

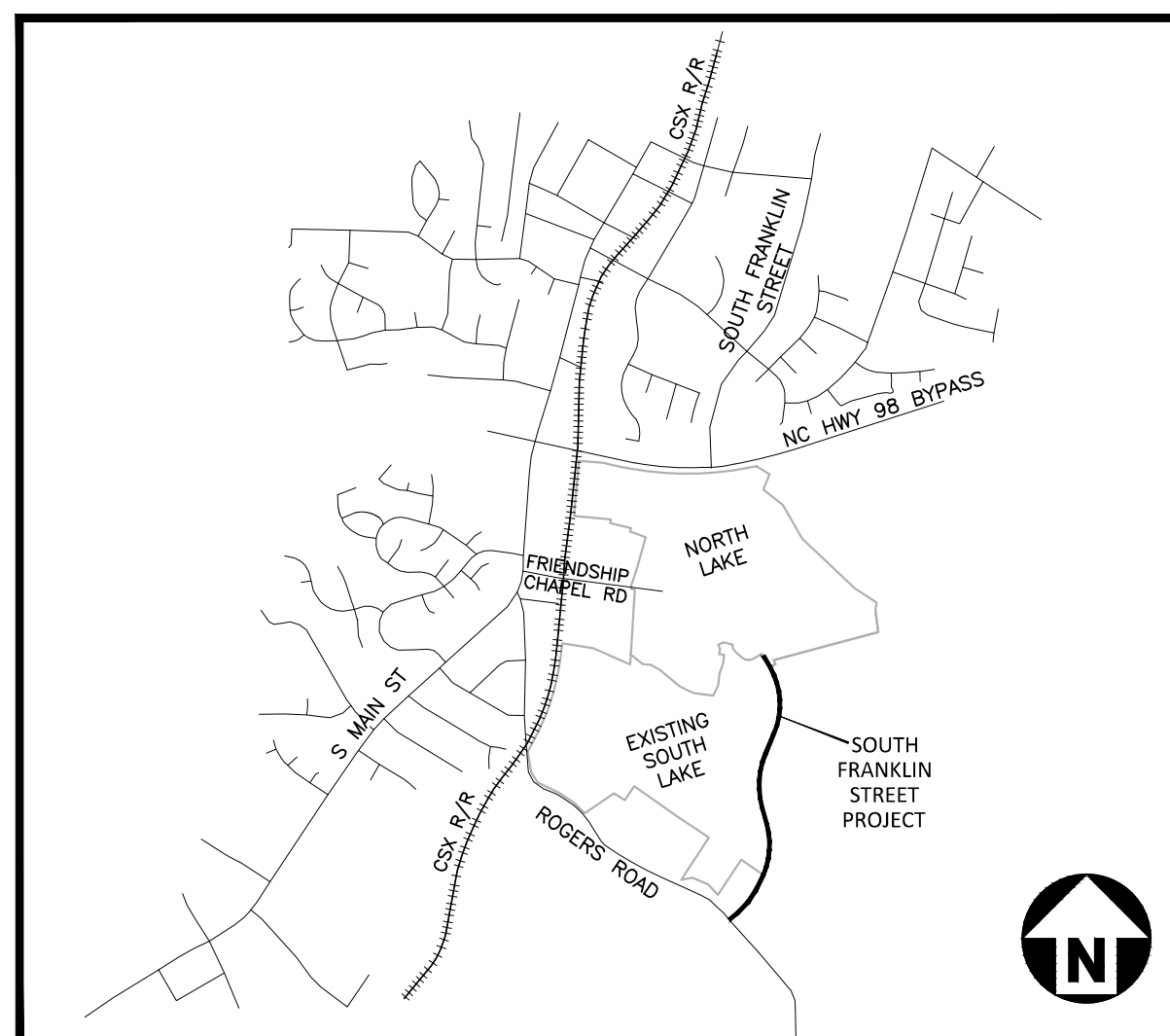
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS

0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

CONSTRUCTION DRAWINGS
PROJECT NUMBER: RAP-19000
WAKE FOREST PROJECT NUMBER: SP-22-08
DATE: FEBRUARY 23, 2024

SHEET INDEX

C0.10	Typical Sections	
C1.00	Existing Conditions	Sta. 15+00 thru Sta. 26+00
C1.01	Existing Conditions	Sta. 26+00 Thru Sta. 46+00
C2.00	Road Widening Plan	Sta. 15+00 Thru Sta. 26+00
C2.01	Road Widening Plan	Sta. 26+00 Thru Sta. 46+00
C2.10	Pavement Marking Plan	Sta. 10+00 Thru Sta. 26+00
C2.11	Pavement Marking Plan	Sta. 26+00 thru Sta. 46+00
C3.00	Grading and Storm Drainage Plan	Sta. 10+00 Thru Sta. 26+00
C3.01	Grading and Storm Drainage Plan	Sta. 26+00 Thru Sta. 46+00
C4.00	Demolition and Utility Conflict Plan	Sta. 10+00 Thru Sta. 26+00
C4.01	Demolition and Utility Conflict Plan	Sta. 26+00 Thru Sta. 46+00
C7.00	Cross Sections	STA. 14+00 THRU STA. 15+50
C7.01	Cross Sections	STA. 15+64.11 THRU STA. 16+00
C7.02	Cross Sections	STA. 16+50 THRU STA. 17+50
C7.03	Cross Sections	STA. 18+00 THRU STA. 19+50
C7.04	Cross Sections	STA. 20+00 THRU STA. 21+50
C7.05	Cross Sections	STA. 22+00 THRU STA. 23+50
C7.06	Cross Sections	STA. 24+00 THRU STA. 25+00
C7.07	Cross Sections	STA. 25+50 THRU STA. 26+50
C7.08	Cross Sections	STA. 27+00 THRU STA. 28+50
C7.09	Cross Sections	STA. 28+85.95 THRU STA. 29+50
C7.10	Cross Sections	STA. 30+00 THRU STA. 30+50
C7.11	Cross Sections	STA. 31+00
C7.12	Cross Sections	STA. 31+50
C7.13	Cross Sections	STA. 32+00
C7.14	Cross Sections	STA 32+29.91
C7.15	Cross Sections	STA. 32+50
C7.16	Cross Sections	STA. 33+00 THRU STA. 33+50
C7.17	Cross Sections	STA. 34+00 THRU STA. 35+00
C7.18	Cross Sections	STA. 35+50 THRU STA. 37+00
C7.19	Cross Sections	STA. 37+50 THRU STA. 39+00
C7.20	Cross Sections	STA. 39+50 THRU STA. 40+50
C7.21	Cross Sections	STA. 41+00 THRU STA. 42+50
C7.22	Cross Sections	STA. 43+00 THRU STA. 44+00
C8.00	Site Details	
C8.01	Site Details	
C8.02	Pavement Marking Details	
C8.03	Storm Drainage Details	
C8.04	Storm Drainage Details	
C8.05	Erosion Control Details	
C8.06	Seeding Schedule	
C8.07	NGC01 Self Inspection	
L5.00	Code Landscape Plan	
L5.01	Code Landscape Plan	
L5.10	LANDSCAPE DETAILS	
C10.00	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND INDEX OF SHEETS)	
C10.01	TRAFFIC CONTROL PHASING & SECTIONS	
C10.10	TRAFFIC CONTROL PLAN PHASE 1	STA. 10+00 THRU STA. 26+00
C10.11	TRAFFIC CONTROL PLAN PHASE 1	STA. 26+00 THRU STA. 46+00
C10.20	TRAFFIC CONTROL PLAN PHASE 2	STA. 10+00 THRU STA. 26+00
C10.21	TRAFFIC CONTROL PLAN PHASE 2	STA. 26+00 THRU STA. 46+00
C10.30	TRAFFIC CONTROL PLAN PHASE 3	STA. 10+00 THRU STA. 26+00
C10.31	TRAFFIC CONTROL PLAN PHASE 3	STA. 26+00 THRU STA. 46+00



VICINITY MAP
N.T.S.



Know what's below.
Call before you dig.

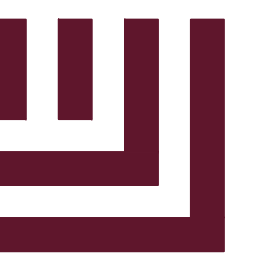
NO SUBSURFACE UTILITY SURVEY (SUE) HAS BEEN PERFORMED FOR THE PREPARATION OF THESE PLANS. ADDITIONAL UNDERGROUND UTILITIES MAY BE IN THE AREA. CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST, CITY OF RALEIGH AND NCDOT (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

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smeyer
04/25/2024
Public Works/Engineering

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Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION



McADAMS

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Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
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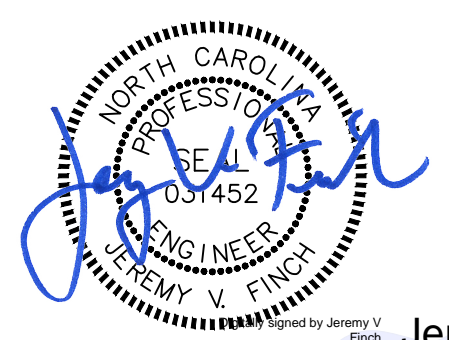
CONTACT

JEREMY FINCH
jfinch@mcadamsco.com
PHONE: 919. 361. 5000

CLIENT

TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

PROJECT DIRECTORY

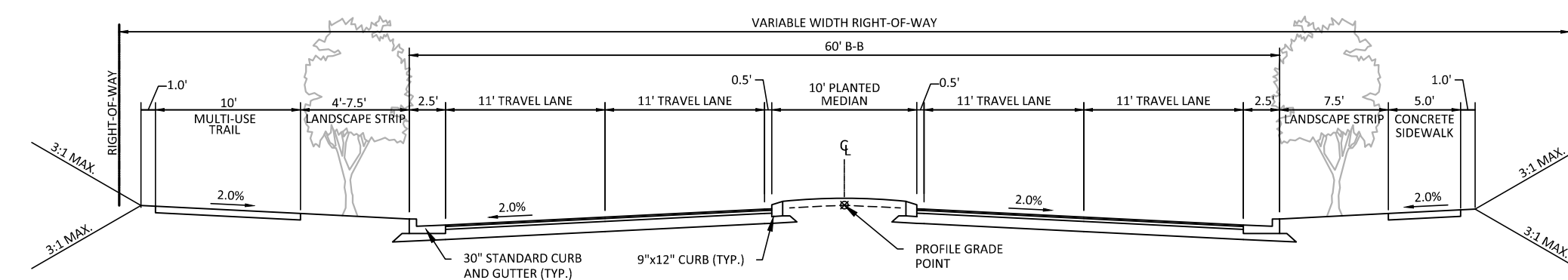


Jeremy V. Finch

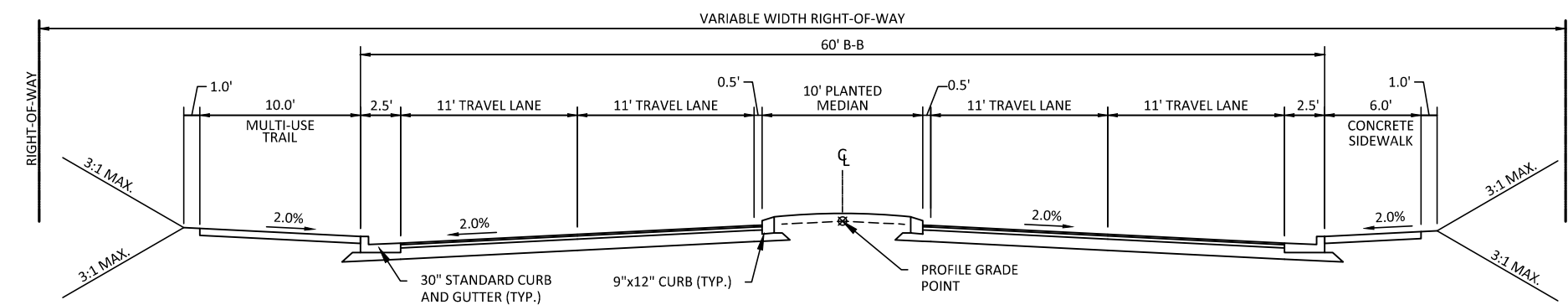
REVISIONS

NO.	DATE
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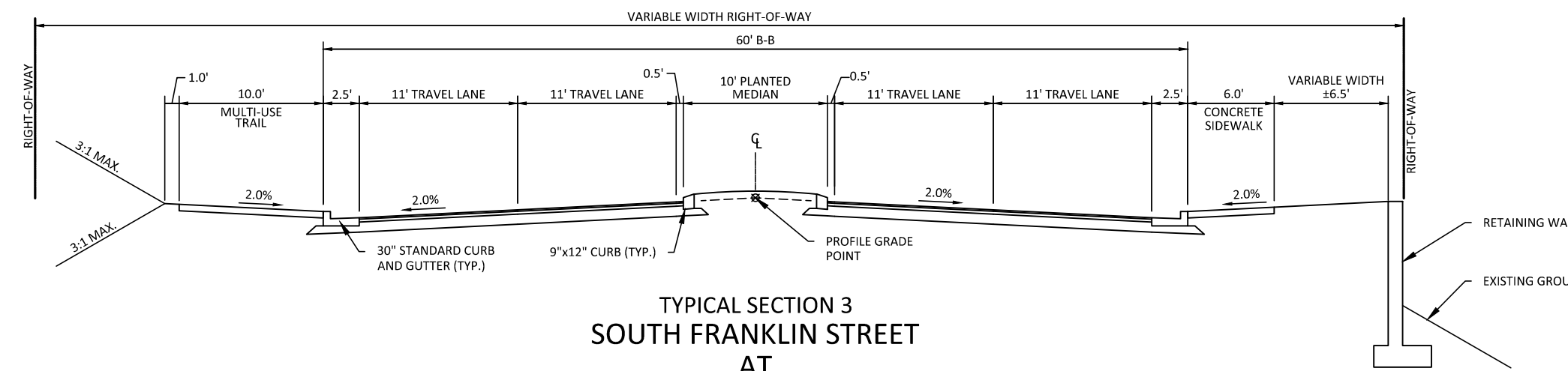
CONSTRUCTION DRAWINGS FOR:
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA
PROJECT NUMBER: RAP-19000



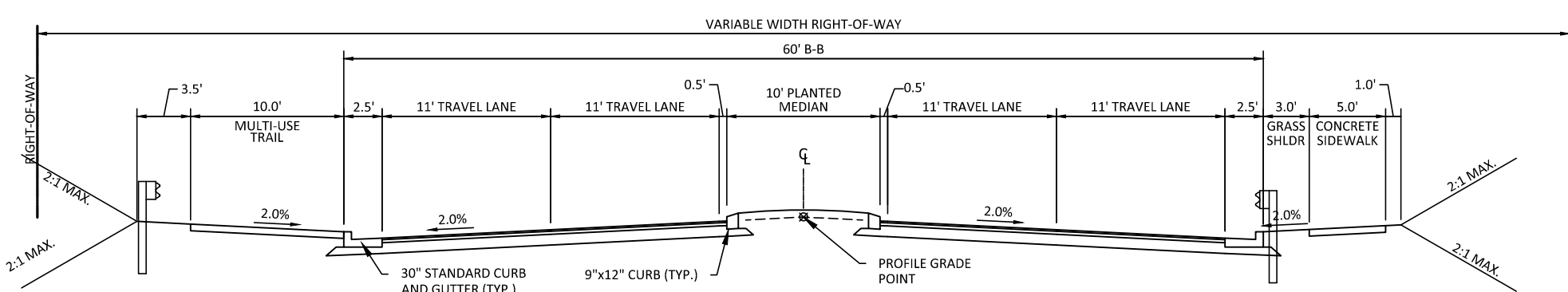
TYPICAL SECTION 1
SOUTH FRANKLIN STREET



TYPICAL SECTION 2
SOUTH FRANKLIN STREET
AT
HERITAGE GREENS
SUBDIVISION



TYPICAL SECTION 3
SOUTH FRANKLIN STREET
AT
HERITAGE GREENS
SUBDIVISION



TYPICAL SECTION 4
SOUTH FRANKLIN STREET
STREAM CROSSING

SOUTH FRANKLIN STREET PAVEMENT SCHEDULE

CODE	DESCRIPTION
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE OVERLAY, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD. MILL A MIN. OF 1.5" TO MATCH EXISTING PAVEMENT.
C2	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD. IN EACH OF TWO 1.5" LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4.0" IN DEPTH.
E2**	PROP. APPROX. 5.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
J2	PROP. 10" AGGREGATE BASE COURSE (E2** WHEN LESS THAN 6")
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
Y2	INCIDENTAL MILLING

NOTES

- PAVEMENT SECTION SHOWN IS BASED NCDOT MINIMUM STANDARDS. A FINAL PAVEMENT SECTION DESIGN IS REQUIRED TO BE SUBMITTED TO NCDOT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF ANY BASE MATERIAL.
- SEE CROSS SECTIONS FOR ROADWAY CROSS SLOPES.
- CONTRACTOR TO SAW CUT EXISTING EDGE OF PAVEMENT TO PROVIDE A STRAIGHT AND UNIFORM JOINT FOR NEW PAVEMENT.

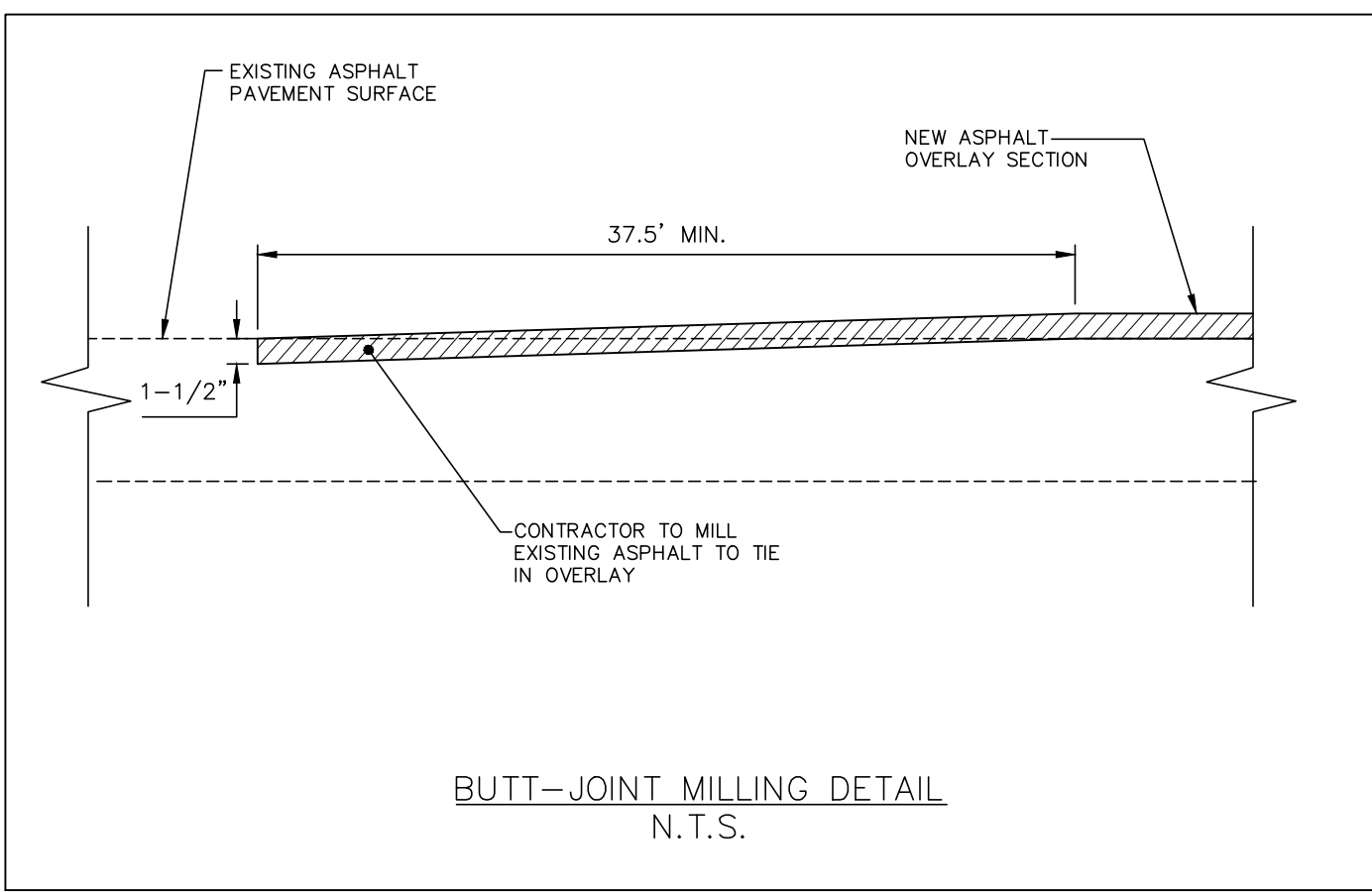
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 04/25/2024
 sprayer
 Public Works/Engineering

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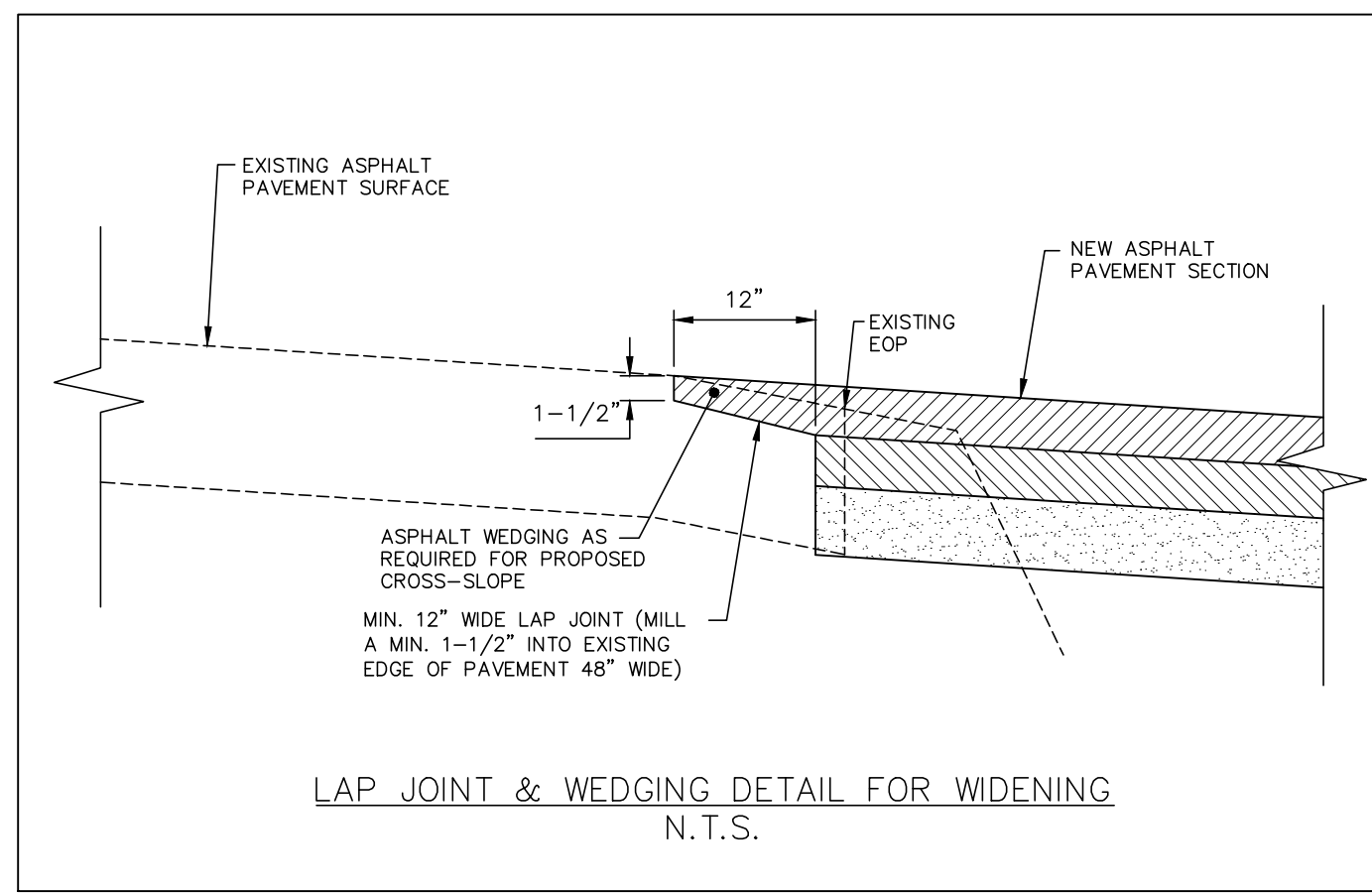
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Planning

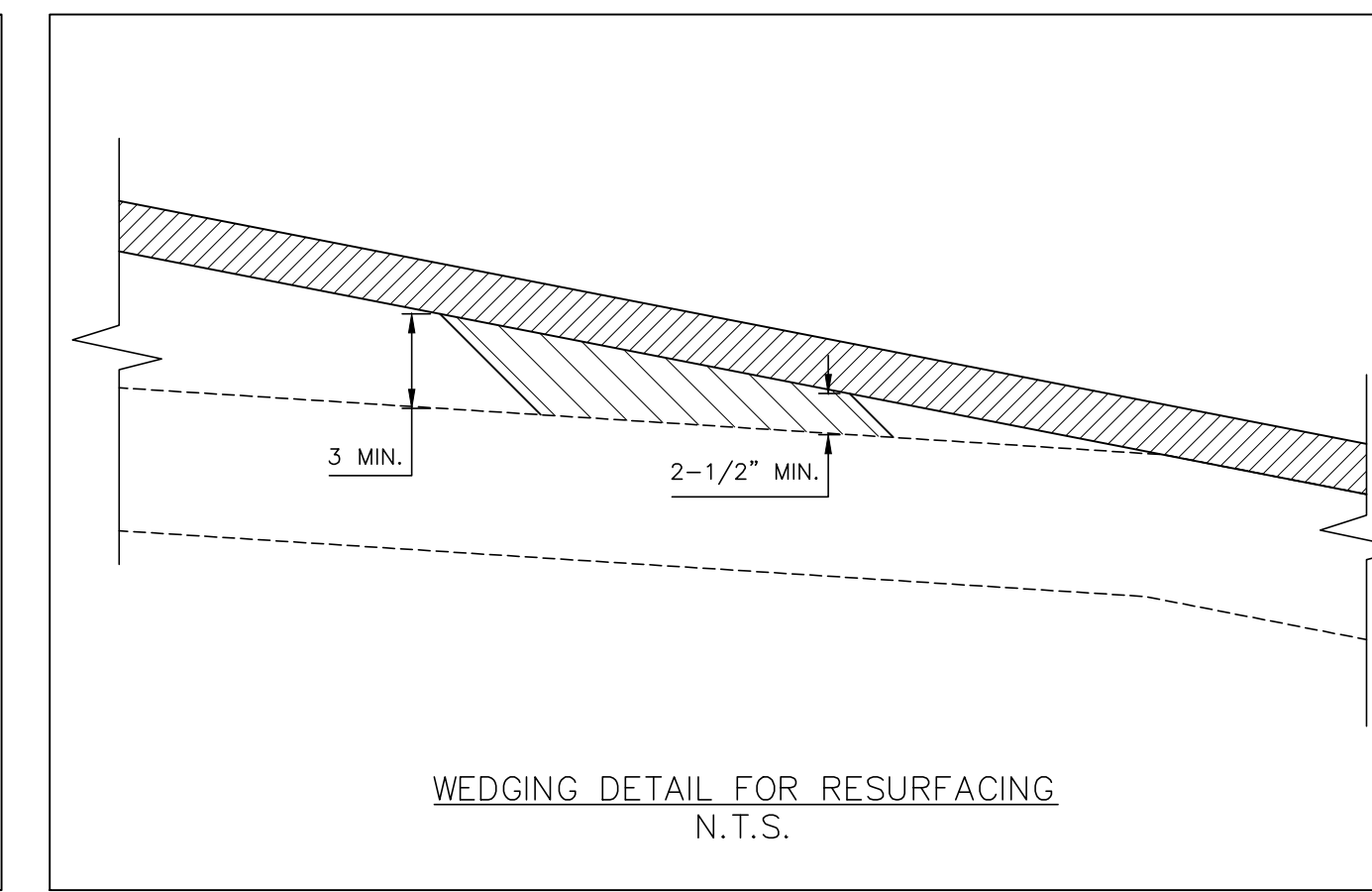
FINAL DRAWING - RELEASED FOR CONSTRUCTION



BUTT-JOINT MILLING DETAIL
N.T.S.



LAP JOINT & WEDGING DETAIL FOR WIDENING
N.T.S.



WEDGING DETAIL FOR RESURFACING
N.T.S.

X:\Projects\BMP\BMP-19000\04-Production\Engineering\Construction Drawings\Current Drawings\South Franklin Office\BMP-19000-SF-TS.dwg, 2/23/2024 11:29:57 AM, Dwayne Peterson



The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713

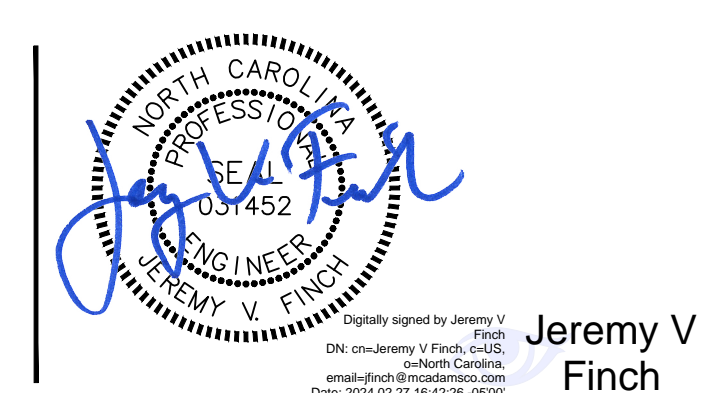
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CLIENT
 TOWN OF WAKE FOREST
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REVISIONS

NO.	DATE
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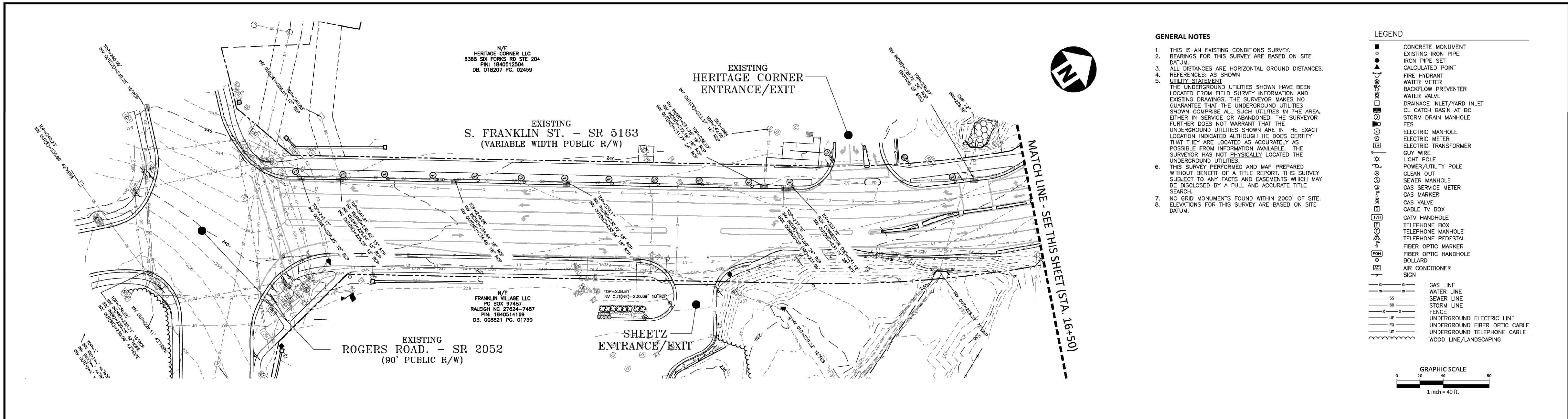


TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-TS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE N.T.S.
 DATE 02. 23. 2024

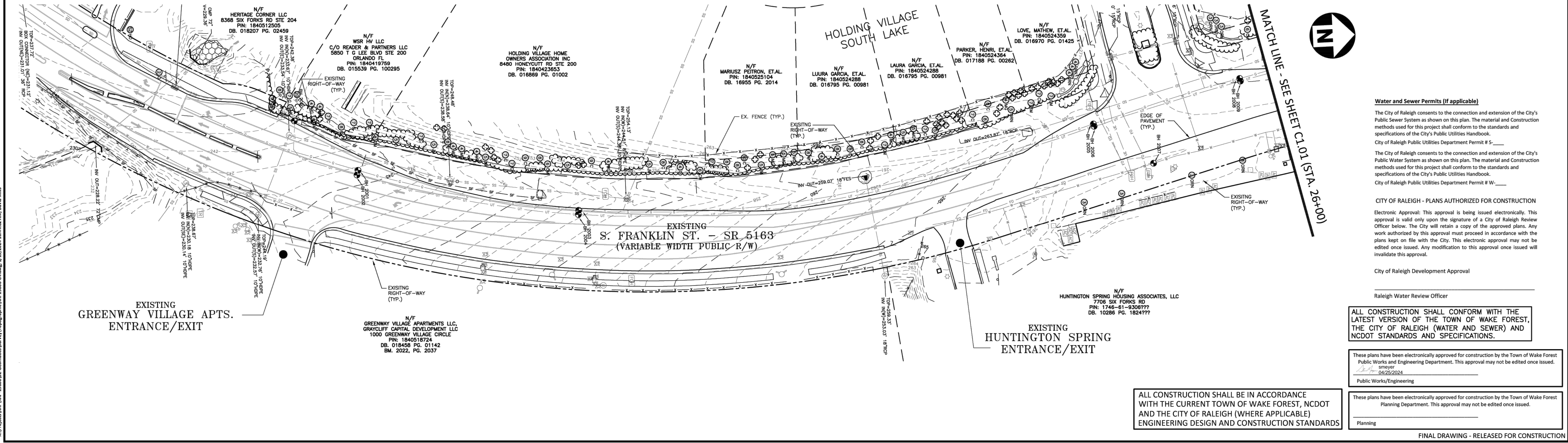
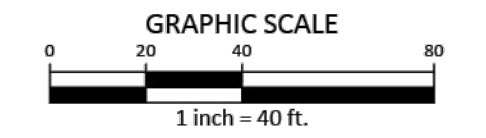
TYPICAL SECTIONS

C0.10



- GENERAL NOTES**
- THIS IS AN EXISTING CONDITIONS SURVEY.
 - BEARINGS FOR THIS SURVEY ARE BASED ON SITE DATUM.
 - ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
 - REFERENCES: AS SHOWN
 - UTILITY STATEMENT
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
 - THIS SURVEY PERFORMED AND MAP PREPARED WITHOUT BENEFIT OF A TITLE REPORT. THIS SURVEY SUBJECT TO ANY FACTS AND EASEMENTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
 - NO GRID MONUMENTS FOUND WITHIN 2000' OF SITE.
 - ELEVATIONS FOR THIS SURVEY ARE BASED ON SITE DATUM.

- LEGEND**
- CONCRETE MONUMENT
 - EXISTING IRON PIPE
 - IRON PIPE SET
 - CALCULATED POINT
 - FIRE HYDRANT
 - WATER METER
 - BACKFLOW PREVENTER
 - DRAINAGE INLET/YARD INLET
 - CL CATCH BASIN AT BC
 - STORM DRAIN MANHOLE
 - FES
 - ELECTRIC MANHOLE
 - ELECTRIC METER
 - ELECTRIC TRANSFORMER
 - GUY WIRE
 - LIGHT POLE
 - POWER/UTILITY POLE
 - CLEAN OUT
 - SEWER MANHOLE
 - GAS SERVICE METER
 - GAS MARKER
 - GAS VALVE
 - CABLE TV BOX
 - CATV HANDHOLE
 - TELEPHONE BOX
 - TELEPHONE MANHOLE
 - TELEPHONE PEDESTAL
 - FIBER OPTIC MARKER
 - FIBER OPTIC HANDHOLE
 - BOLLARD
 - AIR CONDITIONER
 - SIGN
 - GAS LINE
 - WATER LINE
 - SEWER LINE
 - STORM LINE
 - FENCE
 - UNDERGROUND ELECTRIC LINE
 - UNDERGROUND FIBER OPTIC CABLE
 - UNDERGROUND TELEPHONE CABLE
 - WOOD LINE/LANDSCAPING



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-____

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City of Raleigh Public Utilities Department Permit # W-____

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

Raleigh Water Review Officer

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH (WATER AND SEWER) AND NCDOT STANDARDS AND SPECIFICATIONS.

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04/25/2024
Public Works/Engineering

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FINAL DRAWING - RELEASED FOR CONSTRUCTION



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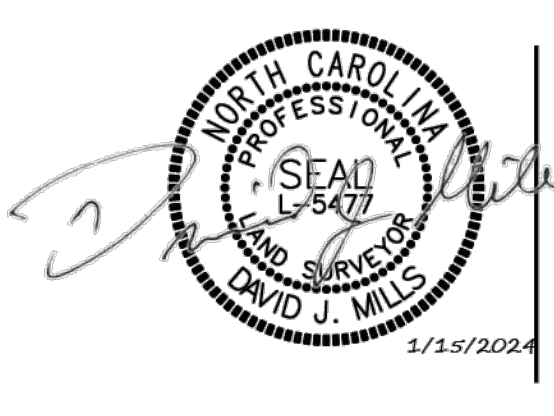
www.mcadamsco.com

CLIENT

TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
PATRICK REIDY
PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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TOWN OF WAKE FOREST
SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 FRIENDSHIP CHAPEL ROAD
WAKE FOREST, NORTH CAROLINA

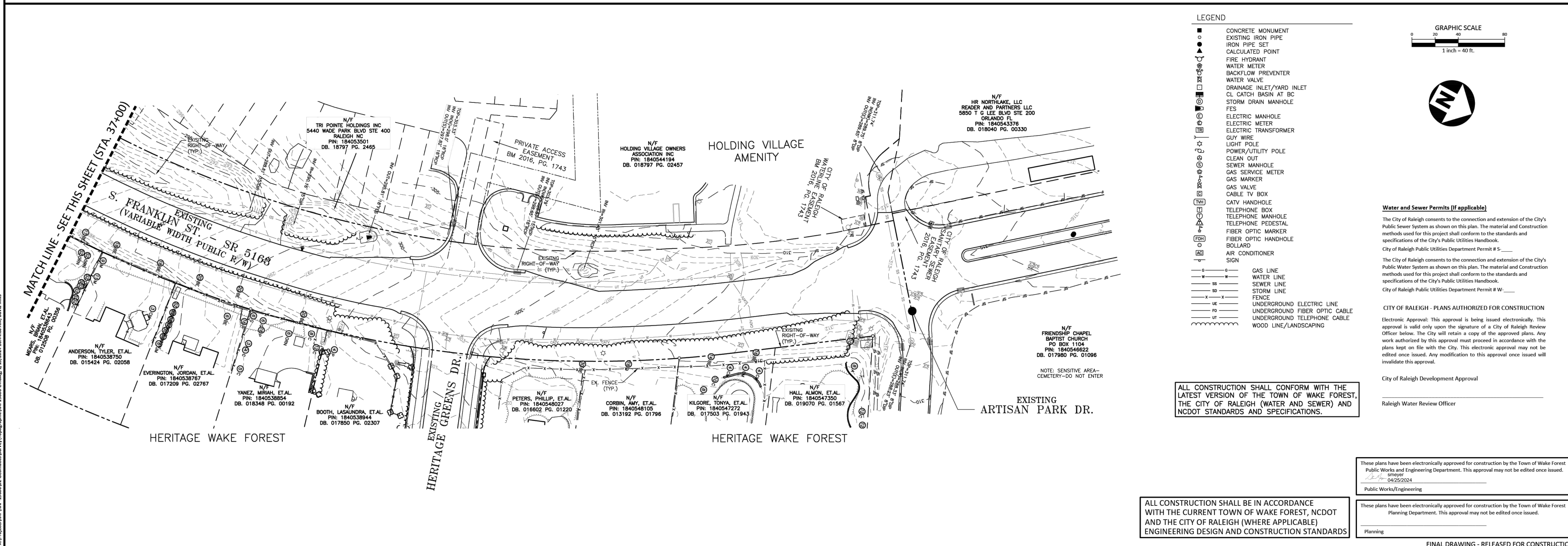
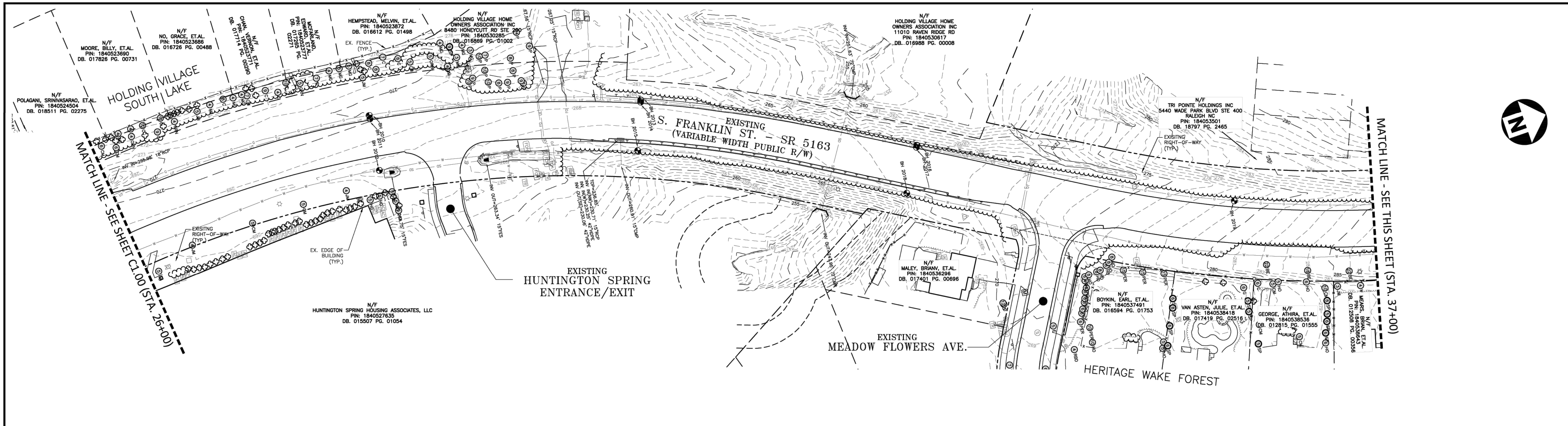
PLAN INFORMATION

PROJECT NO. RAP-19000
FILENAME RAP19000-C4
CHECKED BY RTF
DRAWN BY DJM
SCALE 1"=40'
DATE 02.10.2022

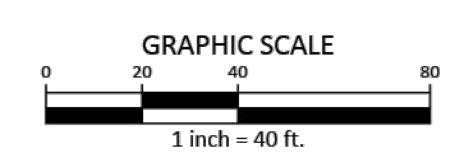
EXISTING CONDITIONS
S. FRANKLIN STREET, STA. 10+00 THRU STA. 26+00

C1.00

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- LEGEND**
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City of Raleigh Public Utilities Department Permit # W-_____

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04/25/2024
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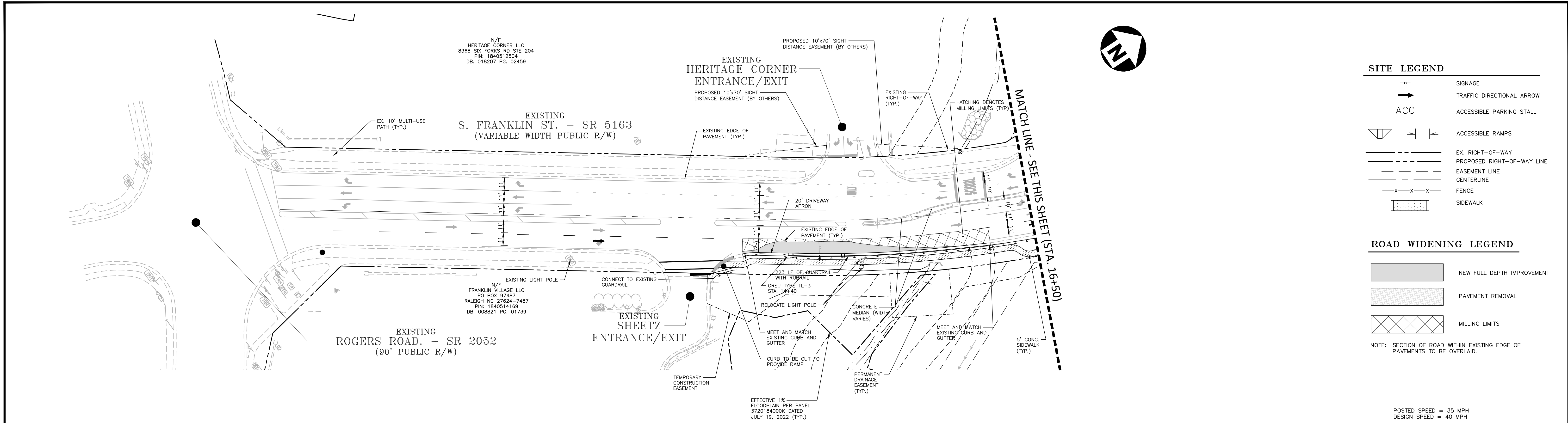
TOWN OF WAKE FOREST
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CONSTRUCTION DRAWINGS
0 FRIENDSHIP CHAPEL ROAD
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO. RAP-19000
FILENAME RAP19000-C4
CHECKED BY RTF
DRAWN BY DJM
SCALE 1"=40'
DATE 02.10.2022

EXISTING CONDITIONS
S. FRANKLIN STREET, STA. 26+00 THRU STA. 46+00

C1.01



SITE LEGEND

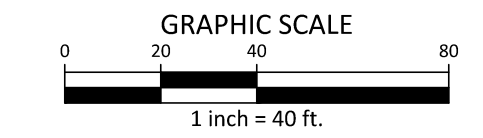
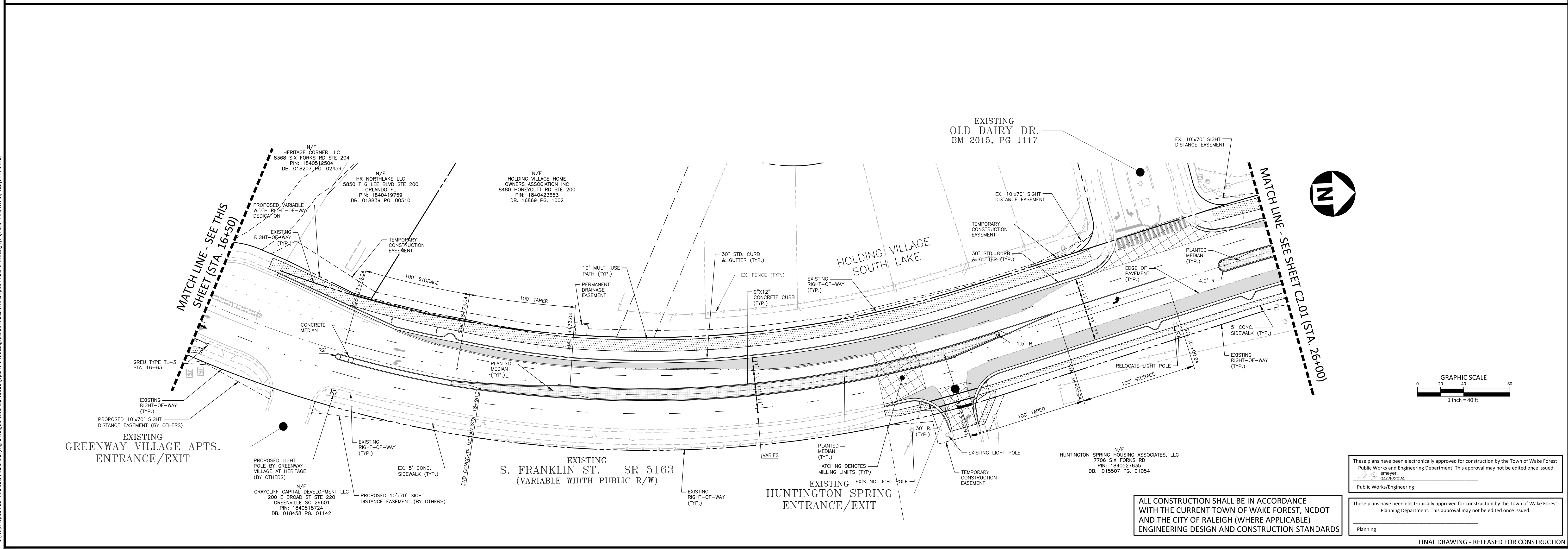
	SIGNAGE
	TRAFFIC DIRECTIONAL ARROW
	ACCESSIBLE PARKING STALL
	ACCESSIBLE RAMP
	EX. RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	EASEMENT LINE
	CENTERLINE
	FENCE
	SIDEWALK

ROAD WIDENING LEGEND

	NEW FULL DEPTH IMPROVEMENT
	PAVEMENT REMOVAL
	MILLING LIMITS

NOTE: SECTION OF ROAD WITHIN EXISTING EDGE OF PAVEMENTS TO BE OVERLAID.

