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ASHTON WOODS.  
**PROJECT DIRECTORY**

# HARRIS CREEK INTERCEPTOR IMPROVEMENTS

ROLESVILLE, NORTH CAROLINA

## CONSTRUCTION DRAWINGS

PROJECT NUMBER: AWH-21002

DATE: NOVEMBER 9, 2021

**SHEET INDEX**

CO.00	PROJECT NOTES
C5.00	PLAN AND PROFILE - HARRIS CREEK INTERCEPTOR STA. 34+00.00 THRU STA. 43+00.00
C5.01	PLAN AND PROFILE - HARRIS CREEK INTERCEPTOR STA. 43+00.00 THRU STA. 52+00.00
C5.02	PLAN AND PROFILE - HARRIS CREEK INTERCEPTOR STA. 52+00.00 THRU STA. 61+00.00
C5.03	PLAN AND PROFILE - HARRIS CREEK INTERCEPTOR STA. 61+00.00 THRU STA. 64+00.00
CB.01	SANITARY SEWER DETAILS
CB.02	EROSION CONTROL DETAILS

**SURVEY BY:**

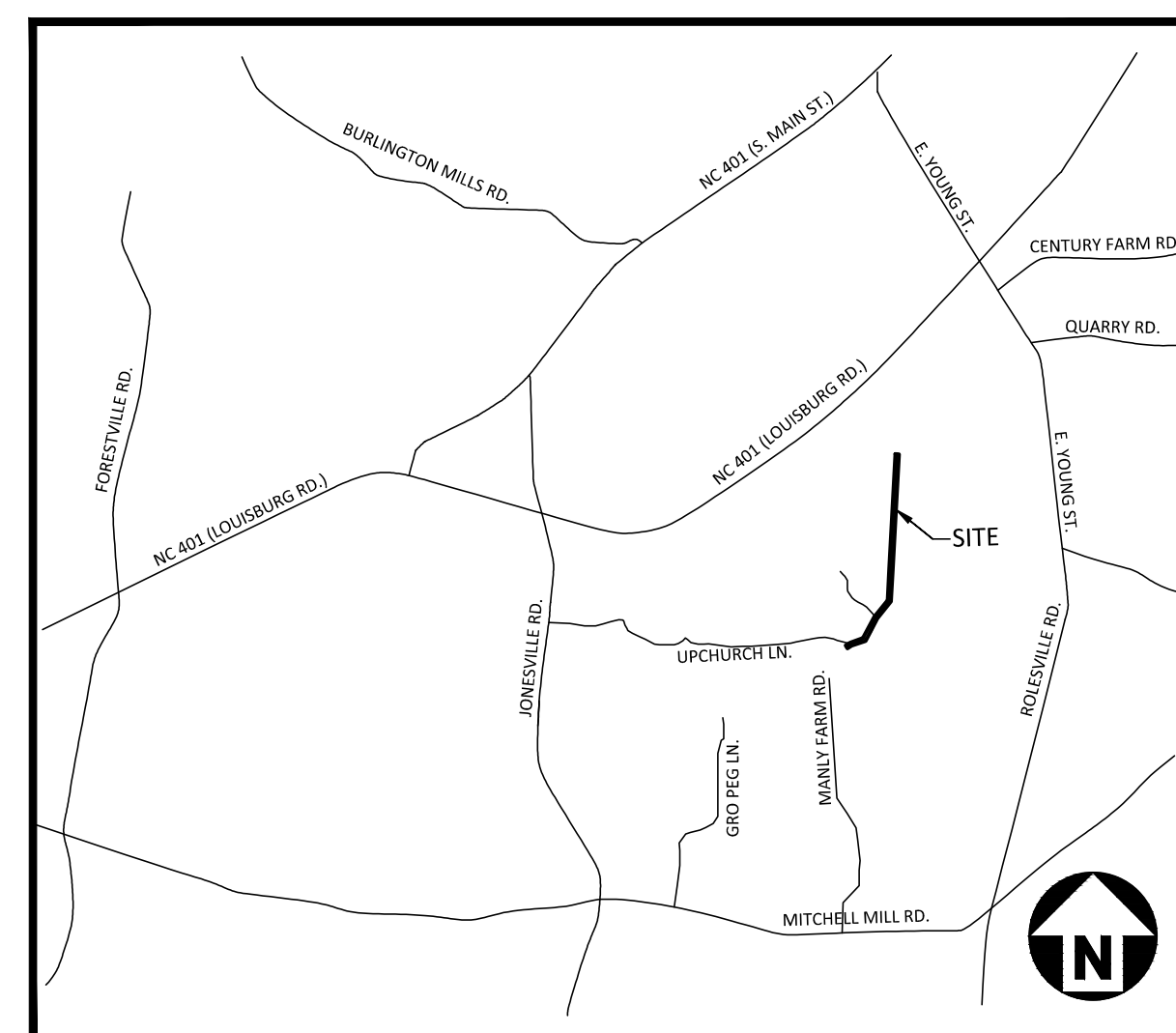
BATEMAN CIVIL SURVEY COMPANY  
2424 RELIANCE AVENUE, APEX, NC 27539

TOPOGRAPHIC DECEMBER 22, 2019  
ALTA SURVEY DECEMBER 12, 2019

STEVEN P CARSON, PLS  
NC LICENSE # 4752  
919-577-1081

**PUBLIC UTILITY IMPROVEMENT QUANTITIES OF SEWER MAIN & MANHOLES**

SIZE	LENGTH
18" PVC (LF)	418 LF
24" PVC (LF)	3,469 LF
NUMBER OF MANHOLES = 13	



**VICINITY MAP**  
N.T.S.

**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 # 5-4972

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 # \_\_\_\_\_

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 # \_\_\_\_\_

**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**

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 \_\_\_\_\_  
City of Raleigh Review Officer \_\_\_\_\_



**REVISIONS**

NO.	DATE	REVISION
1	03.03.2022	RESPOND TO MUNICIPAL COMMENTS

**CONSTRUCTION DRAWINGS FOR:**

HARRIS CREEK INTERCEPTOR IMPROVEMENTS  
ROLESVILLE, NORTH CAROLINA  
PROJECT NUMBER: AWH-21002

P:\Projects\AWH\AWH-21002\04-Production\Engineering\SS-Detail\Upgrade\Current Drawings\AWH21002-C51.dwg, 6/7/2022 4:44:30 PM, Brandon Bikit

**CITY OF RALEIGH PUBLIC UTILITIES  
STANDARD UTILITY NOTES (AS APPLICABLE)**

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
- UTILITY SEPARATION REQUIREMENTS:
  - 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. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
  - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - 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.
  - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
  - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS, WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & 5-49).
  - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- 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.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS 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.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- 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.
- 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.
- INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDM, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- 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.
- CROSS-CONNECTION 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 DEVICES 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 FOR MORE INFORMATION.

**NOTES:**

DEEDS OF EASEMENT FOR SANITARY SEWER PURPOSES TO CITY OF RALEIGH RECORDED IN BOOK 12249, PAGE 864 AND BOOK 12466, PAGE 1149 AND AS SHOWN ON RECORDED PLAT IN BOOK OF MAPS 2006, PAGES 2216 AND 2217, WAKE COUNTY REGISTRY.

(DEED OF EASEMENT SUPERSEDED BY BM 2008 PG 480 & 481)

RIGHT OF WAY AND UTILITY EASEMENTS RECORDED IN BOOK 13736, PAGES 1287 AND 1294 AND AS SHOWN ON RECORDED PLAT IN BOOK OF MAPS 2009, PAGE 1991, WAKE COUNTY REGISTRY.

(AS SHOWN ON SURVEY)

DEEDS OF EASEMENT FOR SANITARY SEWER PURPOSES TO CITY OF RALEIGH RECORDED IN BOOK 12249, PAGE 860 AND BOOK 12466, PAGE 1171 AND AS SHOWN ON RECORDED PLAT IN BOOK OF MAPS 2006, PAGES 2216 AND 2217, WAKE COUNTY REGISTRY.

**BY-PASS PUMPING NOTES:**

- DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO PROPERTY OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
- A BYPASS PLAN SEALED BY A NC PROFESSIONAL ENGINEER MUST BE SUBMITTED TO CITY OF RALEIGH PUBLIC UTILITIES PRIOR TO PUMPING OPERATIONS TO COORDINATE WITH ENGINEERING STAFF. PUMPS SHOULD BE SIZED TO HANDLE THE PEAK FLOW (2.5 TIMES THE AVERAGE DAILY FLOW) FOR THE LINE OR AREA OF WORK. THE CONTRACTOR SHALL SECURE THE PUMPS FROM A PUMP SUPPLIER ACCORDING TO THE PROVIDED FLOW INFORMATION. PUMPING OPERATIONS MUST BE MONITORED 24 HOURS A DAY FOR EACH OF THE PUMPING OPERATION BY QUALIFIED PERSONNEL IN ORDER TO RESPOND TO PROBLEMS OR FAILURES. 100% REDUNDANCY IS REQUIRED FOR PUMPING OPERATIONS. IN ADDITION, BACKUP PUMPS ARE TO BE CONNECTED TO THE BYPASS FORCE MAIN TO FACILITATE IMMEDIATE USE UPON FAILURE OF THE PRIMARY PUMPS.

**EROSION CONTROL NOTES**

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST TOWN OF ROLESVILLE, CITY OF RALEIGH AND WAKE COUNTY STANDARDS, SPECIFICATIONS AND DETAILS AS APPLICABLE.
- GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE WAKE COUNTY SOIL AND EROSION CONTROL STANDARDS AND SPECIFICATIONS.
- GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER QUALITY (DWQ) STANDARDS AND SPECIFICATIONS. WHERE DIFFERENT FROM WAKE COUNTY STANDARDS, THE MORE STRINGENT METHOD SHALL BE APPLIED.
- FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE CONTRACTOR TO FINES AND PENALTIES ISSUED BY EITHER THE COUNTY EROSION CONTROL DEPARTMENT OR THE DWQ.
- CONTRACTOR SHALL SEED AND STABILIZE ALL STEEP SLOPES (GREATER THAN 2H:1V) WITHIN 7 DAYS, 10 DAYS FOR MODERATE SLOPES (3H:1V OR GREATER) AND WITHIN 14 CALENDAR DAYS EVERYWHERE ELSE (STATE LAW 2009-486).
- FOR ANY LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
- NO DEBRIS SHALL BE TRACKED ONTO PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MUD, ROCK AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT THE FUTURE OCCURRENCE.
- THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY WAKE COUNTY SEDIMENTATION AND EROSION CONTROL (SEC) ONCE INITIAL MEASURES ARE IN PLACE. (SEE CONSTRUCTION SEQUENCE)
- CONTRACTOR SHALL INSPECT ALL SEDIMENT /EROSION CONTROL DEVICES AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
- A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
- CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY/COUNTY ENGINEERING DEPARTMENT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
- A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED. INSTALLATION OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE SEDIMENTATION & EROSION CONTROL INSPECTOR AND THE ENGINEER.
- PROVIDE INLET PROTECTION AROUND ALL SITE STORM INLETS. PROTECT OPEN PIPES UNDER CONSTRUCTION WITH EITHER PLYWOOD OR WITH MESH AND GRAVEL WEIRS. RUNOFF SHALL NOT BE ALLOWED IN ANY OPEN TRENCH.
- CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS.
- TEMPORARY DIVERSIONS SHALL BE MAINTAINED DAILY BY CONTRACTOR SO THAT THEY ARE FUNCTIONAL AT THE END OF EACH WORKDAY AND WHEN STOPPING WORK FOR RAIN.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- DISTURBANCE OUTSIDE OF THE SITE PROPERTY LIMITS OR PUBLIC RIGHT-OF-WAY SHALL ONLY BE AS ALLOWED BY SIGNED GRADING AGREEMENTS AND/OR EASEMENTS BETWEEN THE DEVELOPER AND THE OFFSITE PROPERTY OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE OPEN ACCESS TO ALL PROPERTIES ALONG ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD FOR IMPROVEMENTS.
- SANITARY SEWER STRUCTURE LOCATIONS AND PIPE SIZES SUBJECT TO FINAL CONSTRUCTION DRAWING APPROVAL.

**CONSTRUCTION SEQUENCE:**

- OBTAIN GRADING PERMIT FROM THE WAKE COUNTY ENVIRONMENTAL SERVICES DEPARTMENT.
- CALL ENVIRONMENTAL CONSULTANT JEEVAN NEUPANE, PE (919-819-8907) TO SCHEDULE A PRE-CONSTRUCTION MEETING. NOTIFY OWNER AND ENGINEER WHEN PRECON IS SCHEDULED SO THEY MAY ALSO ATTEND.
- CONTRACTOR WILL BE REQUIRED TO SUBMIT SITE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY (NCG010000) TO WAKE COUNTY INSPECTIONS THROUGHOUT THE PROJECT.
- INSTALL THE FOLLOWING EROSION AND SEDIMENTATION CONTROL DEVICES PER THE APPROVED PLAN IN THE FOLLOWING ORDER:
  - TREE PROTECTION FENCE
  - SILT FENCING SURROUNDING SITE WITH SILT FENCE OUTLETS.
  - INLET PROTECTION FOR EXISTING INLETS WITHIN ROADWAYS.
- CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
- CLEAR AND GRUB AREA FOR FUTURE CONSTRUCTION. CONTRACTOR TO COORDINATE WITH DEVELOPER TO OBTAIN NECESSARY OFFSITE EASEMENTS.
- CALL WAKE COUNTY ENVIRONMENTAL SERVICES FOR INSPECTION.
- MAINTAIN DEVICES AS NEEDED IN ACCORDANCE WITH THE NOTES ON THIS SHEET.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 DAYS OF INACTIVITY.
- CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL DEVICES ONCE PER WEEK AND AFTER EVERY RAINFALL EVENT. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.
- BEGIN CONSTRUCTION OF SANITARY SEWER INTERCEPTOR. AS AREAS AREA COMPLETED, STABILIZE SITE WITH VEGETATION.
- SUBMIT DOCUMENTATION REQUIRED UNDER THE SITE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY (NCG010000) TO WAKE COUNTY THROUGHOUT THE PROJECT.
- ALL OFF-SITE STREETS SHALL BE KEPT CLEAN AS NOTED IN EROSION CONTROL NOTES DURING HAUL OFF OF EXCAVATED MATERIAL.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 DAYS OF INACTIVITY.
- PRIOR TO THE REMOVAL, OF ANY EROSION CONTROL DEVICES, THE CONTRACTOR IS TO CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT JEEVAN NEUPANE, PE (919-819-8907).

