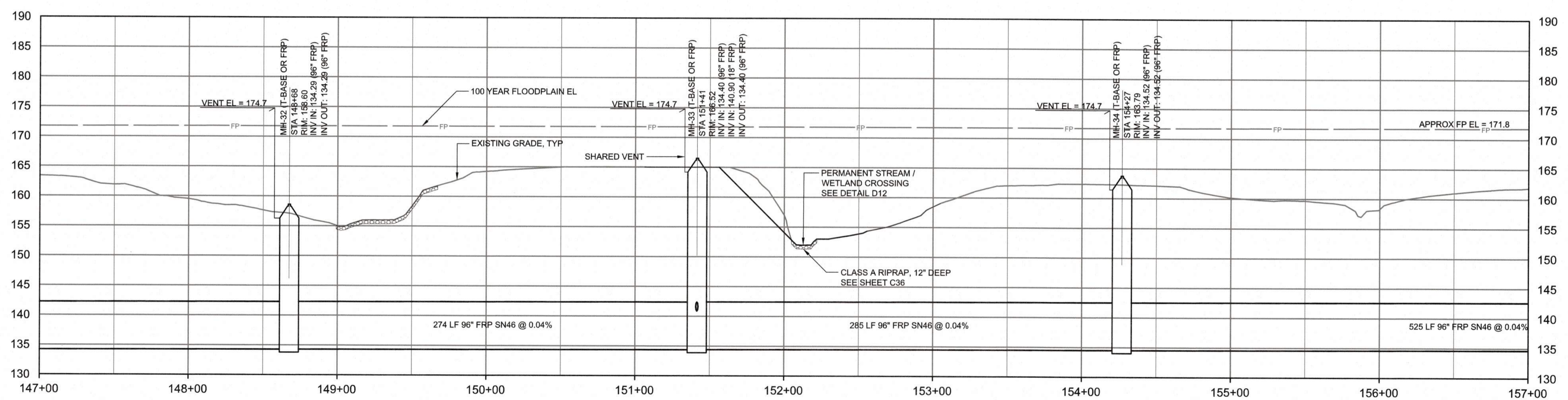
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 137+00 TO 147+00

DATE: NOVEMBER 2020
HAZEN NO.: 32426-000
CONTRACT NO.: 1
DRAWING NUMBER: C14



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization shall not be a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

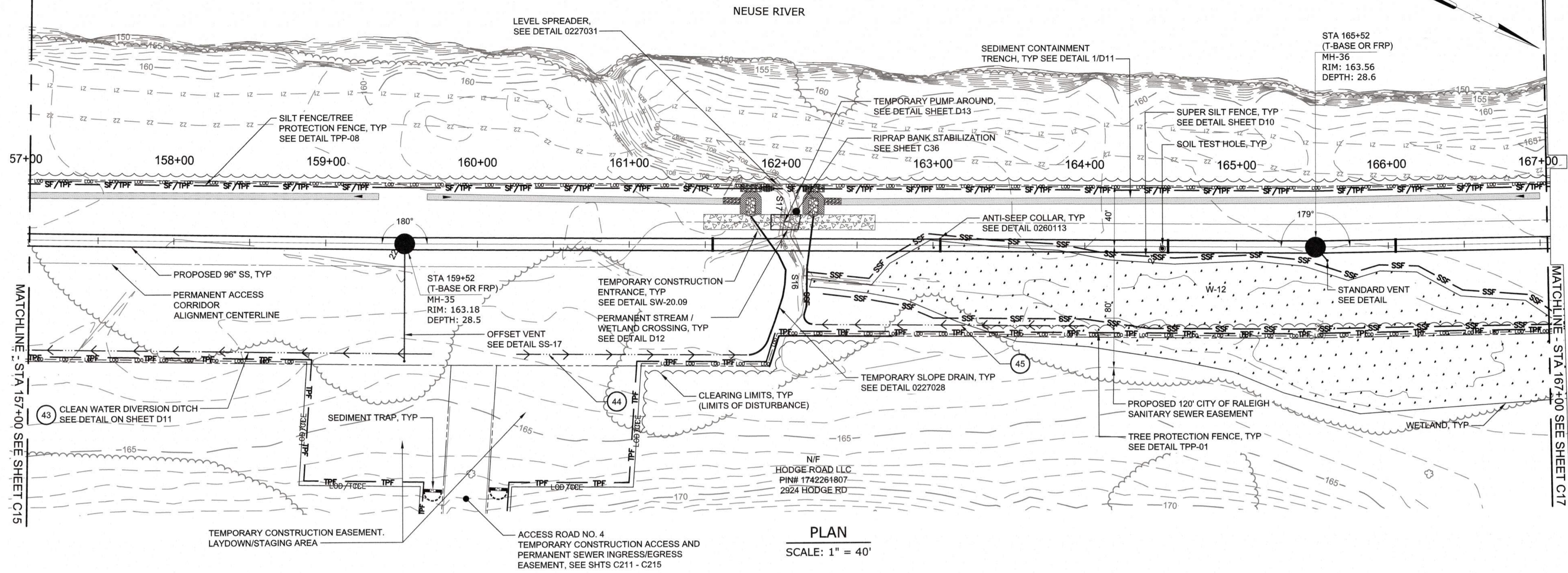
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

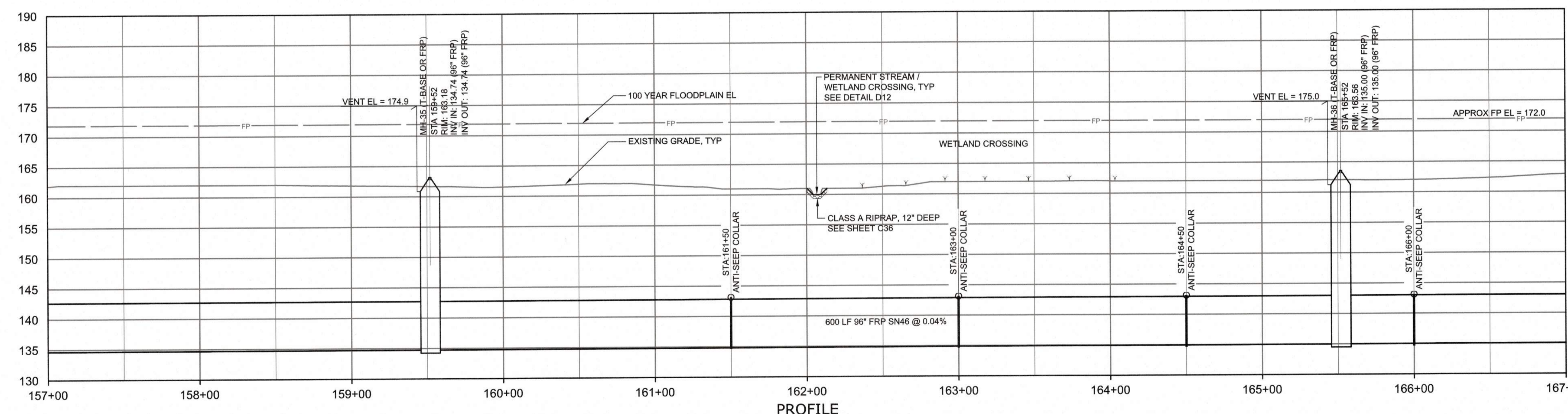
96" INTERCEPTOR
PLAN AND PROFILE
STATION 147+00 TO 157+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C15

Plot Date: 2020/11/06 5:00:10 PM By: JOE BAILEY
File: C:\BAY\WORK\PROJECTS\2020\11\05\1123.Plot Save Date: 2020/11/05 1:23 PM



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Laws. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



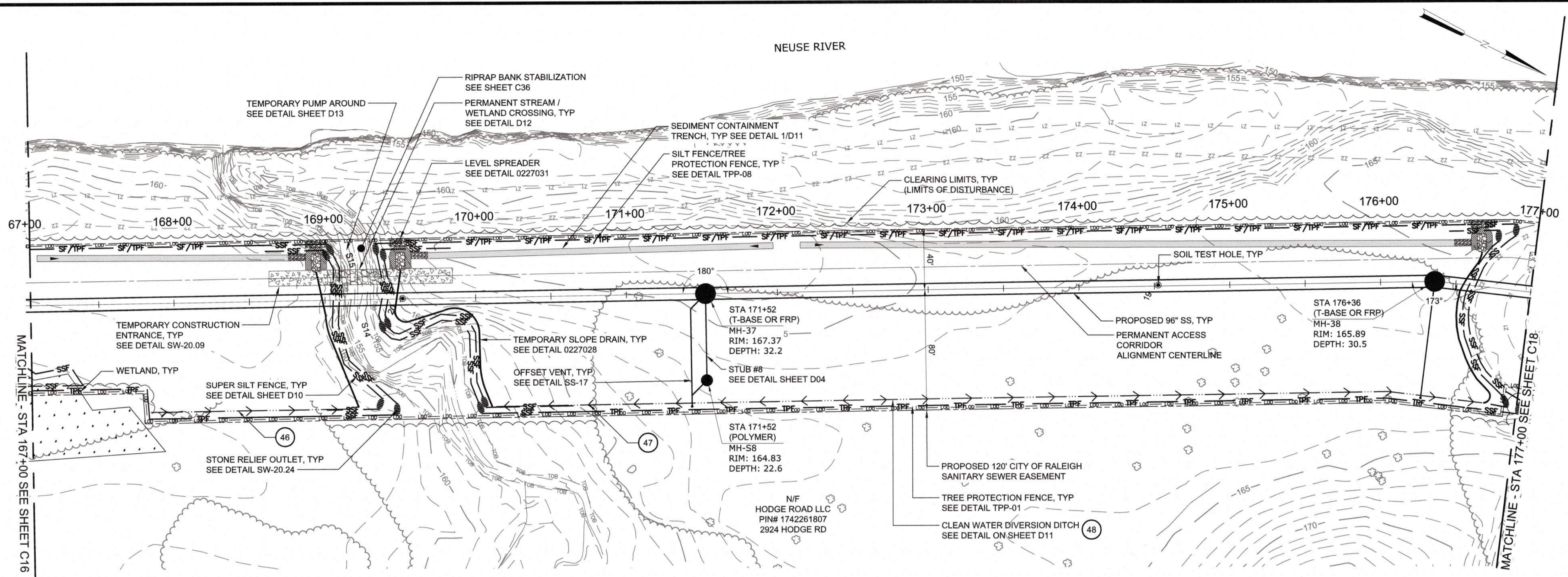
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

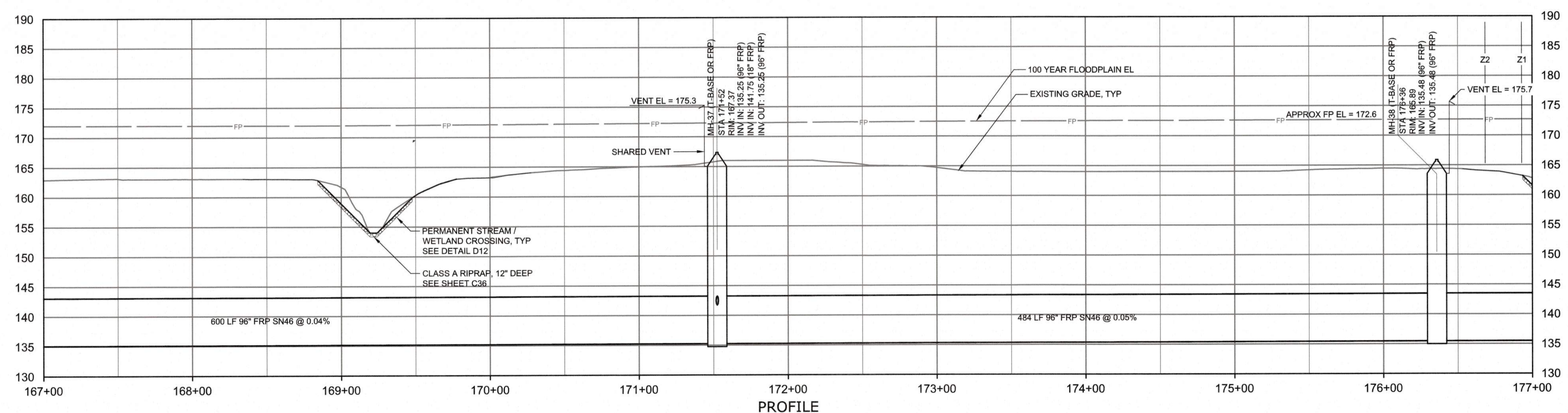
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 157+00 TO 167+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C16



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/05 5:03:20 PM BY: JACEY BAILEY
FILE: C:\MSW\HAZEN-SAWYER\PROJECTS\96" INTERCEPTOR\96" INTERCEPTOR.dwg Saved By: JACEY BAILEY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

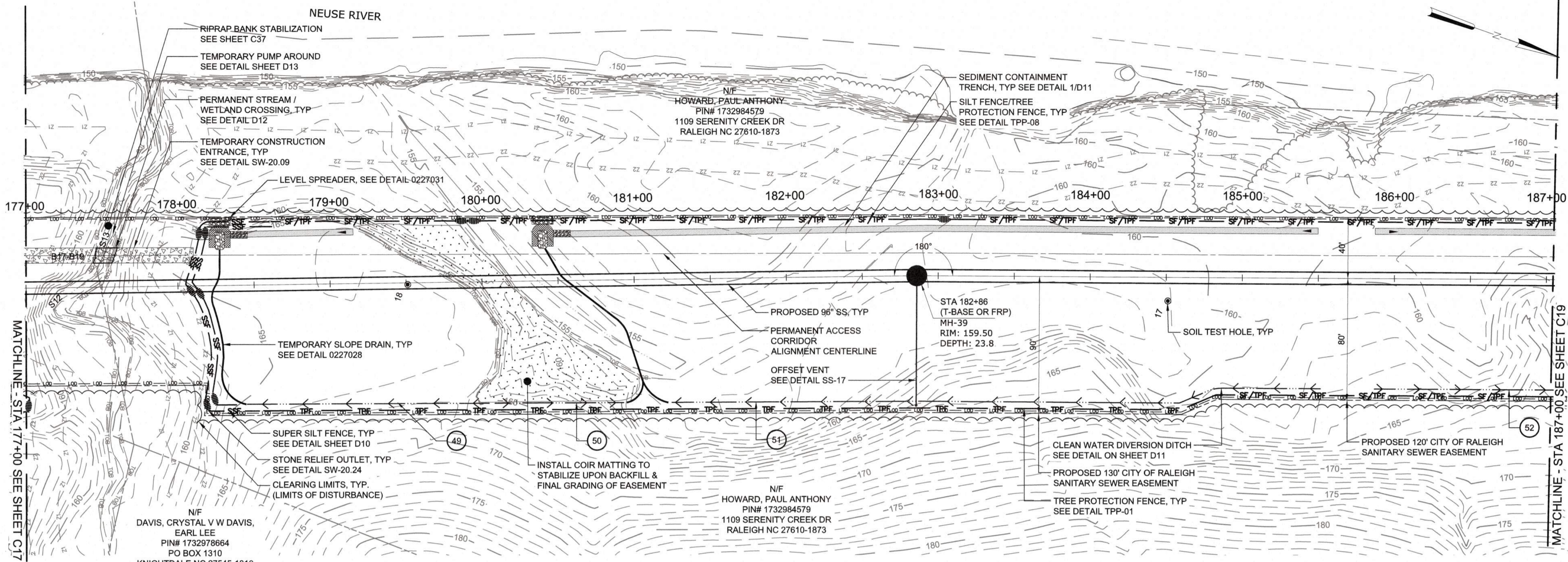
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

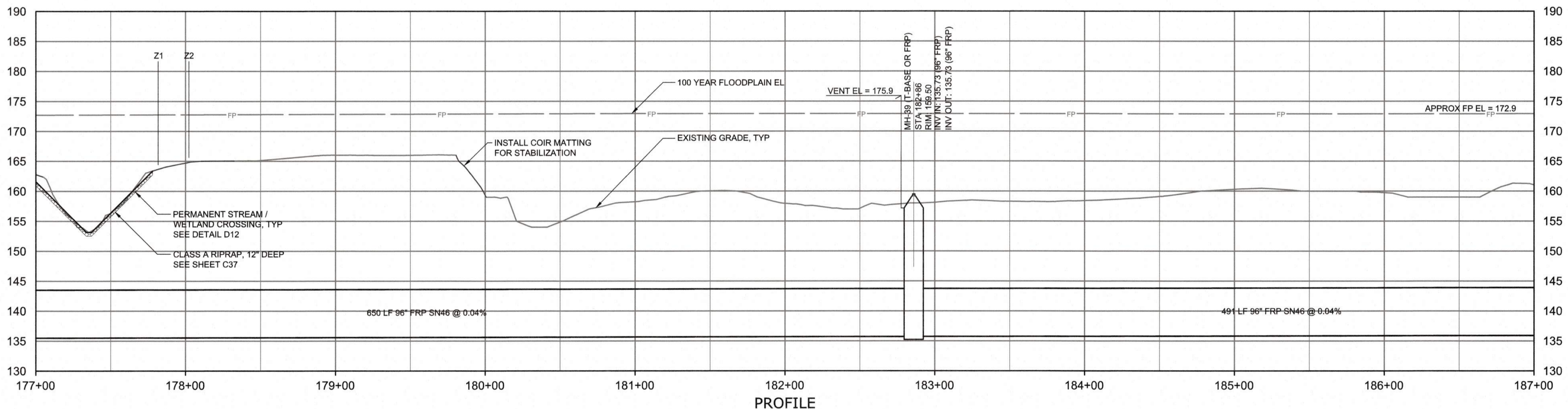
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 167+00 TO 177+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C17



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 5:05:18 PM BY: JREY BAILEY
FILE: C:\MSW\HATCH\PROJECTS\2020\11\05_131.PLT

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



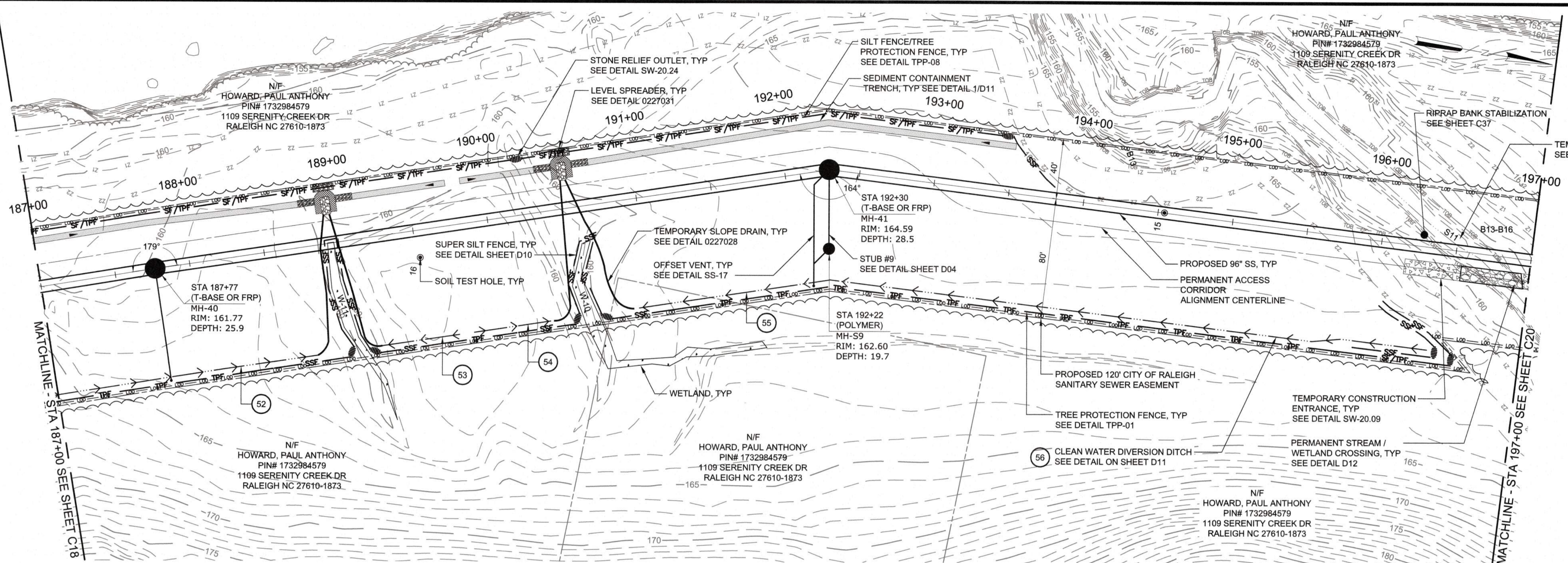
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

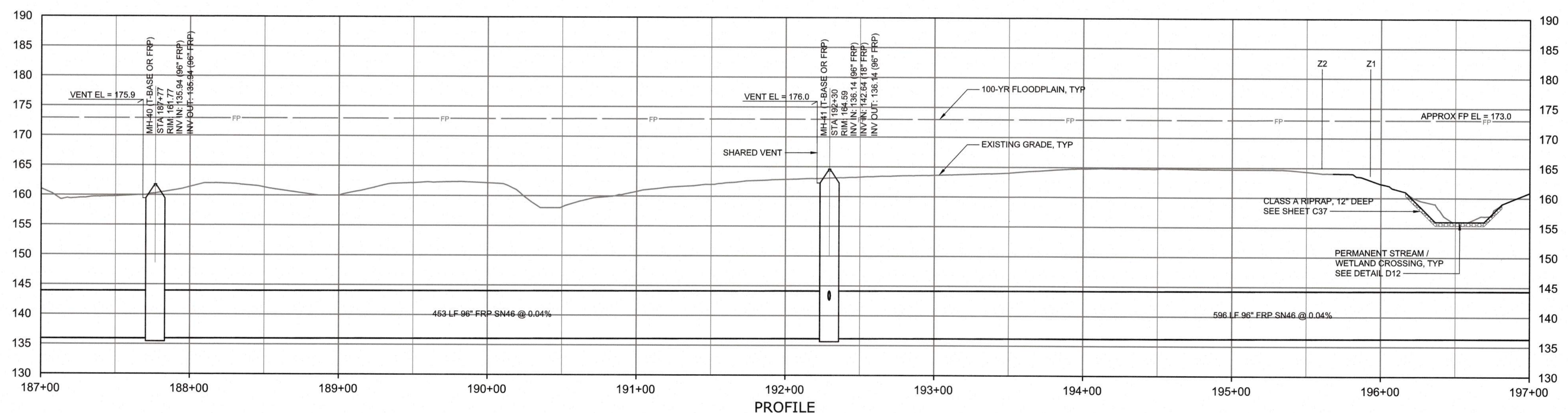
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 177+00 TO 187+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C18



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Public
Sewer Collection/ Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

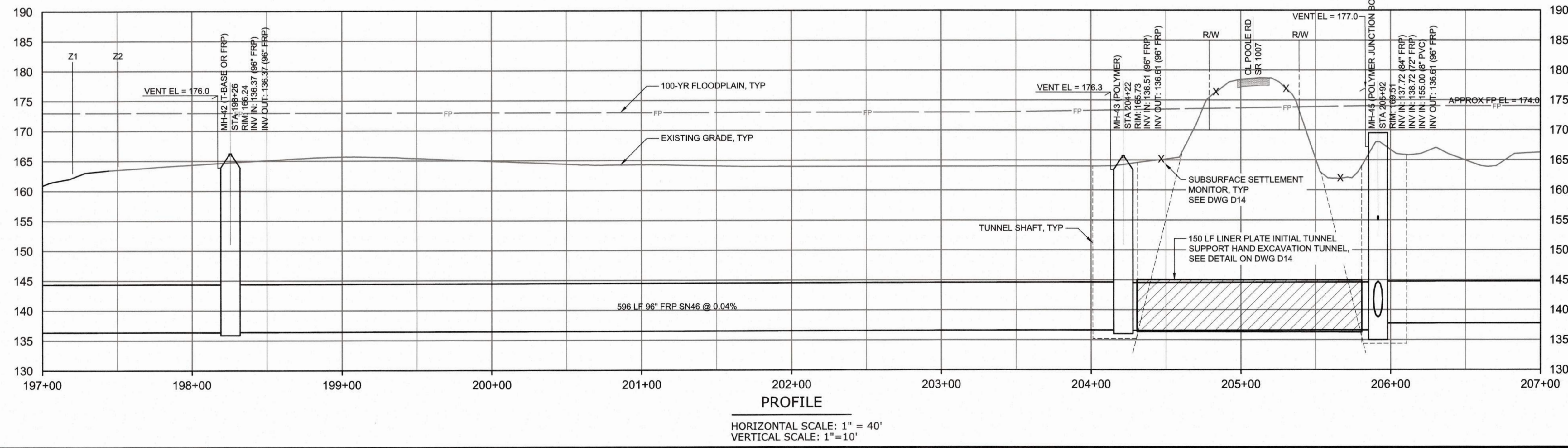
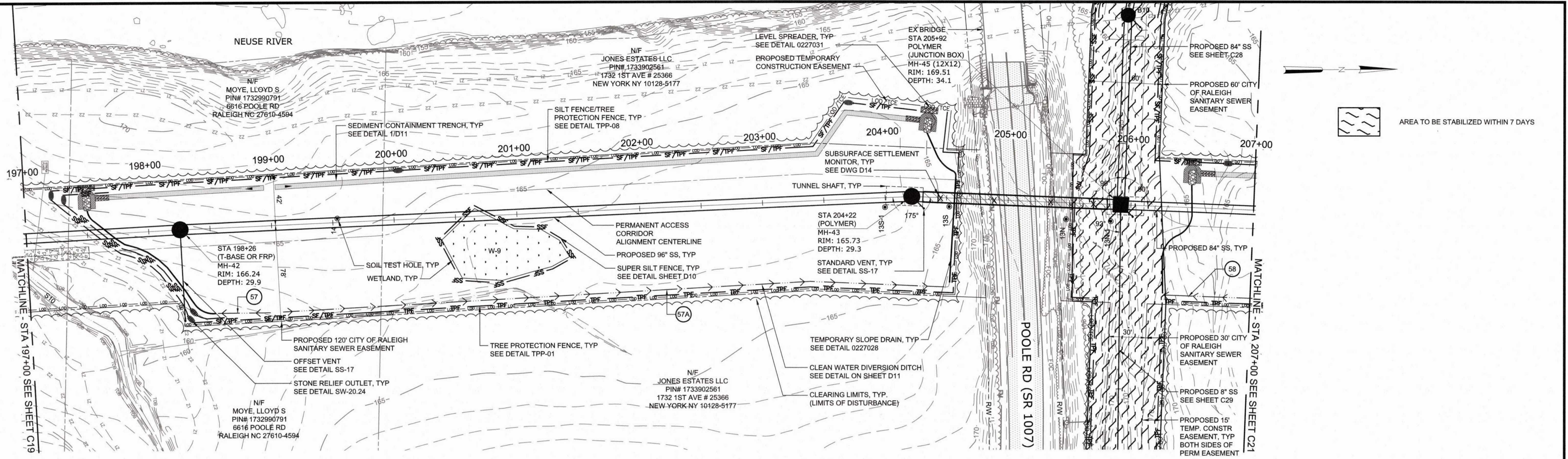
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

96" INTERCEPTOR
PLAN AND PROFILE
STATION 187+00 TO 197+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C19

PLOT DATE: 2020/11/06 5:07:01 PM BY: JOE BAILEY
 FILE: C:\BAILEY\2020\11\06\1109 SERENITY CREEK DR\1109 SERENITY CREEK DR.dwg
 Scale Date: 2020/11/05 13:33 PM



Public
Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. The specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

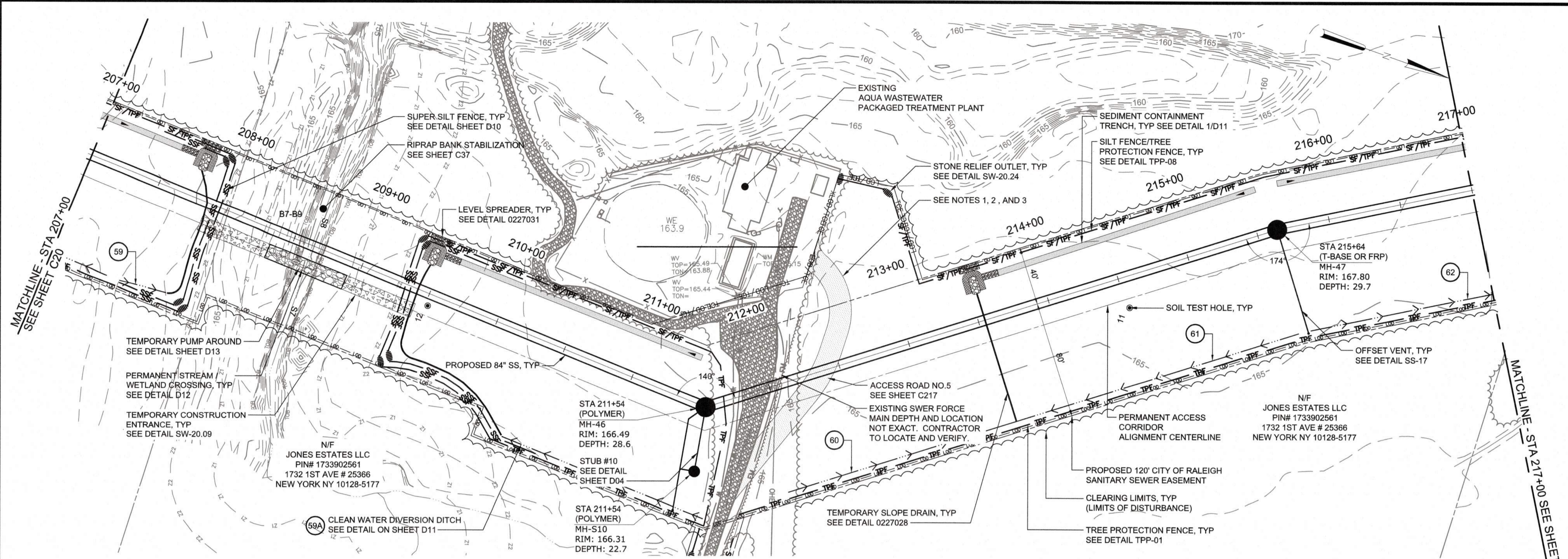
96" & 84" INTERCEPTOR

PLAN AND PROFILE

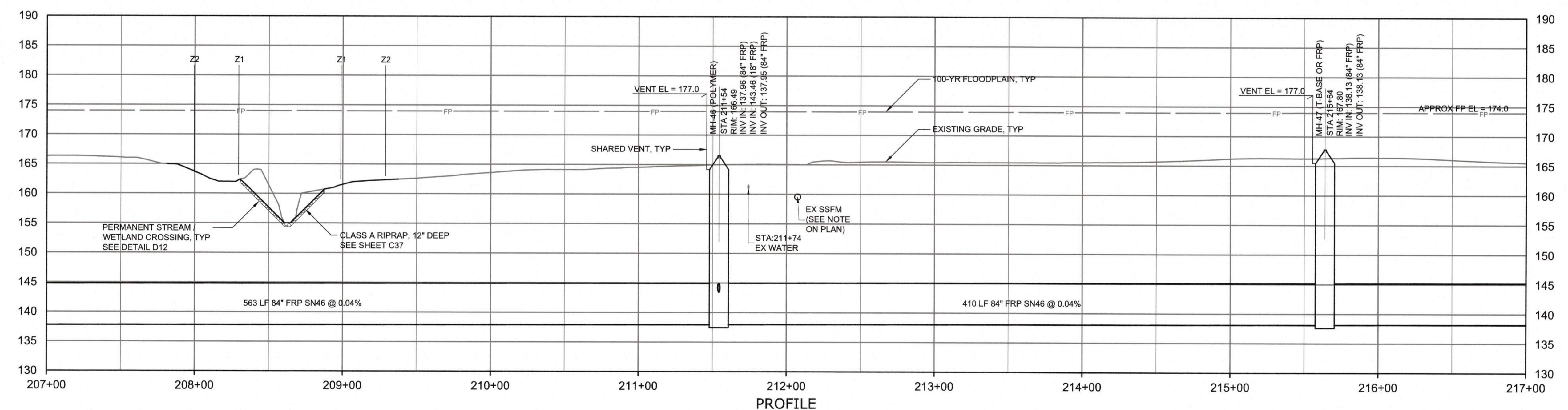
STATION 197+00 TO 207+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C20

- NOTES:**
- CONTRACTOR SHALL INSTALL TEMPORARY ACCESS GRAVEL DRIVE TO PROVIDE CONTINUOUS ACCESS TO THE EXISTING AQUA PLANT DURING THE PERIOD WHEN THE EXISTING ACCESS DRIVE IS UNUSABLE. THE EXISTING ACCESS DRIVE SHALL BE RE-INSTALLED TO PRE-CONSTRUCTION CONDITION AS SOON AS POSSIBLE AND MADE AVAILABLE TO AQUA FOR USE PRIOR TO THE TEMPORARY ACCESS DRIVE BEING REMOVED.
 - THE CONTRACTOR SHALL INSTALL A NEW 12' WIDE CHAIN LINK ACCESS GATE TO MATCH THE EXISTING FENCING. THIS GATE SHALL BE INSTALLED AND MADE AVAILABLE TO AQUA FOR USE WITH THE TEMPORARY ACCESS DRIVE.
 - THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION COORDINATION MEETING WITH THE CITY OF RALEIGH AND AQUA AMERICA ON-SITE PRIOR TO STARTING CONSTRUCTION OF ACCESS ROAD NO. 5 OR THE GRAVITY SEWER SHOWN ON THIS SHEET



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Town Certification: This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

Public
Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization does not constitute a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 4:16:01 PM
 File: C:\WORK\HAZEN-SAWYER\PROJECTS\2020\11\06_3.57 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



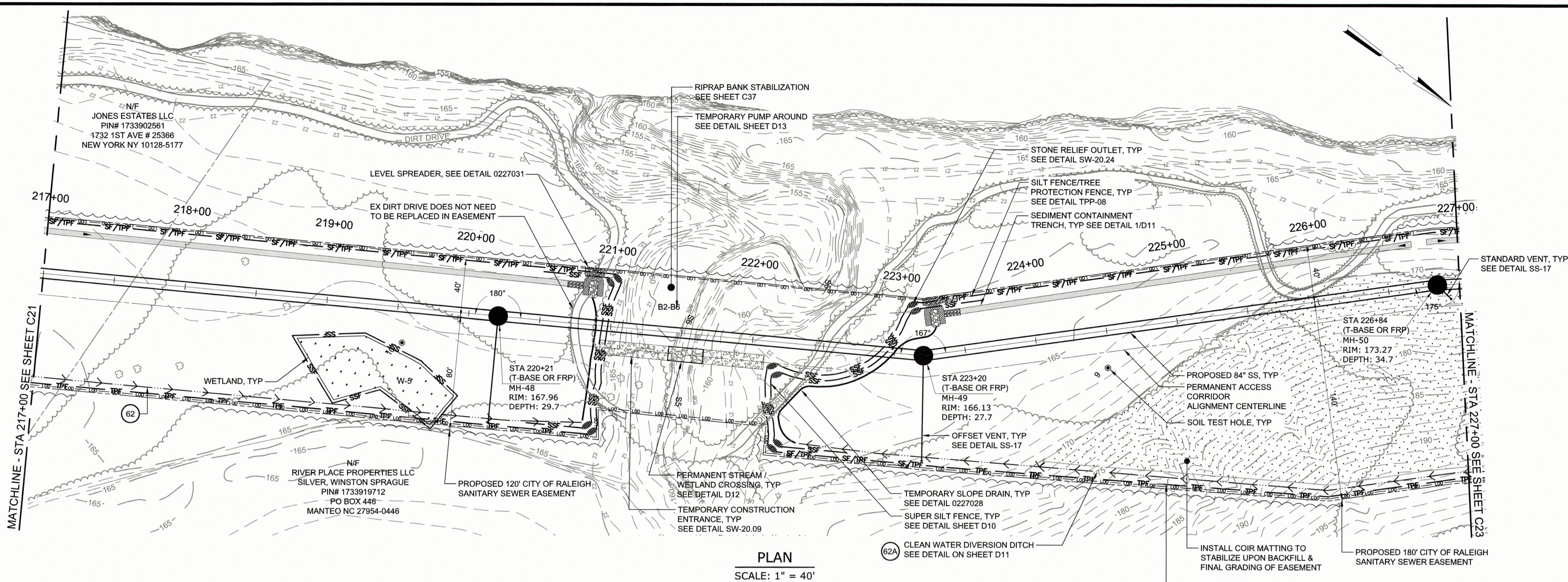
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

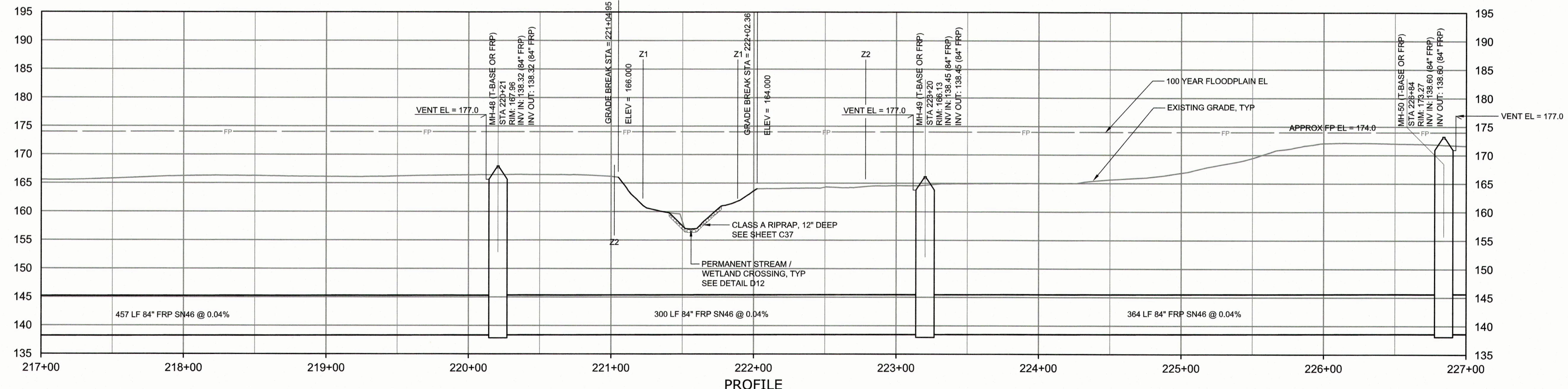
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
**NEUSE RIVER EAST
PARALLEL INTERCEPTOR**

**84" INTERCEPTOR
PLAN AND PROFILE
STATION 207+00 TO 217+00**

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C21



PLAN
SCALE: 1" = 40'

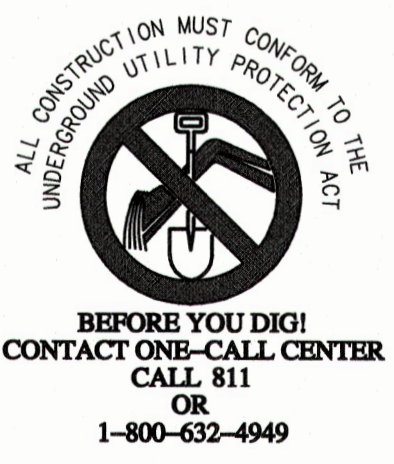


PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization before is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



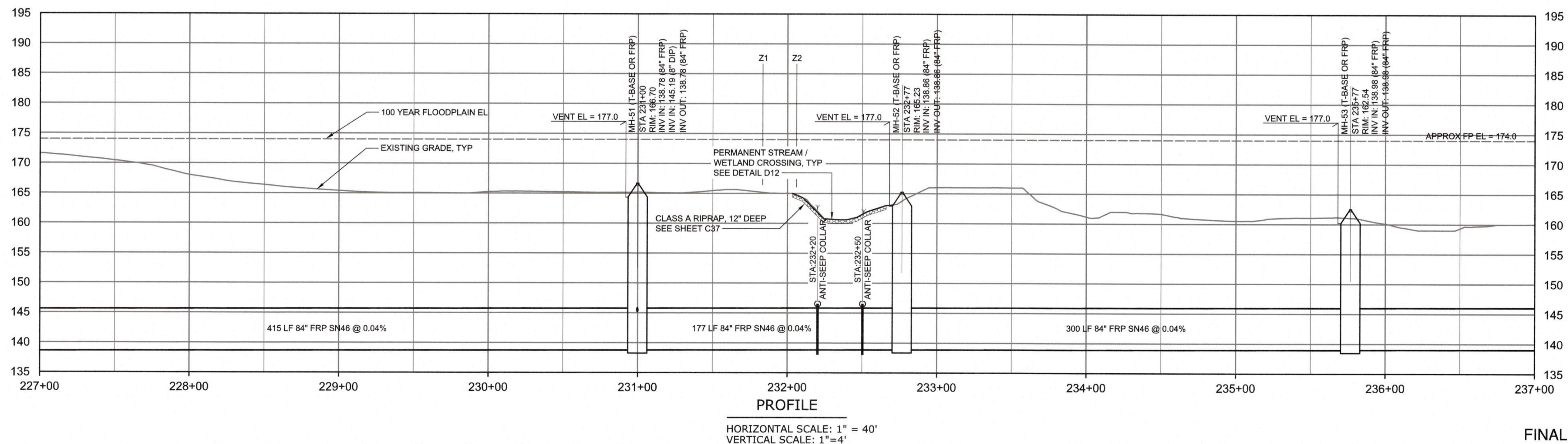
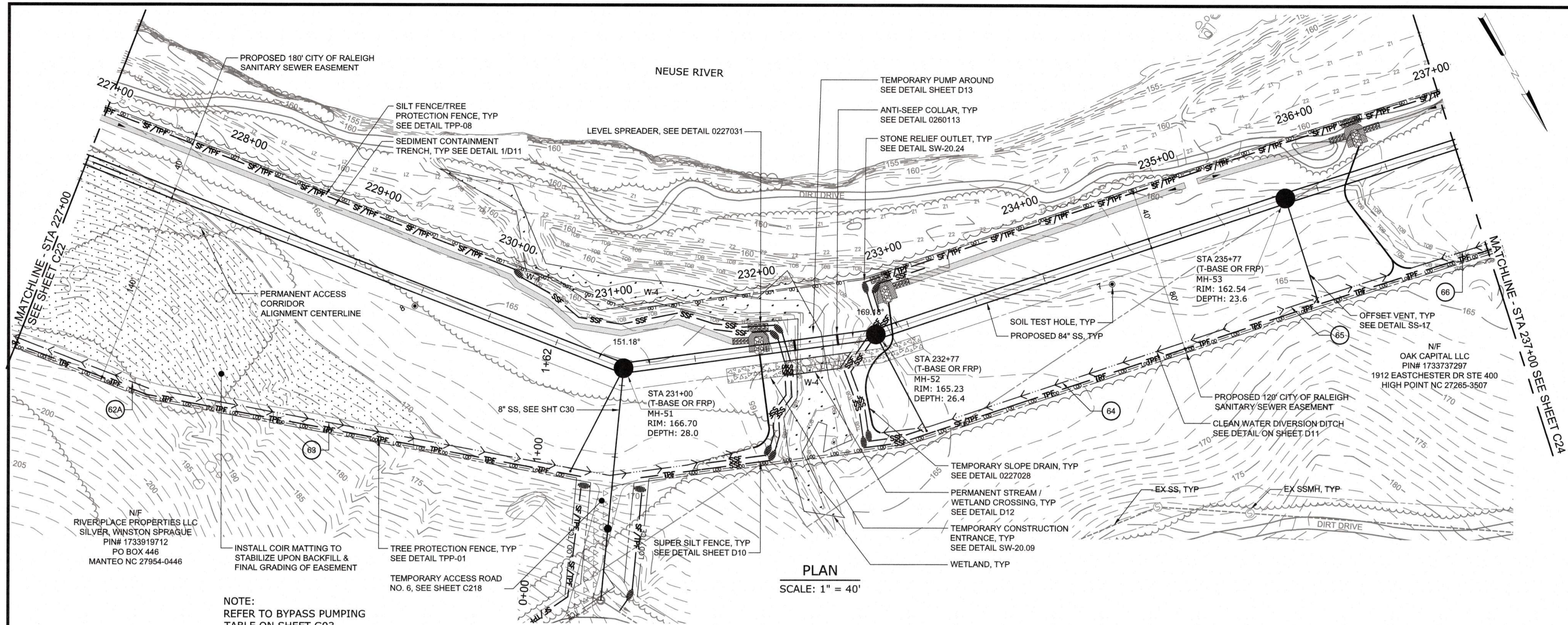
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

84" INTERCEPTOR
PLAN AND PROFILE
STATION 217+00 TO 227+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C22



Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

Public

Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization does not constitute a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



PLOT DATE: 2020/11/06 3:56:46 PM BY: JOE HALEY
 C:\WORKSPACE\PROJECTS\2323 - NEUSE RIVER EAST PARALLEL INTERCEPTOR.dwg Date: 2020/11/05 1:44 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

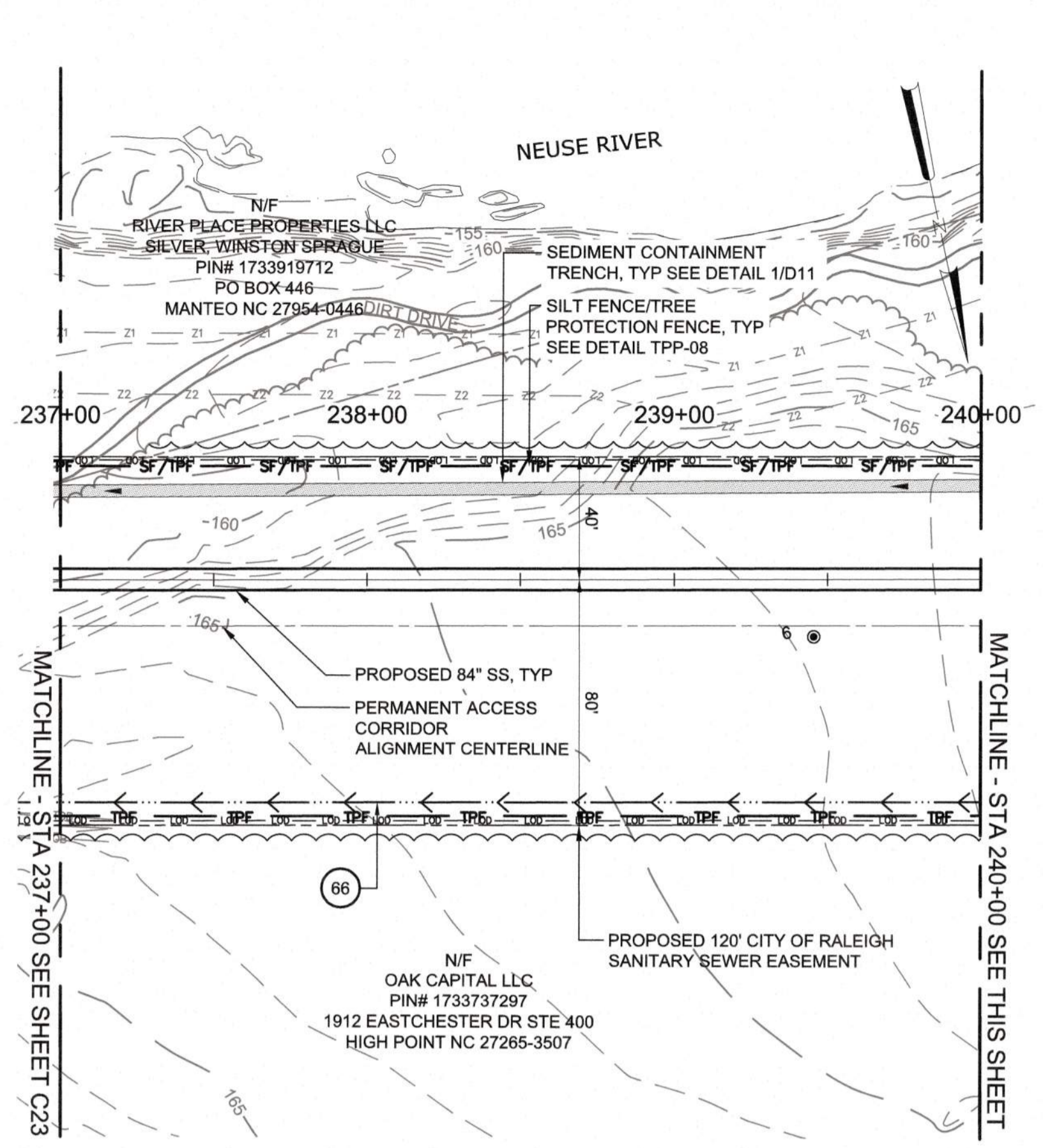
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