POSTED SPEED = 35 MPH
 DESIGN SPEED = 40 MPH



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 Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION

X:\Projects\BMP\BMP-19000\04-Production\Engineering\Construction Drawings\Current Drawings\South Franklin\BMP-19000-SF-51.dwg, 2/23/2024, 12:30:28 PM, Dwayne Peterson



The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713

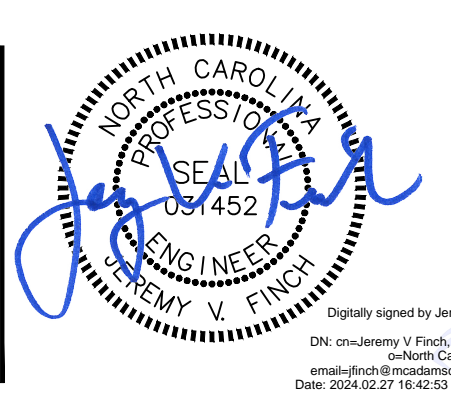
 phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187

 www.mcadamsco.com

CLIENT
 TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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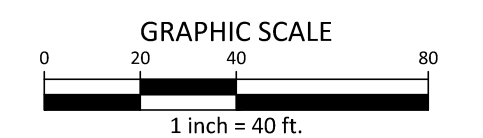
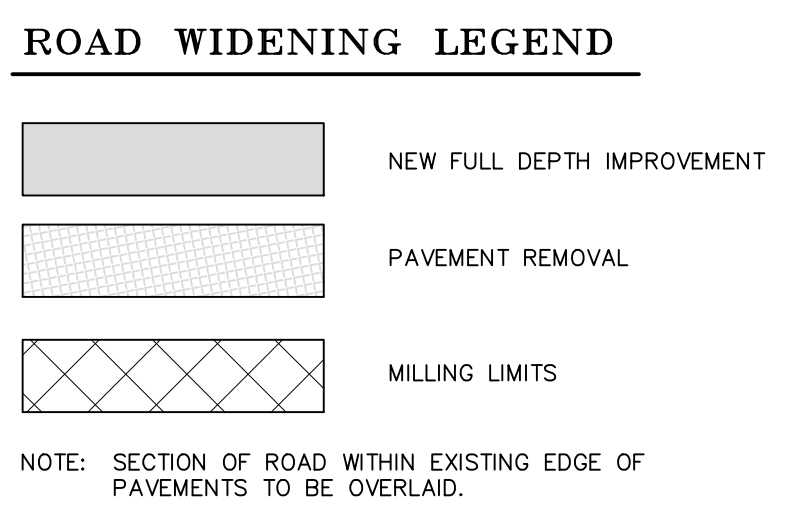
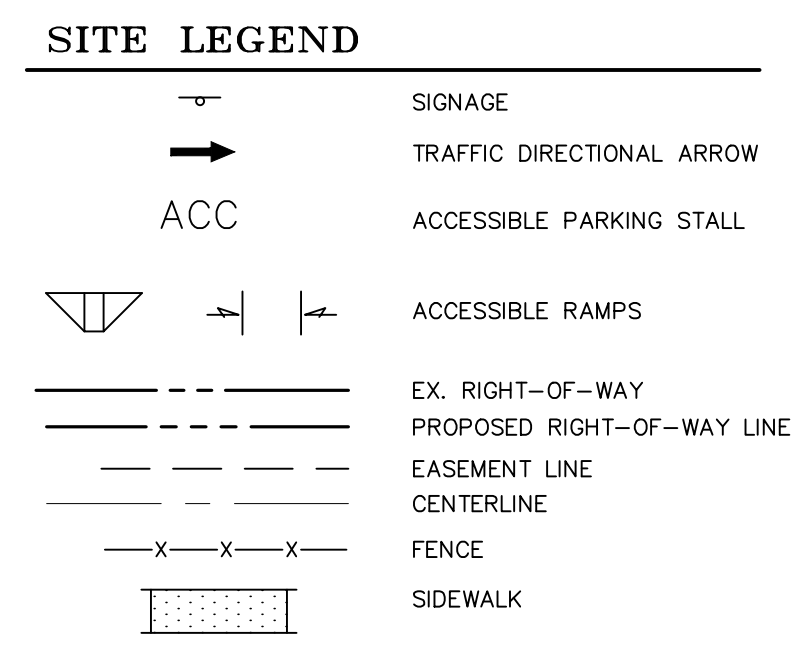
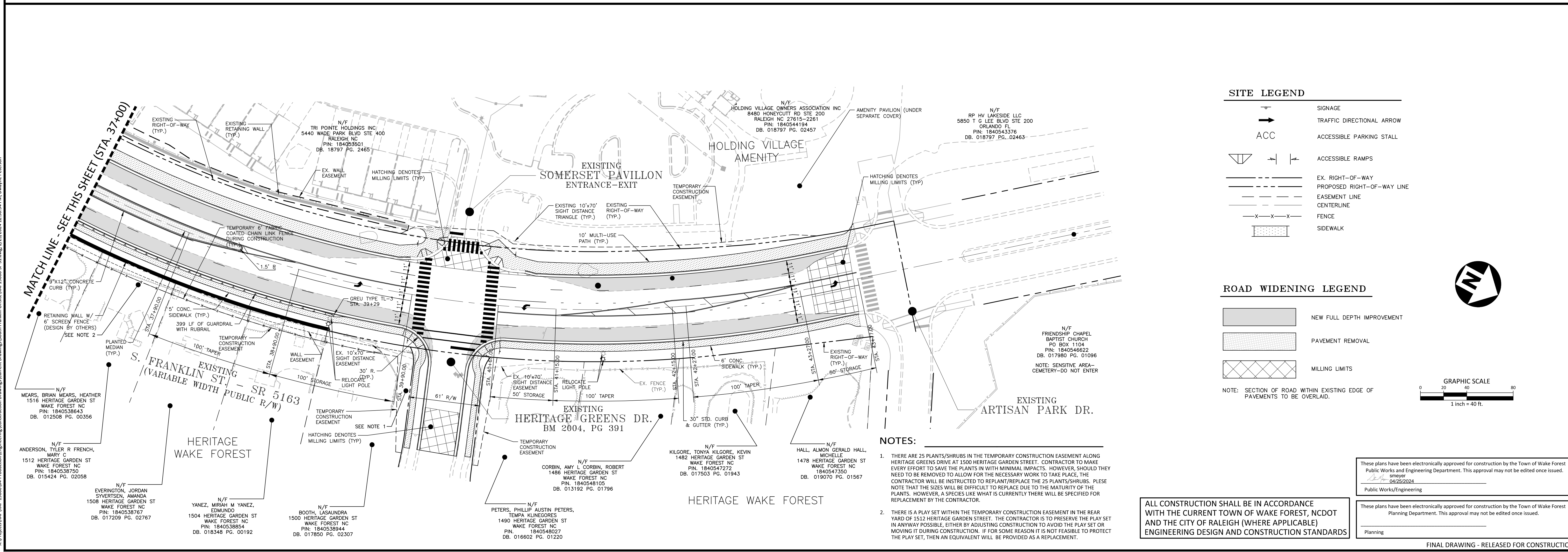
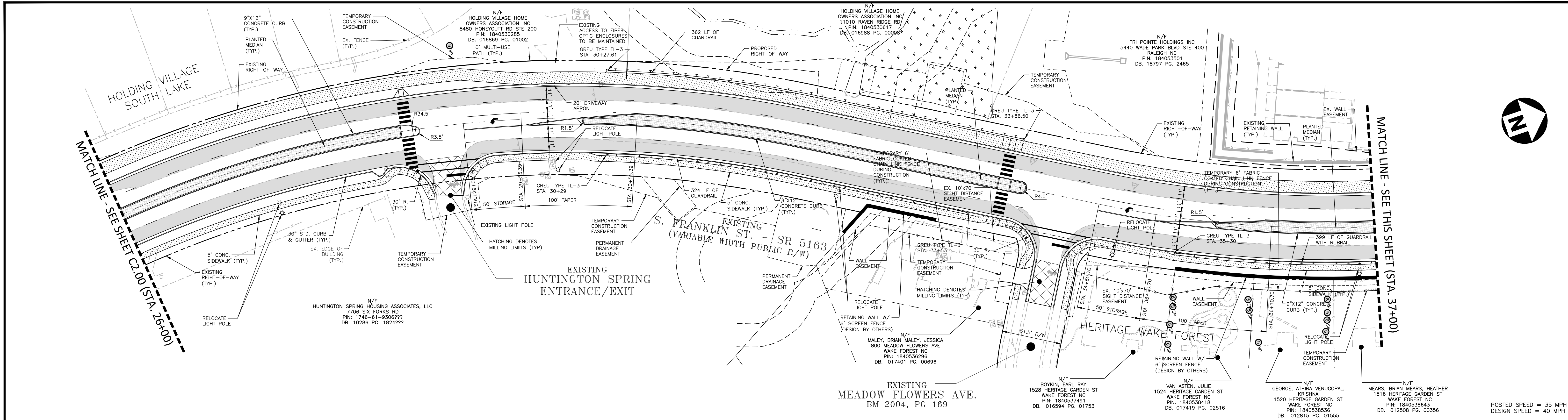
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 DN: cn=Jeremy V. Finch, o=North Carolina, email=jfinch@modernize.com Date: 2024.02.27 14:42:53 -0500
 Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-51
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1" = 40'
 DATE 02. 23. 2024

ROAD WIDENING PLAN
 S. FRANKLIN STREET, STA. 15+00 THRU STA. 26+00

C2.00



- ### NOTES:
- THERE ARE 25 PLANTS/SHRUBS IN THE TEMPORARY CONSTRUCTION EASEMENT ALONG HERITAGE GREENS DRIVE AT 1500 HERITAGE GARDEN STREET. CONTRACTOR TO MAKE EVERY EFFORT TO SAVE THE PLANTS IN WITH MINIMAL IMPACTS. HOWEVER, SHOULD THEY NEED TO BE REMOVED TO ALLOW FOR THE NECESSARY WORK TO TAKE PLACE, THE CONTRACTOR WILL BE INSTRUCTED TO REPLANT/REPLACE THE 25 PLANTS/SHRUBS. PLEASE NOTE THAT THE SIZES WILL BE DIFFICULT TO REPLACE DUE TO THE MATURITY OF THE PLANTS. HOWEVER, A SPECIES LIKE WHAT IS CURRENTLY THERE WILL BE SPECIFIED FOR REPLACEMENT BY THE CONTRACTOR.
 - THERE IS A PLAY SET WITHIN THE TEMPORARY CONSTRUCTION EASEMENT IN THE REAR YARD OF 1512 HERITAGE GARDEN STREET. THE CONTRACTOR IS TO PRESERVE THE PLAY SET IN ANYWAY POSSIBLE, EITHER BY ADJUSTING CONSTRUCTION TO AVOID THE PLAY SET OR MOVING IT DURING CONSTRUCTION. IF FOR SOME REASON IT IS NOT FEASIBLE TO PROTECT THE PLAY SET, THEN AN EQUIVALENT WILL BE PROVIDED AS A REPLACEMENT.

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 Public Works/Engineering

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 DN: cn=Jeremy V Finch, o=Professional Engineer, ou=Professional Engineer, email=jfinch@mcadamsco.com, c=NC
 Date: 2024.02.27 16:43:09 -0500

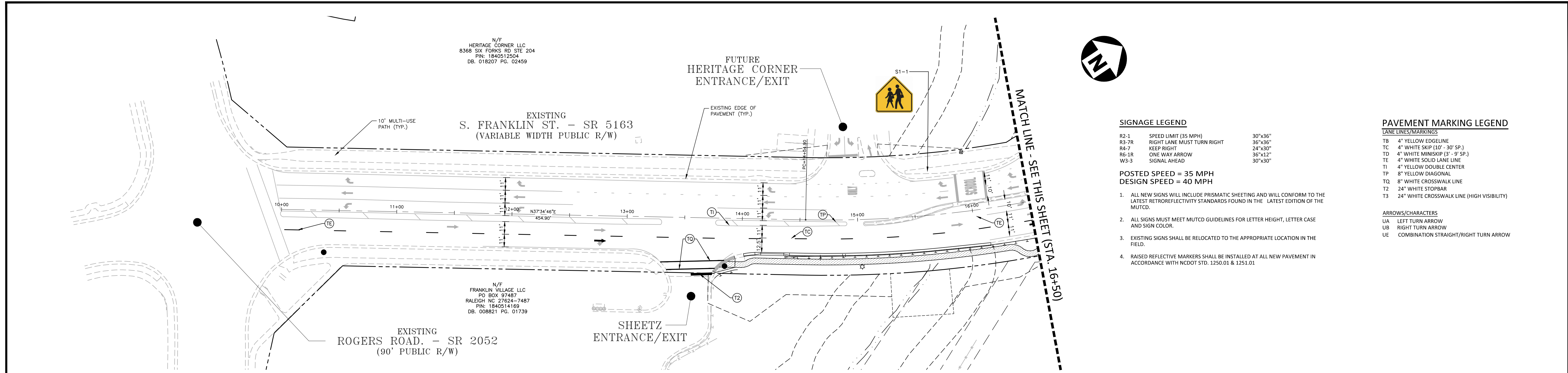
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-S1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1" = 40'
DATE	02.23.2024

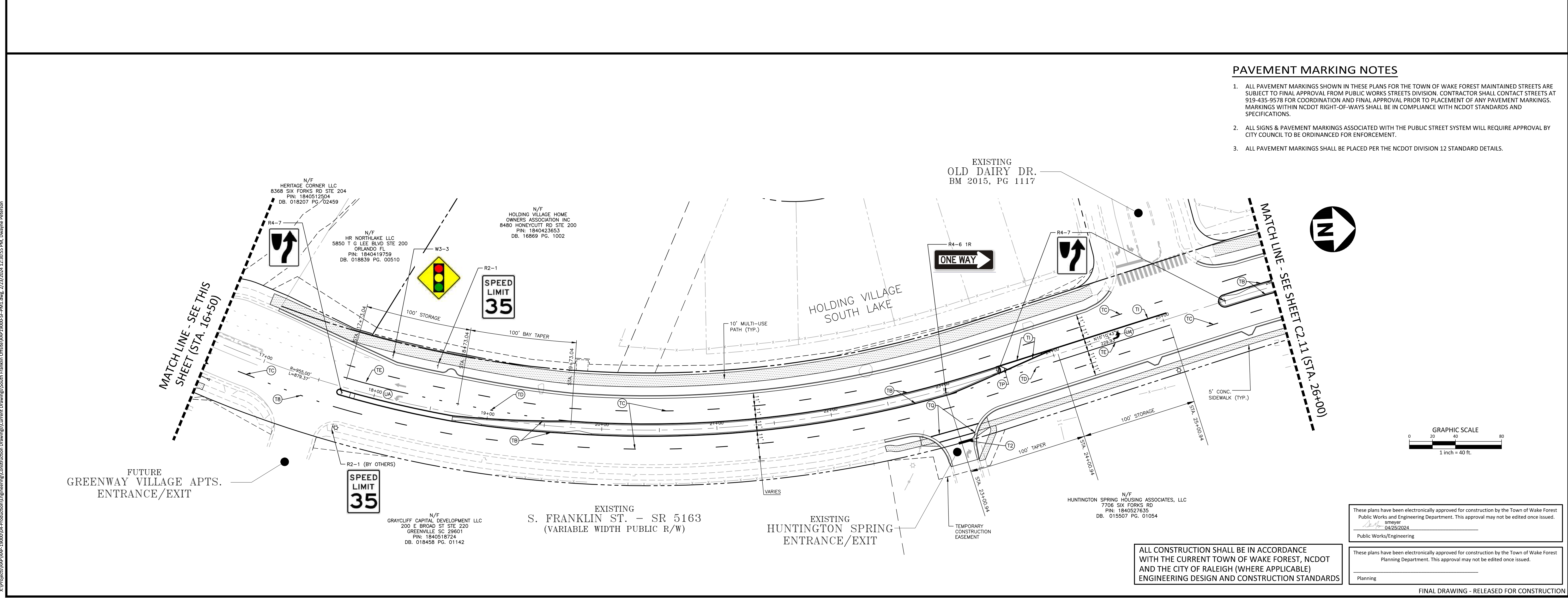
ROAD WIDENING PLAN
 S. FRANKLIN STREET, STA. 26+00 THRU STA. 46+00

C2.01



PAVEMENT MARKING NOTES

- ALL PAVEMENT MARKINGS SHOWN IN THESE PLANS FOR THE TOWN OF WAKE FOREST MAINTAINED STREETS ARE SUBJECT TO FINAL APPROVAL FROM PUBLIC WORKS STREETS DIVISION. CONTRACTOR SHALL CONTACT STREETS AT 919-435-9578 FOR COORDINATION AND FINAL APPROVAL PRIOR TO PLACEMENT OF ANY PAVEMENT MARKINGS. MARKINGS WITHIN NCDOT RIGHT-OF-WAYS SHALL BE IN COMPLIANCE WITH NCDOT STANDARDS AND SPECIFICATIONS.
- ALL SIGNS & PAVEMENT MARKINGS ASSOCIATED WITH THE PUBLIC STREET SYSTEM WILL REQUIRE APPROVAL BY CITY COUNCIL TO BE ORDINANCED FOR ENFORCEMENT.
- ALL PAVEMENT MARKINGS SHALL BE PLACED PER THE NCDOT DIVISION 12 STANDARD DETAILS.



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Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS

CONSTRUCTION DRAWINGS

0 SOUTH FRANKLIN STREET

WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

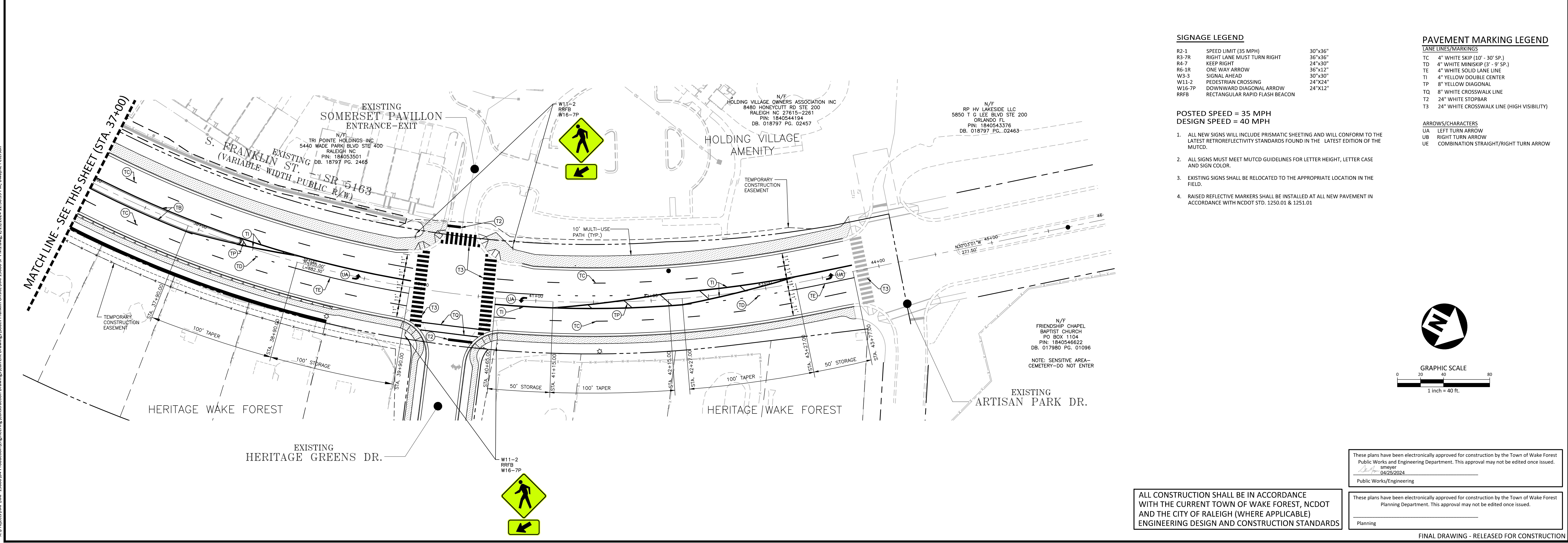
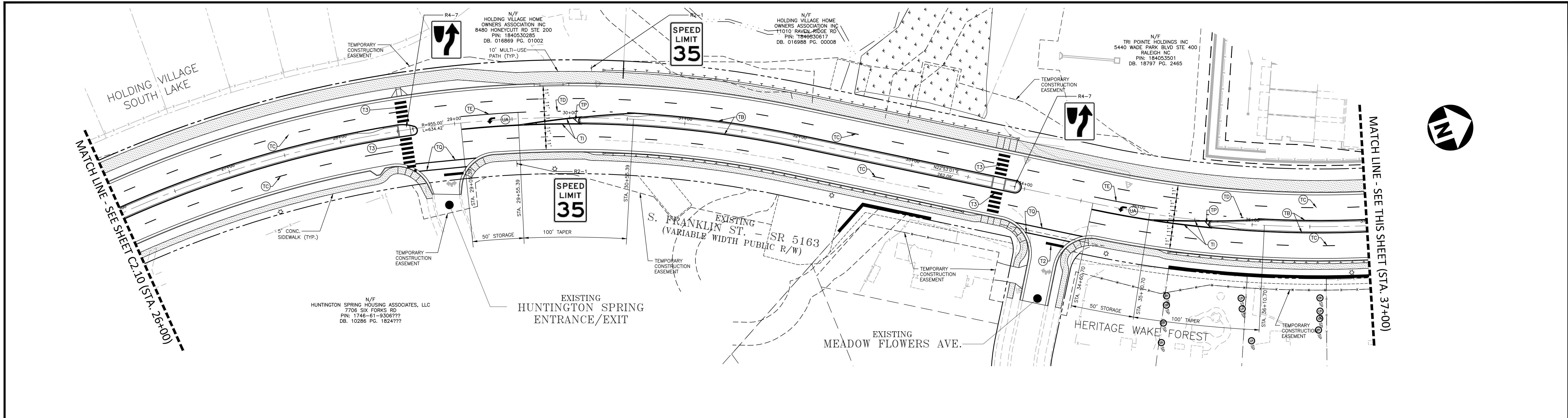
PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-PM1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1" = 40'
DATE	02.23.2024

PAVEMENT MARKING PLAN

S. FRANKLIN STREET, STA. 10+00 THRU STA. 26+00

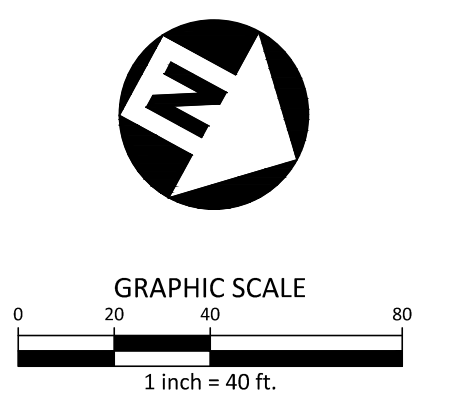
C2.10

FINAL DRAWING - RELEASED FOR CONSTRUCTION



- SIGNAGE LEGEND**
- | | | |
|--------|--------------------------------|---------|
| R2-1 | SPEED LIMIT (35 MPH) | 30"x36" |
| R3-7R | RIGHT LANE MUST TURN RIGHT | 36"x36" |
| R4-7 | KEEP RIGHT | 24"x30" |
| R6-1R | ONE WAY ARROW | 36"x12" |
| W3-3 | SIGNAL AHEAD | 30"x30" |
| W11-2 | PEDESTRIAN CROSSING | 24"x24" |
| W16-7P | DOWNWARD DIAGONAL ARROW | 24"x12" |
| RRFB | RECTANGULAR RAPID FLASH BEACON | |
- POSTED SPEED = 35 MPH**
DESIGN SPEED = 40 MPH
- ALL NEW SIGNS WILL INCLUDE PRISMATIC SHEETING AND WILL CONFORM TO THE LATEST RETROREFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.
 - ALL SIGNS MUST MEET MUTCD GUIDELINES FOR LETTER HEIGHT, LETTER CASE AND SIGN COLOR.
 - EXISTING SIGNS SHALL BE RELOCATED TO THE APPROPRIATE LOCATION IN THE FIELD.
 - RAISED REFLECTIVE MARKERS SHALL BE INSTALLED AT ALL NEW PAVEMENT IN ACCORDANCE WITH NCDOT STD. 1250.01 & 1251.01

- PAVEMENT MARKING LEGEND**
- LANE LINES/MARKINGS
- | | |
|----|--|
| TC | 4" WHITE SKIP (10' - 30' SP.) |
| TD | 4" WHITE MINISKIP (2' - 5' SP.) |
| TE | 4" WHITE SOLID LANE LINE |
| TI | 4" YELLOW DOUBLE CENTER |
| TP | 8" YELLOW DIAGONAL |
| TQ | 8" WHITE CROSSWALK LINE |
| T2 | 24" WHITE STOPBAR |
| T3 | 24" WHITE CROSSWALK LINE (HIGH VISIBILITY) |
- ARROWS/CHARACTERS
- | | |
|----|---------------------------------------|
| UA | LEFT TURN ARROW |
| UB | RIGHT TURN ARROW |
| UE | COMBINATION STRAIGHT/RIGHT TURN ARROW |



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DN: cn=Jeremy V. Finch, o=North Carolina, email=jfinch@mcadamsco.com, c=US
Date: 2024.02.23 16:40:02 -0500

Jeremy V. Finch

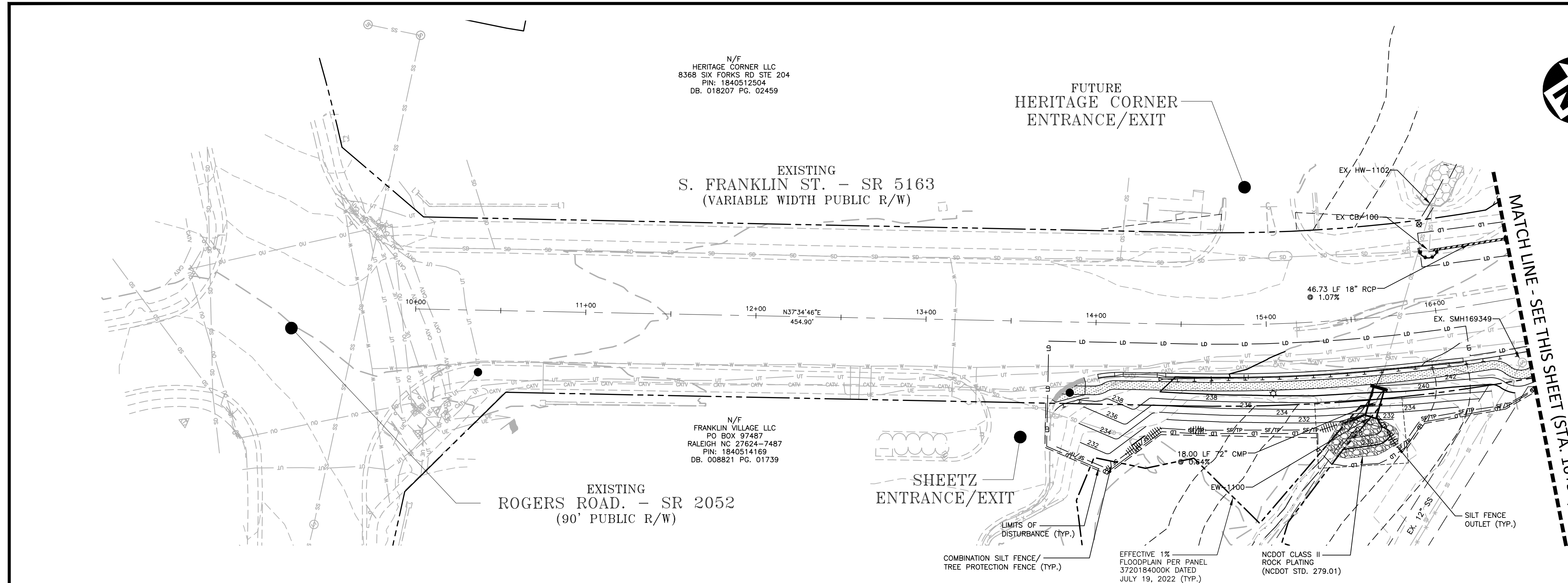
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

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FILENAME	RAP19000-SF-PM1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1" = 40'
DATE	02. 23. 2024

PAVEMENT MARKING PLAN
S. FRANKLIN STREET, STA. 26+00 THRU STA. 46+00

C2.11



GRADING LEGEND	
[Symbol]	FLARED END SECTION
[Symbol]	CATCH BASIN
[Symbol]	DROP INLET
[Symbol]	STORM SERVICE INLET
[Symbol]	STORM SERVICE ROOF-DRAIN
[Symbol]	JUNCTION BOX
[Symbol]	DRAINAGE FLOW ARROW
[Symbol]	LINE BREAK SYMBOL
[Symbol]	STORM DRAINAGE
[Symbol]	STORM SERVICE LINE
[Symbol]	TREE PROTECTION
[Symbol]	LIMITS OF DISTURBANCE
[Symbol]	WOODED AREA
[Symbol]	10' CONTOUR
[Symbol]	2' CONTOUR
[Symbol]	EXISTING 10' CONTOUR
[Symbol]	EXISTING 2' CONTOUR
[Symbol]	EASEMENT LINE

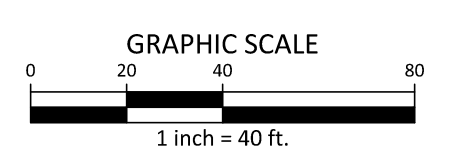
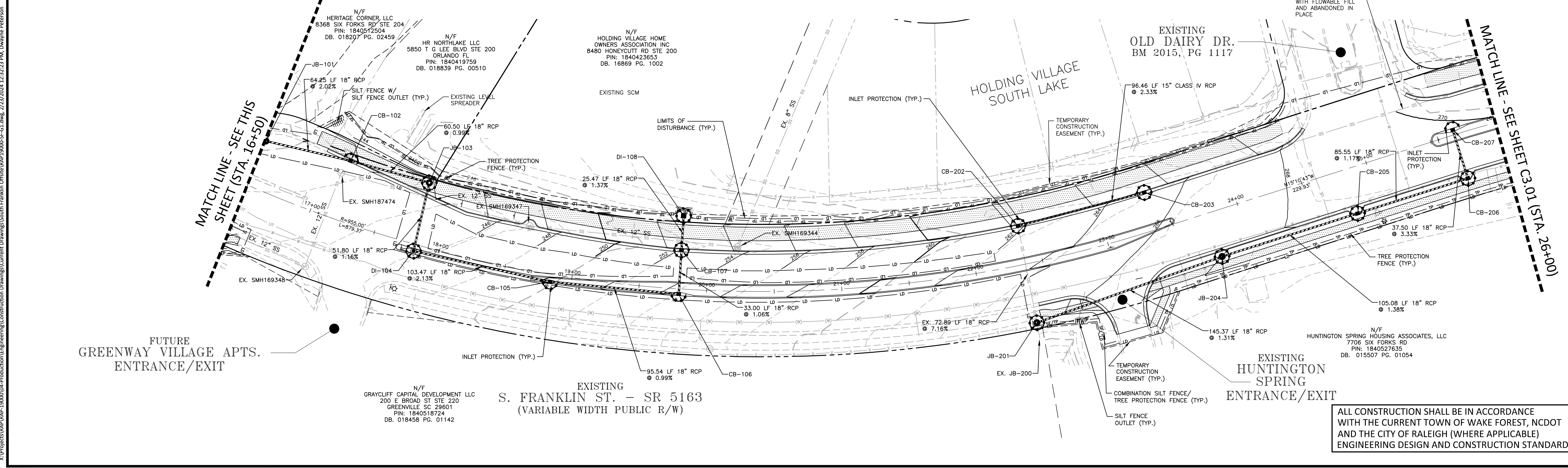
EROSION CONTROL LEGEND	
[Symbol]	SILT FENCE OUTLET
[Symbol]	INLET PROTECTION
[Symbol]	INLET PROTECTION FOR EXISTING STRUCTURES
[Symbol]	TEMPORARY SLOPE DRAIN
[Symbol]	FILTER BERM
[Symbol]	CHECK DAM
[Symbol]	SILT FENCE
[Symbol]	TREE PROTECTION FENCE
[Symbol]	LIMITS OF DISTURBANCE
[Symbol]	WOODED AREA
[Symbol]	DIVERSION DITCH

NOTE:
1. SEE TEMPORARY SEEDING SCHEDULE ON SHEET C8.06

TOTAL DISTURBED AREA = 6.75 AC.

CONSTRUCTION SEQUENCE

- EROSION AND SEDIMENT CONTROL (EASC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR.
- NO LAND CLEARING ACTIVITIES SHALL COMMENCE UNTIL EROSION CONTROL PLAN APPROVAL HAS BEEN RECEIVED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQ).
- OBTAIN A GRADING PERMIT FROM NCEQ.
- CONTRACTOR SHALL CONTACT RALEIGH DIVISION OF NCEQ REGIONAL OFFICE AT LEAST 48 HOUR PRIOR TO START OF LAND DISTURBING ACTIVITIES. THE CONTACT TELEPHONE NUMBER IS: (919)791-4200
- CALL ENVIRONMENTAL CONSULTANT AT NCEQ TO SCHEDULE A PRE-CONSTRUCTION MEETING. NOTIFY OWNER AND ENGINEER WHEN PRECON IS SCHEDULED SO THEY MAY ALSO ATTEND.
- PER NCEQ REQUIREMENTS, A RAIN GAUGE, SELF-INSPECTION RECORDS, PERMIT, CERTIFICATE OF COVERAGE, AND S&E PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTION. IT IS RECOMMENDED THAT THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF THE PROJECT.
- SELF-INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF GREATER THAN 1 INCH. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DESIGNED. ALL ESC MEASURES SHALL BE MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS ON THIS PLAN. A RAIN GAUGE SHALL BE INSTALLED AT THE PROJECT SITE FOR MONITORING.
- 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.
 - THE ABOVE MUST BE INSTALLED AND INSPECTED/APPROVED PRIOR TO THE START OF ON SITE DEMOLITION ACTIVITIES.
- INSTALL TREE PROTECTION FENCING ACCORDING TO THE EROSION CONTROL PLAN.
- INSTALL SILT FENCING, AND SILT FENCE OUTLETS AS SHOWN ON APPROVED EROSION CONTROL PLAN. GRADE ONLY AS NECESSARY TO INSTALL THESE DEVICES. INSTALL SILT FENCE OUTLETS AT LOW POINTS IN THE SILT FENCING AS NEEDED TO PREVENT BLOWOUTS.
- LINE ALL DIVERSION DITCHES TO TOP OF SLOPE WITH LINER AS REFERENCED IN THE EROSION CONTROL PLAN.
- STABILIZE ALL DISTURBED AREAS, INCLUDING DIVERSION DITCHES AND SKIMMER BASINS, IMMEDIATELY UPON INSTALLATION. SEE DETAIL ON SEEDING SCHEDULE. TEMPORARILY SEED AND MULCH ANY DISTURBED AREAS IN A TIMEFRAME COMPLIANT WITH NCEQ STABILIZATION GUIDELINES.
- FILL SLOPES SHALL BE STAGE SEEDING AND COVERED WITH A SUITABLE ROLLED EROSION CONTROL PRODUCT (RCP).
- DOWNSTREAM AREAS OF ALL DIVERSION DITCHES (BETWEEN MEASURES AND PERIMETER SILT FENCE) MUST BE STABILIZED UPON INSTALLATION VIA MATTING, SEEDING, OR ANCHORED MULCH INSTALLED IMMEDIATELY UPON COMPLETION OF INSTALLATION.
- AS THE SITE IS BROUGHT UP TO GRADE, THE CONTRACTOR SHALL RAISE AND/OR RELOCATE ALL DIVERSION DITCHES TO MAINTAIN A POSITIVE SEDIMENT LADEN FLOW TO DESIGNATED OUTLETS.
- INSTALL STORM COLLECTION SYSTEM WITH INLET PROTECTION ON ALL STRUCTURES ACCEPTING FLOW, AS SITE IS BROUGHT TO FINAL GRADE BEGINNING WITH MAIN TRUNK LINES THAT CONVEY RUNOFF TO THE SEDIMENT BASIN.
- EARTHEN BERMS SHOULD BE USED TO COLLECT AND DIRECT RUN-OFF TO THE STORM DRAIN SYSTEM INLETS. ONCE STONE BASE AND ASPHALT BASE LAYERS ARE IN PLACE, BERMS MAY BE CONSTRUCTED OF COLD PATCH, SANDBAGS, OR ACCEPTABLE ALTERNATIVES.
- INSTALL APPROVED INLET PROTECTION AS INLETS ARE INSTALLED. PRIOR TO STORM DRAIN CONVEYANCE SYSTEMS BEING ALLOWED TO ACCEPT FLOW, DOWNSTREAM ENERGY DISSIPATORS SHALL BE INSTALLED PER THE PLANS. TEMPORARY EROSION CONTROL MEASURES ARE TO REMAIN UNTIL SUCH MEASURES HAVE BEEN APPROVED FOR REMOVAL BY THE ENVIRONMENTAL ENGINEER AND EROSION CONTROL INSPECTOR. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DEPENDING ON FIELD CONDITIONS.
- MAINTAIN EROSION CONTROL DEVICES WEEKLY, AND FOLLOWING EVERY RAIN EVENT. MONITOR EROSION CONTROL USING THE STANDARD NCEQ REPORT AFTER EVERY RAIN FALL EQUAL TO OR GREATER THAN 1". REPORTS SHALL BE STORED ON SITE IN THE EVENT NCEQ EROSION CONTROL INSPECTOR PERFORMS AN ON-SITE INSPECTION.
- STABILIZE GRADED AREAS AS THEY ARE BROUGHT TO FINAL GRADE, PER THE NCEQ GROUND STABILIZATION TIMELINE. ONCE FINAL GRADE HAS BEEN ACHIEVED, PERMANENTLY SEED ALL AREAS AND SLOPES PER NCEQ'S EROSION SEDIMENT CONTROL PLANNING AND DESIGN MANUAL VERSION 5/13, CHAPTER 6.16.10 AND 6.16.11. SEE THIS SHEETS FOR SEEDING SPECIFICATIONS.
- PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE.



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Jeremy V. Finch

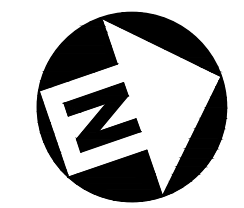
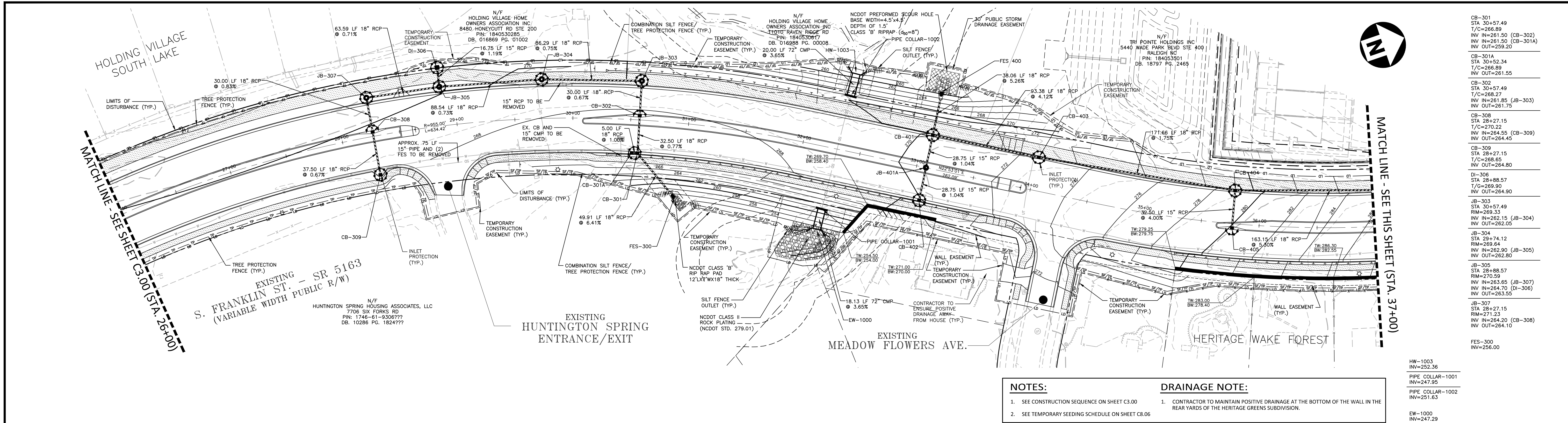
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WAKE FOREST, NORTH CAROLINA

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GRADING AND STORM DRAINAGE PLAN
S. FRANKLIN STREET, STA. 10+00 THRU STA. 26+00

C3.00



MATCH LINE - SEE SHEET C3.00 (STA. 26+00)

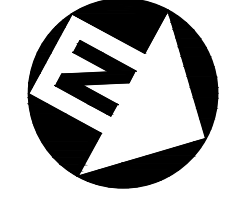
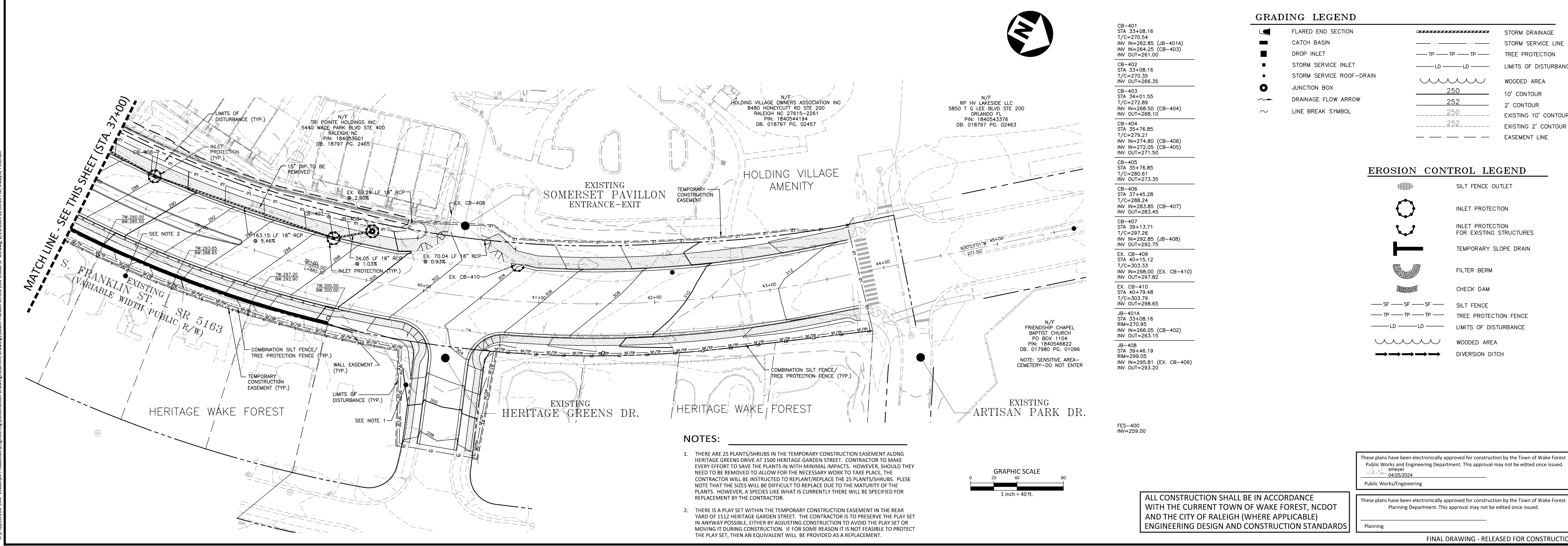
MATCH LINE - SEE THIS SHEET (STA. 37+00)

NOTES:
 1. SEE CONSTRUCTION SEQUENCE ON SHEET C3.00
 2. SEE TEMPORARY SEEDING SCHEDULE ON SHEET C8.06

DRAINAGE NOTE:
 1. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT THE BOTTOM OF THE WALL IN THE REAR YARDS OF THE HERITAGE GREENS SUBDIVISION.