**EROSION CONTROL MAINTENANCE PLAN**

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BY THE SITE CONTRACTOR FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- THE SEDIMENT BASINS SHALL BE INSPECTED REGULARLY DURING LAND DISTURBING ACTIVITIES AND AFTER EACH RUNOFF-PRODUCING RAINFALL. SEDIMENT SHALL BE REMOVED AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF EACH BASIN. PORTIONS OF THE BASIN'S GRAVEL FACING THAT ARE CONTAMINATED BY SEDIMENT SHALL BE REPLACED WITH FRESH GRAVEL DURING EACH SEDIMENT REMOVAL EPISODE.
- SEDIMENT FENCES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AS NEEDED TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL EVENT, AND TO REDUCE PRESSURE ON THE FENCE. FENCING MATERIALS AND SEDIMENT DEPOSITS SHALL BE REMOVED, AND THE AREA BROUGHT TO GRADE FOLLOWING STABILIZATION OF UPGRADING DISTURBED AREAS.
- DIVERSION DITCHES MUST REMAIN IN PLACE UNTIL PROJECT IS STABILIZED. PERMISSION SHALL BE GIVEN BY THE EROSION CONTROL INSPECTOR FOR REMOVAL UPON COMPLETION OF PERMANENT UPSTREAM STABILIZATION.

**STOCKPILE NOTES**

**DESIGN CRITERIA**

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
- STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
- OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL. PRIOR TO DISPOSAL, FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE IS REQUIRED.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).
- STOCKPILE MUST HAVE SILT FENCE WRAPPED AROUND THE LOW SIDE(S) AND A SILT FENCE OUTLET AT ALL LOW POINTS.

**SEEDING AND MULCHING**

SEEDING AND MULCHING SHALL BE CARRIED OUT IMMEDIATELY BEHIND CONSTRUCTION IN ACCORDANCE WITH FOLLOWING SPECIFICATIONS.

SEEDING SPECIFICATIONS			
SHOULDER, SIDE DITCHES, SLOPES (MAX 3:1)			
SEEDING PERIOD	TYPE	APPLICATION RATE	
		PER ACRE	PER 1000 SF
AUGUST 15 - NOVEMBER 1	TALL FESCUE	300#	7#
	TALL FESCUE AND	300#	7#
NOVEMBER 1 - MARCH 1	ABRUZZI RYE	25#	0.6#
	TALL FESCUE	300#	7#
MARCH 1 - APRIL 15	TALL FESCUE	300#	7#
APRIL 15 - JUNE 30	HULLED COMMON BERMUDAGRASS	25#	0.6#
JULY 1 - AUGUST 15	TALL FESCUE AND	120#	2.8#
	*BROWNTOP MILLET	35#	0.8#
	*OR SORGHUM-SUDAN HYBRIDS	30#	0.7#

SEEDING SPECIFICATIONS			
SLOPES (3:1 TO 2:1)			
SEEDING PERIOD	TYPE	APPLICATION RATE	
		PER ACRE	PER 1000 SF
MARCH 1 - JUNE 1	SERICA LESPEDeza (SCARIFIED)	50#	1.2#
	AND		
MARCH 1 - APRIL 15	ADD TALL FESCUE	120#	2.8#
MARCH 1 - JUNE 30	OR ADD WEEPING LOVE GRASS	10#	0.2#
MARCH 1 - JUNE 30	OR ADD HULLED COMMON BERMUDAGRASS	25#	0.6#
JUNE 1 - SEPTEMBER 1	*TALL FESCUE AND	120#	2.8#
	*OR BROWNTOP MILLET	35#	0.8#
	*OR SORGHUM-SUDAN HYBRIDS	30#	0.7#
SEPTEMBER 1 - MARCH 1	SERICA LESPEDeza (UNHULLED, UNSCARIFIED)	70#	1.6#
	AND TALL FESCUE	120#	2.8#
NOVEMBER 1 - MARCH 1	ADD ABRUZZI RYE	25#	0.6#

\*TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW TO MORE THAN 12 INCHES HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

CONSULT WAKE SOIL AND WATER CONSERVATION DISTRICT OR NORTH CAROLINA DIVISION OF SOIL AND WATER CONSERVATION FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

**SEEDBED PREPARATION**

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTIRE AREA TO 6-INCH DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLE SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW).
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLE UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60 PERCENT DAMAGED, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT WAKE SOIL AND WATER CONSERVATION DISTRICT ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

- APPLY:
  - AGRICULTURAL LIMESTONE - 2 TONS/ACRE (3/TONS/ACRES IN CLAY SOILS)
  - FERTILIZER - 1000 LB/ACRE -10-10-10
  - SUPERPHOSPHATE - 500 LB/ACRE - 20 PERCENT ANALYSIS
  - MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW
  - ANCHOR - ASPHALT EMULSION @ 300 GALS/ACRE

**DISTURBED AREA = 3.98 AC.**

**ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF ROLESVILLE AND WAKE COUNTY SPECIFICATIONS AND DETAILS.**

**CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.**



**McADAMS**

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Durham, NC 27713

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**CLIENT**

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5711 SIX FORKS ROAD, SUITE 300  
RALEIGH, NORTH CAROLINA 27609  
PHONE: 919. 232. 3695  
CONTACT: BOB MISHLER



**HARRIS CREEK INTERCEPTOR  
IMPROVEMENTS**  
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
WAKE COUNTY, NORTH CAROLINA



**SITE PERMITTING APPROVAL**

**Water and Sewer Permits (if applicable)**

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City of Raleigh Development Approval \_\_\_\_\_  
City of Raleigh Review Officer \_\_\_\_\_

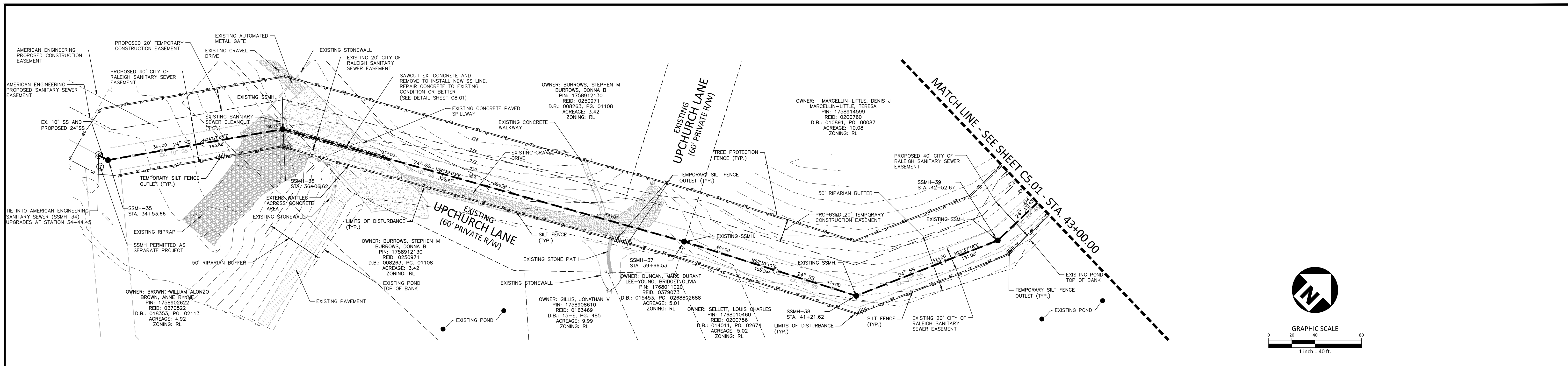
**PLAN INFORMATION**

PROJECT NO. AWH-21002  
FILENAME AWH21002-N1  
CHECKED BY .  
DRAWN BY .  
SCALE N.T.S.  
DATE 11. 09. 2021

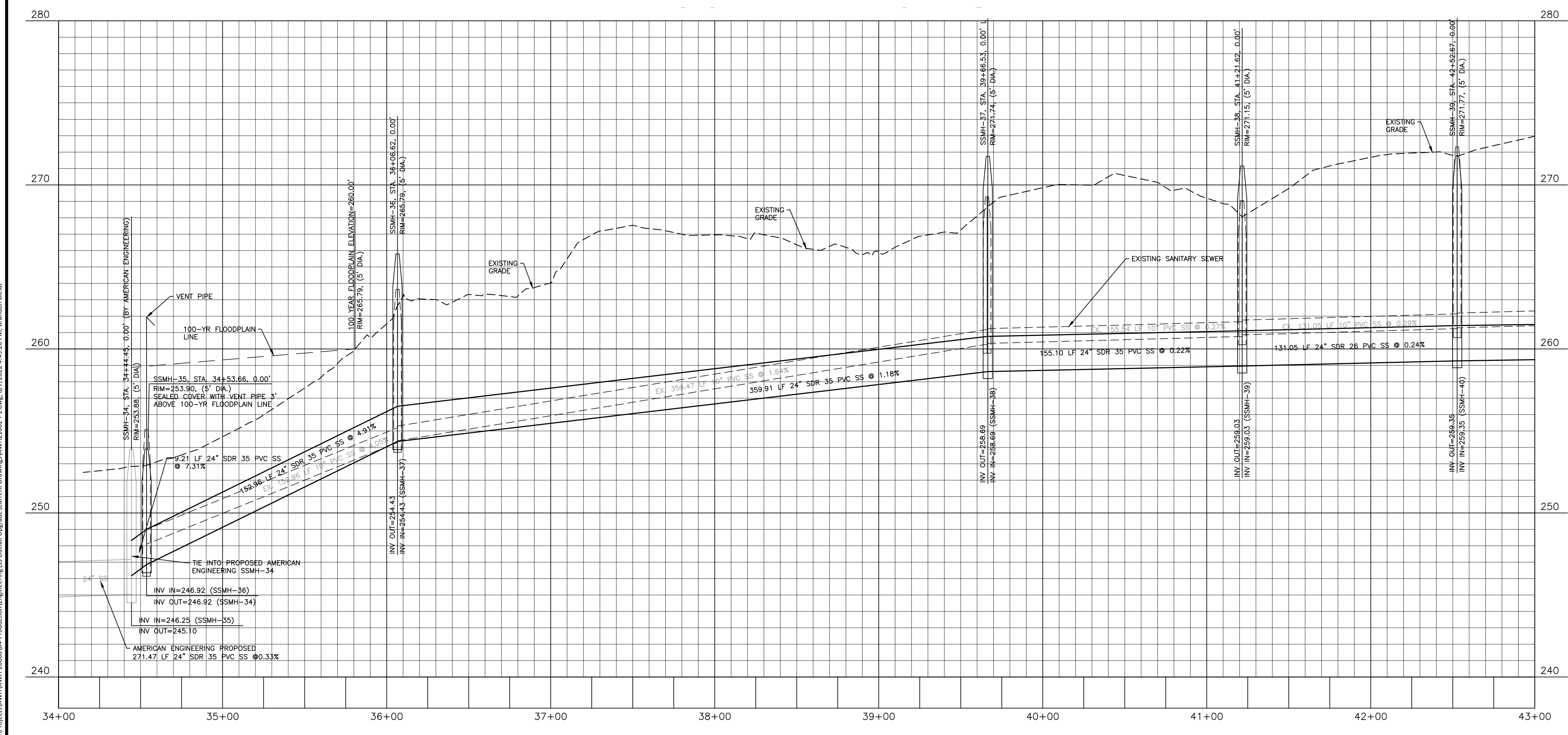
**SHEET**

**PROJECT NOTES**

**CO.00**



# HARRIS CREEK INTERCEPTOR



BYPASS PUMPING TABLE		
SUCTION MANHOLE	DISCHARGE MANHOLE	QPEAK (GPM)
MH40	MH39	177.97
MH39	MH38	177.97
MH38	MH37	177.97
MH37	MH36	177.97
MH36	MH34	177.97

### SITE PERMITTING APPROVAL

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City of Raleigh Development Approval \_\_\_\_\_  
 City of Raleigh Review Officer \_\_\_\_\_

FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION

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 Durham, NC 27713

phone 919. 361. 5000  
 fax 919. 361. 2269  
 license number: C-0293, C-187

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**CLIENT**

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 5711 SIX FORKS ROAD, SUITE 300  
 RALEIGH, NORTH CAROLINA 27609  
 PHONE: 919. 232. 3695  
 CONTACT: BOB MISHLER

**REVISIONS**

NO.	DATE	RESPOND TO MUNICIPAL COMMENTS
1	03.03.2022	RESPOND TO MUNICIPAL COMMENTS

## HARRIS CREEK INTERCEPTOR IMPROVEMENTS

### CONSTRUCTION DRAWINGS

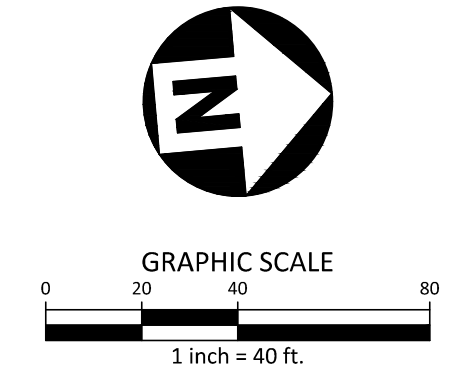
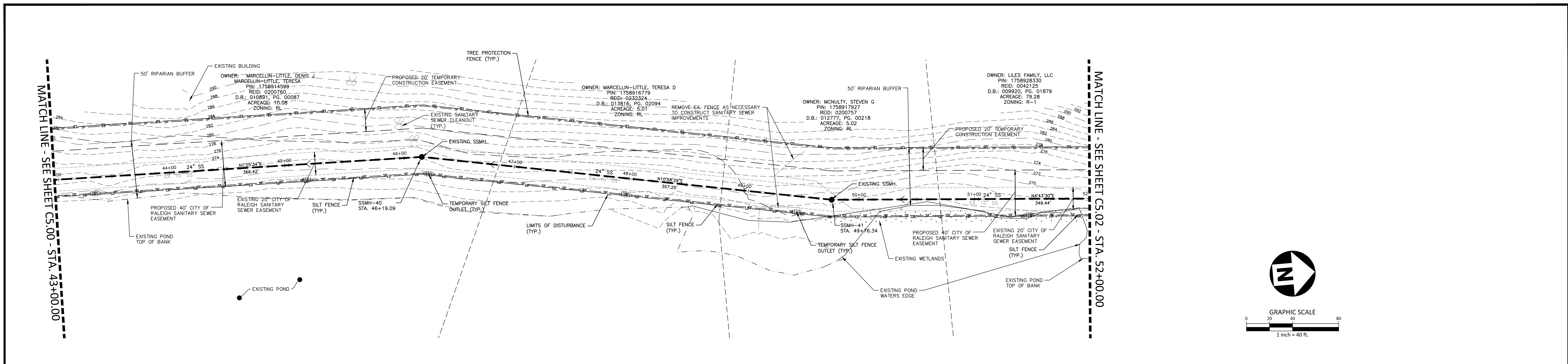
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
 WAKE COUNTY, NORTH CAROLINA