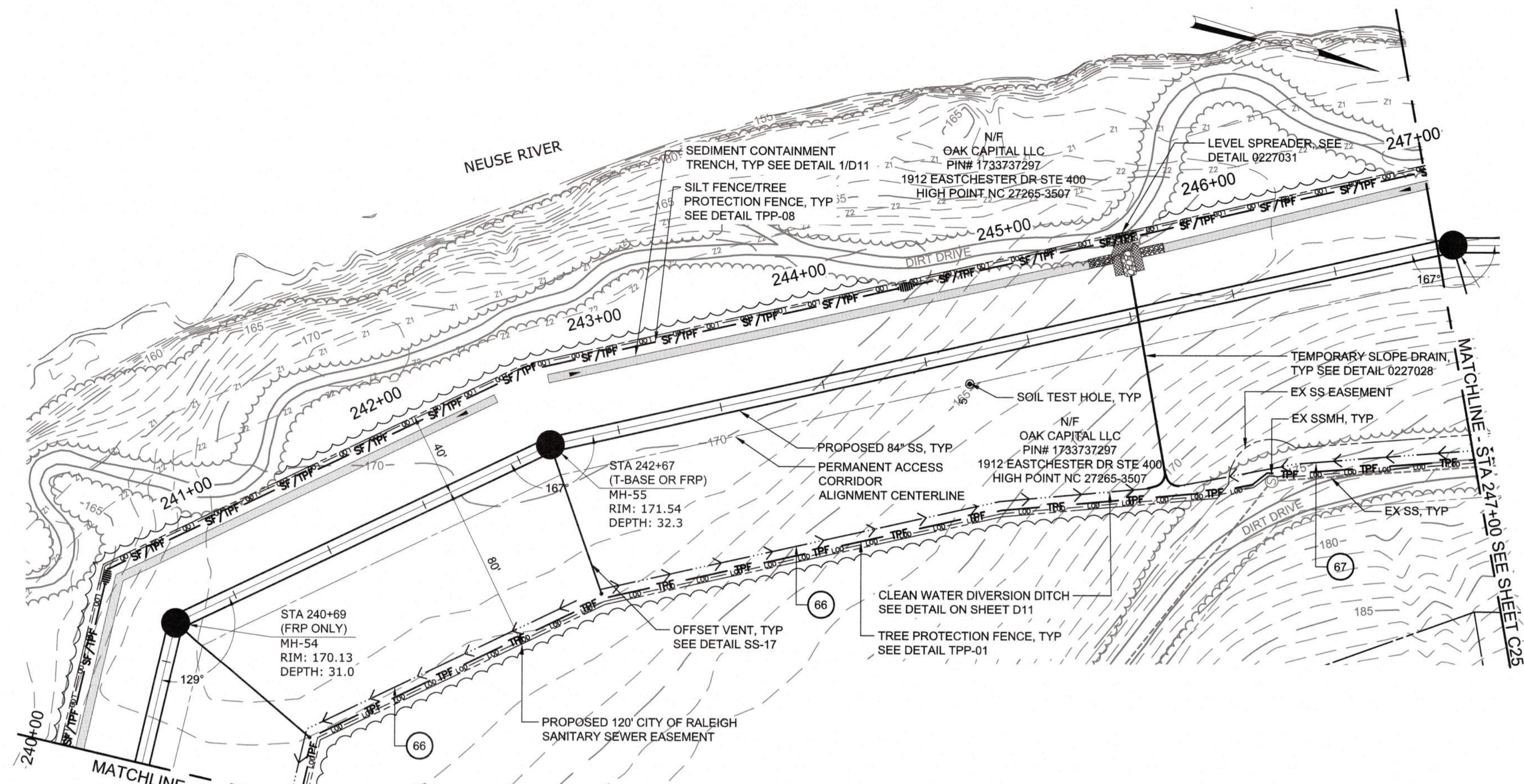
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

84" INTERCEPTOR
PLAN AND PROFILE
STATION 227+00 TO 237+00

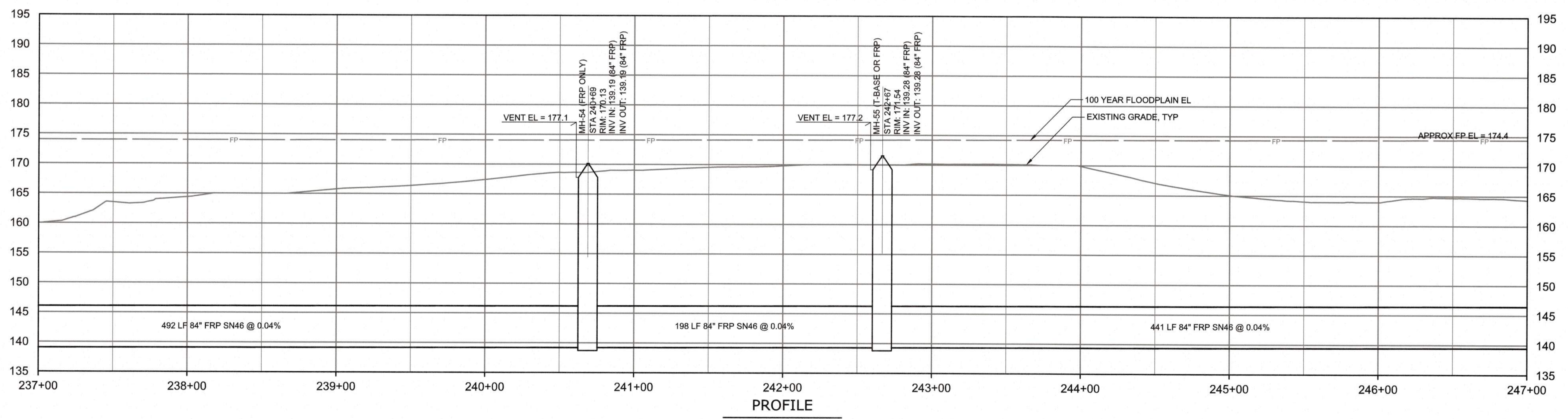
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C23



PLAN
SCALE: 1" = 40'



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

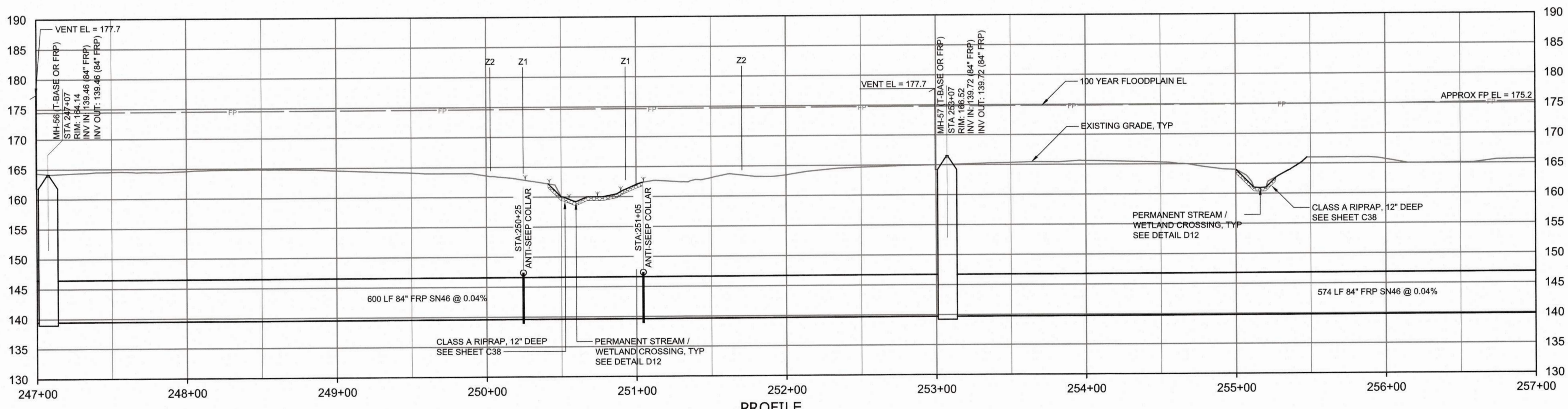
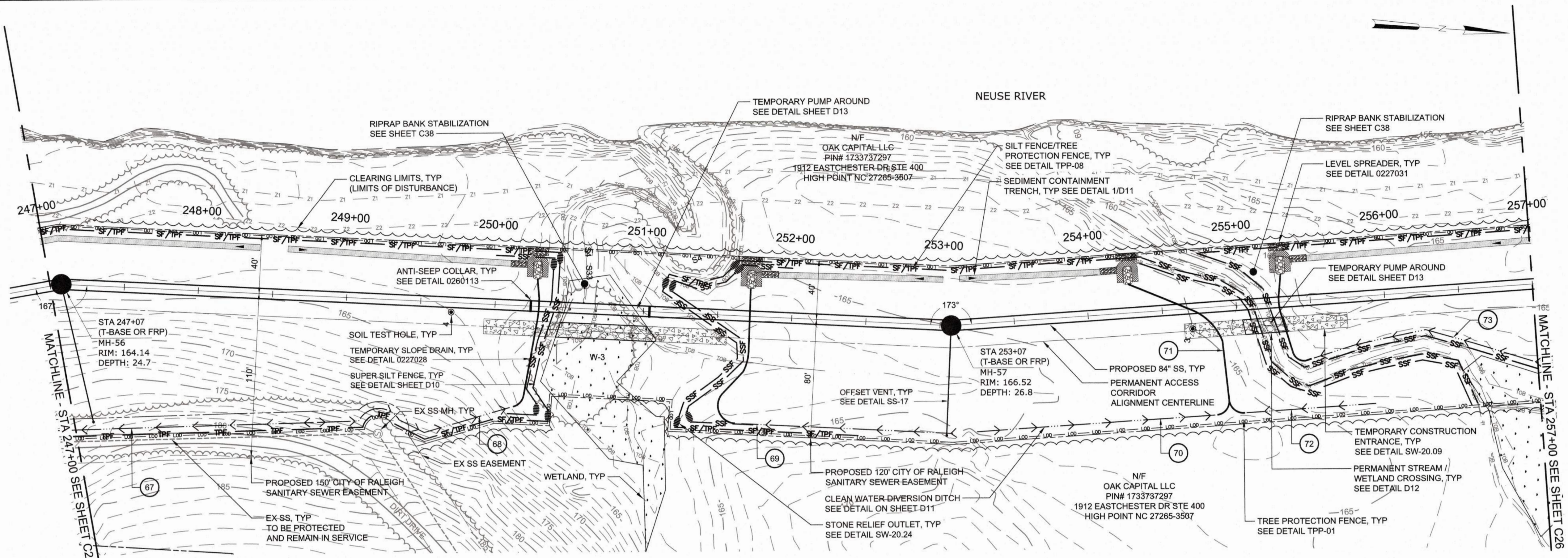
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

84" INTERCEPTOR
PLAN AND PROFILE
STATION 237+00 TO 247+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C24

PLOT FILE: 2020/11/05 8:56:56 PM
 PLOT: C:\WORK\2020\11\05\84" INTERCEPTOR - PLAN AND PROFILE.dwg
 PLOT DATE: 2020/11/05 8:56:56 PM
 PLOT BY: JERRY BAILEY
 PLOT DATE: 2020/11/05 8:56:56 PM



Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

Public Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 5:17:40 PM BY: JOE BAILEY
 C:\projects\1912 EASTCHESTER DR STE 400\DWG\1912 EASTCHESTER DR STE 400 - C25.dwg
 Scale Date: 2020/11/05 1:51 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

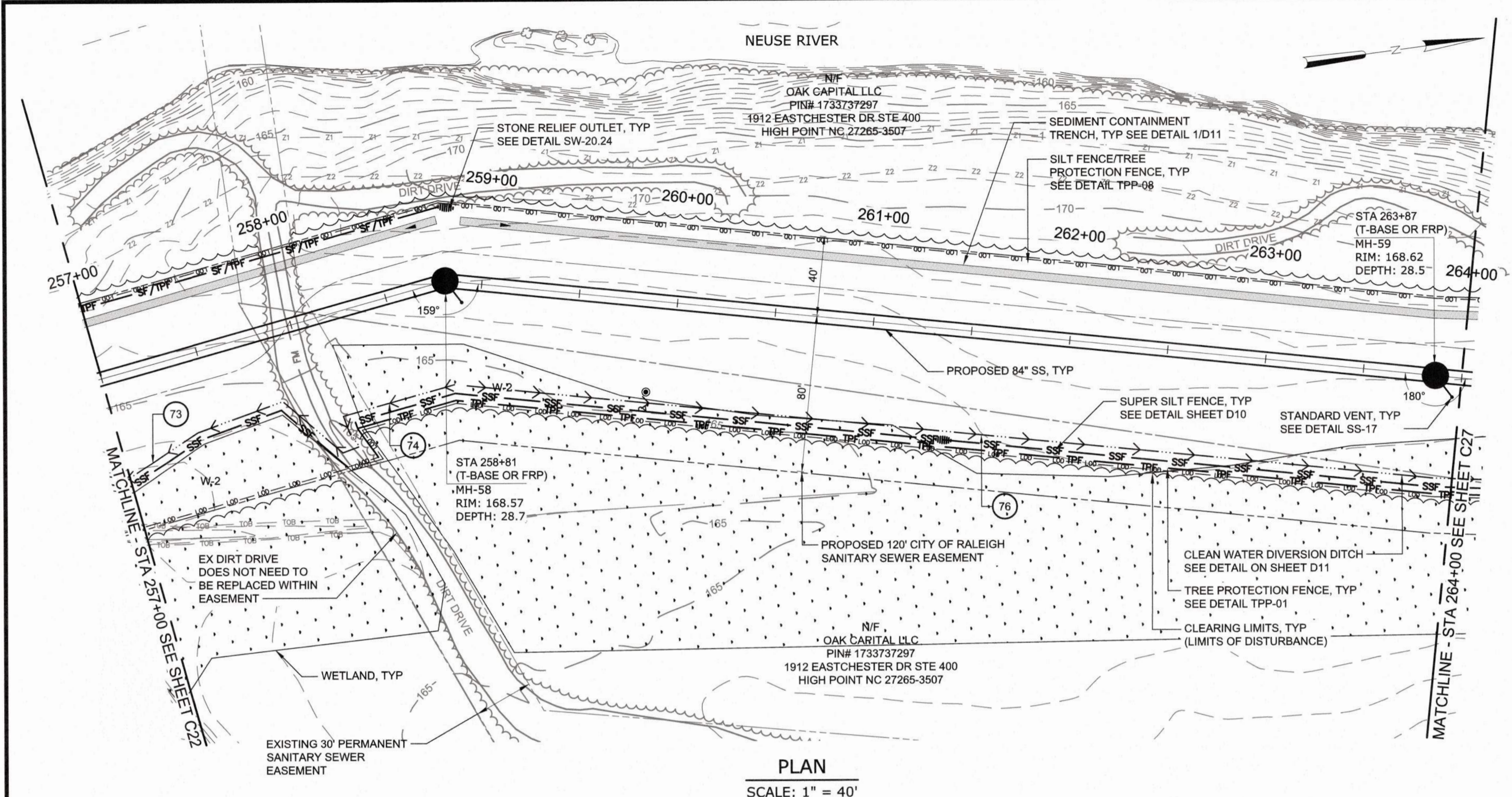
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

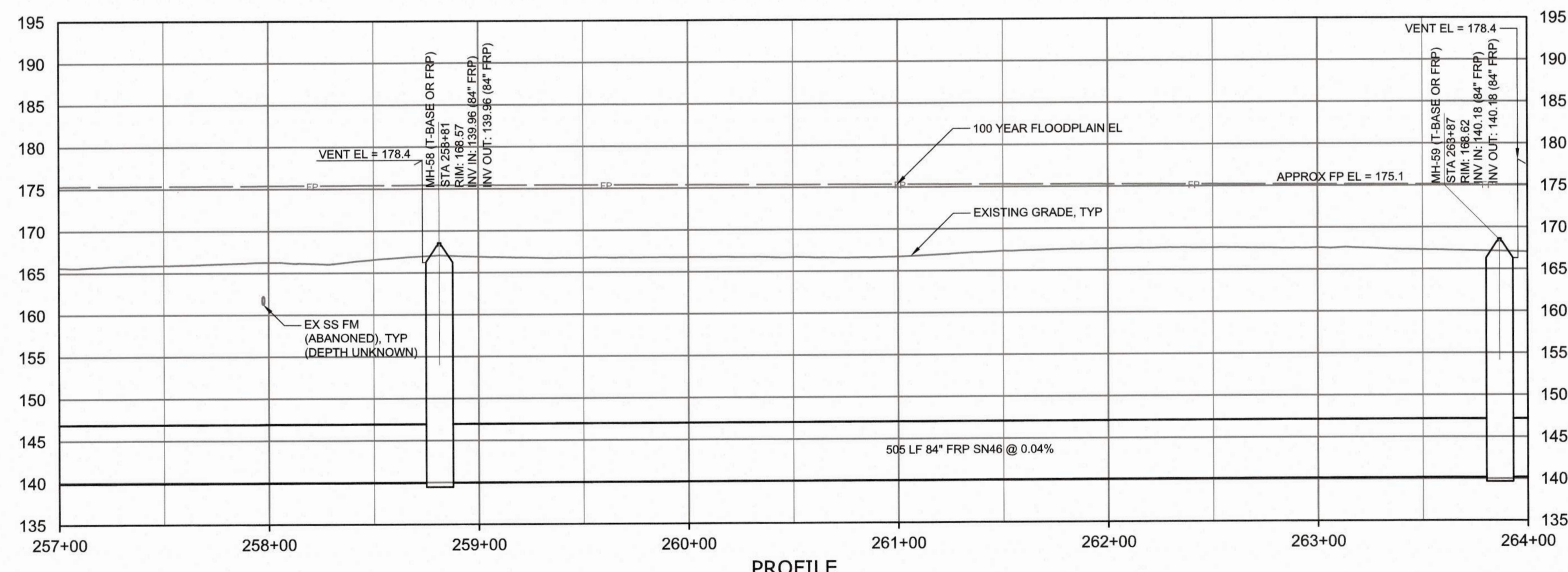
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

84" INTERCEPTOR
PLAN AND PROFILE
STATION 247+00 TO 257+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C25



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

1. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

Public
Sewer Collection/ Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

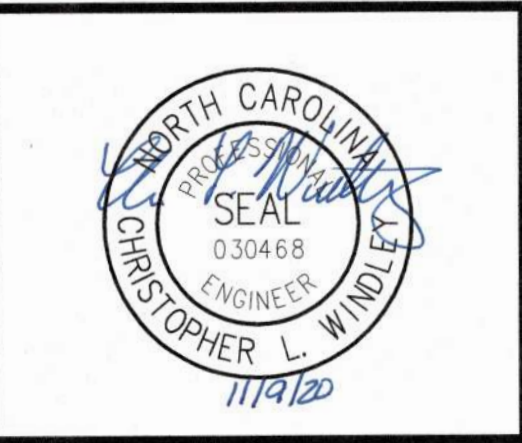
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

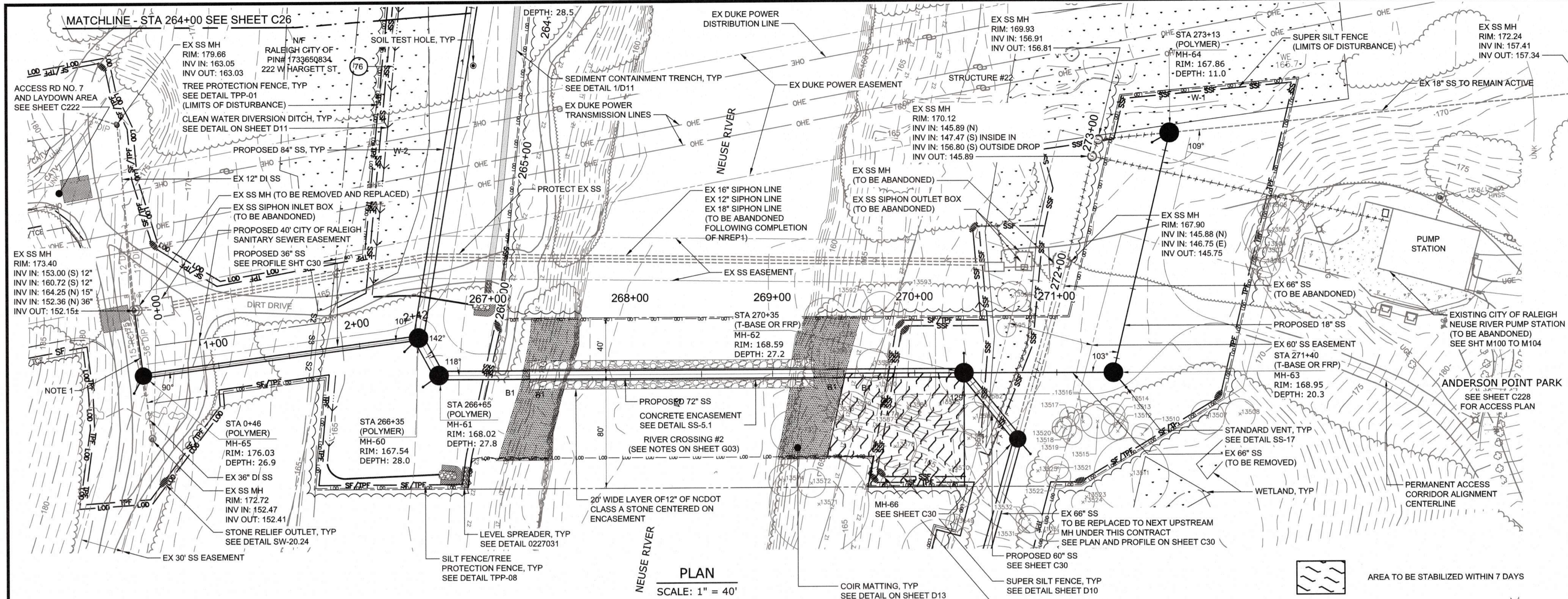
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

84" INTERCEPTOR
PLAN AND PROFILE
STATION 257+00 TO 264+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C26

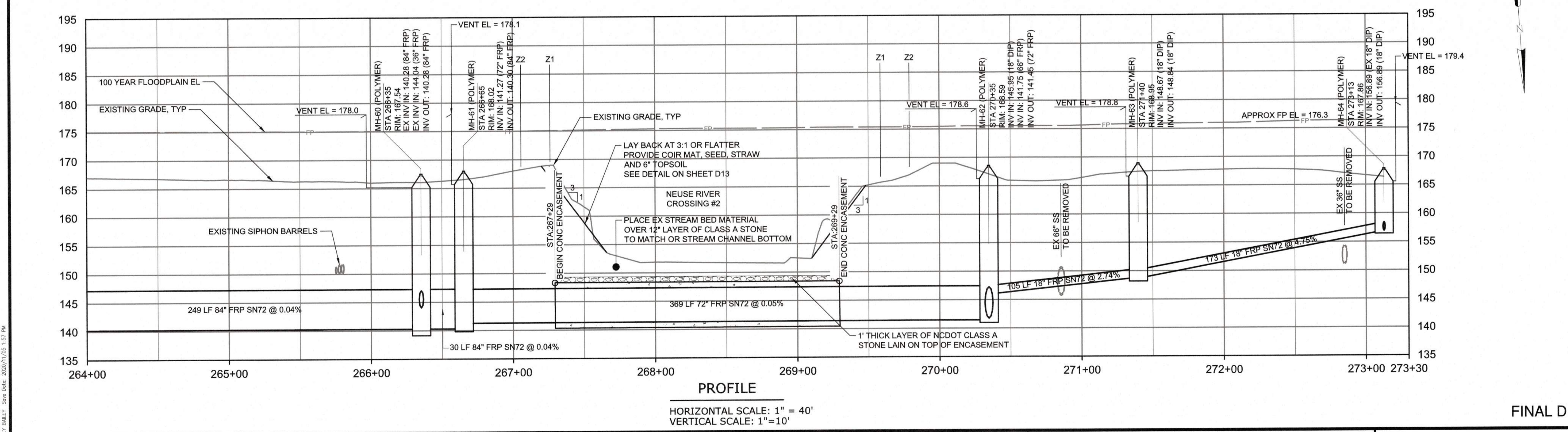
PLOT DATE: 2020/11/09 4:10 PM
 File: C:\WORK\2020\PROJECTS\887\2020\887\C26.dwg
 Plot: C:\WORK\2020\PROJECTS\887\2020\887\C26.dwg
 Scale: By: JETTY BAILEY
 Date: 2020/11/09 4:10 PM



NOTES:

- REMOVE AND REPLACE EX 36" SS WITH NEW 12" DIP SS TO CONVEY SEWER FROM REPLACEMENT MH TO MH-65.
- REFER TO BYPASS PUMPING TABLE ON SHEET G03.

Point #	Elevation	Northing	Easting	Description	Percent
13502	171.43	734813.03	2136300.22	PINE 171	28%
13503	171.24	734805.56	2136301.14	PINE 171	46%
13504	171.52	734801.34	2136298.75	PINE 181	40%
13505	171.50	734791.53	2136296.34	PINE 321	43%
13507	165.96	734818.47	2136348.93	WILLOW 191	40%
13508	165.18	734817.83	2136325.94	SYC 171	0%
13511	165.78	734855.13	2136405.25	OAK 421	30%
13523	166.90	734968.20	2136437.78	MAP 111	0%
13524	167.35	734971.77	2136440.57	MAP 131	0%
13530	165.79	734989.40	2136453.46	ELM 101	0%
13571	164.48	734959.70	2136266.01	OAK 561	34%
13596	165.86	734823.99	2136478.81	OAK 171	0%



Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

Public Sewer Collection/ Extension

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct

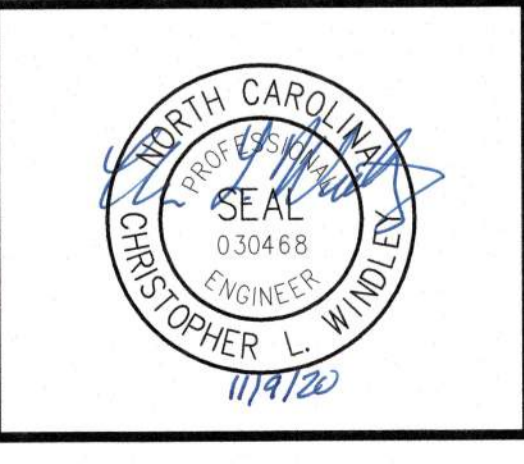
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

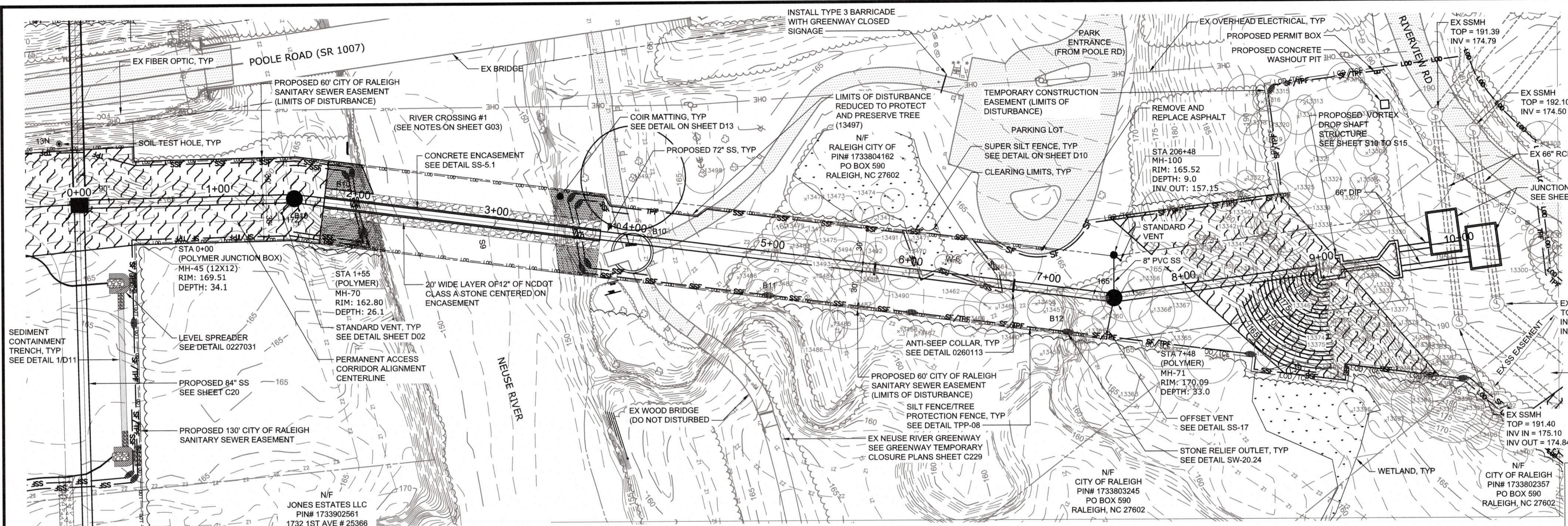
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

66" - 84" INTERCEPTOR
RIVER CROSSING #2
PLAN AND PROFILE

STATION 264+00 TO 273+13

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C27

PLOT FILE: 20201102_6_41.dwg, PLOT DATE: 2020/11/02 1:57 PM
 FILE: C:\WORK\2020\11\02\66-84\66-84.dwg, PLOT DATE: 2020/11/02 1:57 PM
 PLOT BY: JACOB VAZQUEZ-PAZ/MSB/7/27/20



PLAN
SCALE: 1" = 40'

NOTES:

- REFER TO BYPASS PUMPING TABLE ON SHEET G03.
- SEE SHEET C230 FOR TREE CRZ IMPACT TABLES.

AREA TO BE STABILIZED WITHIN 7 DAYS

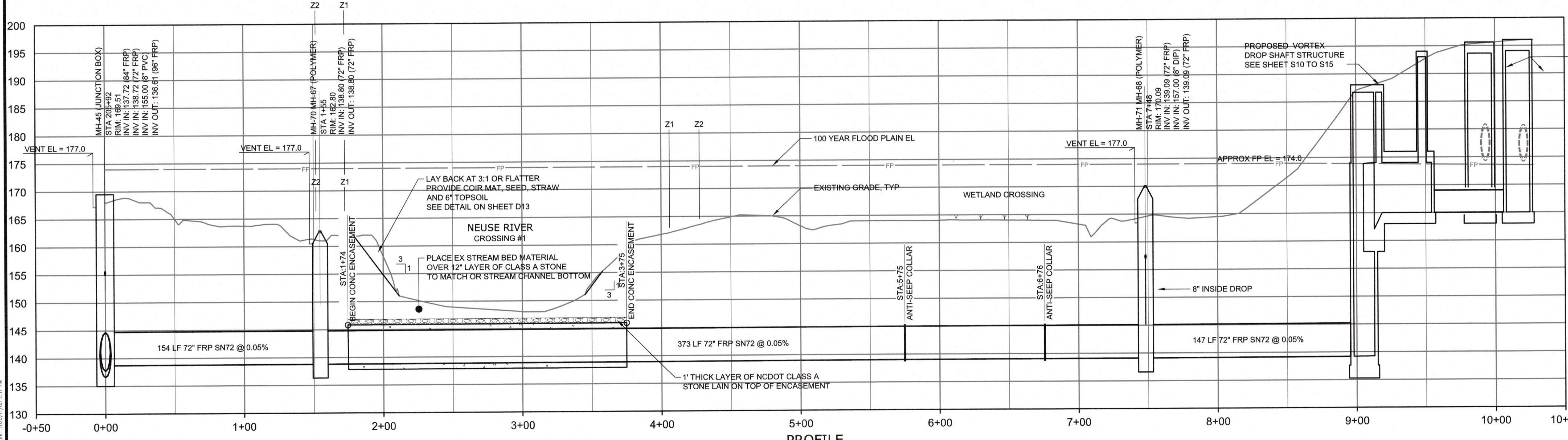
SEE SHEET C230 FOR CONTINUATION OF CONSTRUCTION LIMITS AND BYPASS PUMP AREA AND INFORMATION

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

JUNCTION STRUCTURES SEE SHEET S20 TO S24

Public Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be considered to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

BEFORE YOU DIG! CONTACT ONE-CALL CENTER CALL 811 OR 1-800-632-4949

FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	S. LEITCH
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

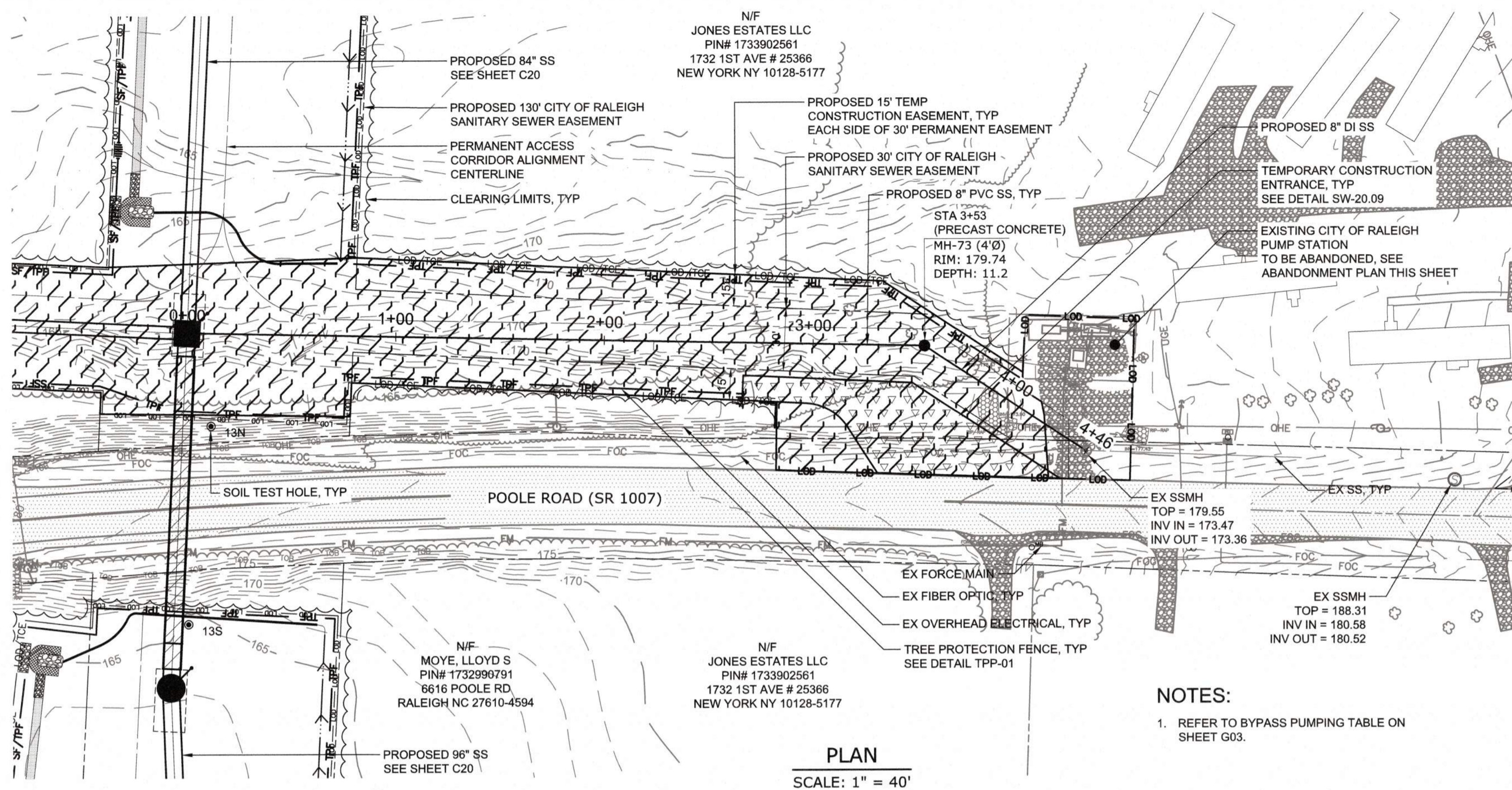
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

72" INTERCEPTOR
RIVER CROSSING #1
PLAN AND PROFILE

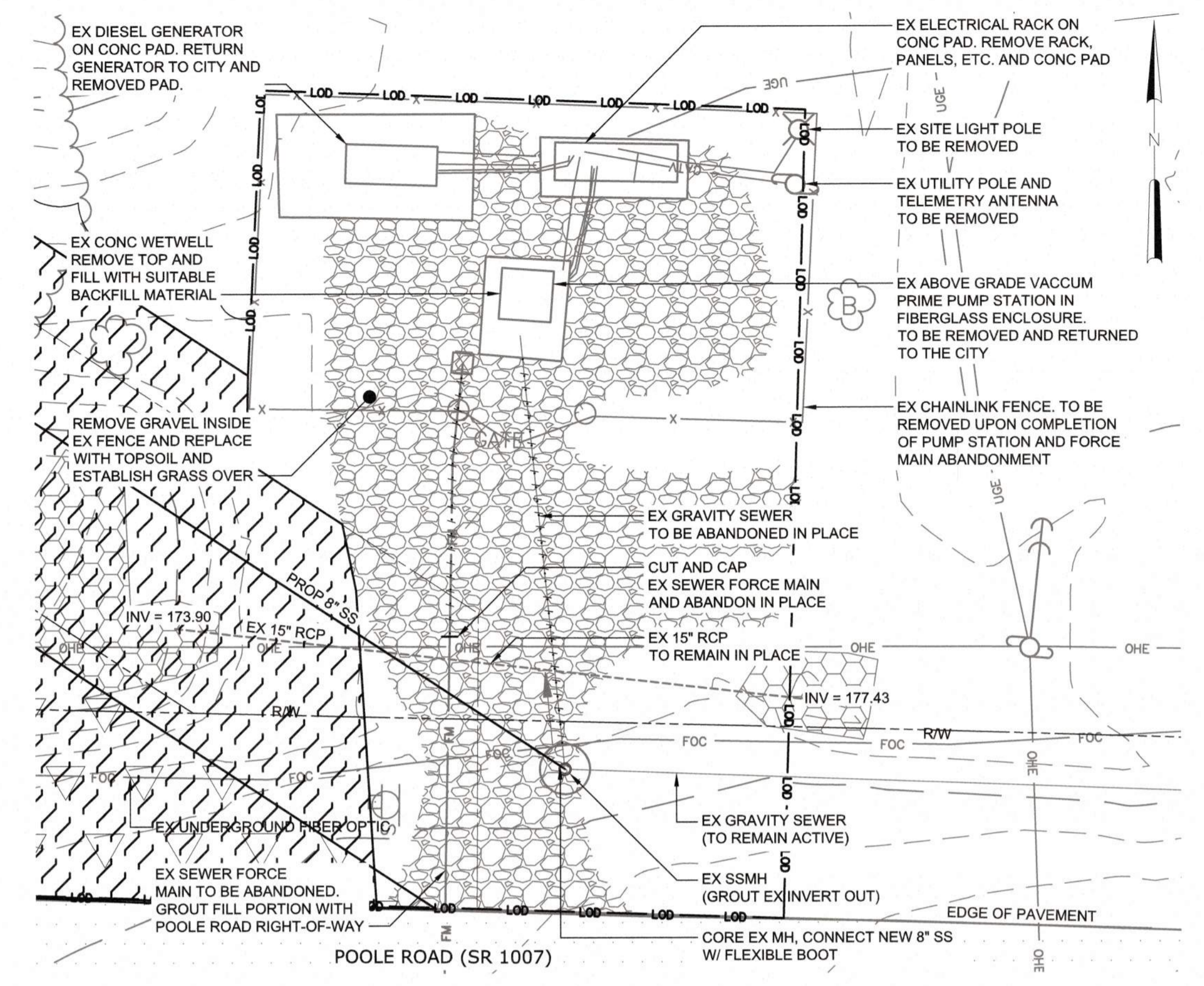
STATION 0+00 TO 8+96

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C28

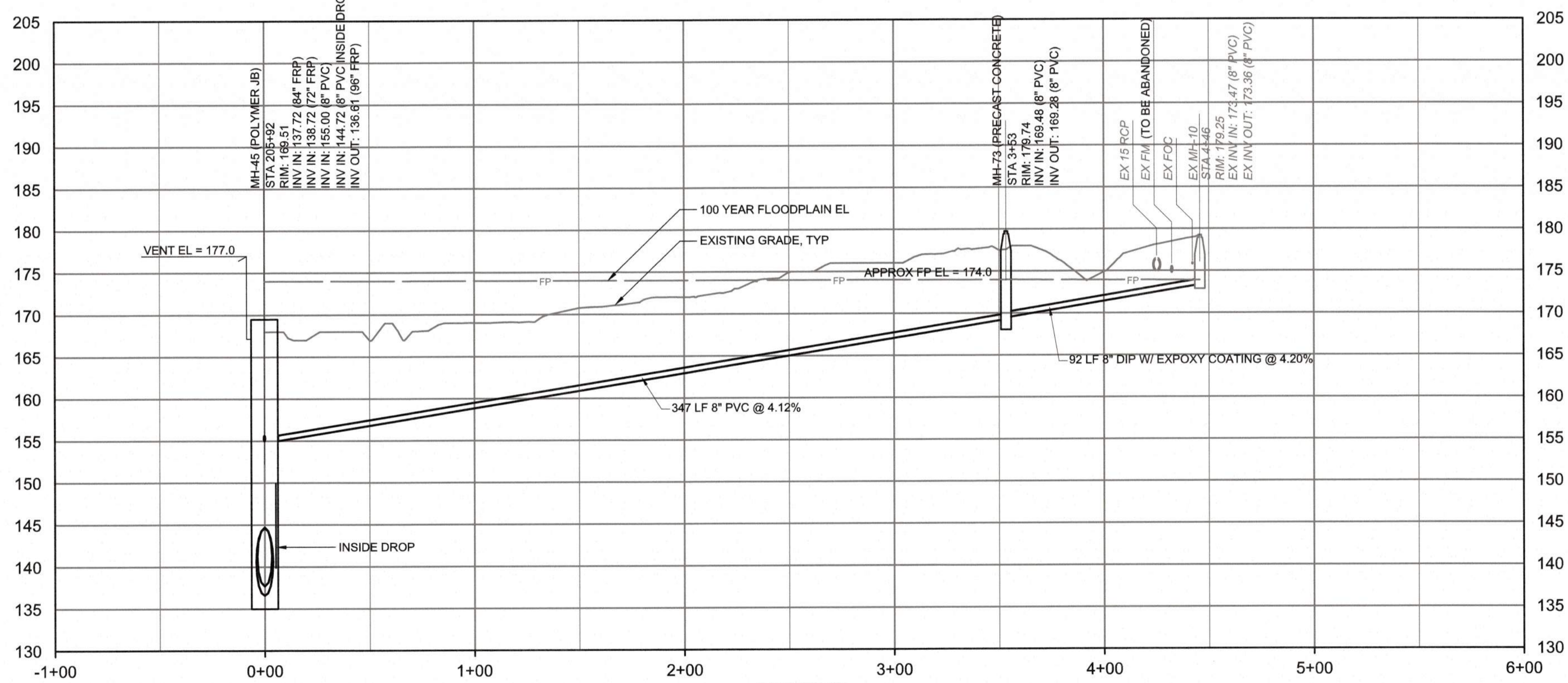


PLAN
SCALE: 1" = 40'

NOTES:
1. REFER TO BYPASS PUMPING TABLE ON SHEET G03.



EXISTING RIVERVIEW PS ABANDONMENT PLAN
SCALE: 1" = 10'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

AREA TO BE STABILIZED WITHIN 7 DAYS

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Administrator

Public
Sewer Collection/Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 2:25:31 PM BY: JETTY BAILEY
FILE: C:\USERS\JBAILEY\PROJECTS\C29 - Sewer By: JETTY BAILEY, Date: 2020/11/06 2:14 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



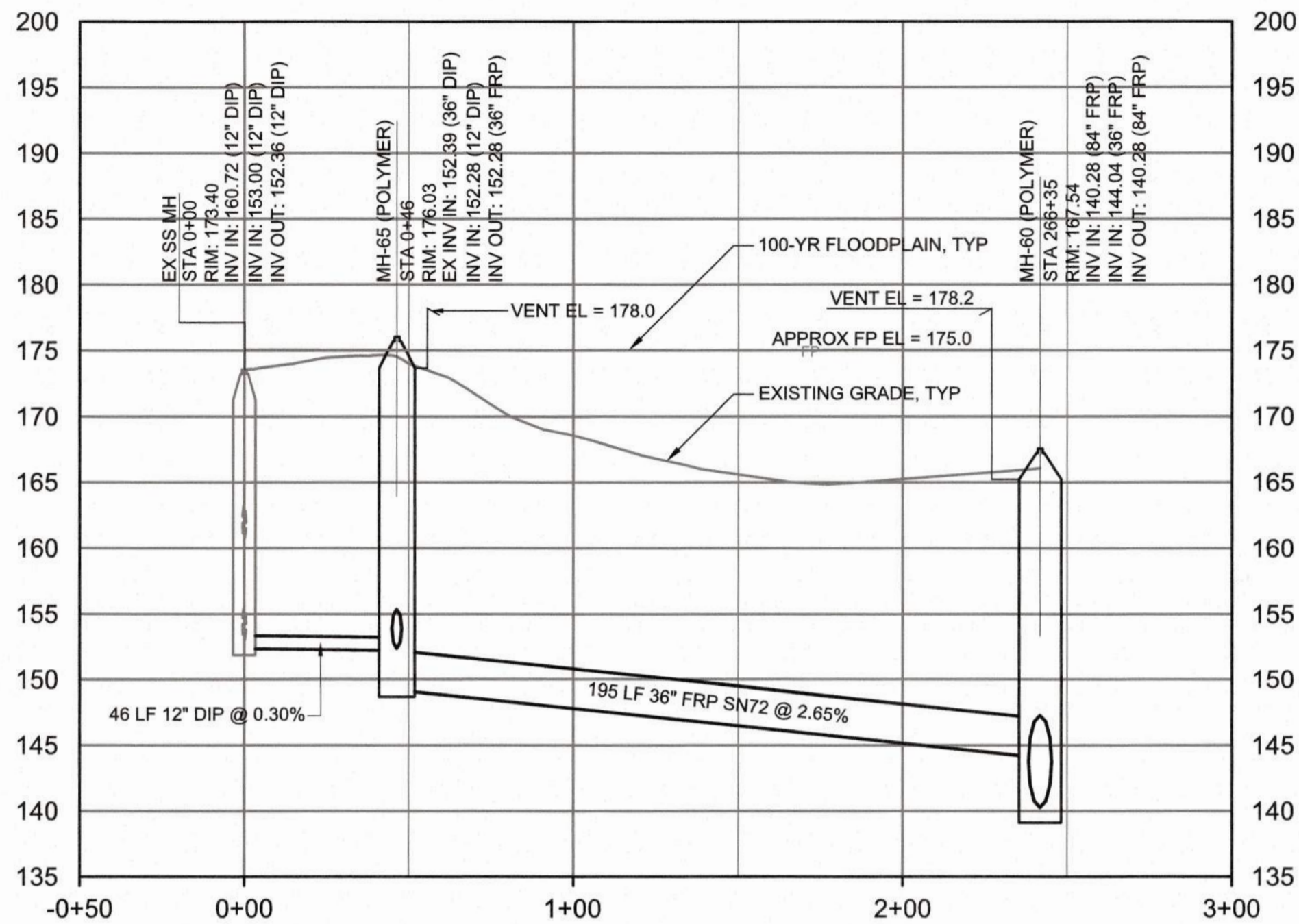
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

8" SANITARY SEWER
PLAN AND PROFILE
STATION 0+00 TO 4+46
AND RIVERVIEW PS
ABANDONMENT PLAN

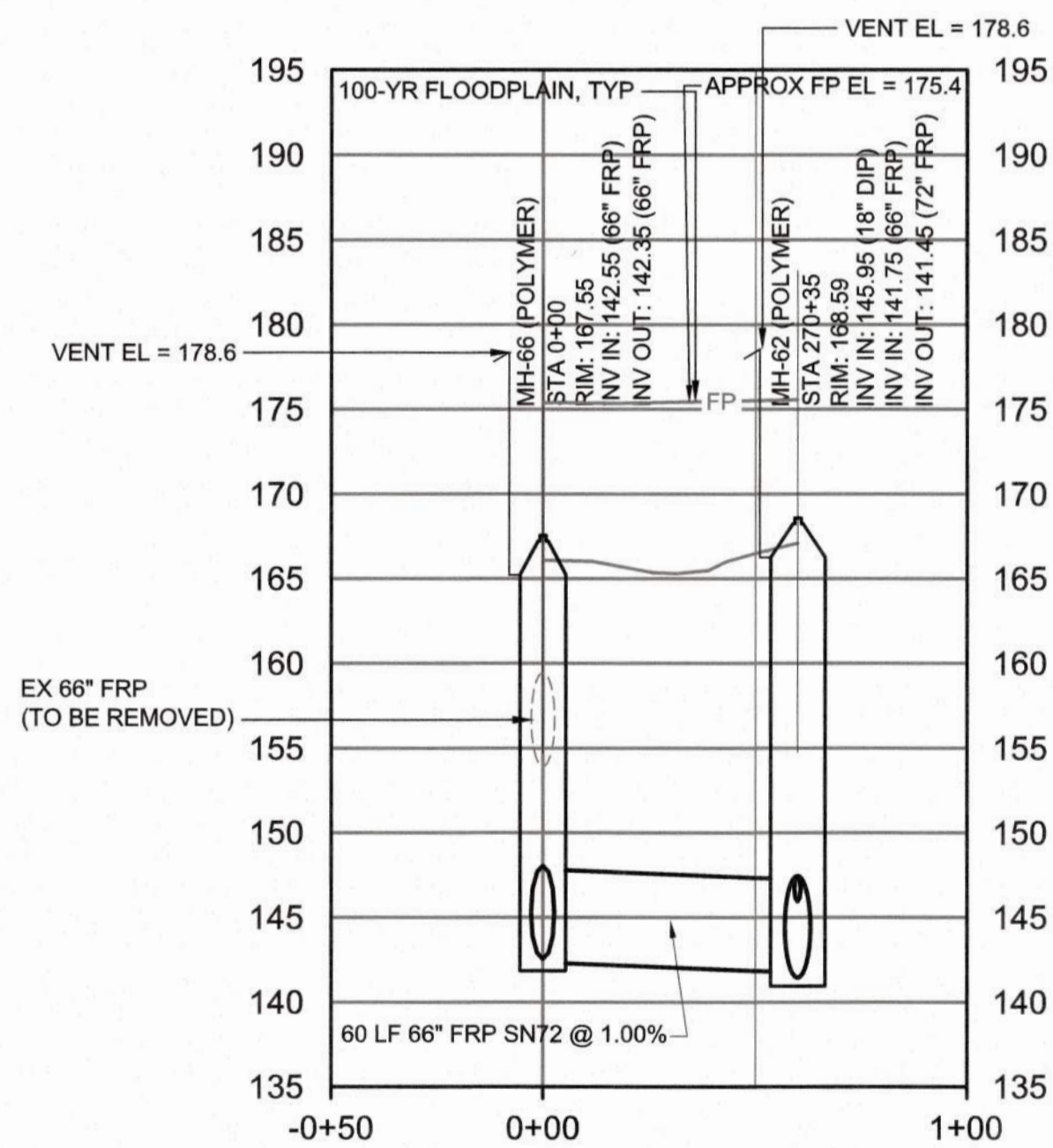
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C29