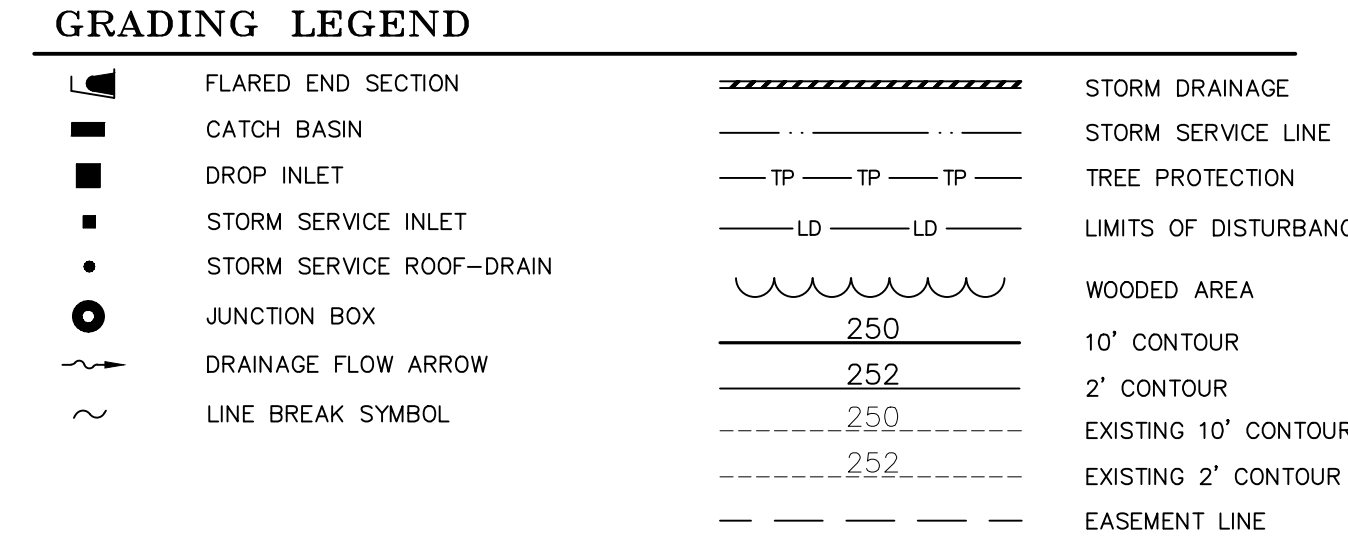
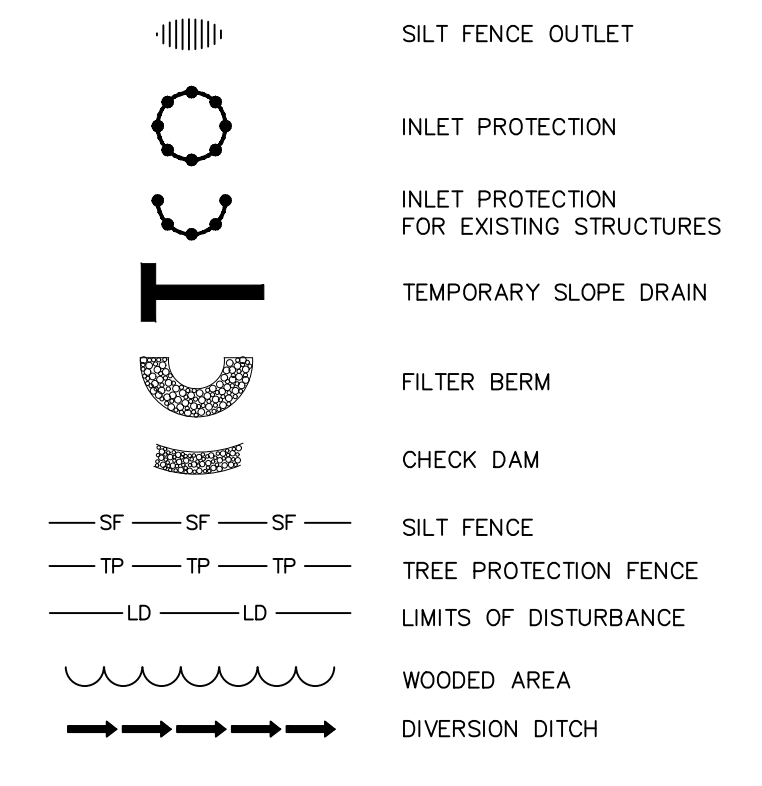
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 PIPE COLLAR-1001
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 EW-1000
 INV=247.29

CB-301	STA 30+57.49	T/C=266.89	INV IN=261.50 (CB-302)	INV IN=261.50 (CB-301A)	INV OUT=259.20
CB-301A	STA 30+52.34	T/C=268.27	INV IN=261.85 (JB-303)	INV OUT=261.55	
CB-302	STA 30+57.49	T/C=268.27	INV IN=261.85 (JB-303)	INV OUT=261.75	
CB-308	STA 28+27.15	T/C=270.22	INV IN=264.55 (CB-309)	INV OUT=264.45	
CB-309	STA 28+27.15	T/C=268.65	INV IN=264.70 (DI-306)	INV OUT=264.80	
DI-306	STA 28+27.15	T/G=269.90	INV IN=264.90	INV OUT=264.90	
JB-303	STA 30+57.49	RIM=269.33	INV IN=262.15 (JB-304)	INV OUT=262.05	
JB-304	STA 29+74.12	RIM=269.64	INV IN=262.90 (JB-305)	INV OUT=262.80	
JB-305	STA 28+27.15	RIM=270.59	INV IN=263.65 (JB-307)	INV IN=264.70 (DI-306)	INV OUT=263.55
JB-307	STA 29+27.15	RIM=271.23	INV IN=264.20 (CB-308)	INV OUT=264.10	
FES-300	INV=256.00				

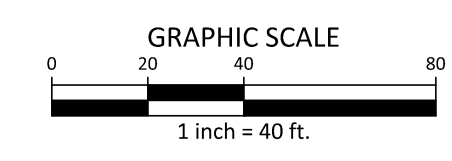


MATCH LINE - SEE THIS SHEET (STA. 37+00)

EROSION CONTROL LEGEND



NOTES:
 1. THERE ARE 25 PLANTS/SHRUBS IN THE TEMPORARY CONSTRUCTION EASEMENT ALONG HERITAGE GREENS DRIVE AT 1500 HERITAGE GARDEN STREET. CONTRACTOR TO MAKE EVERY EFFORT TO SAVE THE PLANTS IN WITH MINIMAL IMPACTS. HOWEVER, SHOULD THEY NEED TO BE REMOVED TO ALLOW FOR THE NECESSARY WORK TO TAKE PLACE, THE CONTRACTOR WILL BE INSTRUCTED TO REPLANT/REPLACE THE 25 PLANTS/SHRUBS. PLEASE NOTE THAT THE SIZES WILL BE DIFFICULT TO REPLACE DUE TO THE MATURITY OF THE PLANTS. HOWEVER, A SPECIES LIKE WHAT IS CURRENTLY THERE WILL BE SPECIFIED FOR REPLACEMENT BY THE CONTRACTOR.
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FINAL DRAWING - RELEASED FOR CONSTRUCTION

The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713
 phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187
 www.mcadamsco.com

CLIENT
 TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V Finch, o=McAdams Company, ou=Engineering, email=jfinch@mcadamsco.com, c=US
 Date: 2024.02.27 16:44:38 -05'00'

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

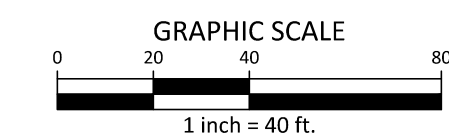
PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-G1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1" = 40'
DATE	02. 23. 2024

GRADING AND STORM DRAINAGE PLAN
 S. FRANKLIN STREET, STA. 26+00 THRU STA. 46+00

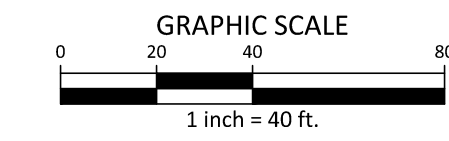
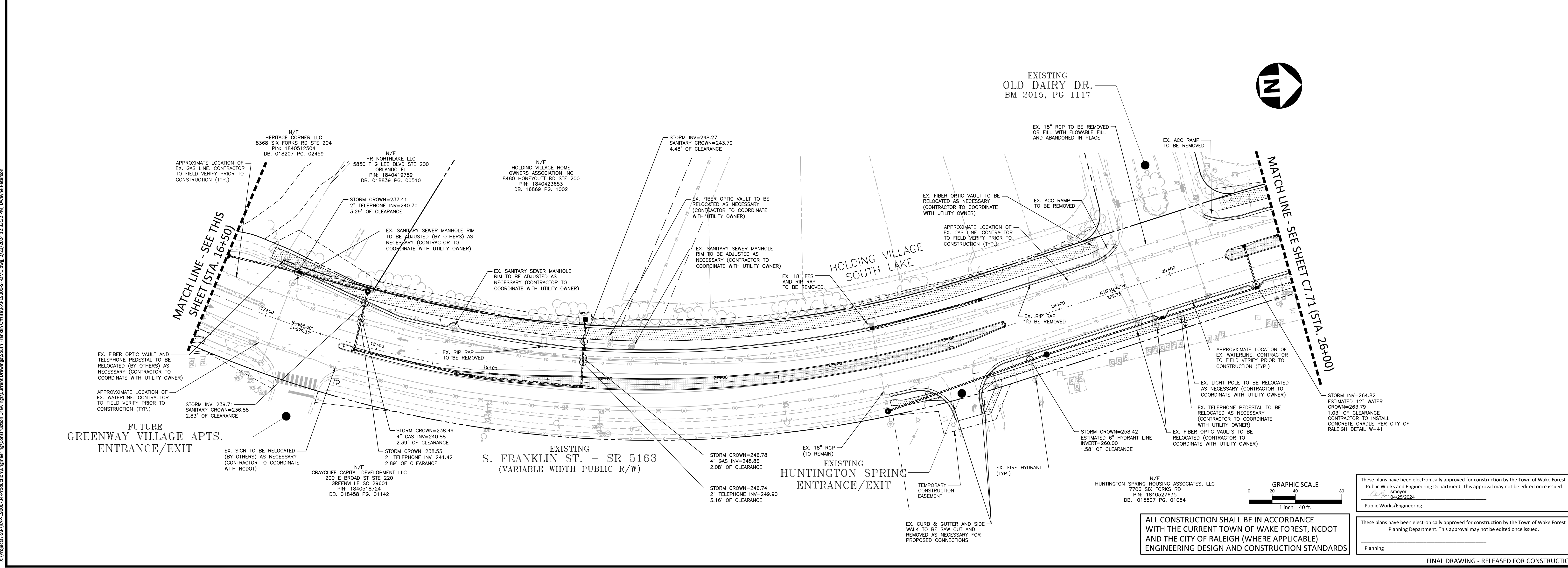
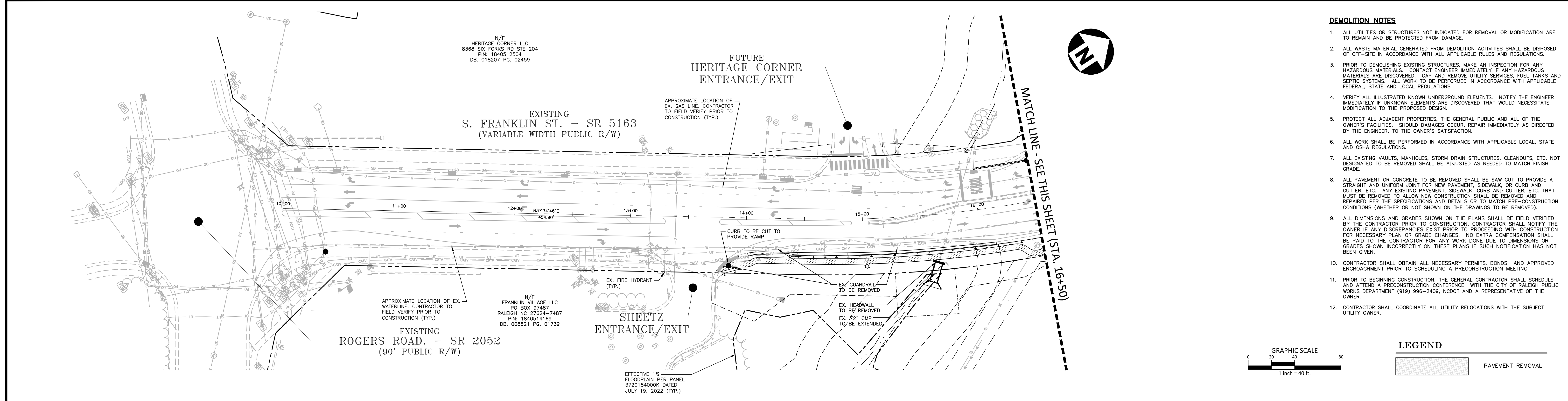
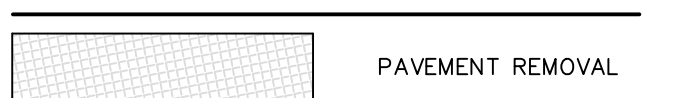
C3.01

DEMOLITION NOTES

- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
- ALL WASTE MATERIAL GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
- PRIOR TO DEMOLISHING EXISTING STRUCTURES, MAKE AN INSPECTION FOR ANY HAZARDOUS MATERIALS. CONTACT ENGINEER IMMEDIATELY IF ANY HAZARDOUS MATERIALS ARE DISCOVERED. CAP AND REMOVE UTILITY SERVICES, FUEL TANKS AND SEPTIC SYSTEMS. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
- PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, REPAIR IMMEDIATELY AS DIRECTED BY THE ENGINEER, TO THE OWNER'S SATISFACTION.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
- ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. NOT DESIGNATED TO BE REMOVED SHALL BE ADJUSTED AS NEEDED TO MATCH FINISH GRADE.
- ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT FOR NEW PAVEMENT, SIDEWALK, OR CURB AND GUTTER, ETC. ANY EXISTING PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH PRE-CONSTRUCTION CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED).
- 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.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, BONDS AND APPROVED ENCROACHMENT PRIOR TO SCHEDULING A PRECONSTRUCTION MEETING.
- PRIOR TO BEGINNING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL SCHEDULE AND ATTEND A PRECONSTRUCTION CONFERENCE WITH THE CITY OF RALEIGH PUBLIC WORKS DEPARTMENT (919) 996-2409, NCDOT AND A REPRESENTATIVE OF THE OWNER.
- CONTRACTOR SHALL COORDINATE ALL UTILITY RELOCATIONS WITH THE SUBJECT UTILITY OWNER.



LEGEND



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 2905 Meridian Parkway
 Durham, NC 27713

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 fax 919. 361. 2269
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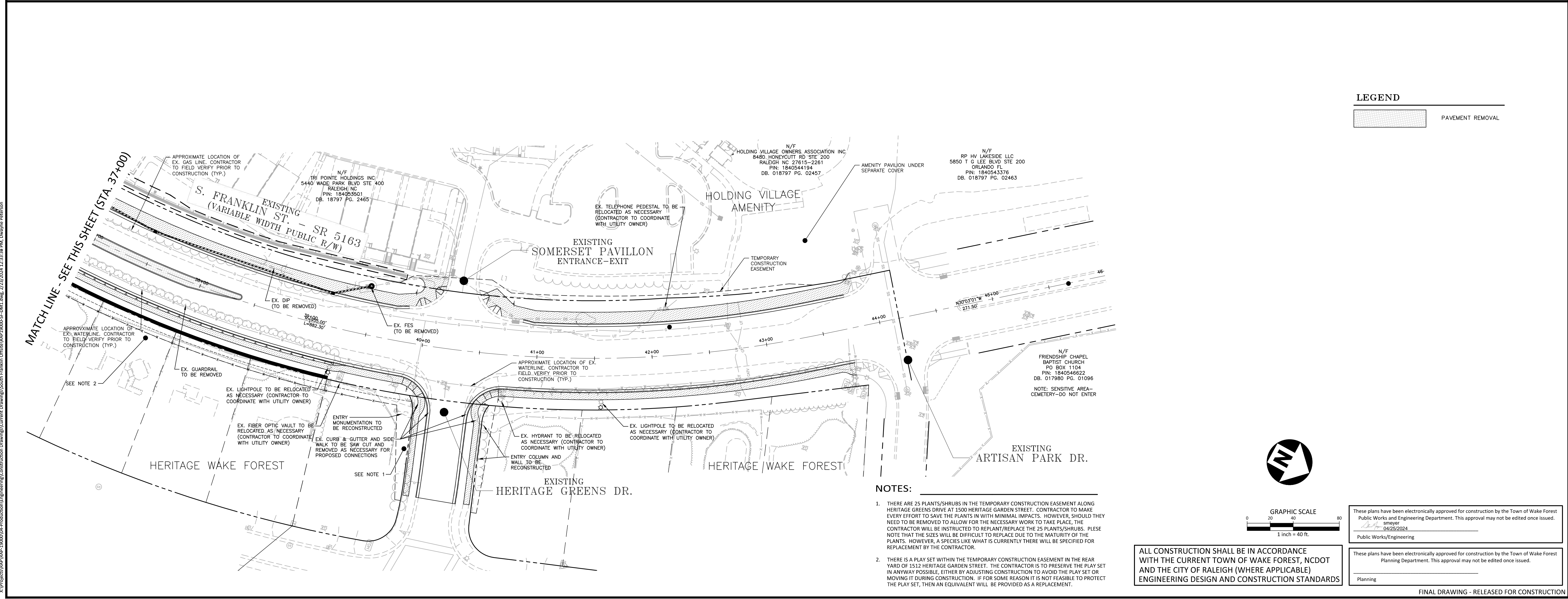
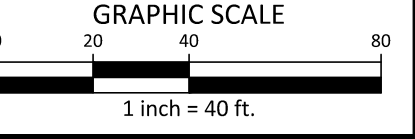
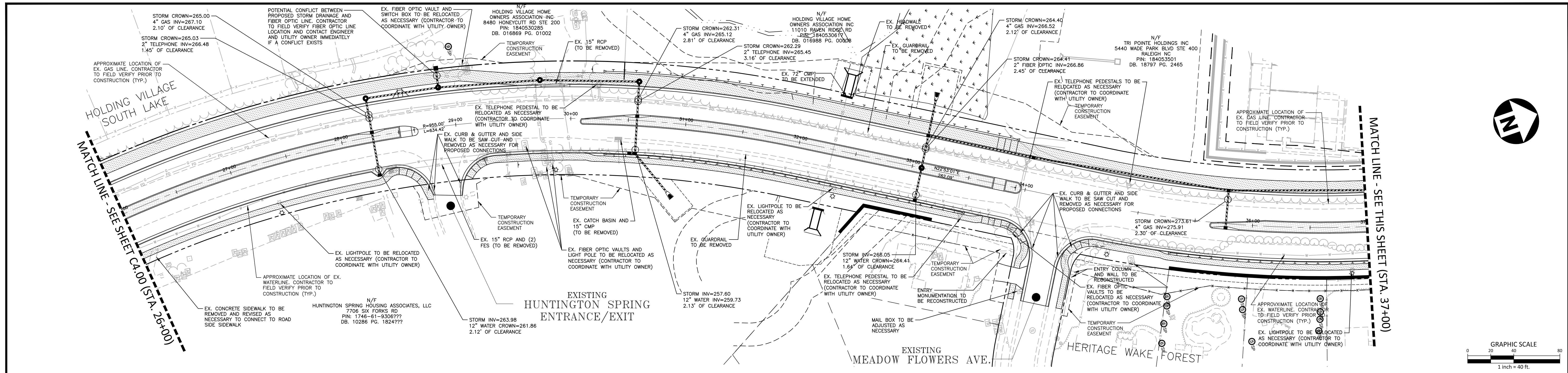


TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
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 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
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 DRAWN BY RJF
 SCALE 1" = 40'
 DATE 02. 23. 2024

DEMOLITION AND UTILITY CONFLICT PLAN
 S. FRANKLIN STREET, STA. 10+00 THRU STA. 26+00

C4.00



LEGEND
 PAVEMENT REMOVAL

- NOTES:**
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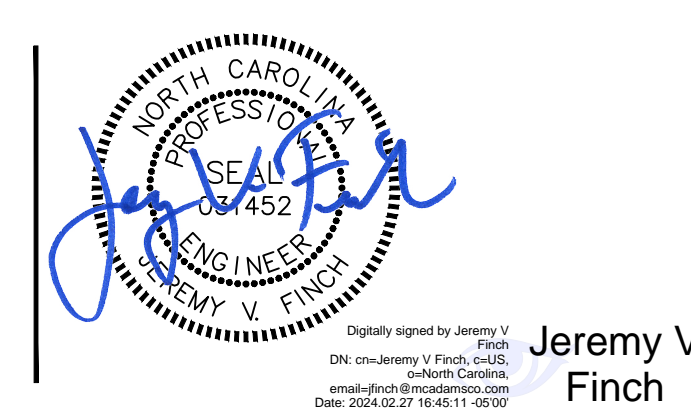


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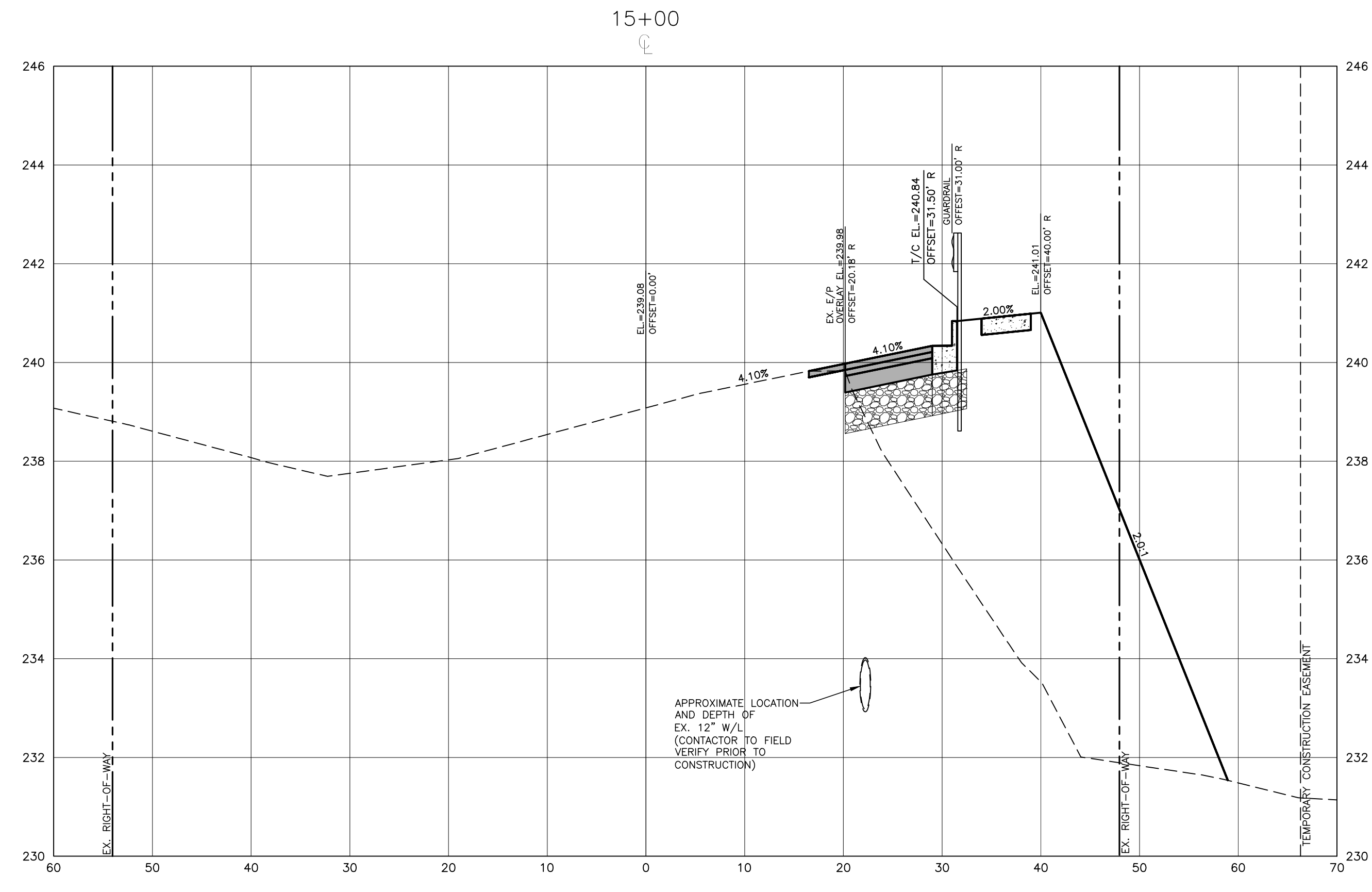
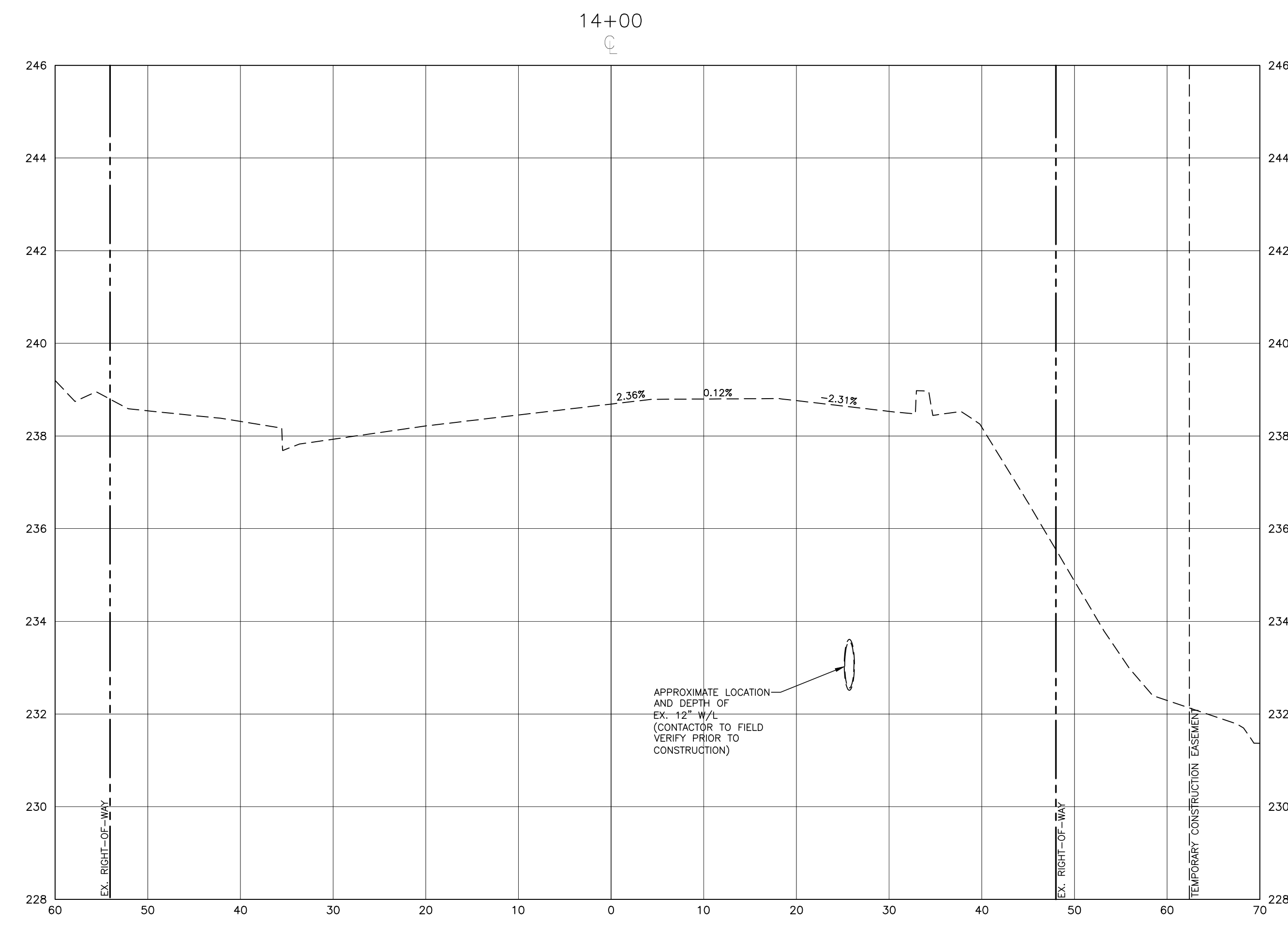
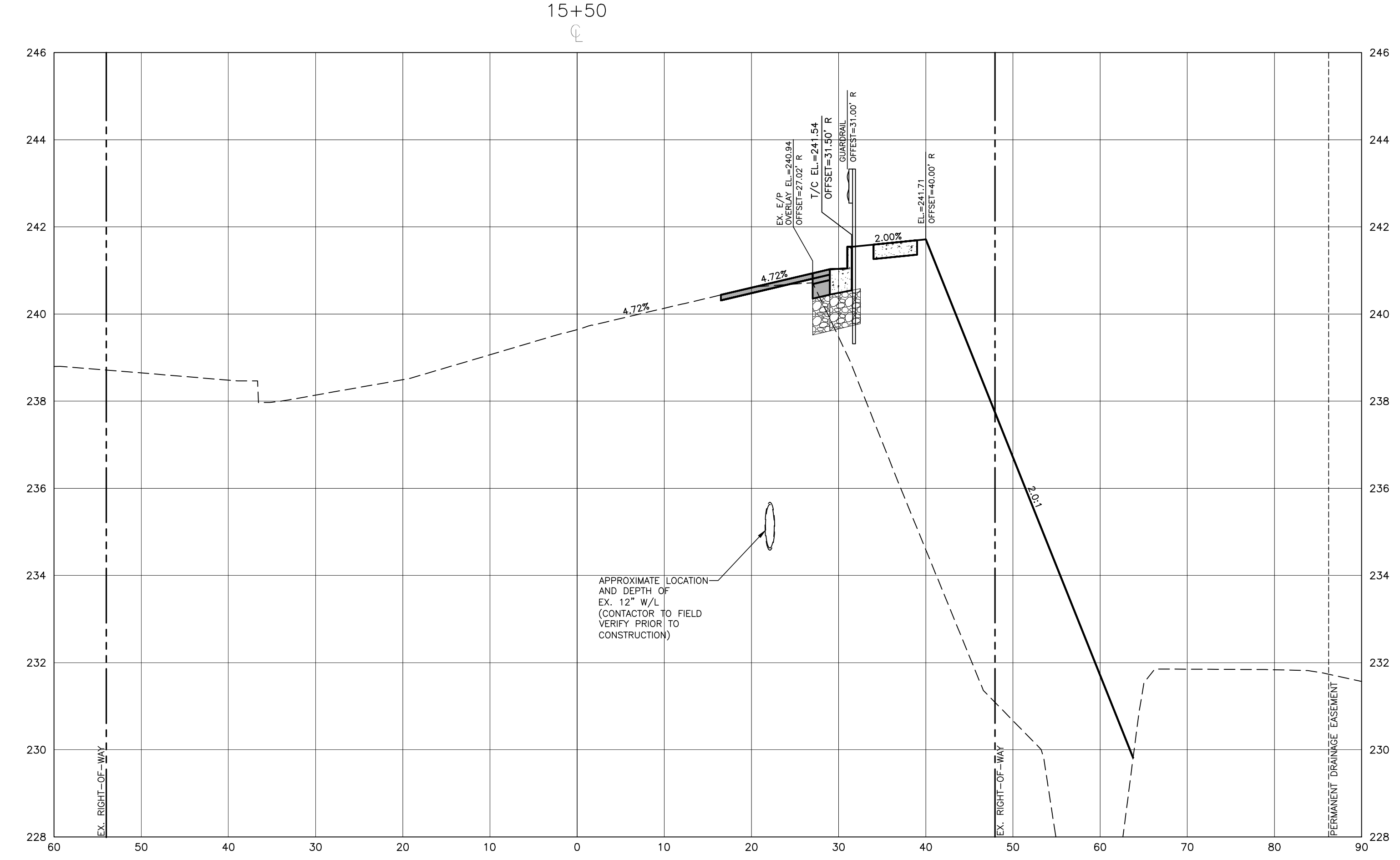
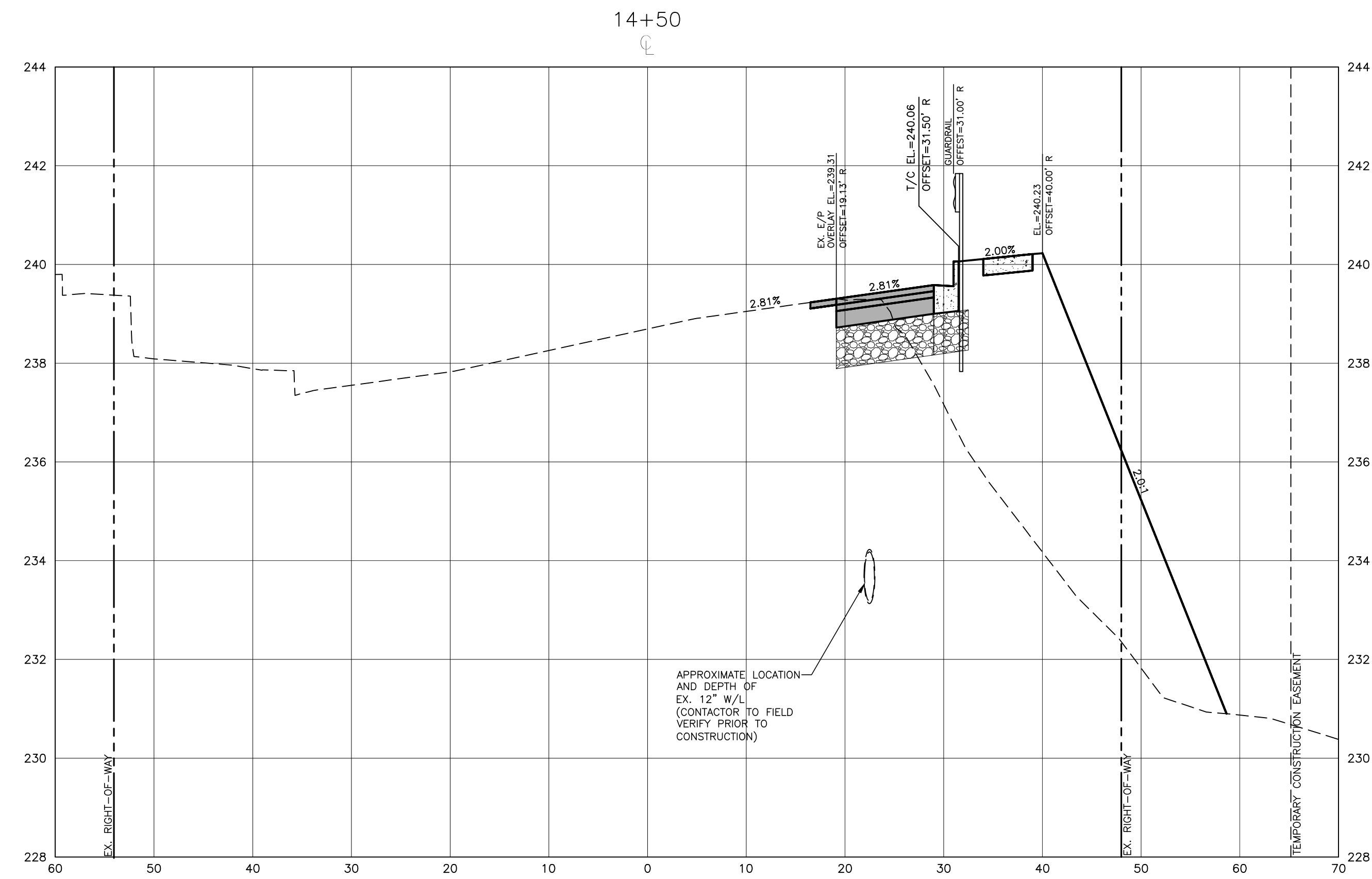
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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DEMOLITION AND UTILITY CONFLICT PLAN
 S. FRANKLIN STREET, STA. 26+00 THRU STA. 46+00

C4.01

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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=North Carolina, ou=Professional Engineers, email=jfinch@wakeforestnc.com, c=US
 Date: 2024.02.27 16:40:43 -0500
 Jeremy V. Finch

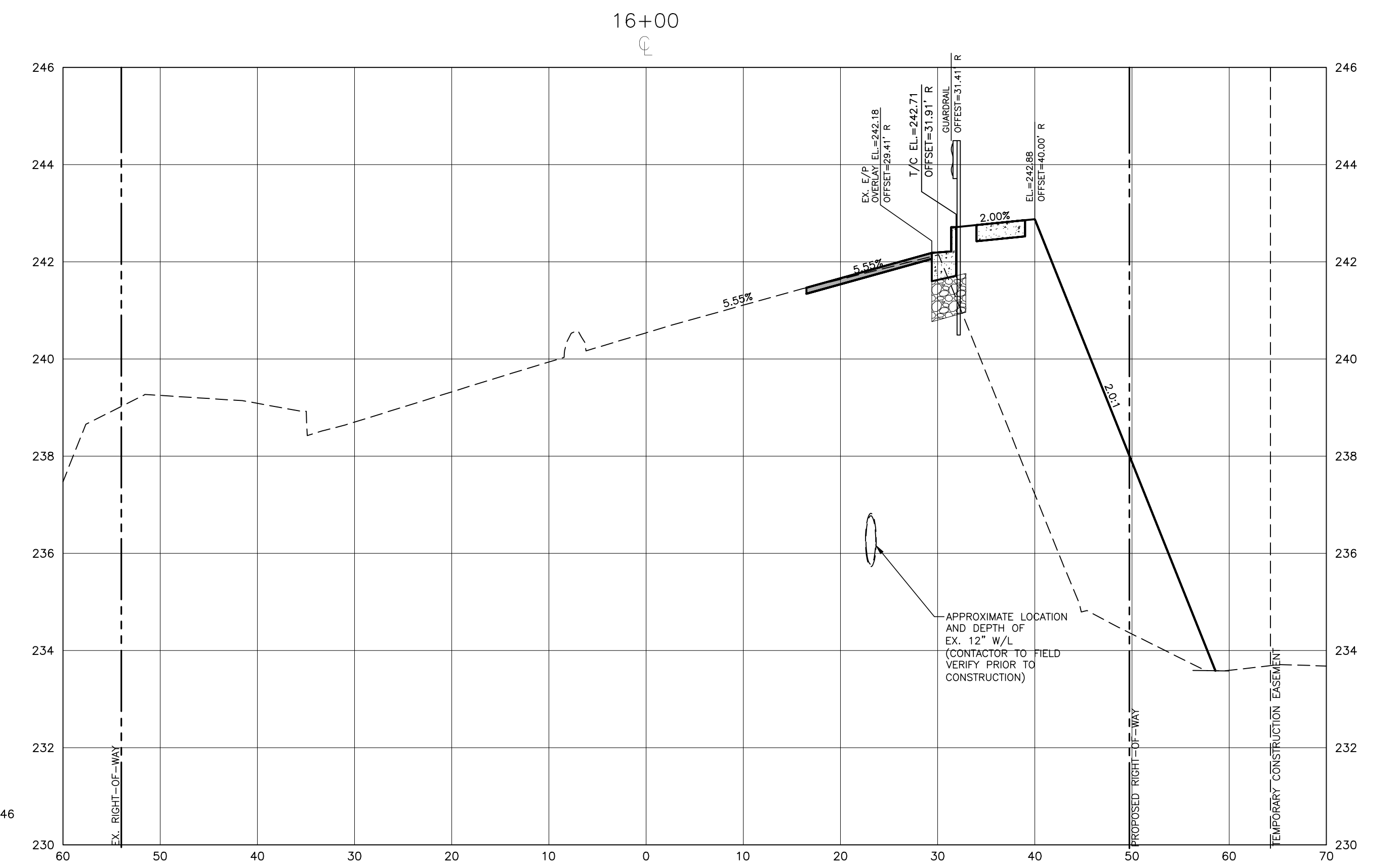
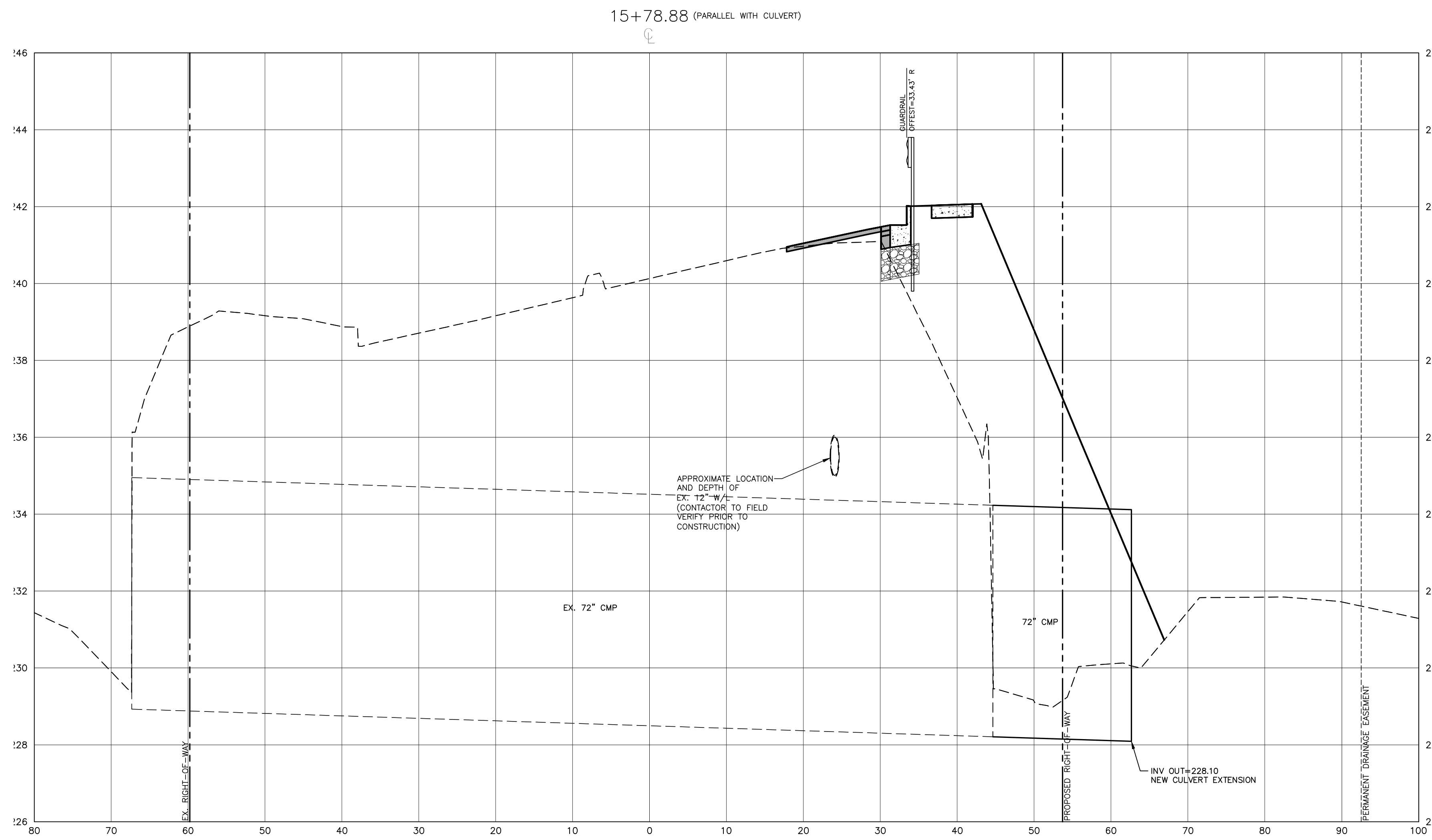
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SCALE	1"=10' H, 1"=2' V
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CROSS SECTIONS
 S. FRANKLIN, STA. 14+00 THRU STA. 15+50
C7.00