**PLAN INFORMATION**

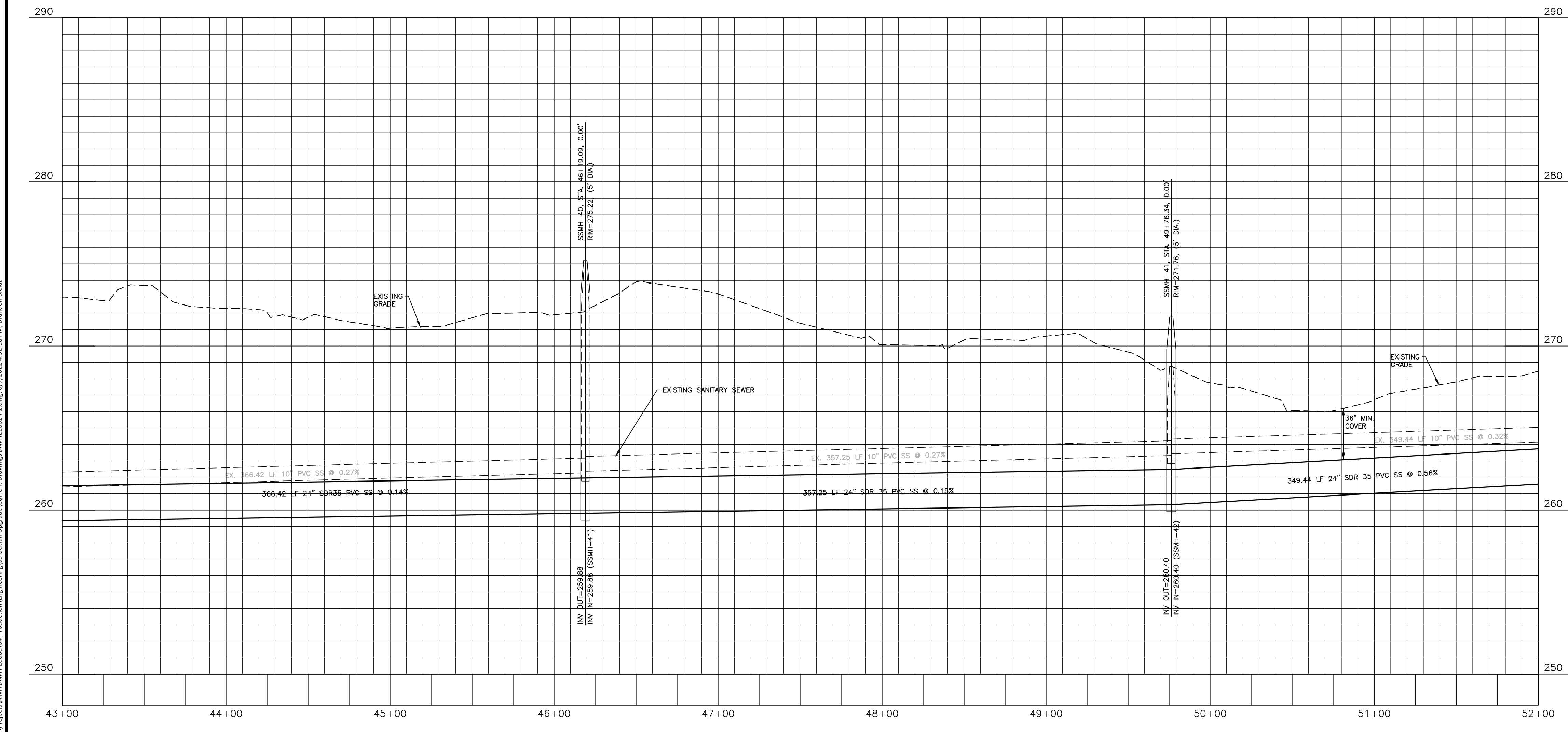
PROJECT NO. AWH21002  
 FILENAME AWH21002-P1  
 CHECKED BY WTO  
 DRAWN BY BB  
 SCALE 1"=40'/1"=4'  
 DATE 11.09.2021

**PLAN AND PROFILE**  
 HARRIS CREEK INTERCEPTOR  
 STA. 34+00 THRU STA. 43+00

# C5.00



# HARRIS CREEK INTERCEPTOR



BYPASS PUMPING TABLE		
SUCTION MANHOLE	DISCHARGE MANHOLE	QPEAK (GPM)
MH42	MH41	177.97
MH41	MH40	177.97
MH40	MH39	177.97

**SITE PERMITTING APPROVAL**

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City of Raleigh Development Approval \_\_\_\_\_  
 City of Raleigh Review Officer \_\_\_\_\_

M:\Projects\AWH\AWH-20000\04-Production\Engineering\SS-Cutfill\_Landscape\Current Drawings\AWH1002-P1.dwg, 6/7/2022 4:52:38 PM, Brandon Bickel



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## HARRIS CREEK INTERCEPTOR IMPROVEMENTS

### CONSTRUCTION DRAWINGS

TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
 WAKE COUNTY, NORTH CAROLINA

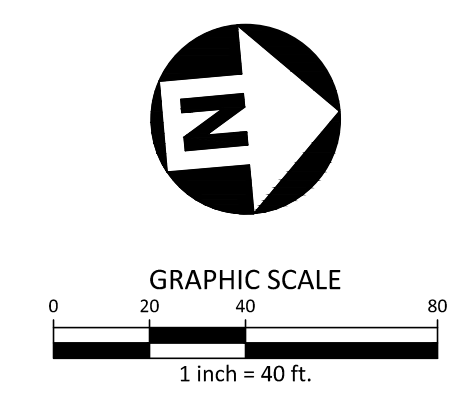
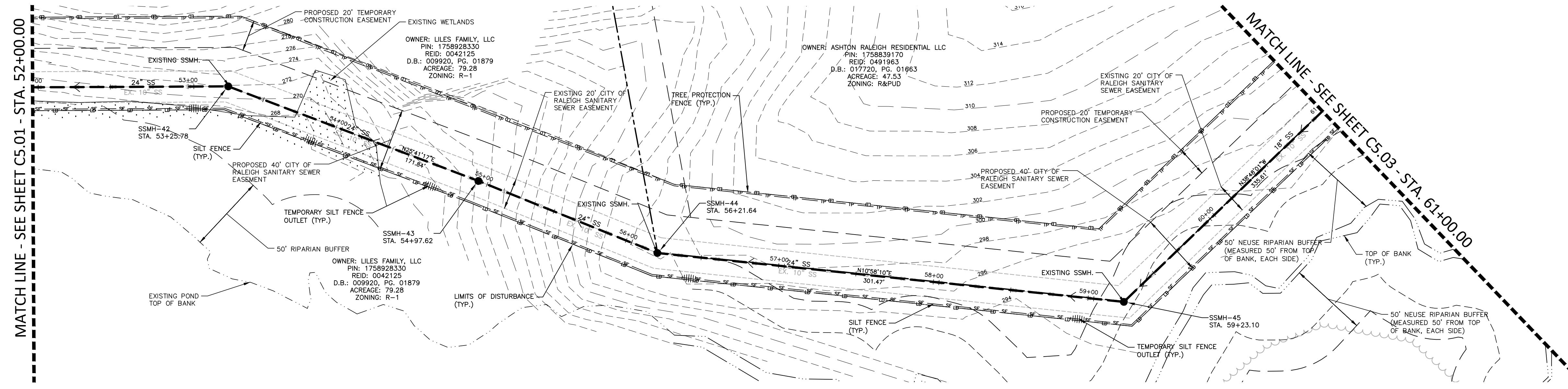
**PLAN INFORMATION**

PROJECT NO. AWH21002  
 FILENAME AWH21002-P1  
 CHECKED BY WTO  
 DRAWN BY BB  
 SCALE 1"=40'/1"=4'  
 DATE 11.09.2021

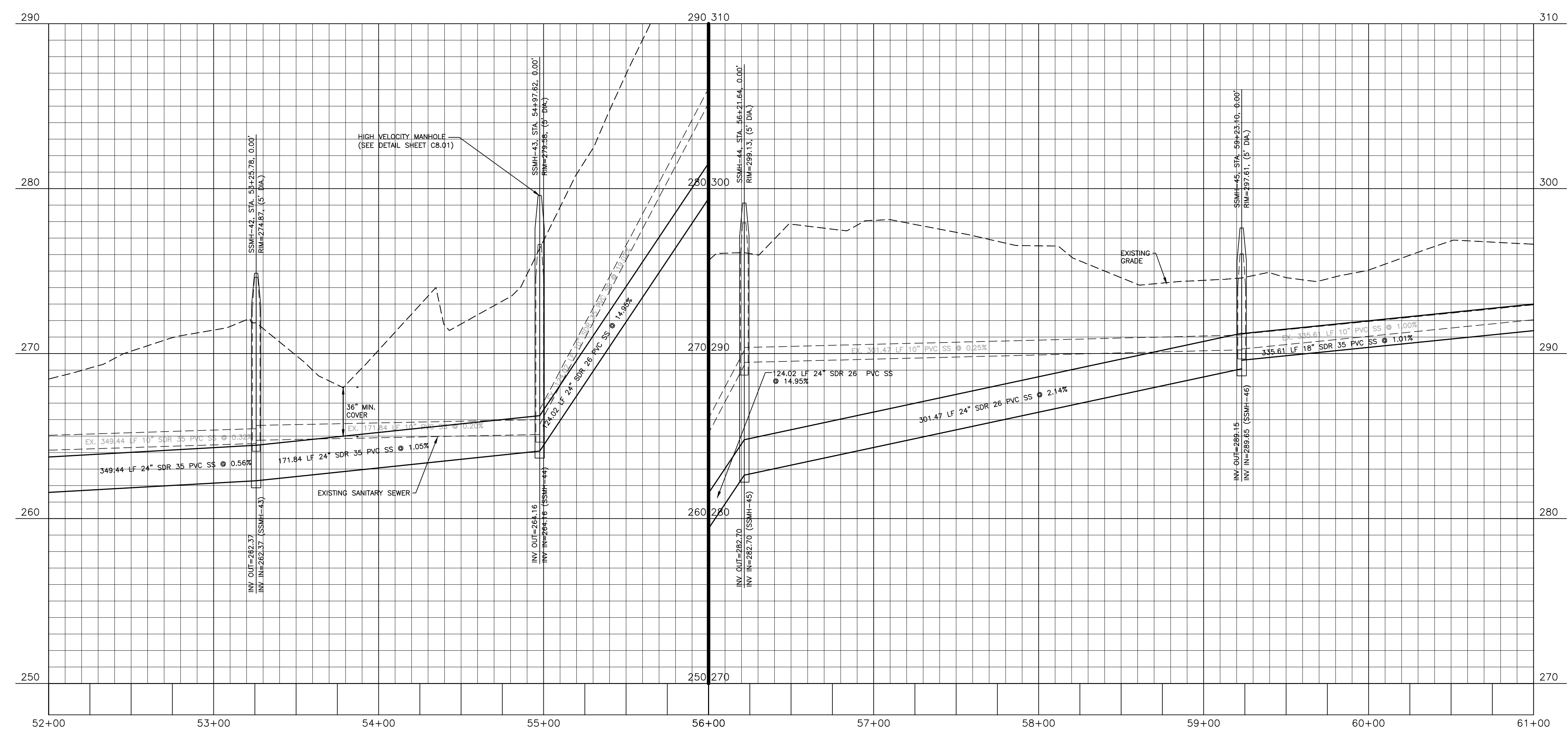
**PLAN AND PROFILE**  
 HARRIS CREEK INTERCEPTOR  
 STA. 43+00 THRU STA. 52+00

# C5.01

FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION



## HARRIS CREEK INTERCEPTOR



BYPASS PUMPING TABLE		
SUCTION MANHOLE	DISCHARGE MANHOLE	QPEAK (GPM)
MH46	MH45	177.97
MH45	MH44	177.97
MH44	MH43	177.97
MH43	MH42	177.97
MH42	MH41	177.97

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 City of Raleigh Review Officer \_\_\_\_\_

M:\Projects\AWH\120000\AWH120000\Production\Engineering\SS\Outfall\Upgrade\Current Drawings\AWH12002-P1.dwg, 6/7/2022 4:51:08 PM, Brandon Bickel