PROFILE - 36" SAN SEWER

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

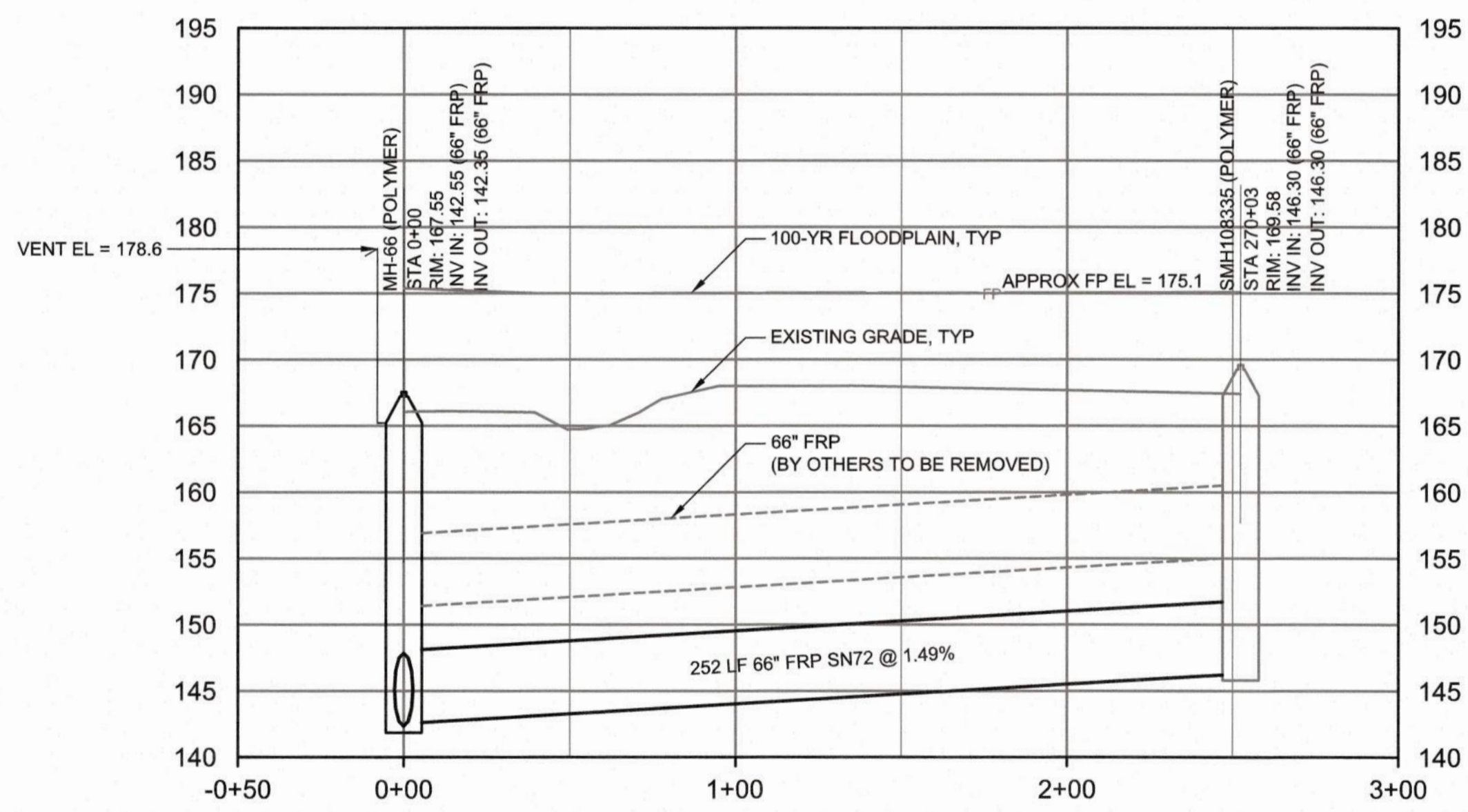
SEE SHEET C27 FOR PLAN VIEW



PROFILE - 66" SAN SEWER - MH-66 TO MH-62

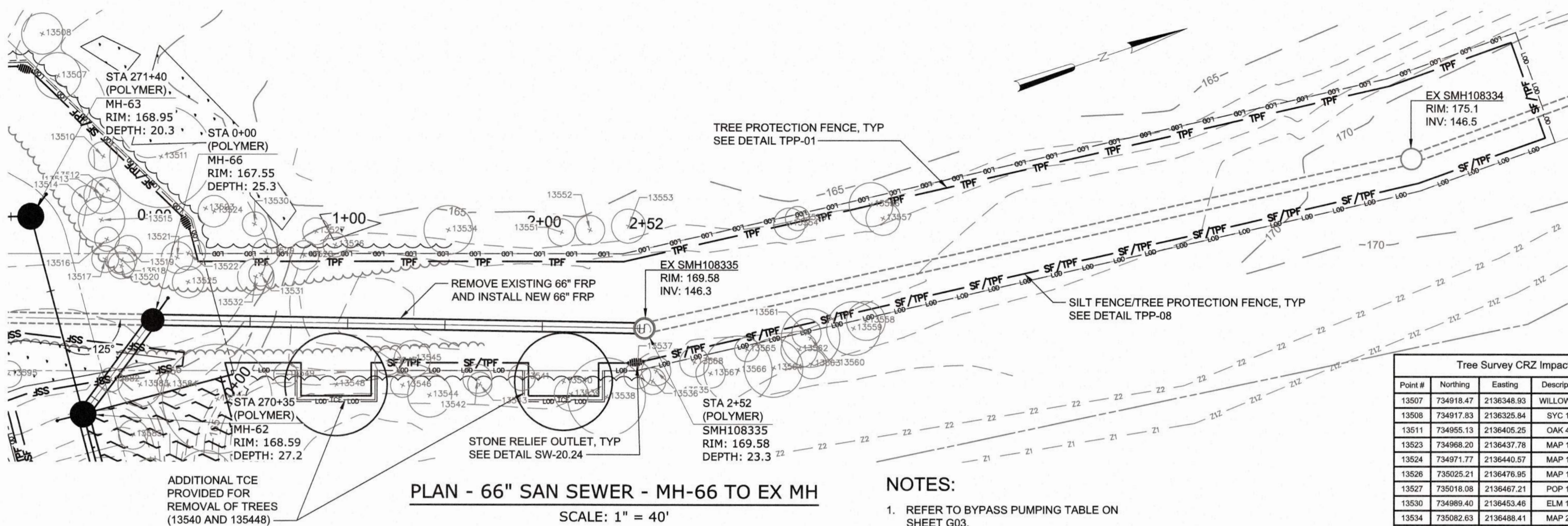
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

SEE SHEET C27 FOR PLAN VIEW



PROFILE - 66" SAN SEWER - MH-66 TO EX MH

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'



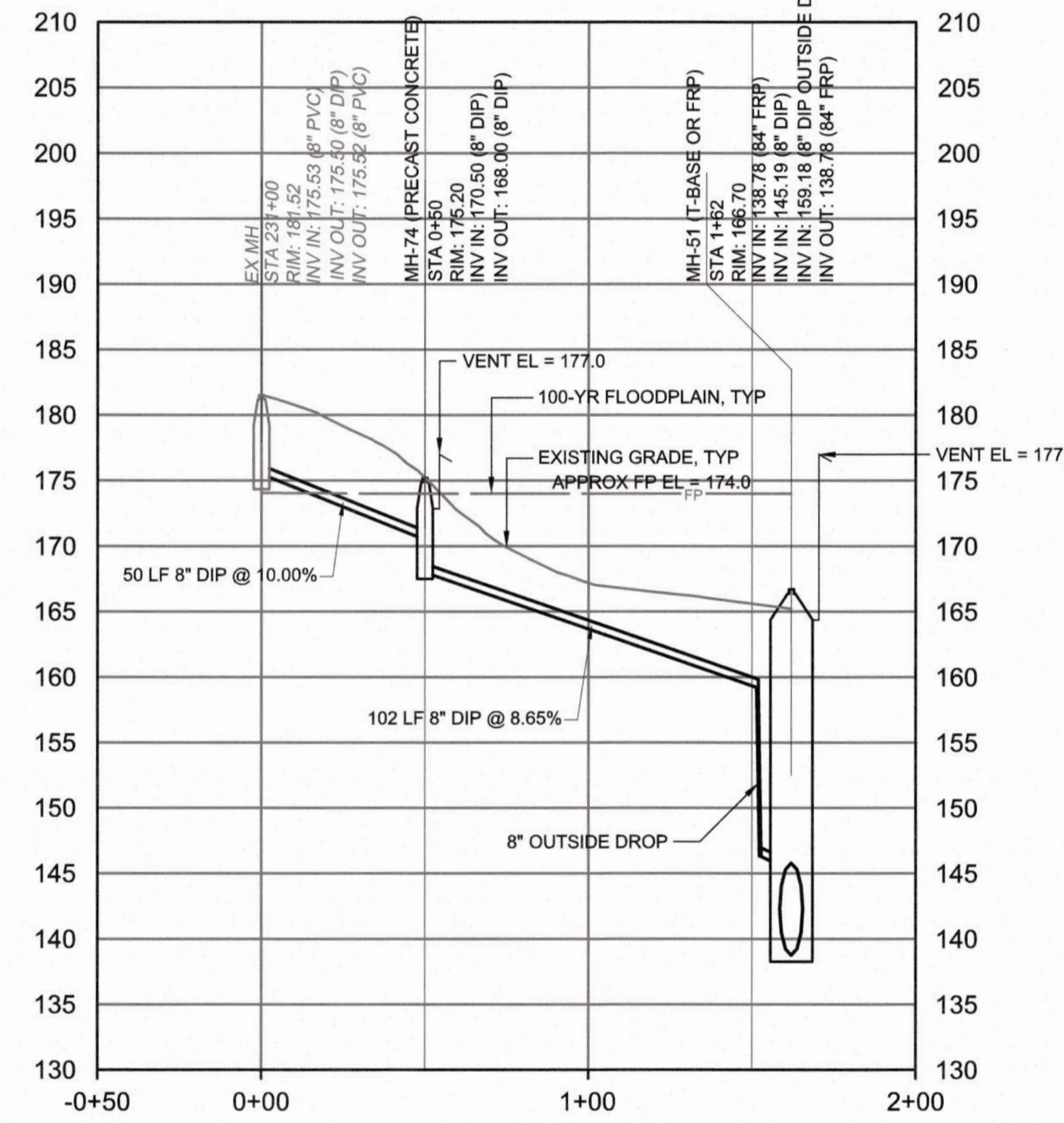
PLAN - 66" SAN SEWER - MH-66 TO EX MH

SCALE: 1" = 40'

NOTES:

- REFER TO BYPASS PUMPING TABLE ON SHEET G03.

Tree Survey CR2 Impact Table				
Point #	Northing	Easting	Description	Percent
13507	734918.47	2136348.93	WILLOW 191	40%
13508	734917.83	2136325.84	SYC 171	0%
13511	734955.13	2136405.25	OAK 421	30%
13523	734968.20	2136437.78	MAP 111	0%
13524	734971.77	2136440.57	MAP 131	0%
13526	735025.21	2136476.95	MAP 101	36%
13527	735018.08	2136467.21	POP 111	0%
13530	734989.40	2136453.46	ELM 109	0%
13534	735082.63	2136488.41	MAP 201	8%
13536	735156.90	2136595.43	GUM 111	15%
13538	735131.89	2136595.96	POP 321	18%
13539	735115.25	2136588.45	POP 141	0%
13540	735113.54	2136581.05	POP 401	TO BE REMOVED
13541	735094.07	2136572.08	ASH 111	46%
13542	735072.15	2136565.53	HICK 121	39%
13543	735072.41	2136568.51	ELM 101	12%
13544	735046.23	2136565.52	RIV BIRCH 181	3%
13546	735034.74	2136556.28	GUM 101	8%
13548	735002.54	2136544.90	POP 421	TO BE REMOVED
13551	735137.19	2136508.20	MAP 111	0%
13552	735151.45	2136511.83	MAP 121	0%
13553	735170.78	2136516.26	ELM 141	0%
13556	735292.22	2136545.59	OAK 181	14%
13557	735295.77	2136554.25	ELM 141	0%
13559	735283.18	2136602.94	PINE 221	47%
13560	735240.74	2136600.46	PINE 241	48%
13562	735233.36	2136604.23	PINE 151	18%
13563	735236.95	2136613.35	PINE 121	0%
13564	735217.89	2136608.98	PINE 241	7%
13566	735200.18	2136604.19	PINE 281	21%
13567	735196.32	2136601.30	RIV BIRCH 121	1.5%



PROFILE - 8" SAN SEWER

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

SEE SHEET C23 FOR PLAN VIEW

FINAL DESIGN

Public
Sewer Collection / Extension System
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # _____
Authorization to Construct _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



PLOT DATE: 2020/11/06 5:28:05 PM BY: JOEY BAILEY
 File: C:\BIRKHAZEN\PROJECTS\BIRKHAZEN\Drawings\2020\11\05\2-18.Plot

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	S. LEITCH		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

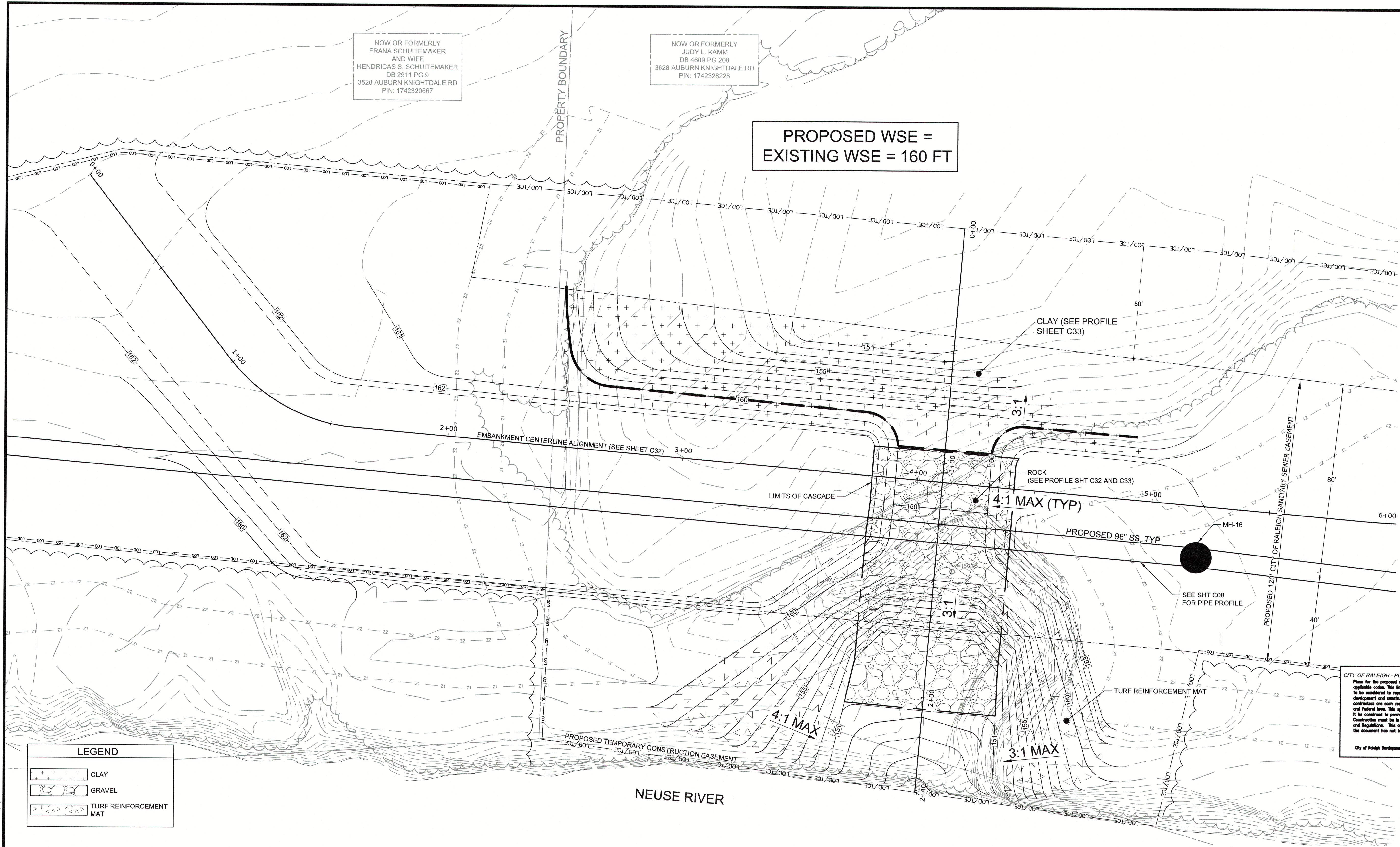
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

8", 36" AND 66" SANITARY SEWER
PROFILES
DATE: NOVEMBER 2020
HAZEN NO.: 32426-000
CONTRACT NO.: 1
DRAWING NUMBER: C30

NOW OR FORMERLY
FRANA SCHUITEMAKER
AND WIFE
HENDRICAS S. SCHUITEMAKER
DB 2911 PG 9
3520 AUBURN KNIGHTDALE RD
PIN: 1742320667

NOW OR FORMERLY
JUDY L. KAMM
DB 4609 PG 208
3628 AUBURN KNIGHTDALE RD
PIN: 1742328228

**PROPOSED WSE =
EXISTING WSE = 160 FT**



LEGEND

	CLAY
	GRAVEL
	TURF REINFORCEMENT MAT

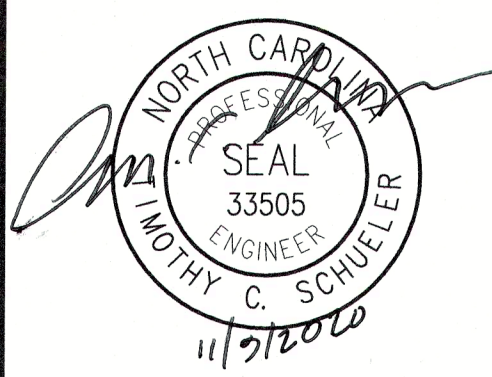
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signatures below is valid.
City of Raleigh Development Approval



SCALE: 1" = 20'

FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	B. THARRINGTON		
DRAWN BY:	B. THARRINGTON		
CHECKED BY:	T. SCHUELER		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

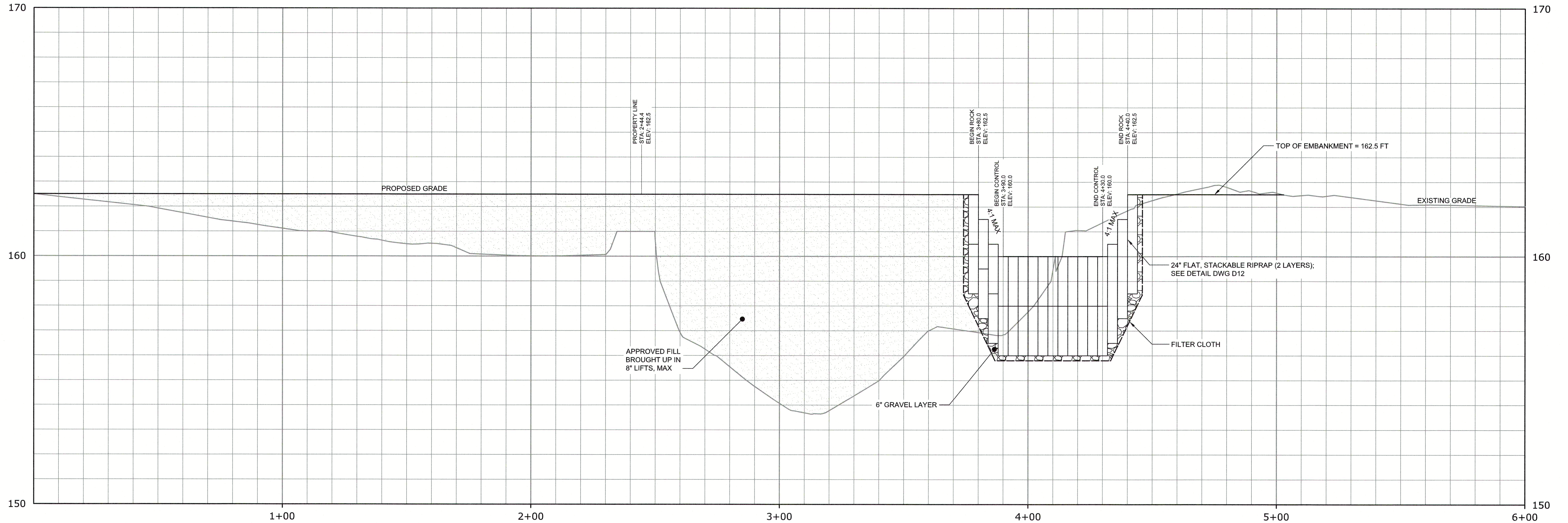
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

POND EMBANKMENT
PROPOSED GRADING @ STA 84+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C31

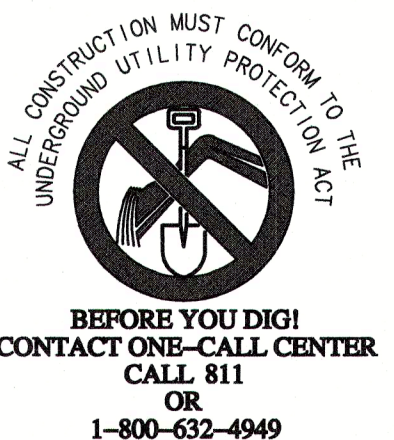
PLOT DATE: 2020/11/09 10:57:40 AM BY: ENG
 FILE: C:\Users\mch2\OneDrive\Documents\C31.dwg Saved By: JET BAILEY Date: 2020/11/09 2:31 PM

EMBANKMENT CENTERLINE



PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 2'

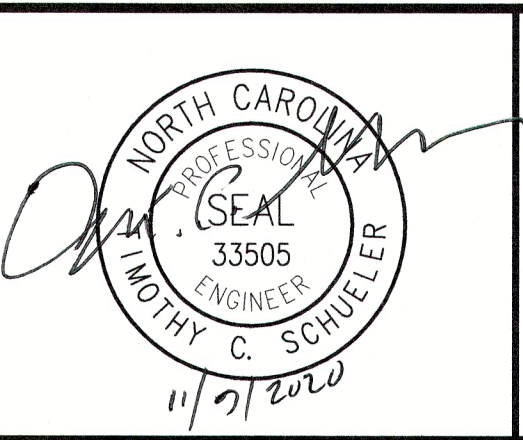
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/05 04:57:50 AM BY: ENG
 File: C:\BMS\HAZEN-SAWYER\PROJECTS\11657\C32_Signed By: TANT\11657_C32.dwg
 Saved By: TANT 11/5/2020 4:57:50 AM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	B. THARRINGTON		
DRAWN BY:	B. THARRINGTON		
CHECKED BY:	T. SCHUELER		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



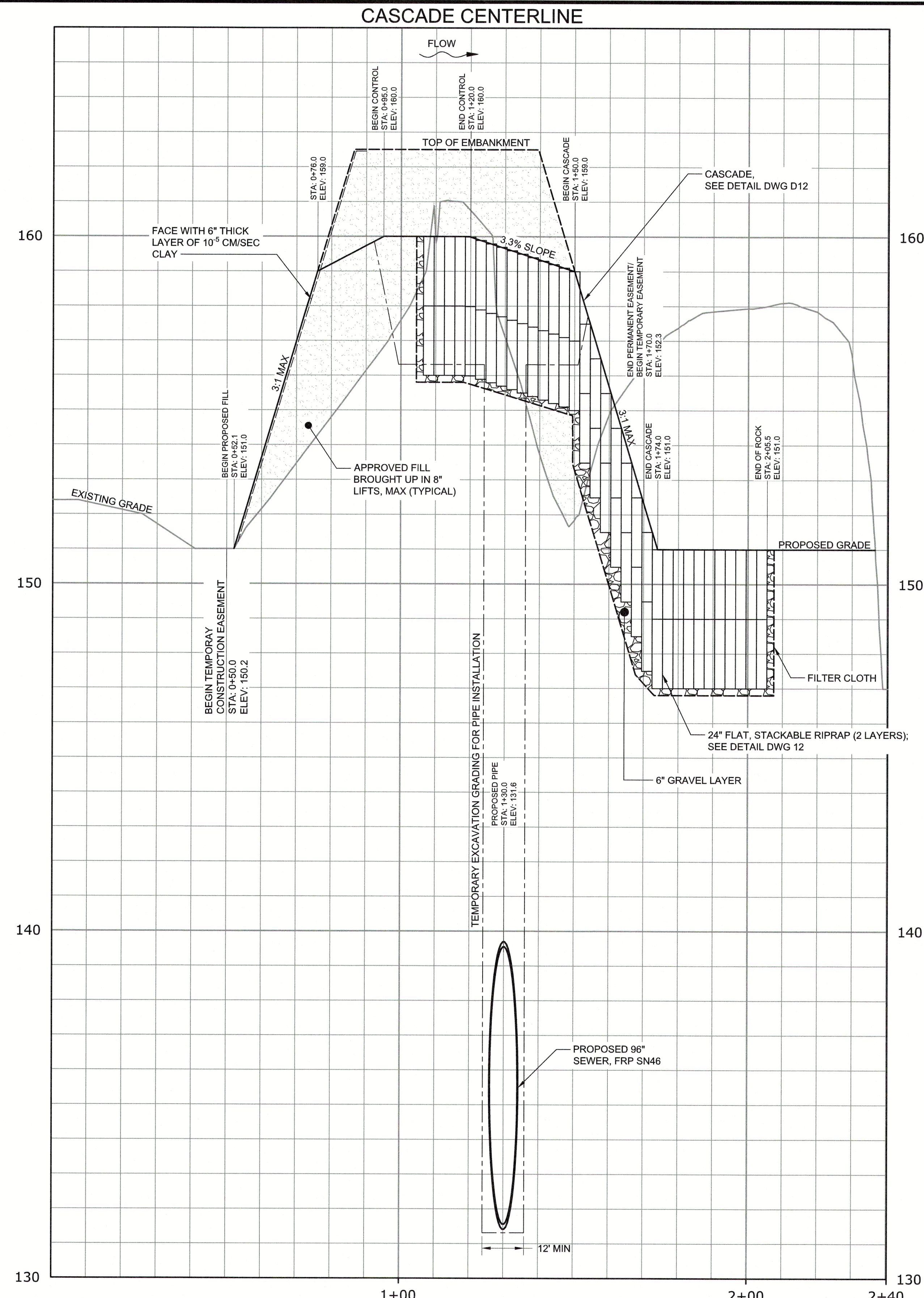
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

POND EMBANKMENT
 PROFILES AT
 EMBANKMENT CENTERLINE

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C32



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____

PROFILE
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1"=2'



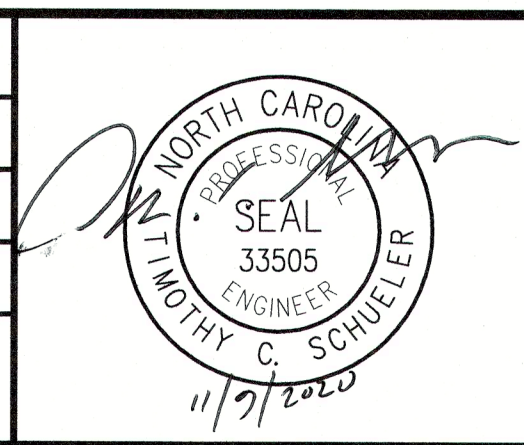
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C33

FINAL DESIGN

PLOT DATE: 2020/11/09 10:38:18 AM BY: ENG
 File: C:\BMS\VAZKEN\FM\FMS-ENG\JMS18167\333_Sched By: JET BAILEY, Save Date: 2020/11/09 2:24 PM

REV	ISSUED FOR	DATE	BY

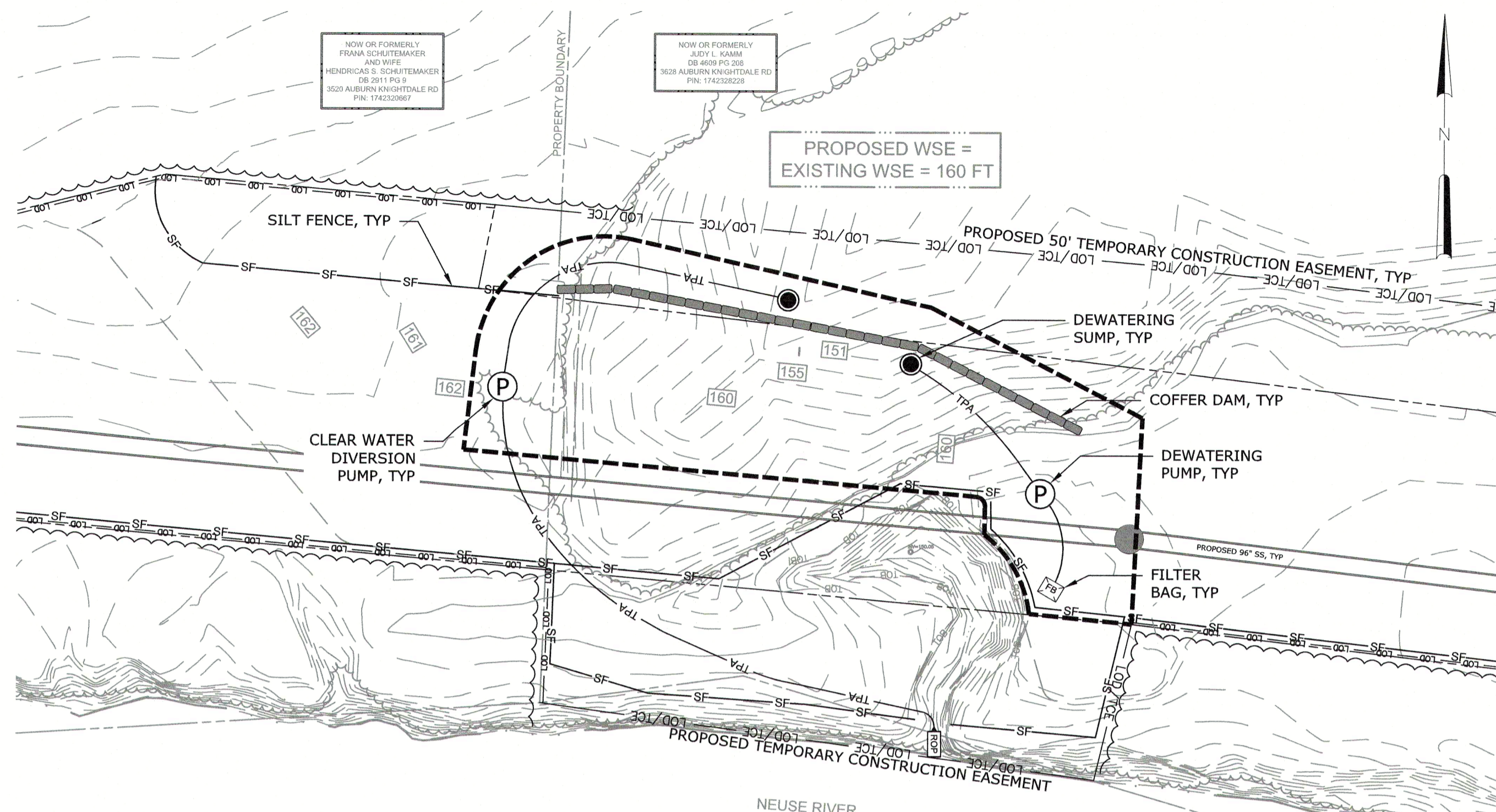
PROJECT ENGINEER:	T. TANT
DESIGNED BY:	B. THARRINGTON
DRAWN BY:	B. THARRINGTON
CHECKED BY:	T. SCHUELER
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



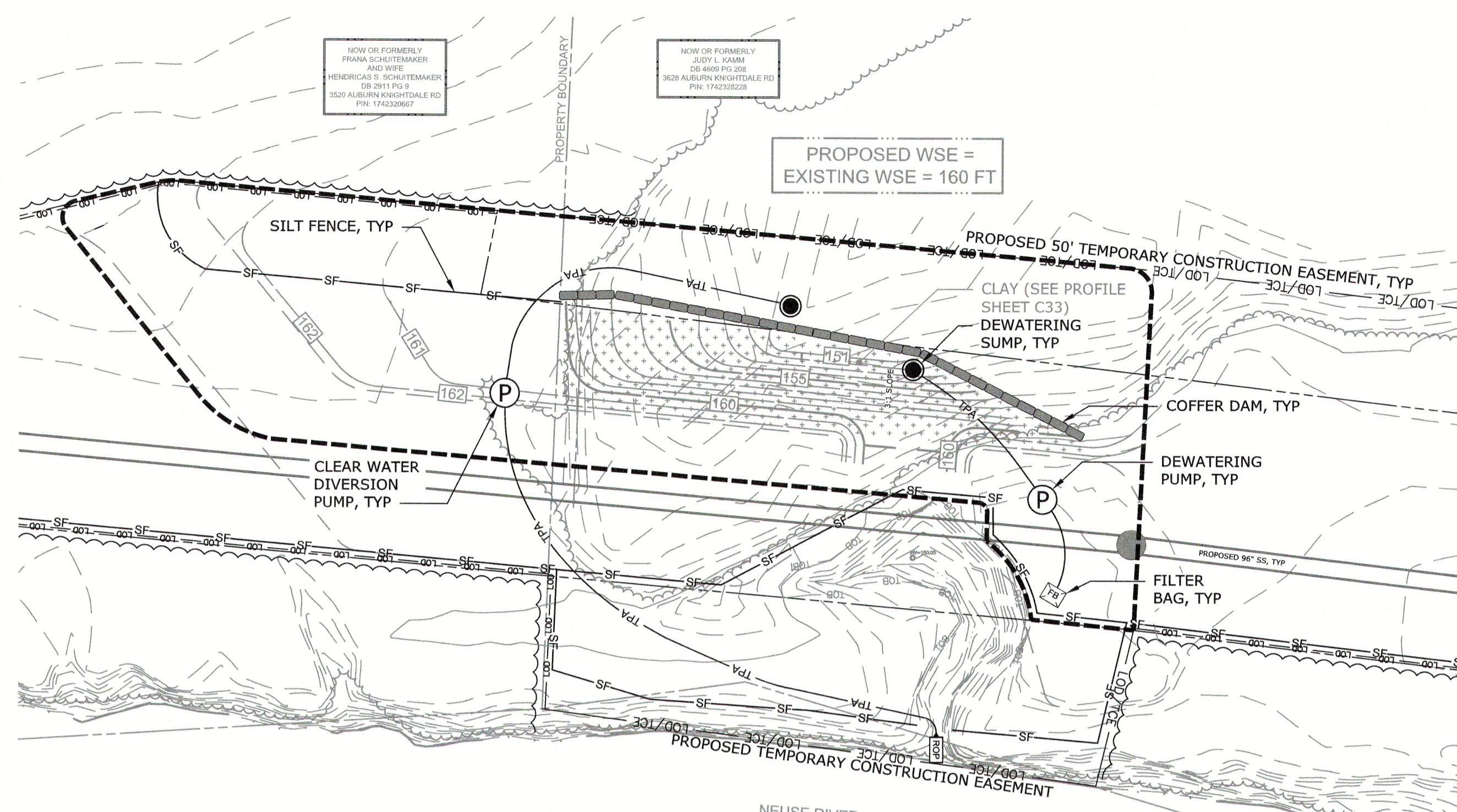
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

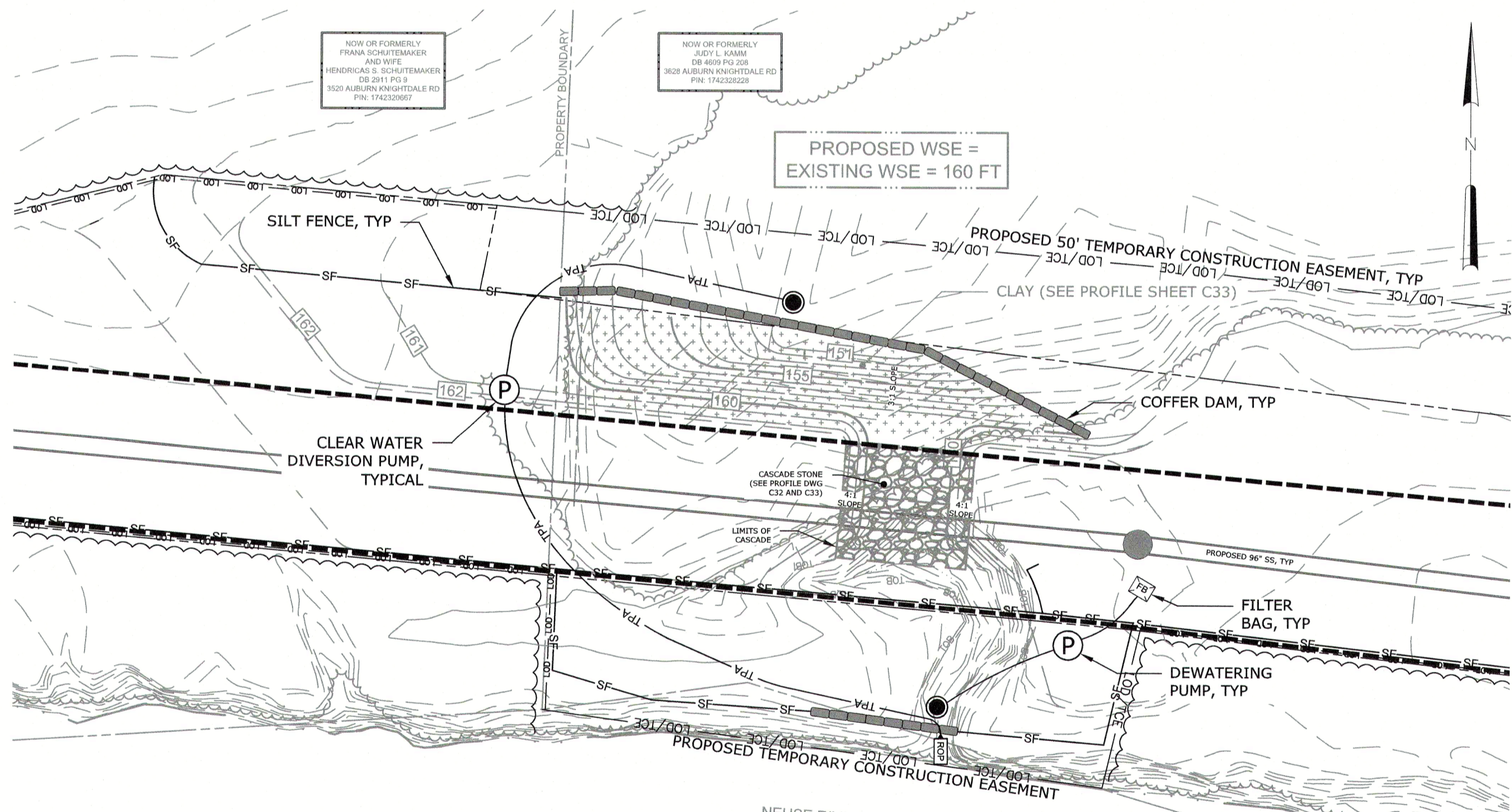
CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR



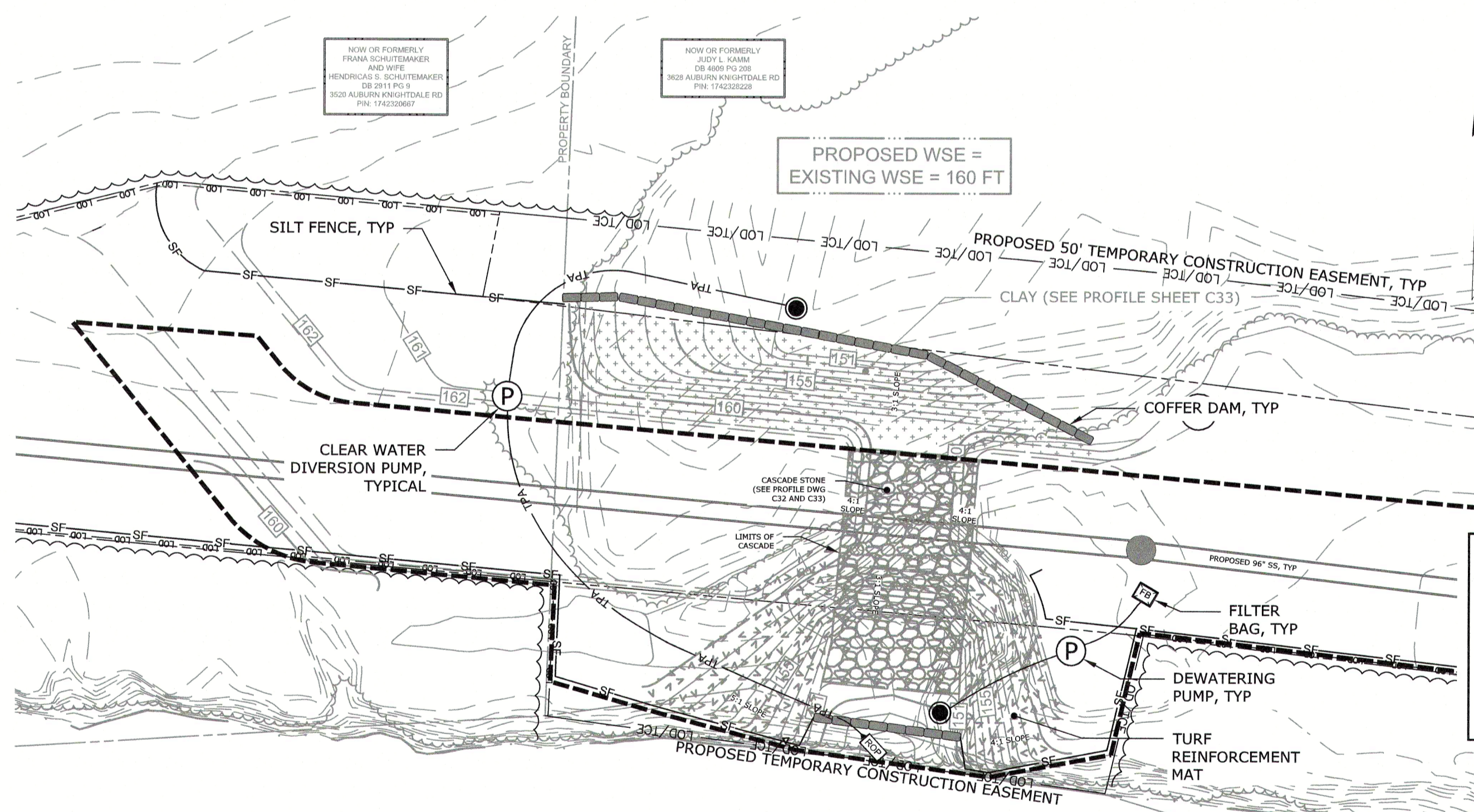
PHASE 1: DEWATERING AND SAND BAG INSTALLATION



PHASE 2: EMBANKMENT FILL



PHASE 3: SANITARY LINE INSTALLATION



PHASE 4: CASCADE COMPLETION AND FINAL GRADING

84+00 EROSION AND SEDIMENT CONTROL PRELIMINARY PHASING

PREPARATION

1. ONSITE PRECONSTRUCTION MEETING
2. INSTALL PERIMETER SEDIMENT CONTROL MEASURES (E.G., SILT FENCE)

PHASE 1 (DEWATERING AND SANDBAG INSTALLATION)

1. PARTIALLY DEWATER LAKE VIA PUMPING TO NEUSE RIVER; RE-ARRANGE OR INSTALL PERIMETER EROSION SEDIMENT CONTROL (ESC) DEVICES AS NEEDED
2. INSTALL DEWATERING SUMPS AS NEEDED AND OPERATE AS NEEDED
3. INSTALL TEMPORARY SAND BAG OR OTHER APPROVED COFFER DAM; CONTINUE PUMPING

PHASE 2 (EMBANKMENT FILL)

1. CONTINUE TO BYPASS WATER FROM LAKE SAFELY TO NEUSE RIVER; RE-ARRANGE OR INSTALL PERIMETER ESC DEVICES AS NEEDED
2. INSTALL APPROVED FILL FOR NEW EMBANKMENT AREA PER LIMITS AS SHOWN
3. ENSURE THAT THE UPSTREAM FACE OF THE EMBANKMENT IS FACED WITH CLAY

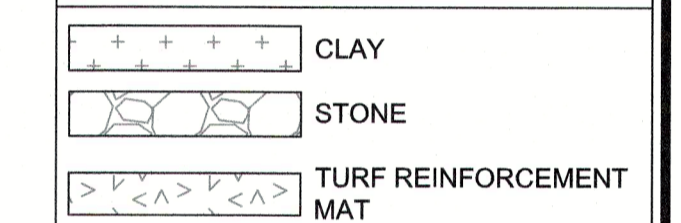
PHASE 3 (SANITARY LINE INSTALLATION)

1. CONTINUE TO BYPASS WATER FROM LAKE SAFELY TO NEUSE RIVER; RE-ARRANGE OR INSTALL PERIMETER ESC DEVICES AS NEEDED
2. TRENCH FOR AND INSTALL 96-IN SANITARY LINE
3. BACKFILL OVER TRENCH
4. INSTALL PORTION OF CASCADE WITHIN SANITARY SEWER TRENCH LIMITS

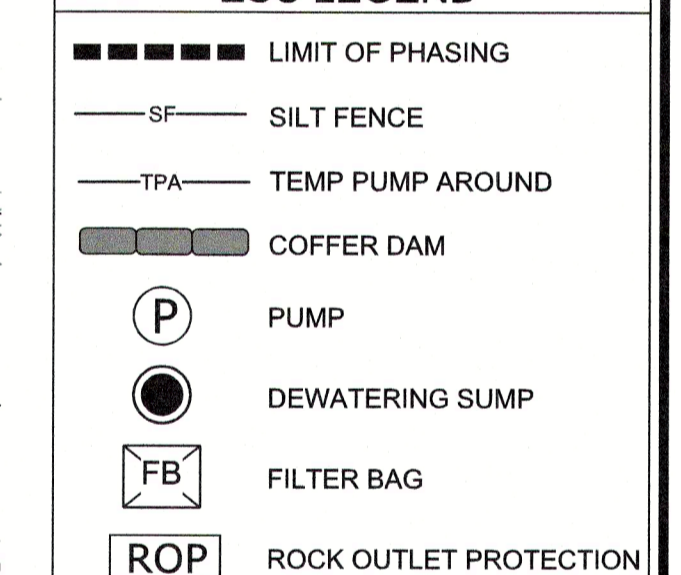
PHASE 4 (CASCADE COMPLETION AND FINAL GRADING)

1. CONTINUE TO BYPASS WATER FROM LAKE SAFELY TO NEUSE RIVER; RE-ARRANGE OR INSTALL PERIMETER ESC DEVICES AS NEEDED
2. COMPLETE FINAL DOWNSTREAM FINE GRADING
3. COMPLETE CASCADE CONSTRUCTION
4. ONCE CASCADE IS ACCEPTED, REMOVE PUMPING AND ALLOW LAKE WATER TO FLOW OVER CASCADE
5. INSTALL TURF REINFORCEMENT MAT
6. REMOVE ANY REMAINING PUMPING EQUIPMENT

LEGEND



ESC LEGEND



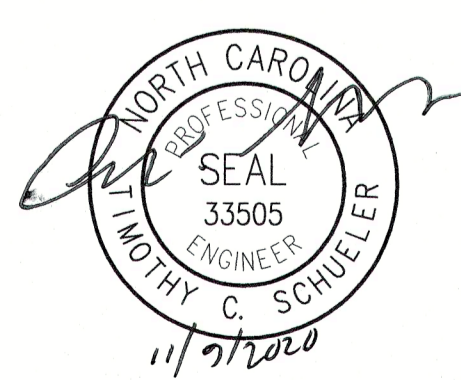
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization does not permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval

NOTE: FOR ESC WORK OUTSIDE LIMITS SHOWN HEREIN, SEE SHEETS C-01 TO C-27

FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER: T. TANT
DESIGNED BY: B. THARRINGTON
DRAWN BY: B. THARRINGTON
CHECKED BY: T. SCHUELER
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



Hazen and Sawyer
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

POND EMBANKMENT
EROSION AND SEDIMENT
CONTROL PHASING PLAN
@ SITE 84+00

DATE: NOVEMBER 2020
HAZEN NO.: 32426-000
CONTRACT NO.: 1
DRAWING NUMBER:
C34



PLOT DATE: 2020/11/09 11:04:15 AM BY: ENG
FILE: C:\BIM\AUTOCAD\PROJECTS\84+00\DWG\C34.dwg PLOT BY: J. BAILEY

**WATER OF THE US CROSSING
SEQUENCE OF CONSTRUCTION:**

- TEMPORARY CONSTRUCTION ENTRANCE (TCE'S)**
1. PRIOR TO EACH CROSSING IMPACT, THE CONTRACTOR IS TO HAVE THE LIMITS OF TEMPORARY CONSTRUCTION ENTRANCES (TCE'S) FLAGGED FOR APPROVAL BY THE ENGINEER.
 2. PRIOR TO EACH CROSSING IMPACT, CONDUCT AN ONSITE PRE-CONSTRUCTION MEETING WITH CONTRACTOR, ENGINEER AND OWNER. SITE MEETINGS MAY BE COMBINED FOR SITES CONSTRUCTED CONCURRENTLY. ENGINEER TO APPROVE OR ADJUST LIMITS OF FLAGGED TCE IMPACTS.
 3. CONTRACTOR TO INSTALL TCE DURING DRY WEATHER FOR EPHEMERAL (DRY) CHANNELS; PUMP AROUND SHOULD NOT BE NEEDED.
 4. FOR PERENNIAL (FLOWING) CHANNEL CROSSINGS, CONTRACTOR TO UTILIZE ESC DEVICES (E.G., PUMP AROUND) TO INSTALL TCE WITHIN FLOWING WATER.