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 Jeremy V. Finch

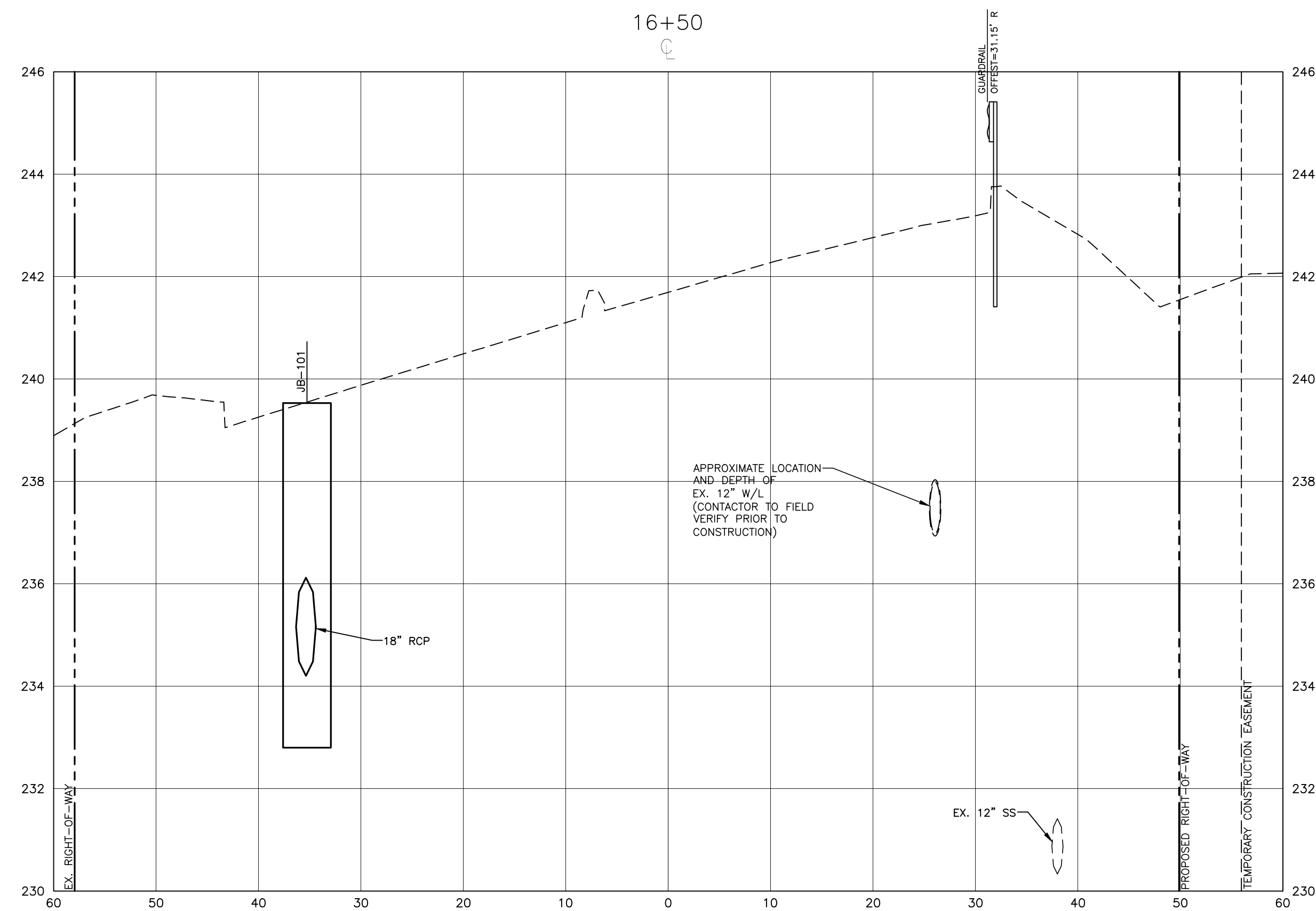
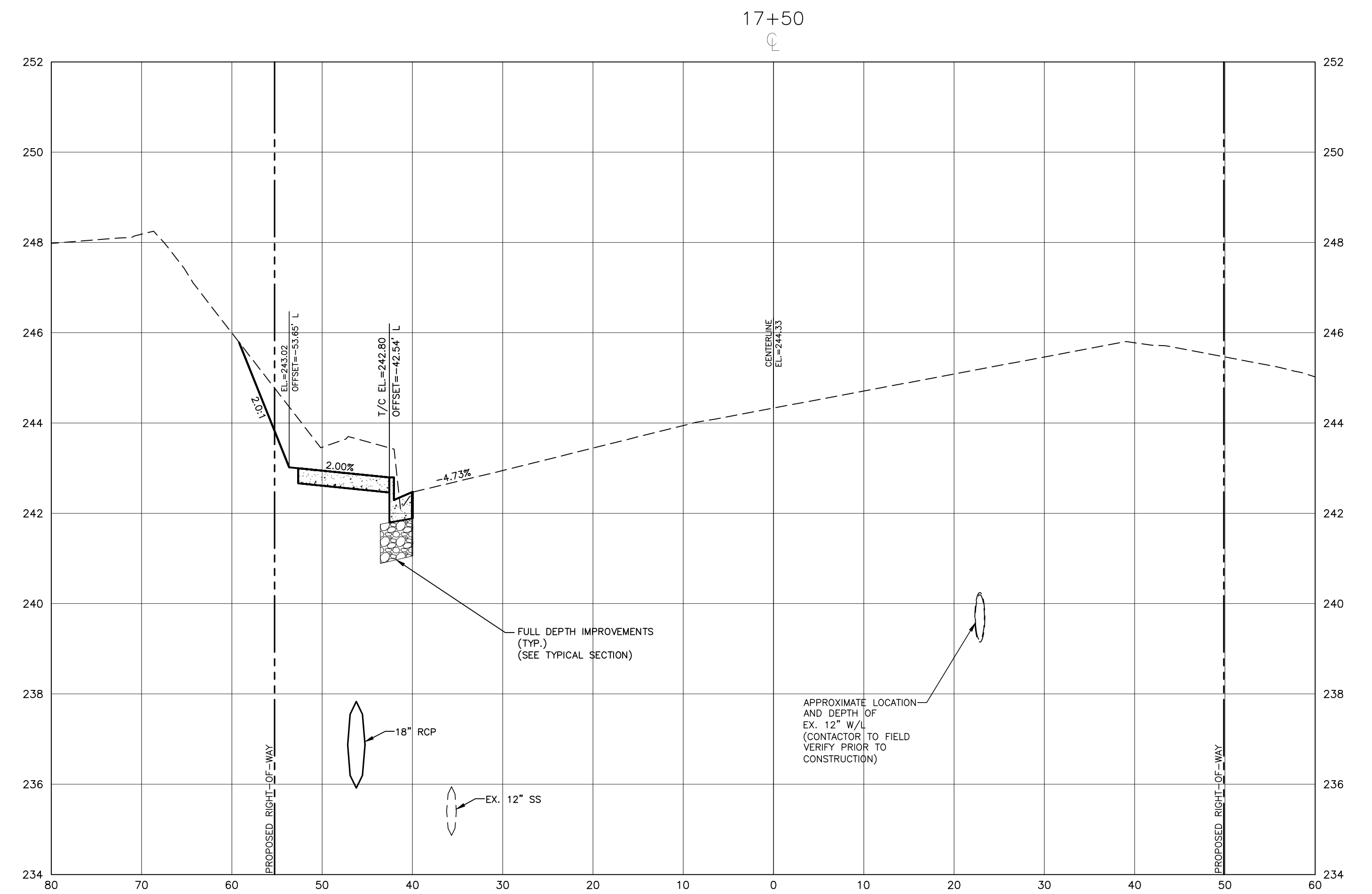
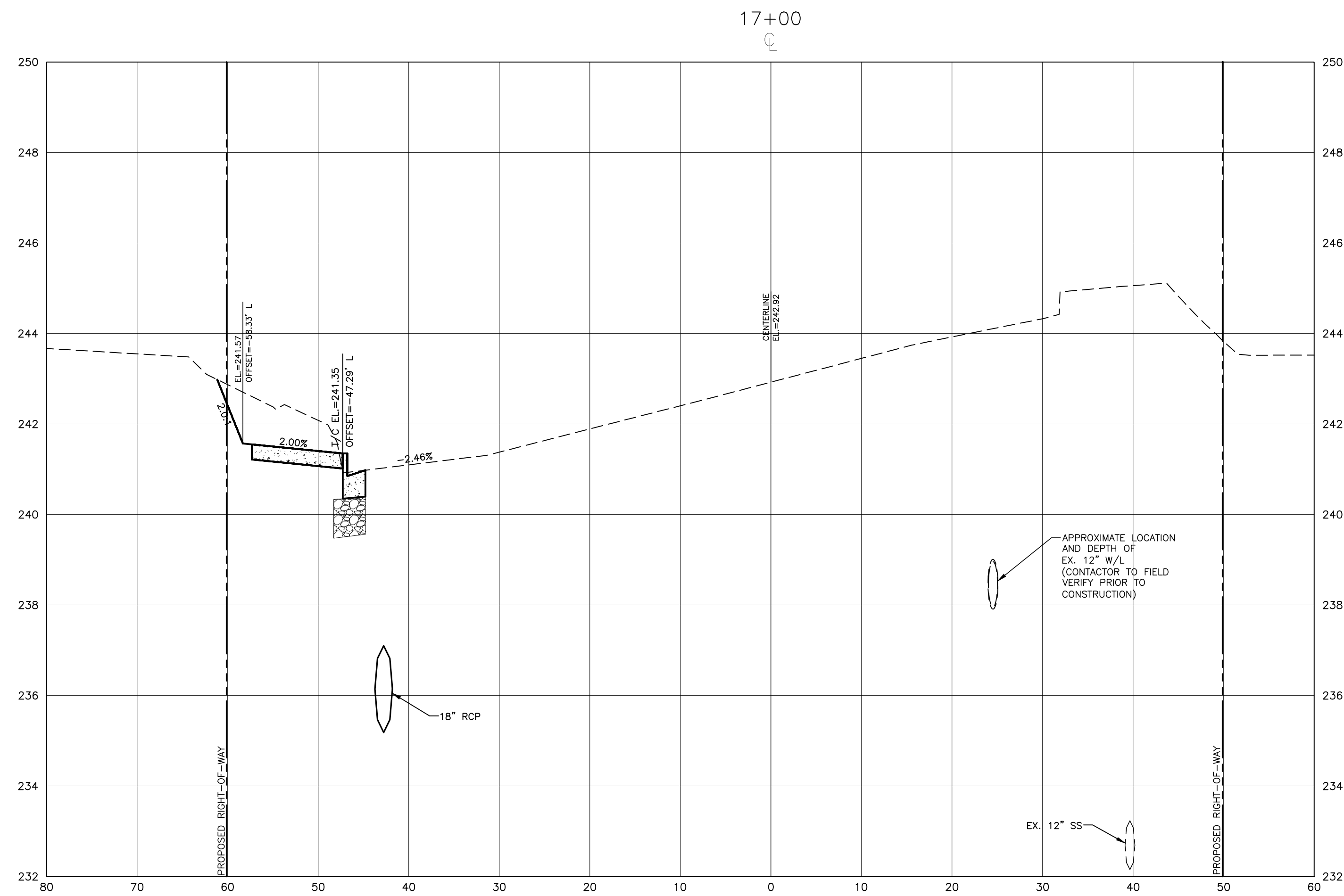
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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CROSS SECTIONS
 S. FRANKLIN, STA. 15+64.11 THRU STA. 16+00

C7.01



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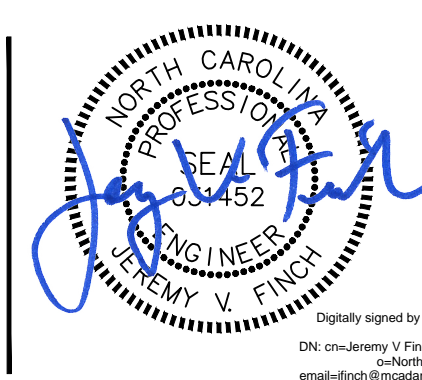
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DN: cn=Jeremy V. Finch, o=McAdams Company, ou=Engineering, email=jfinch@mcadamsco.com, c=US

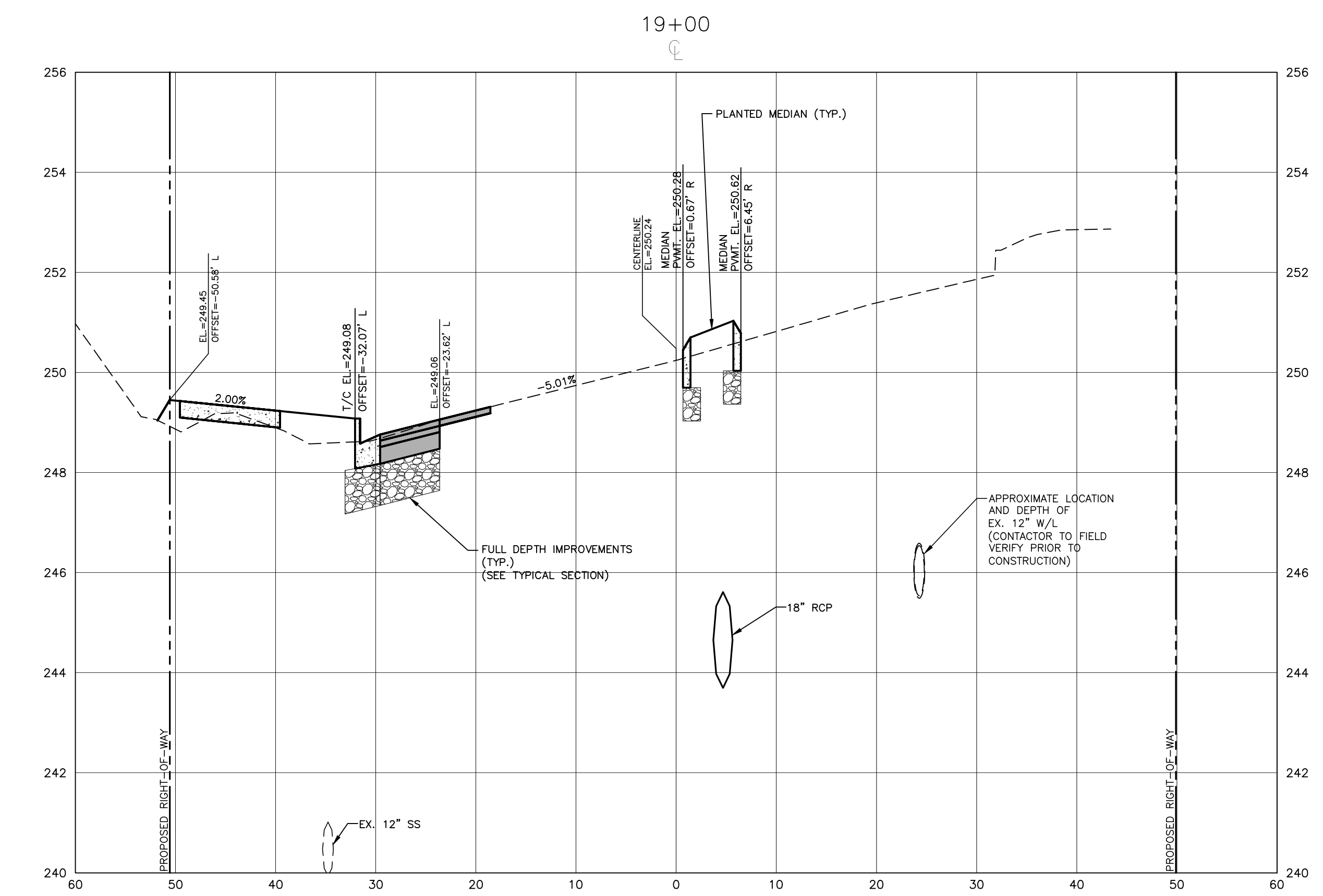
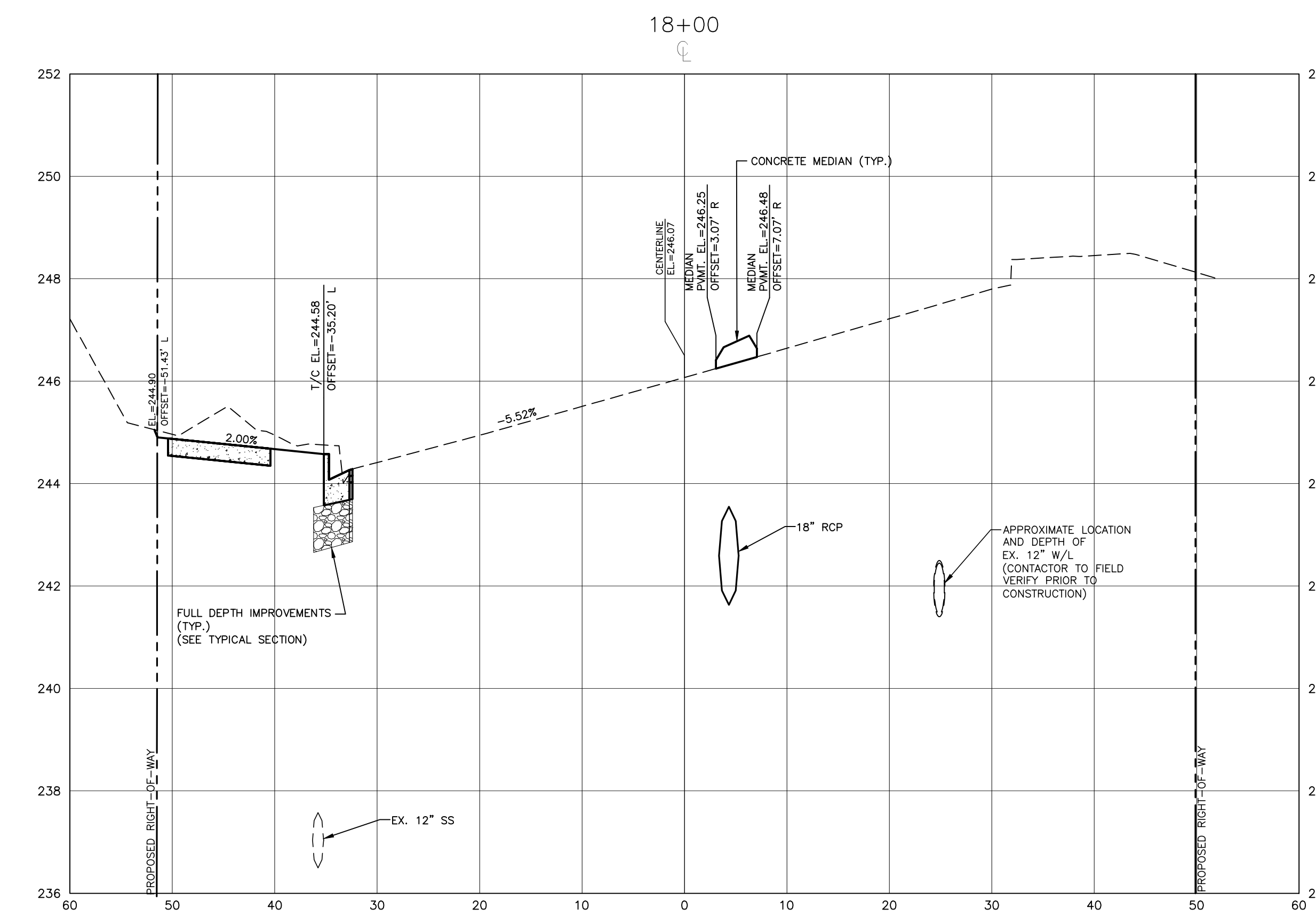
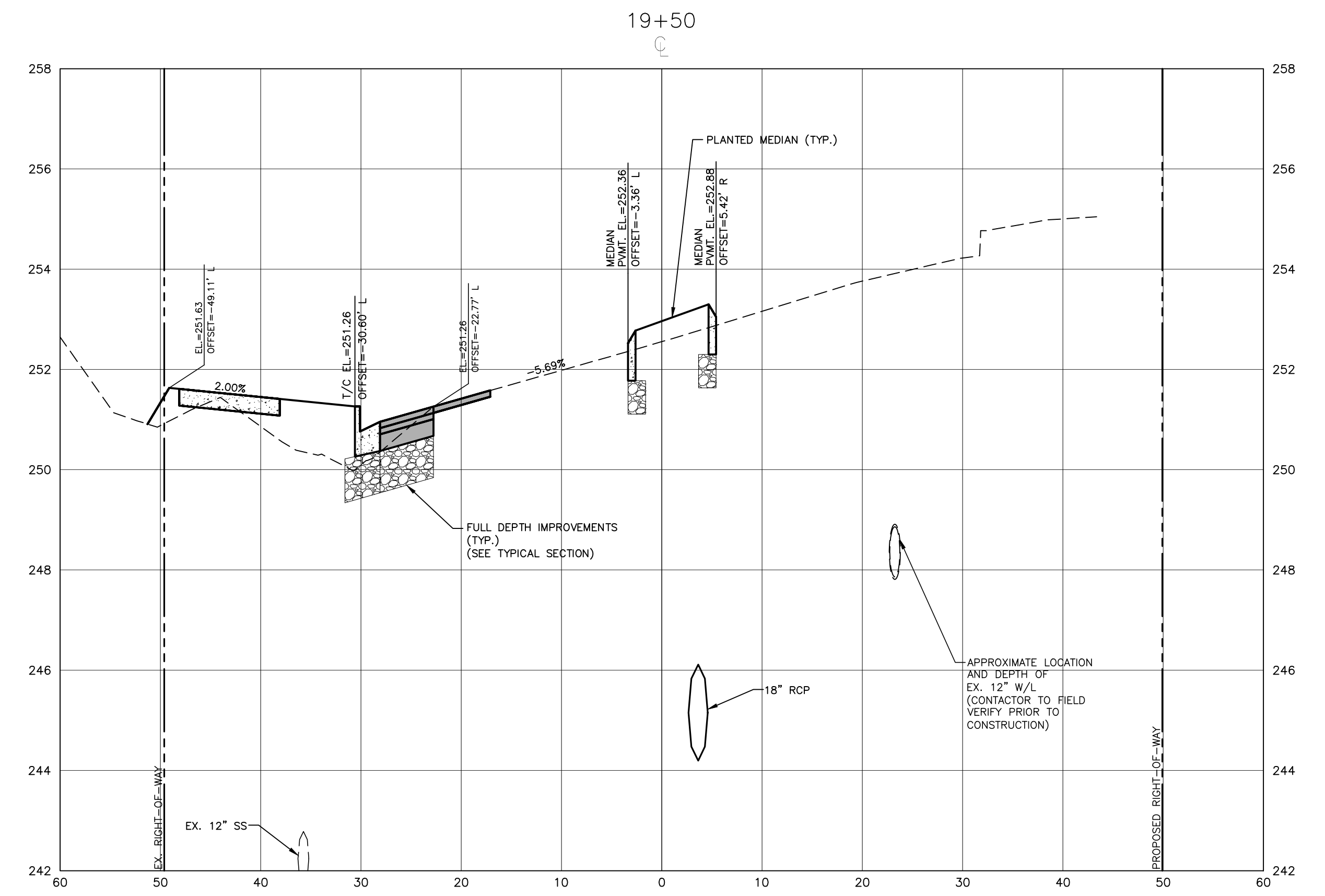
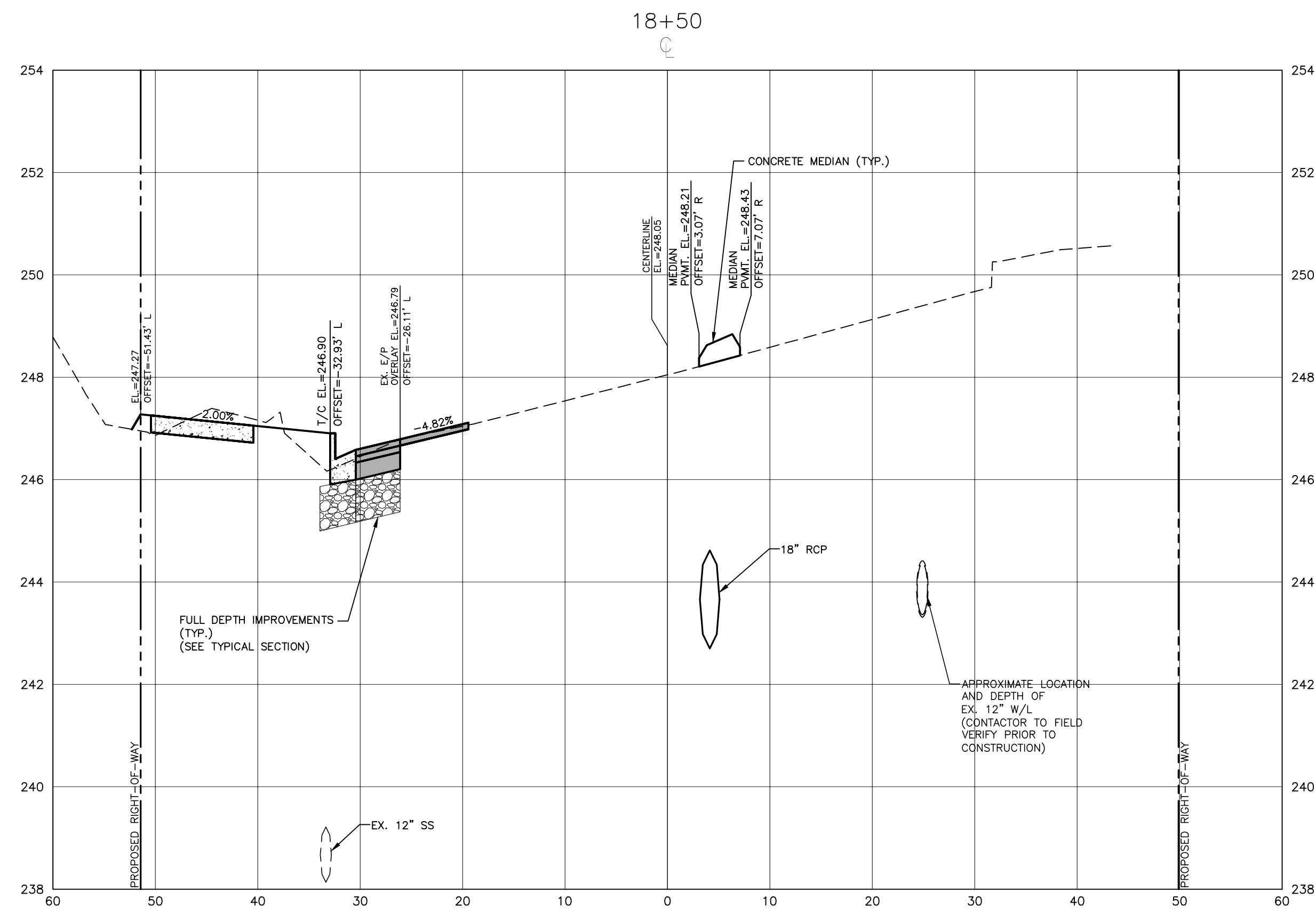
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP-19000
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DATE 02. 23. 2024

CROSS SECTIONS
S. FRANKLIN, STA. 16+50 THRU STA. 17+50

C7.02

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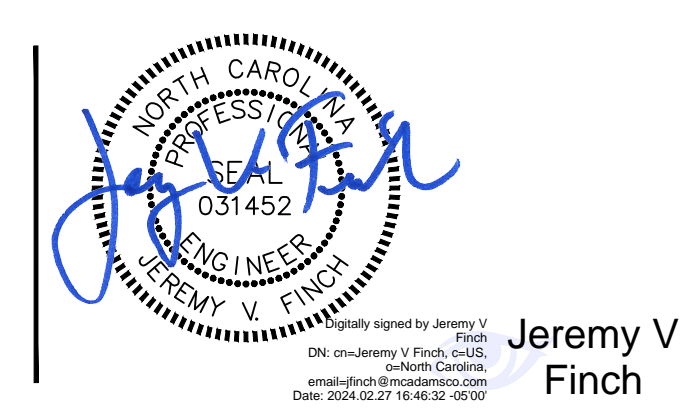


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REVISIONS

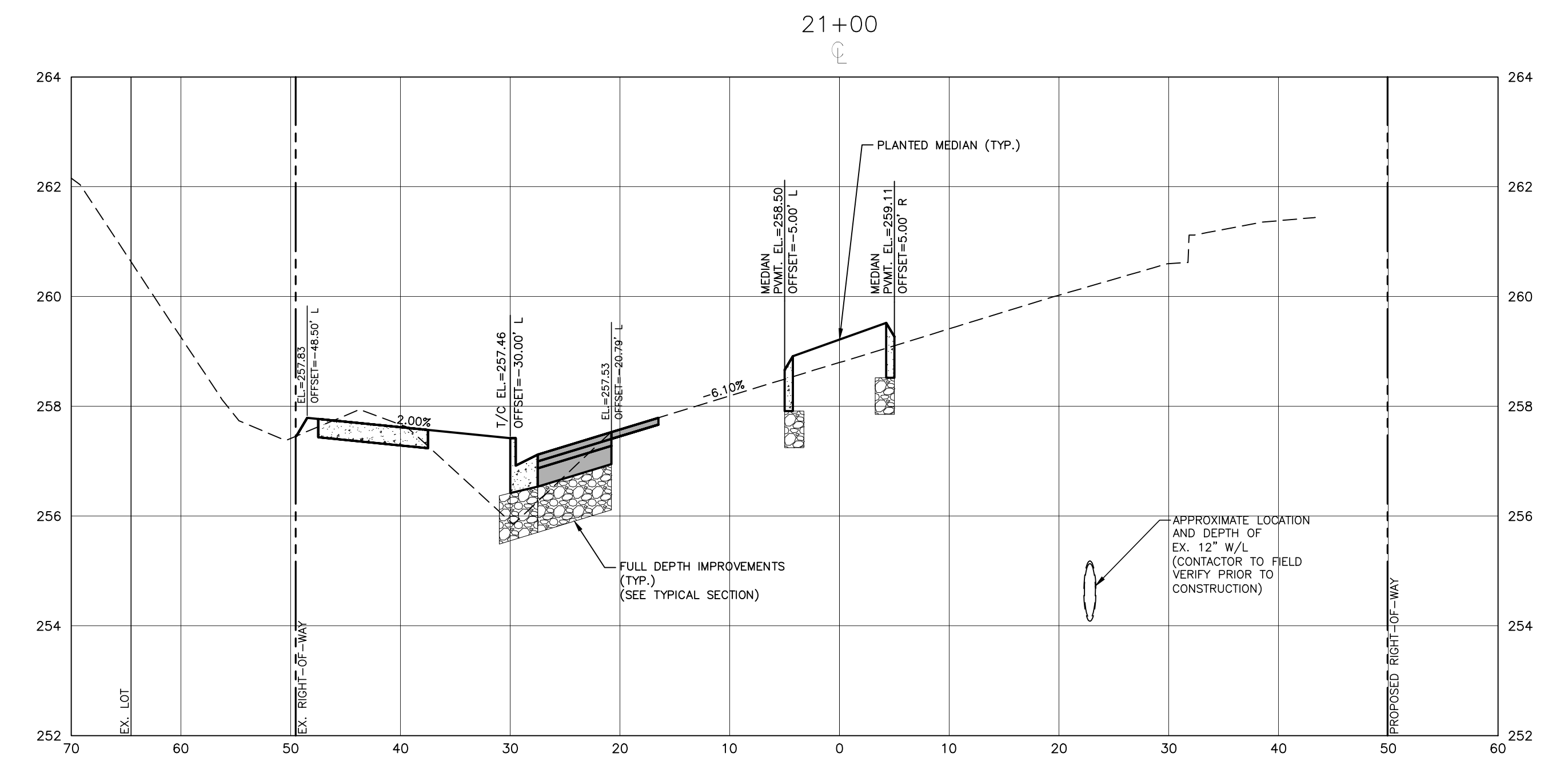
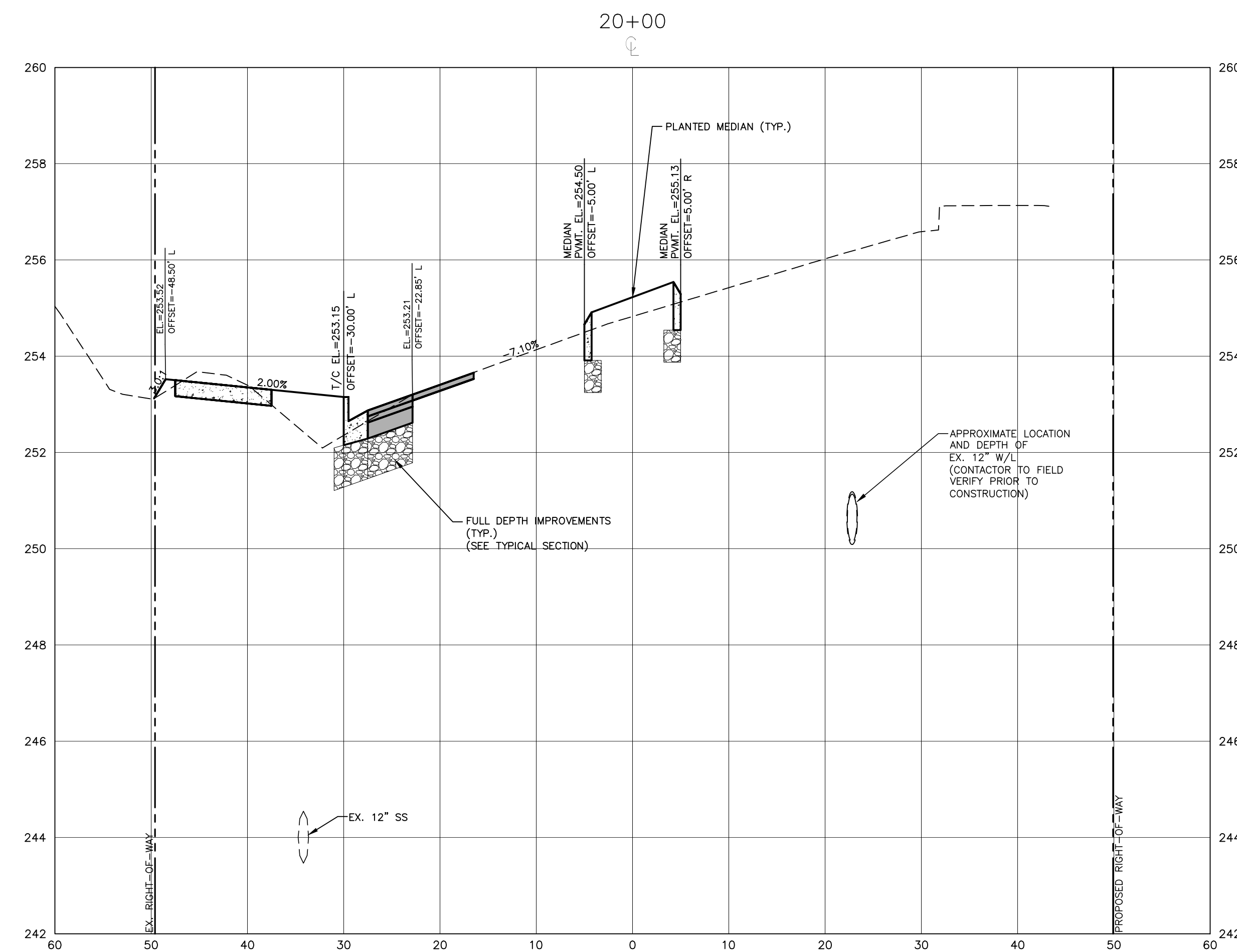
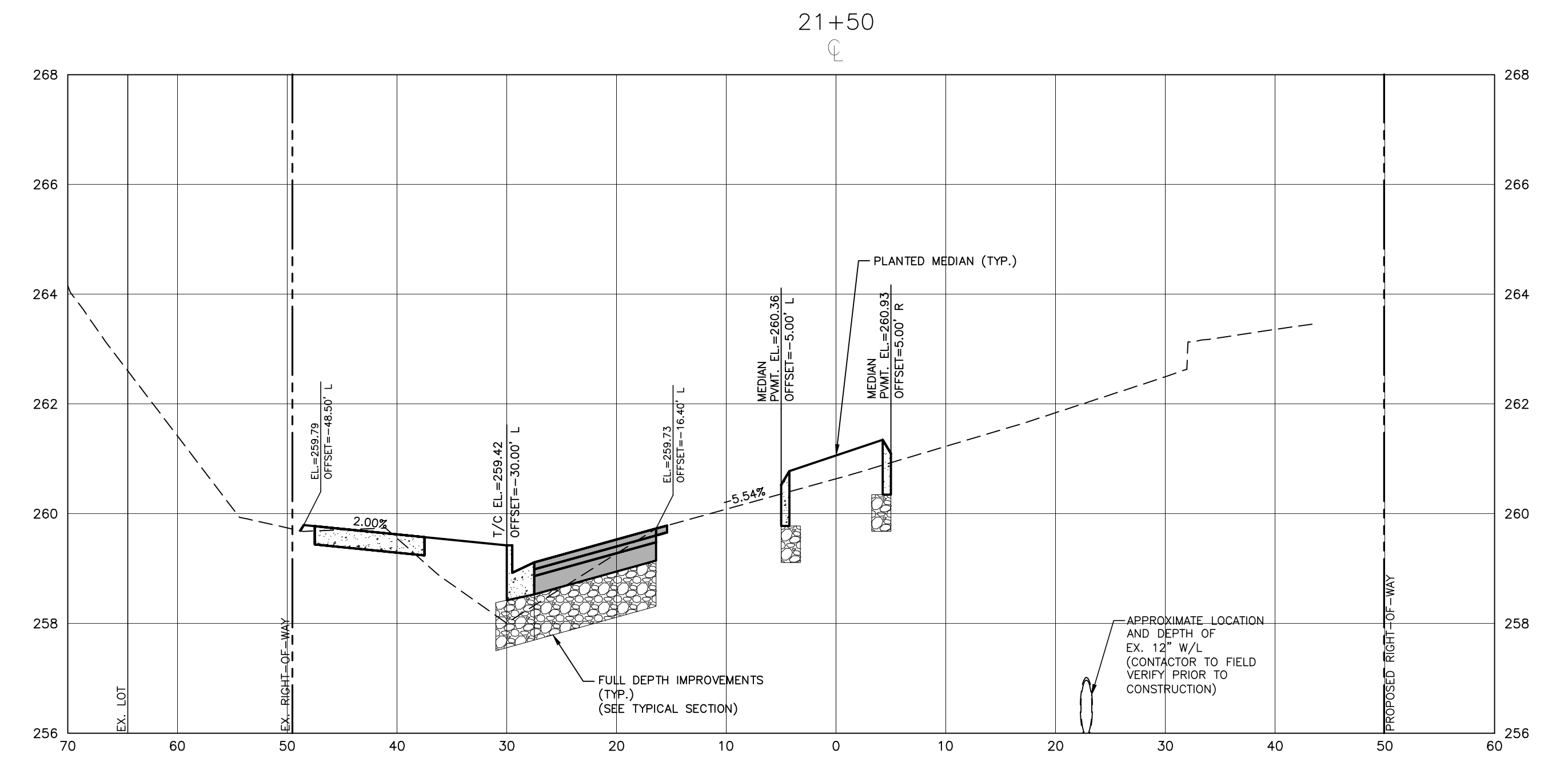
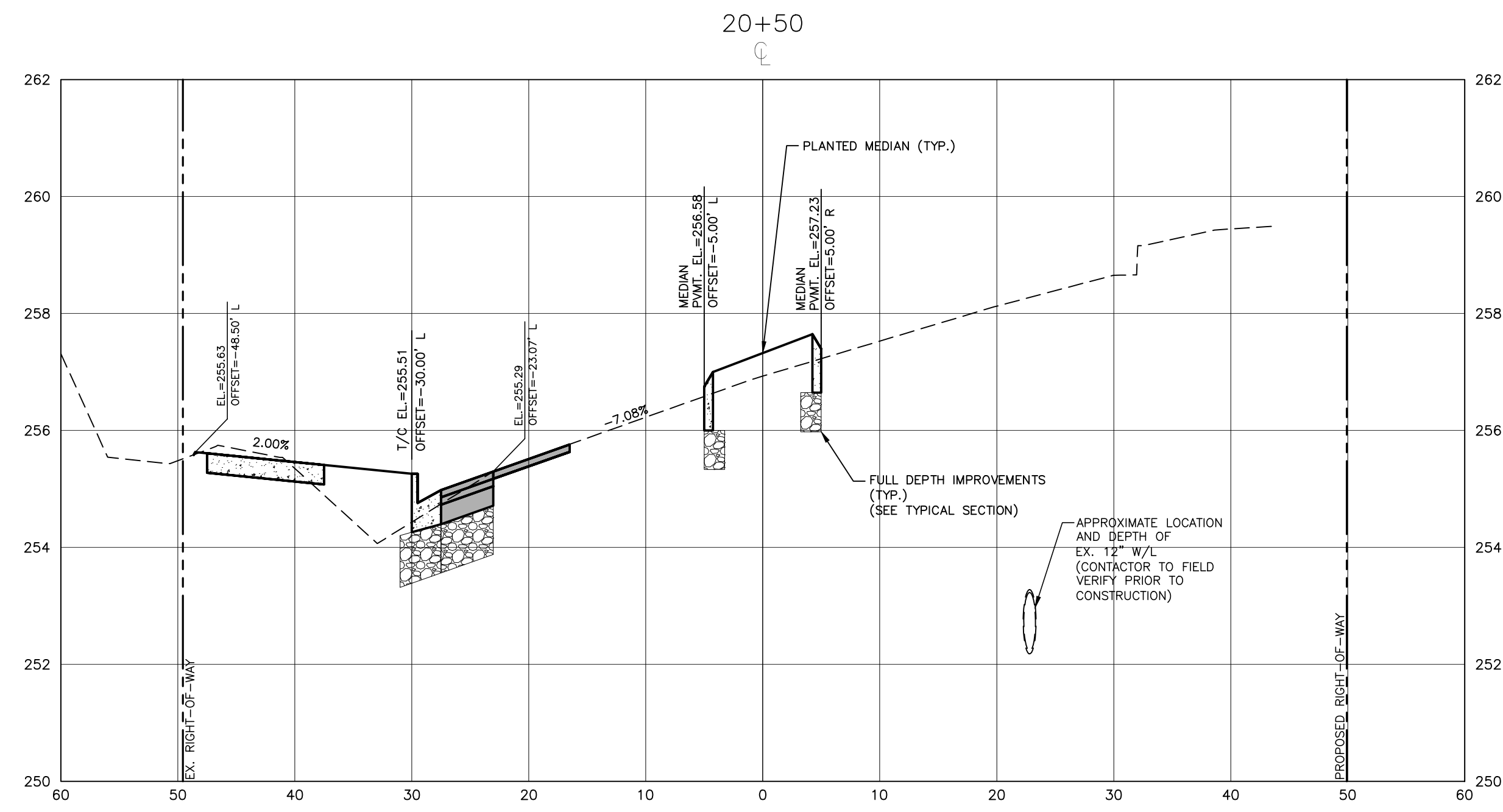
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TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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CROSS SECTIONS
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C7.03



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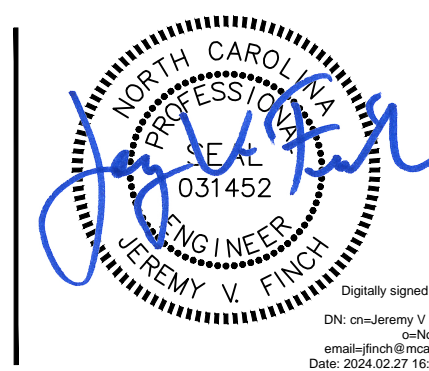
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Jeremy V. Finch