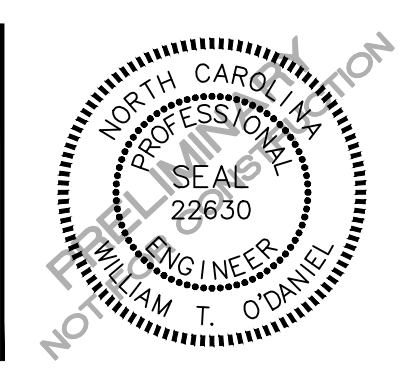


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 CONTACT: BOB MISHLER

**REVISIONS**

NO.	DATE	RESPOND TO MUNICIPAL COMMENTS
1	03.03.2022	RESPOND TO MUNICIPAL COMMENTS



# HARRIS CREEK INTERCEPTOR IMPROVEMENTS

## CONSTRUCTION DRAWINGS

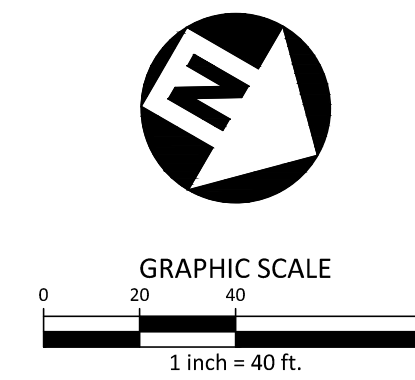
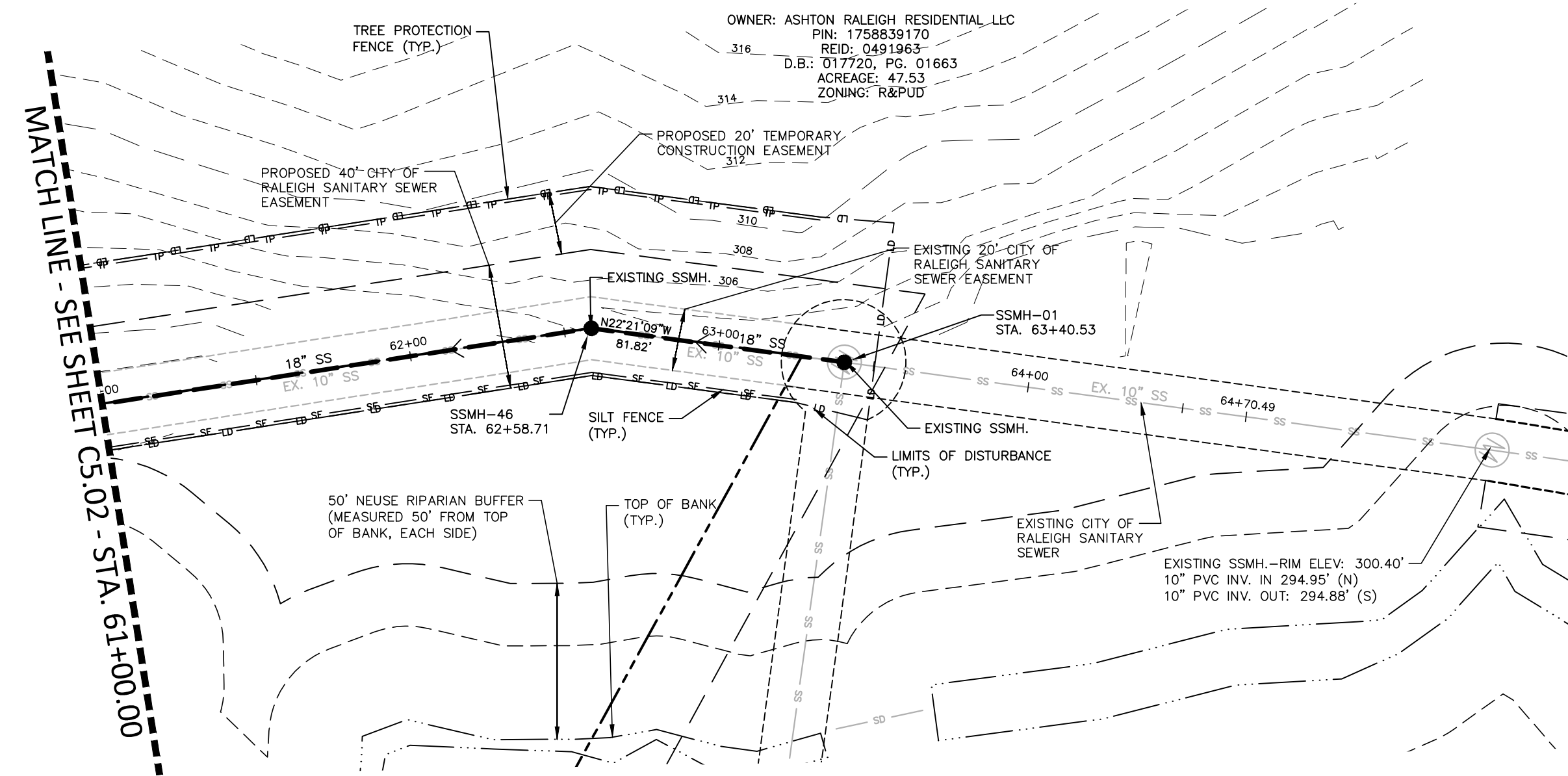
### TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

**PLAN INFORMATION**  
 PROJECT NO. AWH21002  
 FILENAME AWH12002-P1  
 CHECKED BY WTO  
 DRAWN BY BB  
 SCALE 1"=40'/1"=4'  
 DATE 11.09.2021

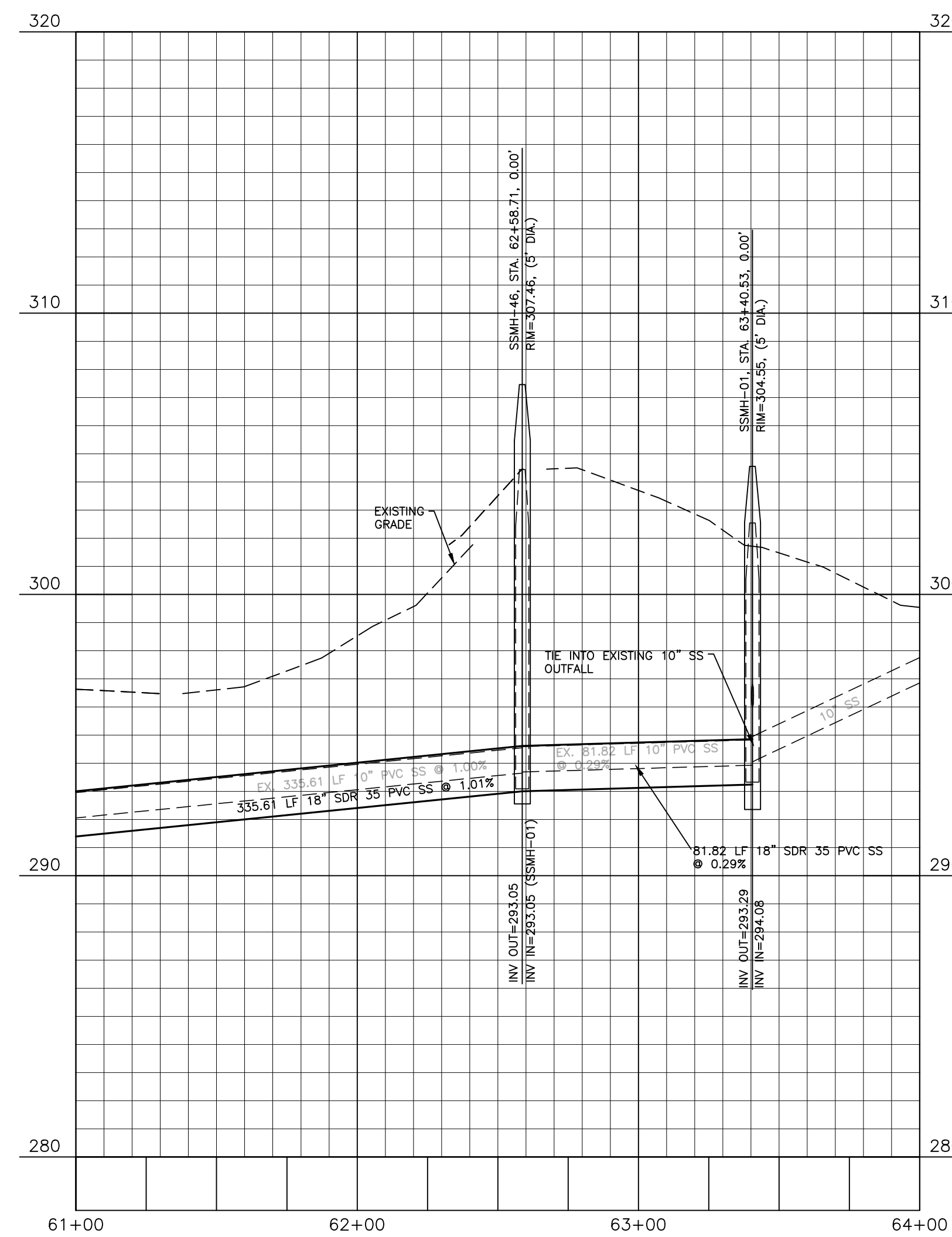
**PLAN AND PROFILE**  
 HARRIS CREEK INTERCEPTOR  
 STA. 52+00 THRU STA. 61+00

# C5.02

FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION



## HARRIS CREEK INTERCEPTOR



BYPASS PUMPING TABLE		
SUCTION MANHOLE	DISCHARGE MANHOLE	QPEAK (GPM)
MH01	MH46	177.97
MH46	MH45	177.97

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City of Raleigh Development Approval \_\_\_\_\_  
 City of Raleigh Review Officer \_\_\_\_\_

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M:\Projects\AWH\AWH-20000\04-Production\Engineering\SS-Outlet\Upgrade\Current Drawings\AWH1002-P1.dwg, 6/7/2022 4:55:12 PM, Brandon Bicket



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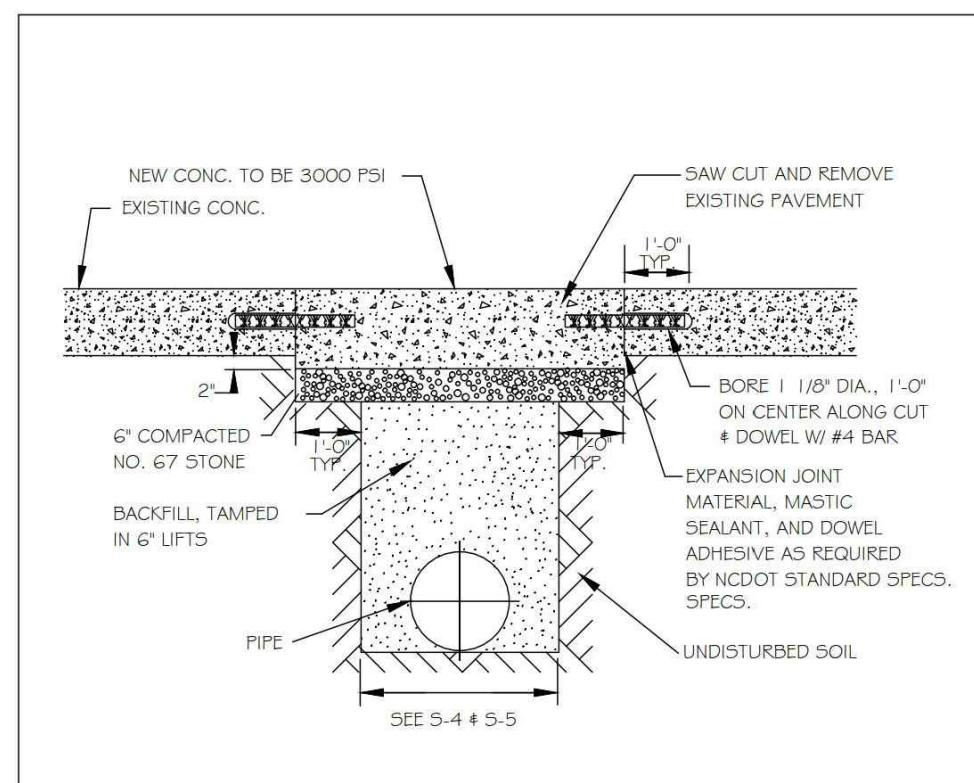
**HARRIS CREEK INTERCEPTOR IMPROVEMENTS**  
 CONSTRUCTION DRAWINGS  
 TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
 WAKE COUNTY, NORTH CAROLINA

**PLAN INFORMATION**

PROJECT NO.	AWH21002
FILENAME	AWH21002-P1
CHECKED BY	WTO
DRAWN BY	BB
SCALE	1"=40'/1"=4'
DATE	11.09.2021

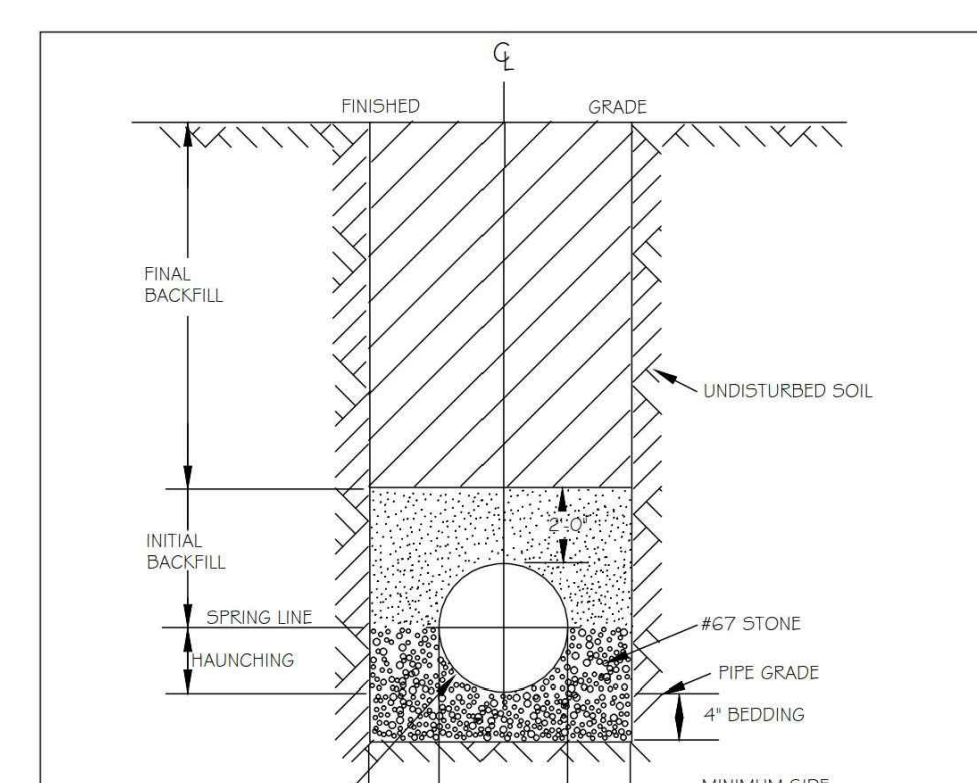
**PLAN AND PROFILE**  
 HARRIS CREEK INTERCEPTOR  
 STA. 61+00 THRU STA. 64+00

**C5.03**



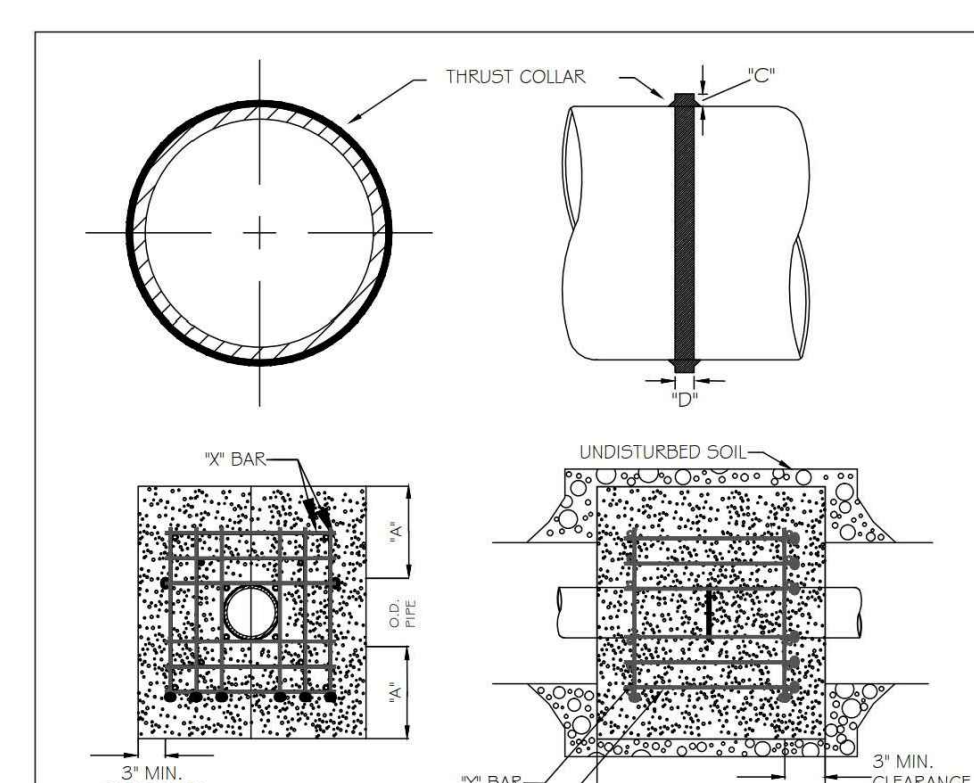
NOTES:  
 1. See City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.  
 2. Pavement cuts over 5'-0" in width shall be reinforced to N.C.D.O.T. standards.  
 3. Pavement cuts shall be made with an appropriate saw cut machine.  
 4. Pavement cuts within NCDOT ROW shall conform to the approved on site encroachment permit.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD CONCRETE PAVEMENT PATCH DETAIL				
DWG. NO.	REVISIONS	DATE	DATE	
5-2	D.W.C. R.H.H.	6-23-99 3-30-00	A.B.B. J.P.S.	4-19-04 0-6-10