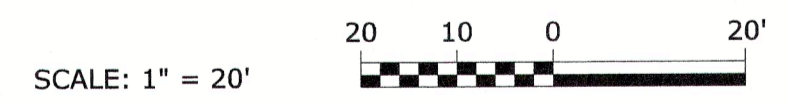
- SEWER TRUNK LINE INSTALLATION**
1. INSTALL TEMPORARY PUMP-AROUNDS/GRAVITY DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FLOW THROUGH SANITARY SEWER EXCAVATION AND CONSTRUCTION.
 2. INSTALL TRUCK LINE. CONTRACTOR TO MAINTAIN PUMP-AROUNDS/GRAVITY DIVERSIONS AND TCE'S DURING TRUNK SEWER INSTALLATION INCLUDING SEEDING AND STRAW PLACEMENT OR MATTING ADJACENT EXPOSED AREAS.

- PERMANENT RIPRAP ACCESSES**
1. ONCE THE TRUNK LINE SEWER IS INSTALLED, CONTRACTOR TO REGRADE THE CROSSING AREA BACK TO ORIGINAL GRADE, UTILIZING AND MAINTAINING PUMP-AROUNDS AND GRAVITY DIVERSIONS.
 2. CONTRACTOR IS TO FLAG LIMITS OF FINAL RIPRAP ACCESS PATH, IN-CHANNEL STONE, SILL GRADE CONTROLS, AND COIR MATTING FOR ENGINEER'S APPROVAL.
 3. ADJUST PUMP-AROUNDS/DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FOR WORK IN THE CHANNEL.
 4. INSTALL SILLS FIRST; THEN INSTALL PERMANENT RIPRAP AND COIR MAT/TOPSOIL/SEED.
 5. REMOVE PUMP-AROUNDS AND DIVERSIONS WITH ENGINEER'S APPROVAL.
 6. ONCE AREA IS STABILIZED WITH VEGETATION, TCE MATERIAL NOT NEEDED FOR PERMANENT CROSSING MAY BE REMOVED.

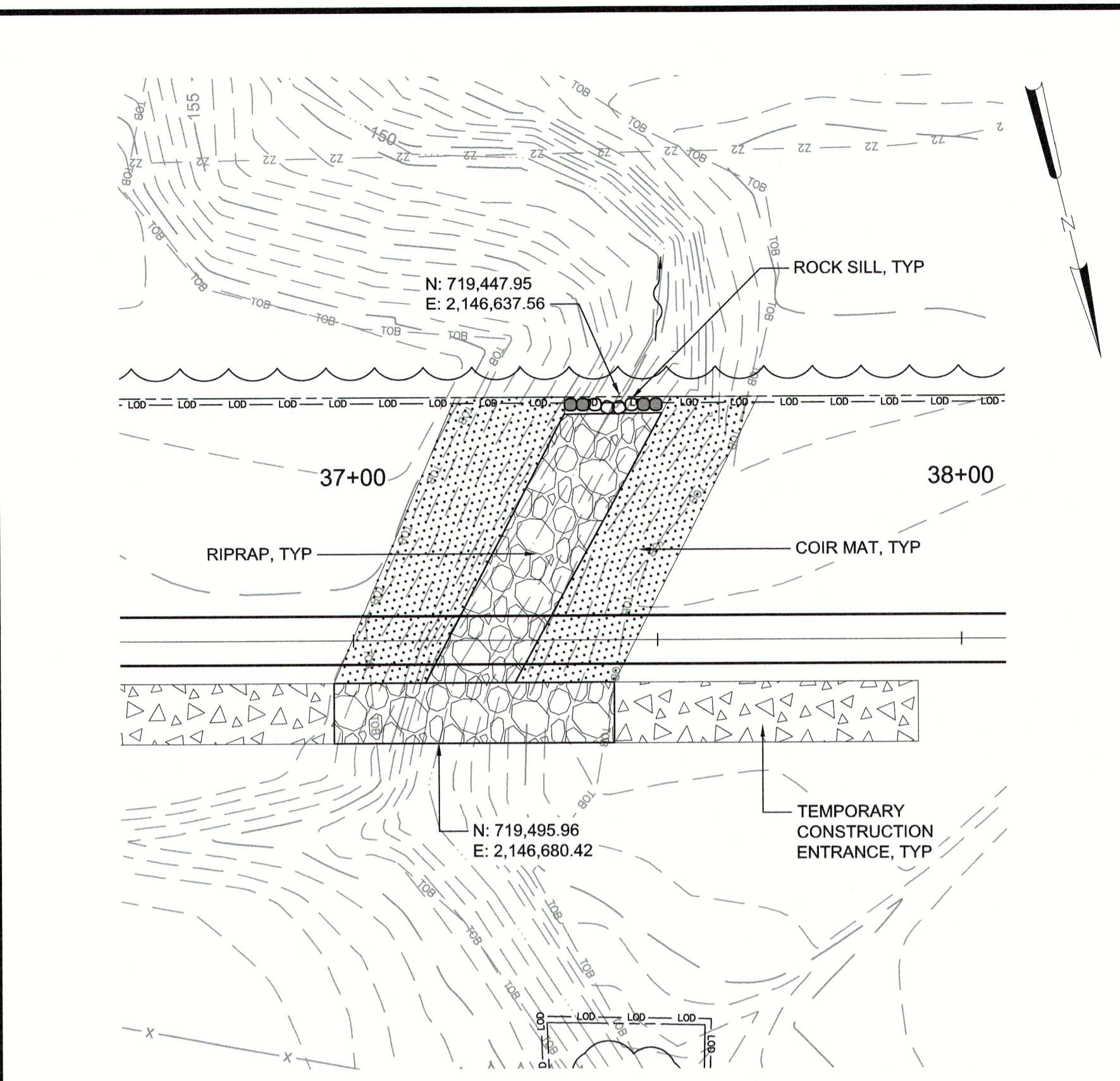
LEGEND

	ROCK SILL (RS)
	RIPRAP
	COIR MAT
	TEMPORARY CONSTRUCTION ENTRANCE

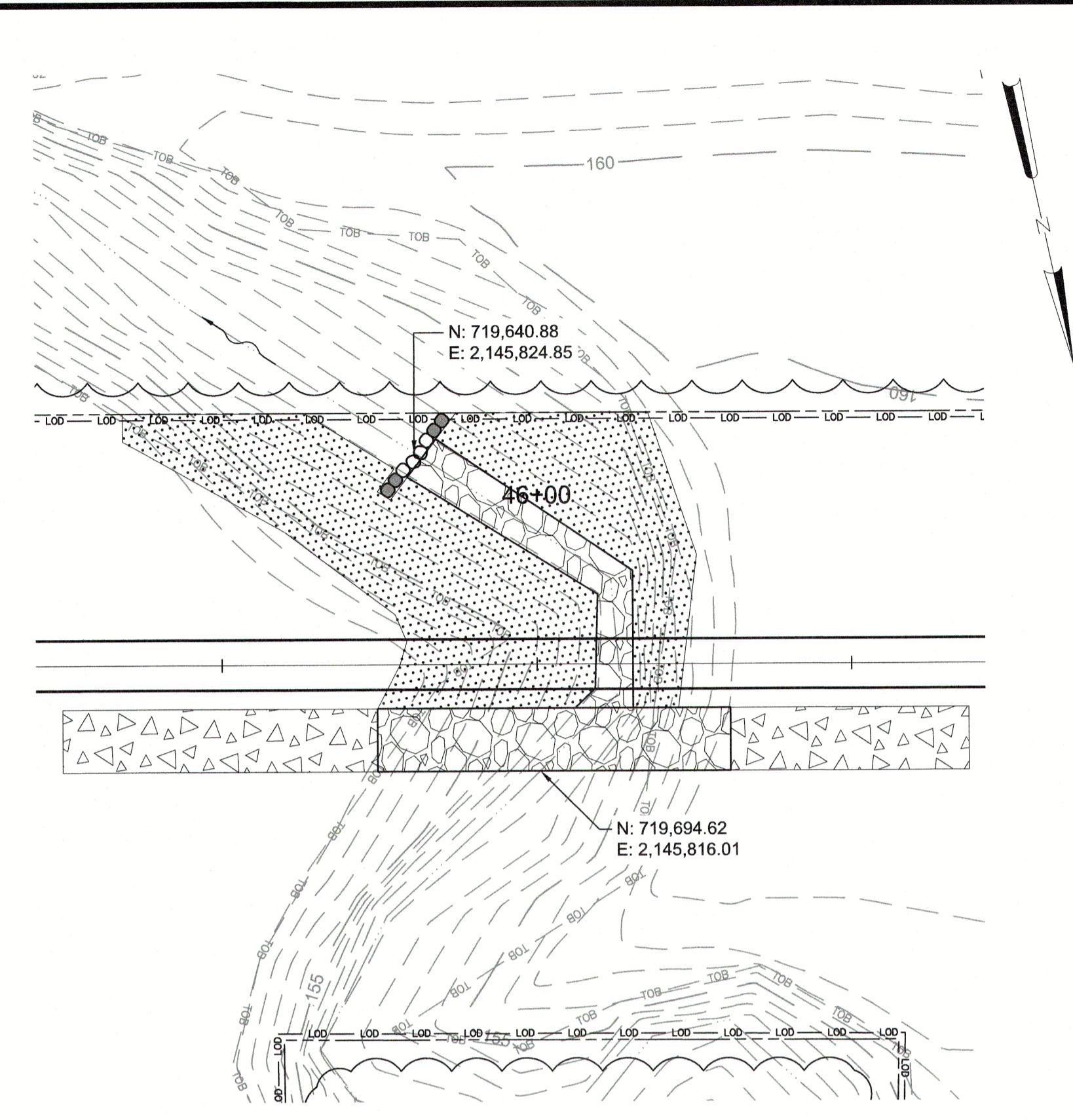
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval



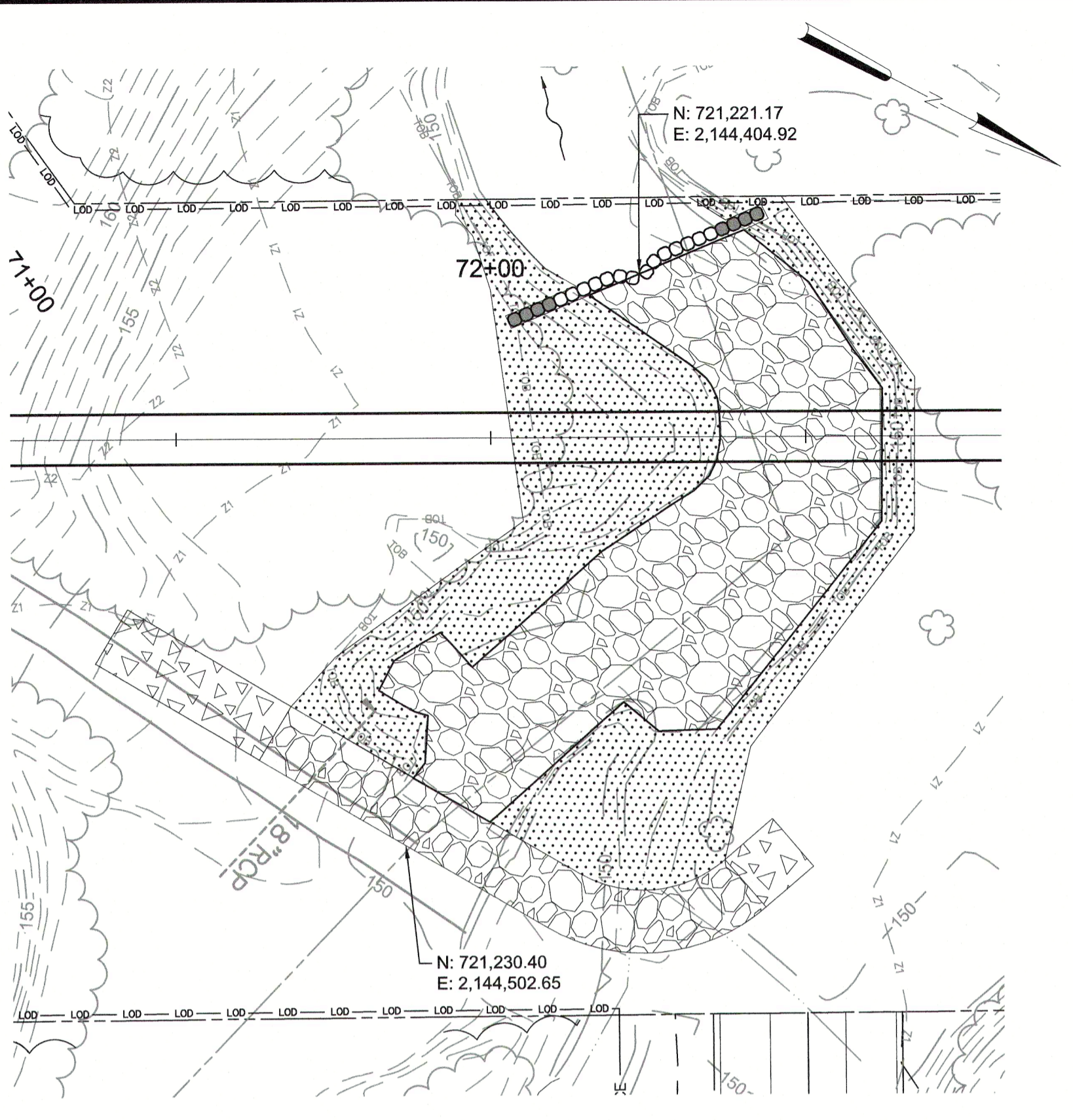
FINAL DESIGN



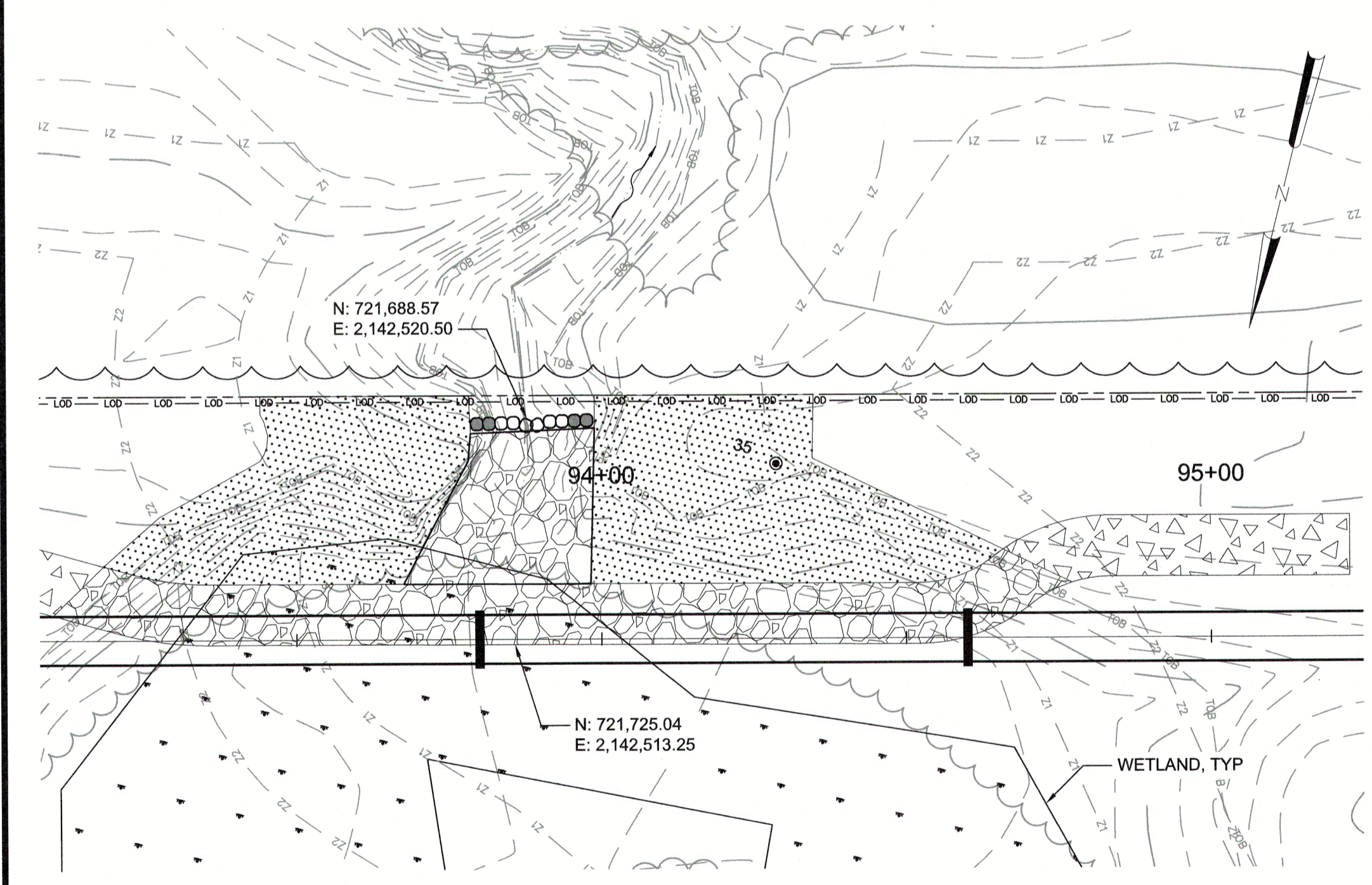
@ STA 37+50



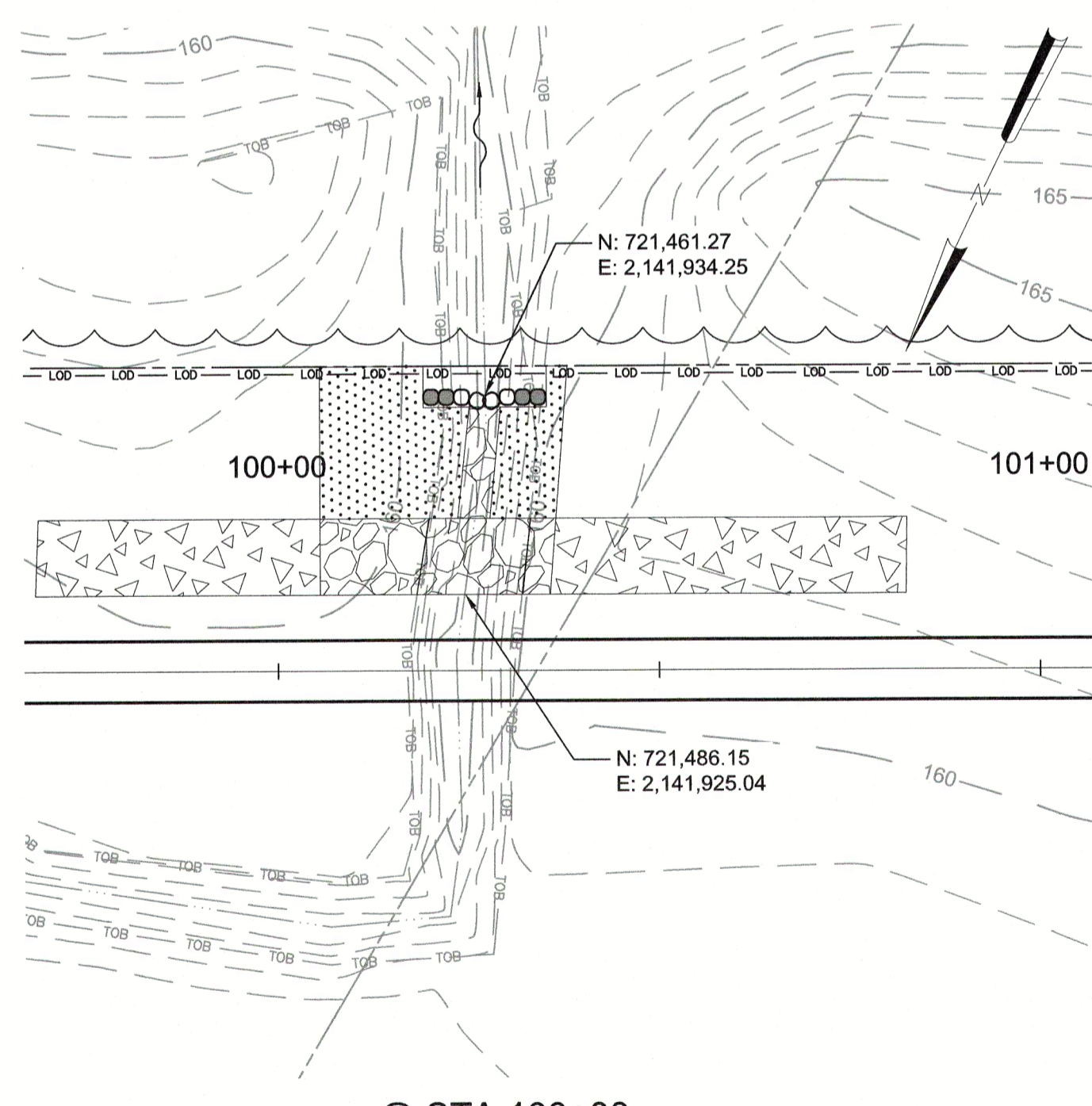
@ STA 46+00



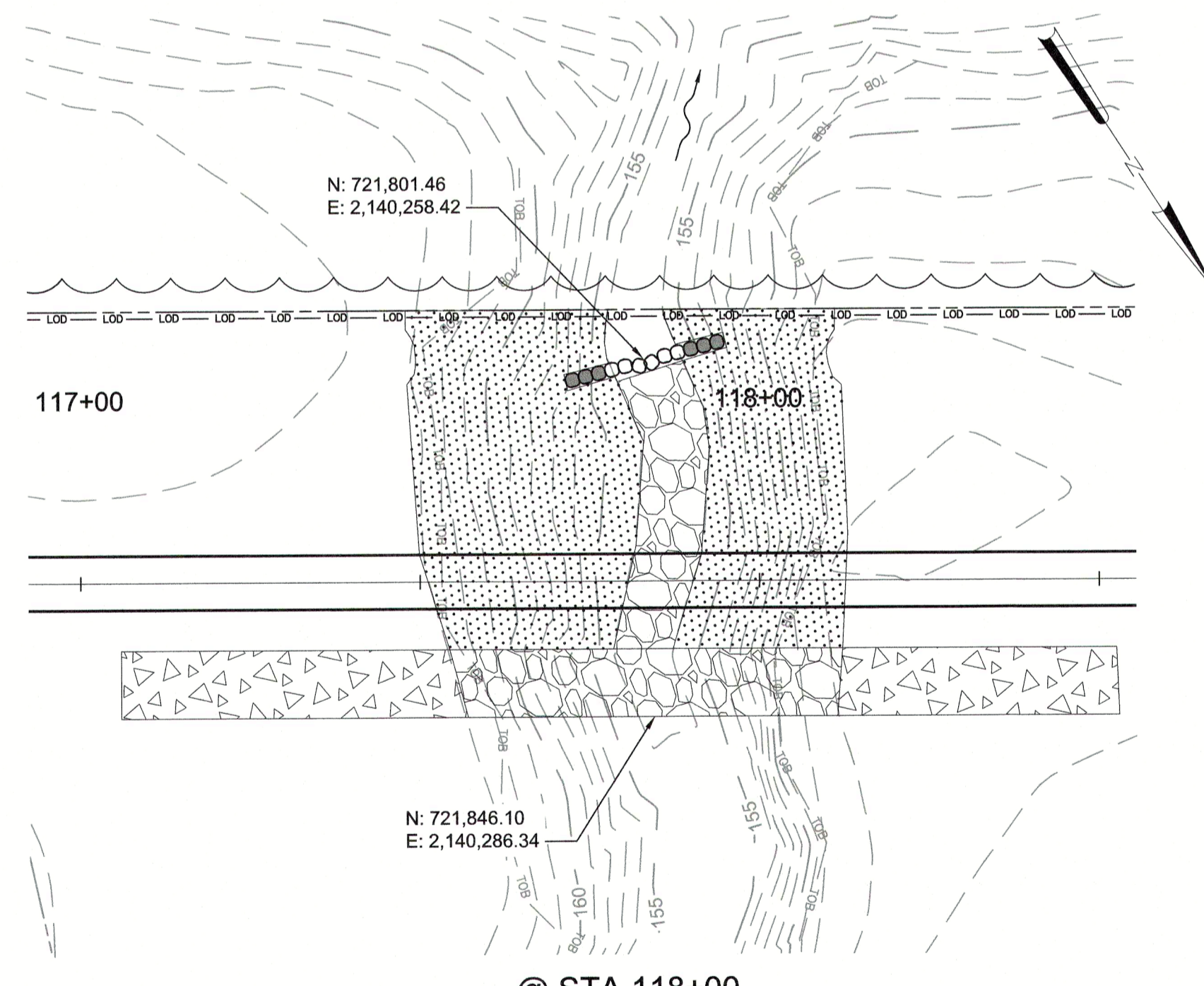
@ STA 72+50



@ STA 94+00



@ STA 100+00

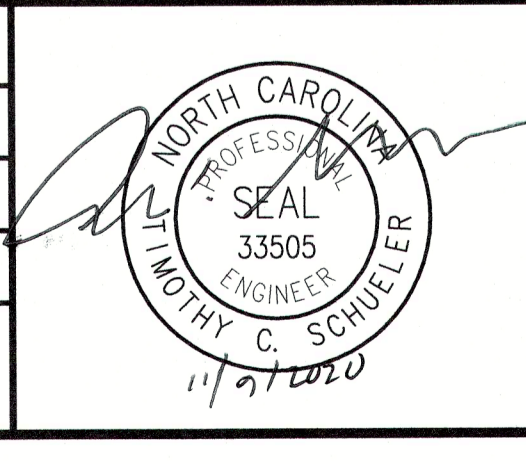


@ STA 118+00

PLOT DATE: 2020/11/09 11:09:41 AM BY: ENG File: C:\BANS\2020\11\09\110941\BANS\BANK STABILIZATION\BANK STABILIZATION.dwg Saved By: J057 (JAB) Date: 2020/11/09 2:49 PM

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	T. SCHUELER
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

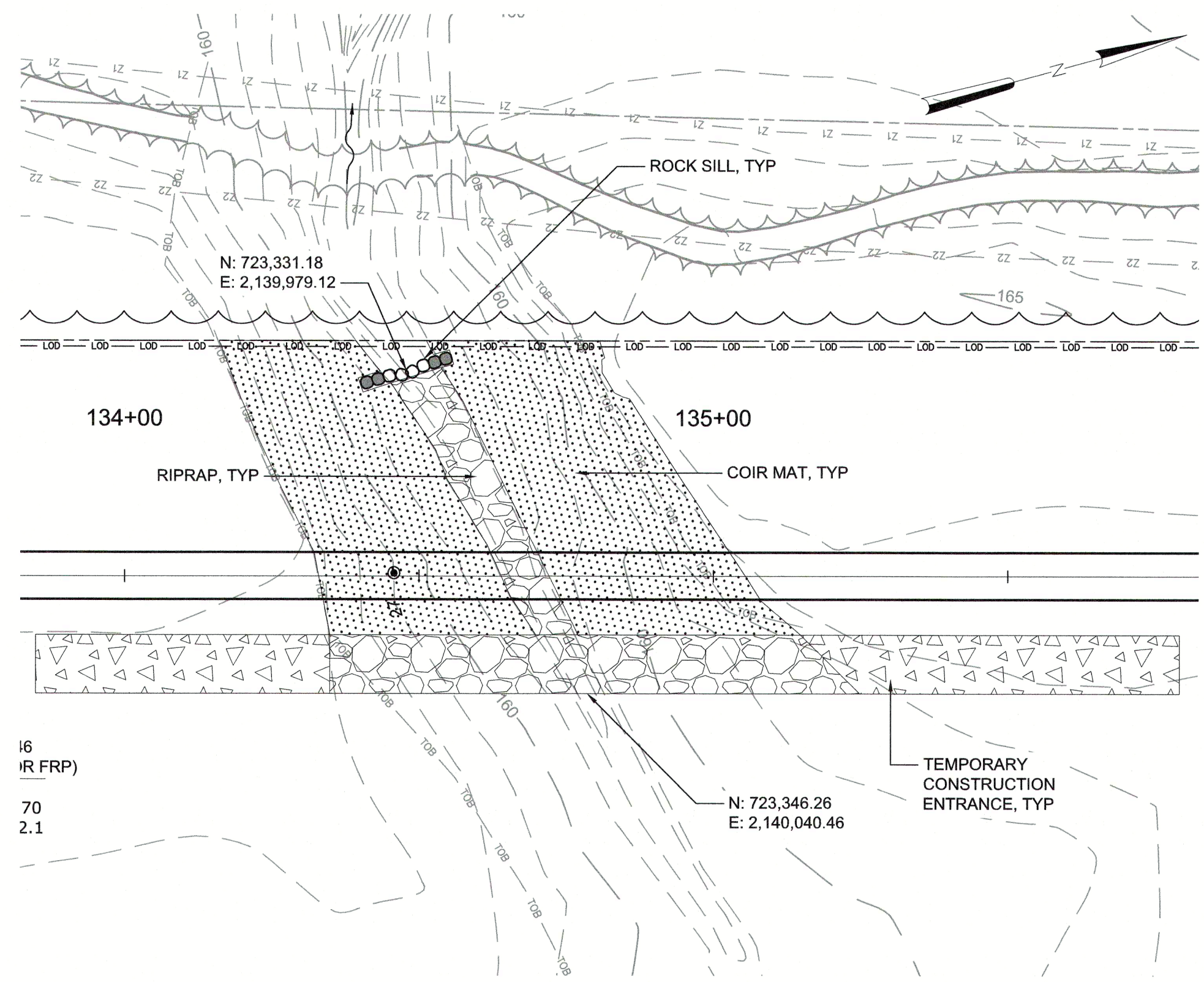
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

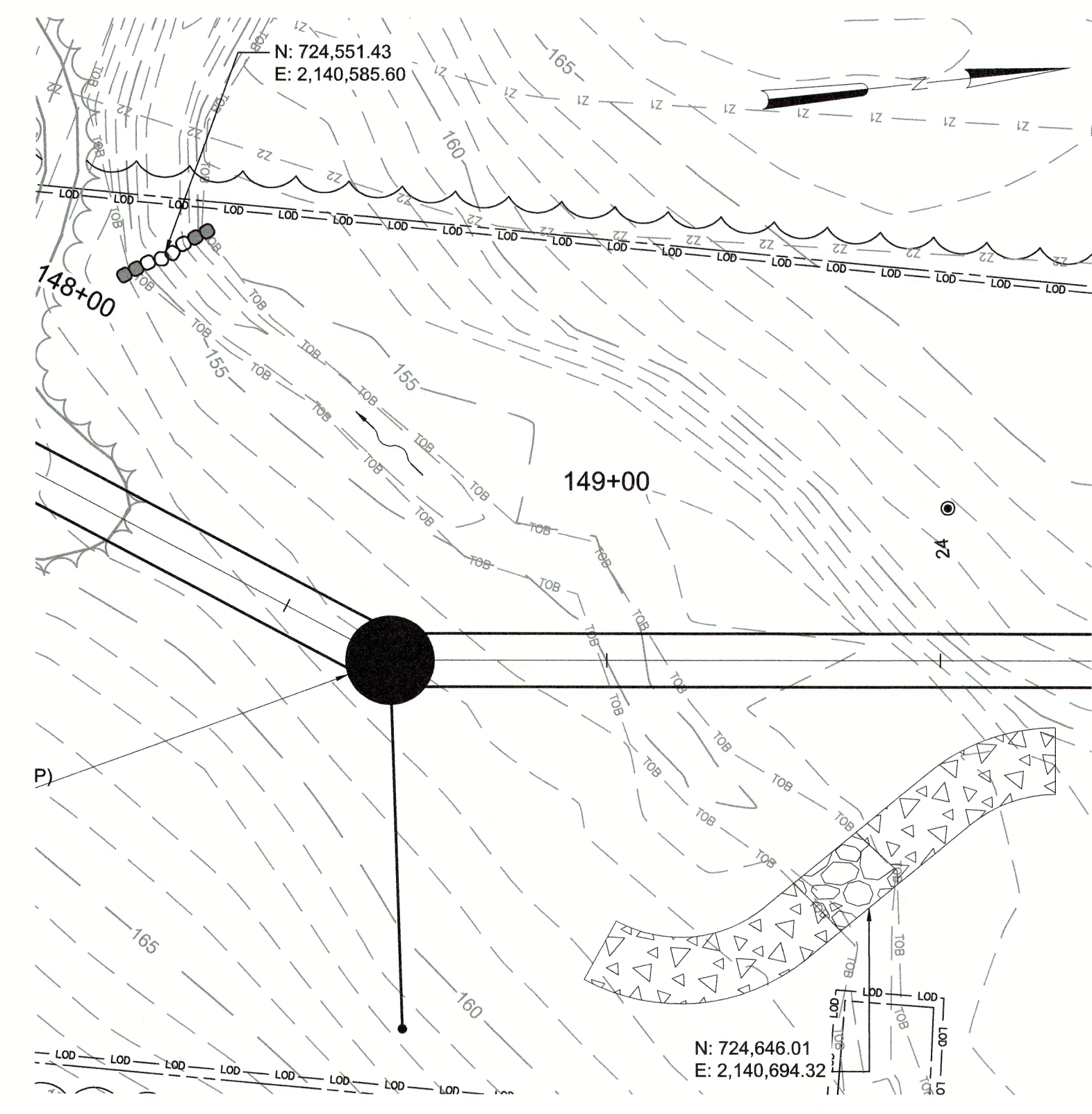
BANK STABILIZATION

DETAIL PLAN

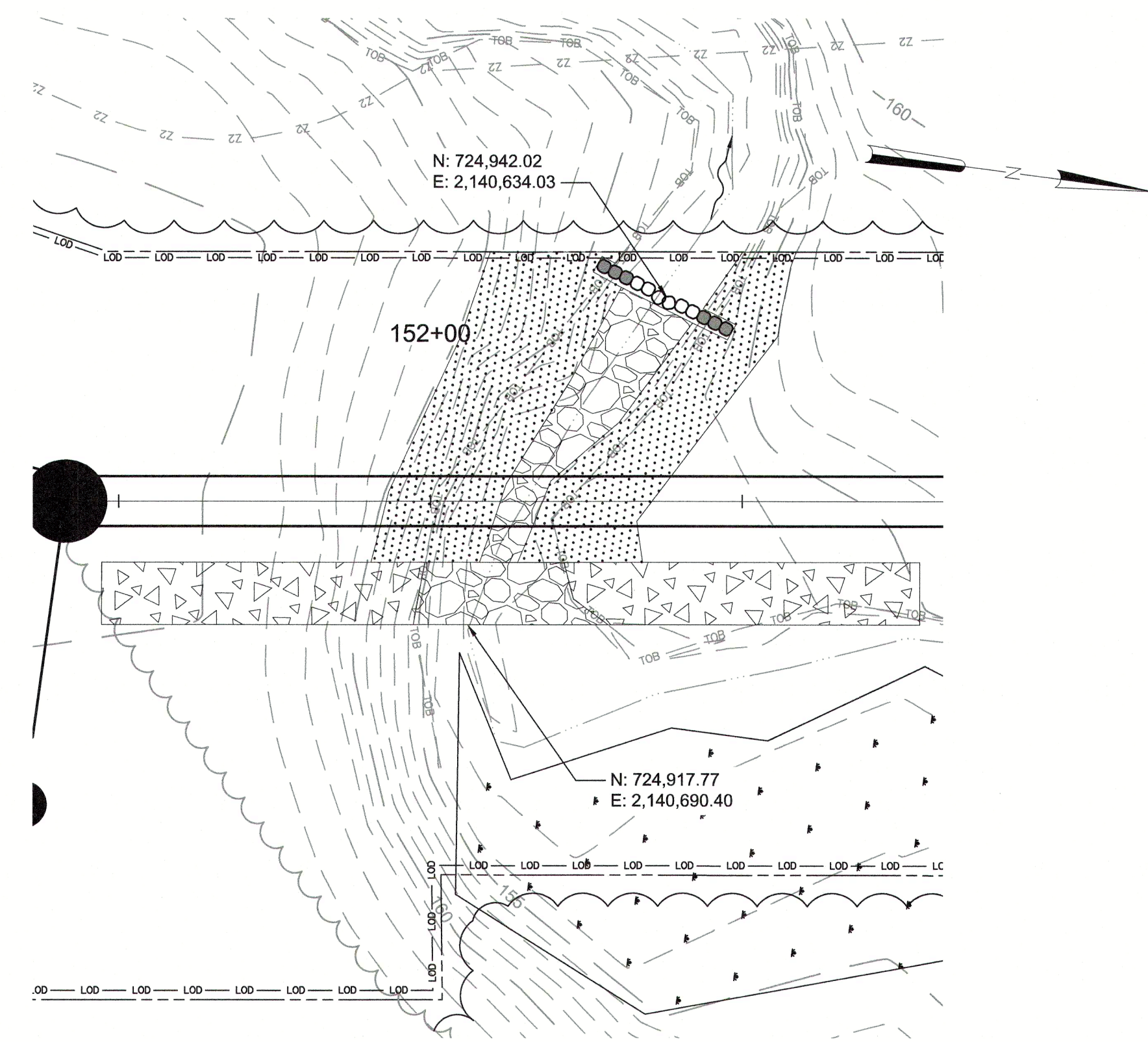
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C35



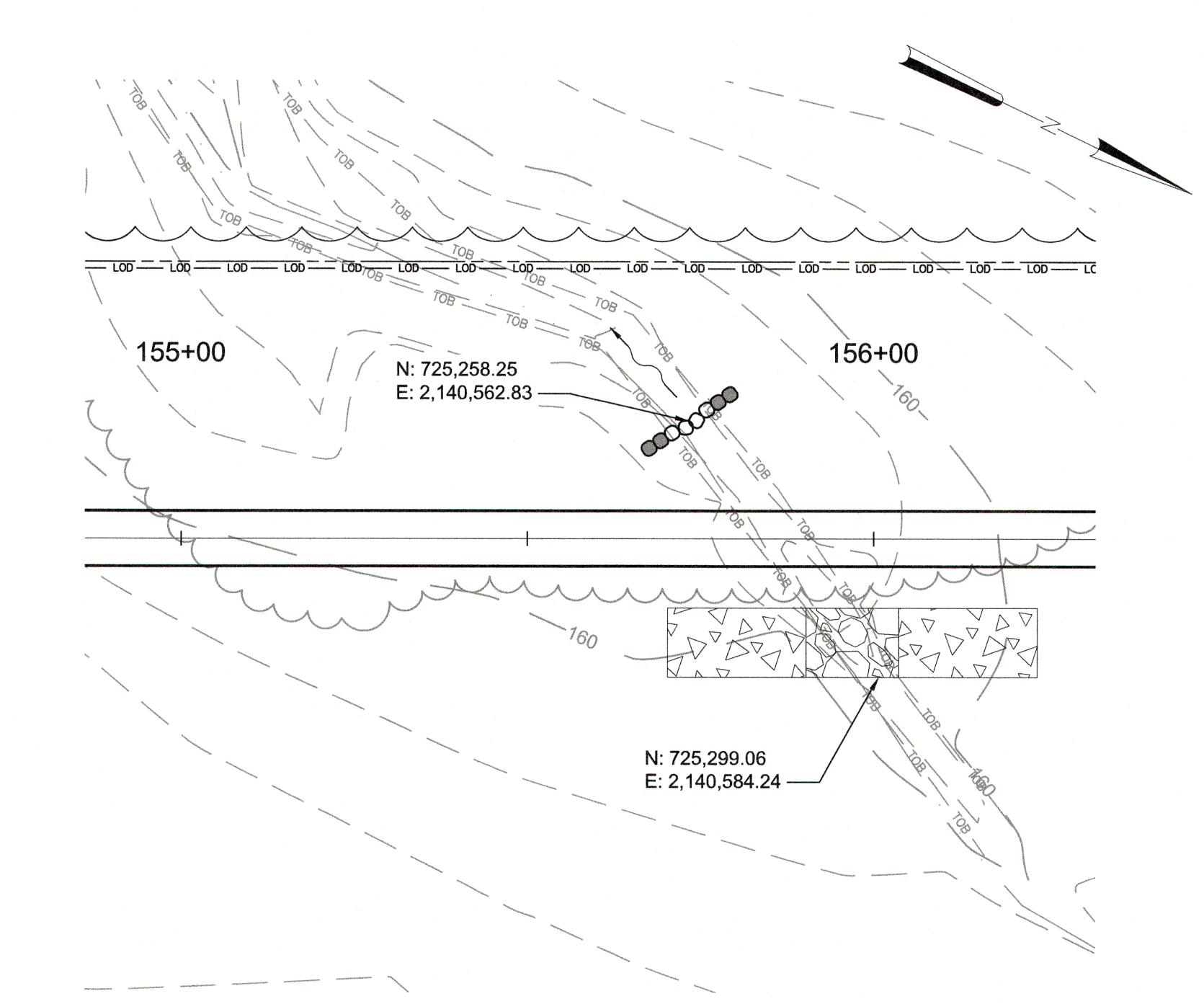
@ STA 134+50



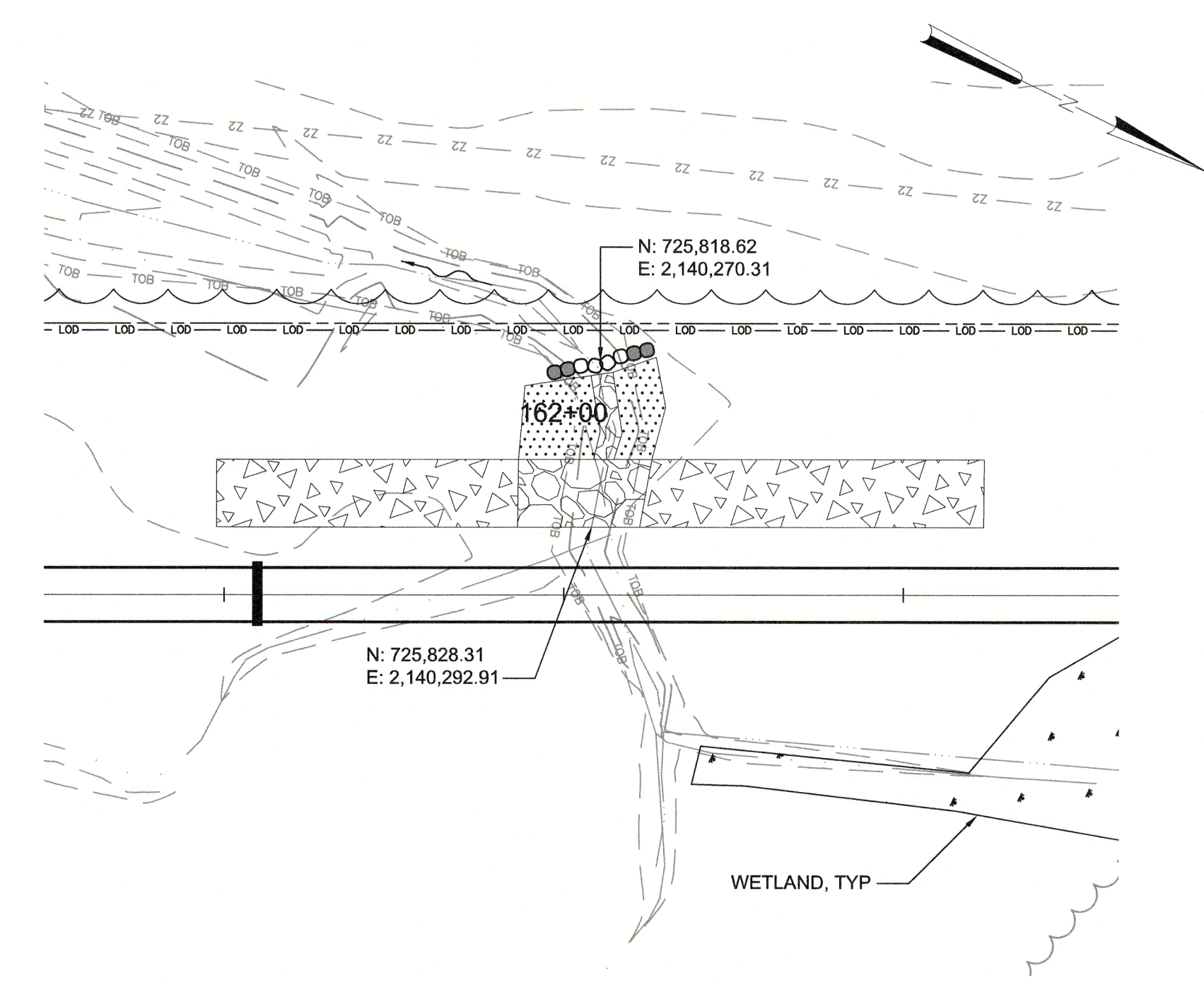
@ STA 149+00



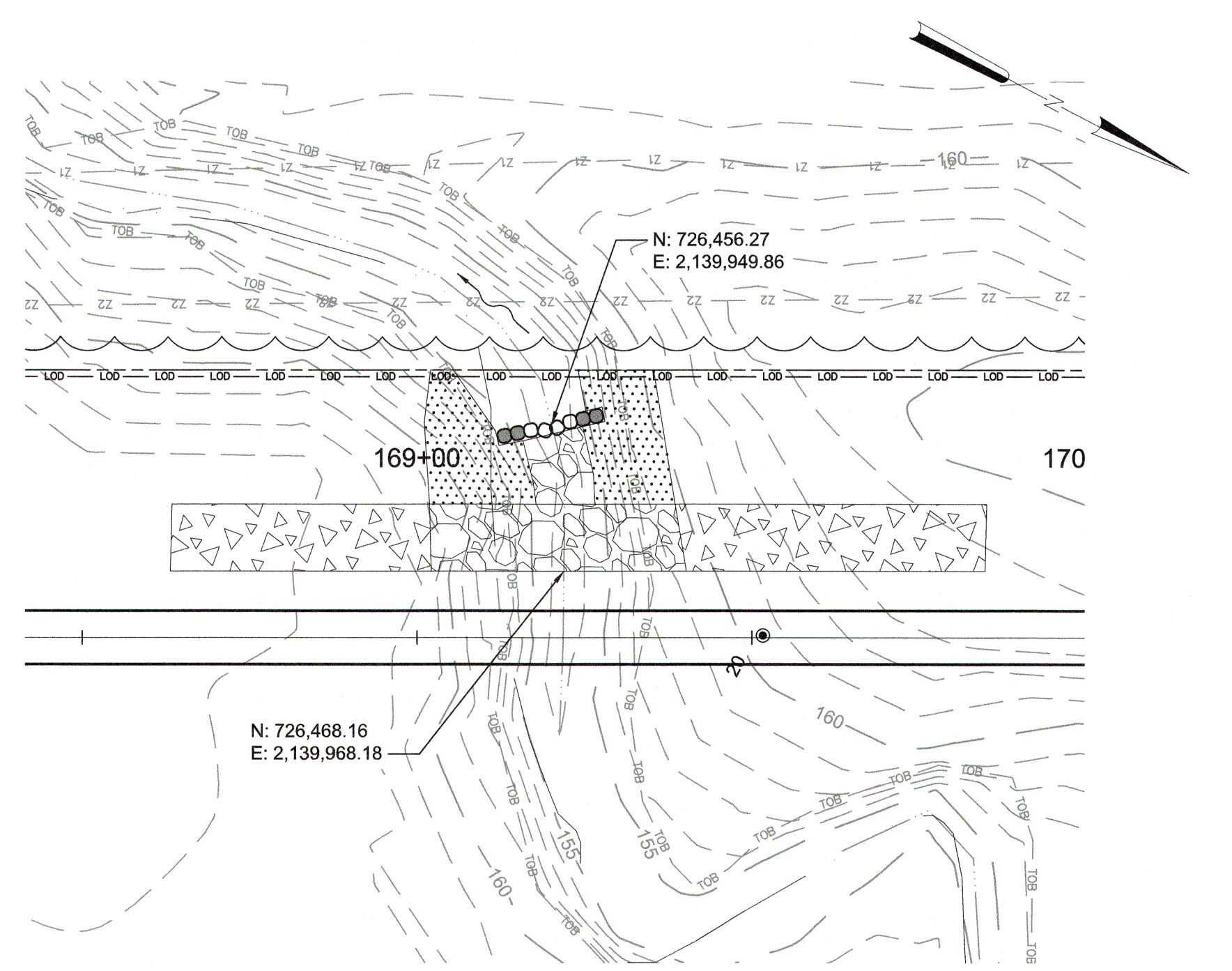
@ STA 152+00



@ STA 156+00



@ STA 162+00



@ STA 169+00




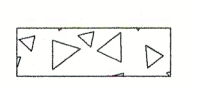
WATER OF THE US CROSSING SEQUENCE OF CONSTRUCTION:

- TEMPORARY CONSTRUCTION ENTRANCE (TCE'S)**
1. PRIOR TO EACH CROSSING IMPACT, THE CONTRACTOR IS TO HAVE THE LIMITS OF TEMPORARY CONSTRUCTION ENTRANCES (TCE'S) FLAGGED FOR APPROVAL BY THE ENGINEER.
 2. PRIOR TO EACH CROSSING IMPACT, CONDUCT AN ONSITE PRE-CONSTRUCTION MEETING WITH CONTRACTOR, ENGINEER AND OWNER. SITE MEETINGS MAY BE COMBINED FOR SITES CONSTRUCTED CONCURRENTLY. ENGINEER TO APPROVE OR ADJUST LIMITS OF FLAGGED TCE IMPACTS.
 3. CONTRACTOR TO INSTALL TCE DURING DRY WEATHER FOR EPHEMERAL (DRY) CHANNELS; PUMP AROUND SHOULD NOT BE NEEDED.
 4. FOR PERENNIAL (FLOWING) CHANNEL CROSSINGS, CONTRACTOR TO UTILIZE ESC DEVICES (E.G., PUMP AROUND) TO INSTALL TCE WITHIN FLOWING WATER.

- SEWER TRUNK LINE INSTALLATION**
1. INSTALL TEMPORARY PUMP-AROUNDS/GRAVITY DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FLOW THROUGH SANITARY SEWER EXCAVATION AND CONSTRUCTION.
 2. INSTALL TRUCK LINE. CONTRACTOR TO MAINTAIN PUMP-AROUNDS/GRAVITY DIVERSIONS AND TCE'S DURING TRUNK SEWER INSTALLATION INCLUDING SEEDING AND STRAW PLACEMENT OR MATTING ADJACENT EXPOSED AREAS.