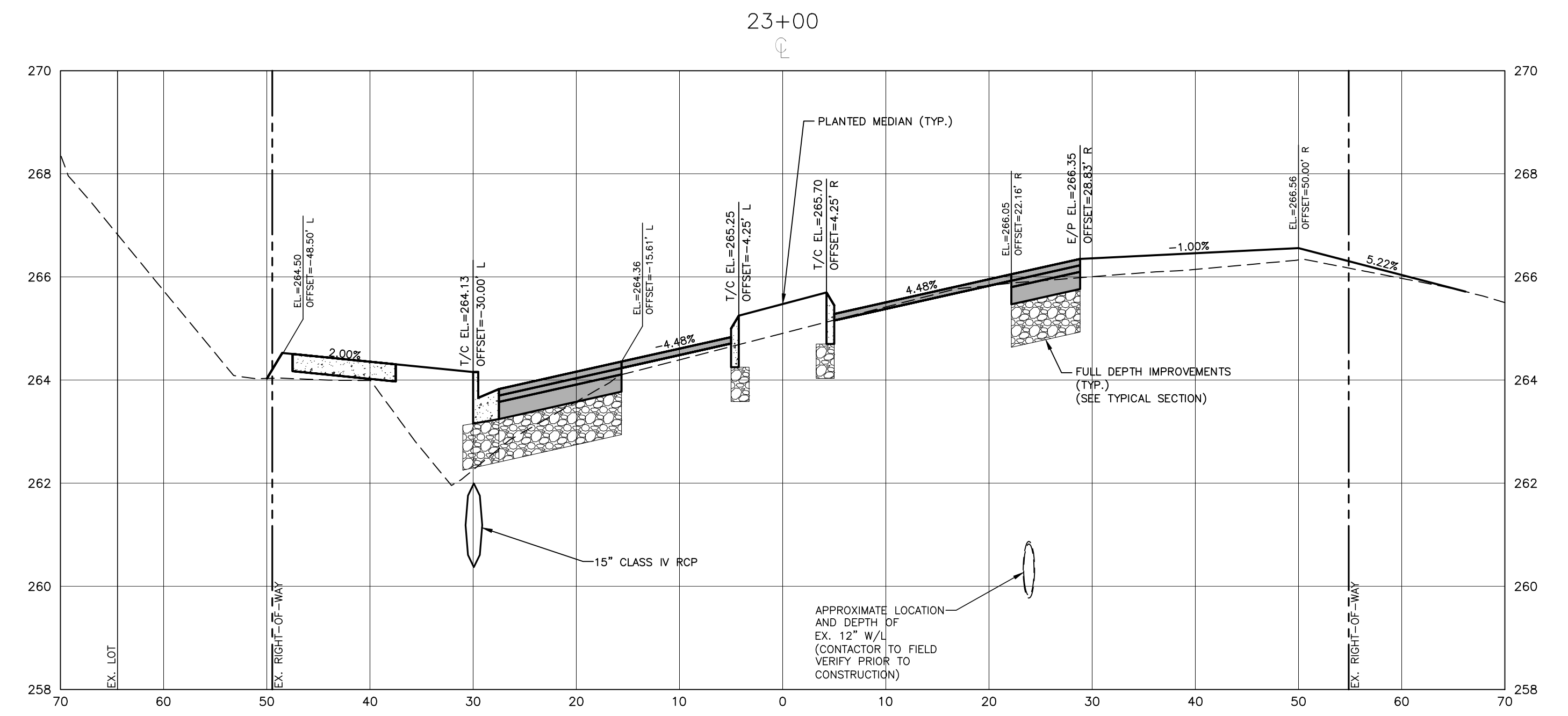
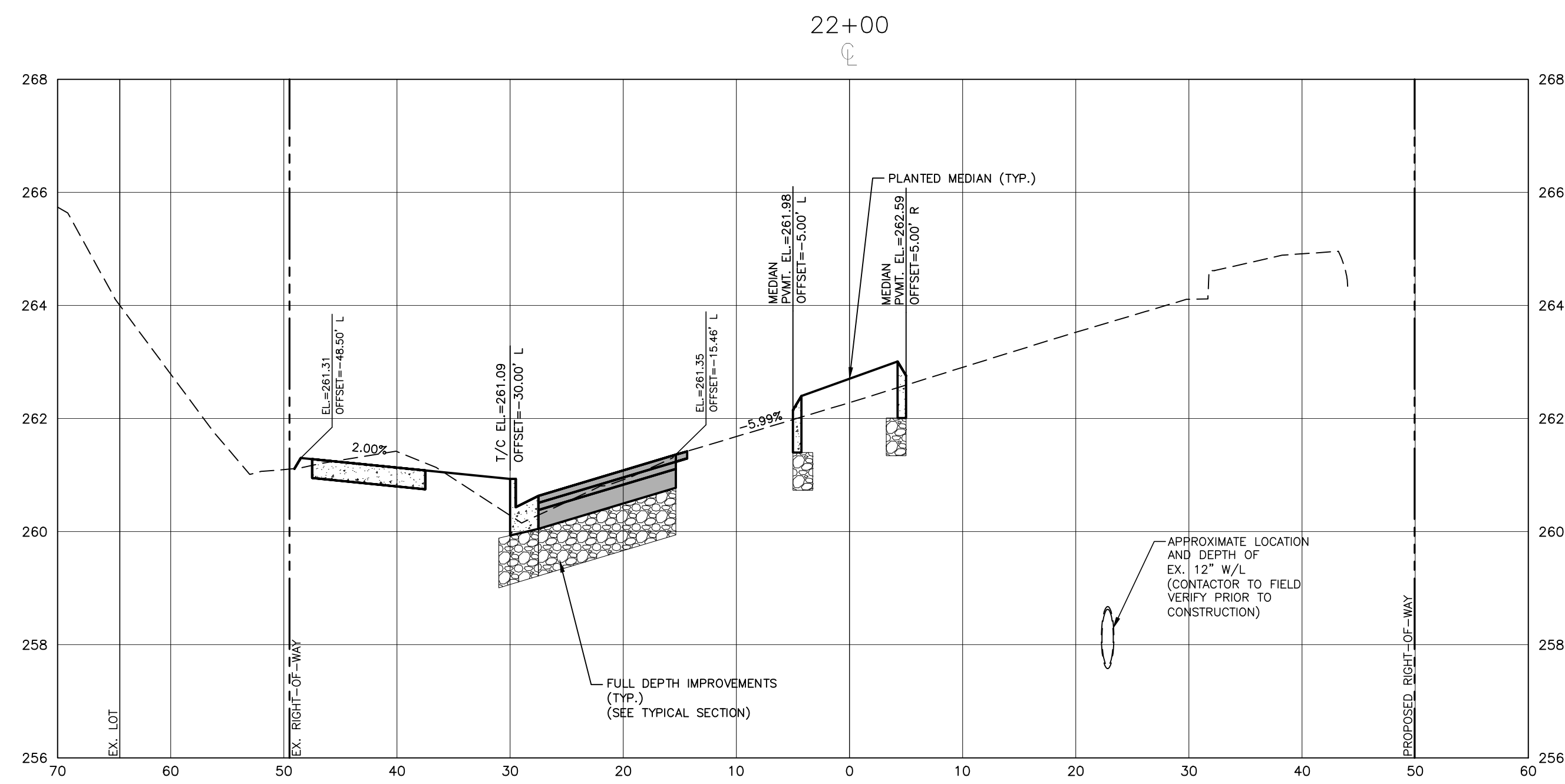
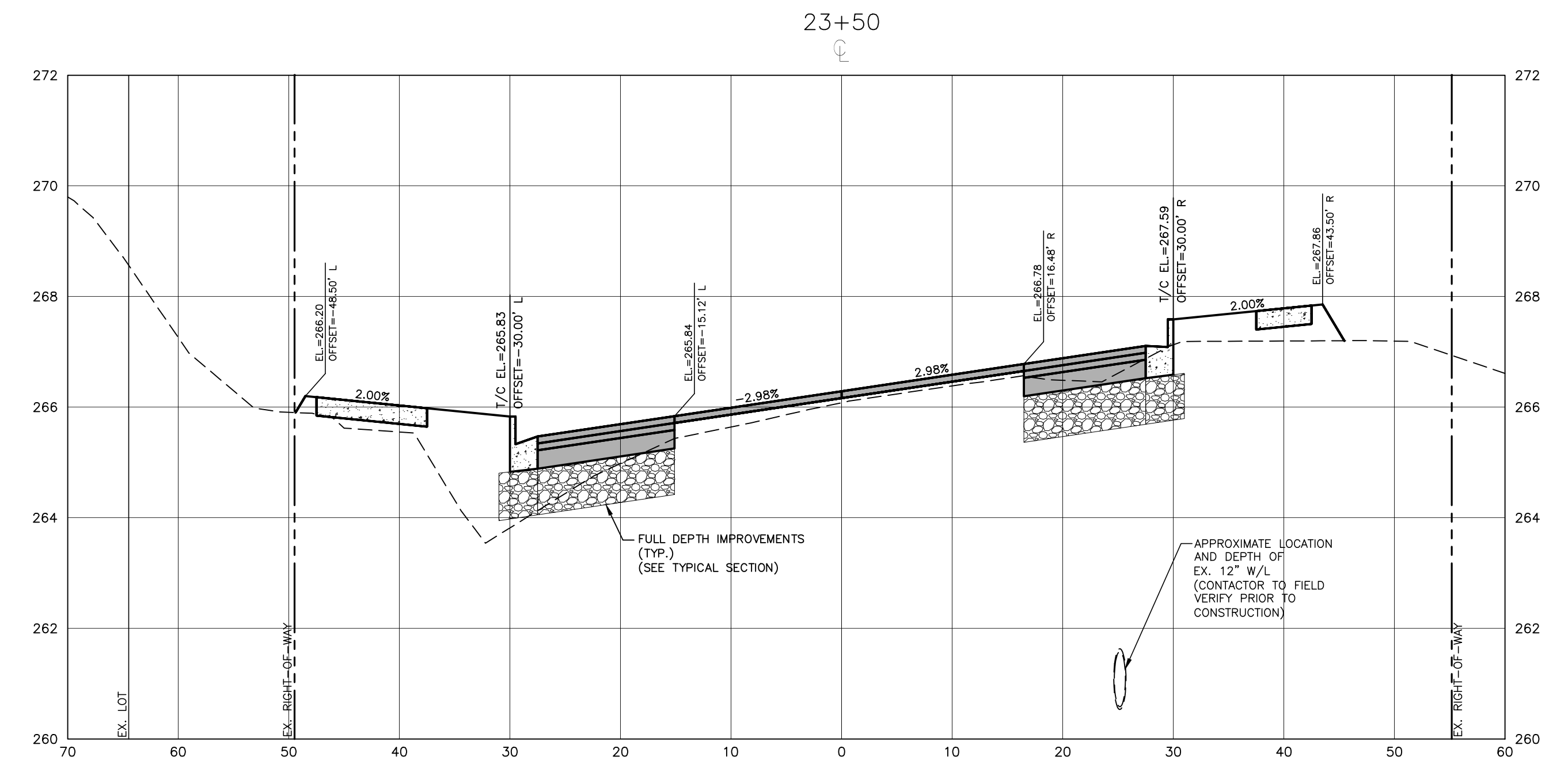
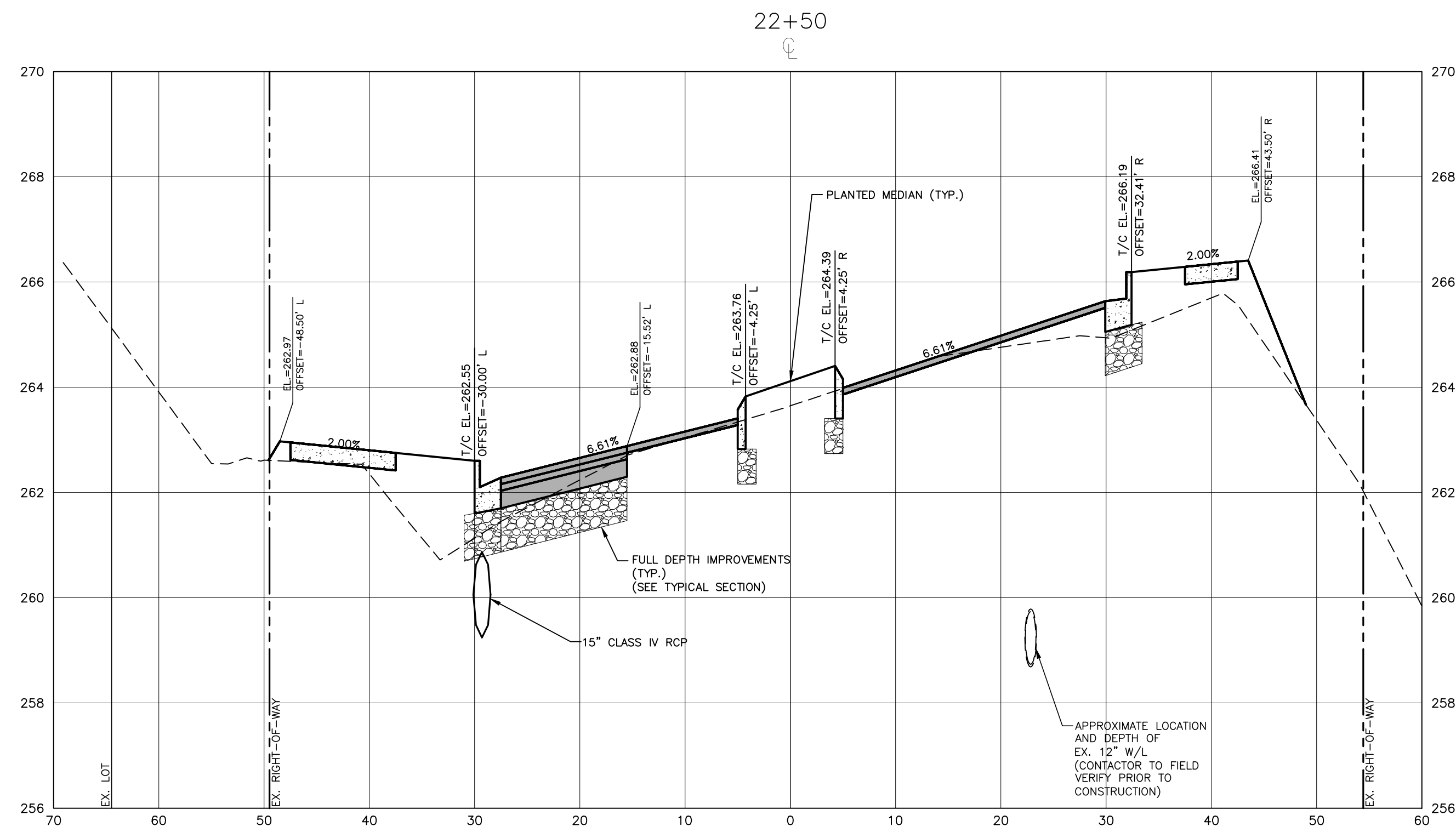
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 20+00 THRU STA. 21+50

C7.04

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Durham, NC 27713

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

www.mcadamsco.com

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TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

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Digitally signed by Jeremy V. Finch
DN: cn=Jeremy V Finch, o=John R. McAdams Company, email=jvfinch@mcadamsco.com, c=US
Date: 2024.02.23 16:02:00 -0500
Jeremy V. Finch

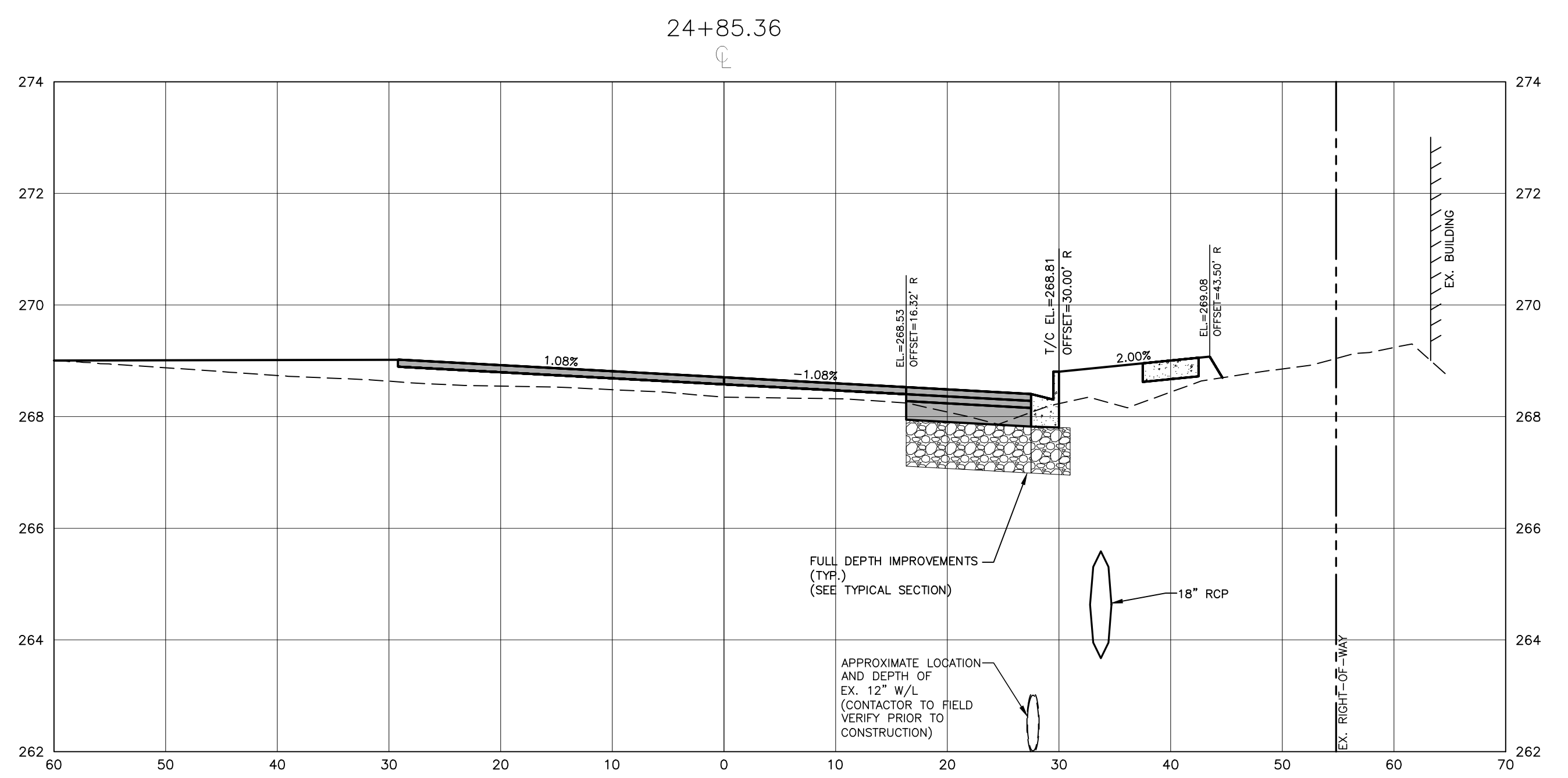
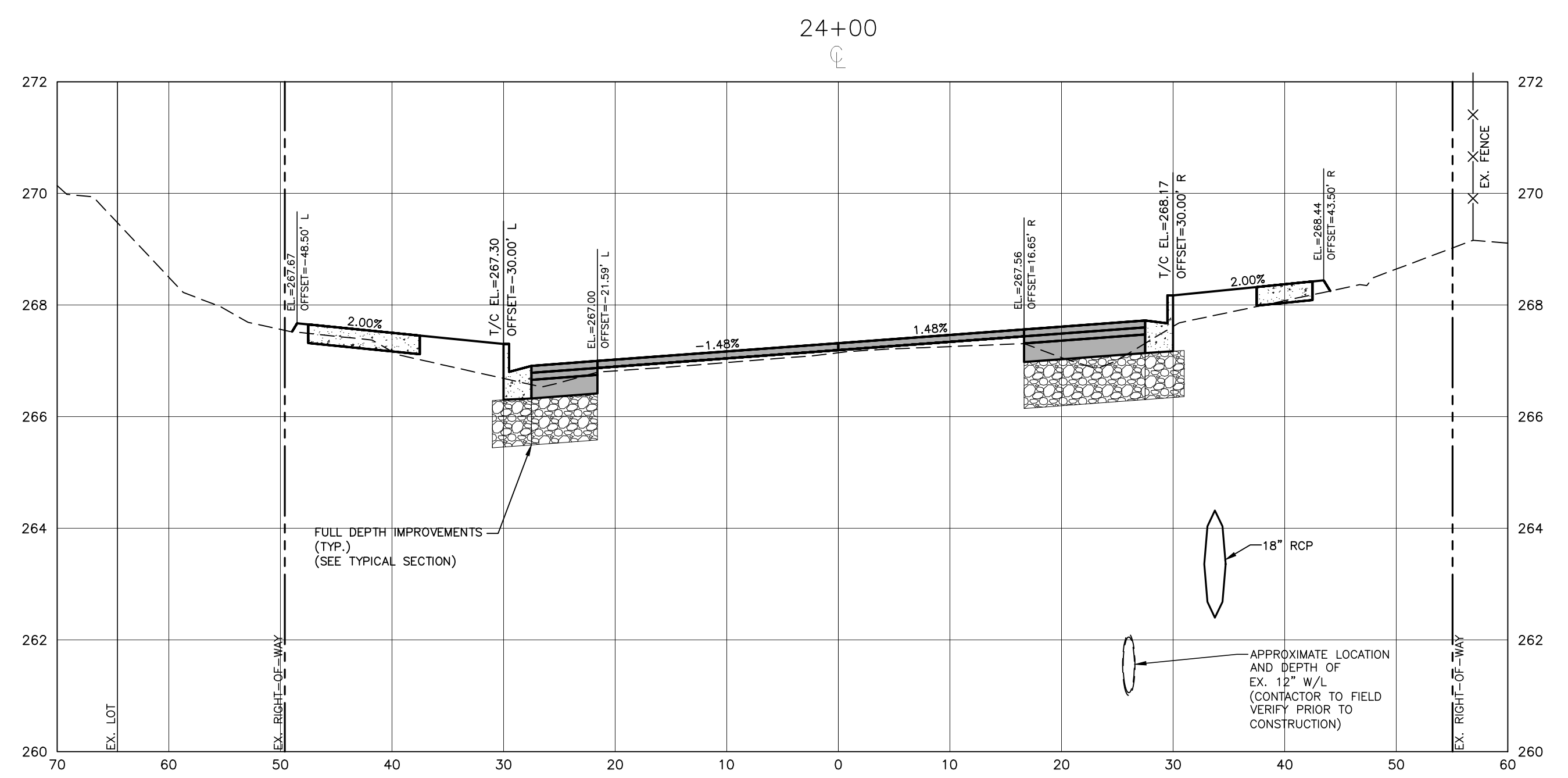
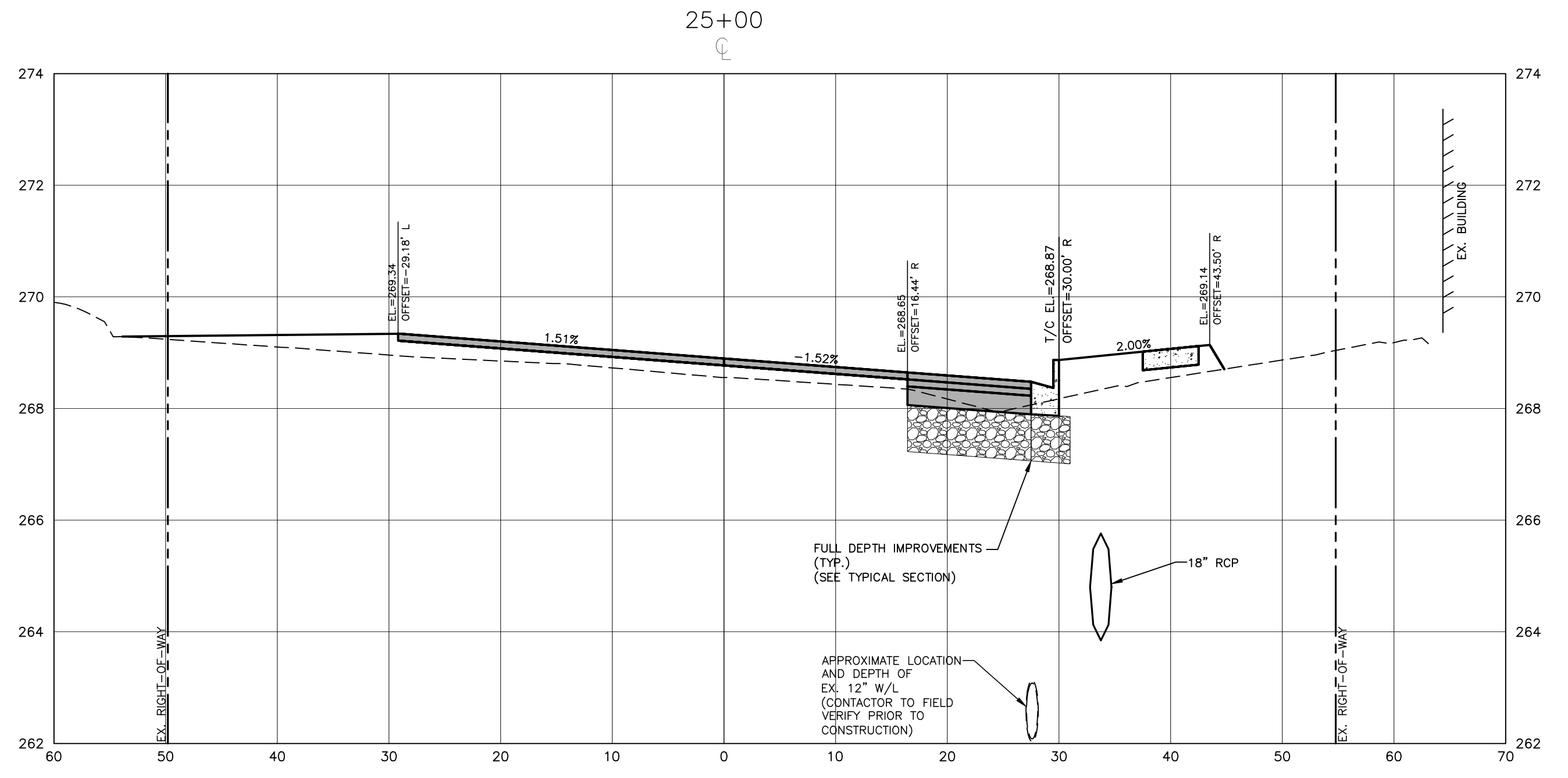
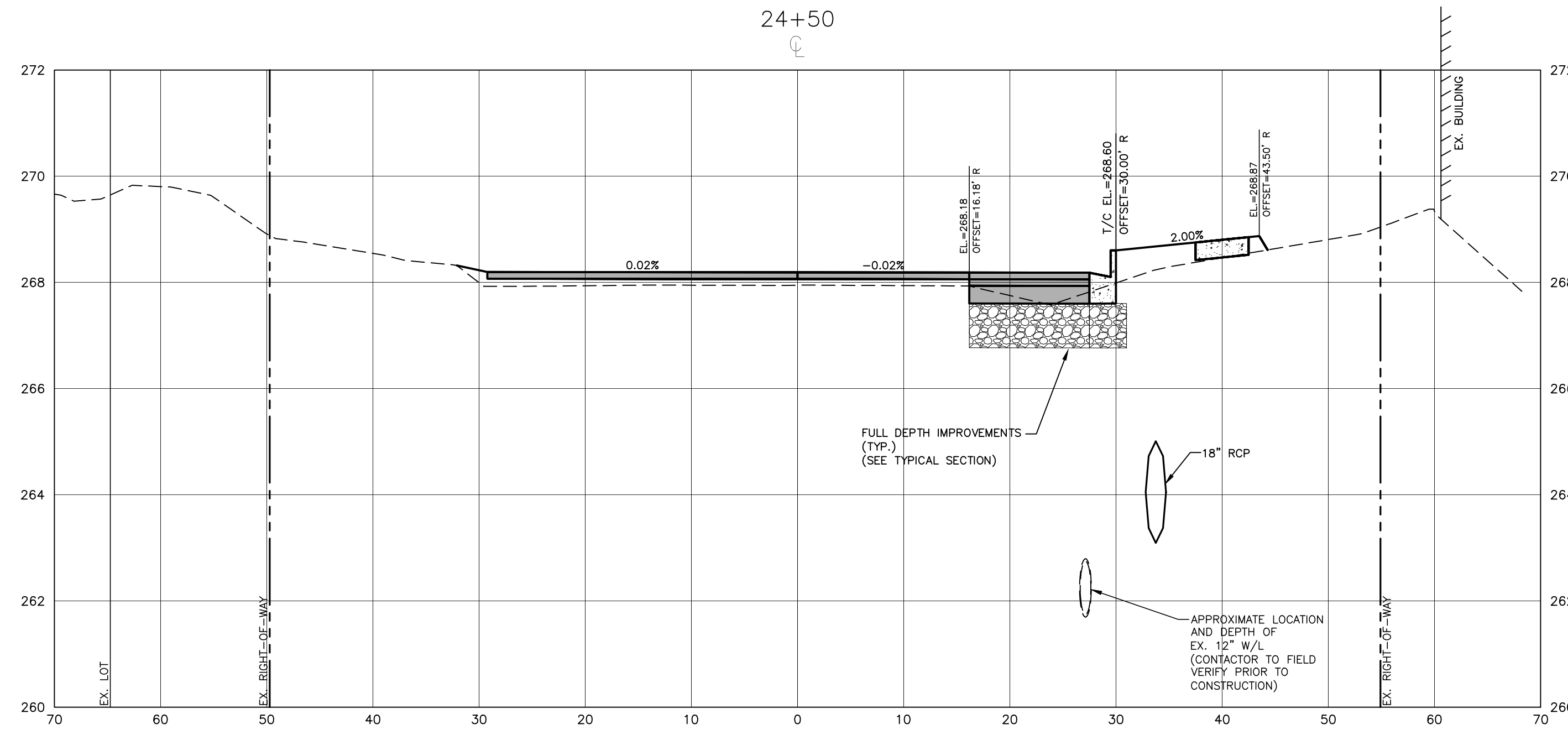
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
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WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP-19000
FILENAME RAP19000-SF-XS1
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DRAWN BY RJF
SCALE 1"=10' H, 1"=2' V
DATE 02. 23. 2024

CROSS SECTIONS
S. FRANKLIN, STA. 22+00 THRU STA. 23+50

C7.05

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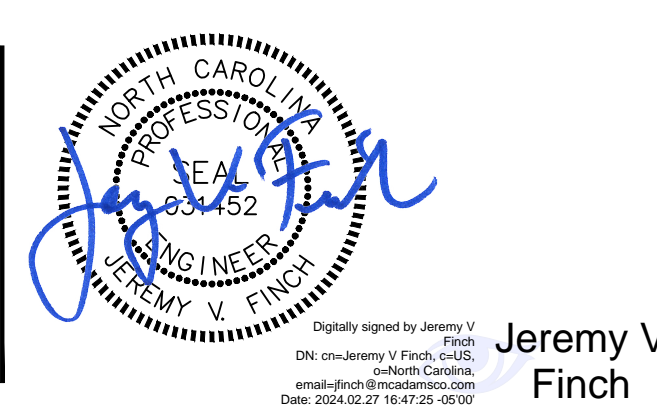


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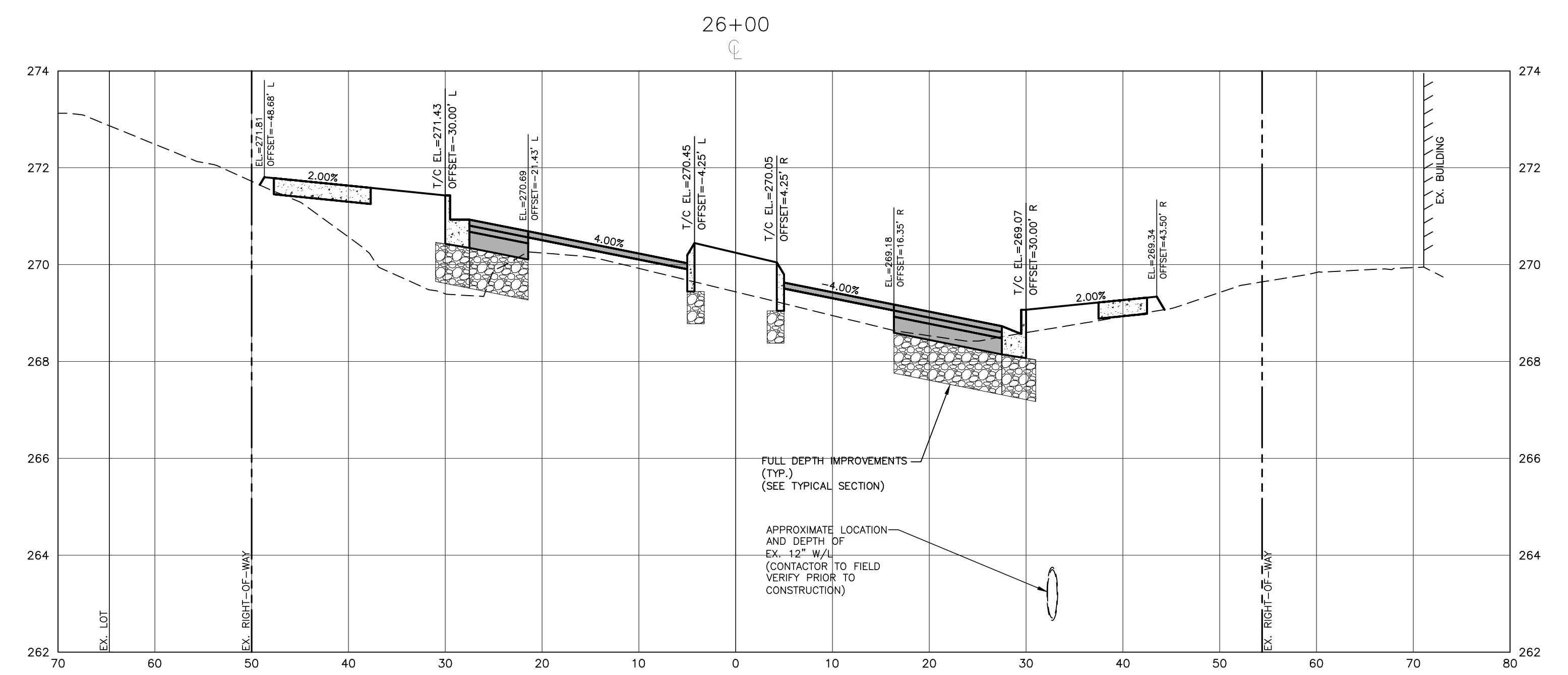
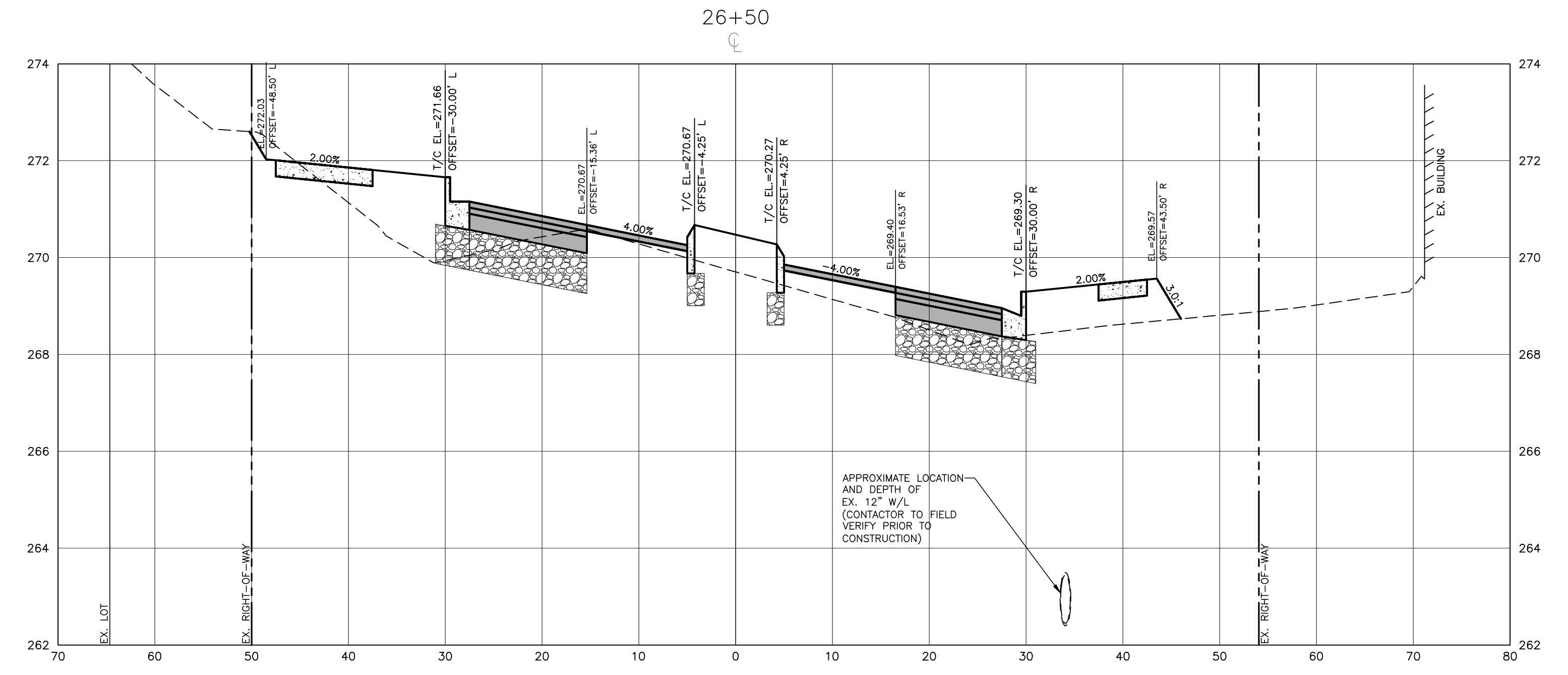
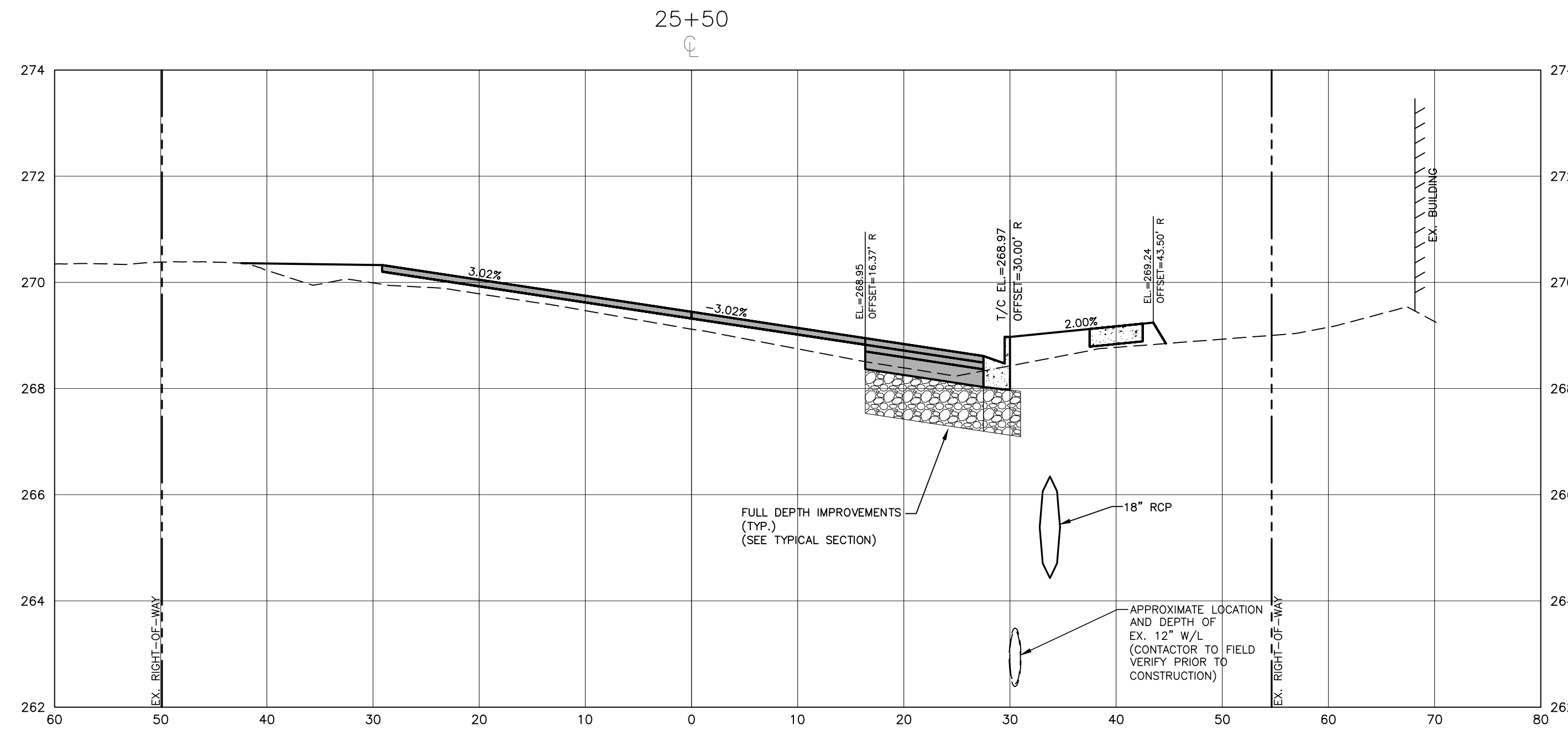


TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
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 DRAWN BY RJF
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CROSS SECTIONS
 S. FRANKLIN, STA. 24+00 THRU STA. 25+00
C7.06

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 SIGNED: [Signature] 04/25/2024
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 SIGNED: [Signature]
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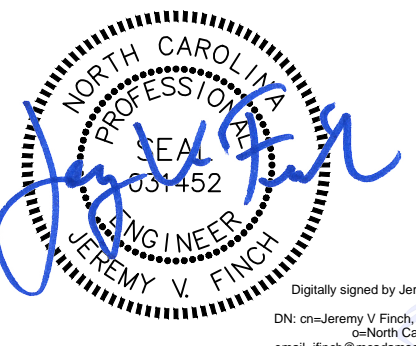