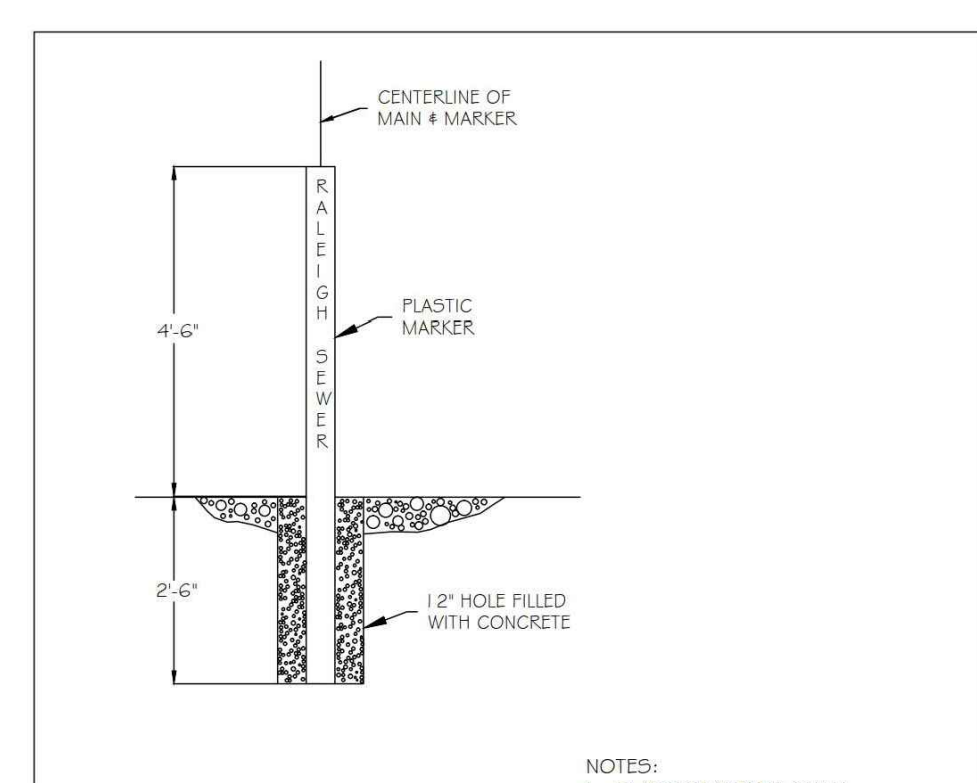
NOTES:  
 1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.  
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.  
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.  
 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
TRENCH BOTTOM DIMENSIONS AND BACKFILL REQUIREMENTS FOR PVC GRAVITY SEWER MAIN			
DWG. NO.	REVISIONS	DATE	DATE
5-5	D.W.C. R.H.H.	3-1-97 7-2-82	9-3-99 3-30-00



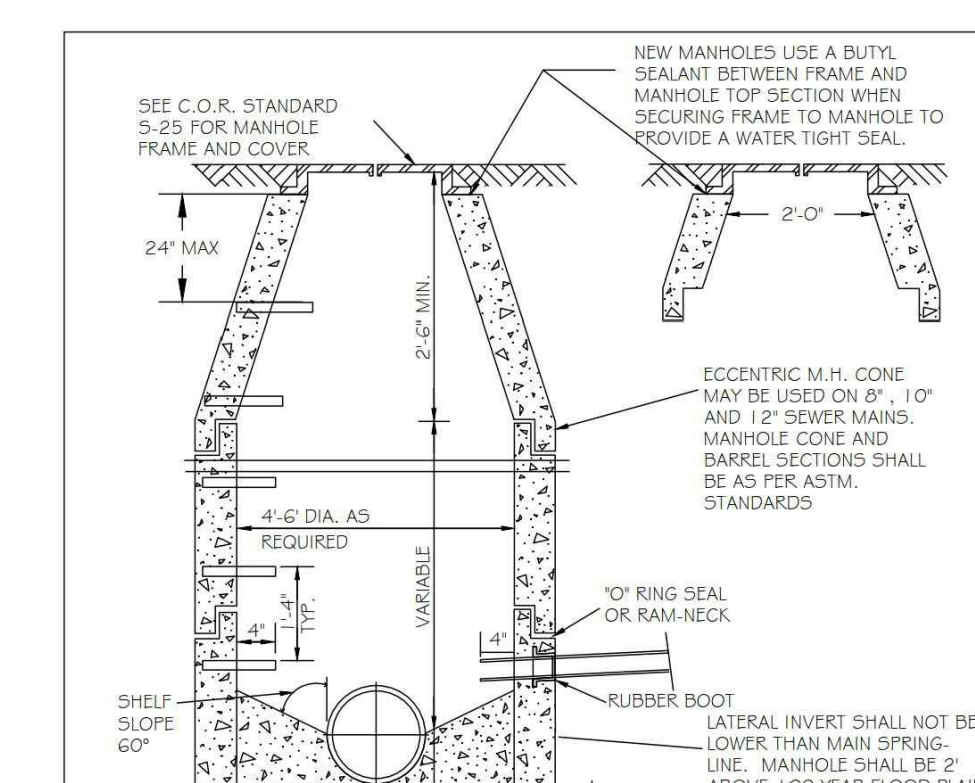
NOTES:  
 1. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.  
 2. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.  
 3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-5.  
 4. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-5.  
 5. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
RESTRAINING COLLAR DESIGN DATA FOR SEWER FORCE MAIN			
DWG. NO.	REVISIONS	DATE	DATE
5-6	D.H.L. R.H.H.	1-21-00 6-18-05	



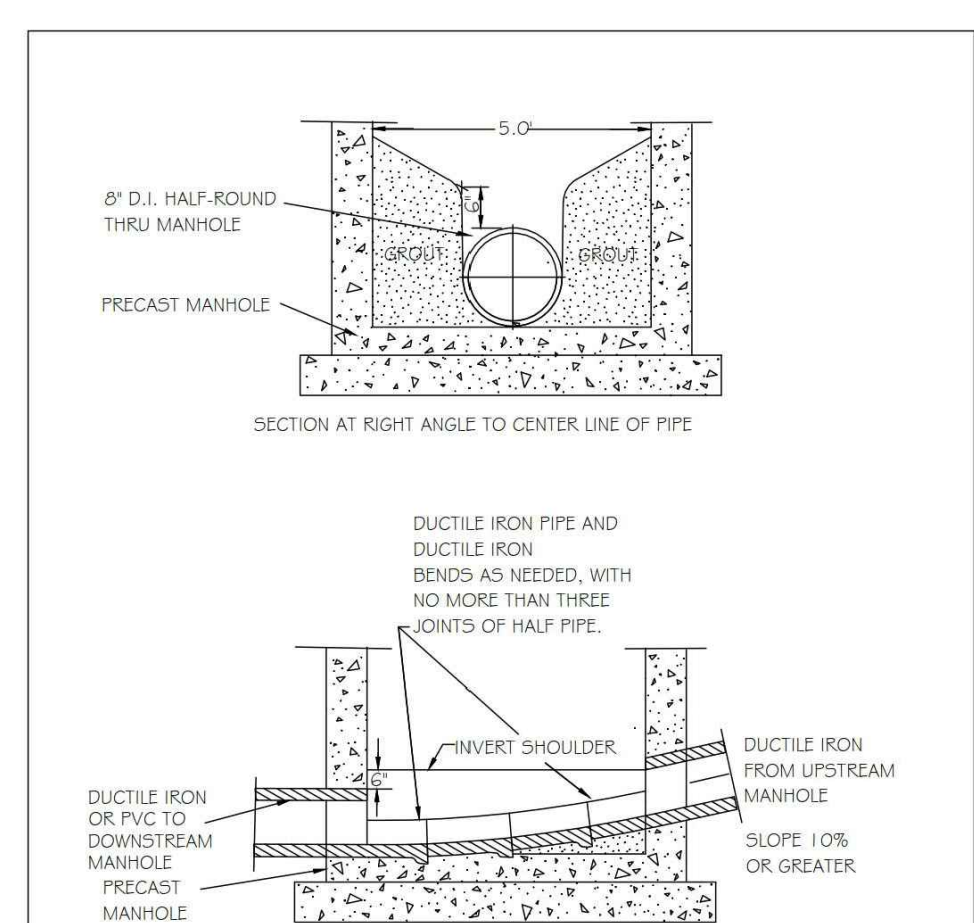
NOTES:  
 1. PLASTIC MARKER SHALL BE GREEN IN COLOR.  
 2. MARKERS SHALL BE LABELED "RALEIGH SEWER".  
 3. TO BE SPACED EVERY 300 FEET ON EACH SIDE OF ANY ROADWAY OR JUNCTION.  
 4. MARKERS SHALL BE ROUND 4" IN DIAMETER.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
STANDARD MAIN MARKER FOR SEWER FORCE MAINS IN EASEMENTS			
DWG. NO.	REVISIONS	DATE	DATE
5-8	R.H.H. D.H.L.	1-21-00 6-18-05	



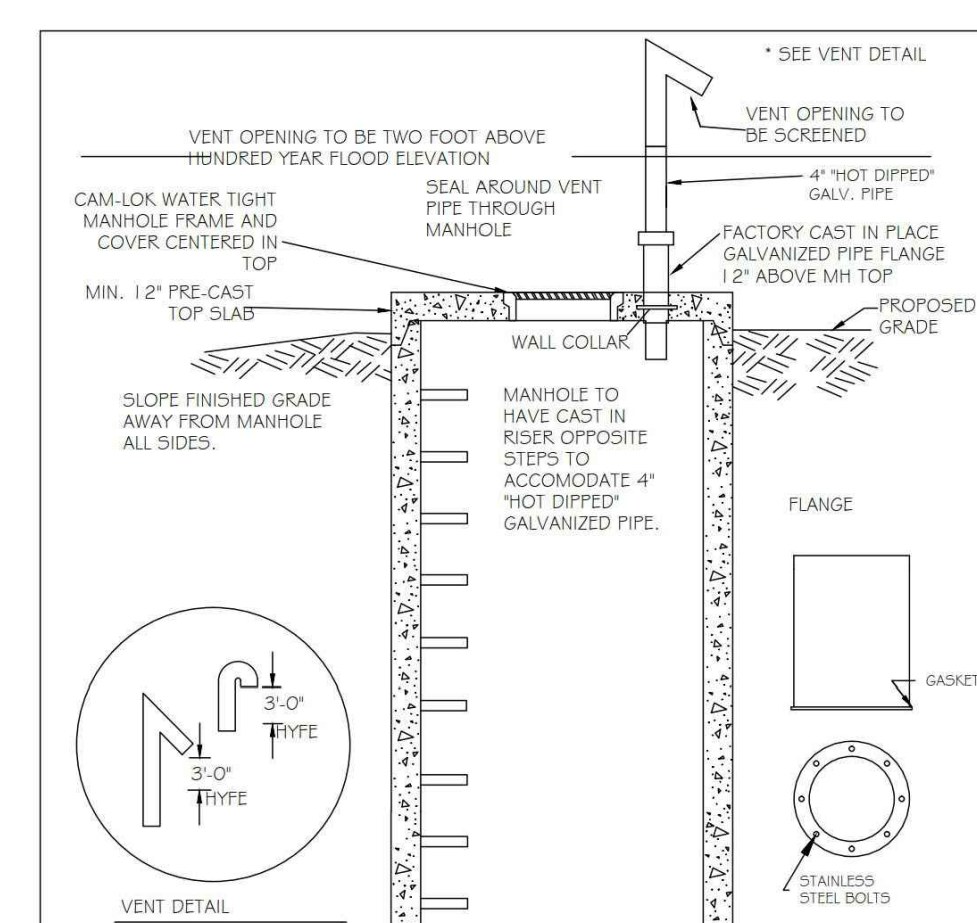
NOTES:  
 1. LATERAL INVERT SHALL NOT BE LOWER THAN MAIN SPRING-LINE. MANHOLE SHALL BE 2' ABOVE 100 YEAR FLOOD PLAIN OR SEALED AND VENT TO BE 2' ABOVE 100 YEAR FLOOD PLAIN, WHEN MANHOLE TOPS ARE IN EXCESS OF 5' ABOVE GRADE. OUTSIDE STEPS MUST BE PROVIDED. SEE STANDARD S-29 FOR STEP DETAIL. IN NON TRAFFIC AREAS, TOP OF FRAME AND COVER SHALL BE INSTALLED A MIN. OF 1' ABOVE FINISHED SURFACE.  
 2. SEE SEWER DESIGN SECTION.  
 3. MIN. 9" COMPACTED #67 STONE BASE TO BE INSTALLED UNDER NEW MANHOLE.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD PRECAST SANITARY SEWER MANHOLE				
DWG. NO.	REVISIONS	DATE	DATE	
5-20	T.C.A. R.H.H.	12-31-82 3-30-00	A.B.B. D.H.L.	3-31-00 4-16-05