- PERMANENT RIPRAP ACCESSES**
1. ONCE THE TRUNK LINE SEWER IS INSTALLED, CONTRACTOR TO REGRADE THE CROSSING AREA BACK TO ORIGINAL GRADE, UTILIZING AND MAINTAINING PUMP-AROUNDS AND GRAVITY DIVERSIONS.
 2. CONTRACTOR IS TO FLAG LIMITS OF FINAL RIPRAP ACCESS PATH, IN-CHANNEL STONE, SILL GRADE CONTROLS, AND COIR MATTING FOR ENGINEER'S APPROVAL.
 3. ADJUST PUMP-AROUNDS/DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FOR WORK IN THE CHANNEL.
 4. INSTALL SILLS FIRST; THEN INSTALL PERMANENT RIPRAP AND COIR MAT/TOPSOIL/SEED.
 5. REMOVE PUMP-AROUNDS AND DIVERSIONS WITH ENGINEER'S APPROVAL.
 6. ONCE AREA IS STABILIZED WITH VEGETATION, TCE MATERIAL NOT NEEDED FOR PERMANENT CROSSING MAY BE REMOVED.

LEGEND

-  ROCK SILL (RS)
-  RIPRAP
-  COIR MAT
-  TEMPORARY CONSTRUCTION ENTRANCE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered as approval of compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

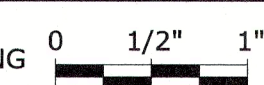
City of Raleigh Development Approval _____

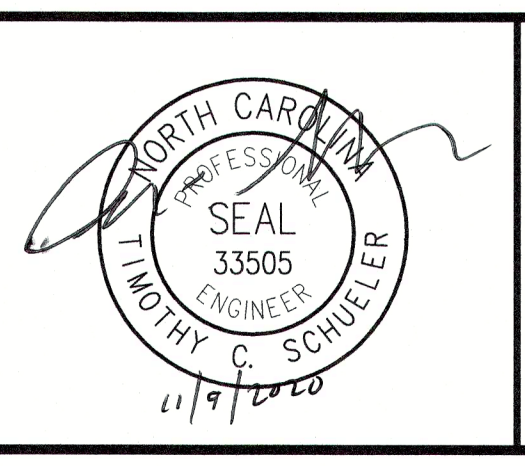


FINAL DESIGN

PLOT DATE: 2020/11/09 11:16:08 AM
 File: C:\BMS\HAZEN-SAWYER\ENR\DWG\18187\18187_036.dwg
 Saved By: MCT, BAILEY
 Sheet Date: 2020/11/09 3:12 PM

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	T. SCHUELER
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC

320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

BANK STABILIZATION

DETAIL PLAN

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C36

WATER OF THE US CROSSING SEQUENCE OF CONSTRUCTION:

TEMPORARY CONSTRUCTION ENTRANCE (TCE'S)

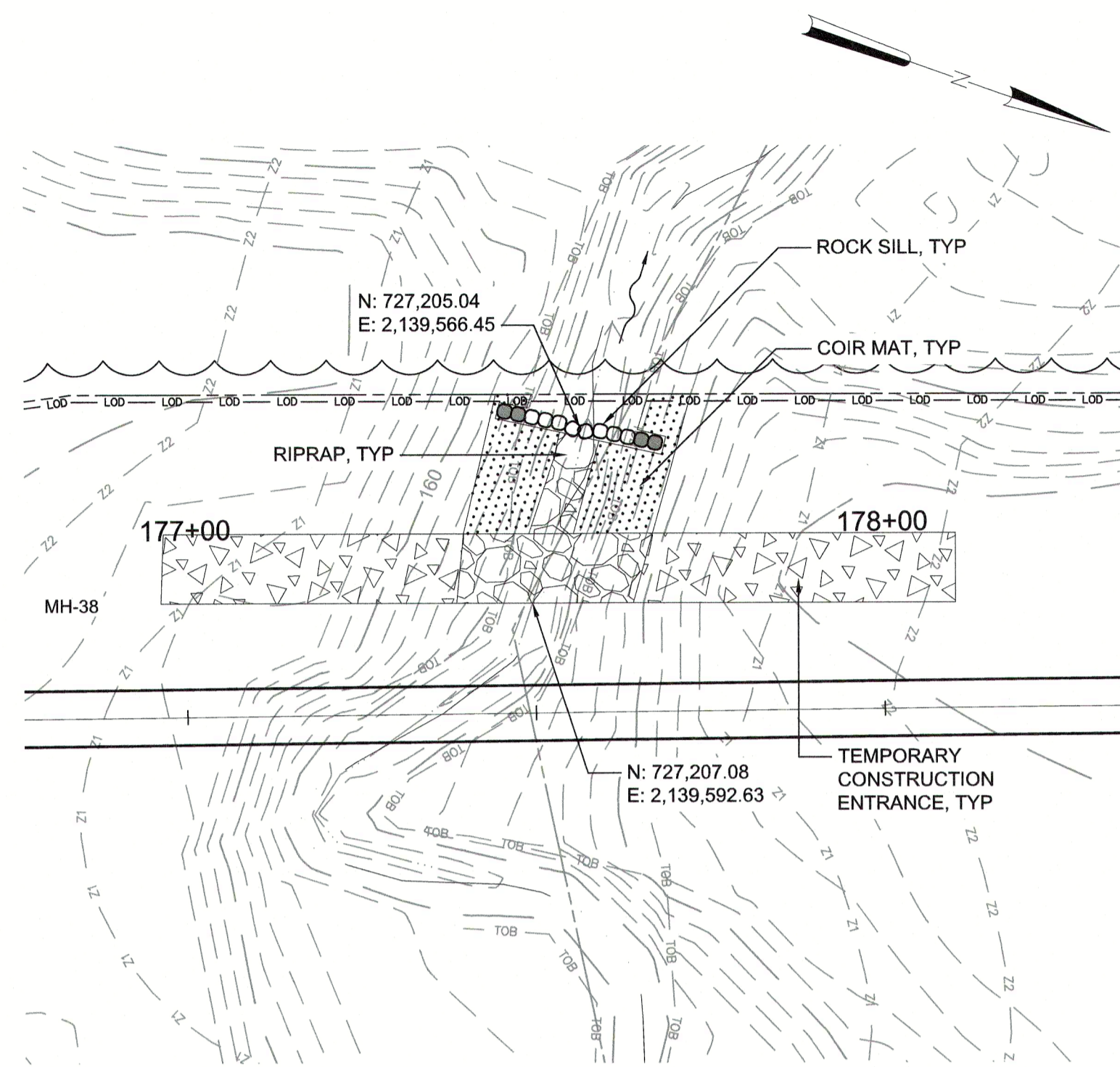
1. PRIOR TO EACH CROSSING IMPACT, THE CONTRACTOR IS TO HAVE THE LIMITS OF TEMPORARY CONSTRUCTION ENTRANCES (TCE'S) FLAGGED FOR APPROVAL BY THE ENGINEER.
2. PRIOR TO EACH CROSSING IMPACT, CONDUCT AN ONSITE PRE-CONSTRUCTION MEETING WITH CONTRACTOR, ENGINEER AND OWNER. SITE MEETINGS MAY BE COMBINED FOR SITES CONSTRUCTED CONCURRENTLY. ENGINEER TO APPROVE OR ADJUST LIMITS OF FLAGGED TCE IMPACTS.
3. CONTRACTOR TO INSTALL TCE DURING DRY WEATHER FOR EPHEMERAL (DRY) CHANNELS; PUMP AROUND SHOULD NOT BE NEEDED.
4. FOR PERENNIAL (FLOWING) CHANNEL CROSSINGS, CONTRACTOR TO UTILIZE ESC DEVICES (E.G., PUMP AROUND) TO INSTALL TCE WITHIN FLOWING WATER.

SEWER TRUNK LINE INSTALLATION

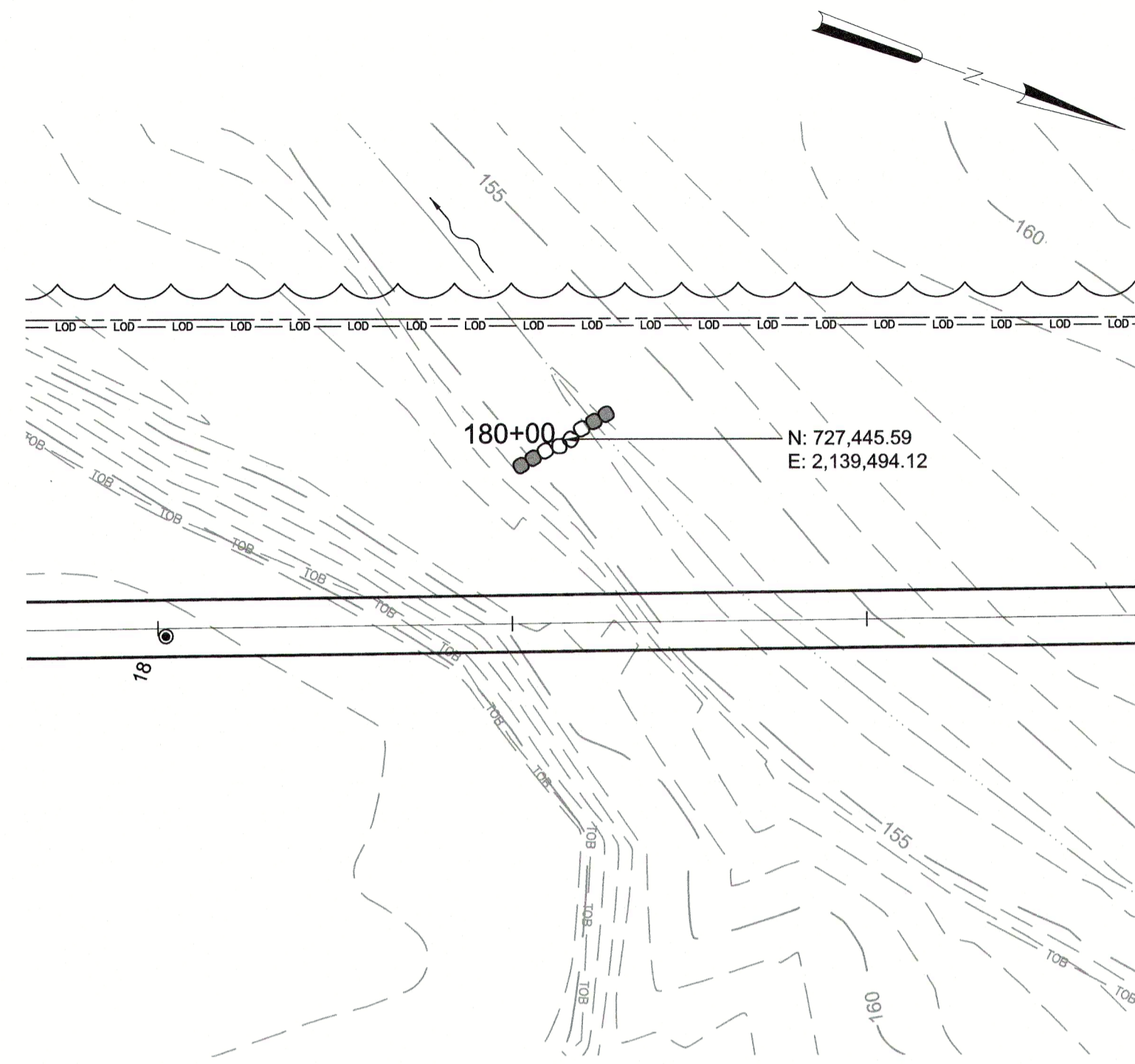
1. INSTALL TEMPORARY PUMP-AROUNDS/GRAVITY DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FLOW THROUGH SANITARY SEWER EXCAVATION AND CONSTRUCTION.
2. INSTALL TRUCK LINE. CONTRACTOR TO MAINTAIN PUMP-AROUNDS/GRAVITY DIVERSIONS AND TCE'S DURING TRUNK SEWER INSTALLATION INCLUDING SEEDING AND STRAW PLACEMENT OR MATTING ADJACENT EXPOSED AREAS.

PERMANENT RIPRAP ACCESSES

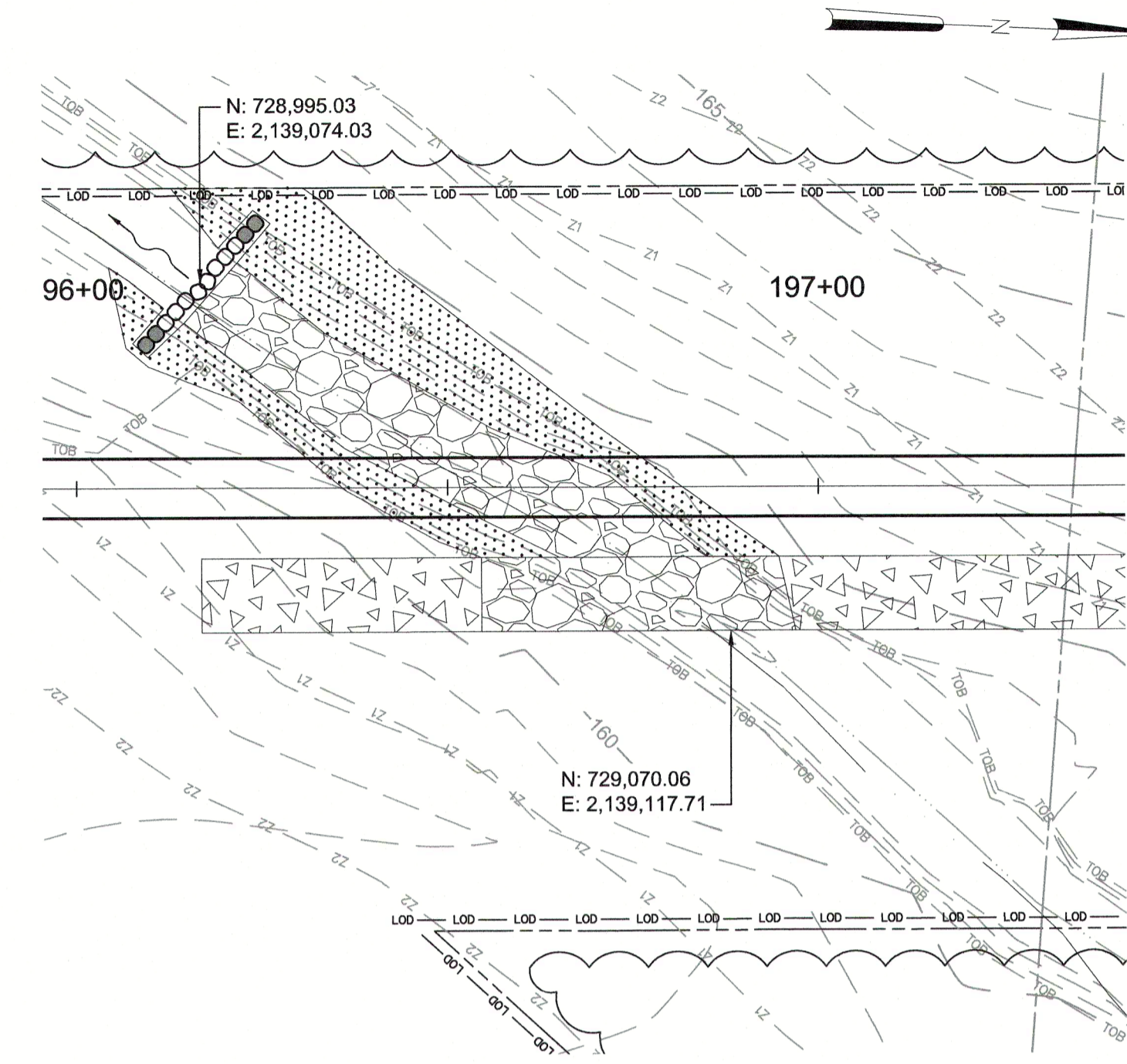
1. ONCE THE TRUNK LINE SEWER IS INSTALLED, CONTRACTOR TO REGRADE THE CROSSING AREA BACK TO ORIGINAL GRADE, UTILIZING AND MAINTAINING PUMP-AROUNDS AND GRAVITY DIVERSIONS.
2. CONTRACTOR IS TO FLAG LIMITS OF FINAL RIPRAP ACCESS PATH, IN-CHANNEL STONE, SILL GRADE CONTROLS, AND COIR MATTING FOR ENGINEER'S APPROVAL.
3. ADJUST PUMP-AROUNDS/DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FOR WORK IN THE CHANNEL.
4. INSTALL SILLS FIRST; THEN INSTALL PERMANENT RIPRAP AND COIR MAT/TOPSOIL/SEED.
5. REMOVE PUMP-AROUNDS AND DIVERSIONS WITH ENGINEER'S APPROVAL.
6. ONCE AREA IS STABILIZED WITH VEGETATION, TCE MATERIAL NOT NEEDED FOR PERMANENT CROSSING MAY BE REMOVED.



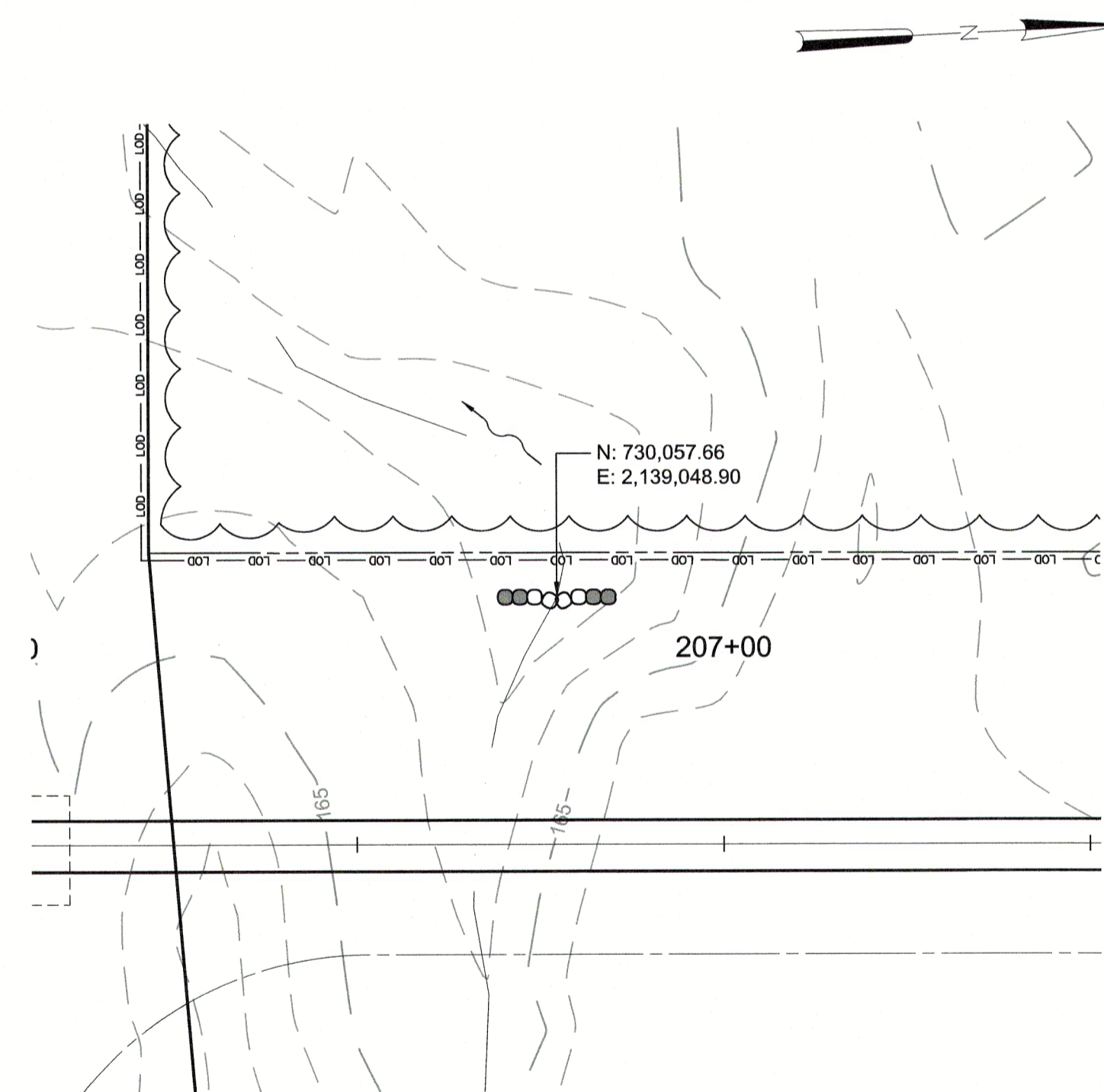
@ STA 177+50



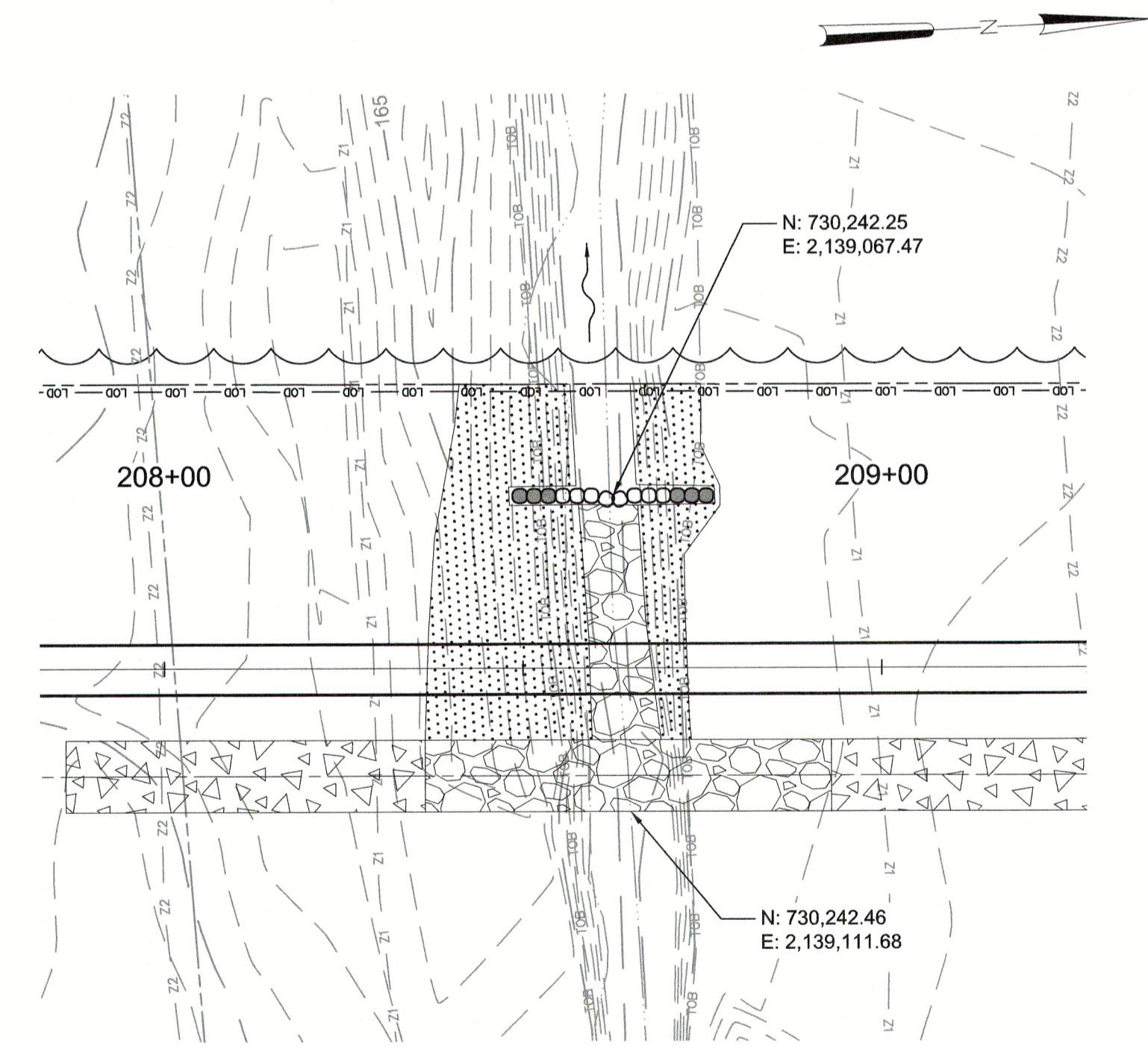
@ STA 180+00



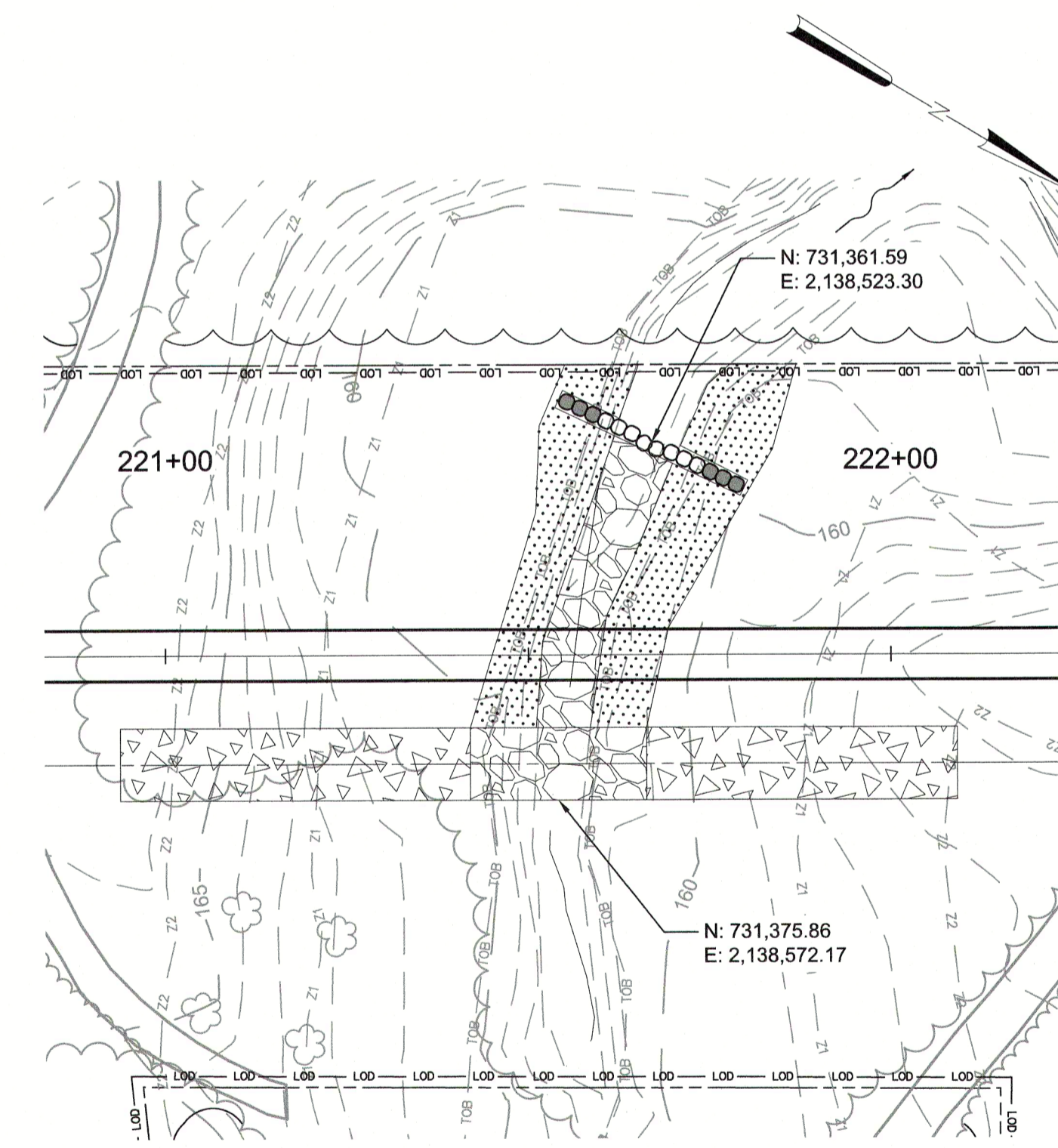
@ STA 196+50



@ STA 206+50



@ STA 208+50



@ STA 221+50

LEGEND	
	ROCK SILL (RS)
	RIPRAP
	COIR MAT
	TEMPORARY CONSTRUCTION ENTRANCE

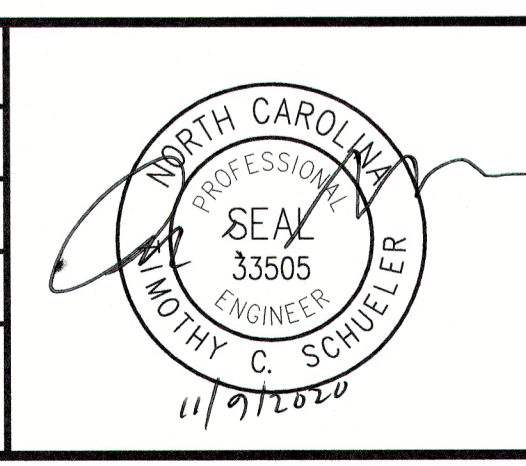
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval



FINAL DESIGN

PLOT DATE: 2020/11/09 11:20:41 AM BY: ENG
 FILE: C:\Users\m222\OneDrive\Work\Projects\2020\11\05_21_20\1105_21_20.dwg

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	T. SCHUELER		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

BANK STABILIZATION
 DETAIL PLAN

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C37

**WATER OF THE US CROSSING
SEQUENCE OF CONSTRUCTION:**

TEMPORARY CONSTRUCTION ENTRANCE (TCE'S)

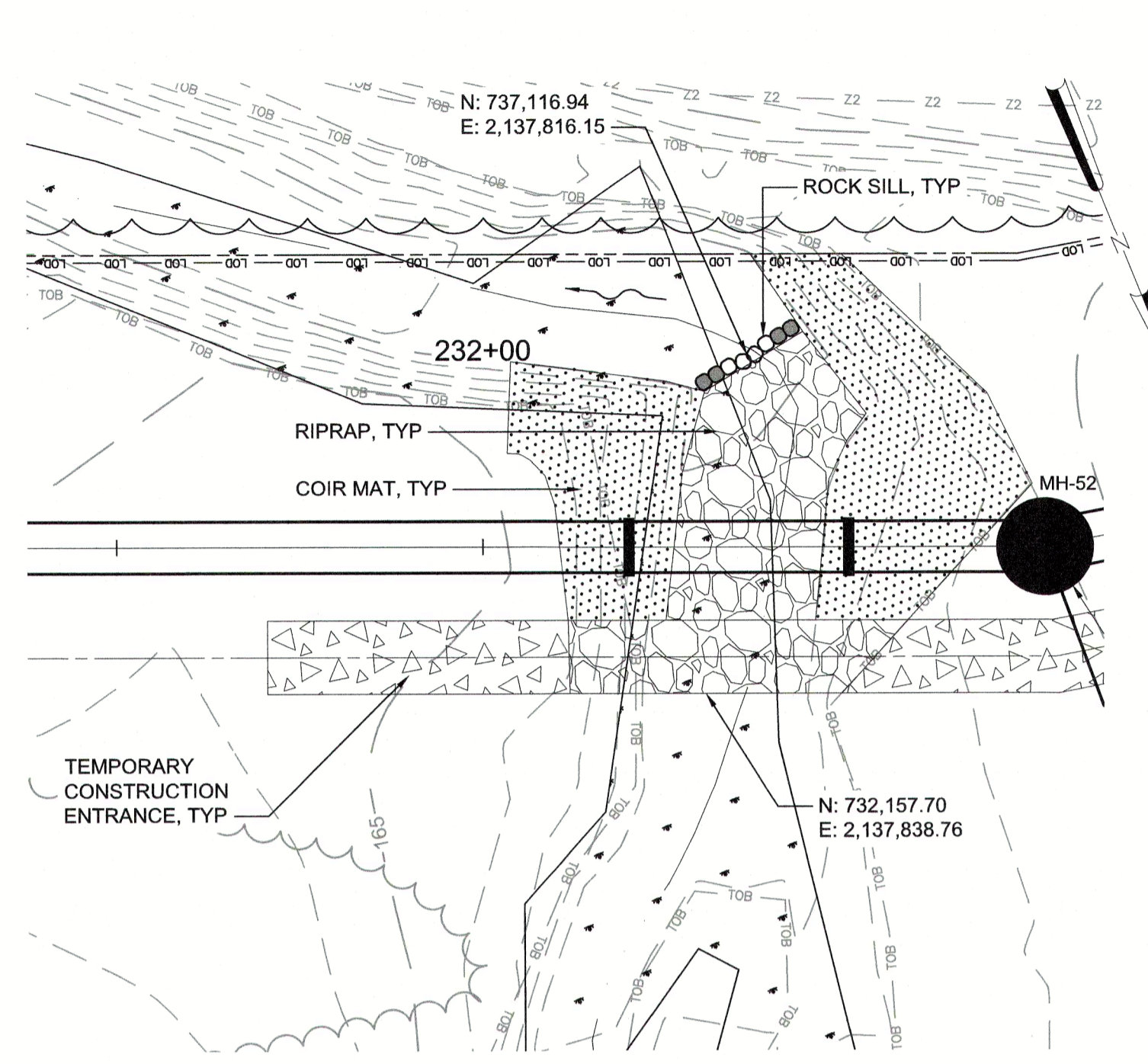
1. PRIOR TO EACH CROSSING IMPACT, THE CONTRACTOR IS TO HAVE THE LIMITS OF TEMPORARY CONSTRUCTION ENTRANCES (TCE'S) FLAGGED FOR APPROVAL BY THE ENGINEER.
2. PRIOR TO EACH CROSSING IMPACT, CONDUCT AN ONSITE PRE-CONSTRUCTION MEETING WITH CONTRACTOR, ENGINEER AND OWNER. SITE MEETINGS MAY BE COMBINED FOR SITES CONSTRUCTED CONCURRENTLY. ENGINEER TO APPROVE OR ADJUST LIMITS OF FLAGGED TCE IMPACTS.
3. CONTRACTOR TO INSTALL TCE DURING DRY WEATHER FOR EPHEMERAL (DRY) CHANNELS. PUMP AROUND SHOULD NOT BE NEEDED.
4. FOR PERENNIAL (FLOWING) CHANNEL CROSSINGS, CONTRACTOR TO UTILIZE ESC DEVICES (E.G., PUMP AROUND) TO INSTALL TCE WITHIN FLOWING WATER.

SEWER TRUNK LINE INSTALLATION

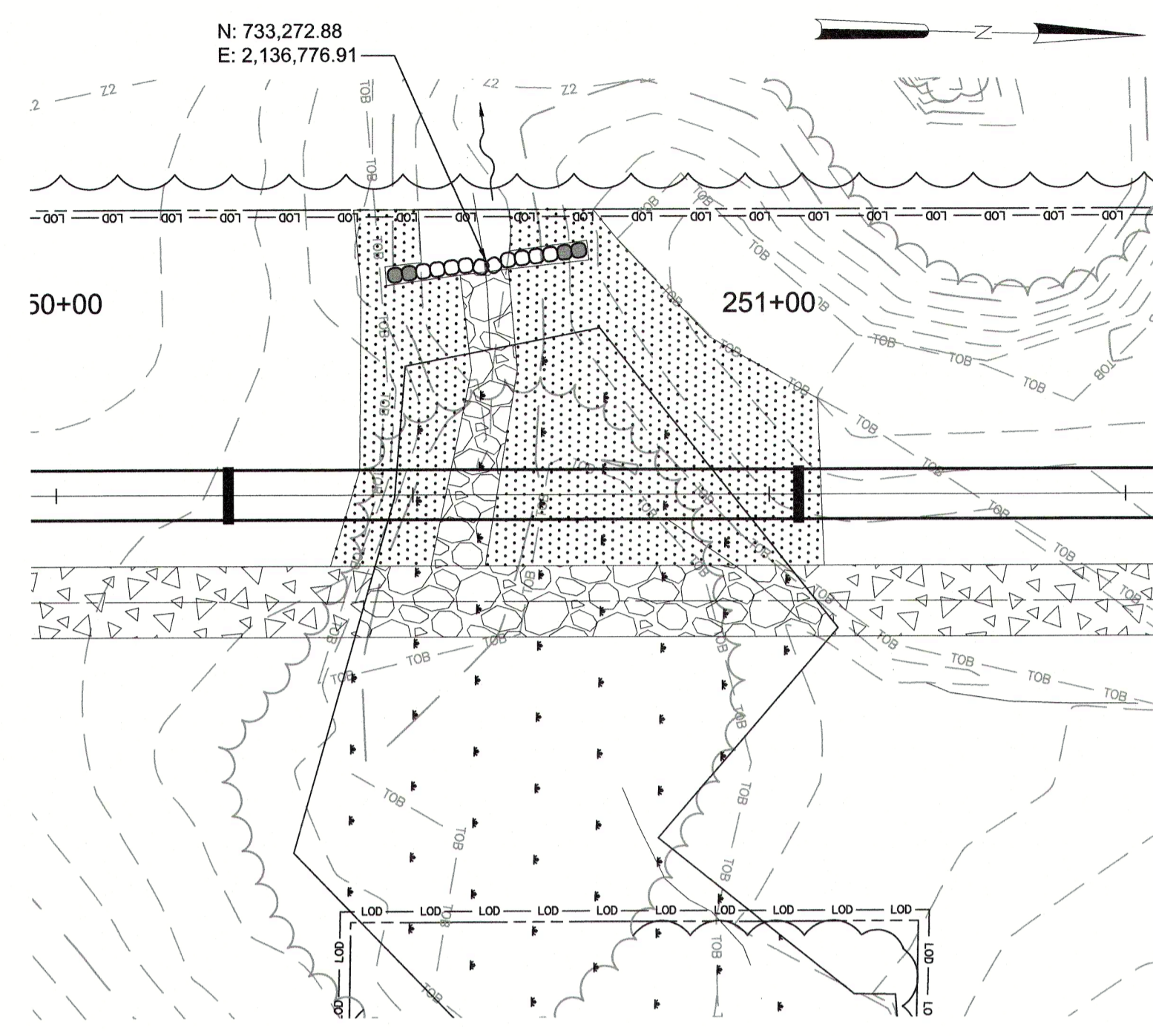
1. INSTALL TEMPORARY PUMP-AROUNDS/GRAVITY DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FLOW THROUGH SANITARY SEWER EXCAVATION AND CONSTRUCTION.
2. INSTALL TRUCK LINE. CONTRACTOR TO MAINTAIN PUMP-AROUNDS/GRAVITY DIVERSIONS AND TCE'S DURING TRUNK SEWER INSTALLATION INCLUDING SEEDING AND STRAW PLACEMENT OR MATTING ADJACENT EXPOSED AREAS.

PERMANENT RIPRAP ACCESSES

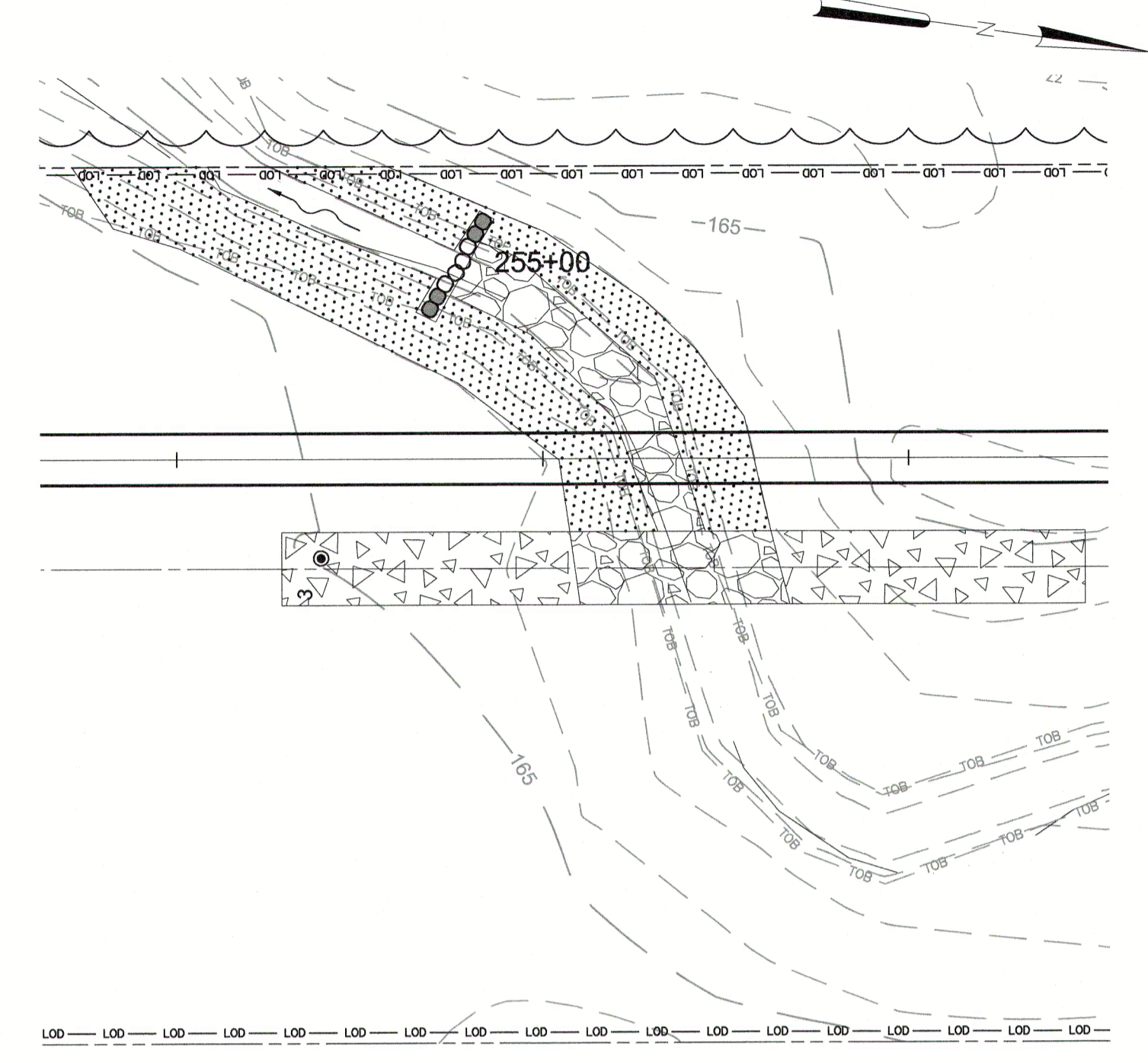
1. ONCE THE TRUNK LINE SEWER IS INSTALLED, CONTRACTOR TO REGRADE THE CROSSING AREA BACK TO ORIGINAL GRADE, UTILIZING AND MAINTAINING PUMP-AROUNDS AND GRAVITY DIVERSIONS.
2. CONTRACTOR IS TO FLAG LIMITS OF FINAL RIPRAP ACCESS PATH, IN-CHANNEL STONE, SILL GRADE CONTROLS, AND COIR MATTING FOR ENGINEER'S APPROVAL.
3. ADJUST PUMP-AROUNDS/DIVERSIONS AND OTHER EROSION AND SEDIMENT CONTROL DEVICES TO ALLOW FOR WORK IN THE CHANNEL.
4. INSTALL SILLS FIRST; THEN INSTALL PERMANENT RIPRAP AND COIR MAT/TOPSOIL/SEED.
5. REMOVE PUMP-AROUNDS AND DIVERSIONS WITH ENGINEER'S APPROVAL.
6. ONCE AREA IS STABILIZED WITH VEGETATION, TCE MATERIAL NOT NEEDED FOR PERMANENT CROSSING MAY BE REMOVED.



@ STA 232+00



@ STA 250+00

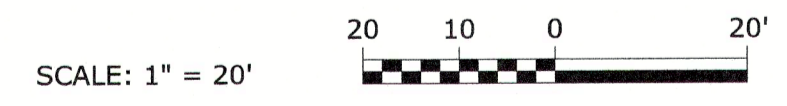


@ STA 255+00

LEGEND	
	ROCK SILL (RS)
	RIPRAP
	COIR MAT
	TEMPORARY CONSTRUCTION ENTRANCE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval _____

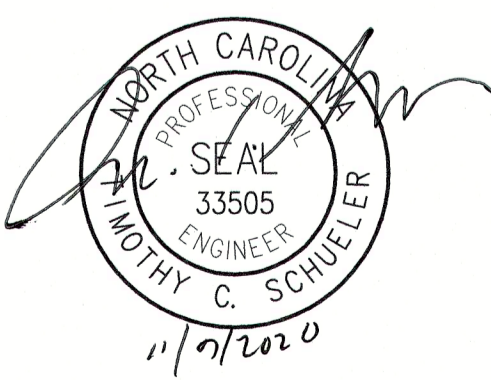
Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it confirms to the requirements established in the Standard Specifications of the Town of Knightdale.
 By: _____ Date: _____
 Town Engineer
 These plans are approved by the Town of Knightdale and serve as construction plans for this project.
 By: _____ Date: _____
 Administrator



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	T. SCHUELER
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

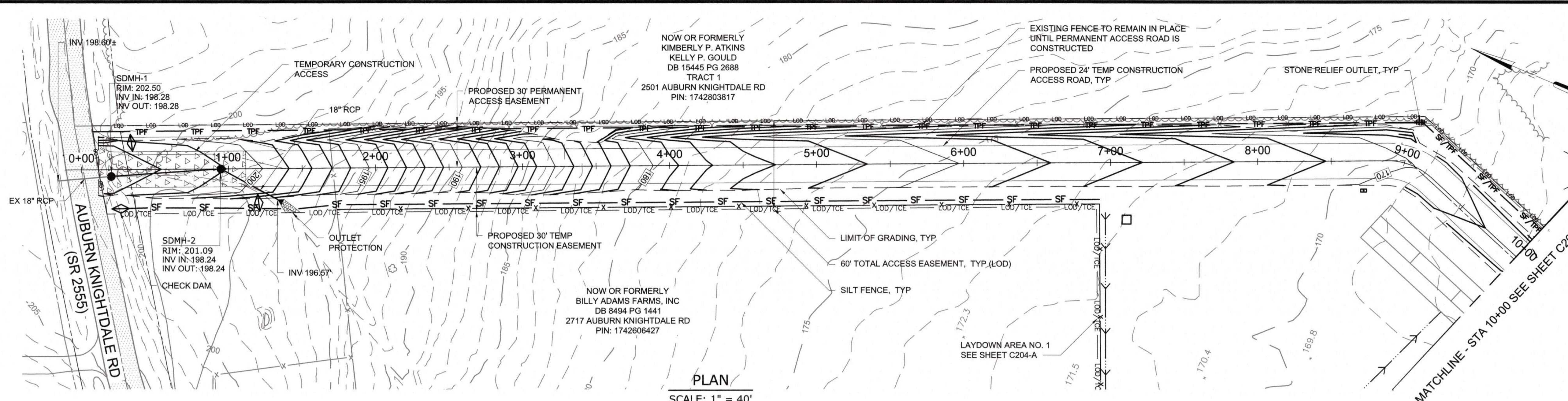
CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

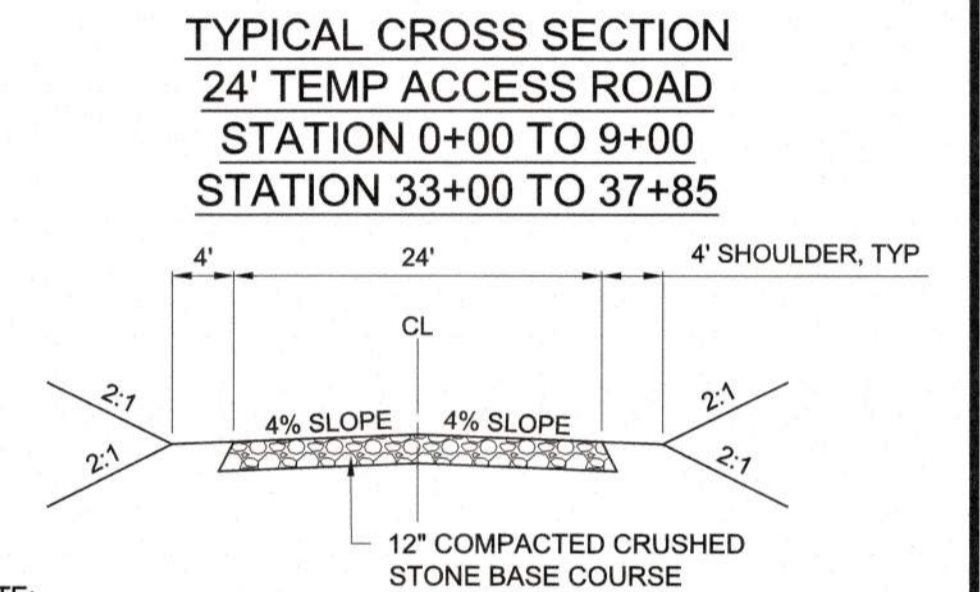
BANK STABILIZATION
 DETAIL PLAN

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C38

PLOT DATE: 2020/11/09 11:24:11 AM BY: ENG
 File: C:\GIS\Projects\2020\11\09\112411\112411.dwg Saved By: JREI (BALEI) Save Date: 2020/11/09 2:10:50 PM

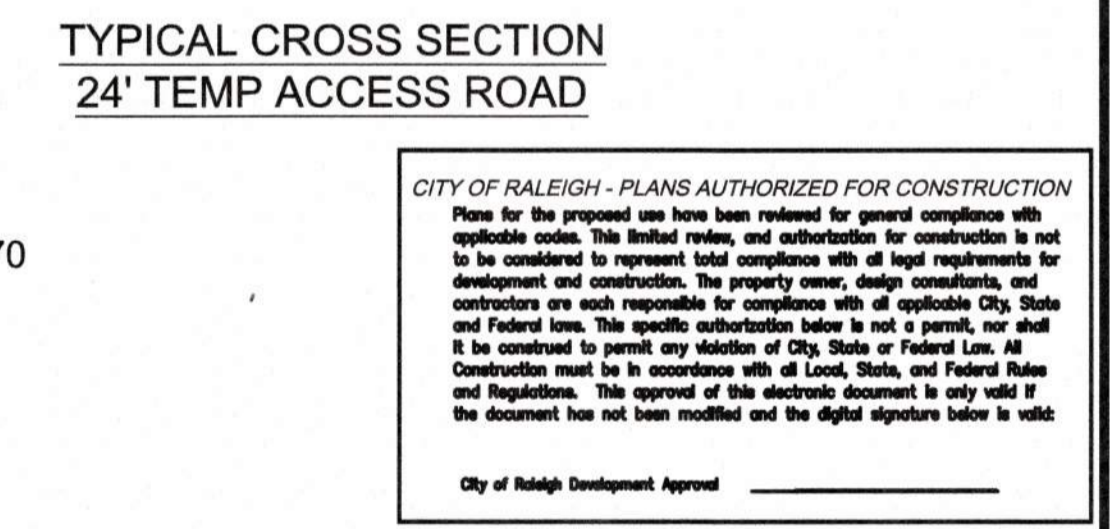
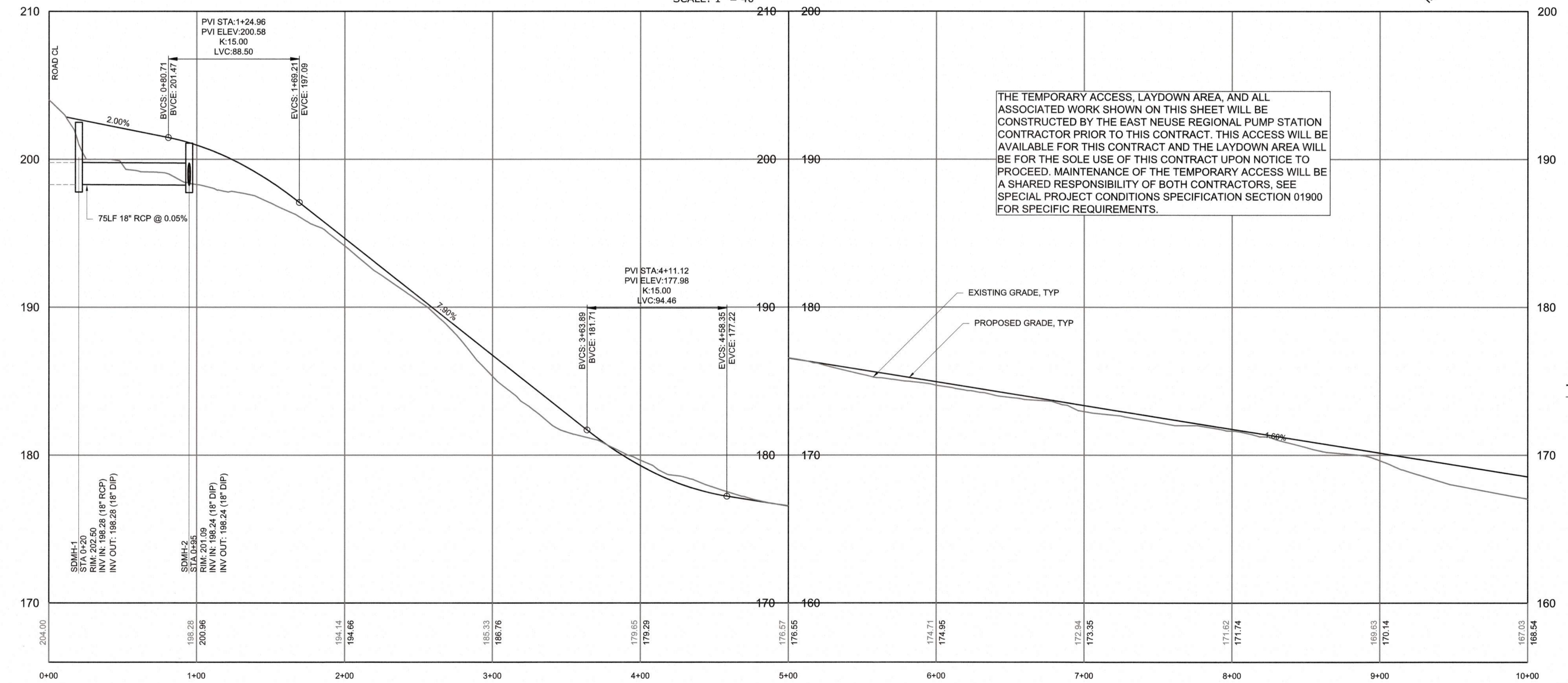


- NOTES:**
- CONTRACTOR SHALL INSTALL STONE CHECK DAMS AT 25' INTERVAL IN THE BOTTOM OF PROPOSED ACCESS ROAD DITCH FROM STA 0+25 TO STA 9+00.
 - CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISION FOR ACCESS ROAD NO. 1.
- NOTE:
- USE STRAW W/NET LINER IN DITCHES.
 - 12" COMPACTED CRUSHED STONE BASE COURSE IS A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
 - ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.