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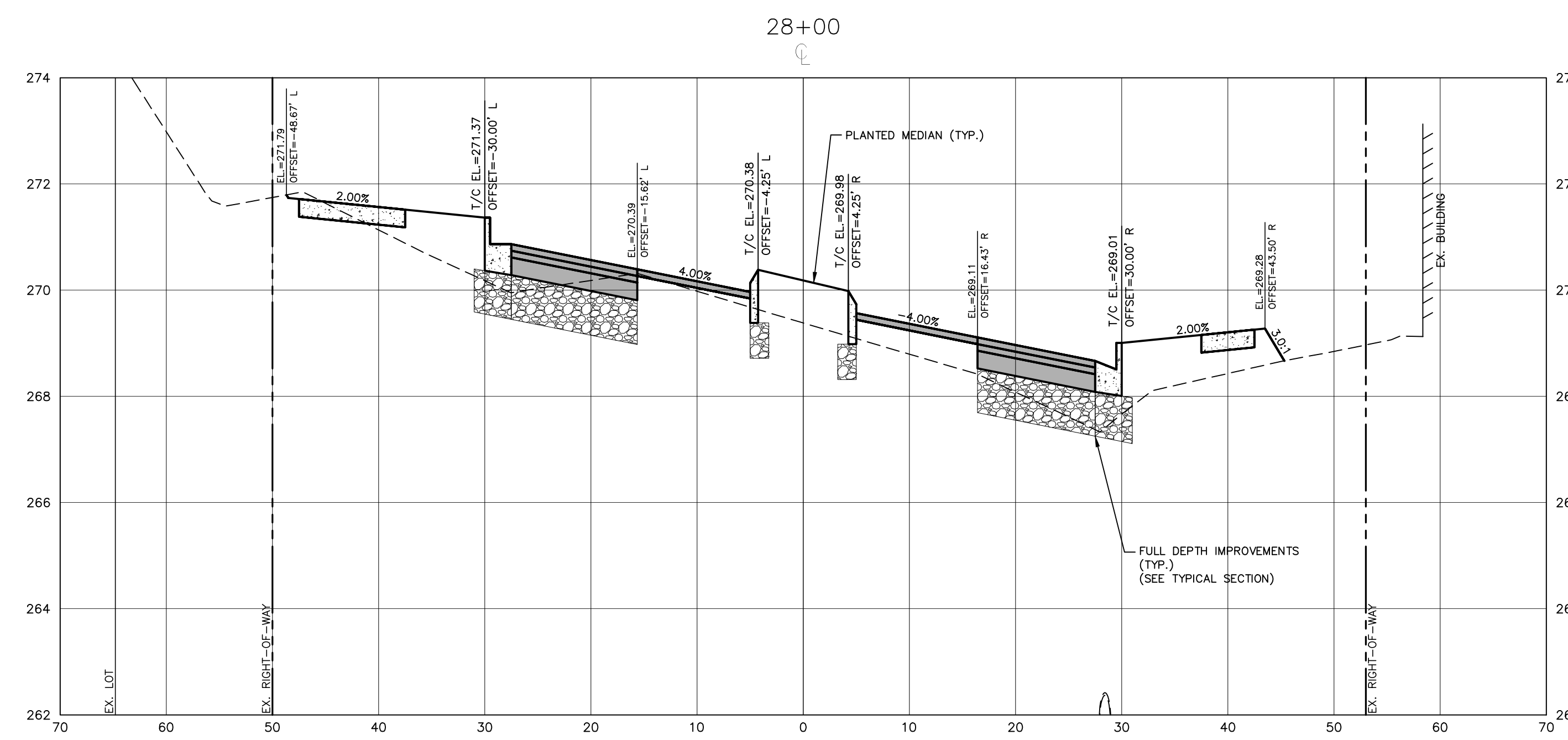
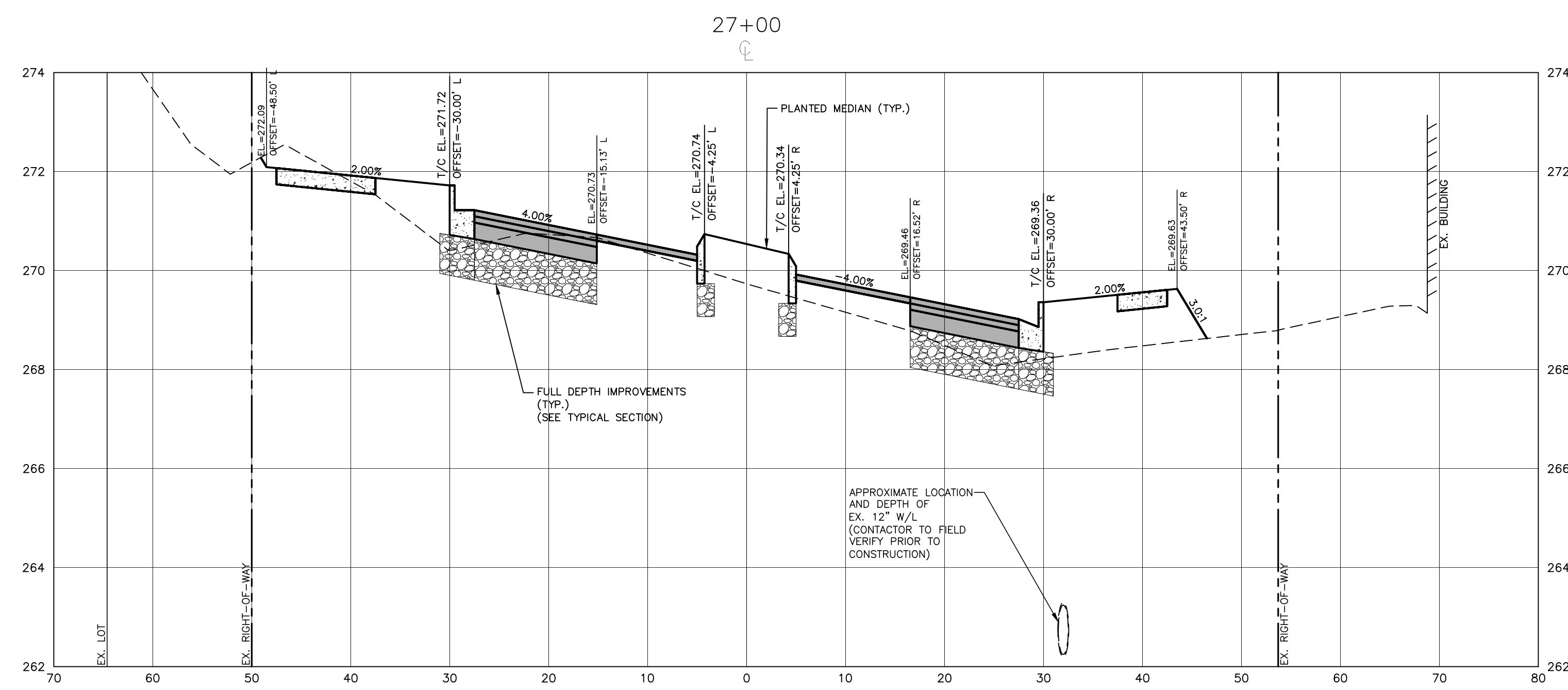
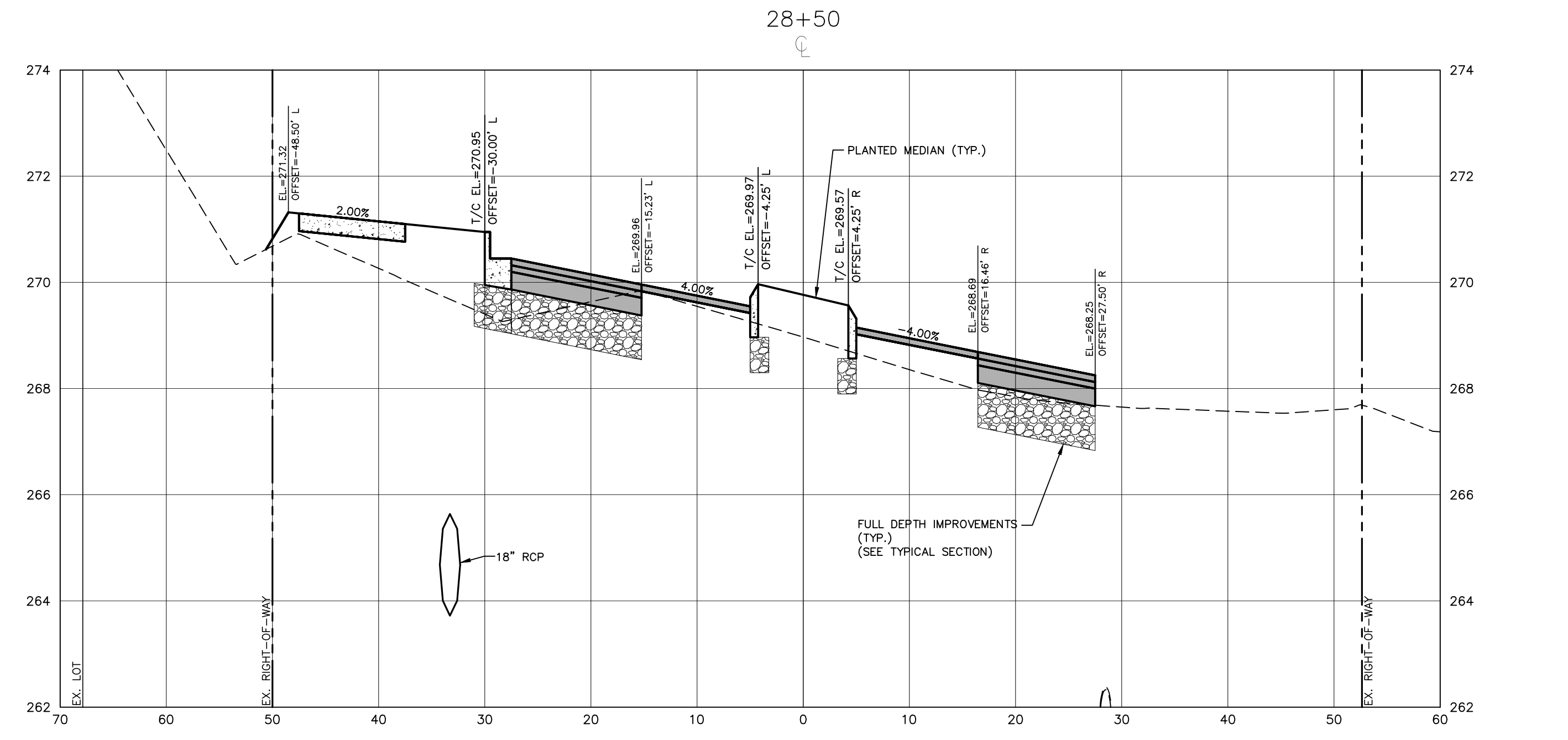
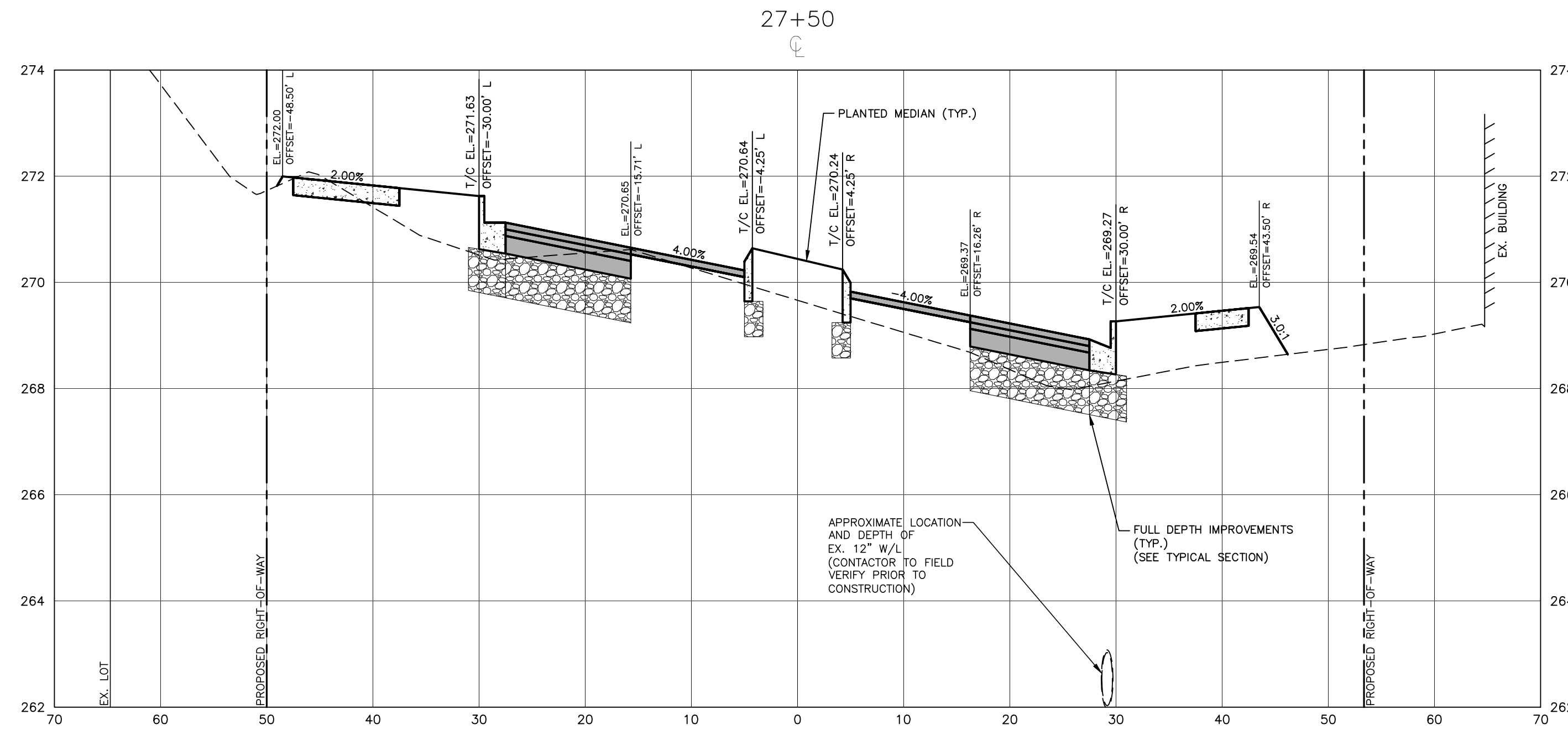
Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V Finch, o=North Carolina, email=jfinch@mcadamsco.com, Date: 2024.02.27 14:47:39 -0500
 Jeremy V Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 25+50 THRU STA. 26+50
C7.07

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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V Finch, o=North Carolina, email=jvf@mcadamsco.com, c=US
 Date: 2024.02.23 16:47:55 -0500

Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
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 WAKE FOREST, NORTH CAROLINA

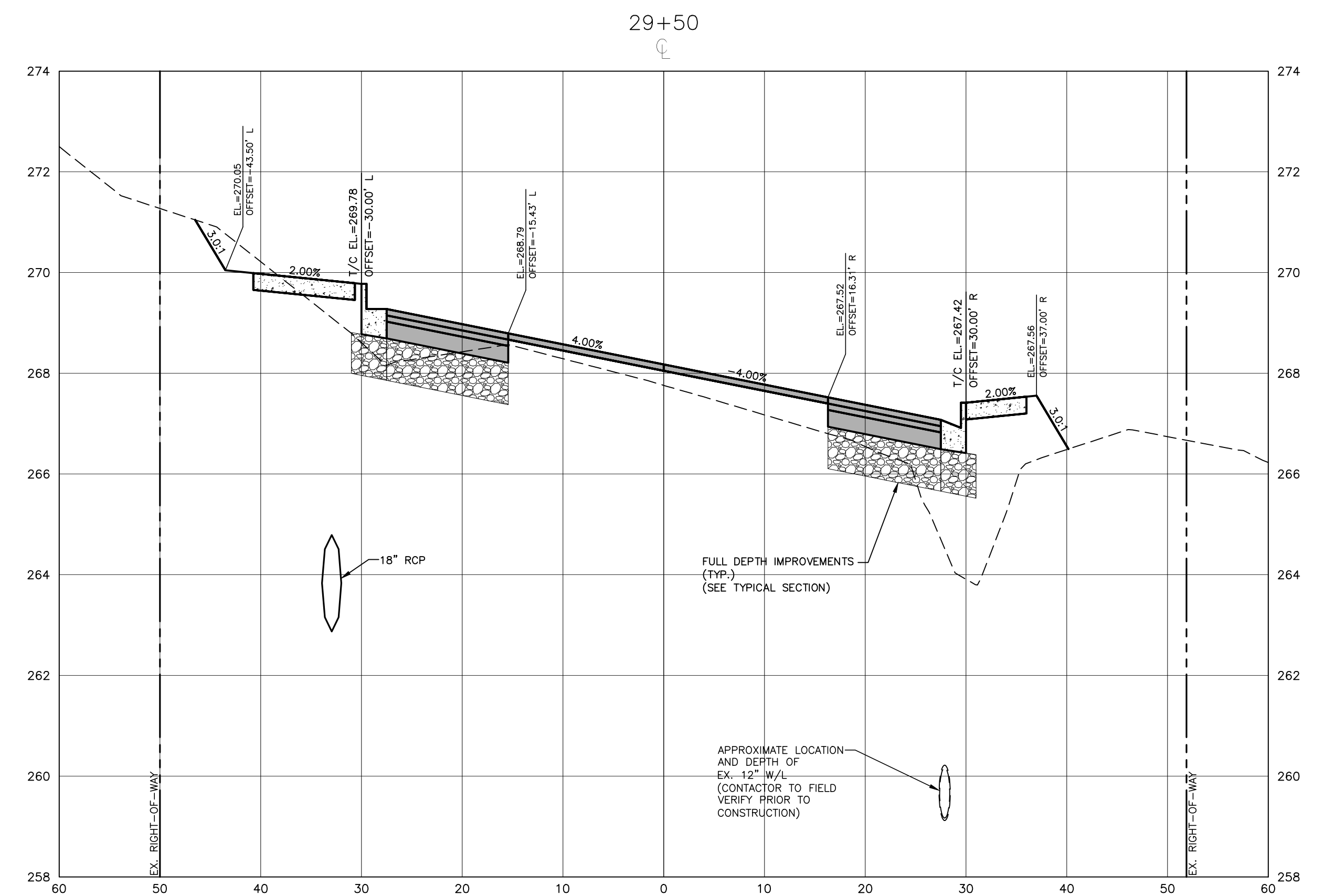
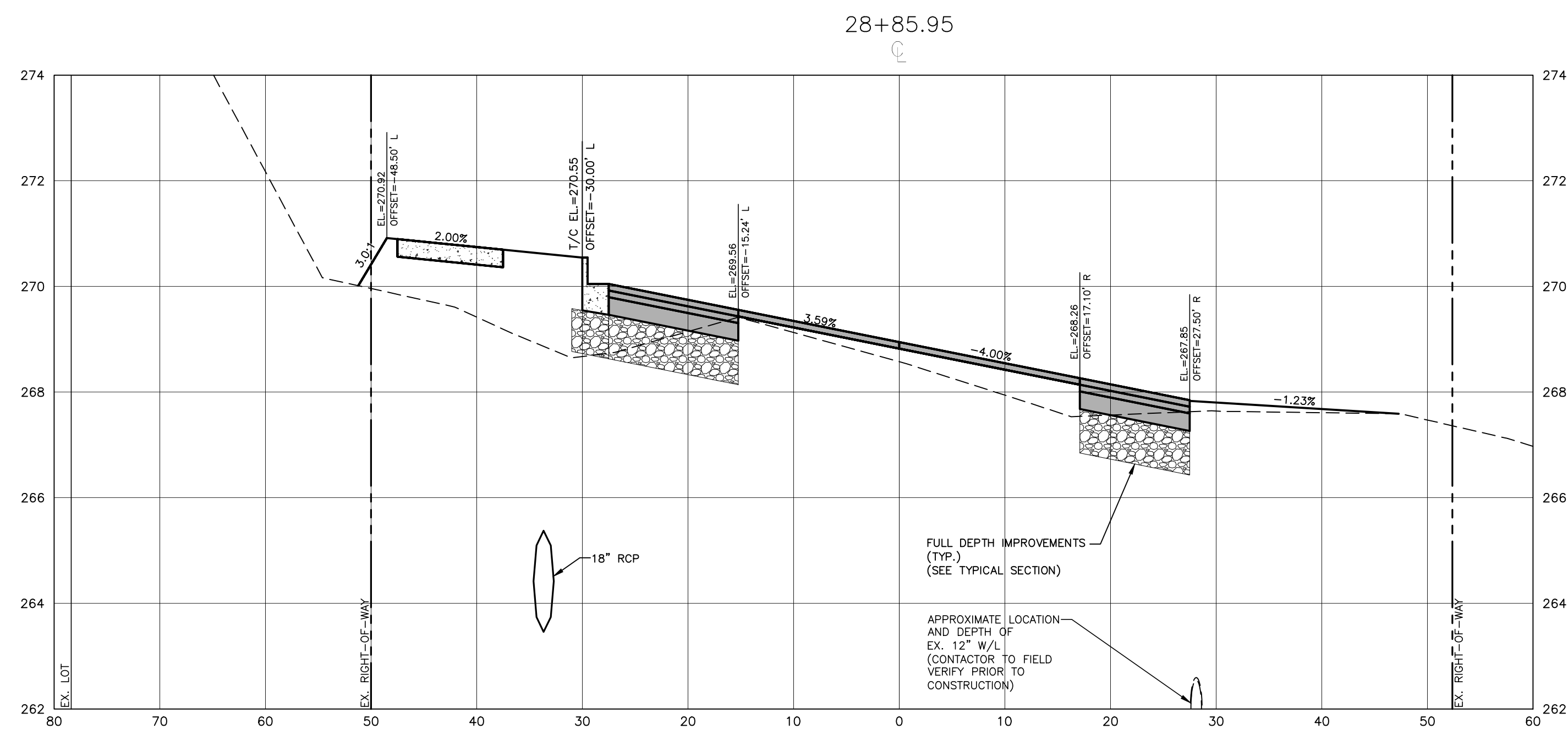
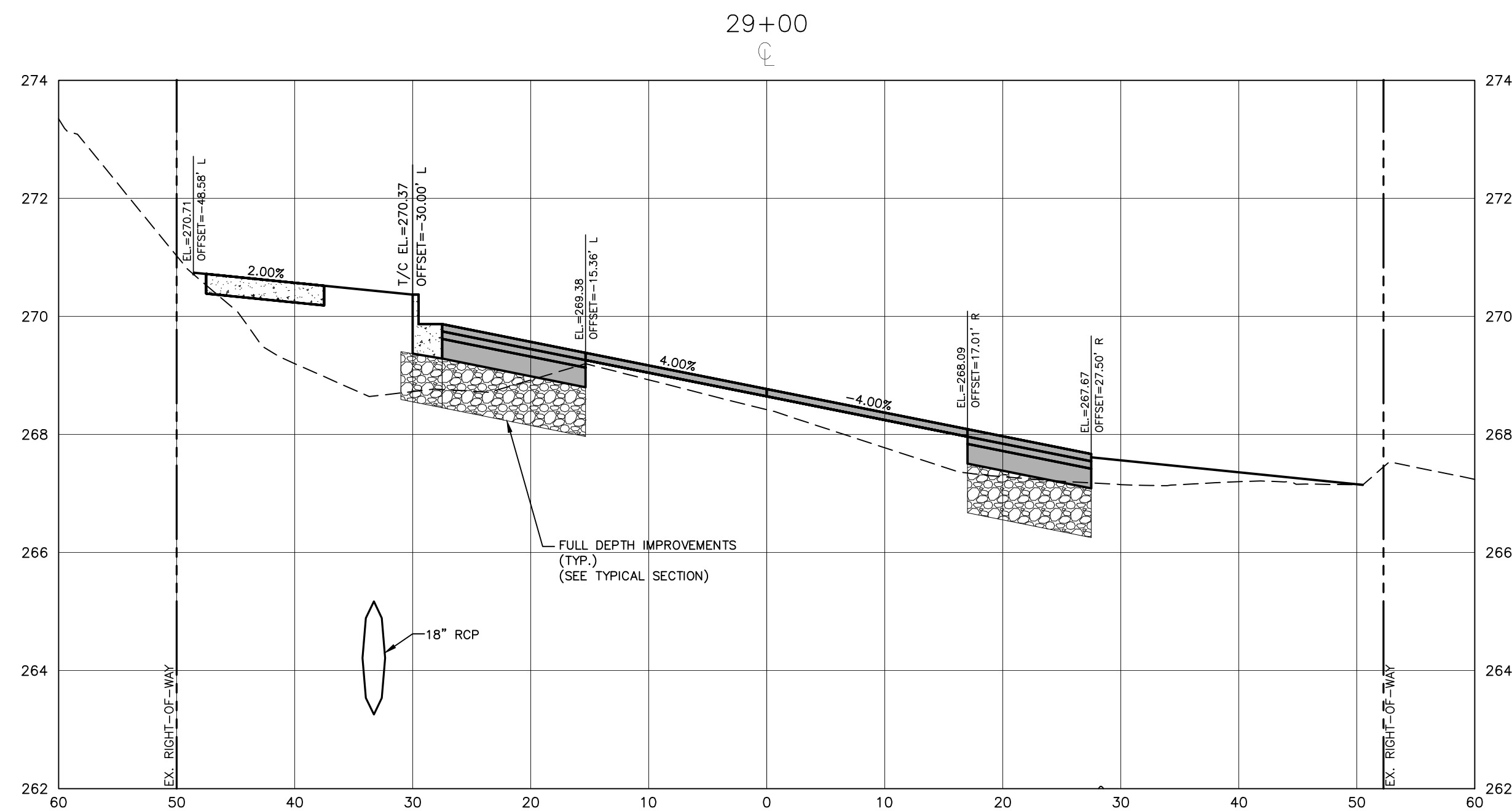
PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-XS1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1"=10' H, 1"=2' V
DATE	02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 27+00 THRU STA. 28+50

C7.08

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PROFESSIONAL ENGINEER
JEREMY V. FINCH
03/14/52
DIGITALLY SIGNED BY JEREMY V. FINCH
DN: cn=Jeremy V Finch, o=McAdams Company, email=jvf@mcadamsco.com, c=NC

Jeremy V. Finch

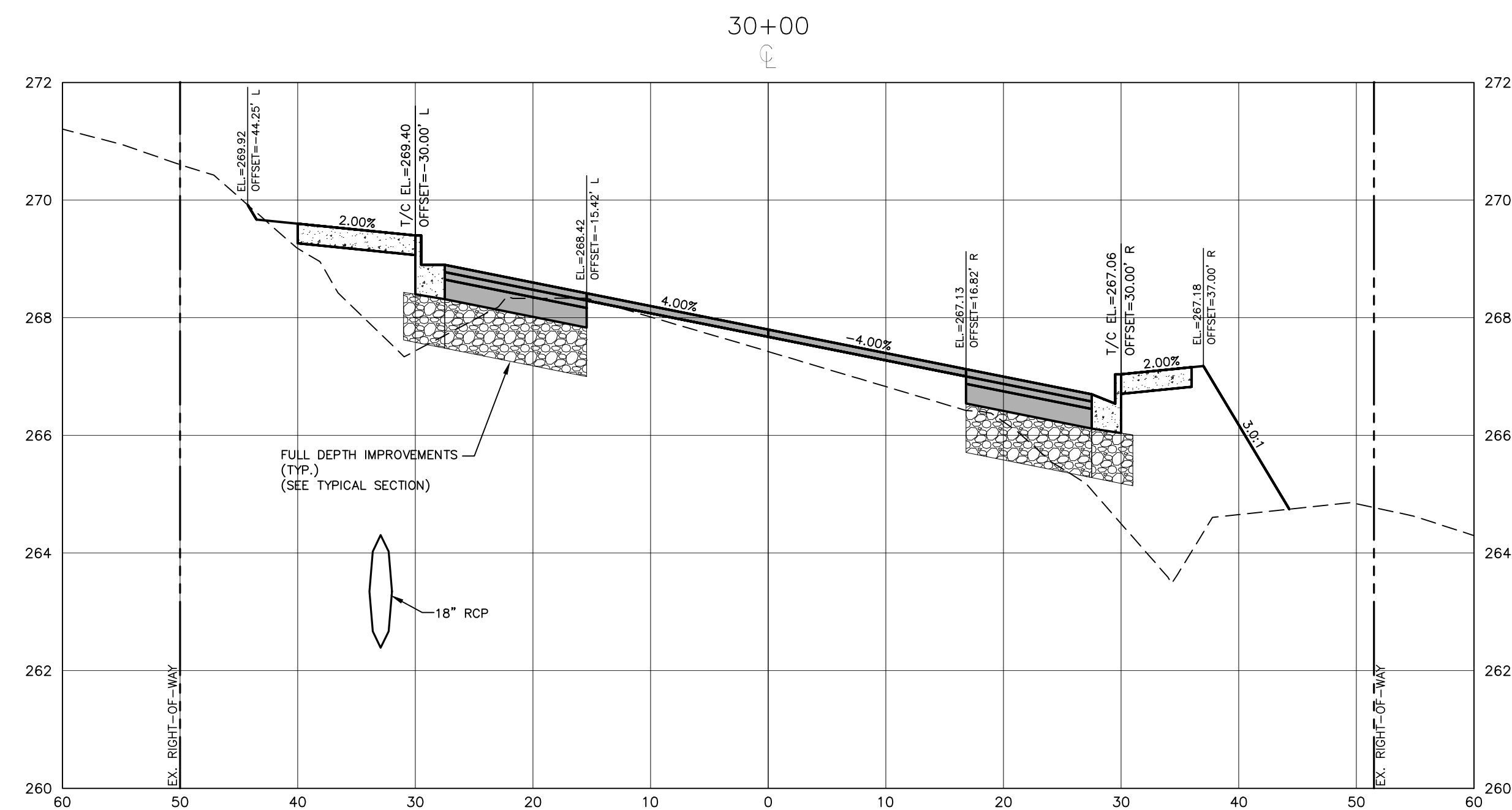
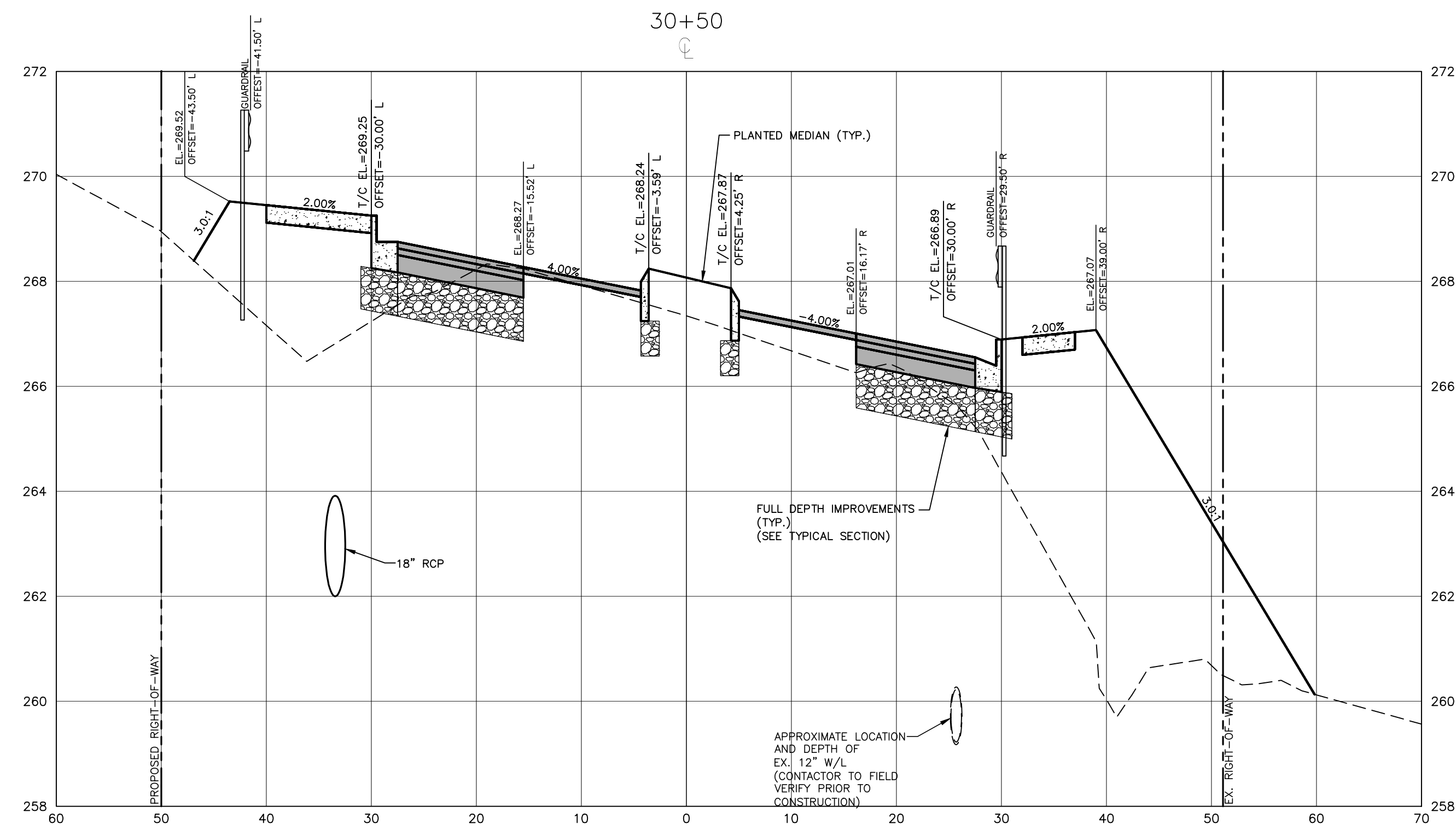
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO. RAP-19000
FILENAME RAP19000-SF-XS1
CHECKED BY DLP
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SCALE 1"=10' H, 1"=2' V
DATE 02. 23. 2024

CROSS SECTIONS
S. FRANKLIN, STA. 28+85.95 THRU STA. 29+50

C7.09



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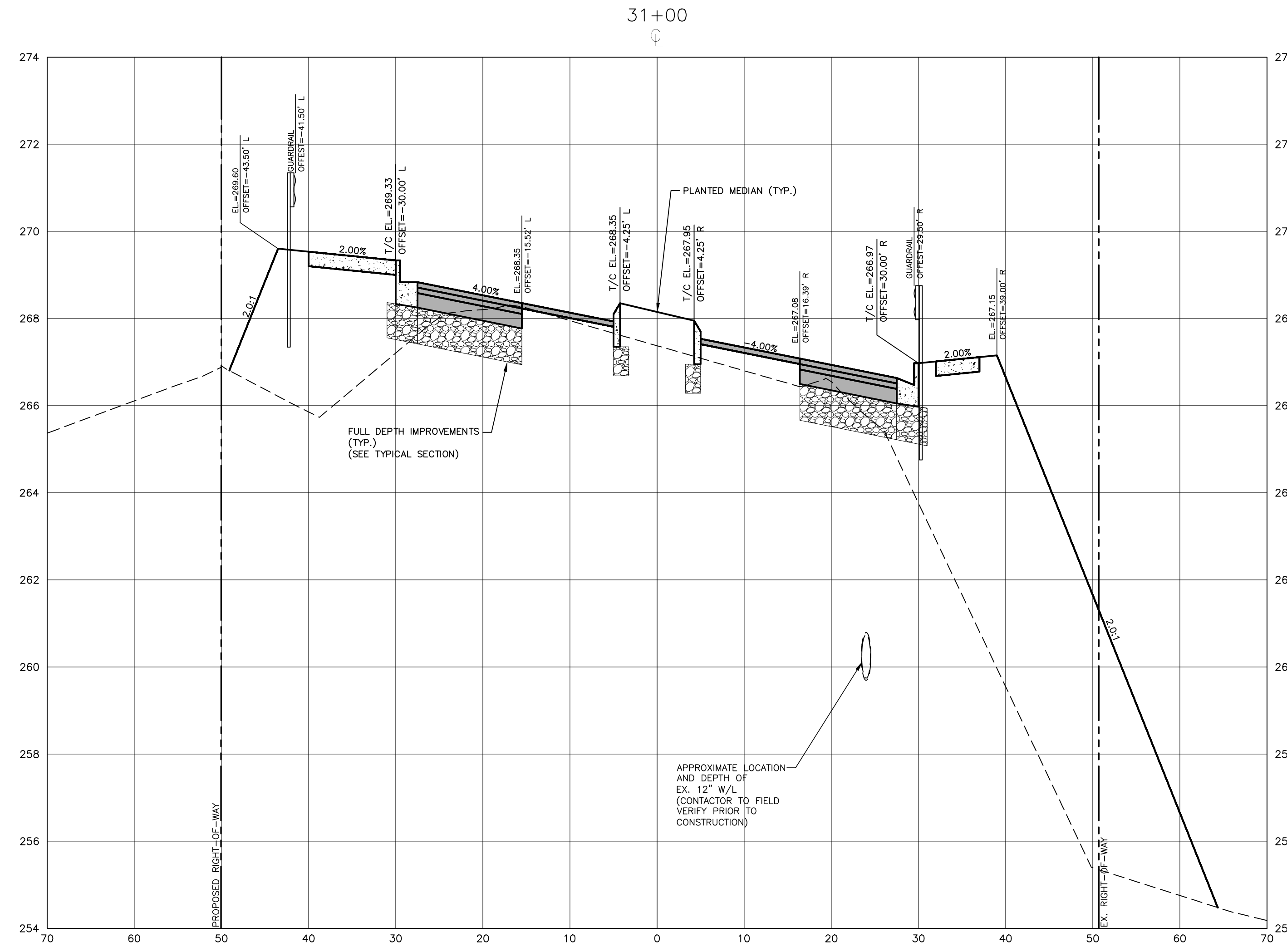
Professional Engineer Seal for Jeremy V. Finch, No. 031452, State of North Carolina.

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
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 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO.	RAP-19000
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DATE	02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 30+00 THRU STA. 30+50
C7.10



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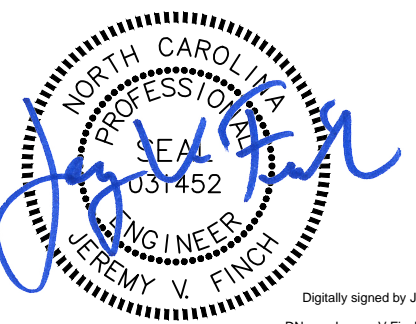
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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V Finch, c=US,
 email=jfinch@mcadamsco.com,
 Date: 2024.02.27 16:48:59 -0500

Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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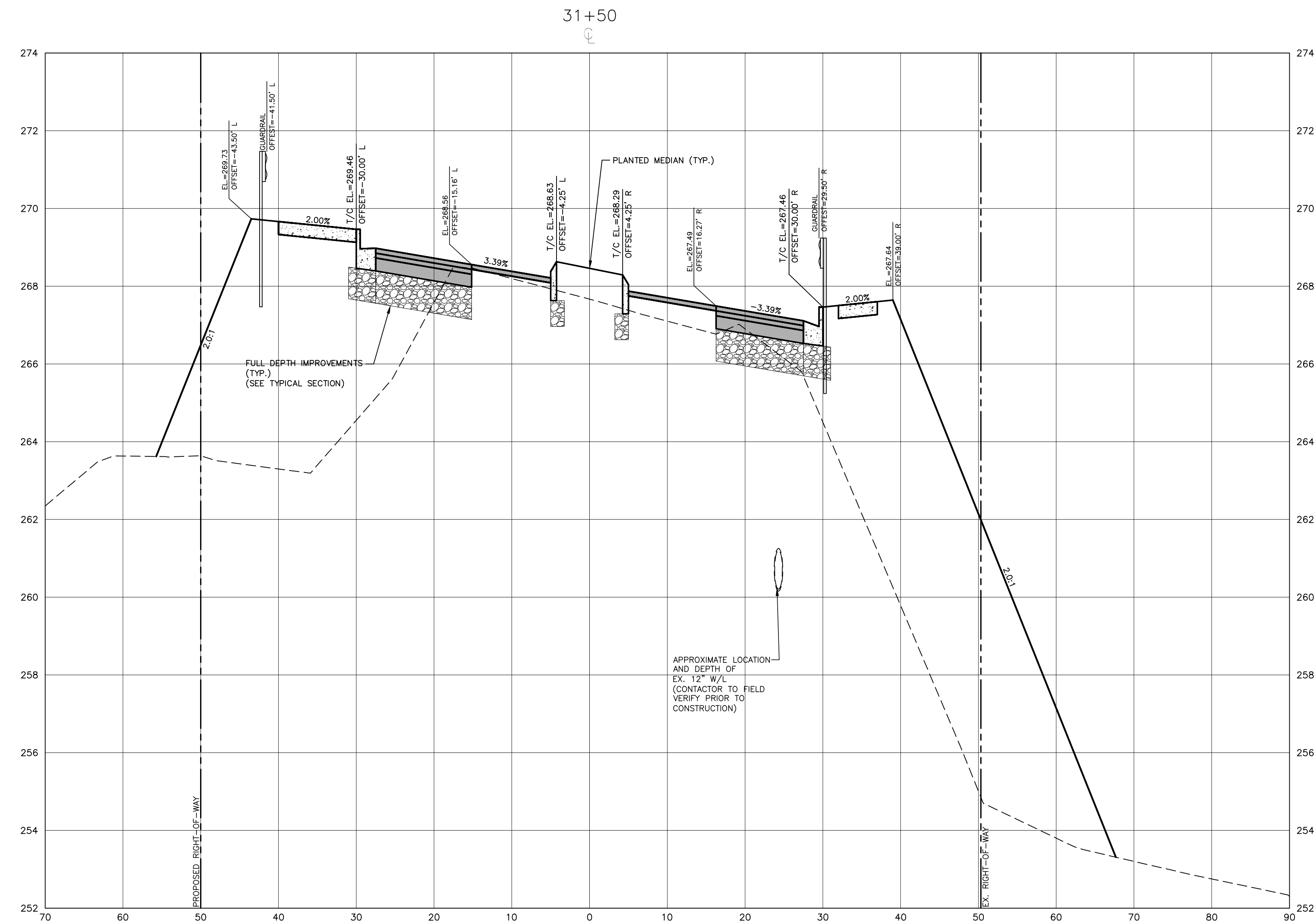
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CROSS SECTIONS
 S. FRANKLIN, STA. 31+00

C7.11

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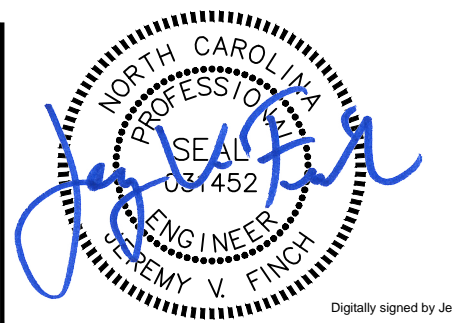
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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=JVF, ou=Professional Engineer, email=jvf@mcadamsco.com, c=US

Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
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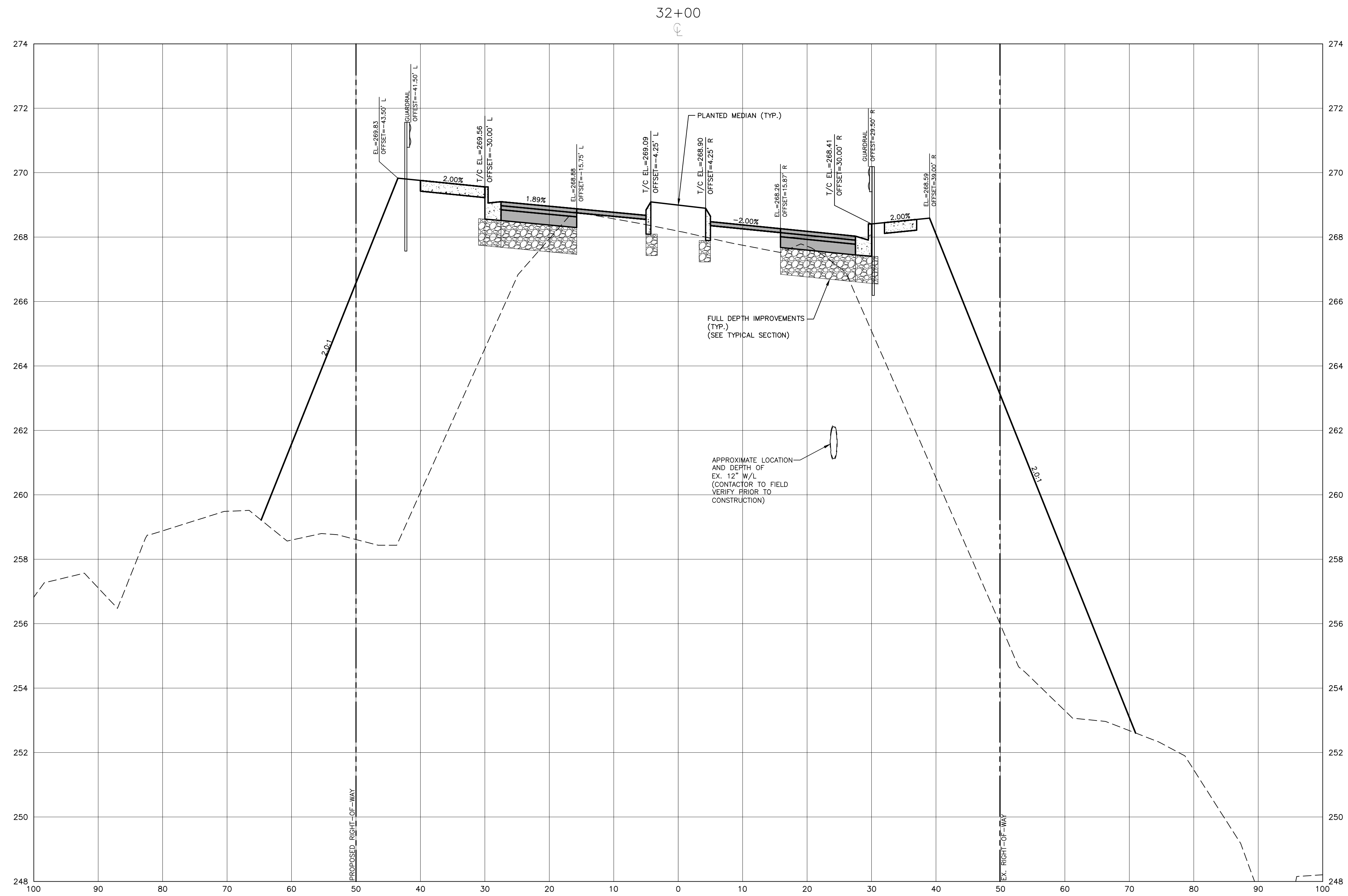
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CROSS SECTIONS
 S. FRANKLIN, STA. 31+50

C7.12

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PROFESSIONAL ENGINEER
 JEREMY V. FINCH
 031452
 Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=CES, ou=Professional Engineer, email=jvf@mcadamsco.com, c=nc, postalCode=27713, serial=031452

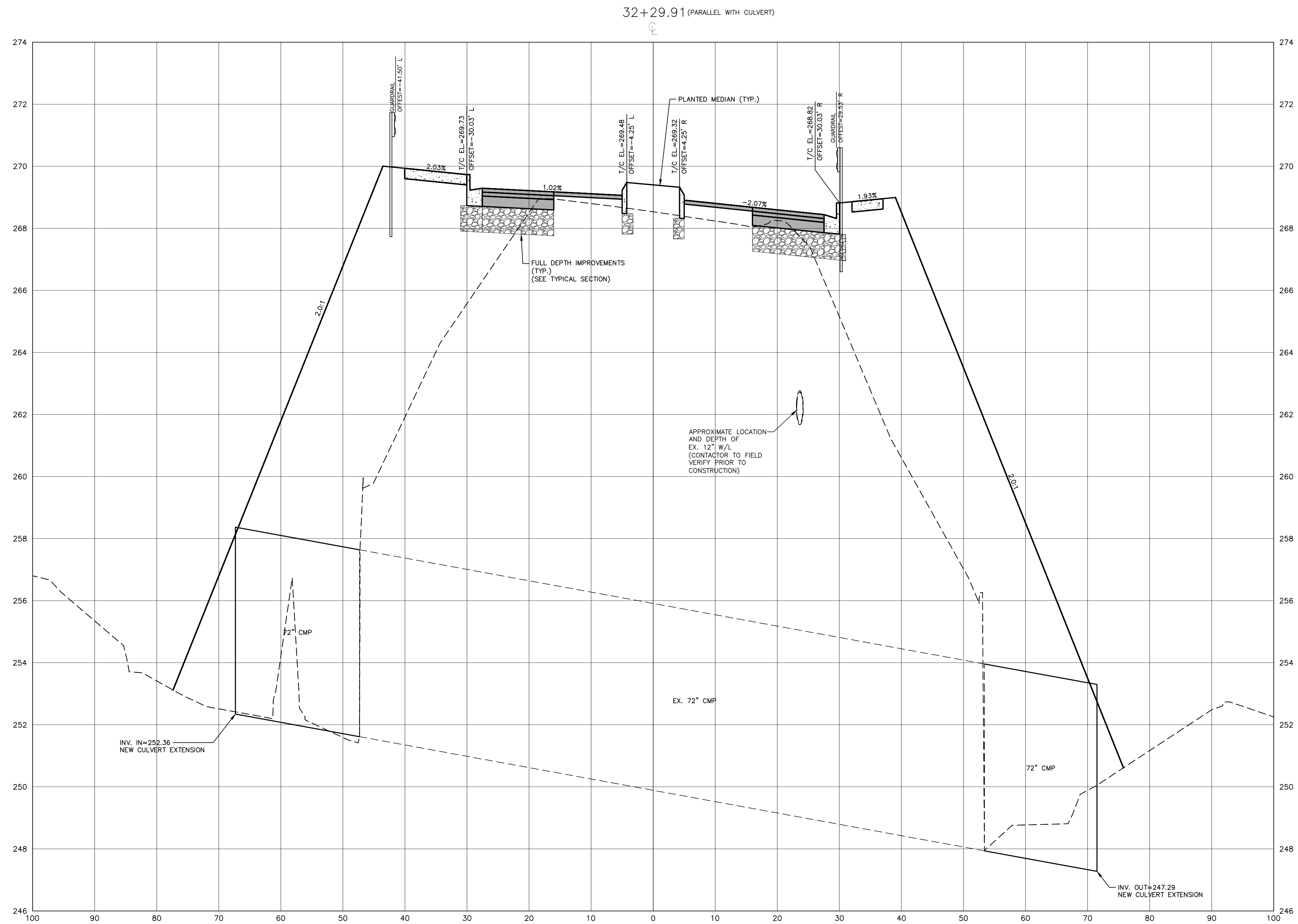
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DATE	02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 32+00
C7.13