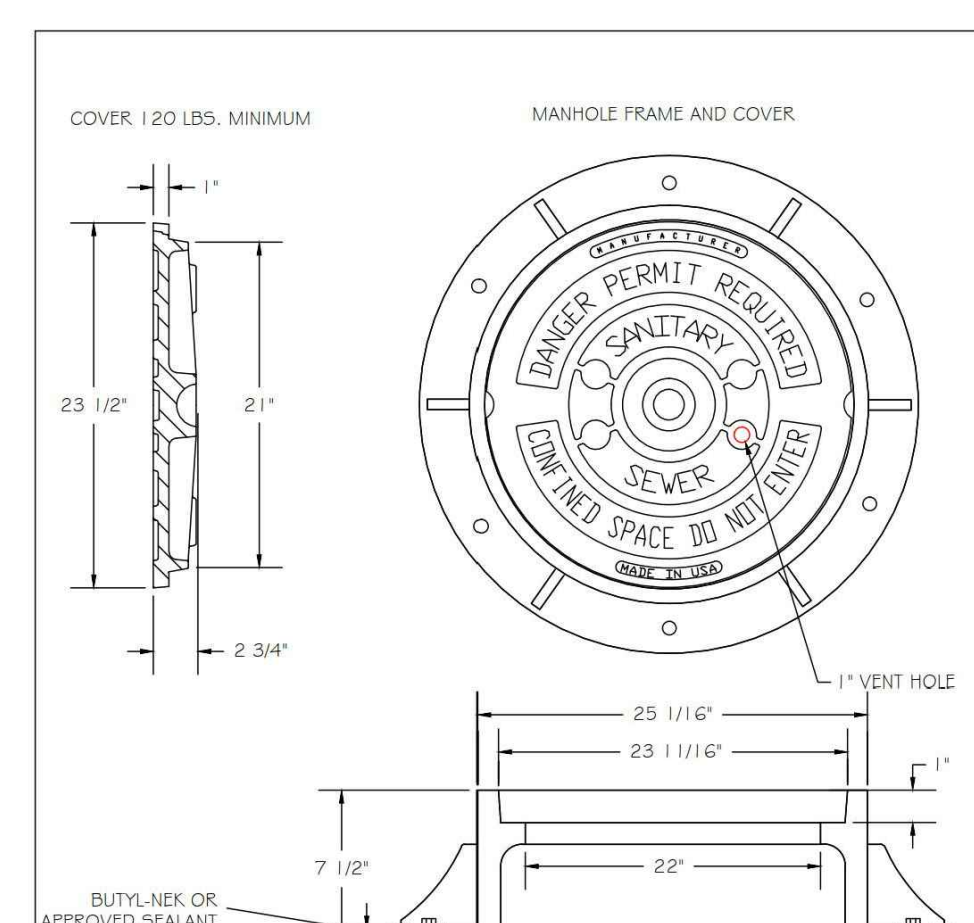
NOTE:  
 NO HORIZONTAL ALIGNMENT CHANGE CAN BE MADE WITH IN THIS MANHOLE TYPE. USE ON GRADES 1.0% OR GREATER.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD HIGH VELOCITY MANHOLE INVERT				
DWG. NO.	REVISIONS	DATE	DATE	
5-23	T.C.A.	3-1-87 12-81-91	R.H.H.	3-30-00



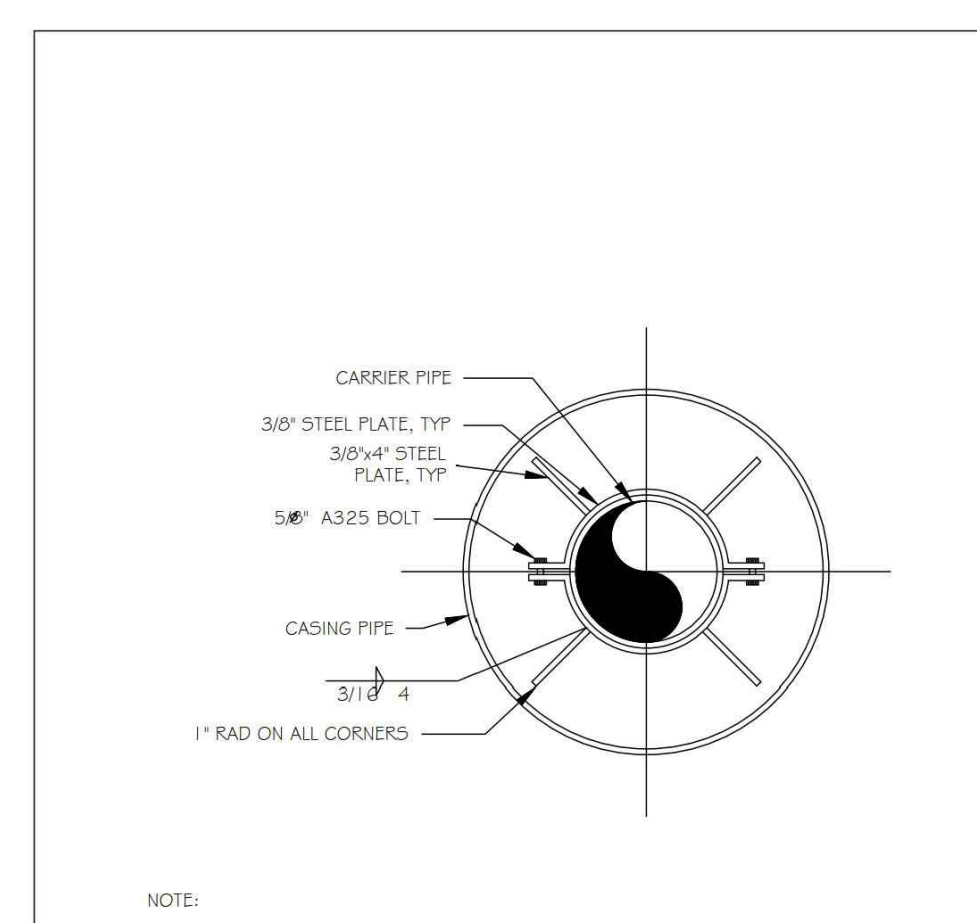
NOTES:  
 1. VENT MUST BE FACTORY WELDED FABRICATED AND "HOT DIPPED" GALVANIZED.  
 2. TYPE - Hundred Year Flood elevation

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD SEAL TIGHT MANHOLE WITH VENTED STACK				
DWG. NO.	REVISIONS	DATE	DATE	
5-24	D.W.C. R.H.H.	6-7-99 3-30-00	A.B.B. D.H.L.	4-15-04 6-18-05



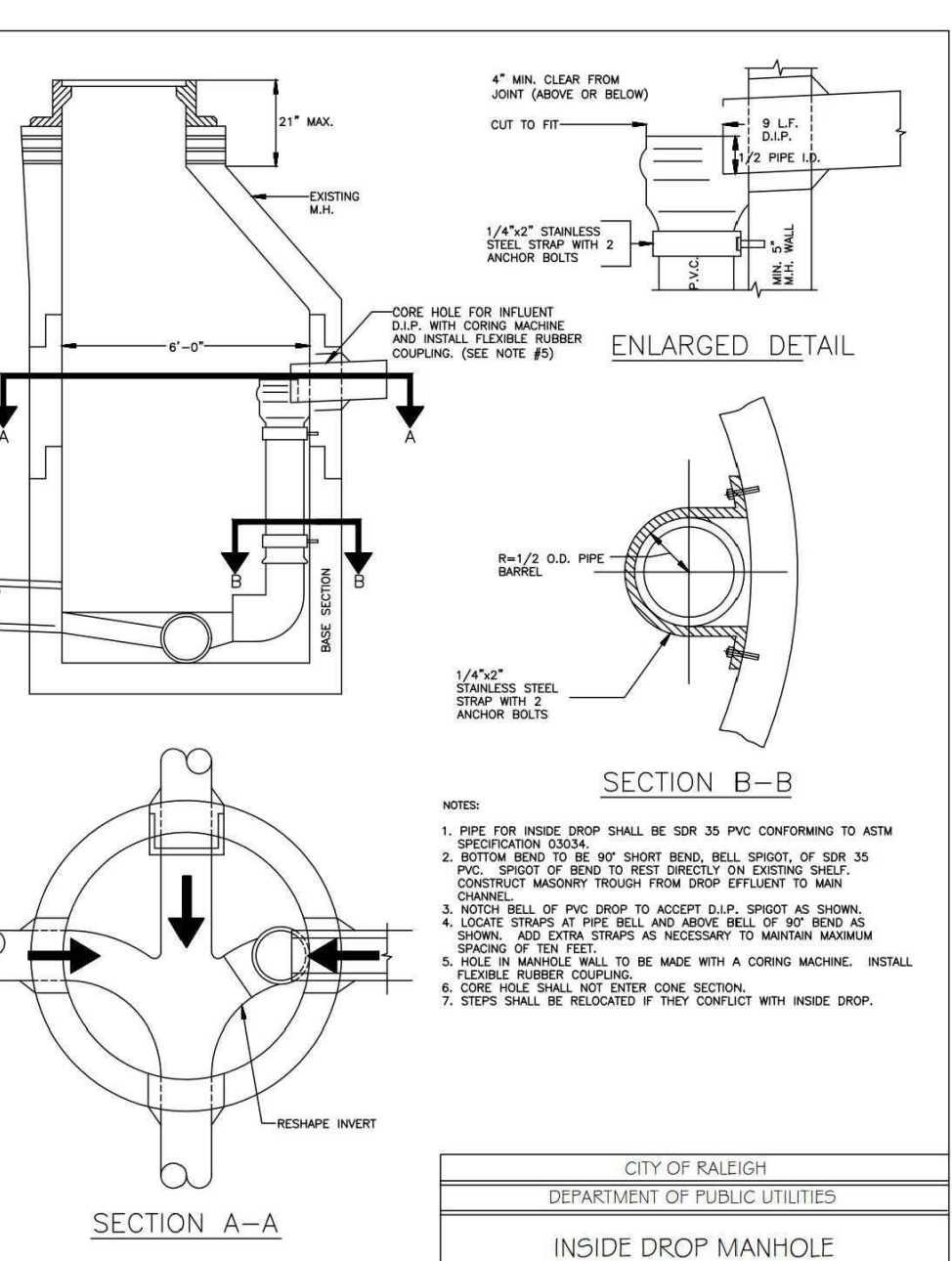
NOTES:  
 1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.  
 2) FRAME SHALL BE A MINIMUM WEIGHT OF 160 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.  
 3) COVER SHALL WEIGH A MIN. OF 120 LBS.  
 4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE COVER				
DWG. NO.	REVISIONS	DATE	DATE	
5-25	R.H.H. D.H.L.	3-1-87 3-30-00	A.B.B. D.H.L.	2-9-05 6-18-05

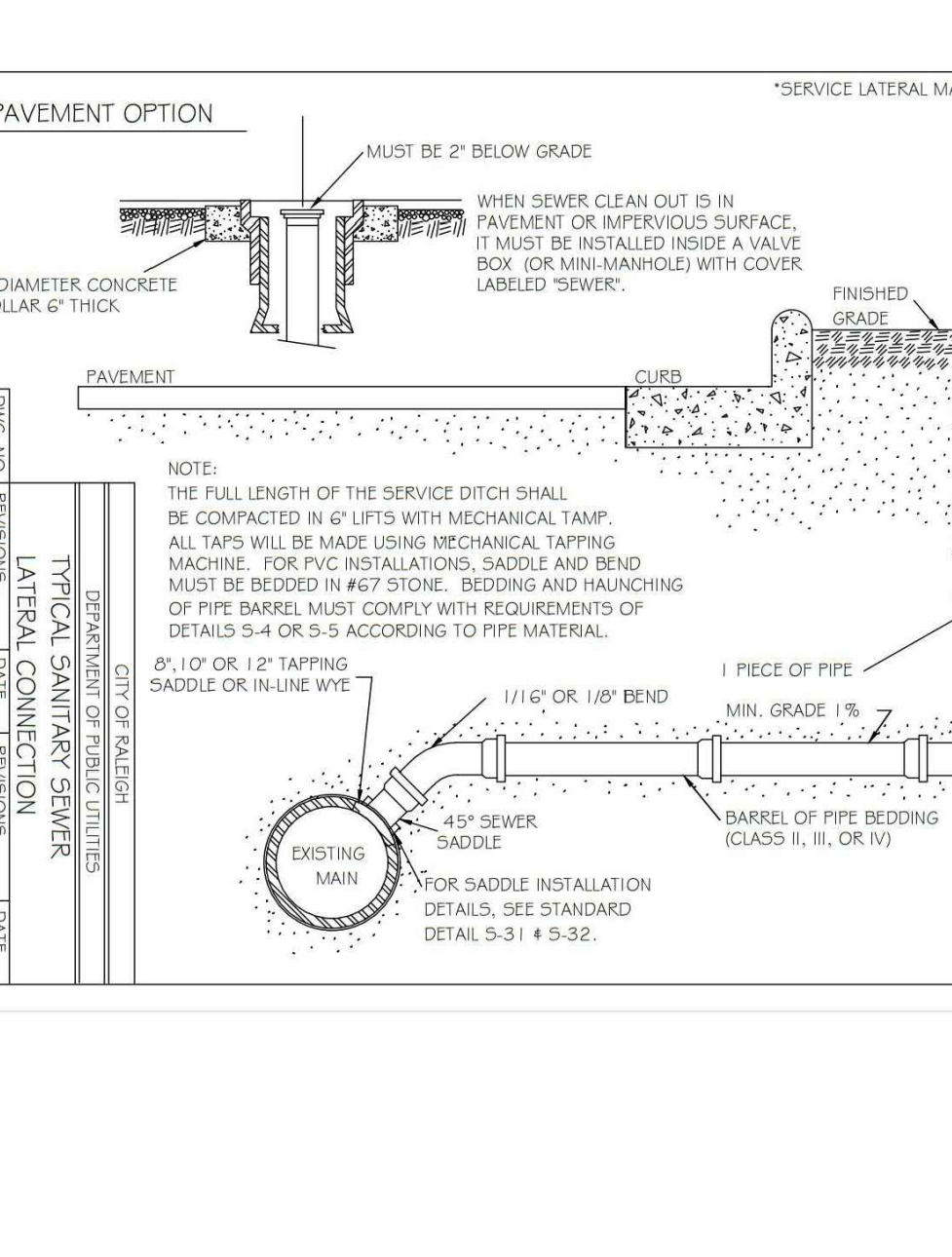


NOTE:  
 1) USE A MINIMUM OF TWO SPIDERS PER PIPE JOINT ONE FOURTH OF THE PIPE JOINT LENGTH IN FROM BOTH THE BELL AND SPIGOT ENDS.