- NOTE:
- 12" COMPACTED CRUSHED STONE BASE COURSE IS A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
 - ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.

THE TEMPORARY ACCESS, LAYDOWN AREA, AND ALL ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE CONSTRUCTED BY THE EAST NEUSE REGIONAL PUMP STATION CONTRACTOR PRIOR TO THIS CONTRACT. THIS ACCESS WILL BE AVAILABLE FOR THIS CONTRACT AND THE LAYDOWN AREA WILL BE FOR THE SOLE USE OF THIS CONTRACT UPON NOTICE TO PROCEED. MAINTENANCE OF THE TEMPORARY ACCESS WILL BE A SHARED RESPONSIBILITY OF BOTH CONTRACTORS, SEE SPECIAL PROJECT CONDITIONS SPECIFICATION SECTION 01900 FOR SPECIFIC REQUIREMENTS.



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all local requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. The approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

PROFILE

HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 4'

FINAL DESIGN



PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen

HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

CJS
 Conveyance, PLLC

320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

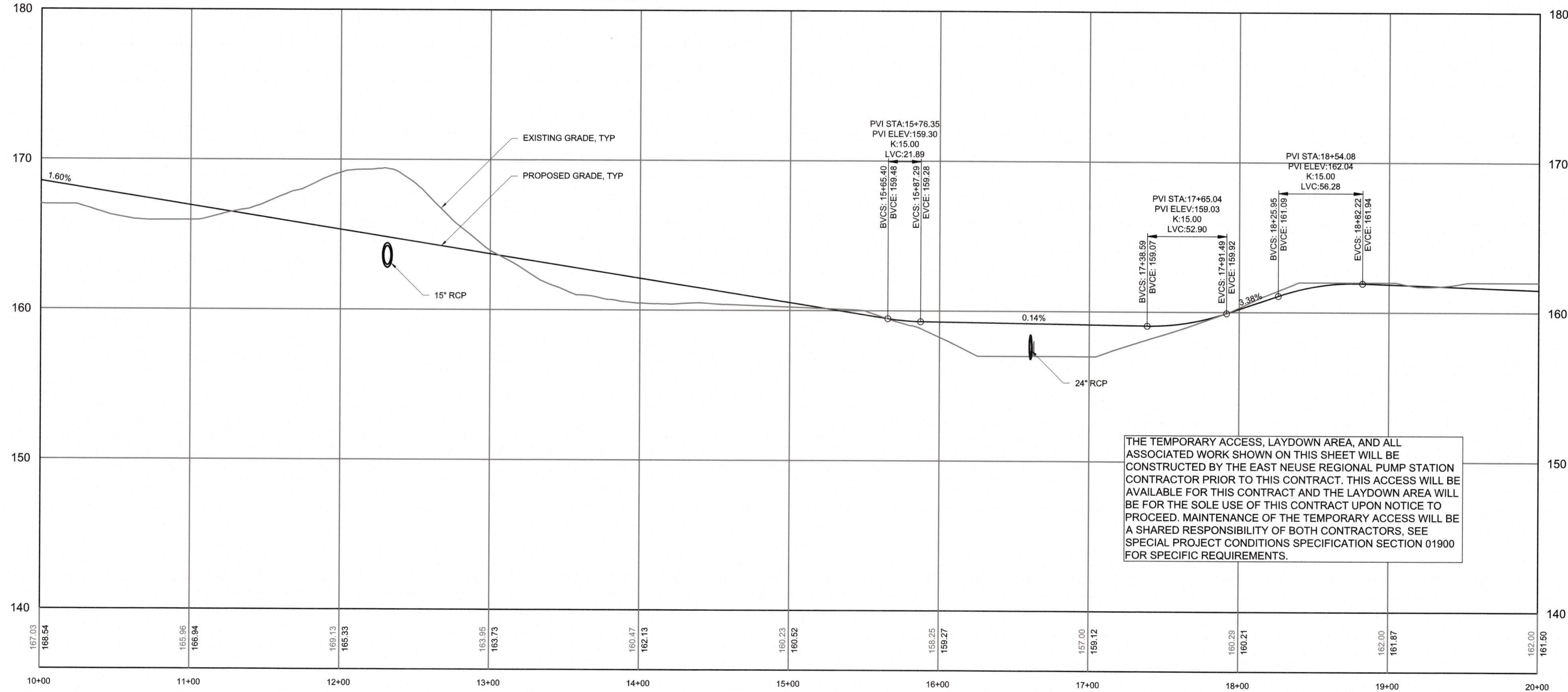
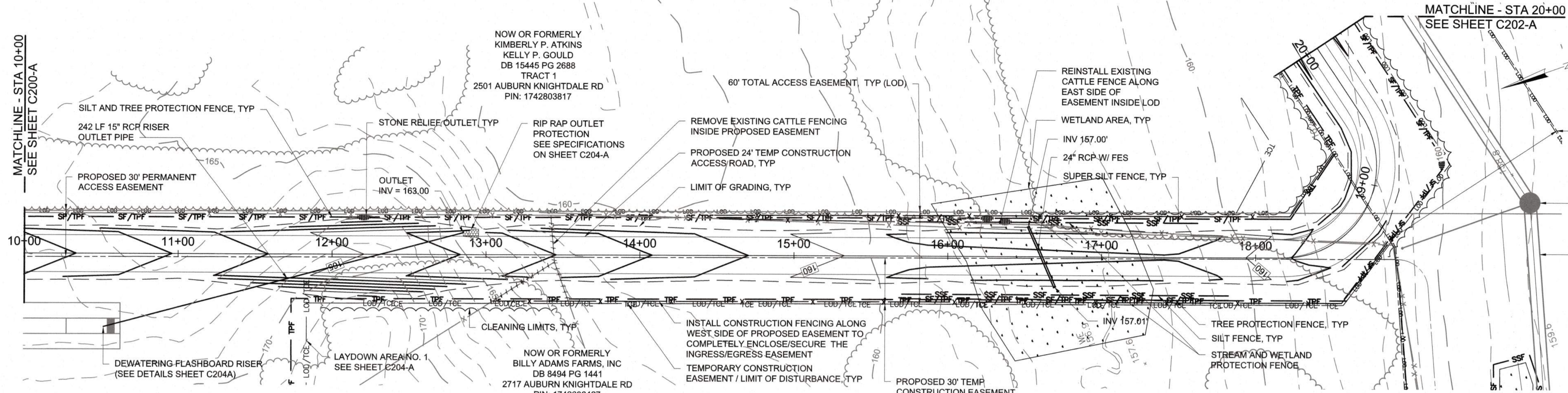
CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
 ACCESS ROAD NO. 1
 (AUBURN-KNIGHTDALE ROAD)
 PLAN AND PROFILE
 STA 0+00 TO 10+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C200-A

PLOT DATE: 2020/11/06 5:58:02 PM BY: JET BAILEY
 File: C:\MS0\VA\ENR\PROJECTS\C200 - Sewer By: JET BAILEY Date: 2020/11/05 3:33 PM



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization does not constitute a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval



PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

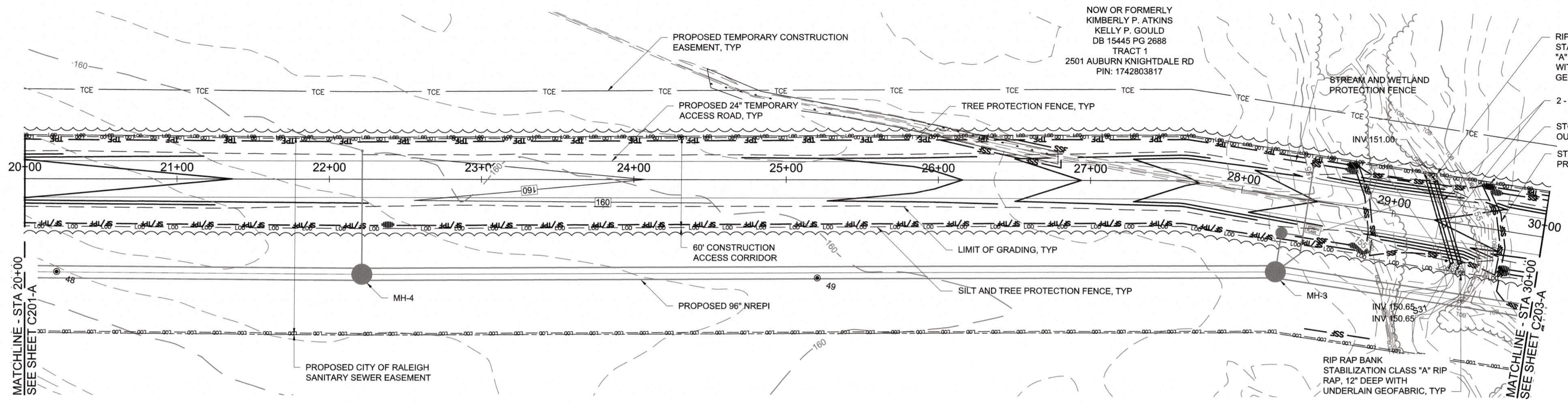
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE

STA 10+00 TO 20+00

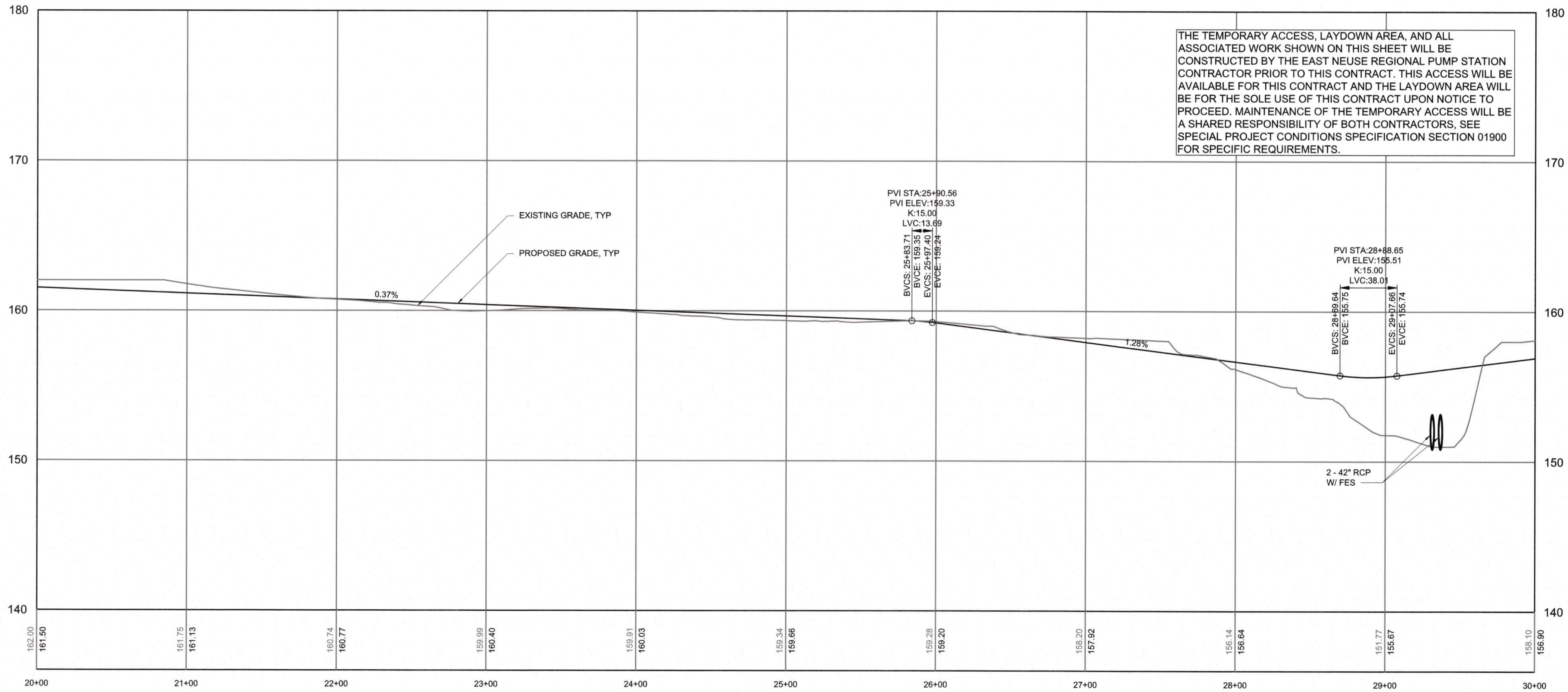
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C201-A

PLOT DATE: 2020/11/06 6:02:43 PM BY: JREY BAILEY
 File: C:\BIM\VAZKEN-PA\WARSHP1\CON_Saved By: JREY BAILEY Save Date: 2020/11/06 3:43 PM



- NOTES:**
1. ALL RCP STORM PIPE SHALL BE A MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND ANY NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.

PLAN
SCALE: 1" = 40'



THE TEMPORARY ACCESS, LAYDOWN AREA, AND ALL ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE CONSTRUCTED BY THE EAST NEUSE REGIONAL PUMP STATION CONTRACTOR PRIOR TO THIS CONTRACT. THIS ACCESS WILL BE AVAILABLE FOR THIS CONTRACT AND THE LAYDOWN AREA WILL BE FOR THE SOLE USE OF THIS CONTRACT UPON NOTICE TO PROCEED. MAINTENANCE OF THE TEMPORARY ACCESS WILL BE A SHARED RESPONSIBILITY OF BOTH CONTRACTORS, SEE SPECIAL PROJECT CONDITIONS SPECIFICATION SECTION 01900 FOR SPECIFIC REQUIREMENTS.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. The specific authorizations below do not permit, nor shall it be construed to permit, any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____

PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



FINAL DESIGN

PLOT DATE: 2020/11/06 6:07:33 PM BY: JOEY BAILEY
 File: C:\BAYVIEW\ENR\PROJECTS\2020\11\06\2020_11_06_11_06_33_33.dwg Saved By: JOEY BAILEY Date: 2020/11/06 3:01 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	XXX
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

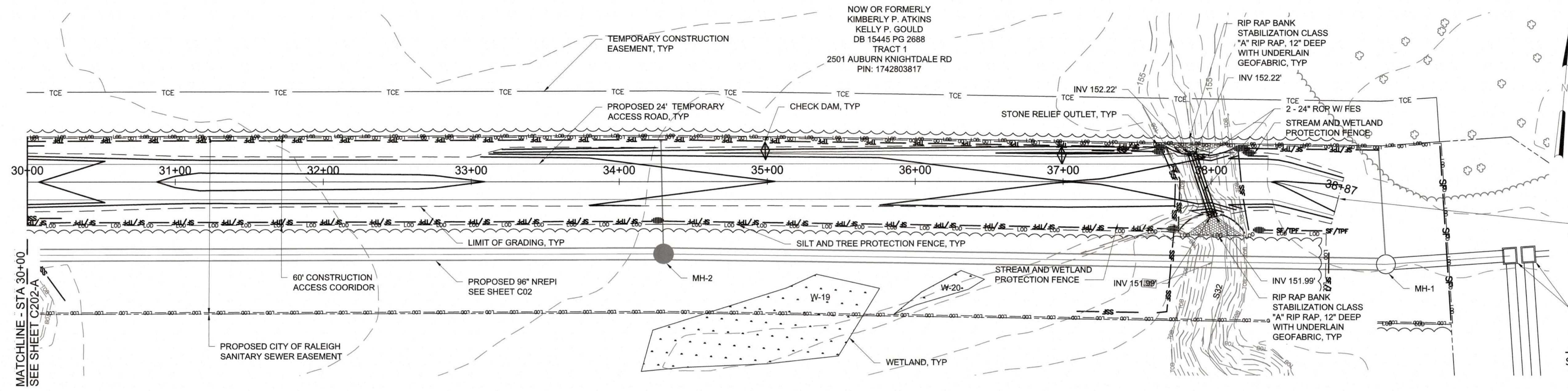
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 20+00 TO 30+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C202-A

NOW OR FORMERLY
KIMBERLY P. ATKINS
KELLY P. GOULD
DB 15445 PG 2688
TRACT 1
2501 AUBURN KNIGHTDALE RD
PIN: 1742803817

- NOTES:**
1. ALL RCP STORM PIPE SHALL BE A MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND ANY NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.

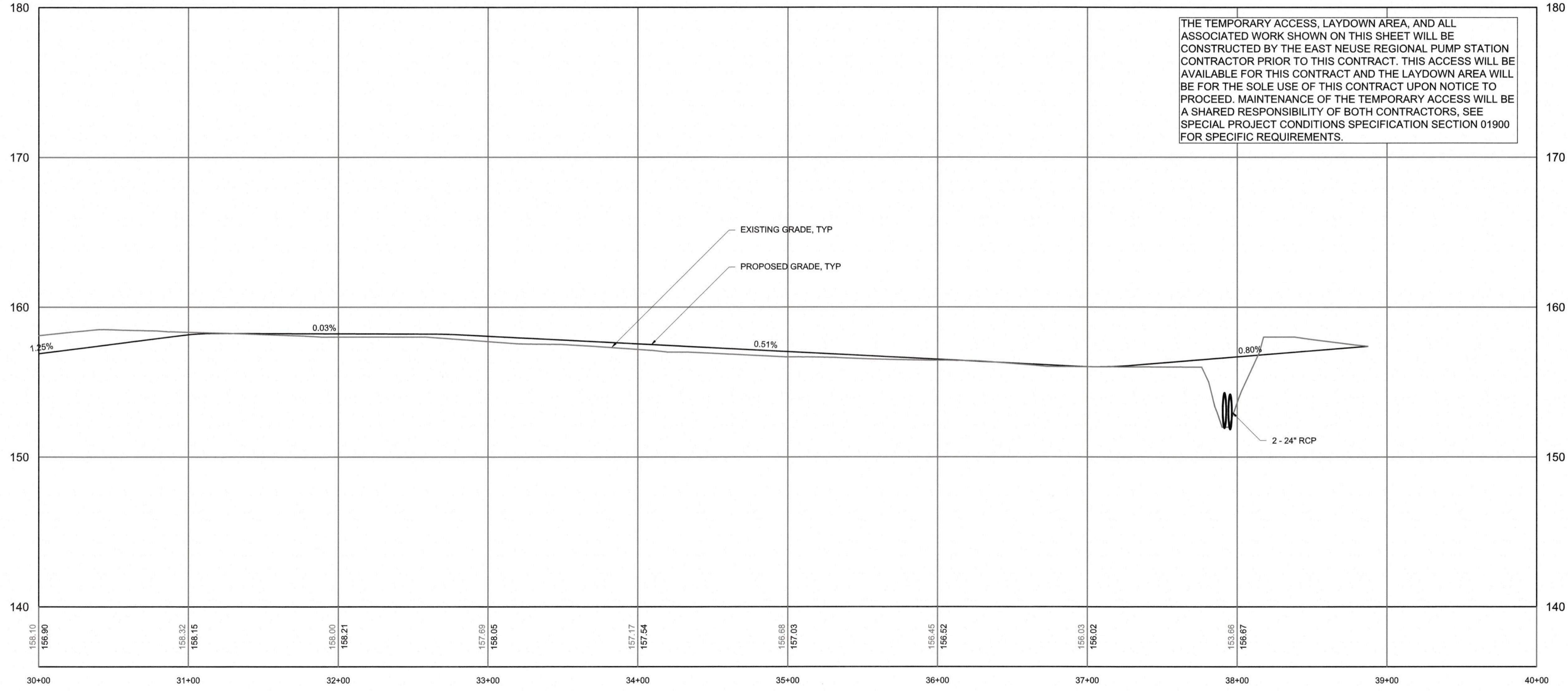


END ACCESS ROAD
SEE CDM EAST NEUSE REGIONAL
PUMP STATION DRAWINGS

JUNCTION BOXES, TYP
(BY OTHERS)

PLAN
SCALE: 1" = 40'

THE TEMPORARY ACCESS, LAYDOWN AREA, AND ALL ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE CONSTRUCTED BY THE EAST NEUSE REGIONAL PUMP STATION CONTRACTOR PRIOR TO THIS CONTRACT. THIS ACCESS WILL BE AVAILABLE FOR THIS CONTRACT AND THE LAYDOWN AREA WILL BE FOR THE SOLE USE OF THIS CONTRACT UPON NOTICE TO PROCEED. MAINTENANCE OF THE TEMPORARY ACCESS WILL BE A SHARED RESPONSIBILITY OF BOTH CONTRACTORS, SEE SPECIAL PROJECT CONDITIONS SPECIFICATION SECTION 01900 FOR SPECIFIC REQUIREMENTS.



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered as approval of compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization herein is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of the electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	XXX
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
0 1/2" 1"	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

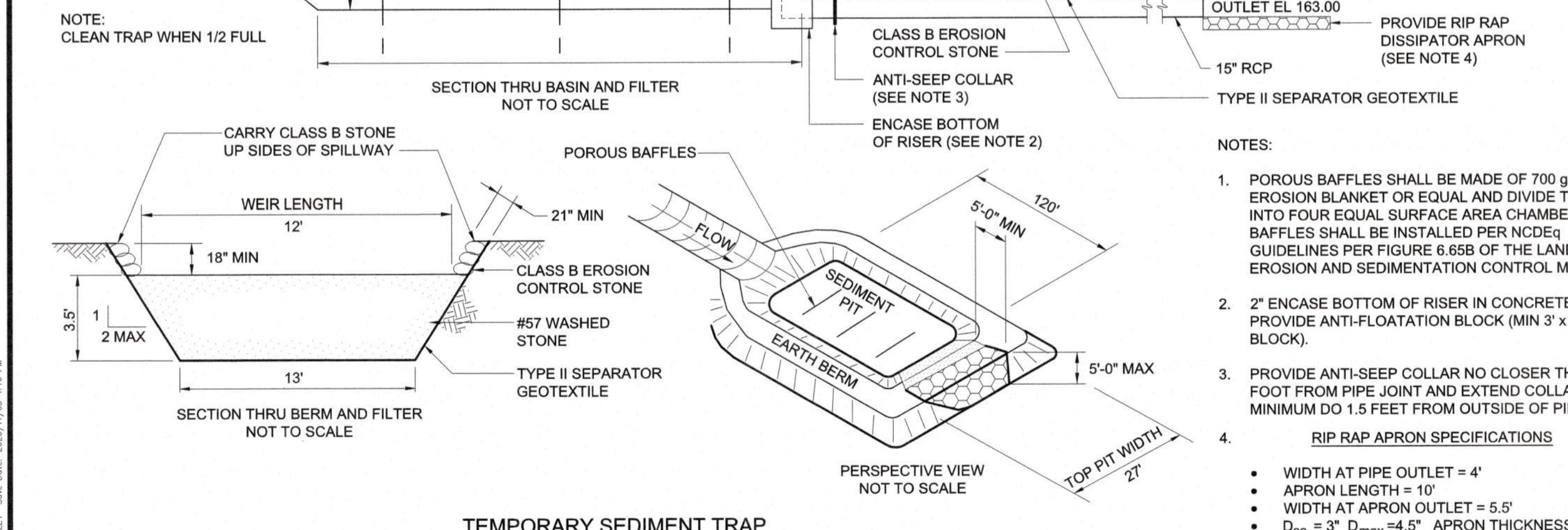
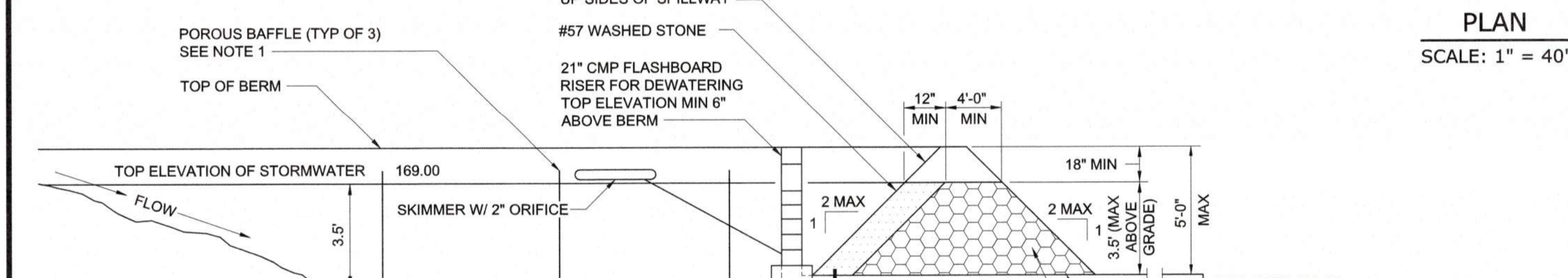
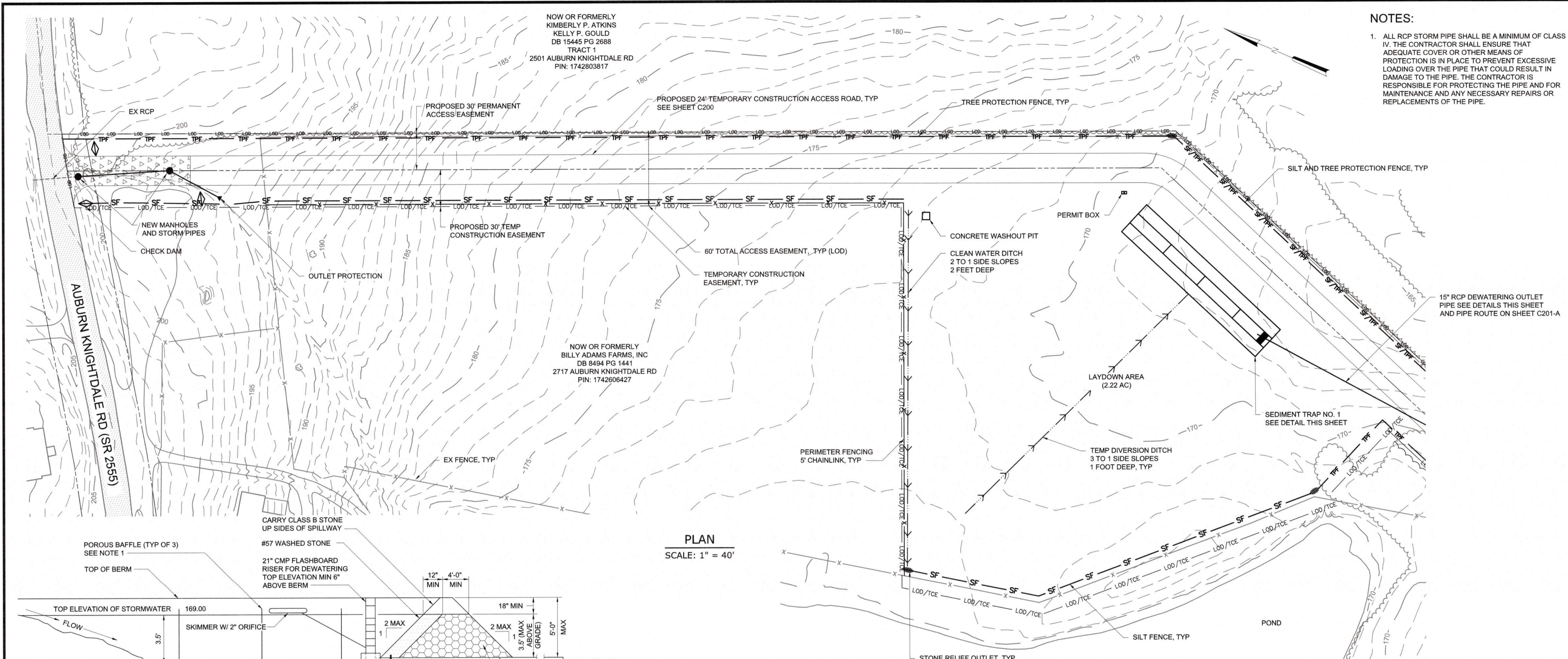
TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 30+00 TO 38+87

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C203-A

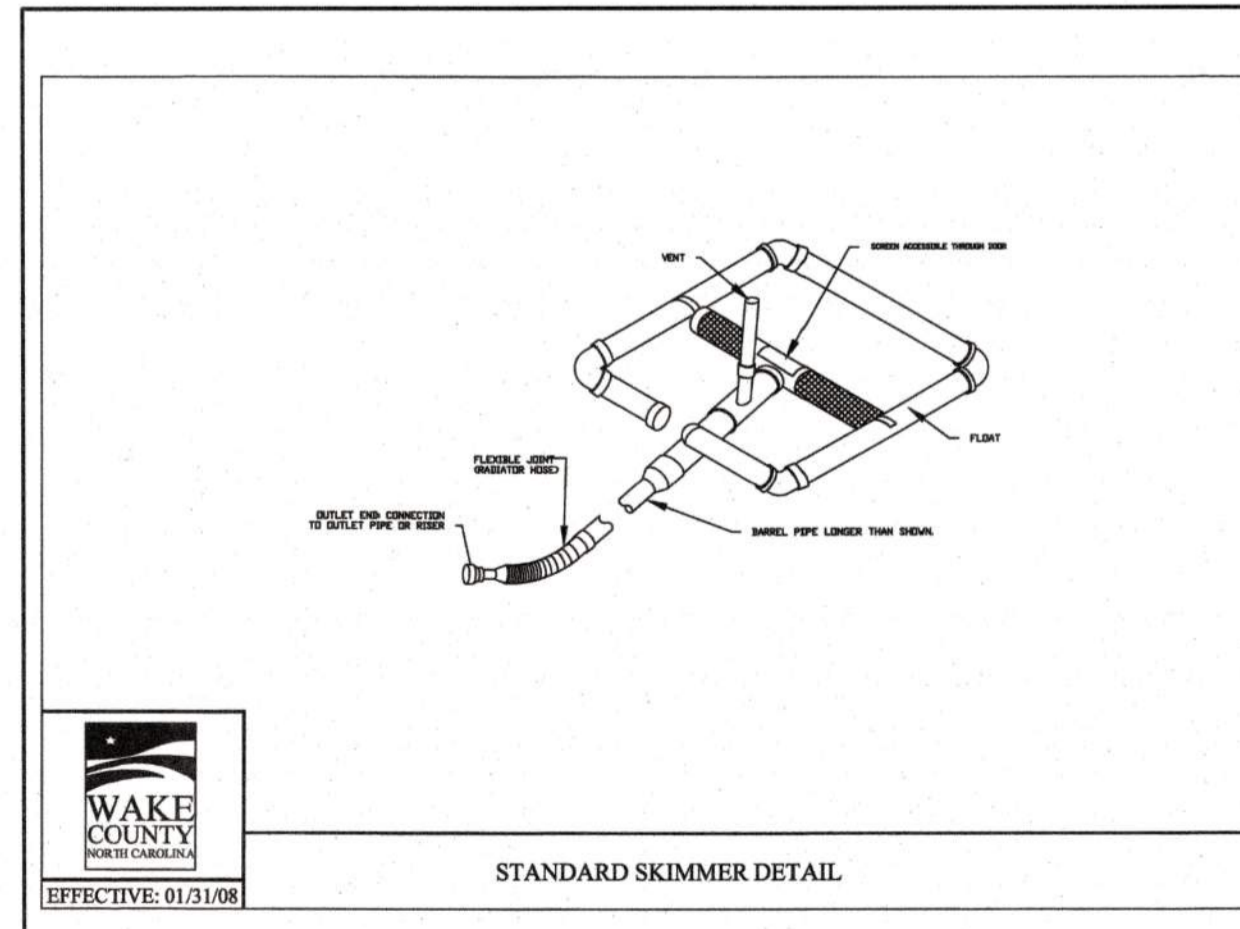
PLOT DATE: 2020/11/06 6:11:21 PM BY: JOEY BAILEY
FILE: C:\MSWHEAT\ENR\PM\MSWHEAT\C203 - Saved By: JOEY BAILEY - Save Date: 2020/11/05 4:01 PM

NOTES:

1. ALL RCP STORM PIPE SHALL BE A MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND ANY NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.



- NOTES:**
1. POROUS BAFFLES SHALL BE MADE OF 700 g/m² COIR EROSION BLANKET OR EQUAL AND DIVIDE THE TRAP INTO FOUR EQUAL SURFACE AREA CHAMBERS. BAFFLES SHALL BE INSTALLED PER NCDEQ GUIDELINES PER FIGURE 6.65B OF THE LAND QUALITY EROSION AND SEDIMENTATION CONTROL MANUAL.
 2. 2\"/>
- RIP RAP APRON SPECIFICATIONS**
- WIDTH AT PIPE OUTLET = 4'
 - APRON LENGTH = 10'
 - WIDTH AT APRON OUTLET = 5.5'
 - D₅₀ = 3\"/>



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signatures below is valid.

City of Raleigh Development Approval

THE TEMPORARY ACCESS, LAYDOWN AREA, AND ALL ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE CONSTRUCTED BY THE EAST NEUSE REGIONAL PUMP STATION CONTRACTOR PRIOR TO THIS CONTRACT. THIS ACCESS WILL BE AVAILABLE FOR THIS CONTRACT AND THE LAYDOWN AREA WILL BE FOR THE SOLE USE OF THIS CONTRACT UPON NOTICE TO PROCEED. MAINTENANCE OF THE TEMPORARY ACCESS WILL BE A SHARED RESPONSIBILITY OF BOTH CONTRACTORS, SEE SPECIAL PROJECT CONDITIONS SPECIFICATION SECTION 01900 FOR SPECIFIC REQUIREMENTS.



FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1\"/>	0 1/2\"/>		
REV	ISSUED FOR	DATE	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

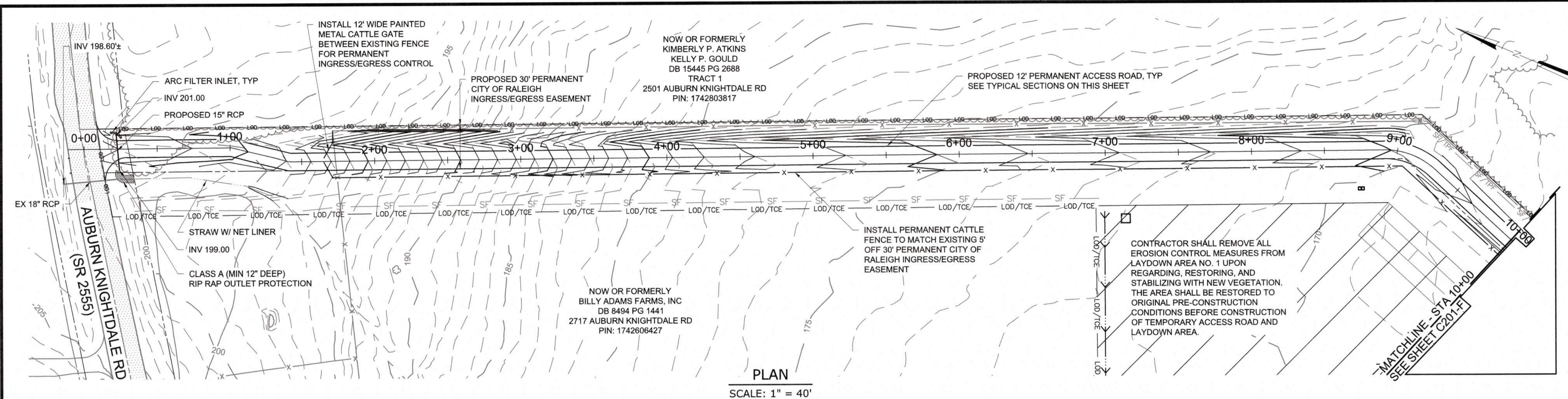
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

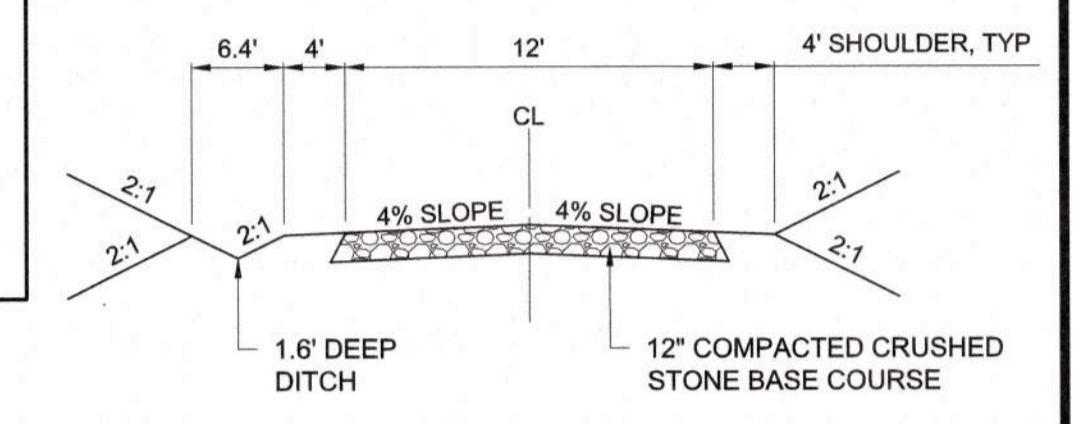
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

LAYDOWN AREA NO. 1

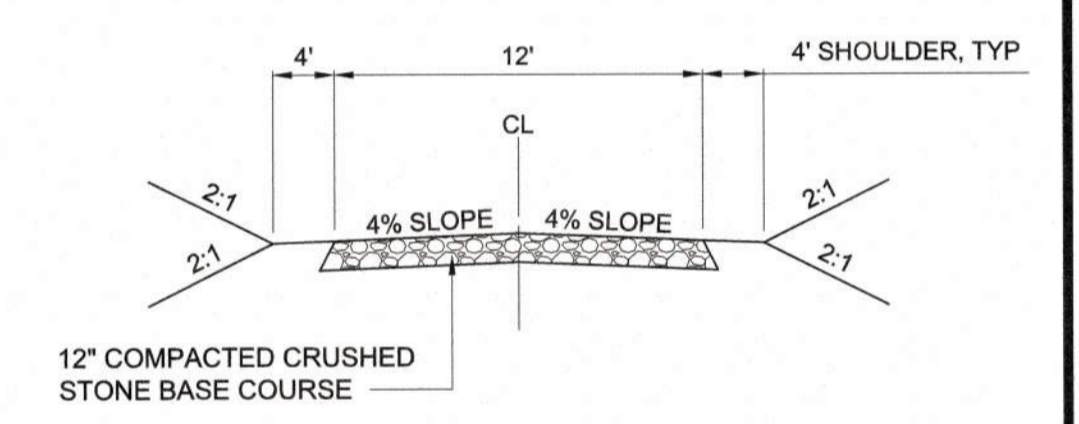
DATE: NOVEMBER 2020
HAZEN NO.: 32426-000
CONTRACT NO.: 1
DRAWING NUMBER: C204-A



- NOTES:**
- CONTRACTOR SHALL INSTALL STONE CHECK DAMS AT 25' INTERVAL IN THE BOTTOM OF PROPOSED ACCESS ROAD DITCH FROM STA 0+25 TO STA 9+00. CHECK DAMS SHALL BE REMOVED FOLLOWING DITCH STABILIZATION AND COMPLETION OF CONSTRUCTION.
 - CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 1.



**TYPICAL CROSS SECTION
12' ACCESS ROAD
STATION 0+00 TO 9+00
STATION 33+00 TO 37+85**

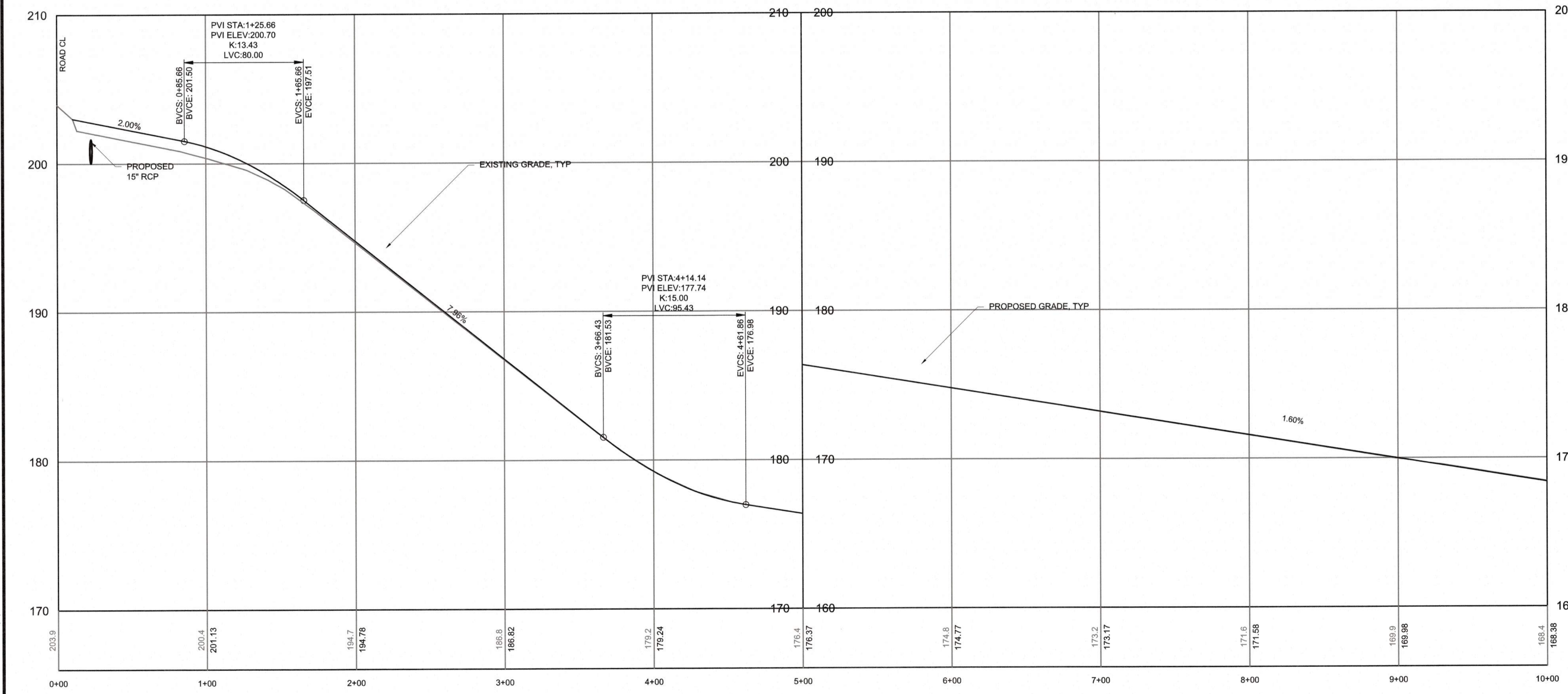


**TYPICAL CROSS SECTION
12' ACCESS ROAD
STATION 9+00 TO 33+00**

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. The initial review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



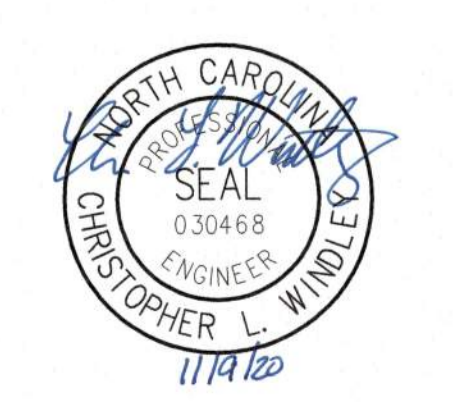
PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



FINAL DESIGN

PLOT DATE: 2020/11/06 6:14:42 PM BY: JREY BAILEY
File: C:\MSW\2020\11\06\1742606427\C200F.dwg Saved By: JREY BAILEY Date: 2020/11/06 3:38 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

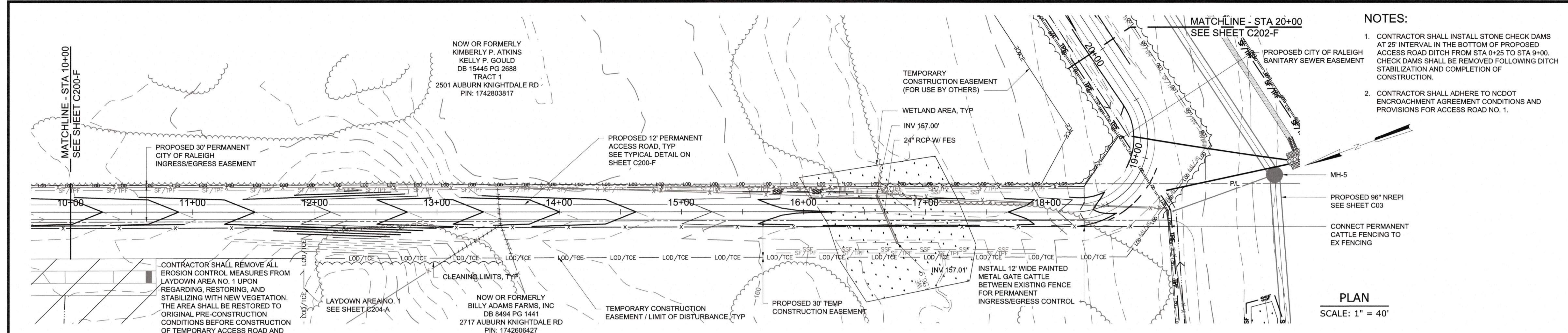
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

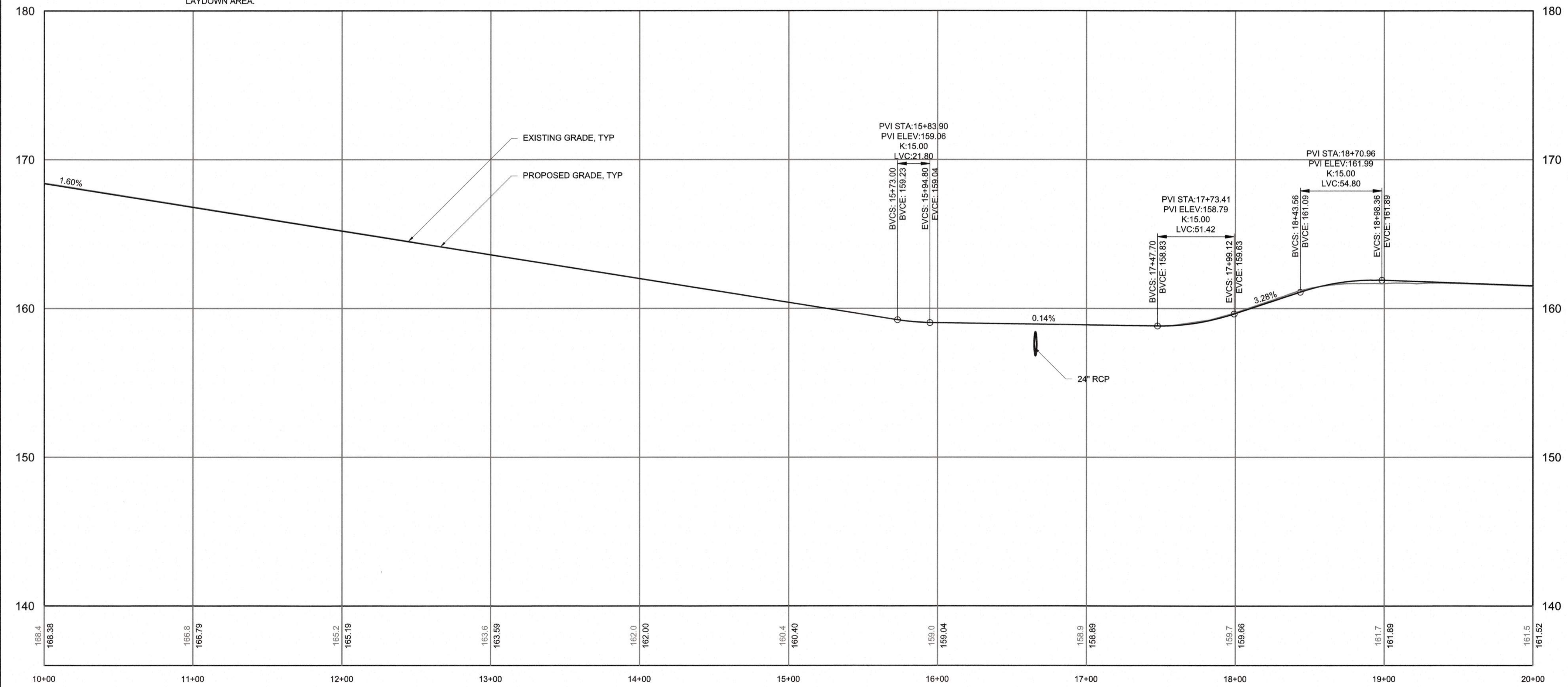
PERMANENT ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 0+00 TO 10+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C200-F



- NOTES:**
- CONTRACTOR SHALL INSTALL STONE CHECK DAMS AT 25' INTERVAL IN THE BOTTOM OF PROPOSED ACCESS ROAD DITCH FROM STA 0+25 TO STA 9+00. CHECK DAMS SHALL BE REMOVED FOLLOWING DITCH STABILIZATION AND COMPLETION OF CONSTRUCTION.
 - CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 1.

PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

FINAL DESIGN

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



PLOT DATE: 2020/11/06 6:18:09 PM BY: JCEY BAILEY
FILE: C:\Users\jbailey\OneDrive\Documents\2020\11\06\3.47 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



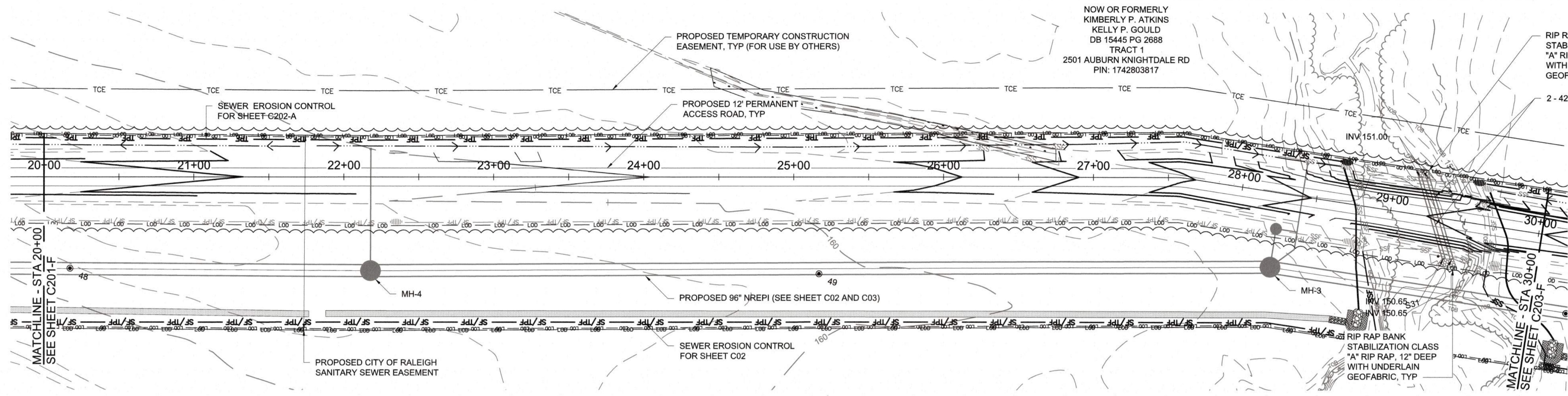
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

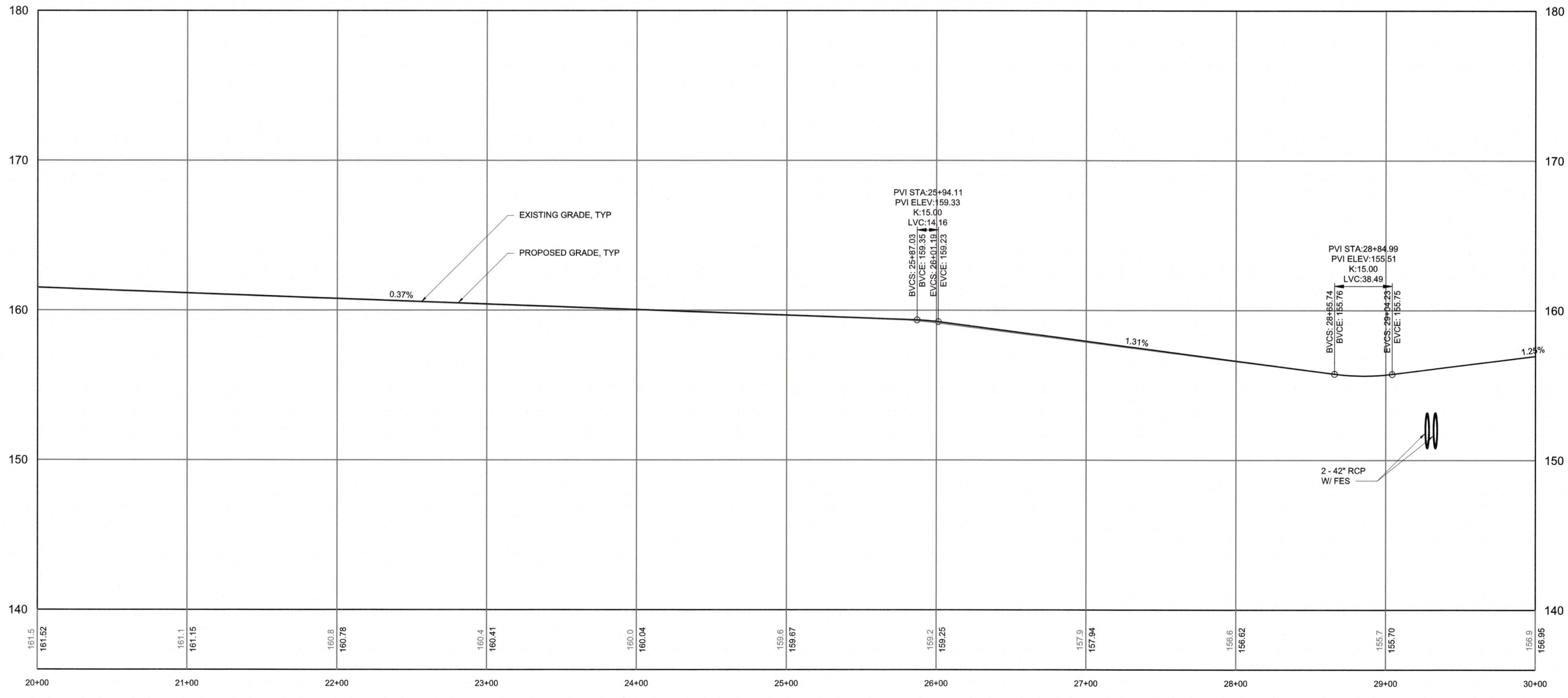
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

PERMANENT ACCESS ROAD
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 10+00 TO 20+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C201-F



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractor are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/09 6:23:36 PM BY: JOEY BAILEY
 FILE: C:\BARVA\2020\11\09\11\09_3157.Plot

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



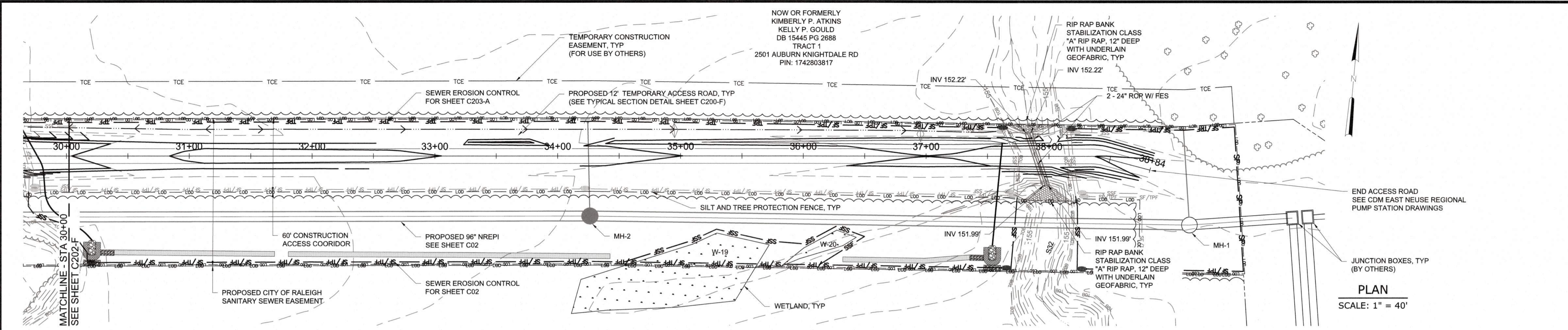
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

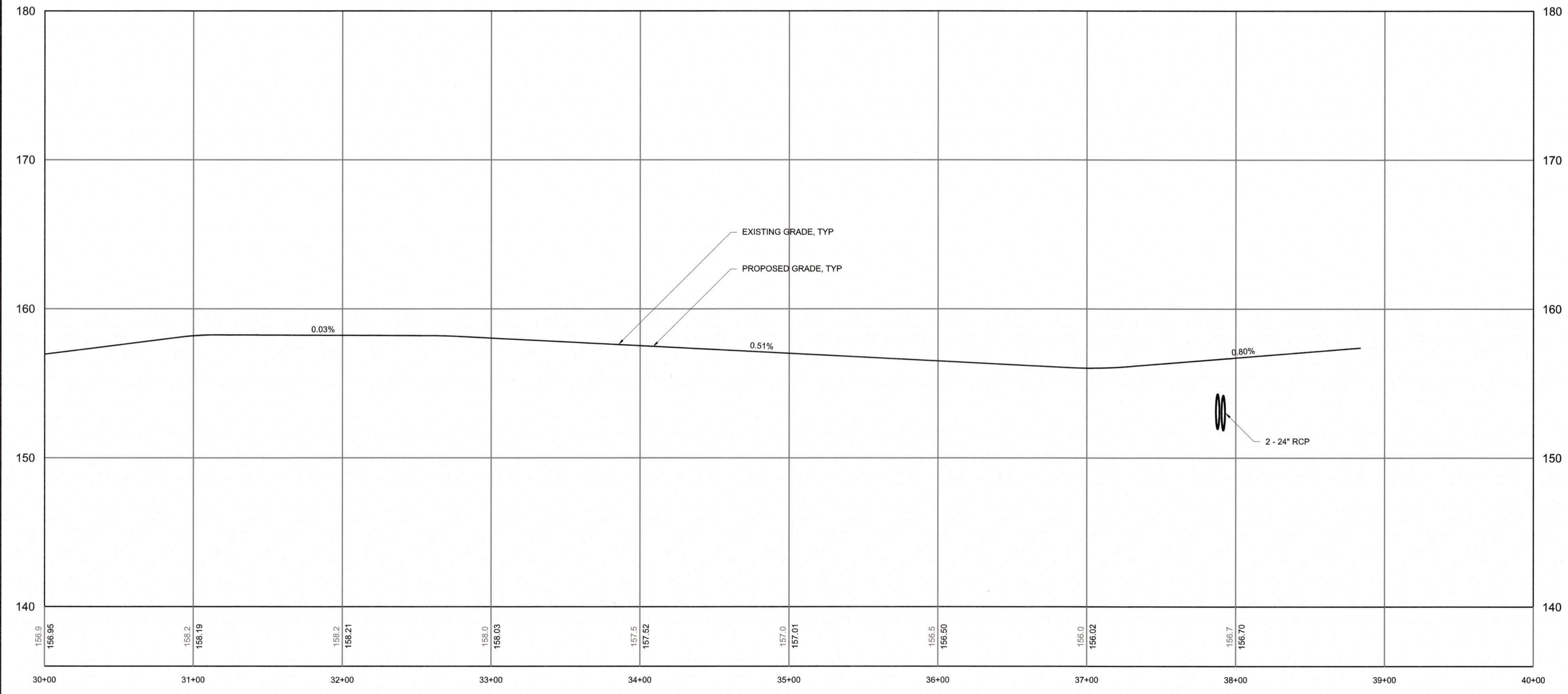
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

PERMANENT ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 20+00 TO 30+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C202-F



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 6:27:24 PM BY: JOEY BAILEY
File: C:\BAYVIEW\PARALLEL\2020\2020\11\06_4105.dwg

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

PERMANENT ACCESS ROAD NO. 1
(AUBURN-KNIGHTDALE ROAD)
PLAN AND PROFILE
STA 30+00 TO 38+87

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C203-F

NOW OR FORMERLY
BILLY S. MYRICK
DB 010317 PG 02494
3137 HODGE RD
PIN: 1742447530

NOW OR FORMERLY
SHIRLEY P. HODGE
3137 HODGE RD
PIN: 1742437356

LAYDOWN AREA NO. 2
(2.18 AC)
SEE SHEET C209

NOW OR FORMERLY
BOBBY C. RAYNOR
MARGARET F.
DB 006859 PG 0073
0 HODGE RD
PIN: 1742426350

NOW OR FORMERLY
BILLY S. MYRICK
SHIRLEY M.
DB 010630 PG 01150
3120 HODGE RD
PIN: 1742432614

NOW OR FORMERLY
JUDY ANDERSEN KAMM
REVOCABLE TRUST
DB 012551 PG 01127
HODGE RD
PIN: 1742328228

NOTES:

- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISION FOR ACCESS ROAD NO. 2.
- USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.
- 12" COMPACTED CRUSHED STONE BASE COURSE IN A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
- ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.

TEMPORARY
CONSTRUCTION ENTRANCE
SEE DETAIL SW-20.09

EXISTING PROPERTY LINE, TYP
15' TEMPORARY CONSTRUCTION EASEMENT
SILT FENCE, TYP
SEE DETAIL SW-20.01

PROPOSED 24' TEMPORARY
CONSTRUCTION ACCESS ROAD, TYP
SEE TYPICAL SECTION THIS SHEET

EXISTING PRIVATE ACCESS
TO EXISTING PATH MUST BE MAINTAINED

HODGE RD
(SR 2516)

LEONARD RD
(SR 2516)

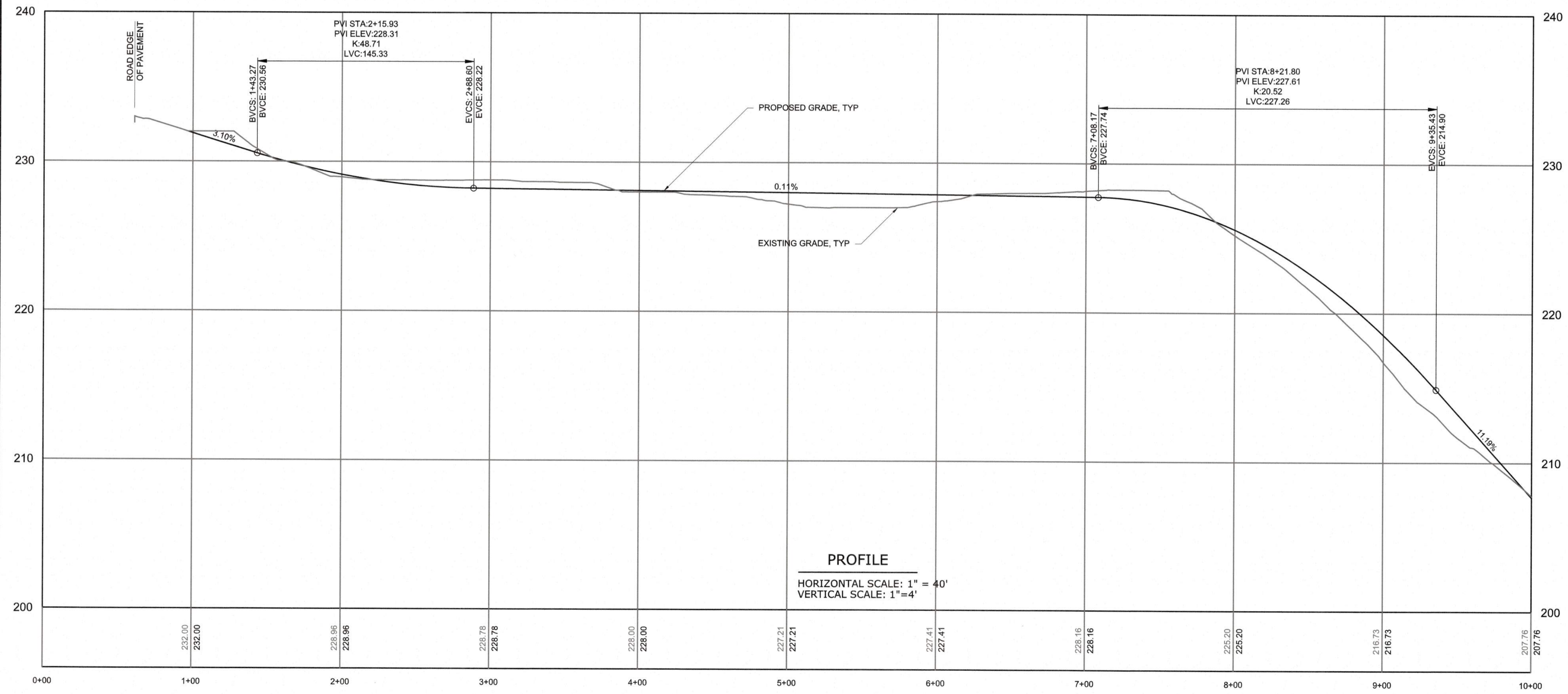
PROPOSED CITY OF RALEIGH
30' PERMANENT INGRESS/EGRESS EASEMENT

CLEARING LIMITS, TYP
STONE RELIEF OUTLET, TYP
SEE DETAIL SW-20.24

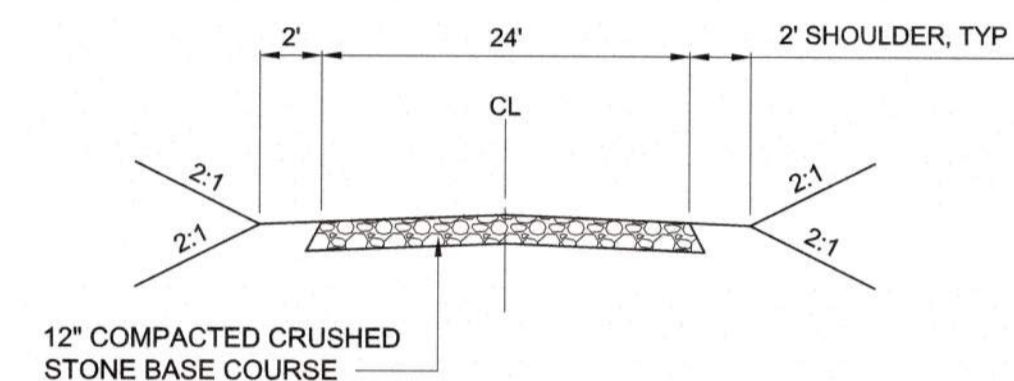
MATCHLINE - STA 10+00
SEE SHEET C206

60' TOTAL ACCESS EASEMENT, TYP (LOD)

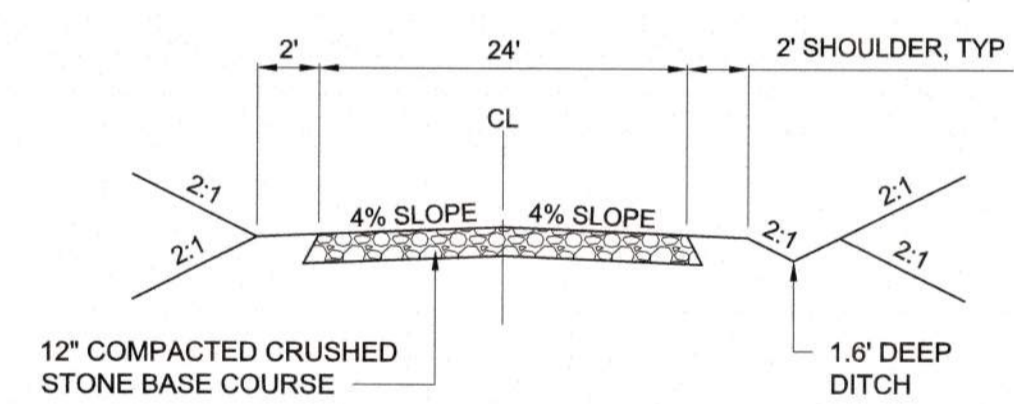
PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



**TYPICAL CROSS SECTION
24' TEMP ACCESS ROAD
STA 0+00 TO 18+00**



**TYPICAL CROSS SECTION
24' TEMP ACCESS ROAD
STA 18+00 TO 29+58**

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization does not constitute a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR
DATE	BY



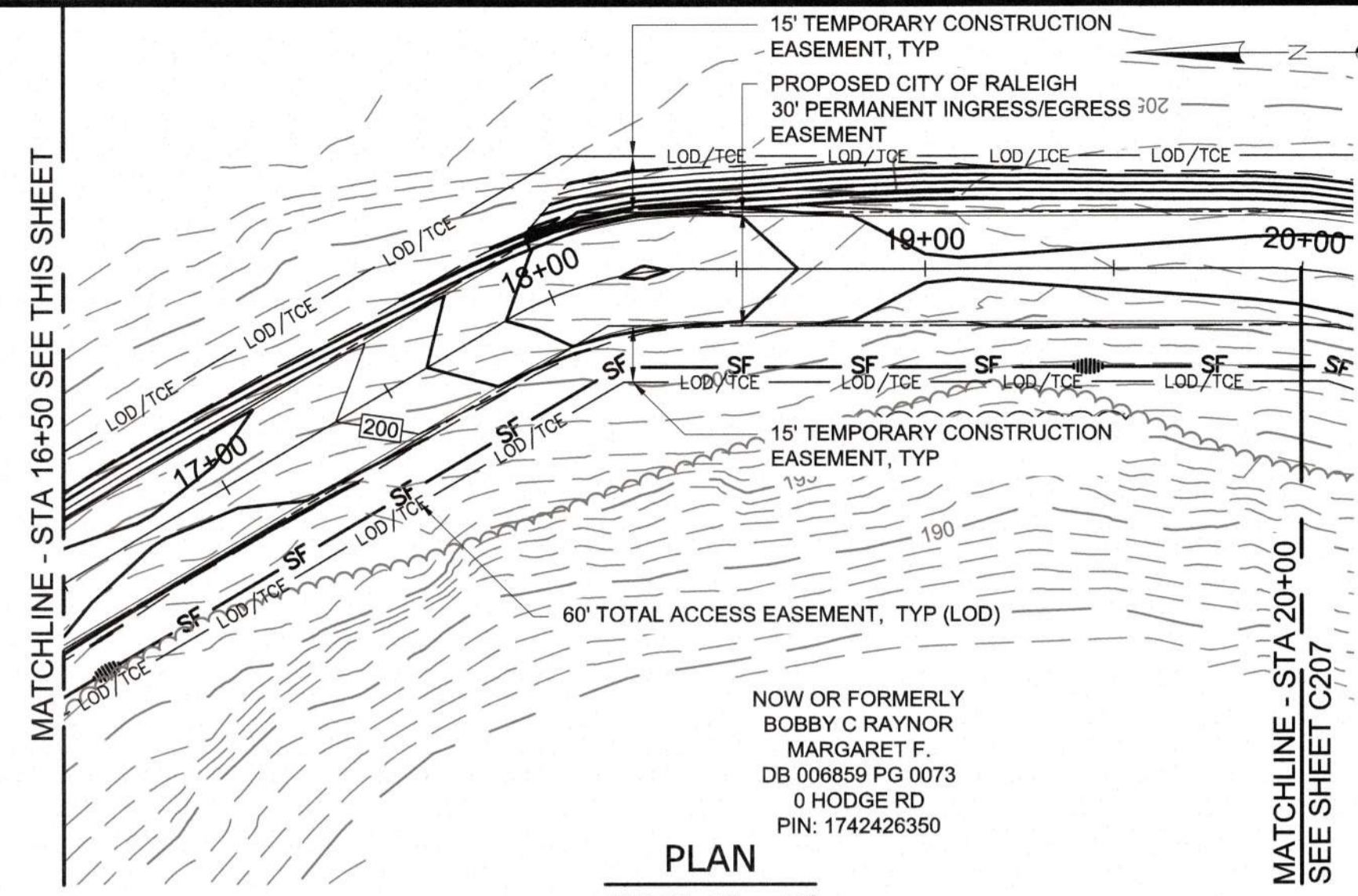
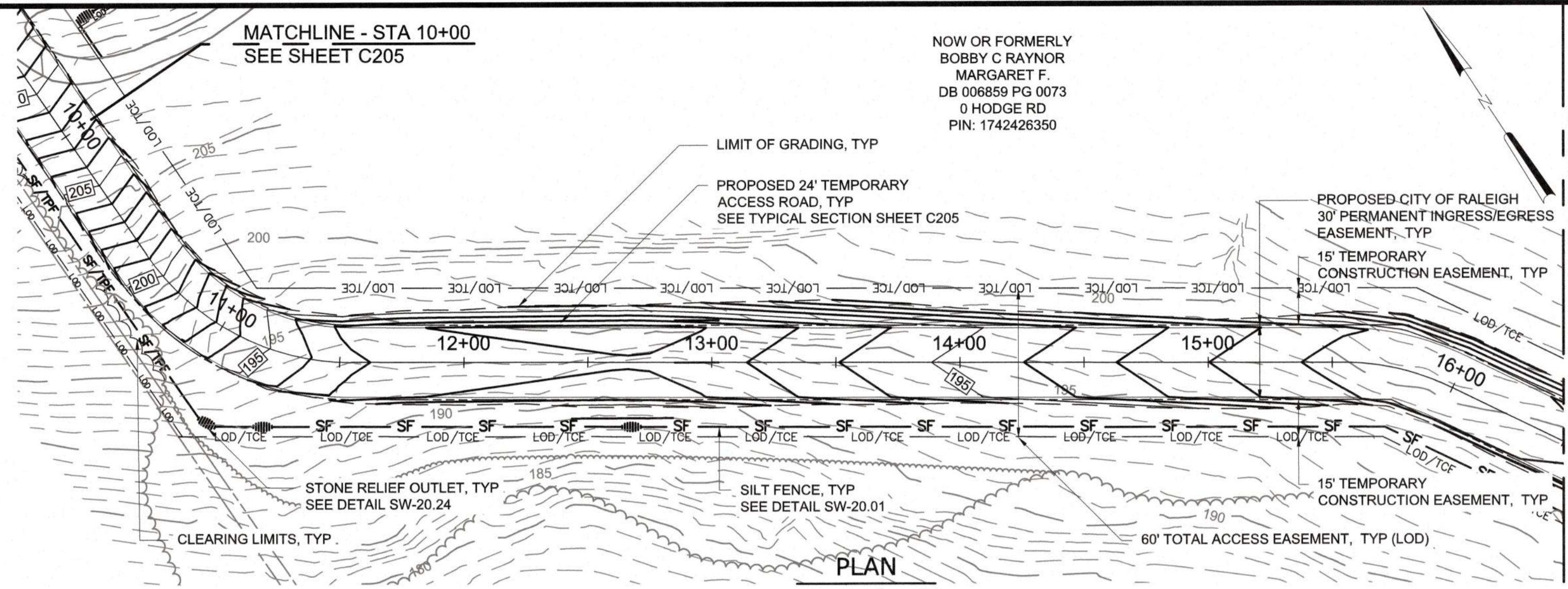
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

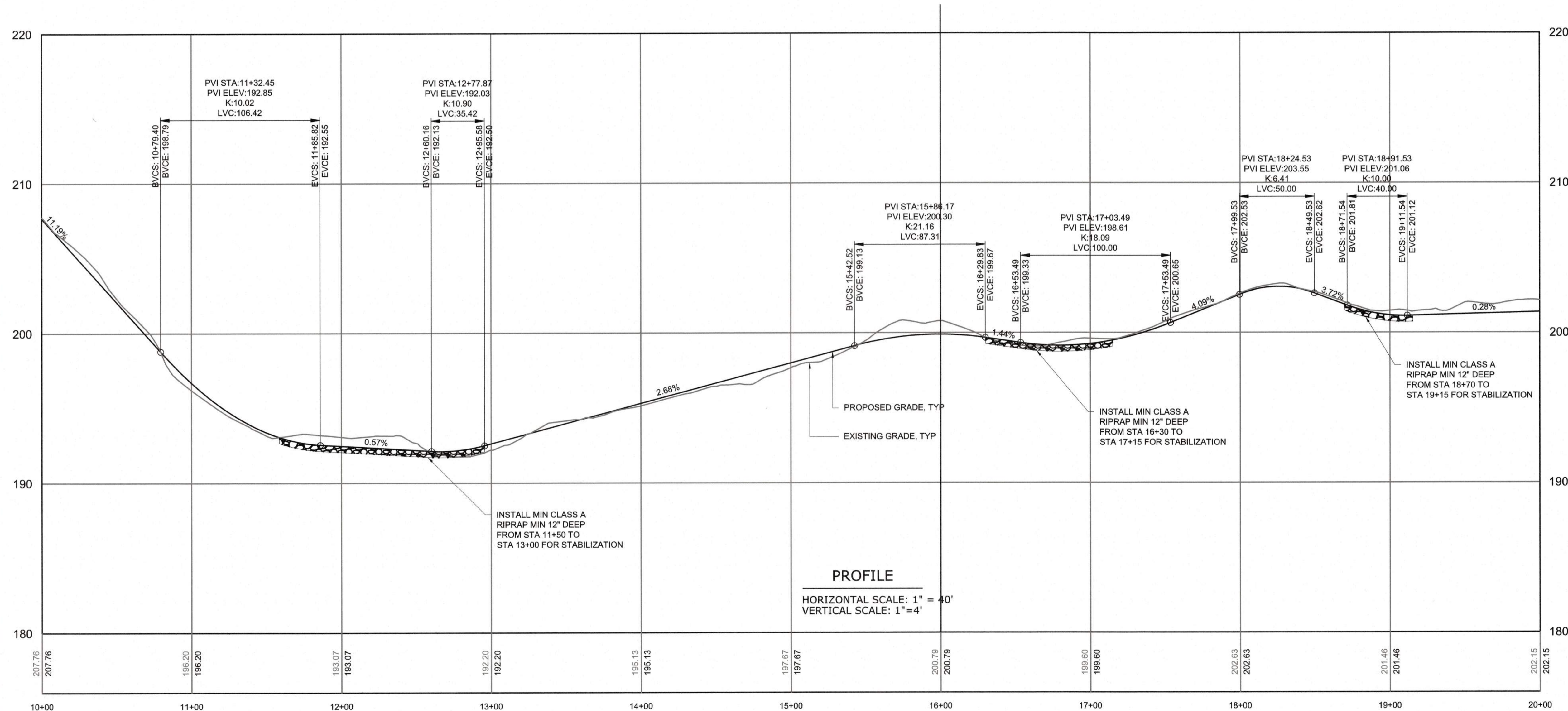
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE
STA 1+00 TO 10+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C205



- NOTES:**
- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISION FOR ACCESS ROAD NO. 2.
 - USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.
 - 12" COMPACTED CRUSHED STONE BASE COURSE IN A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
 - ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	XXX
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

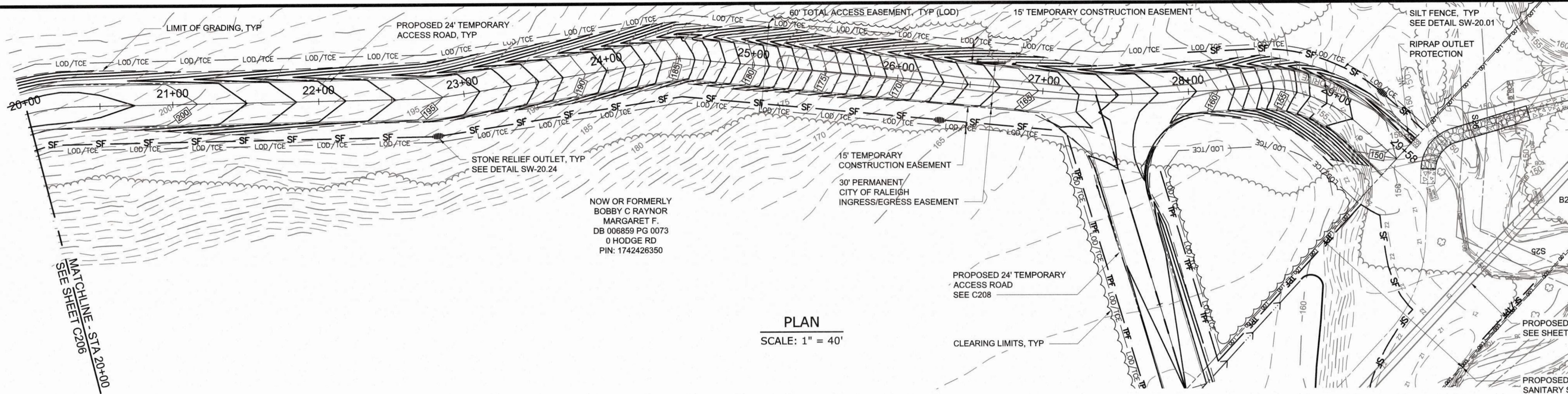
CJS
 Conveyance, PLLC
 320 S. ACADEMY STREET
 CARY, NC 27511
 LICENSE NO. : P-1611

CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT
 NEUSE RIVER EAST
 PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
 ACCESS ROAD NO. 2
 (LEONARD RD & HODGE RD)
 PLAN AND PROFILE
 STA 10+00 TO 20+00

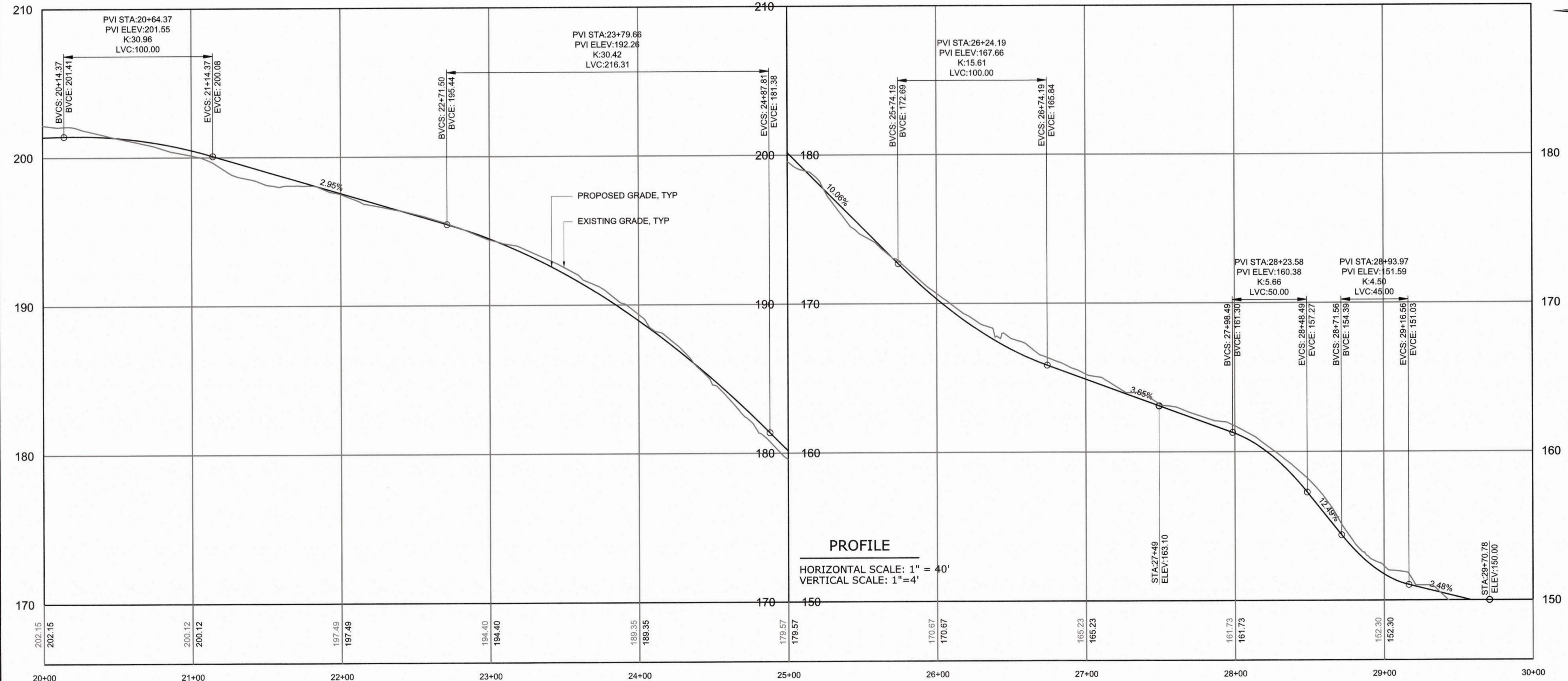
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C206

PLOT DATE: 2020/11/06 4:34:00 PM
 File: C:\WORK\2020\11\05\4231.Plot
 Saved By: ABEY BAILEY
 Save Date: 2020/11/05 4:21 PM



- NOTES:**
- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISION FOR ACCESS ROAD NO. 2.
 - USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.
 - 12" COMPACTED CRUSHED STONE BASE COURSE IN A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
 - ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.

PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization before is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	XXX
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

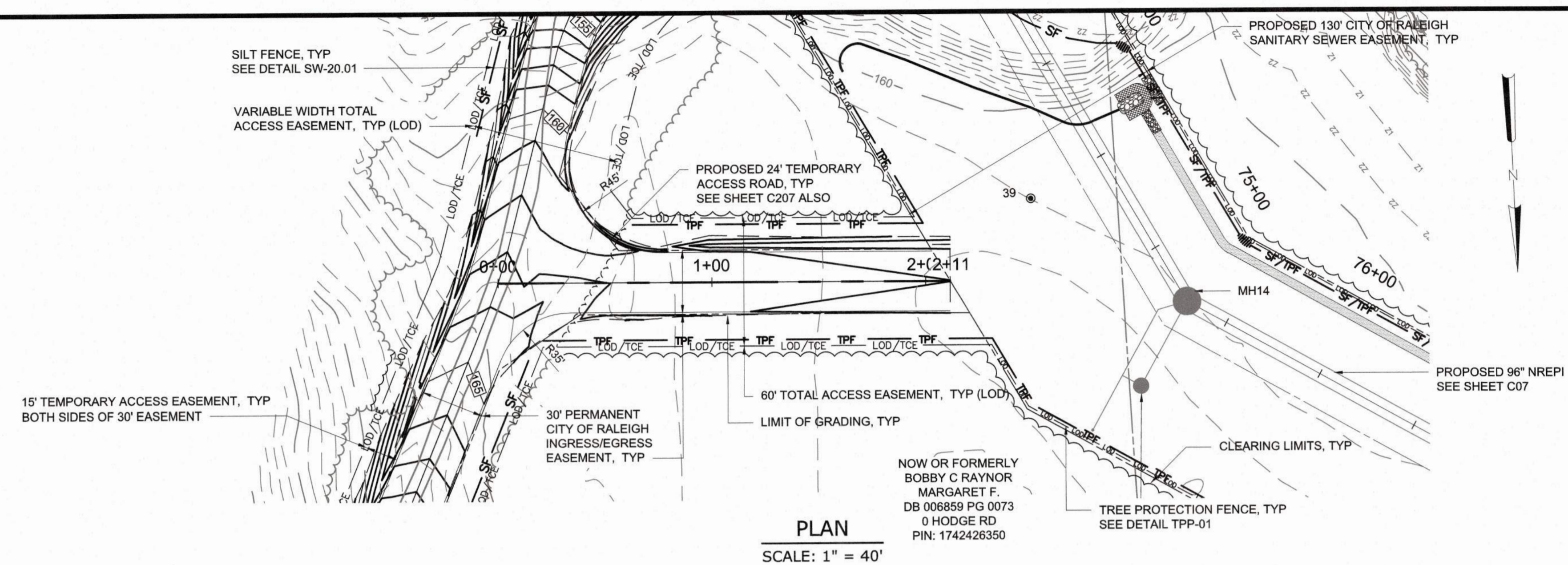
TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE
STA 20+00 TO 29+58

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C207

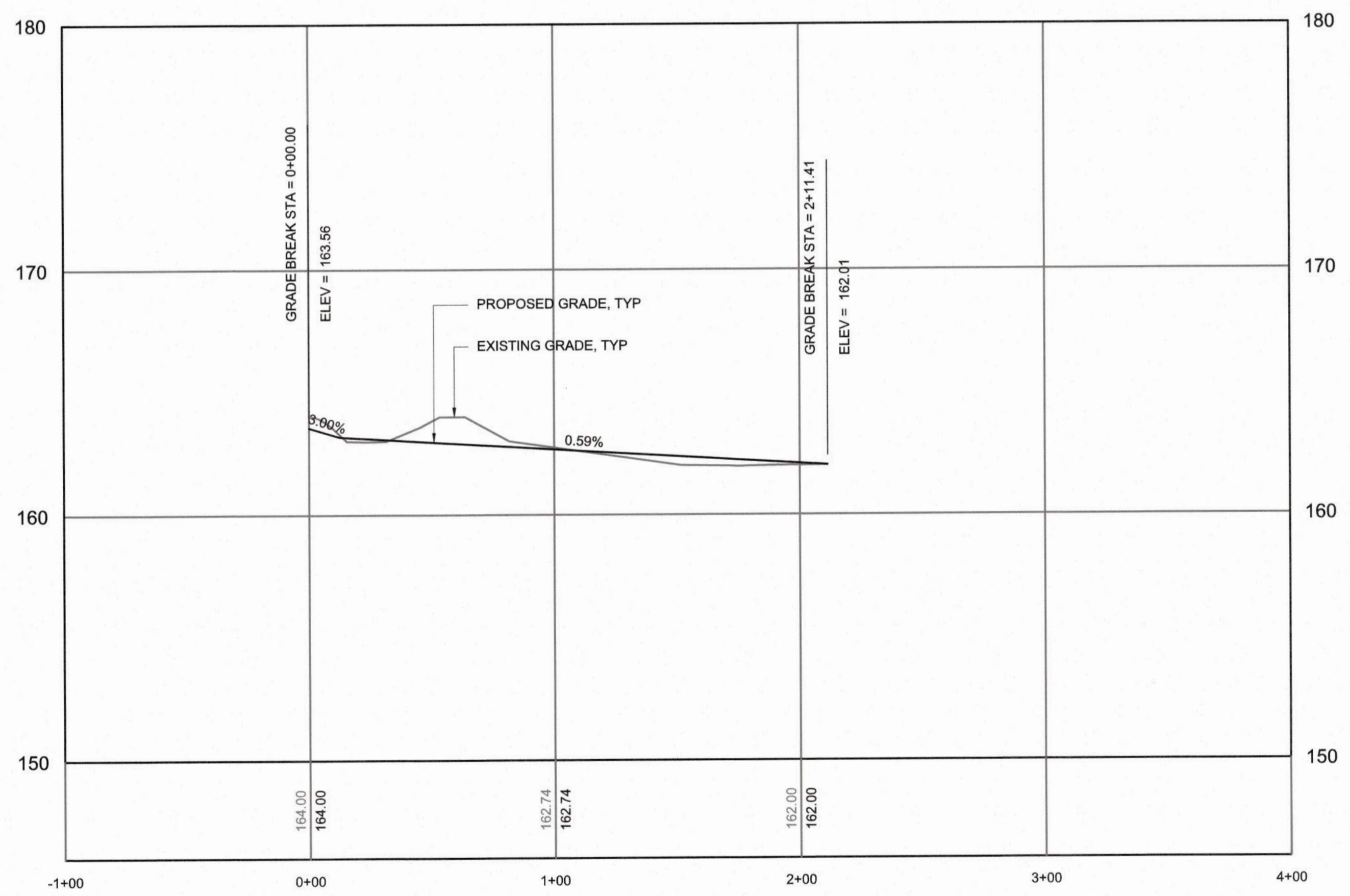
PLOT DATE: 2020/11/06 6:38:25 PM BY: JACE BAILEY
 C:\GIS\PROJECTS\2020\11\06\4_25\PM

NOTES:

1. CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 2.
2. USE SYNTHETIC MATTING LINER IN DITCHES.



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

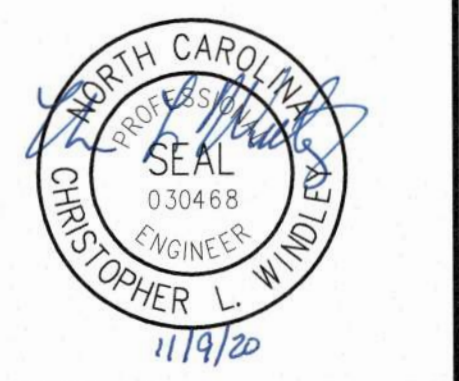
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultant, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/05 4:41:37 PM BY: JOEY BAILEY
 File: C:\Users\jbailey\OneDrive\Documents\C208_Signed By JOEY BAILEY.dwg Save Date: 2020/11/05 4:37 PM

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

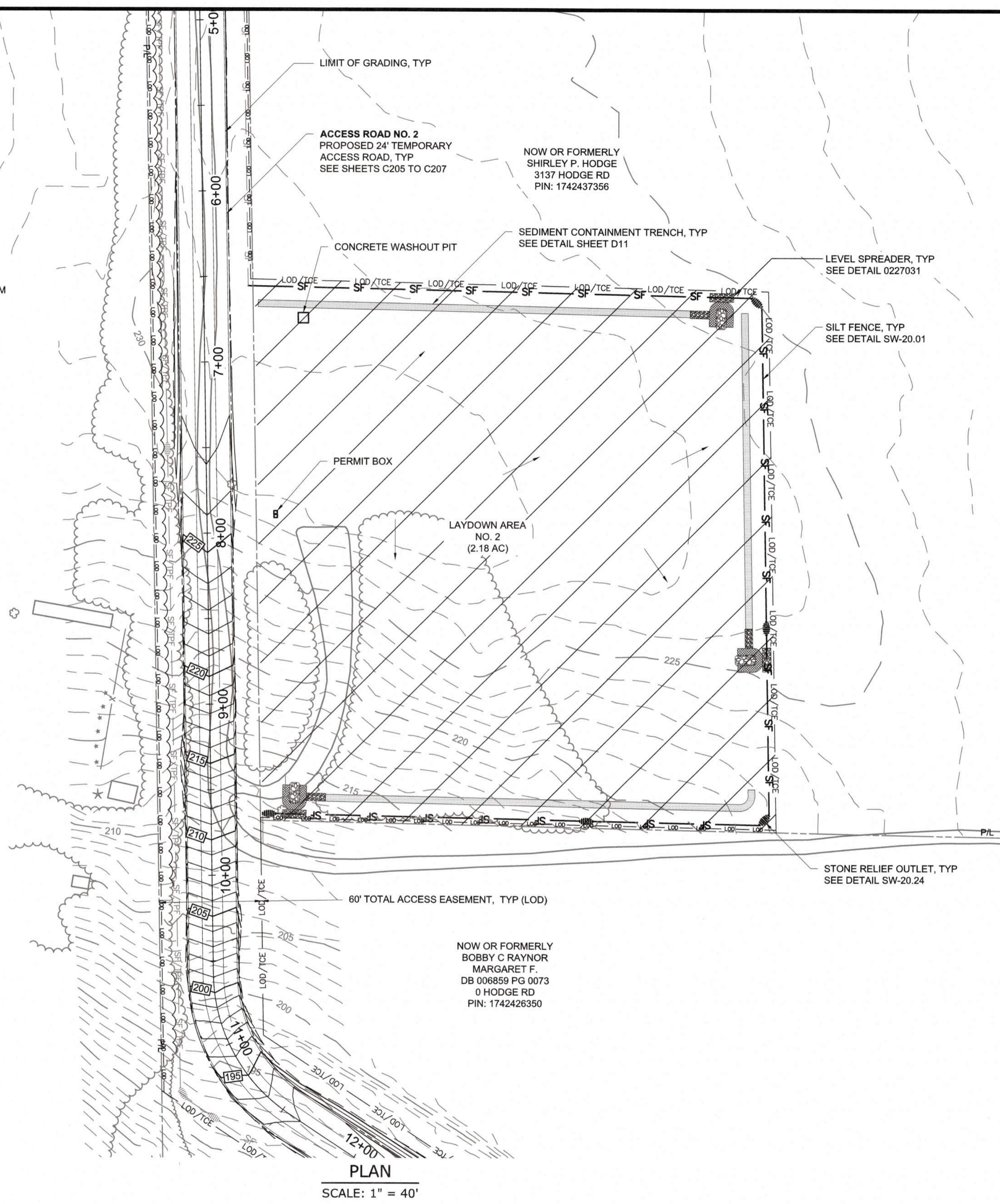
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE