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 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=McAdams Company, email=jvfinch@mcadamsco.com, ou=McAdams Company, c=US
 Date: 2024.02.23 16:48:43 -0500
 Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

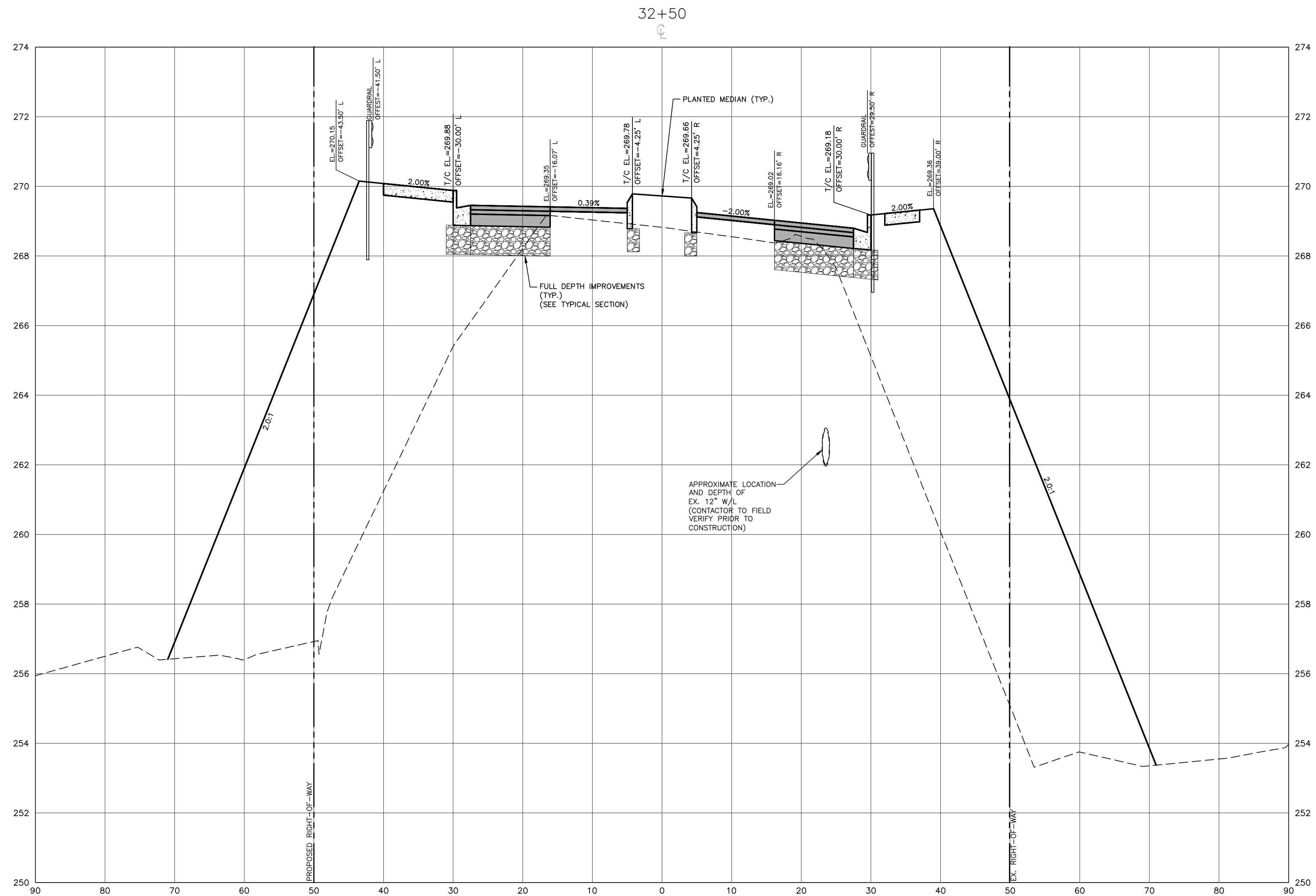
PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-XS1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1"=10' H, 1"=2' V
DATE	02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA 32+29.91

C7.14

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 smayer
 04/25/2024
 Public Works/Engineering

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 Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION



The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713
 phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187
 www.mcadamsco.com

CLIENT
 TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

REVISIONS

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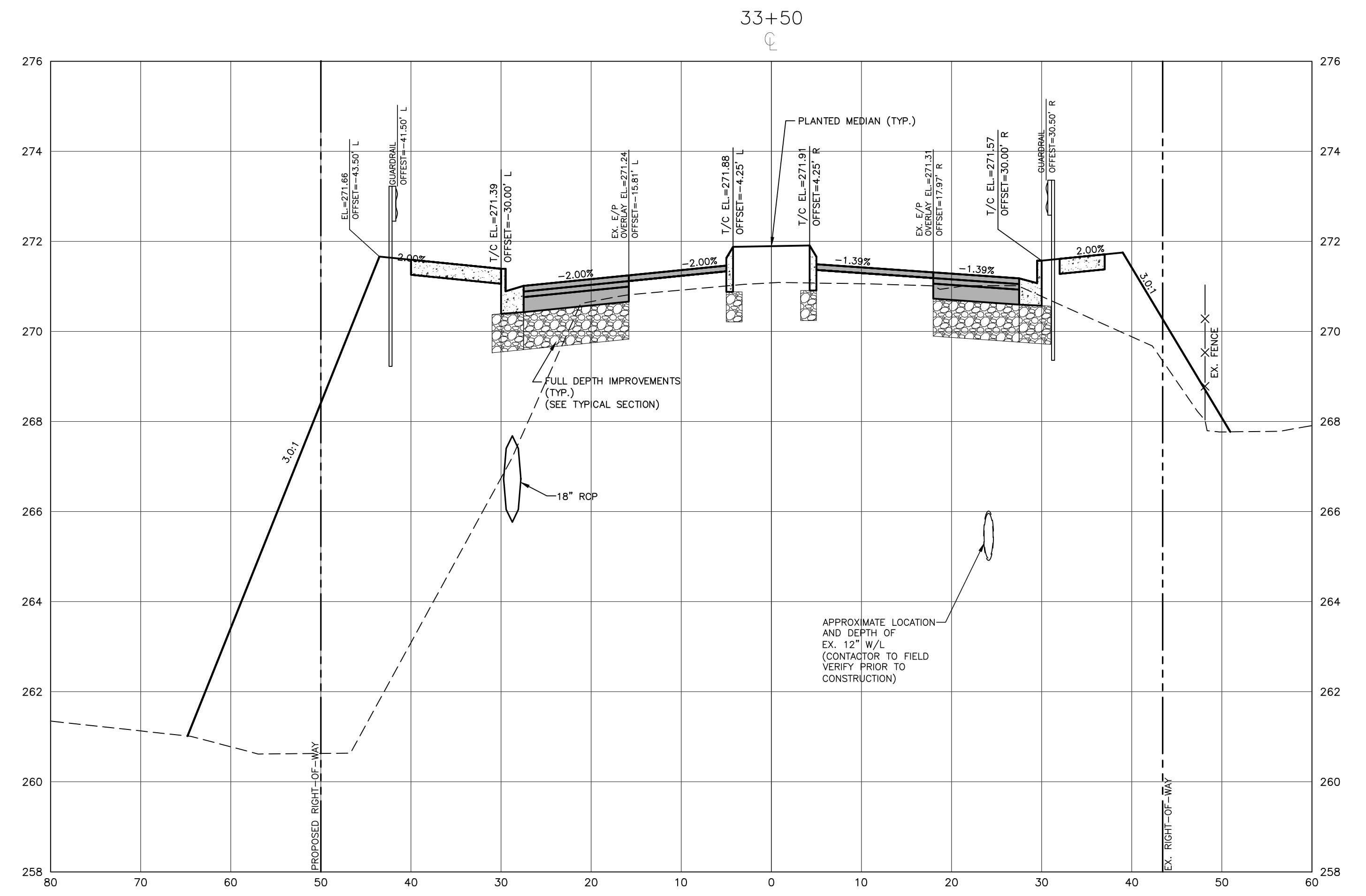
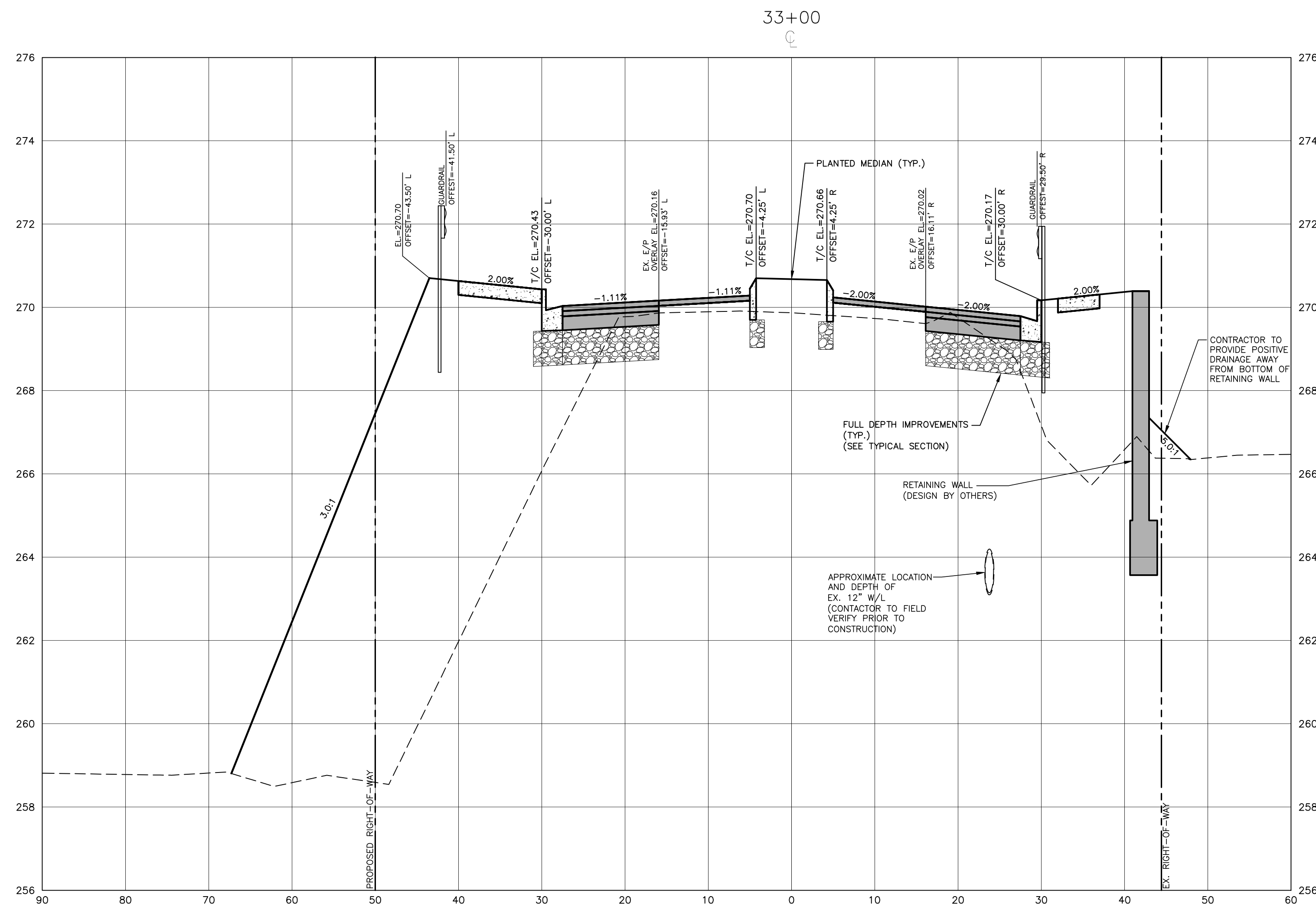
North Carolina Professional Engineer
 JEREMY V. FINCH
 031452
 Digitally signed by Jeremy V. Finch
 DN: c=United States, o=North Carolina, ou=Professional Engineers, cn=Jeremy V. Finch
 Date: 2024.02.27 16:45:59 -0500

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 32+50
C7.15

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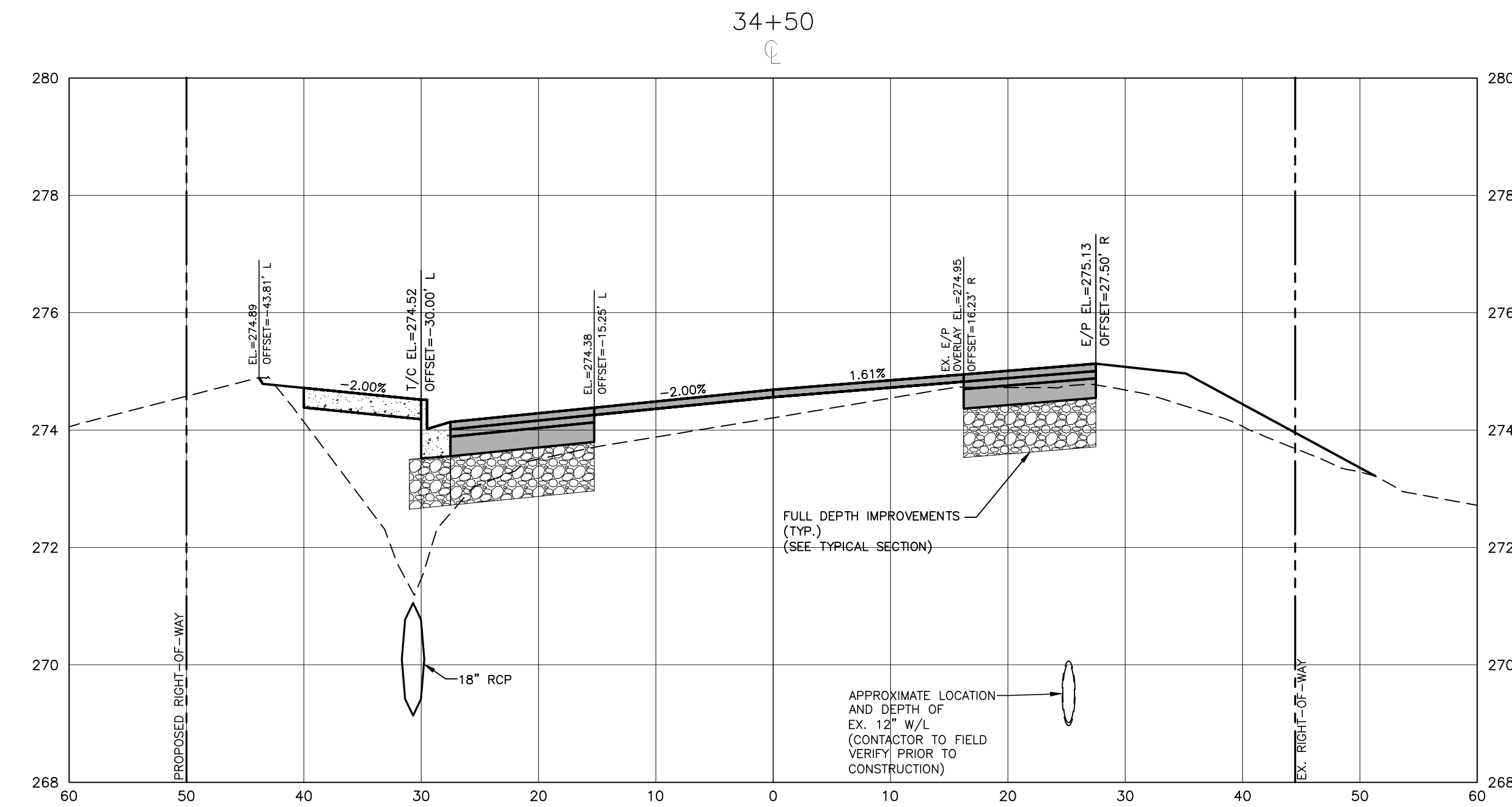
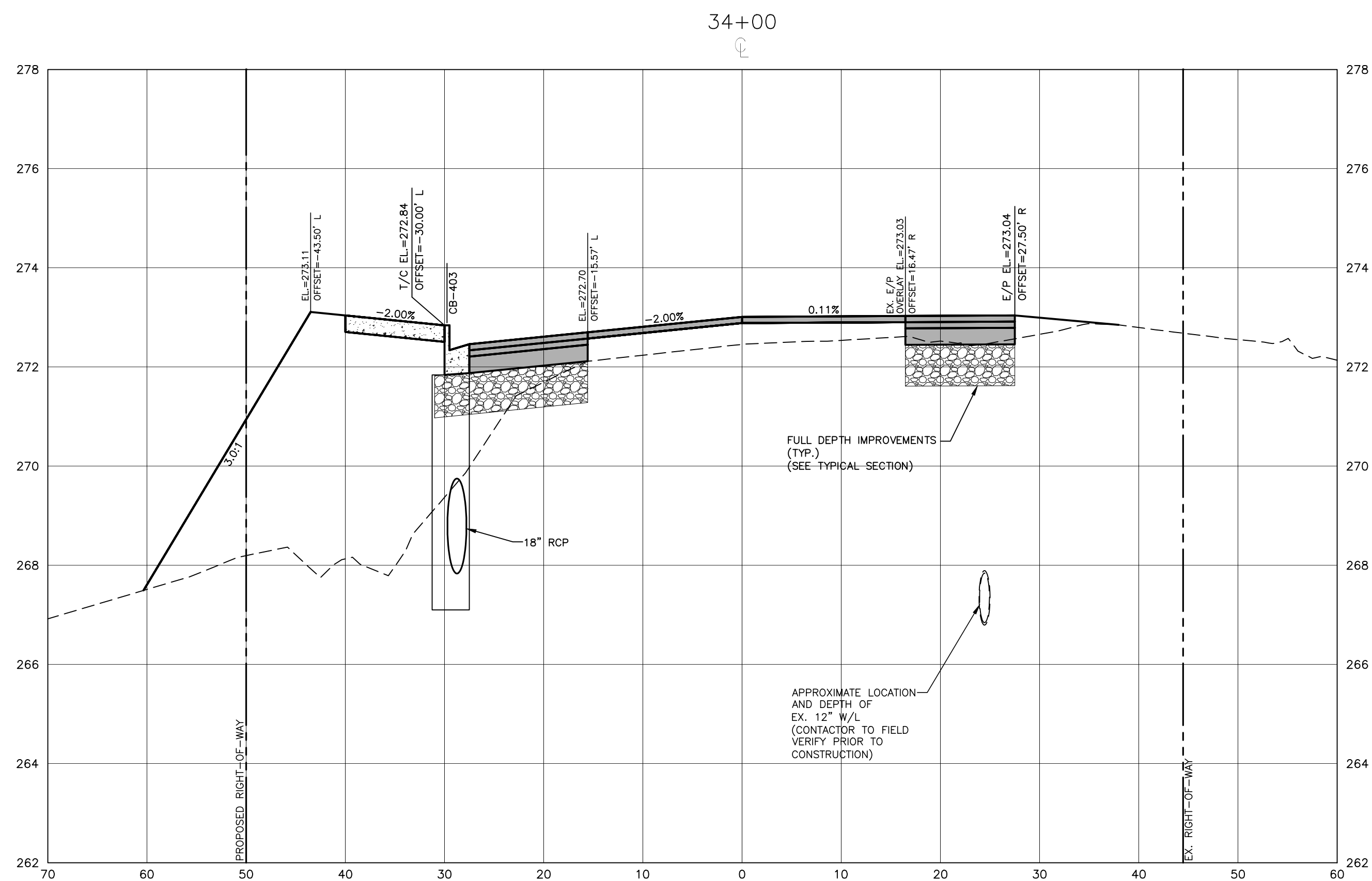
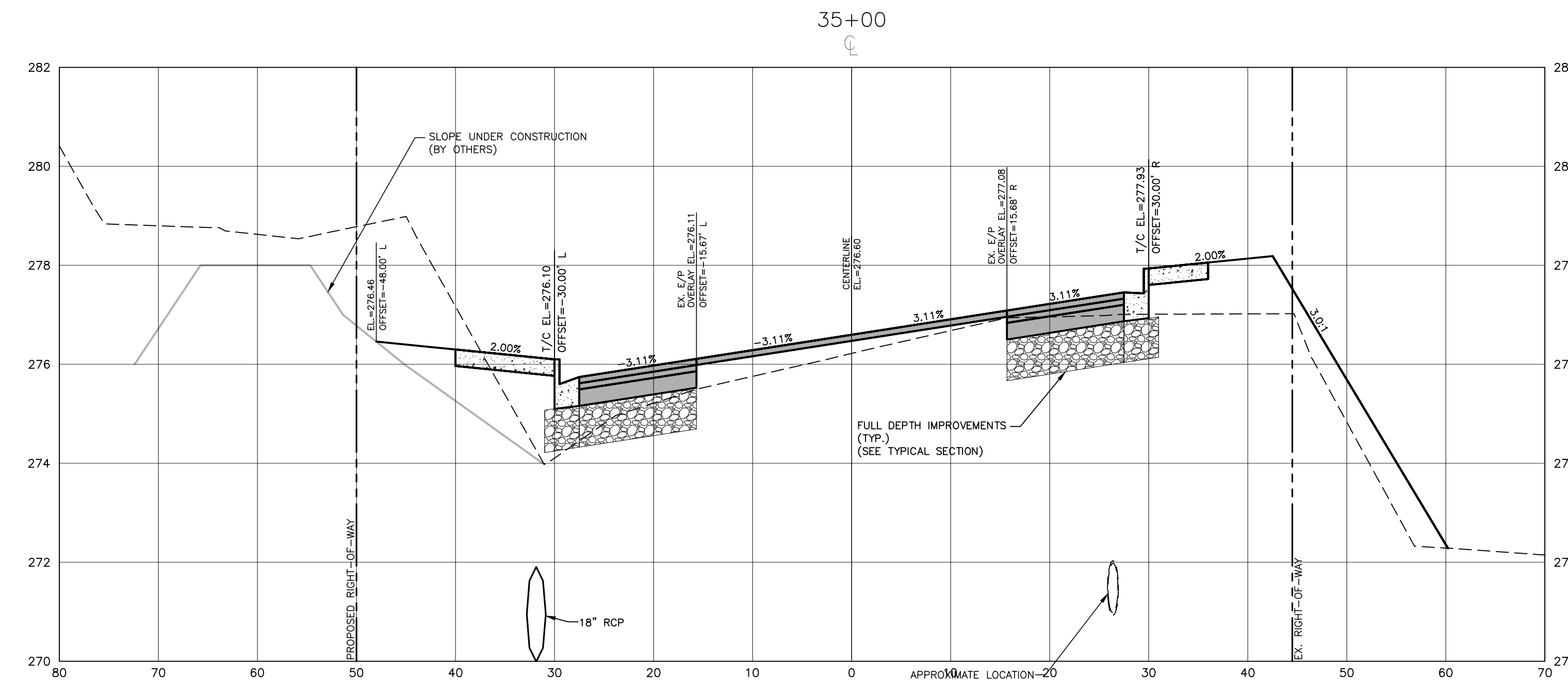
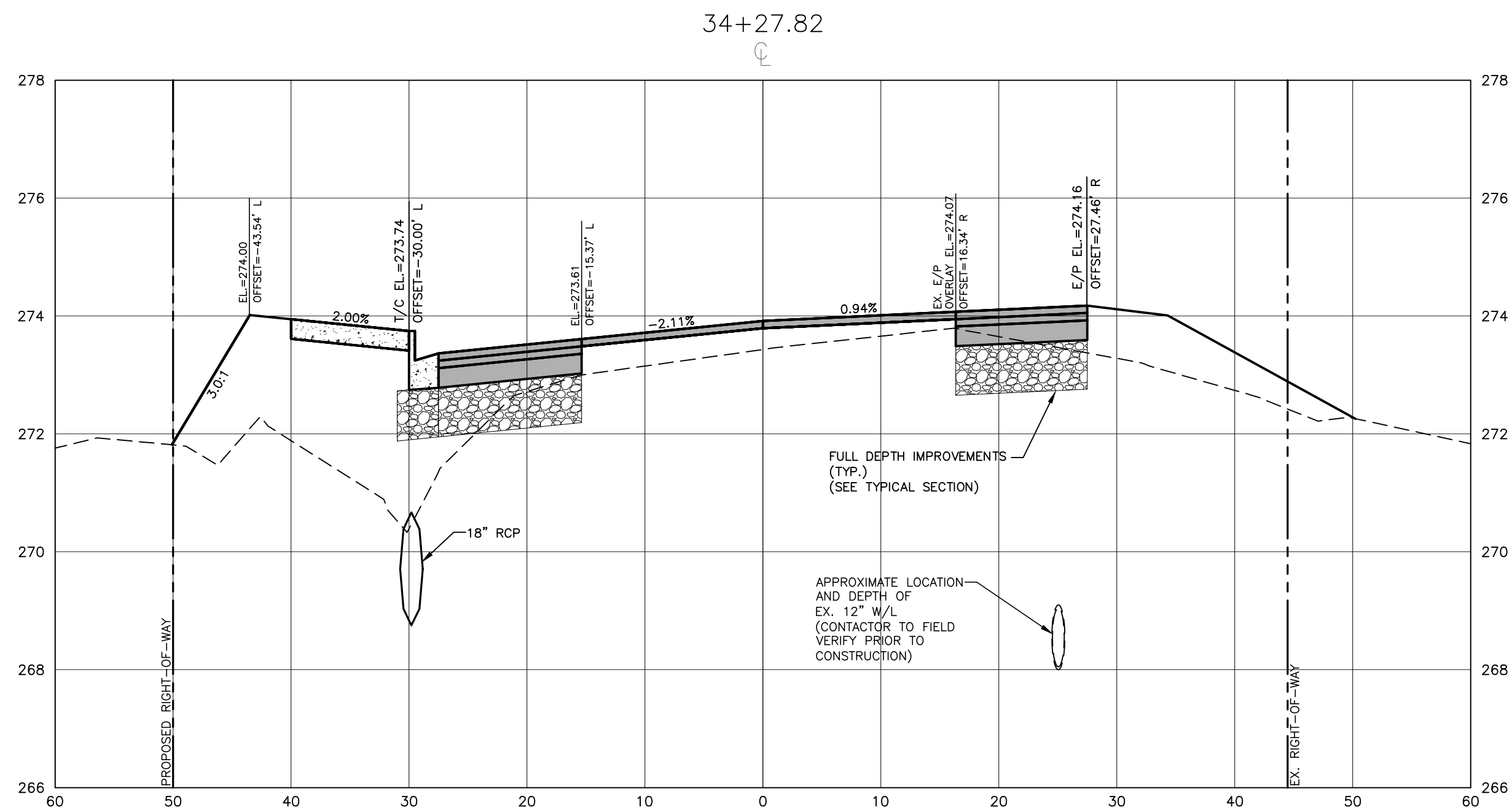
PROFESSIONAL ENGINEER
 JEREMY V. FINCH
 03/452
 Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=North Carolina, email=jvf@wakeforestnc.com, c=US
 Date: 2024.02.27 16:32:14 -05'00'

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-XS1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	1"=10' H, 1"=2' V
DATE	02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 33+00 THRU STA. 33+50
C7.16



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 Date: 04/25/2024
 Public Works/Engineering

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CLIENT
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 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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Professional Engineer Seal: NORTH CAROLINA PROFESSIONAL ENGINEER, JEREMY V. FINCH, No. 031452, Exp. 03/31/25

Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=JVF, ou=Wake Forest, c=US
 Date: 2024.04.25 16:02:00 -0400
 Jeremy V. Finch

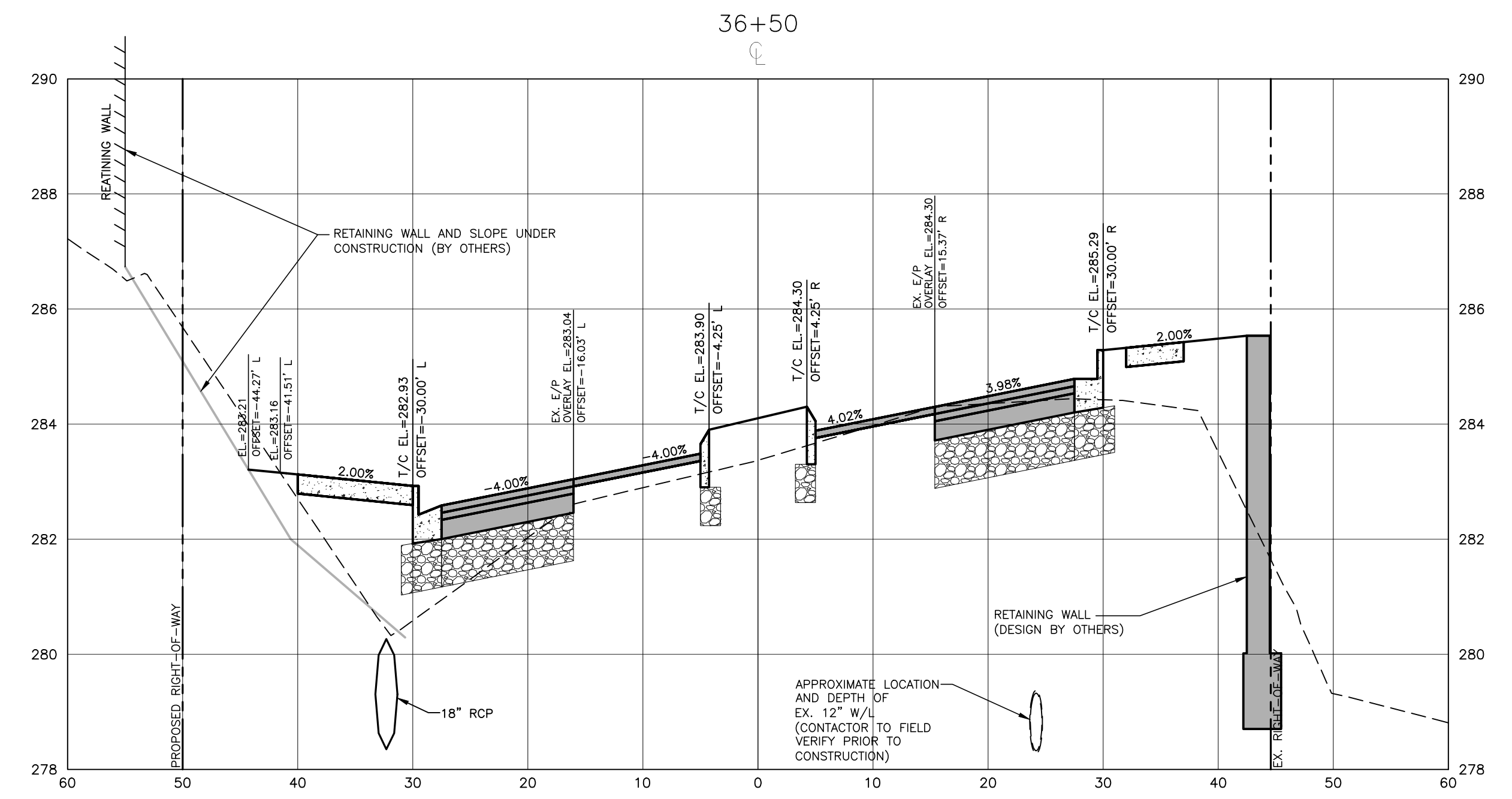
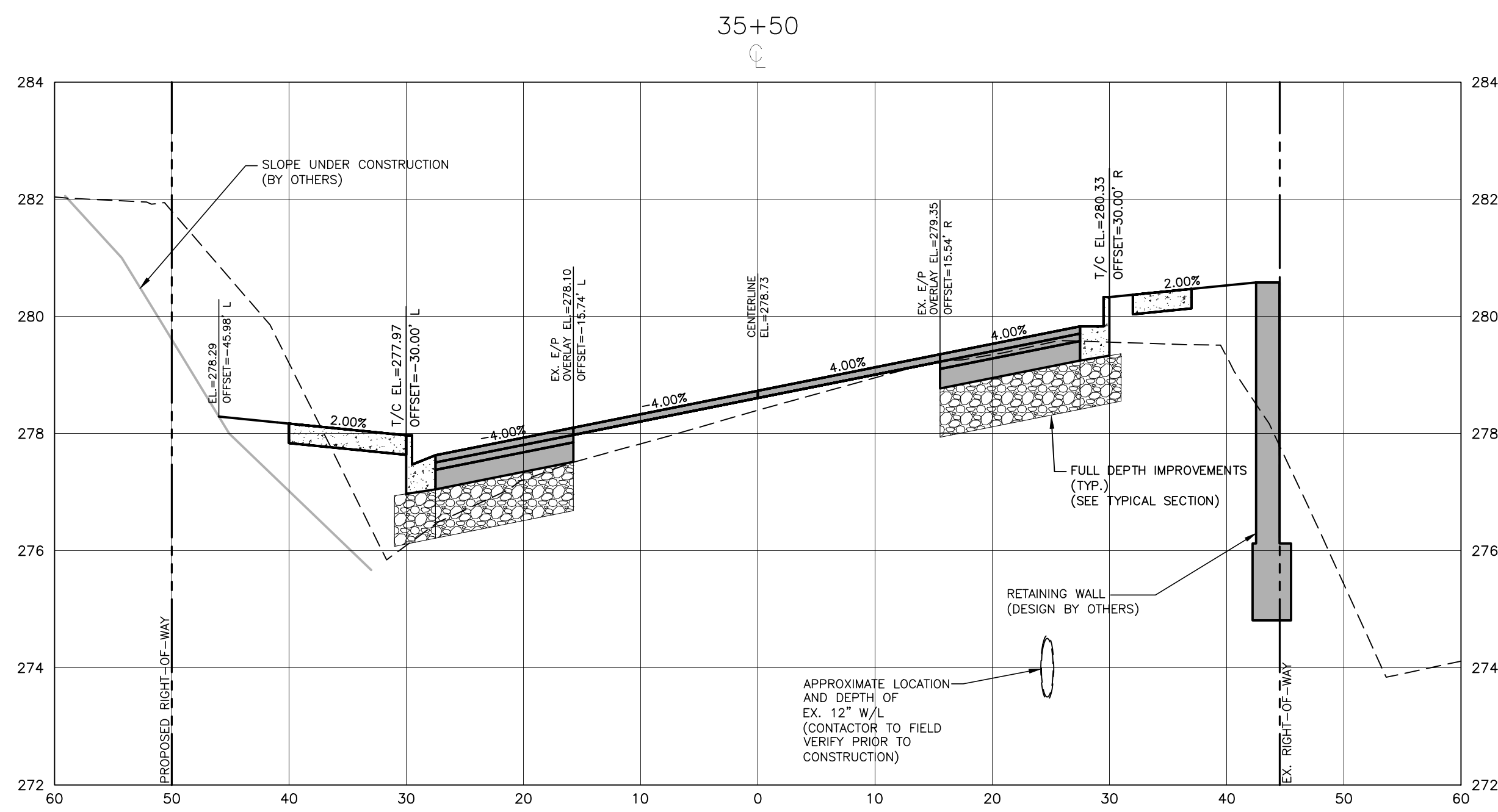
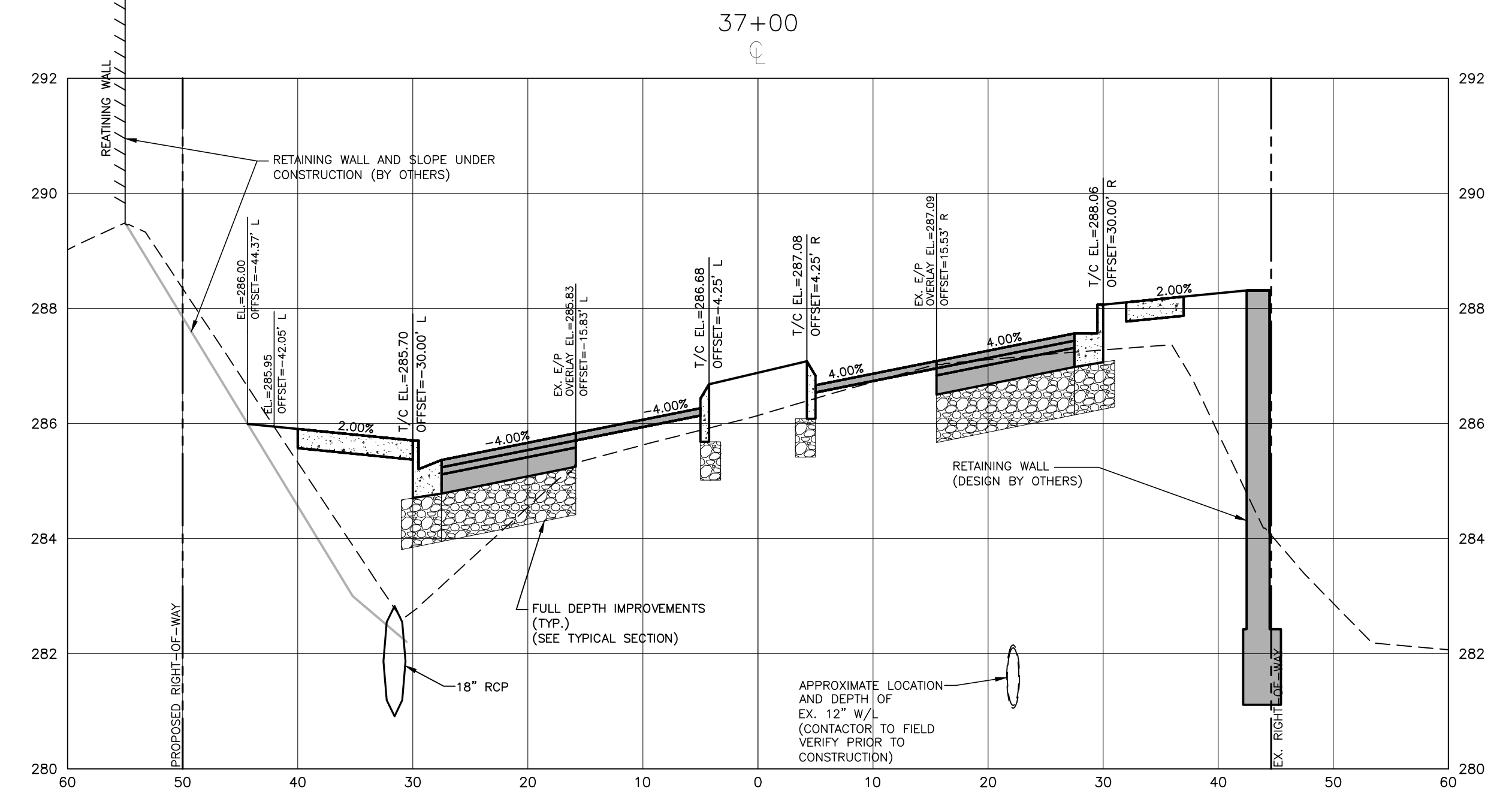
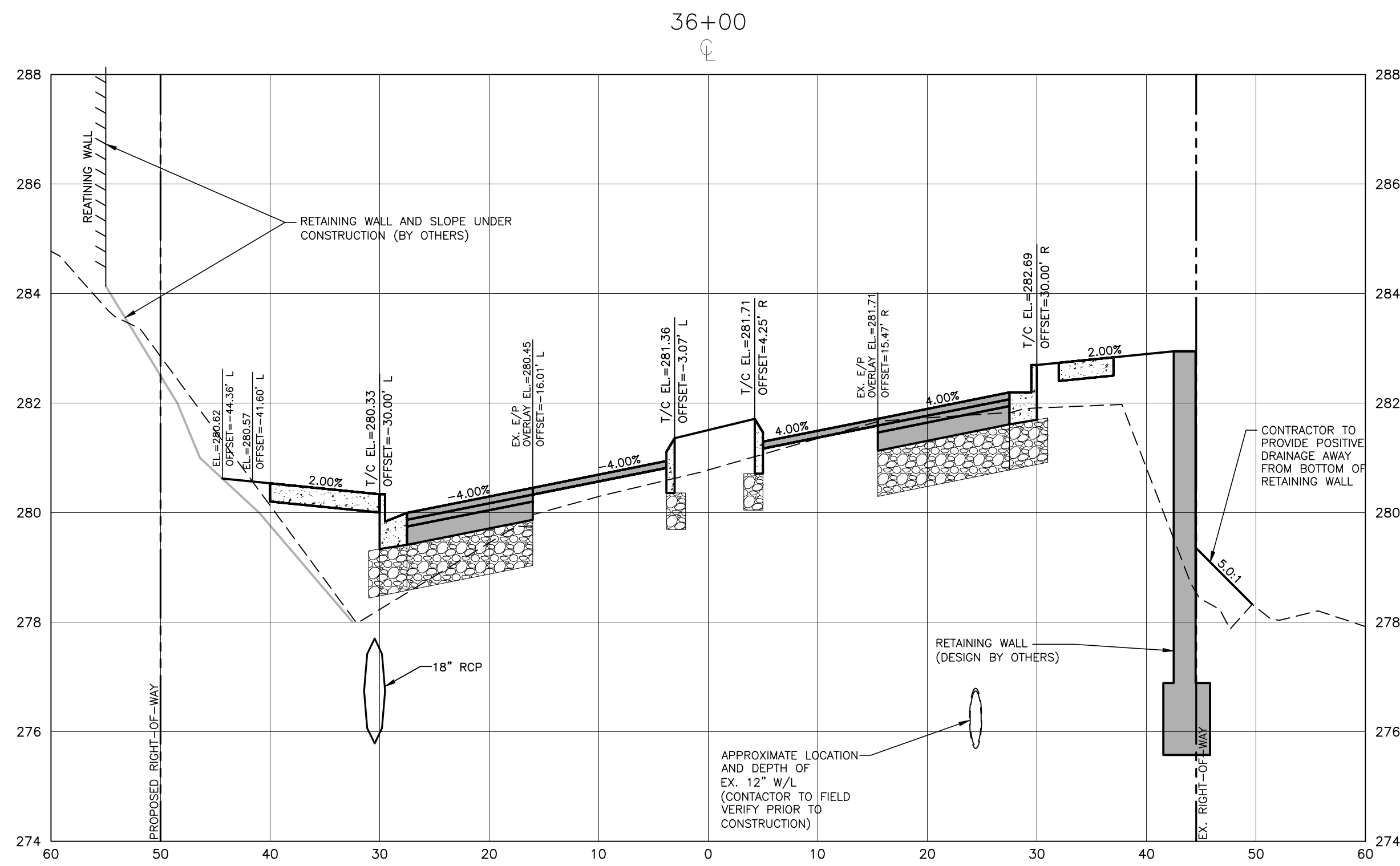
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 34+00 THRU STA. 35+00

C7.17

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ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST AND NCDOT STANDARDS AND ALL CONSERVATION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST, NCDOT AND THE CITY OF RALEIGH (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

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 04/25/2024
 Public Works/Engineering

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 Planning

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CLIENT
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 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