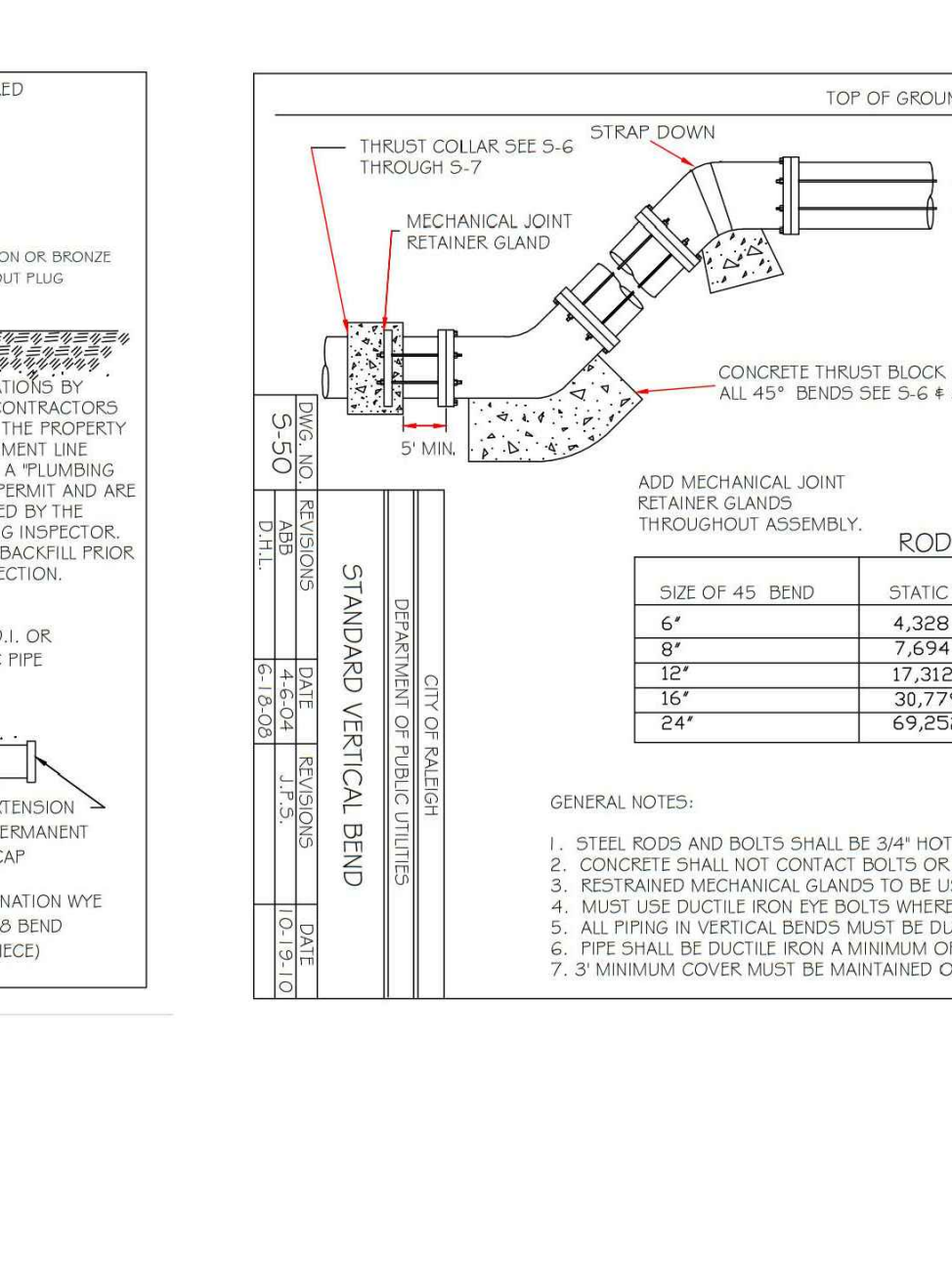
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
PIPE ALIGNMENT GUIDE			
DWG. NO.	REVISIONS	DATE	DATE
5-39	R.H.H. A.B.B.	3-31-00 4-1-04	



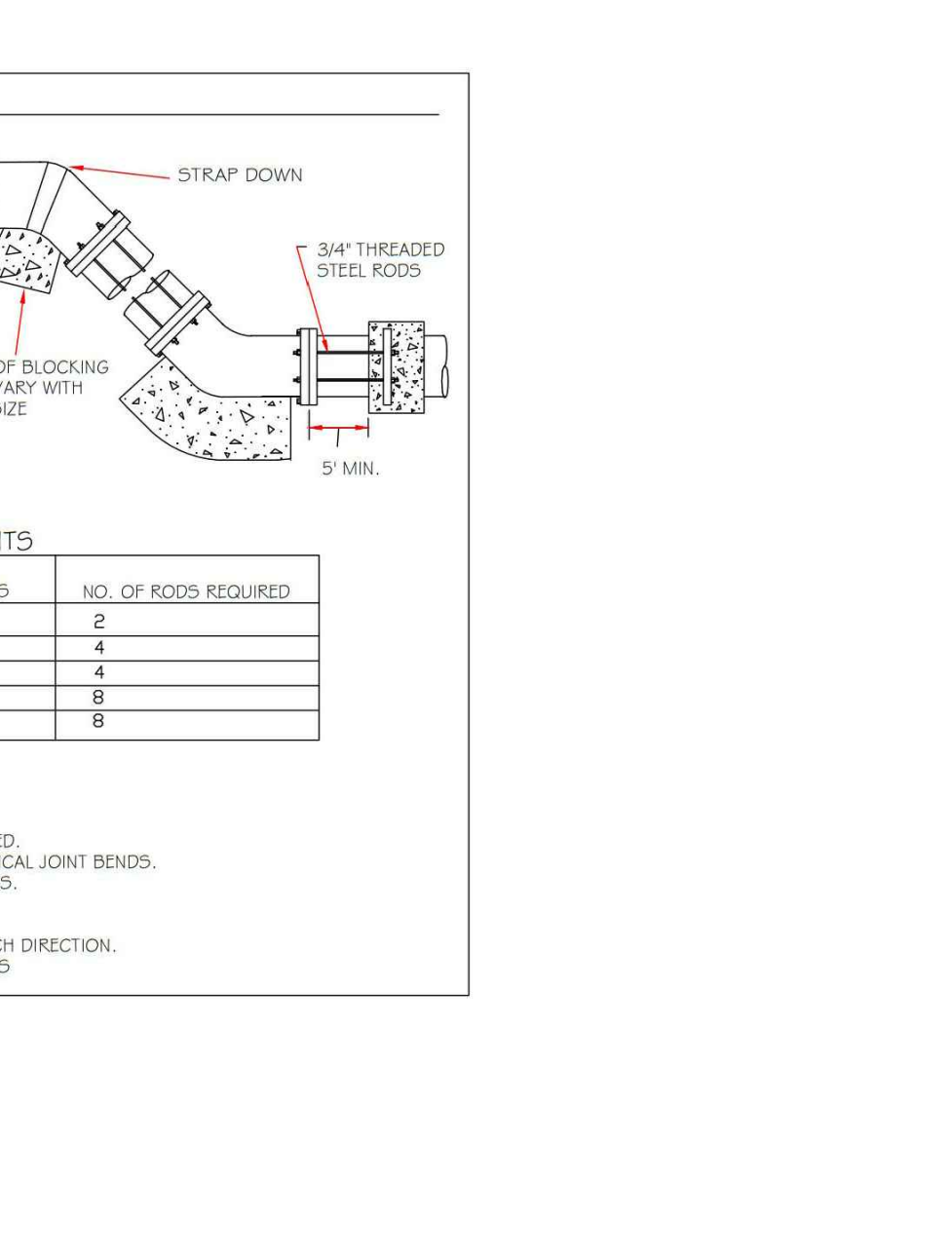
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
INSIDE DROP MANHOLE			
DWG. NO.	REVISIONS	DATE	DATE
5-53	M.A.B.	11-6-13	



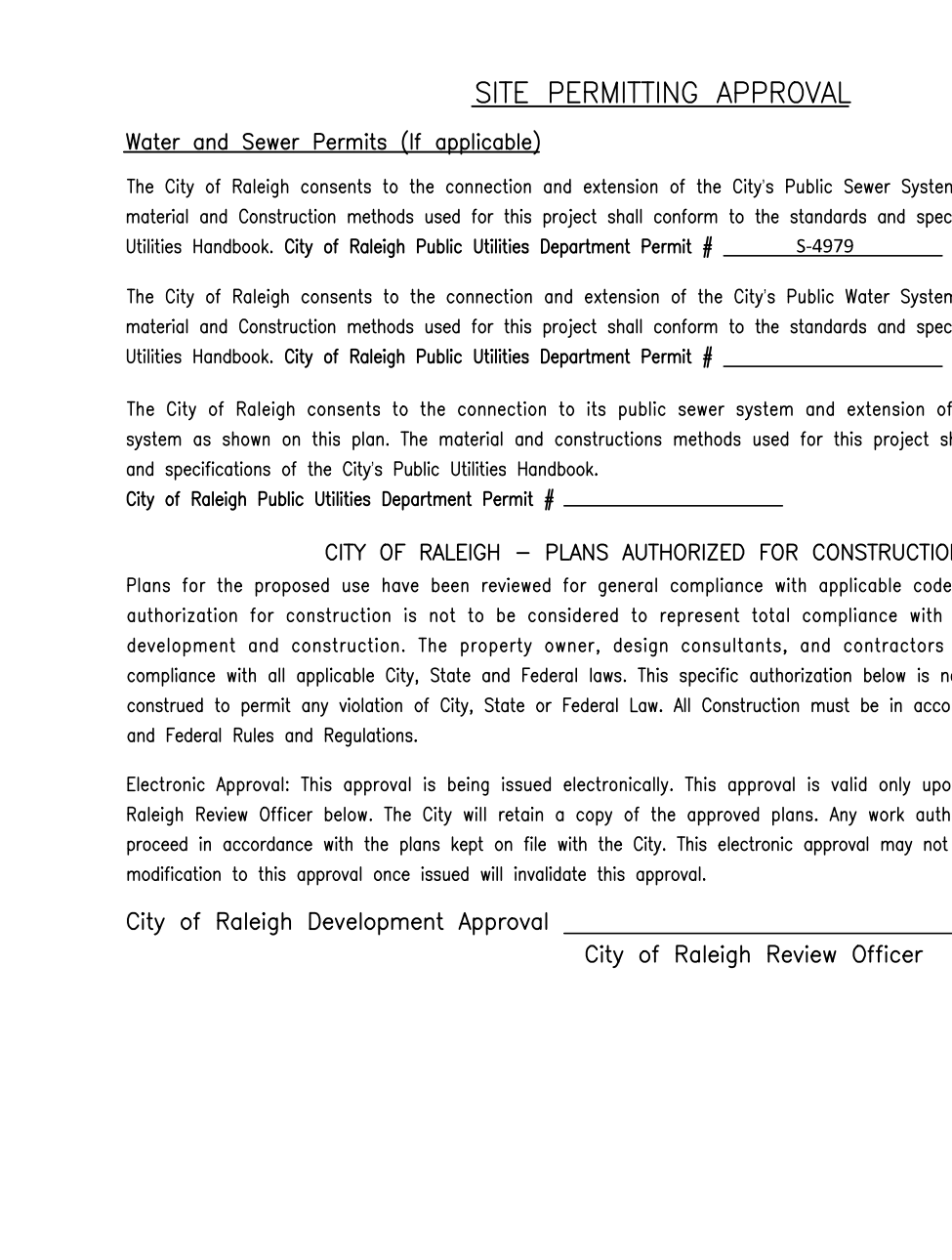
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES			
TYPICAL SANITARY SEWER LATERAL CONNECTION			
DWG. NO.	REVISIONS	DATE	DATE
5-30	D.H.L. R.H.H.	3-30-00 6-18-05	



GENERAL NOTES:  
 1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.  
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BOLTS.  
 3. RESTRAINING MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.  
 4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.  
 5. ALL FITTING IN MECHANICAL BOLDS MUST BE DUCTILE IRON.  
 6. PIPE SHALL BE DUCTILE IRON A MINIMUM OF ONE JOINT IN EACH DIRECTION.  
 7. 3" MINIMUM COVER MUST BE MAINTAINED ON ALL FORCE MAINS.



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 # S-4979.



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**McADAMS**  
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 www.mcadamsco.com

**CLIENT**  
 ASHTON RALEIGH RESIDENTIAL, LLC.  
 5711 SIX FORKS ROAD, SUITE 300  
 RALEIGH, NORTH CAROLINA 27609  
 PHONE: 919. 232. 3695  
 CONTACT: BOB MISHLER

**ASHTON WOODS**

**HARRIS CREEK INTERCEPTOR  
 IMPROVEMENTS**  
 TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
 WAKE COUNTY, NORTH CAROLINA

**SITE PERMITTING APPROVAL**

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City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

**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 relied upon issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval \_\_\_\_\_  
 City of Raleigh Review Officer \_\_\_\_\_

**REVISIONS**

NO.	DATE	RESPOND TO MUNICIPAL COMMENTS
1	03.03.2022	RESPOND TO MUNICIPAL COMMENTS

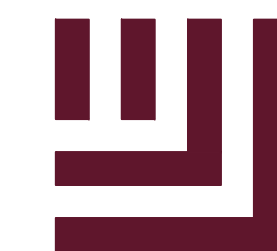
**PLAN INFORMATION**

PROJECT NO. AWH-21002  
 FILENAME AWH21002-01  
 CHECKED BY .  
 DRAWN BY .  
 SCALE N.T.S.  
 DATE 11.09.2021  
 SHEET

**SANITARY SEWER  
 DETAILS  
 C8.01**

FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION

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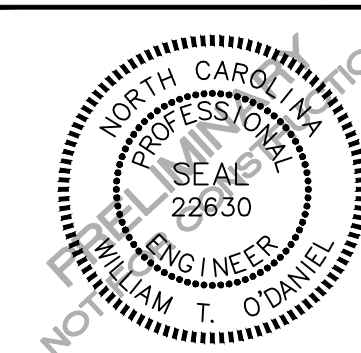
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TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
WAKE COUNTY, NORTH CAROLINA



SITE PERMITTING APPROVAL

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City of Raleigh Review Officer