STA 0+00 TO 2+11

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C208



PLAN
SCALE: 1" = 40'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This graphic authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 6:45:44 PM
 PLOT BY: JERRY BAILEY
 FILE: C:\WORK\HAZEN-SAWYER\PROJECTS\2020\11\06\1106_4_45.PLT

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
REV	ISSUED FOR	DATE	BY



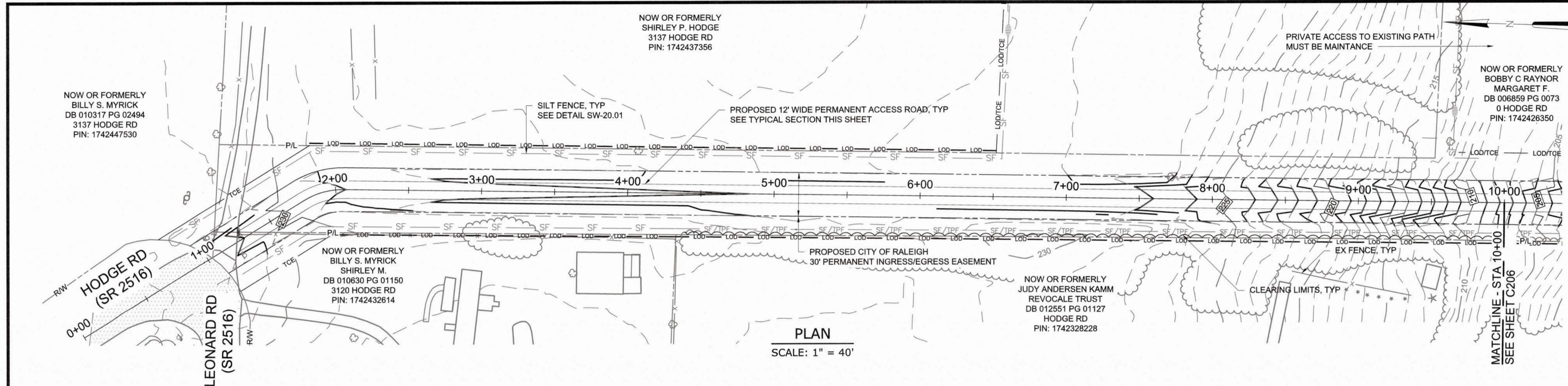
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

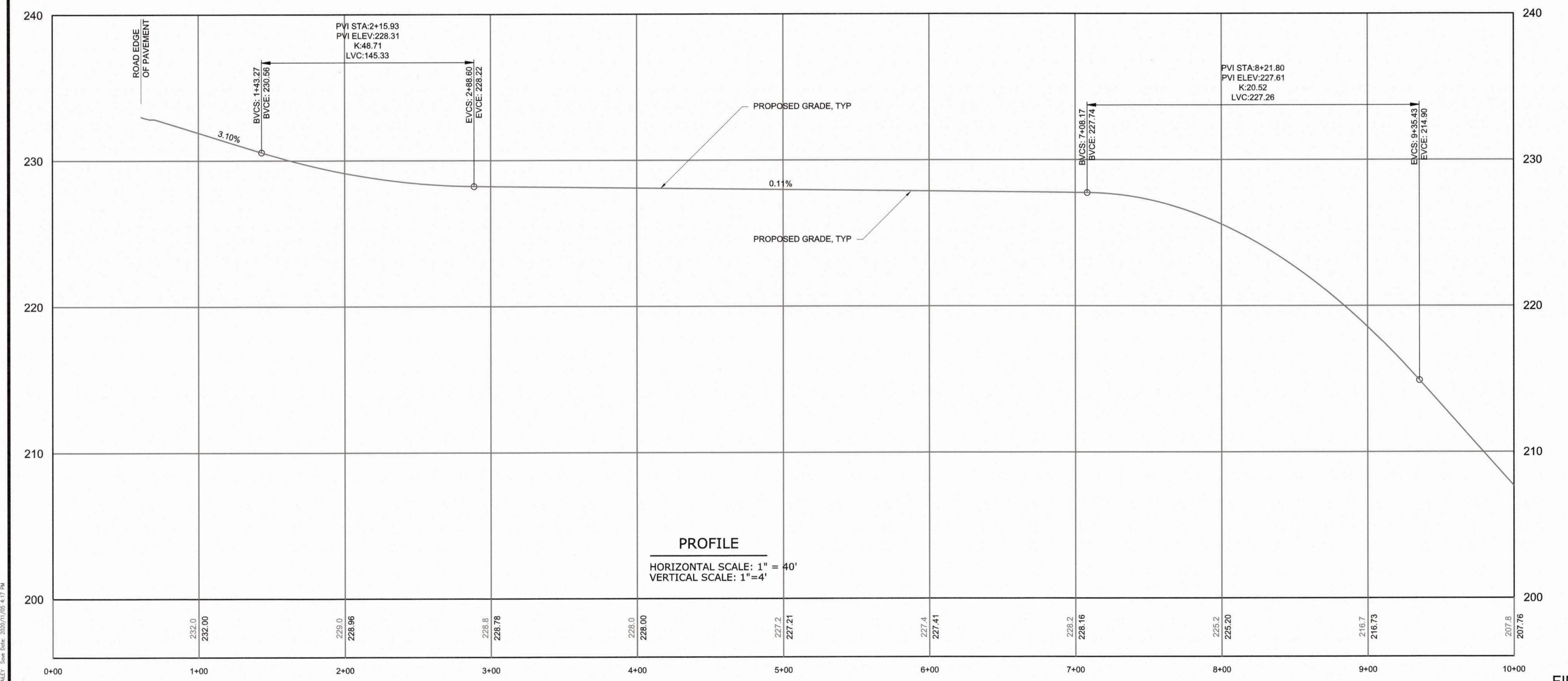
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

(LEONARD RD & HODGE RD)
LAYDOWN AREA NO. 2

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C209



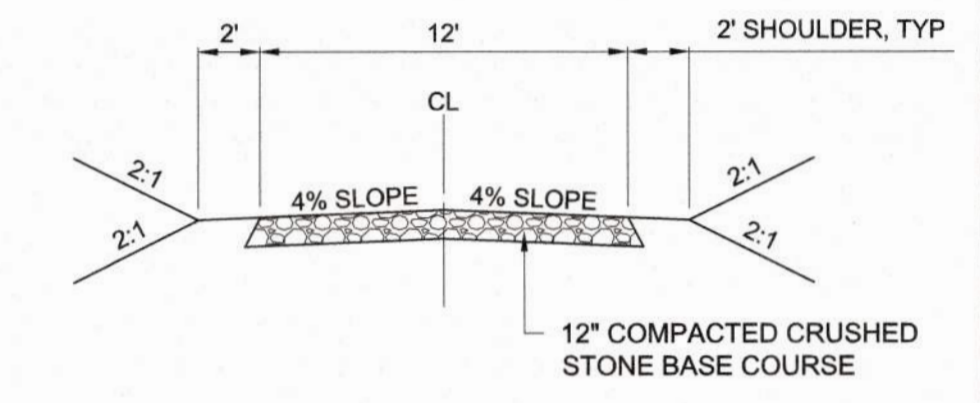
PLAN
SCALE: 1" = 40'



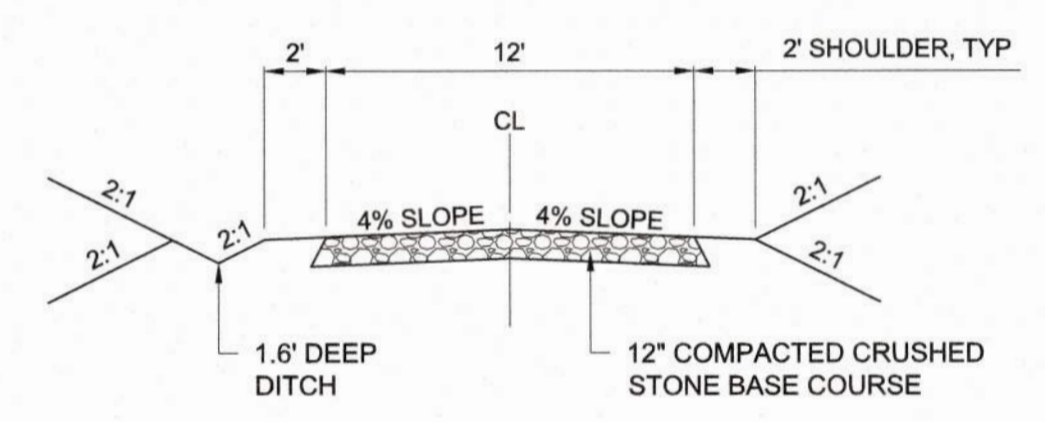
PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

NOTES:

- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISION FOR ACCESS ROAD NO. 2.
- USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.
- 12" COMPACTED CRUSHED STONE BASE COURSE IN A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
- ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.



TYPICAL CROSS SECTION
12' ACCESS ROAD
STA 0+00 TO 18+00



TYPICAL CROSS SECTION
12' ACCESS ROAD
STA 18+00 TO 29+58

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval



FINAL DESIGN

PROJECT ENGINEER:	T. TANT		
DESIGNED BY:	C. WINDLEY		
DRAWN BY:	E. NG		
CHECKED BY:	T. TANT		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
REV	ISSUED FOR	DATE	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

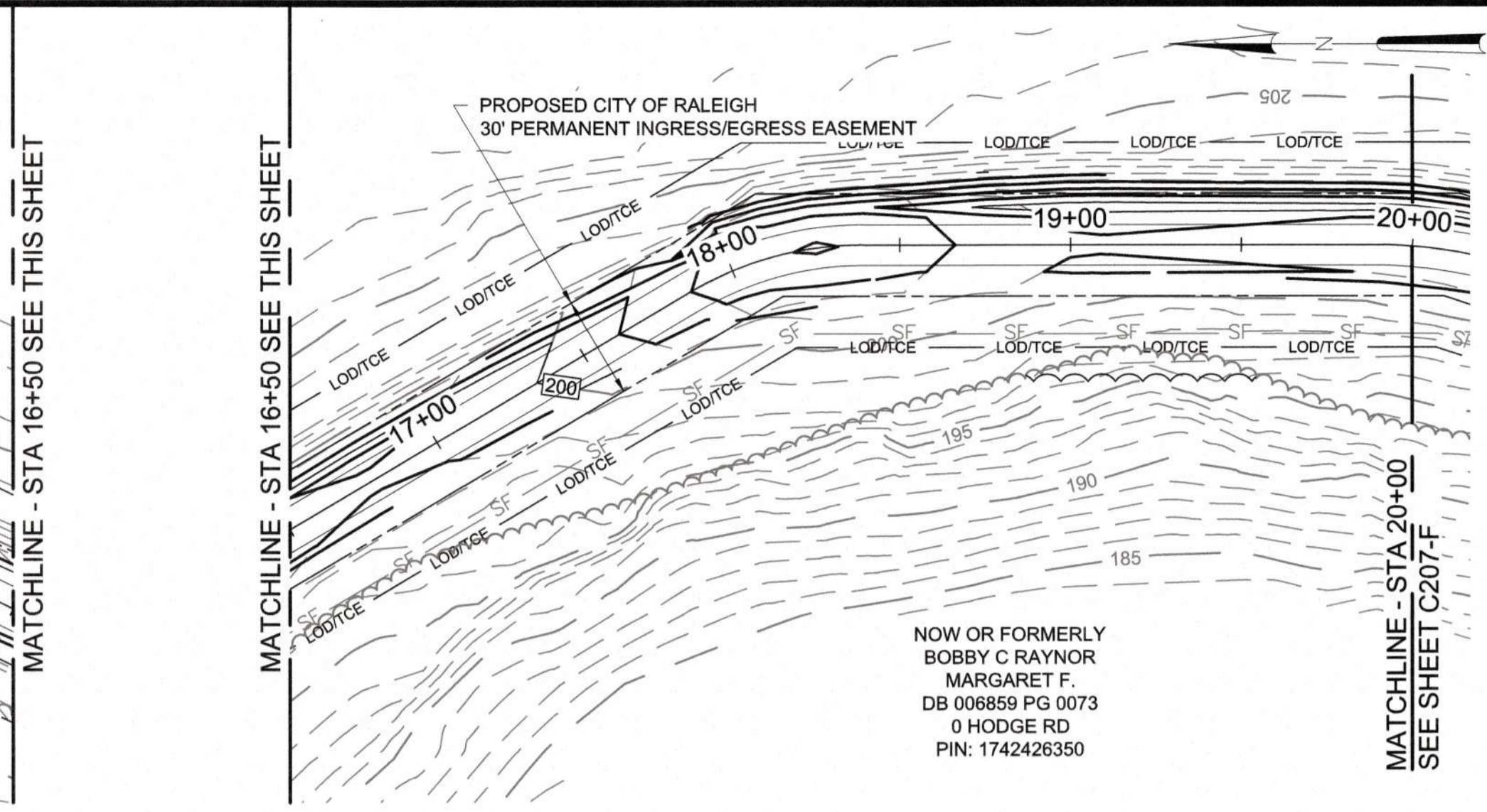
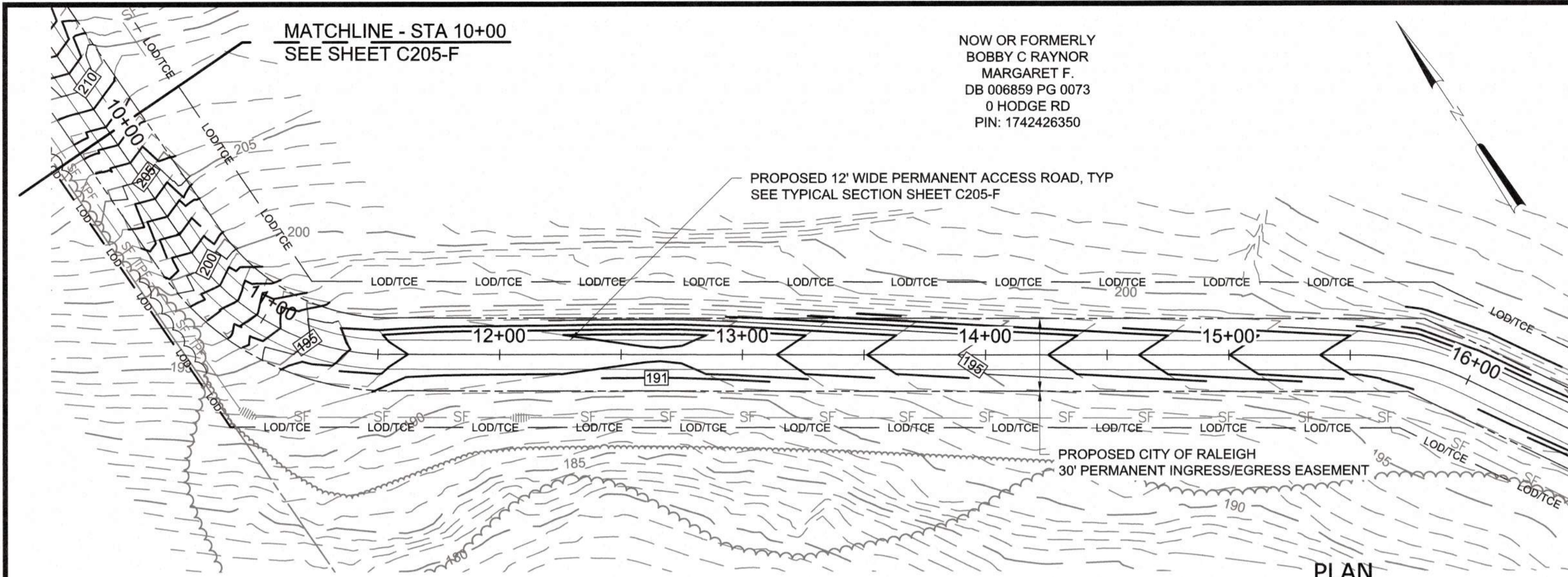
CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

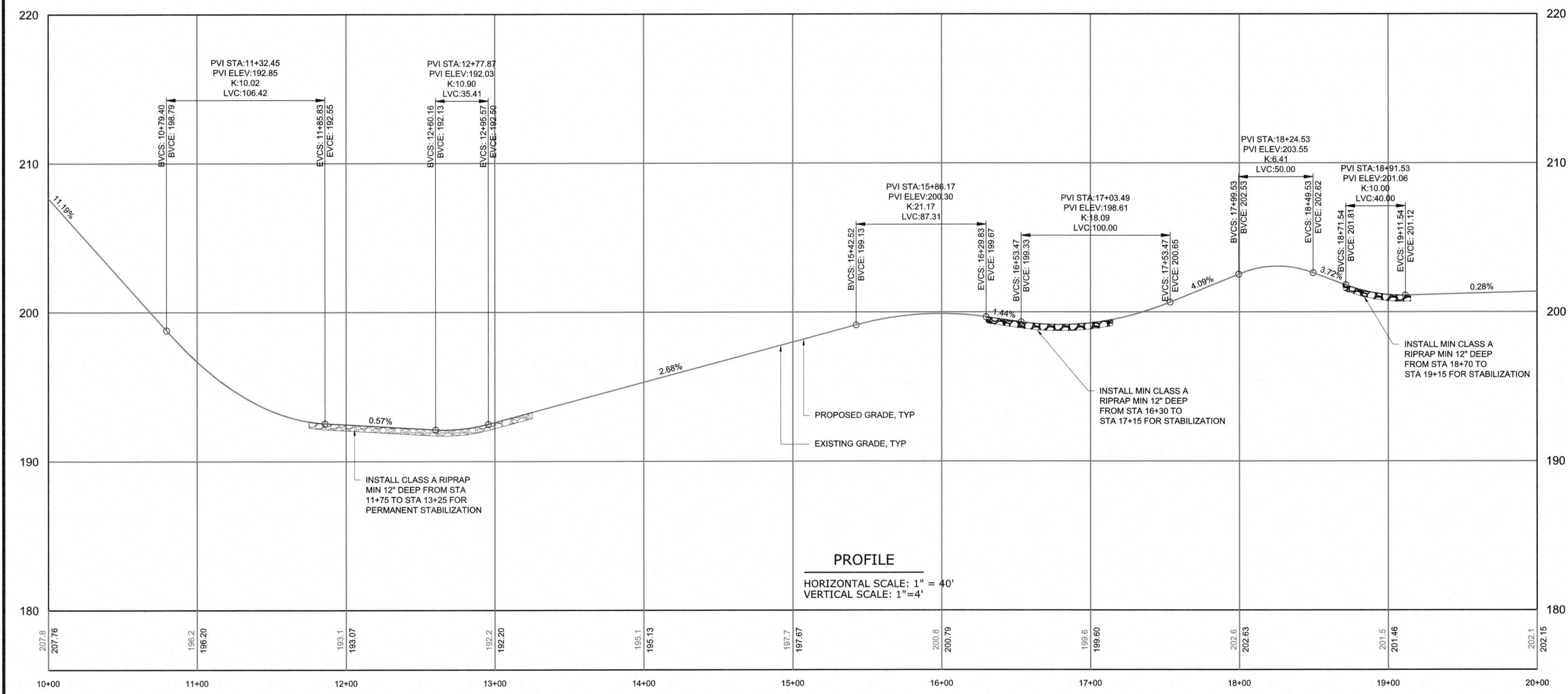
PERMANENT ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE
STA 1+00 TO 10+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C205-F

PLOT DATE: 2020/11/06 6:45:39 PM BY: JDEY BAILEY
C:\GIS\PROJECTS\2020\11\06\32426-000\32426-000-001.dwg



- NOTES:**
- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 2.
 - USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

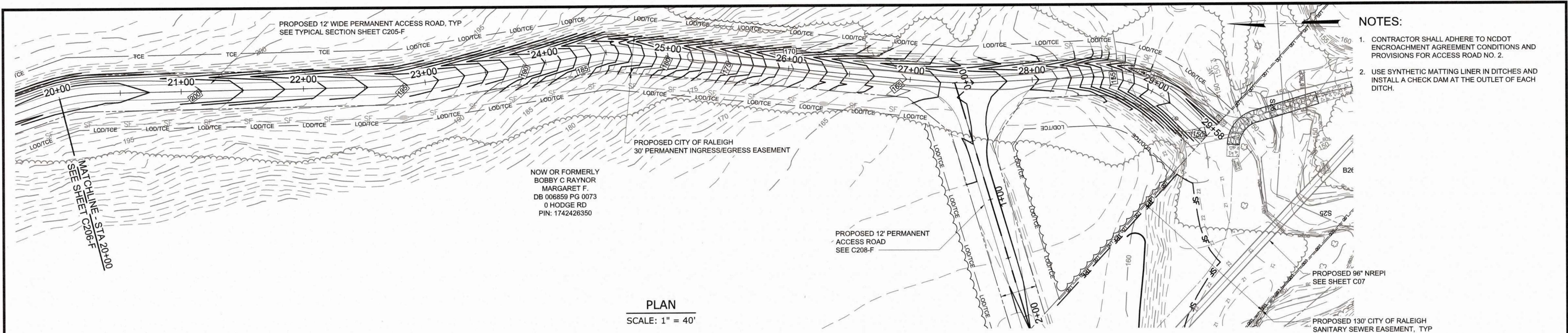
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

PERMANENT ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE

STA 10+00 TO 20+00

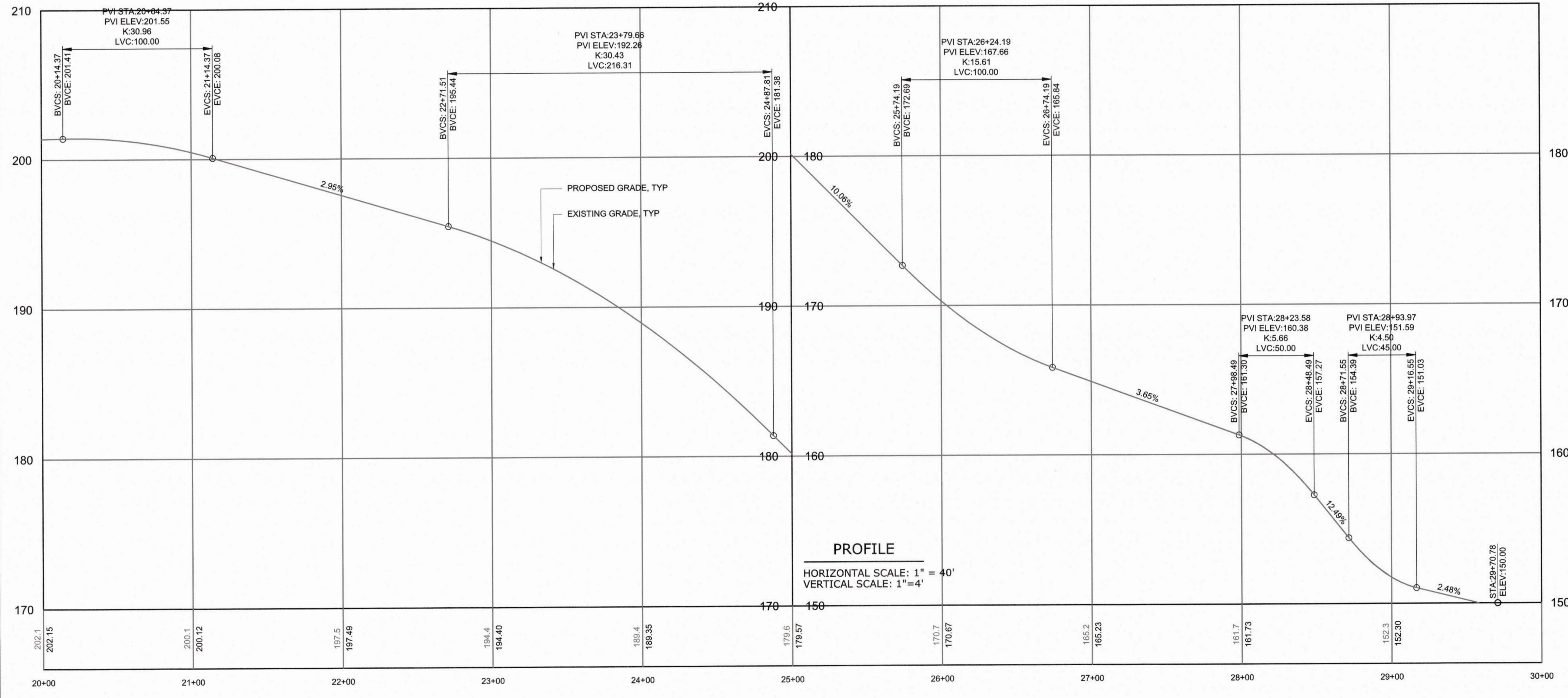
DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C206-F

PLOT DATE: 2020/11/06 6:48:40 PM BY: JREY BAILEY
 File: C:\MSWATER\PM\MSWBIF\CD06P_Saved By: JREY BAILEY



- NOTES:**
1. CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 2.
 2. USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.

PLAN
SCALE: 1" = 40'



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Laws. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval



FINAL DESIGN

PLOT DATE: 2020/11/16 6:51:32 PM; PLOT BY: JET BAILEY; PLOT SCALE: 1/4" = 10'; PLOT SHEET: 1 OF 1; PLOT FILE: C:\WORK\2020\11\16\16_6_51_32_PM_1119120.dwg

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

0 1/2" 1"



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

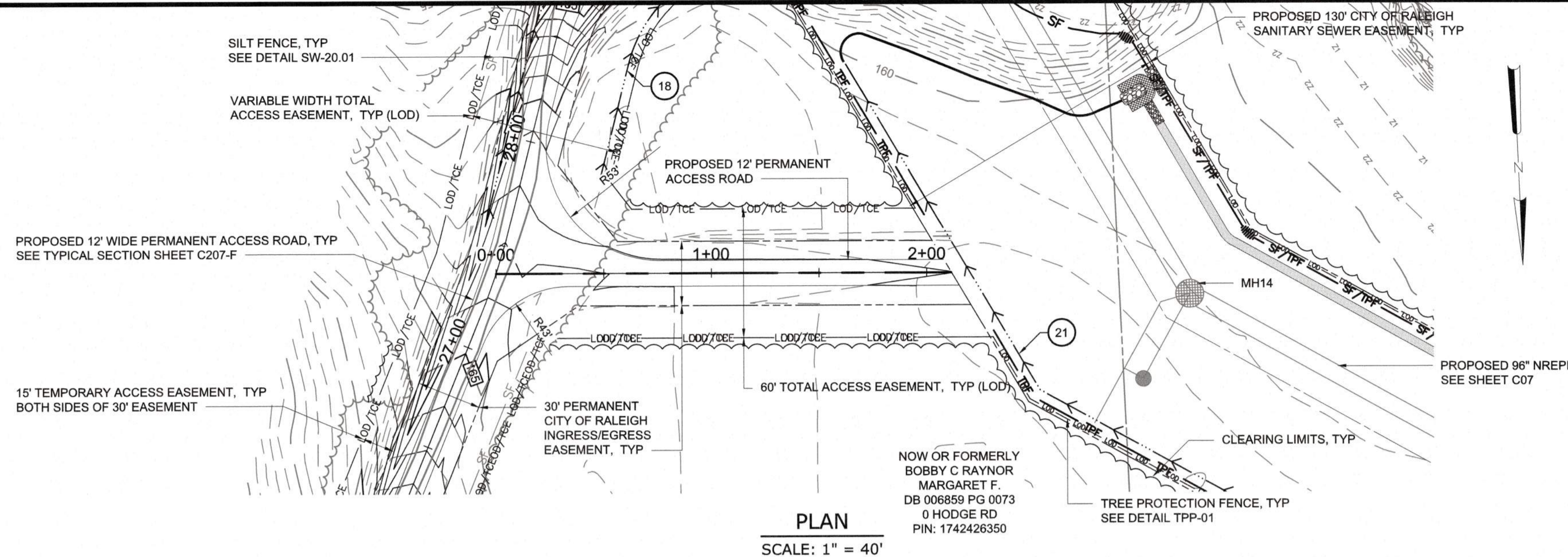
PERMANENT ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE

STA 20+00 TO 29+58

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C207-F

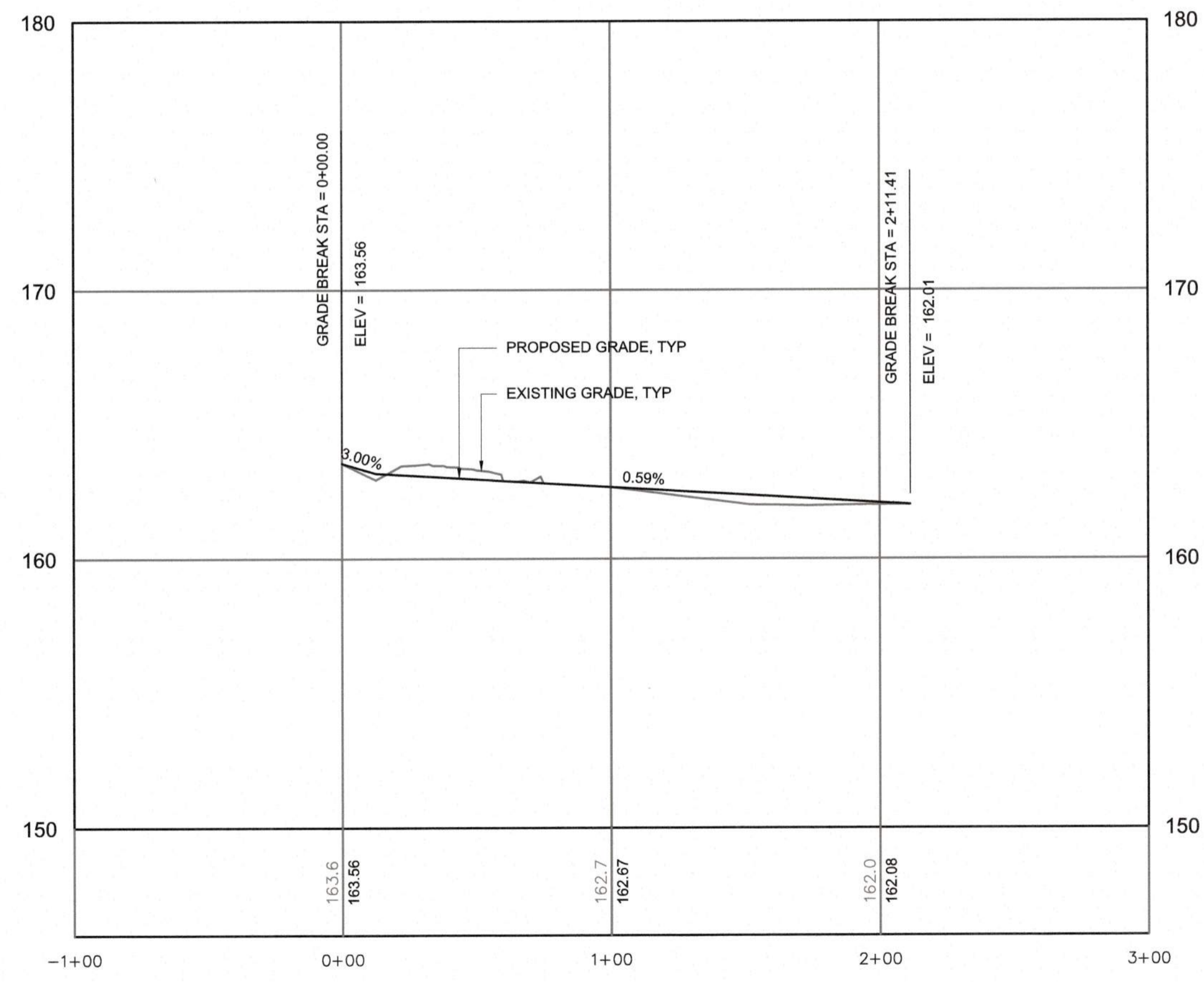
NOTES:

1. CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 2.
2. USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.



PLAN
SCALE: 1" = 40'

NOW OR FORMERLY
BOBBY C RAYNOR
MARGARET F.
DB 006859 PG 0073
0 HODGE RD
PIN: 1742426350



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval _____



FINAL DESIGN

PLOT DATE: 2020/11/06 6:54:00 PM BY: JCY BAILEY
FILE: C:\BMS\HAZEN-NW\GIS\B167\C208-F.dwg Saved By: JCY BAILEY Show Date: 2020/11/05 4:40 PM

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

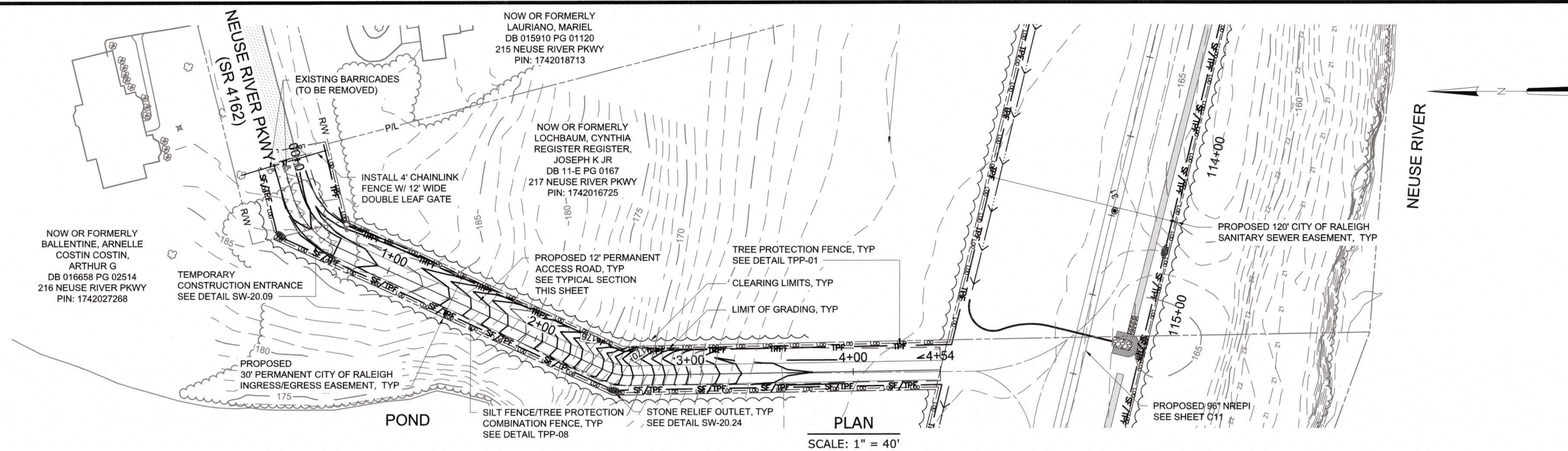
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

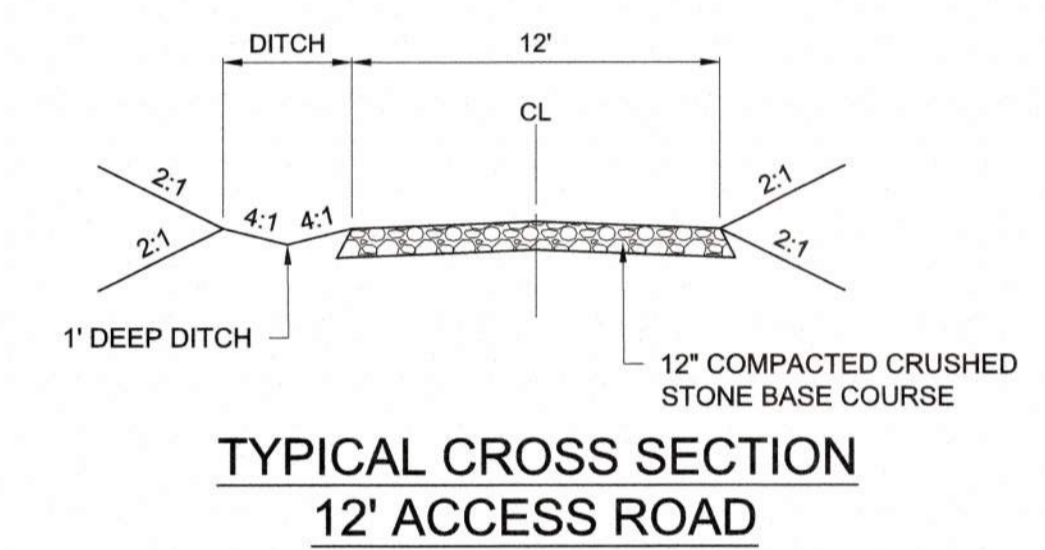
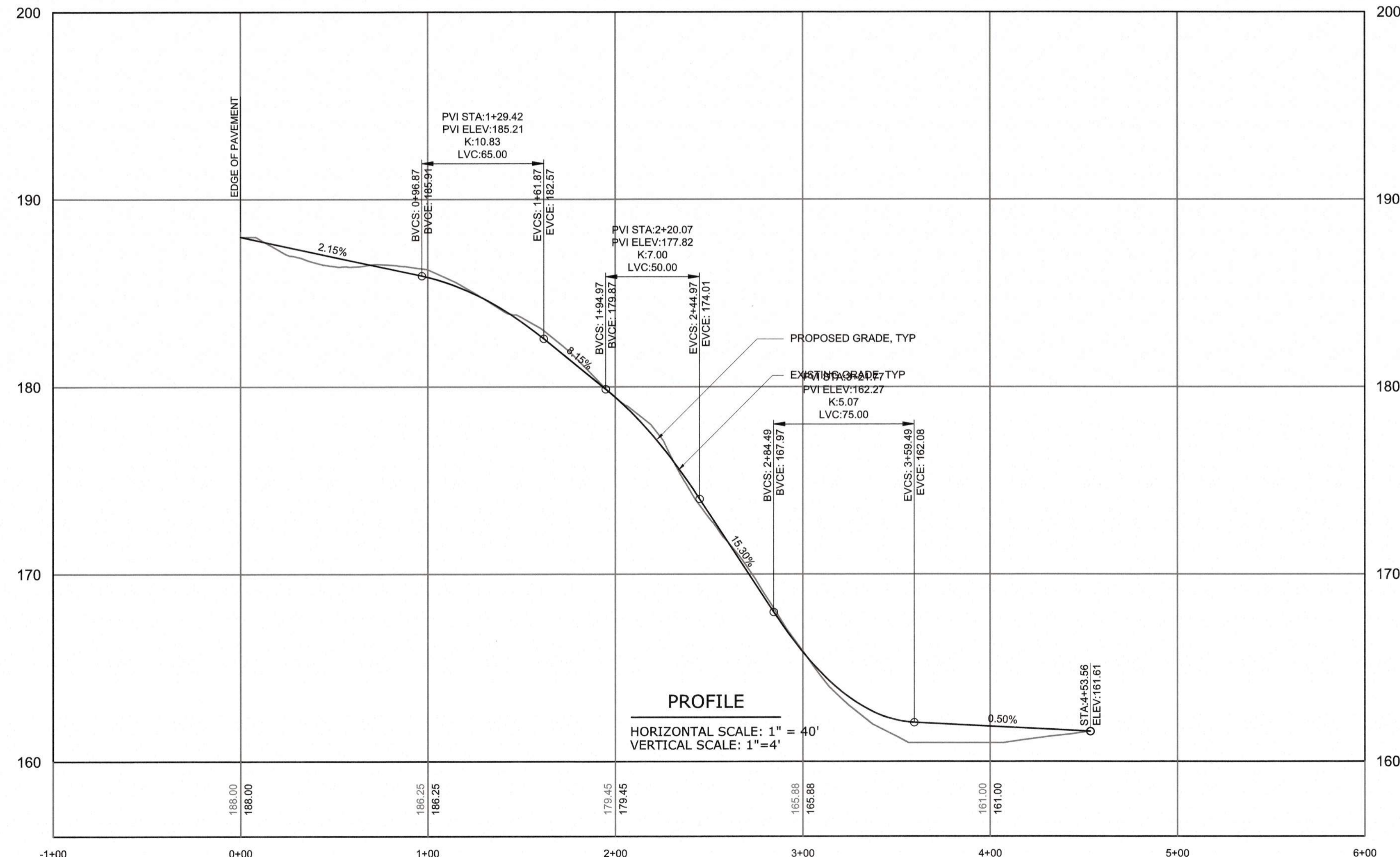
PERMANENT CONSTRUCTION
ACCESS ROAD NO. 2
(LEONARD RD & HODGE RD)
PLAN AND PROFILE

STA 0+00 TO 2+11

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C208-F



- NOTES:**
- CONTRACTOR SHALL ADHERE TO NCDOT ENCROACHMENT AGREEMENT CONDITIONS AND PROVISIONS FOR ACCESS ROAD NO. 3.
 - USE SYNTHETIC MATTING LINER IN DITCHES AND INSTALL A CHECK DAM AT THE OUTLET OF EACH DITCH.
 - 12" COMPACTED CRUSHED STONE BASE COURSE IN A MINIMUM SPECIFIED ROAD BASE MATERIAL AND DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF THE EXACT ROAD BASE STONE SIZE AND DEPTH NECESSARY TO SUPPORT THE CONTRACTOR'S VEHICULAR AND EQUIPMENT LOADS IMPOSED ON THE ACCESS ROAD. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND ANY NECESSARY REPAIRS OF THE ROAD.
 - ALL RCP STORM PIPE SHALL BE IN MINIMUM OF CLASS IV. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE COVER OR OTHER MEANS OF PROTECTION IS IN PLACE TO PREVENT EXCESSIVE LOADING OVER THE PIPE THAT COULD RESULT IN DAMAGE TO THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE PIPE AND FOR MAINTENANCE AND NECESSARY REPAIRS OR REPLACEMENTS OF THE PIPE.



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC

320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

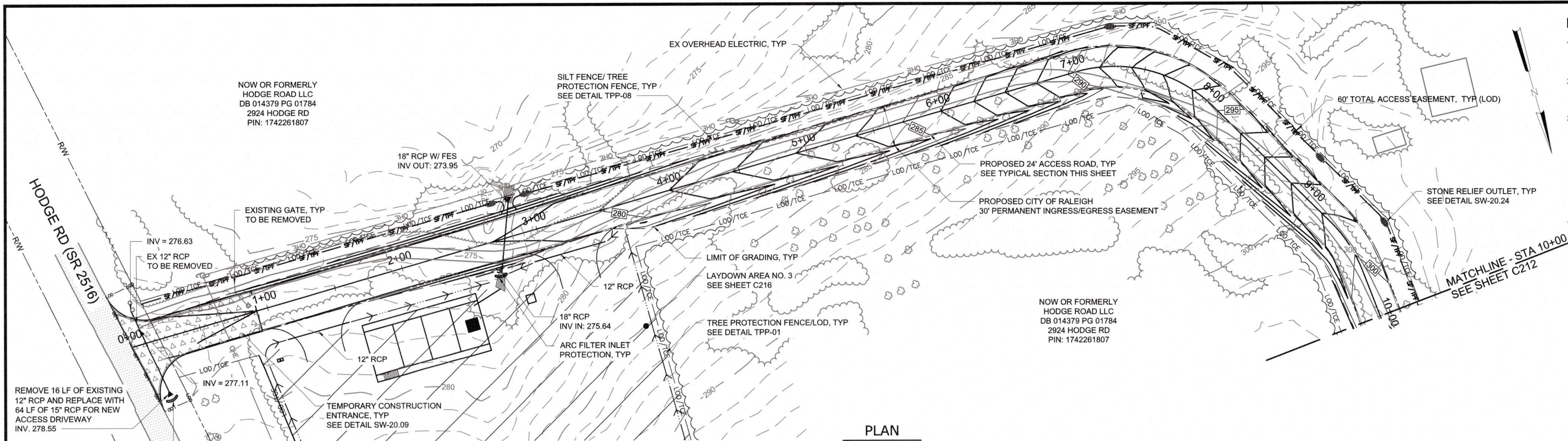
NEUSE RIVER EAST
PARALLEL INTERCEPTOR

PERMANENT ACCESS ROAD NO. 3
(NEUSE RIVER PKWY)

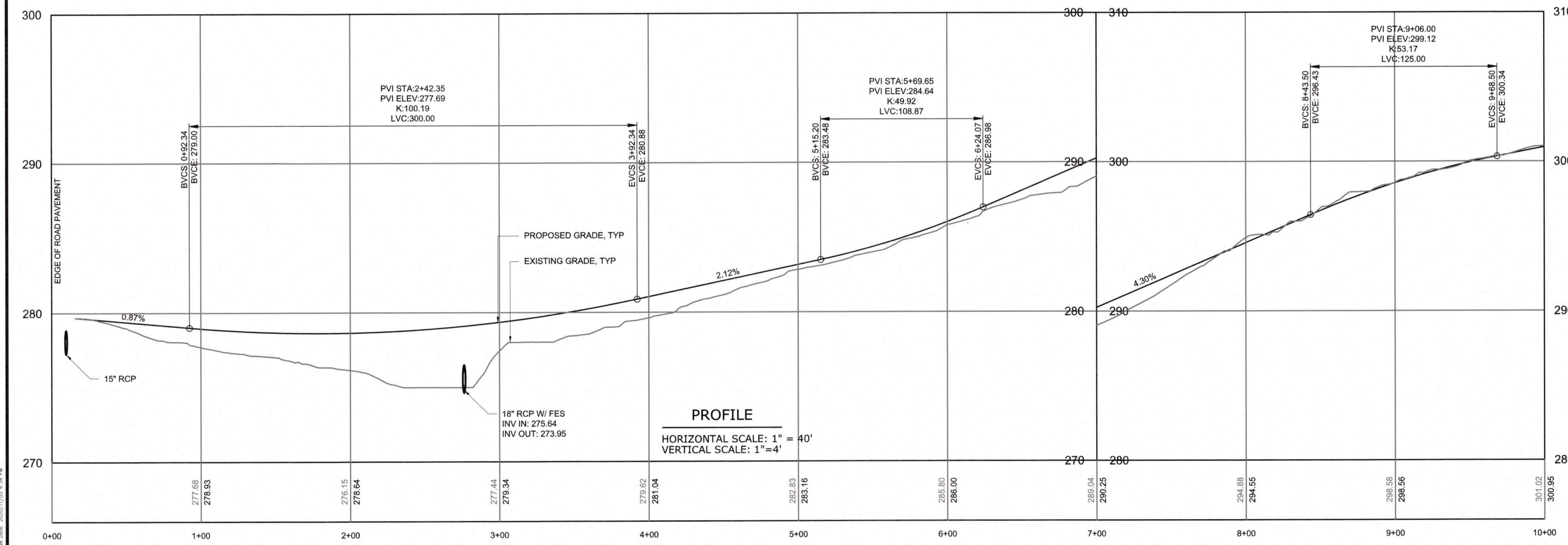
PLAN AND PROFILE
STA 0+00 TO 4+53.56

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C210

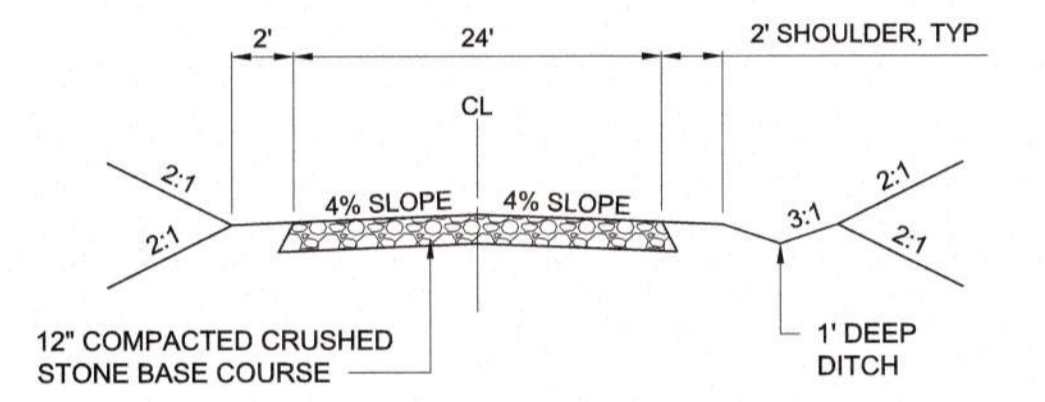
PLOT DATE: 2020/11/05 4:54 PM
 PLOT BY: ABEY BAILEY
 PLOT FILE: C:\WORK\2020\11\05\17\05_4_51 PM



PLAN
SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



TYPICAL CROSS SECTION
24' ACCESS ROAD
STATION 0+00 TO 10+00

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval



FINAL DESIGN

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	T. TANT
DESIGNED BY:	C. WINDLEY
DRAWN BY:	E. NG
CHECKED BY:	T. TANT
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

CJS
Conveyance, PLLC
320 S. ACADEMY STREET
CARY, NC 27511
LICENSE NO. : P-1611

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

NEUSE RIVER EAST
PARALLEL INTERCEPTOR

TEMPORARY CONSTRUCTION
ACCESS ROAD NO. 4
(HODGE RD)
PLAN AND PROFILE
STA 0+00 TO 10+00

DATE:	NOVEMBER 2020
HAZEN NO.:	32426-000
CONTRACT NO.:	1
DRAWING NUMBER:	C211

PLOT DATE: 2020/11/06 7:01:34 PM BY: JET BAILEY Date: 2020/11/05 4:54 PM File: C:\Users\jbailey\OneDrive\Documents\2020\11\05\20201105_454_Plan