REVISIONS

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PLAN INFORMATION

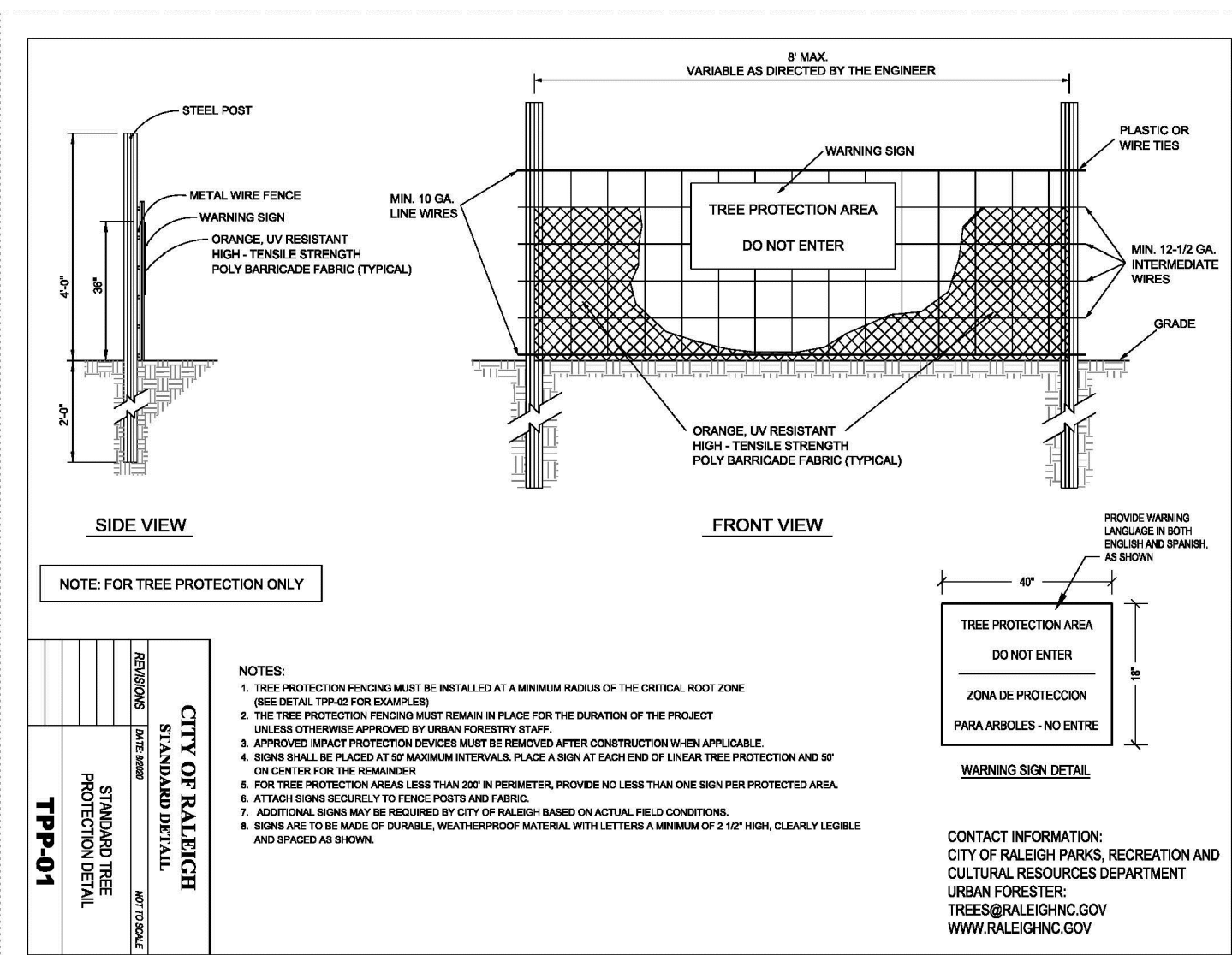
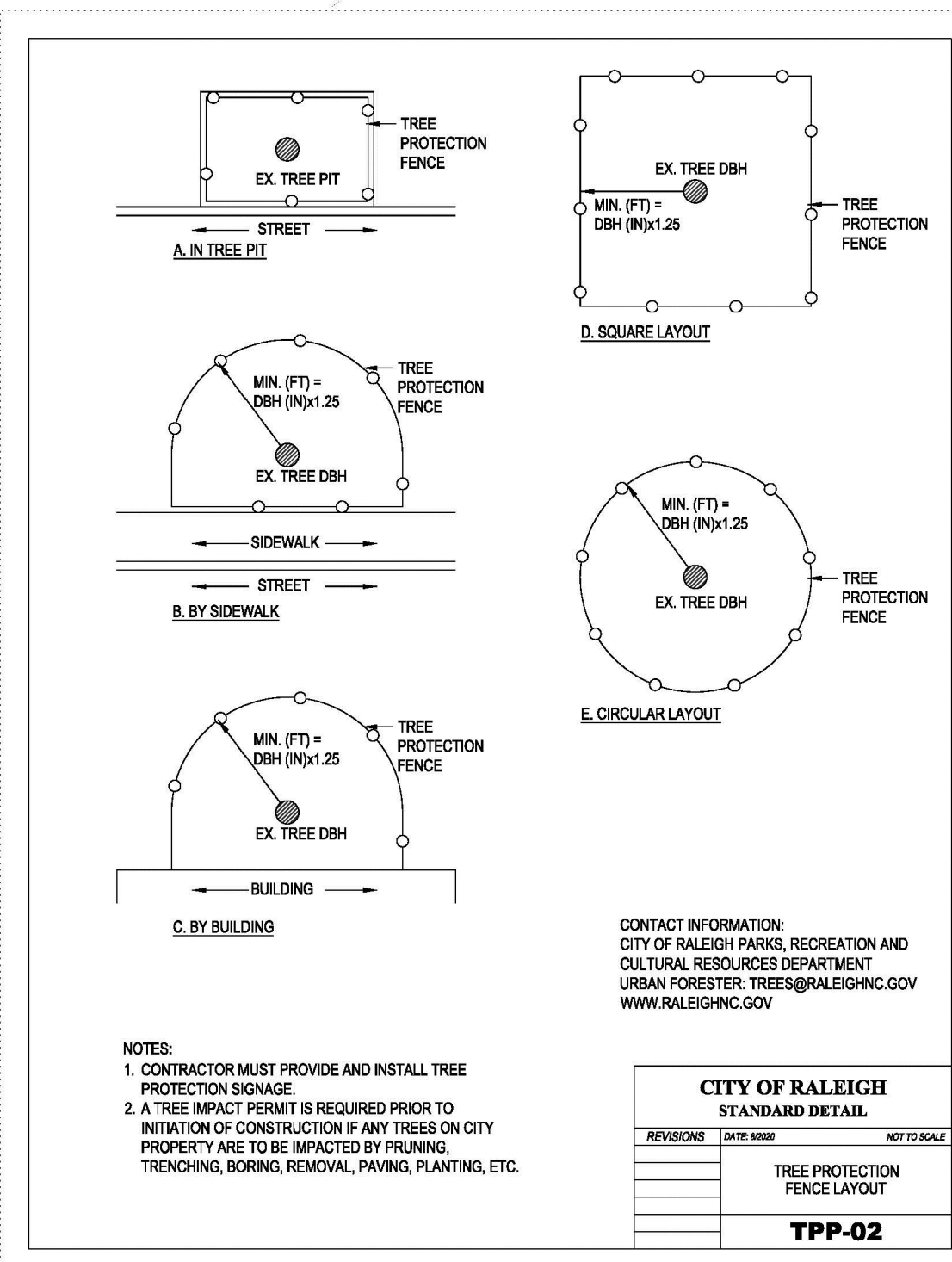
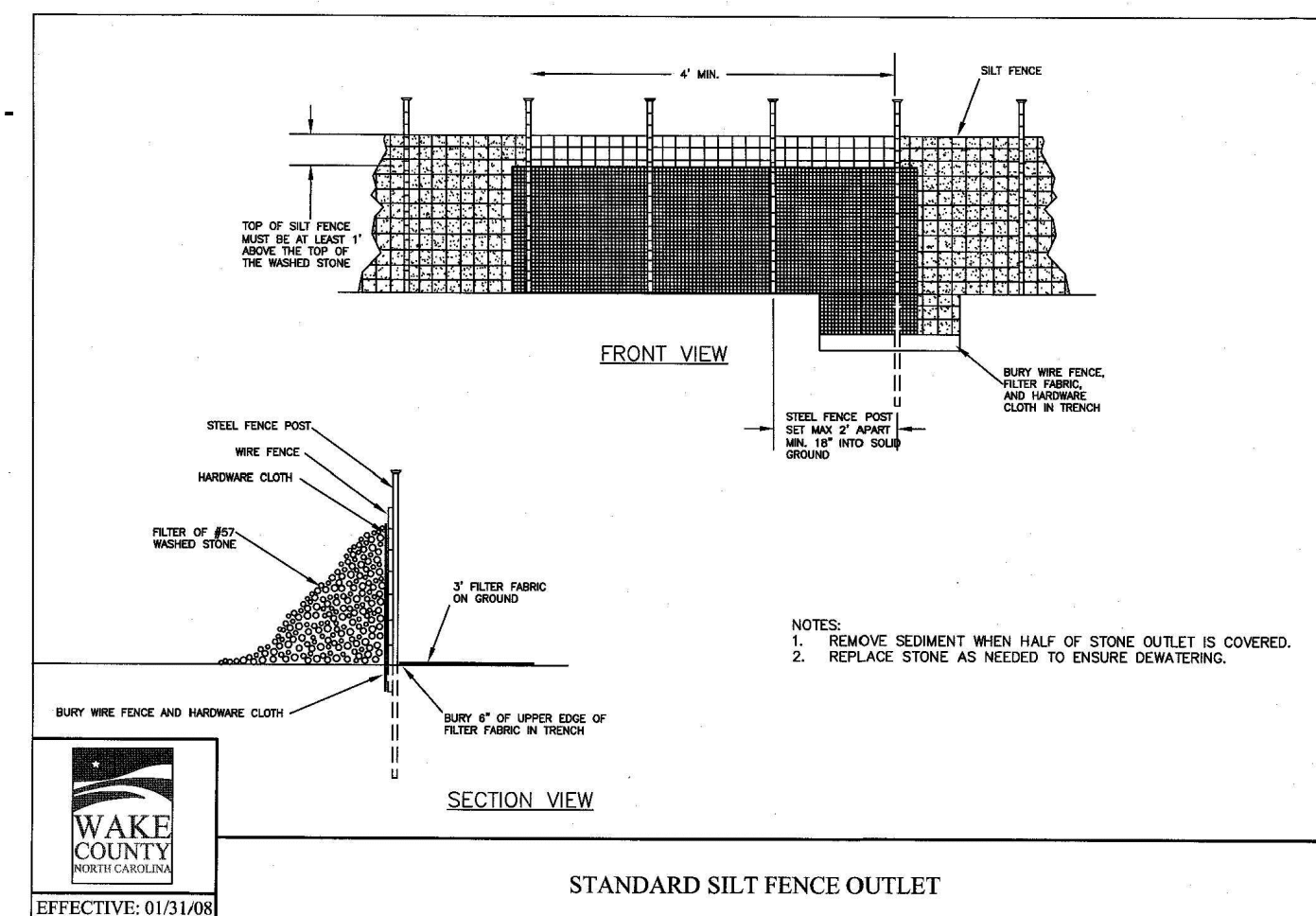
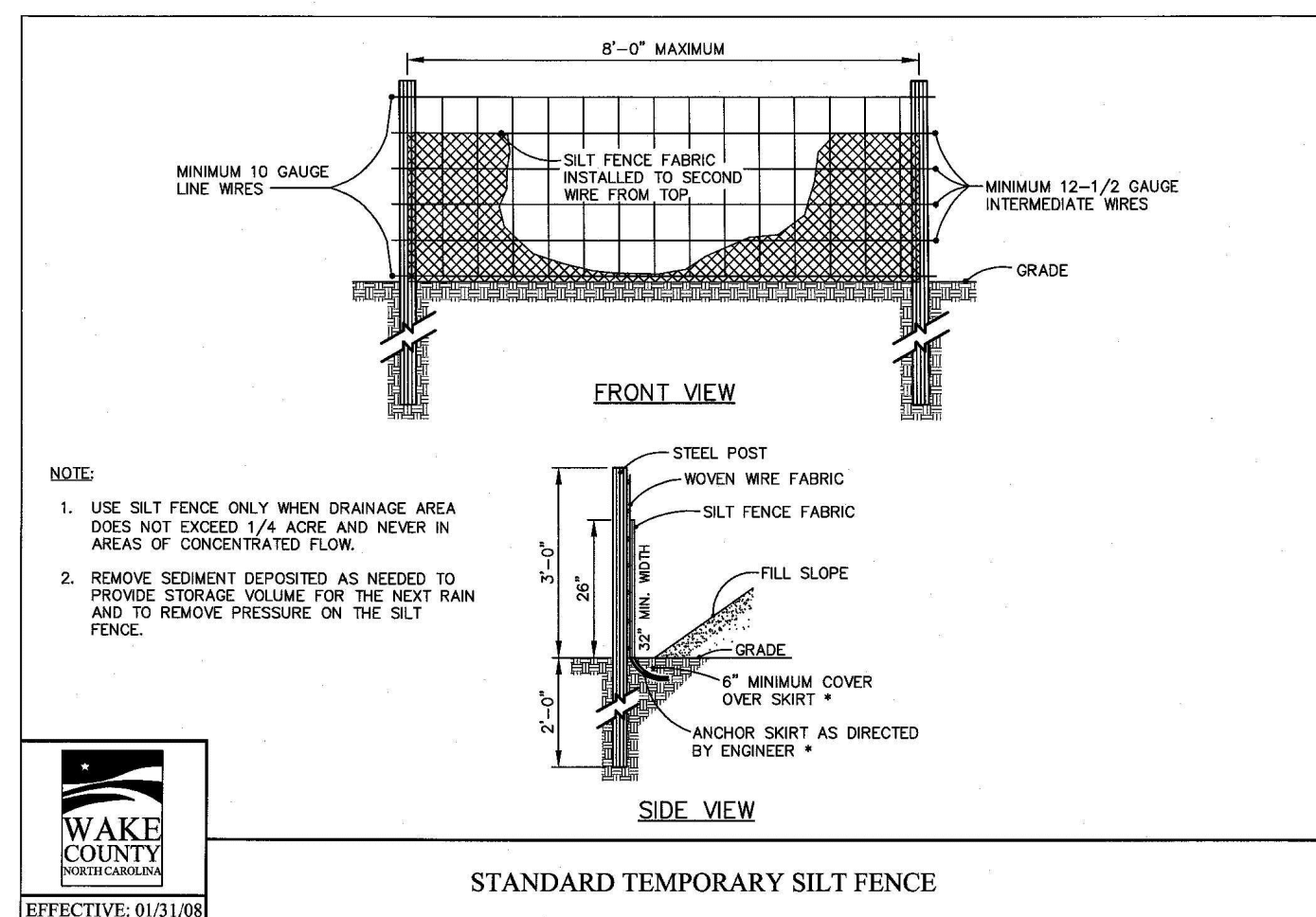
PROJECT NO. AWH-21002  
 FILENAME AWH21002-D1  
 CHECKED BY .  
 DRAWN BY .  
 SCALE N.T.S.  
 DATE 11.09.2021

SHEET

EROSION CONTROL  
DETAILS

C8.02

FINAL DRAWING - NOT RELEASED FOR CONSTRUCTION



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