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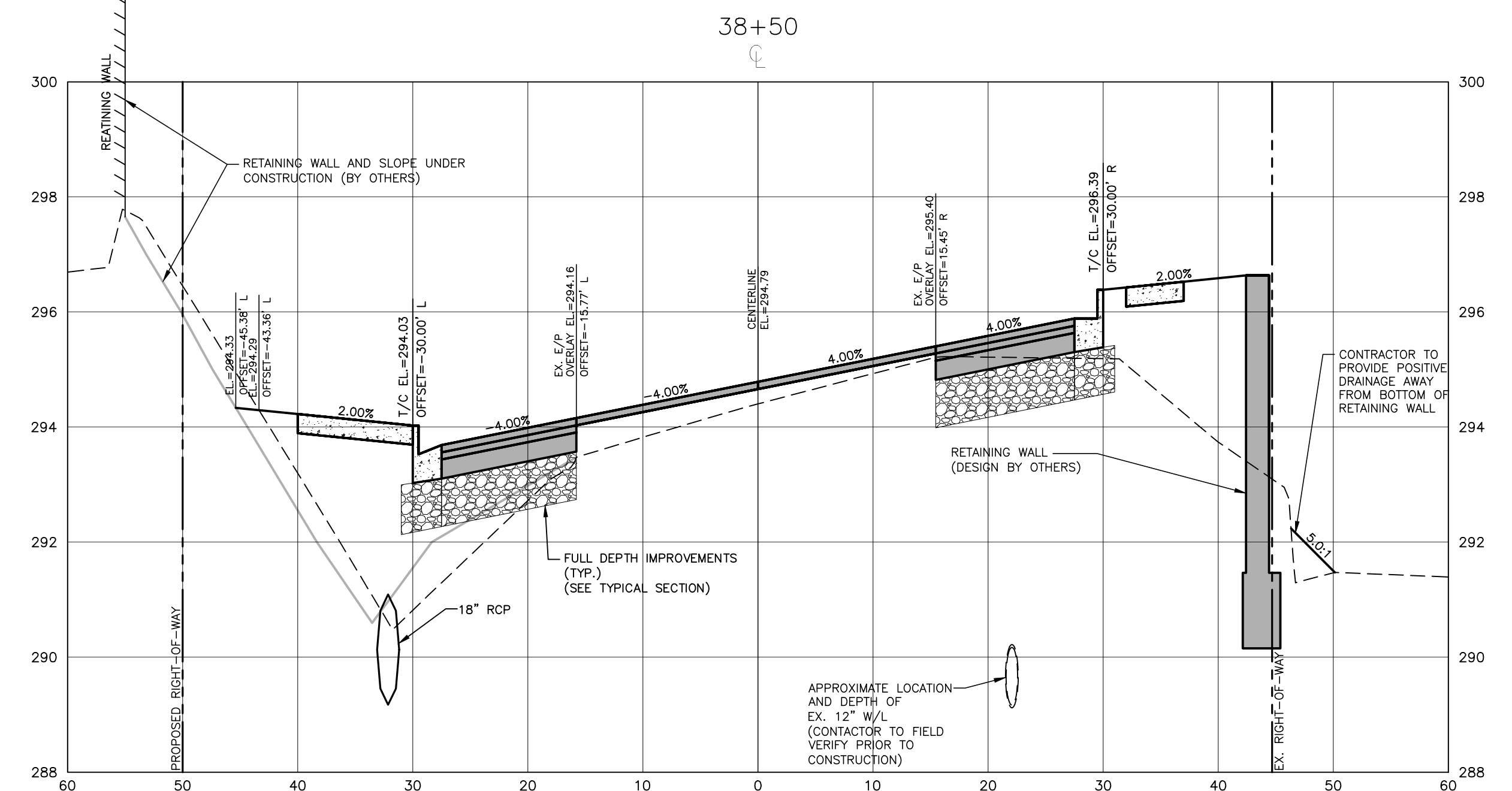
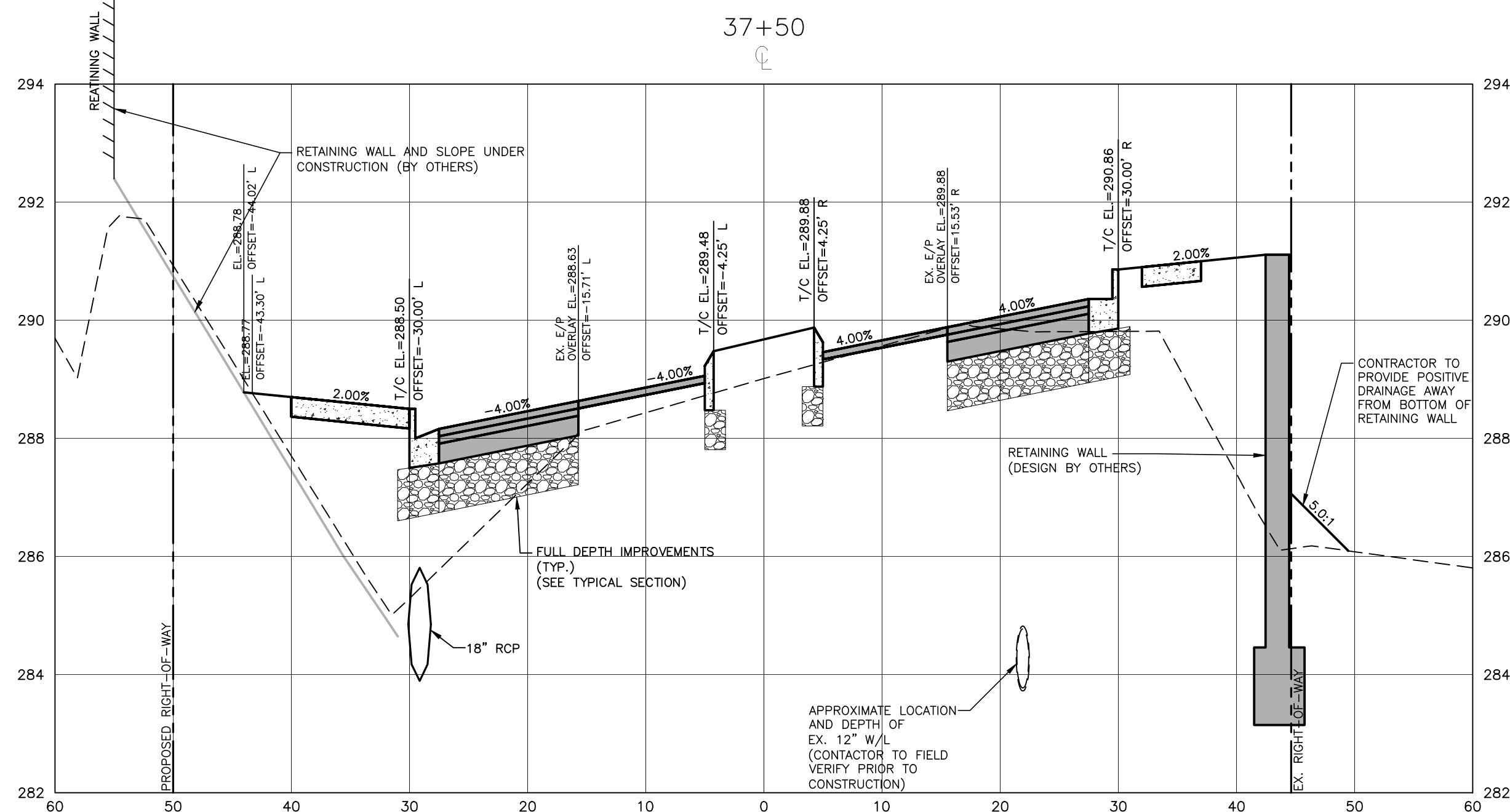
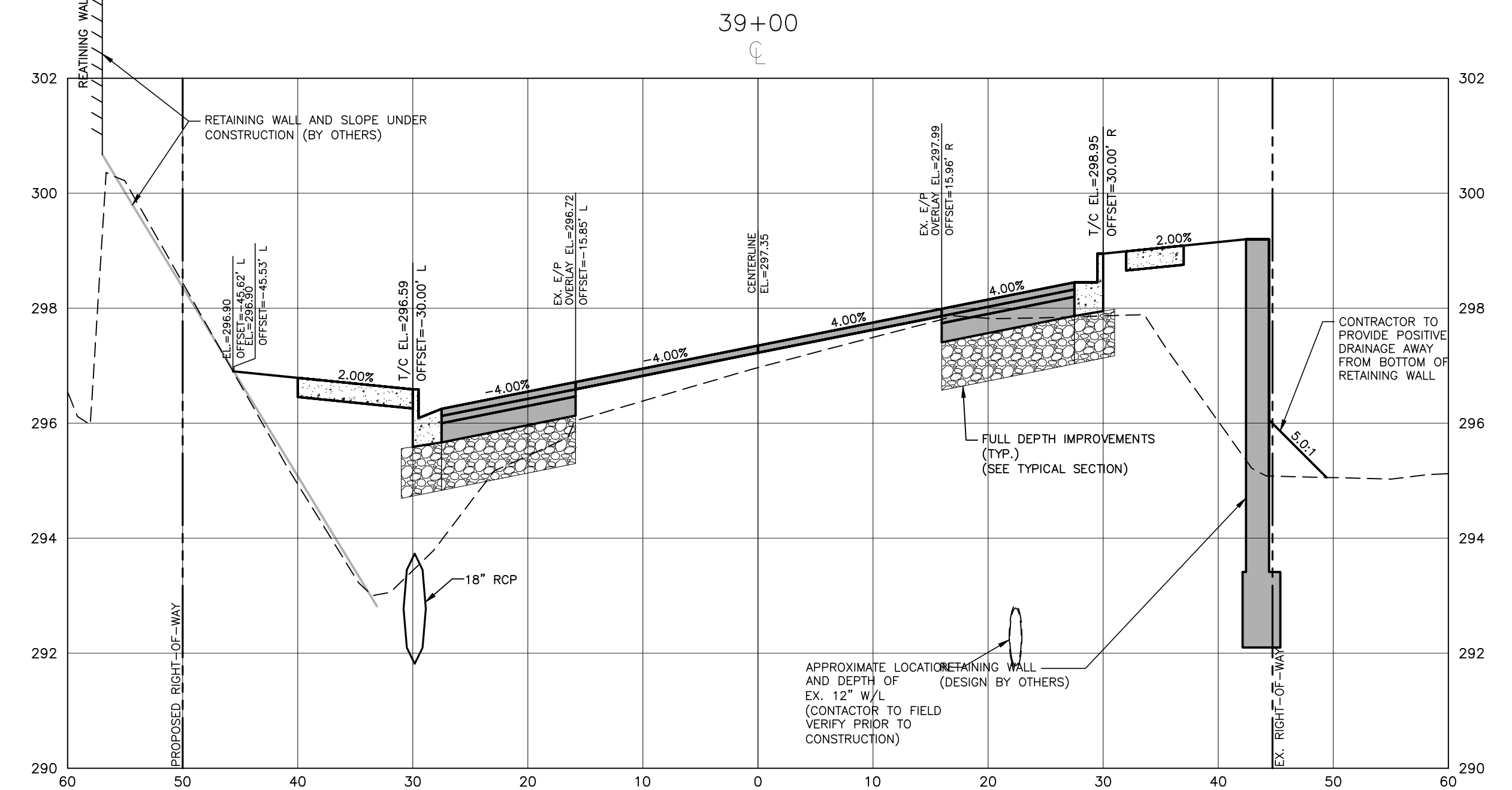
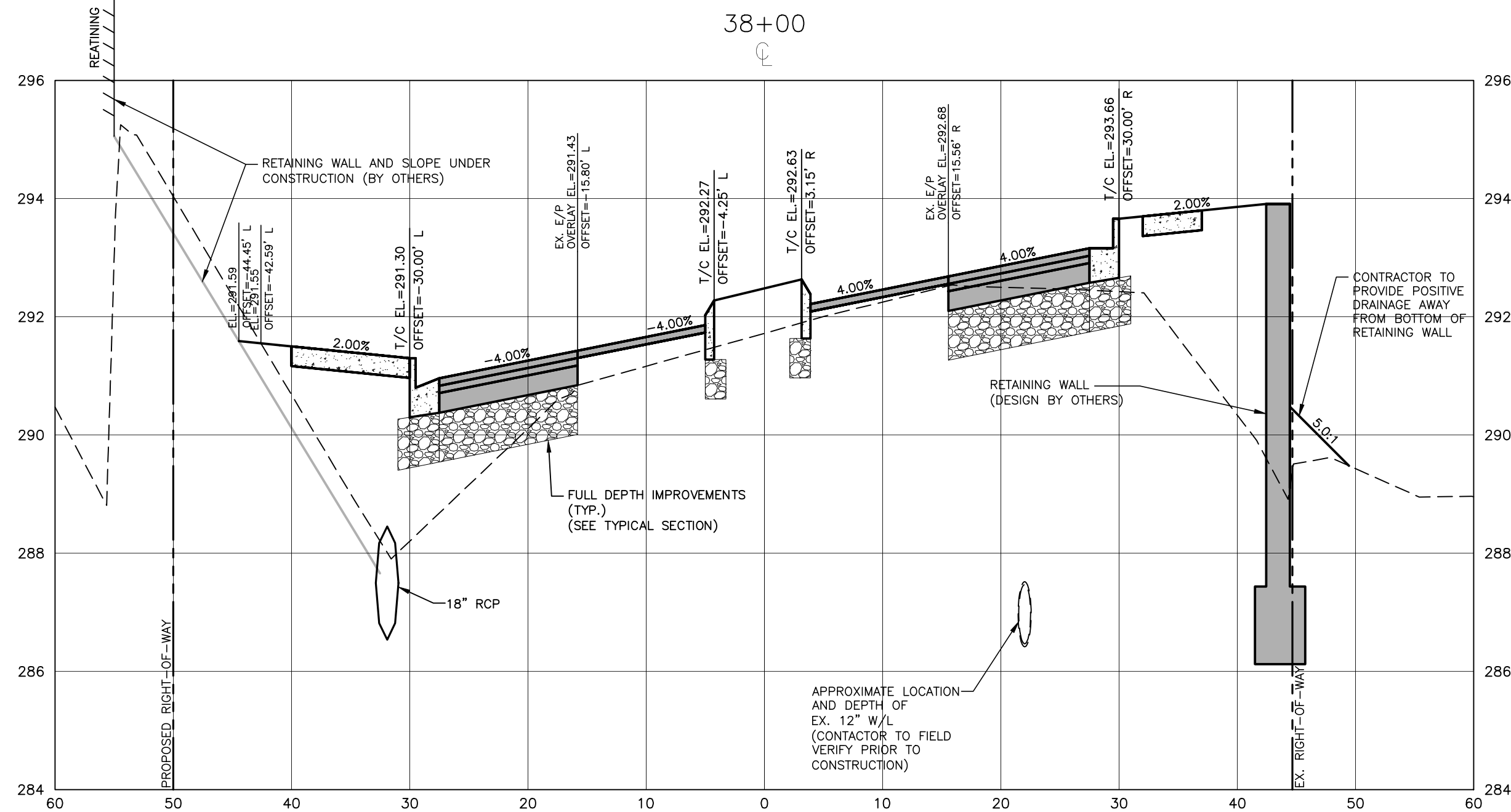


TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 35+50 THRU STA. 37+00
C7.18

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 Planning

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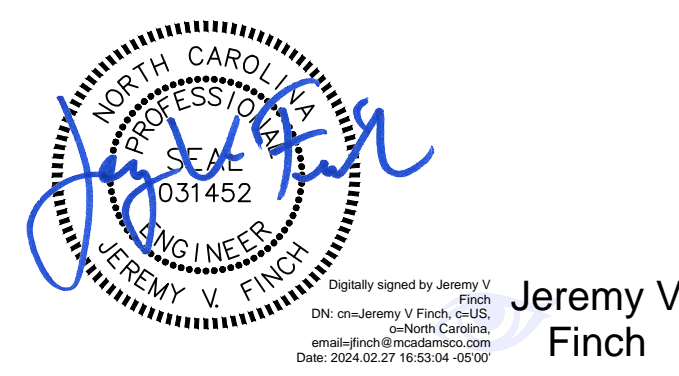


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 www.mcadamsco.com

CLIENT
 TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

REVISIONS

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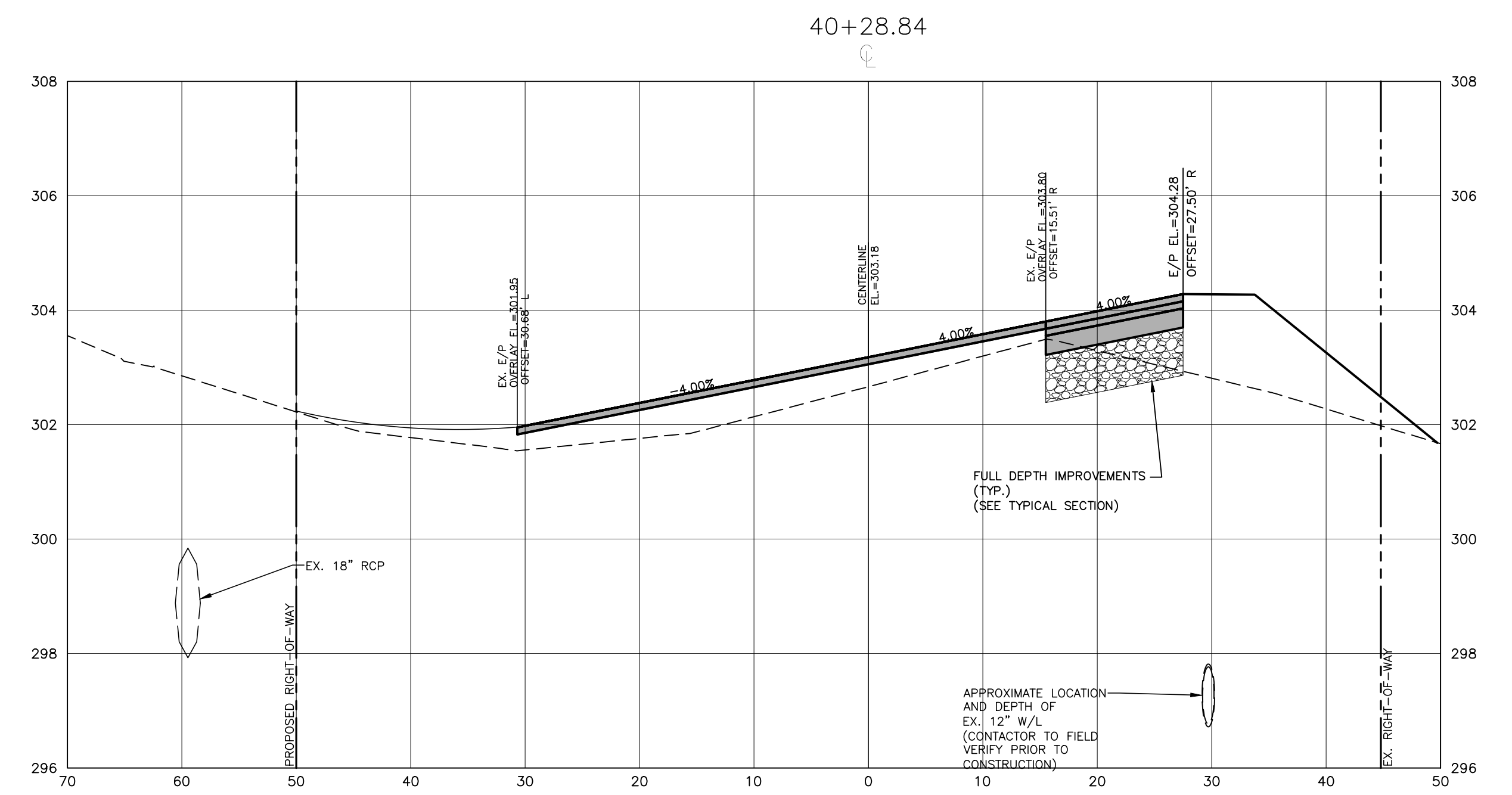
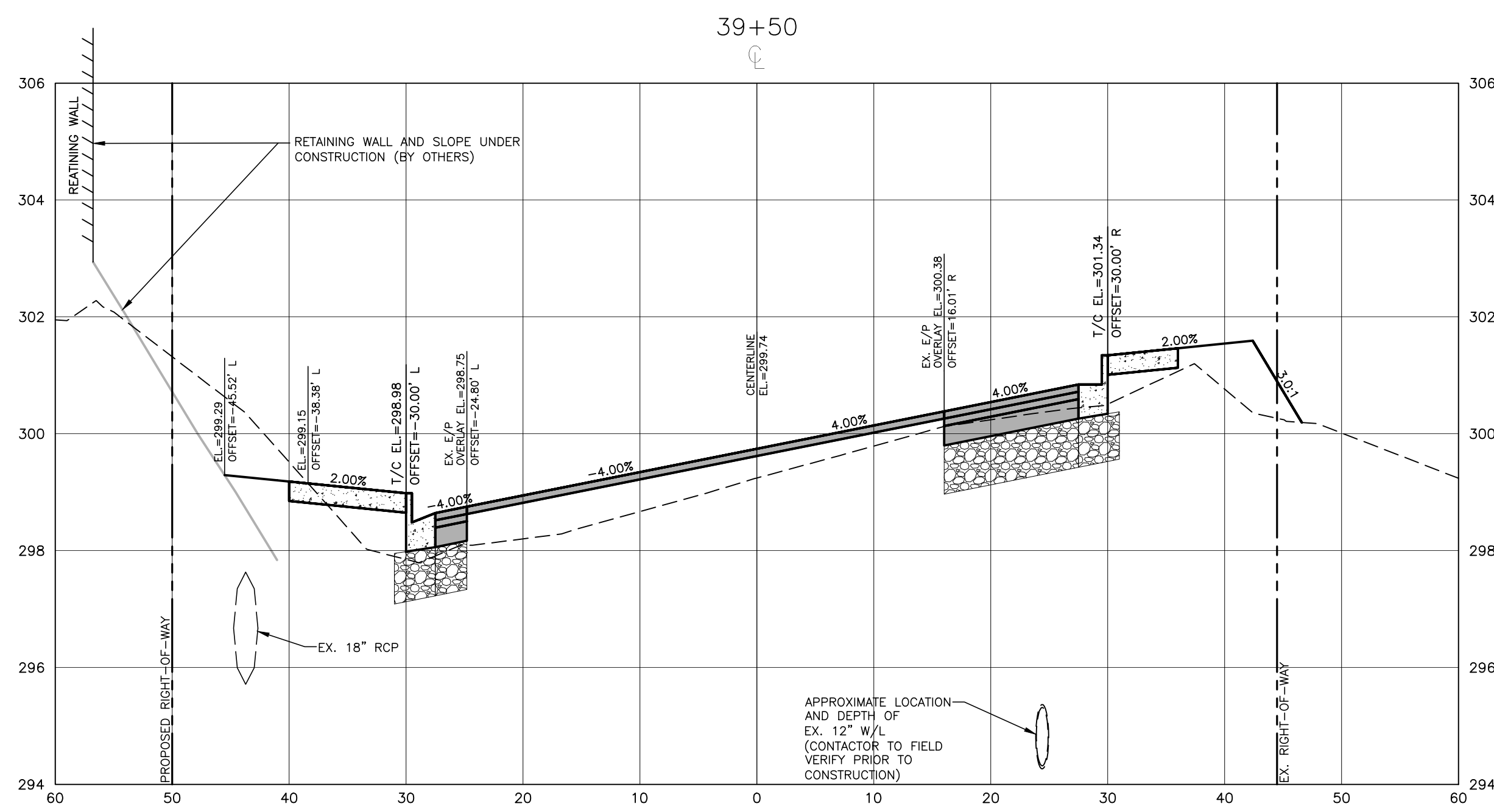
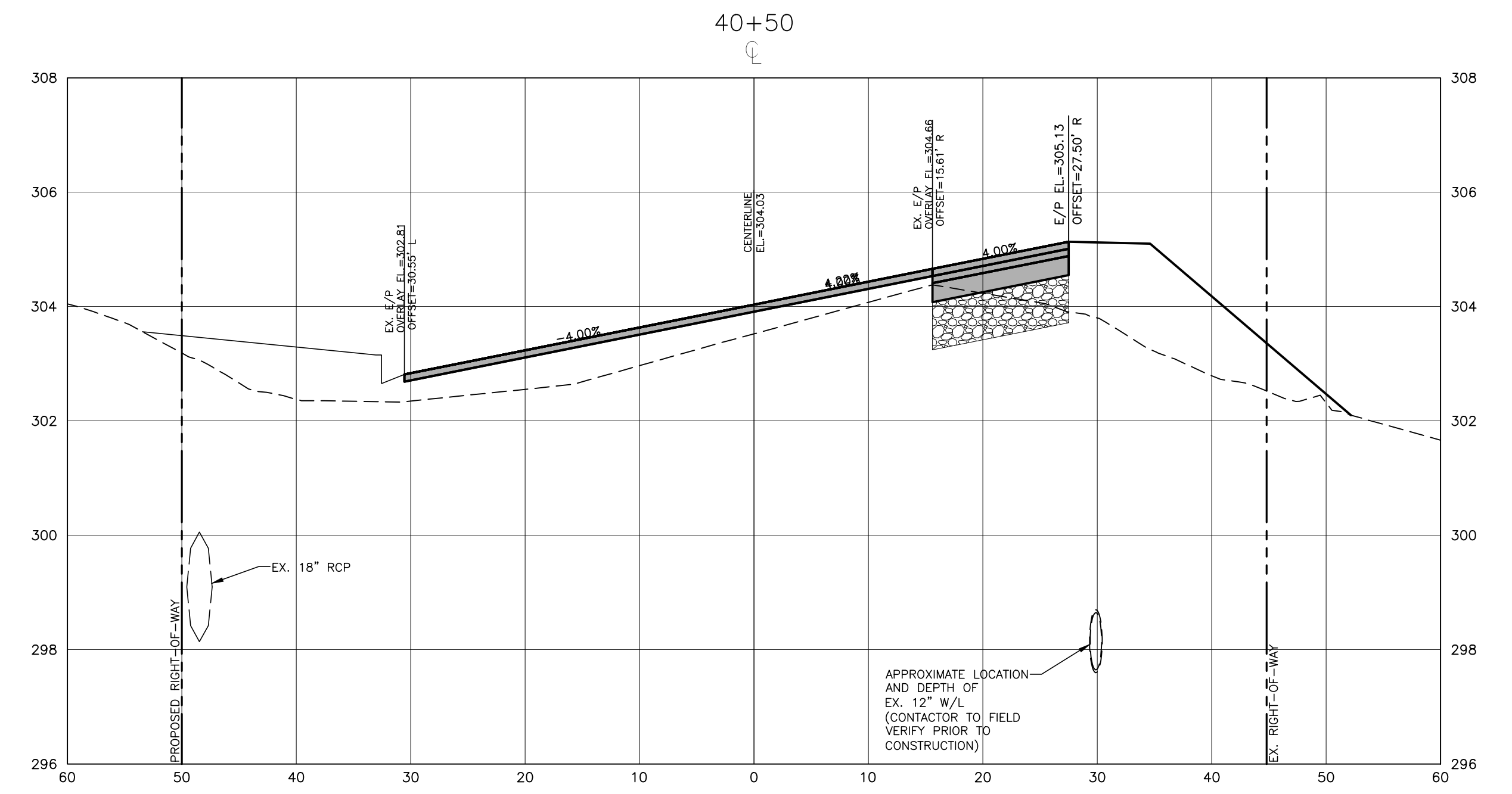
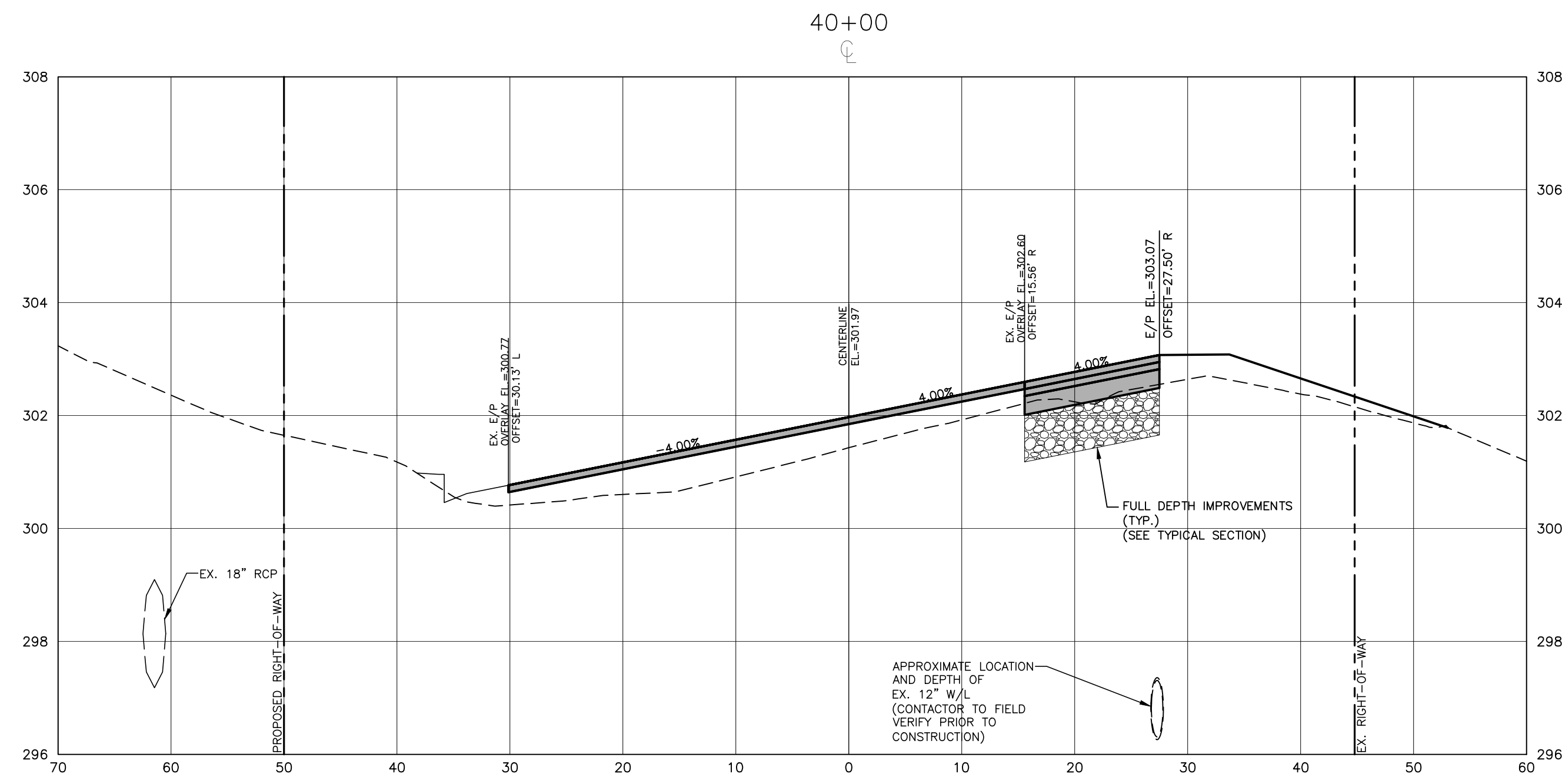
TOWN OF WAKE FOREST SOUTH FRANKLIN
 STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 37+50 THRU STA. 39+00

C7.19

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 Date: 04/25/2024
 Public Works/Engineering

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 Planning

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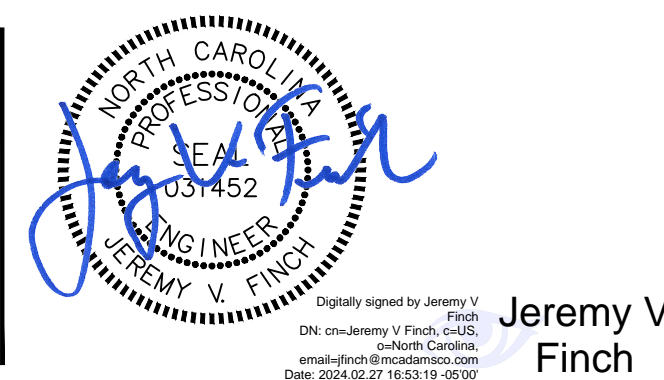


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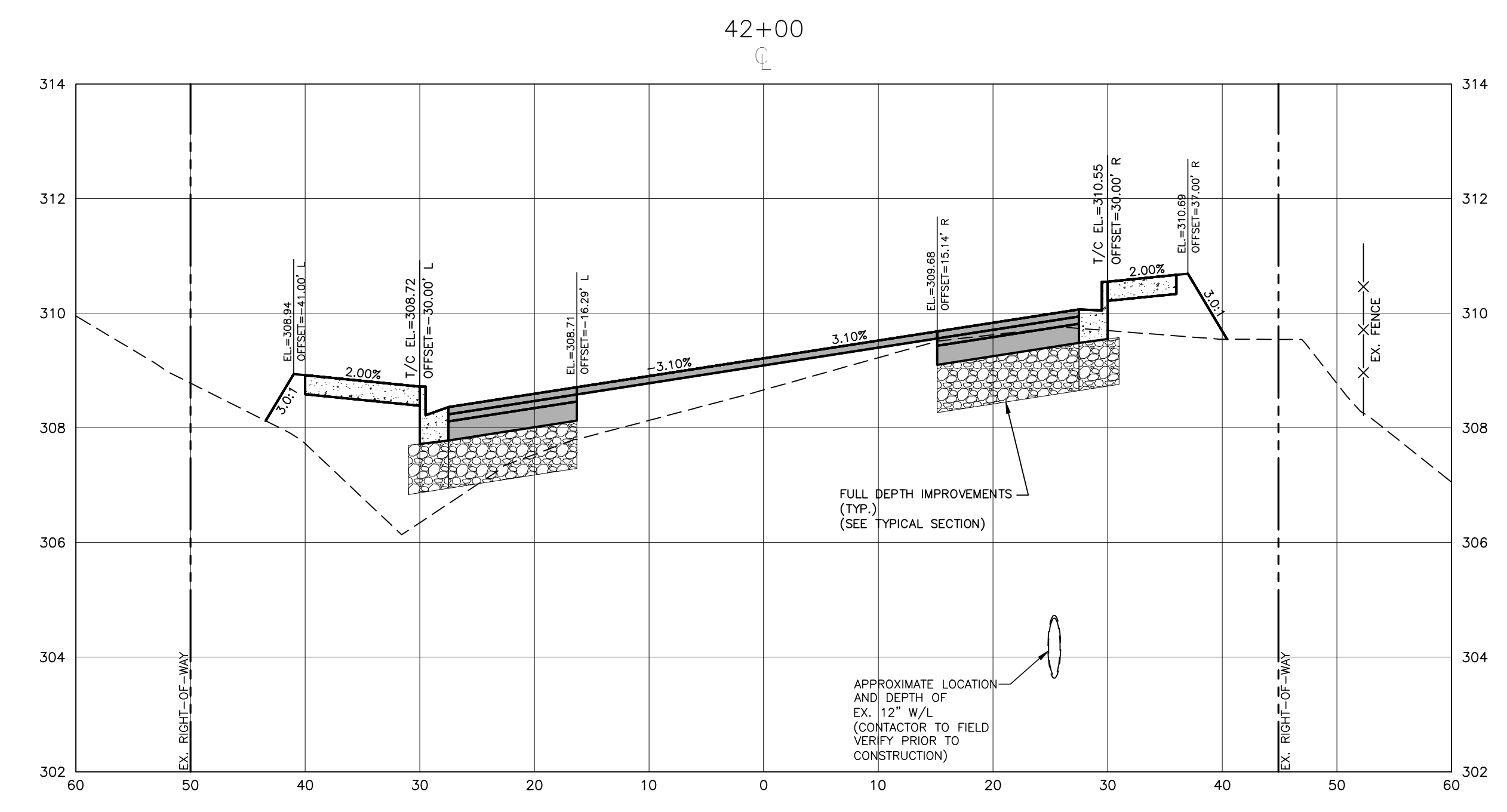
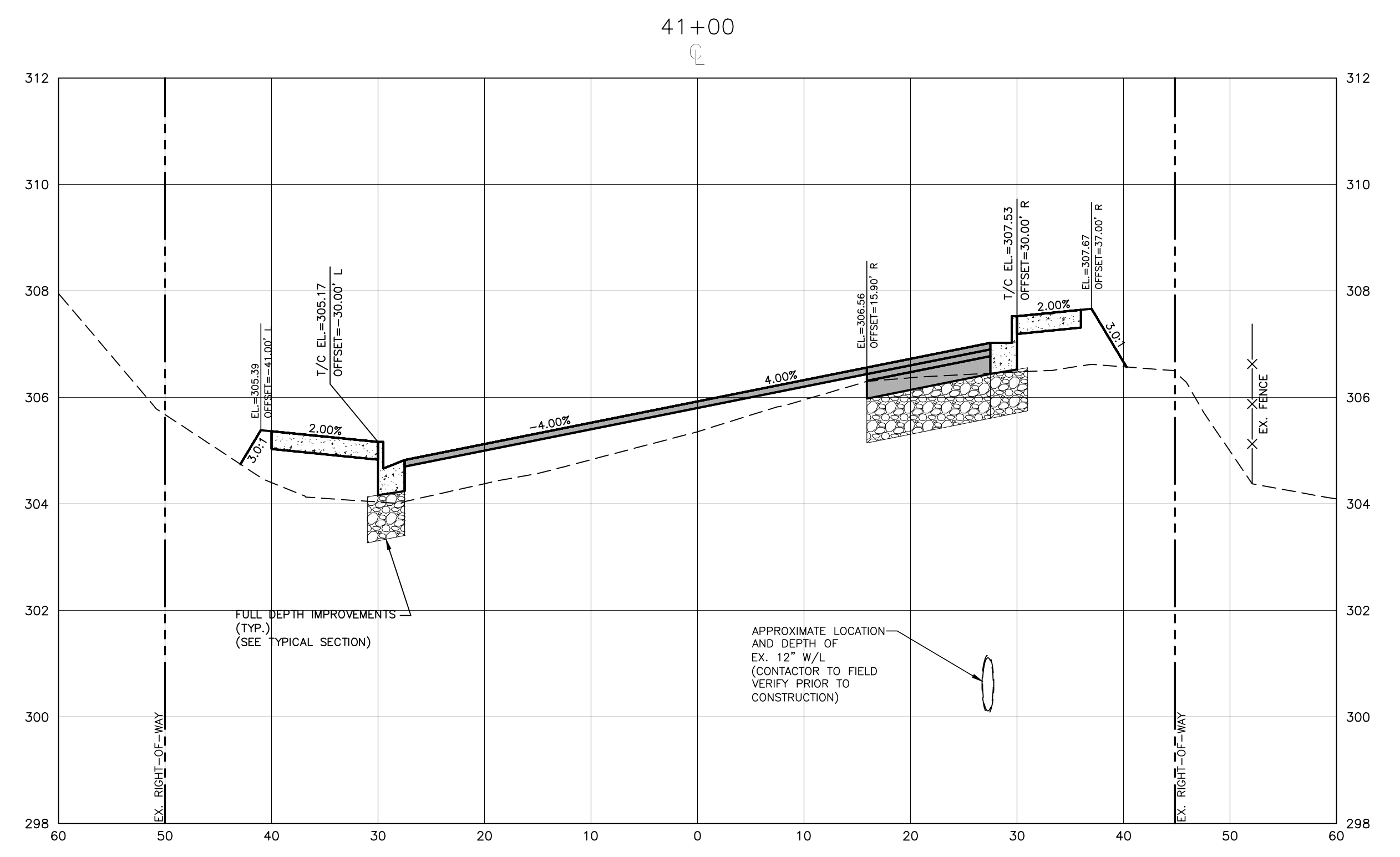
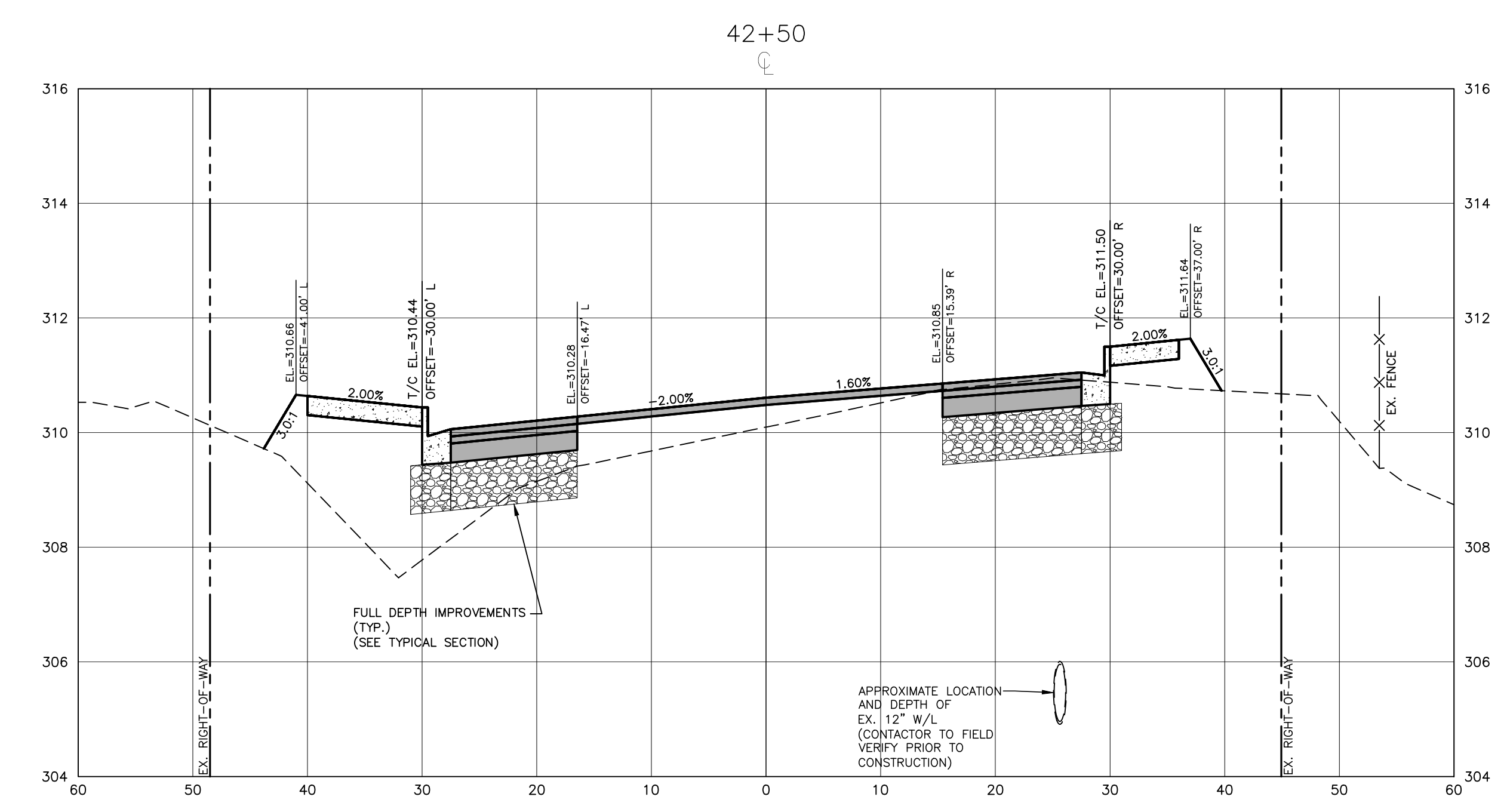
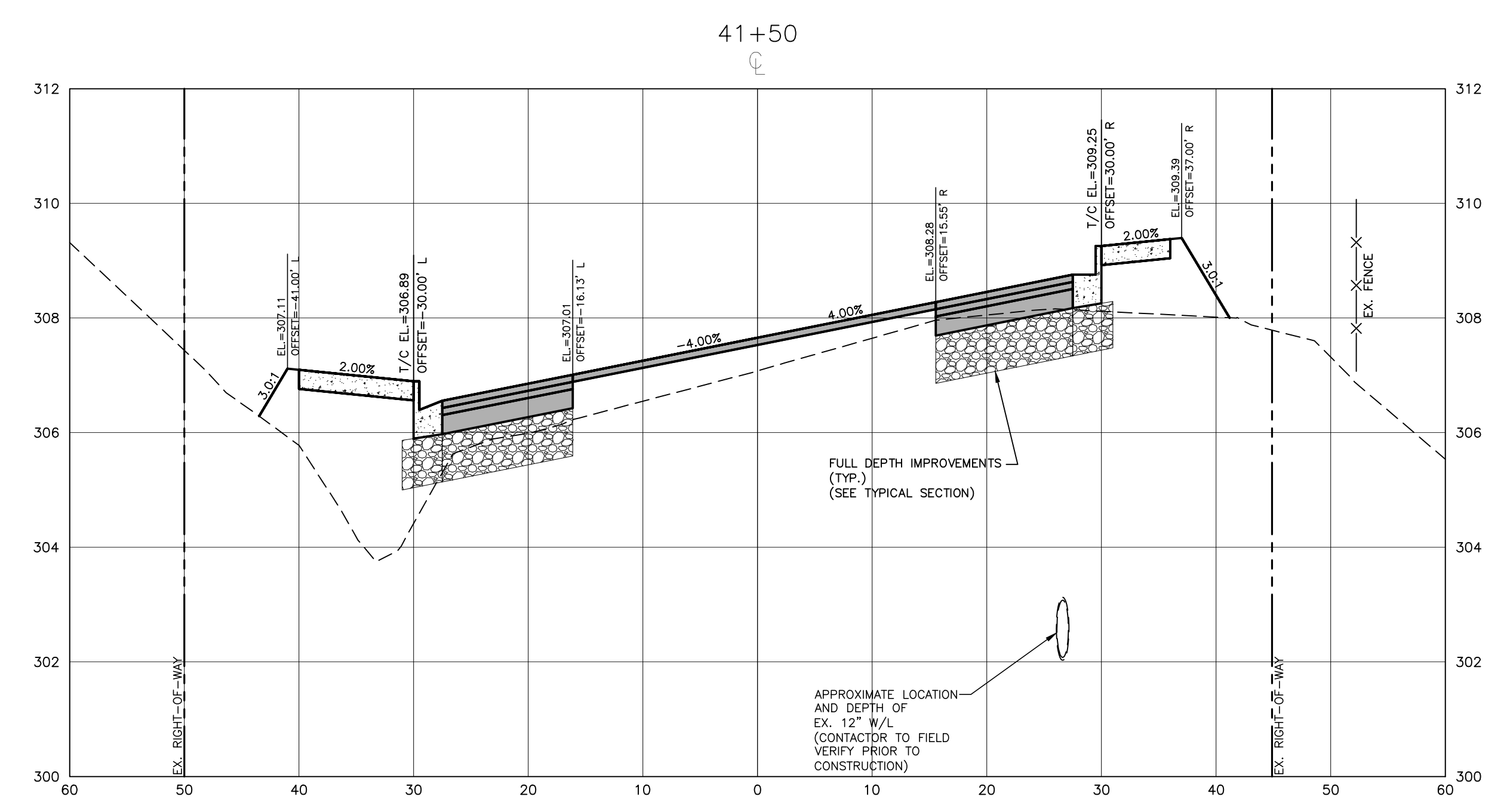
TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 39+50 THRU STA. 40+50

C7.20

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 DWP
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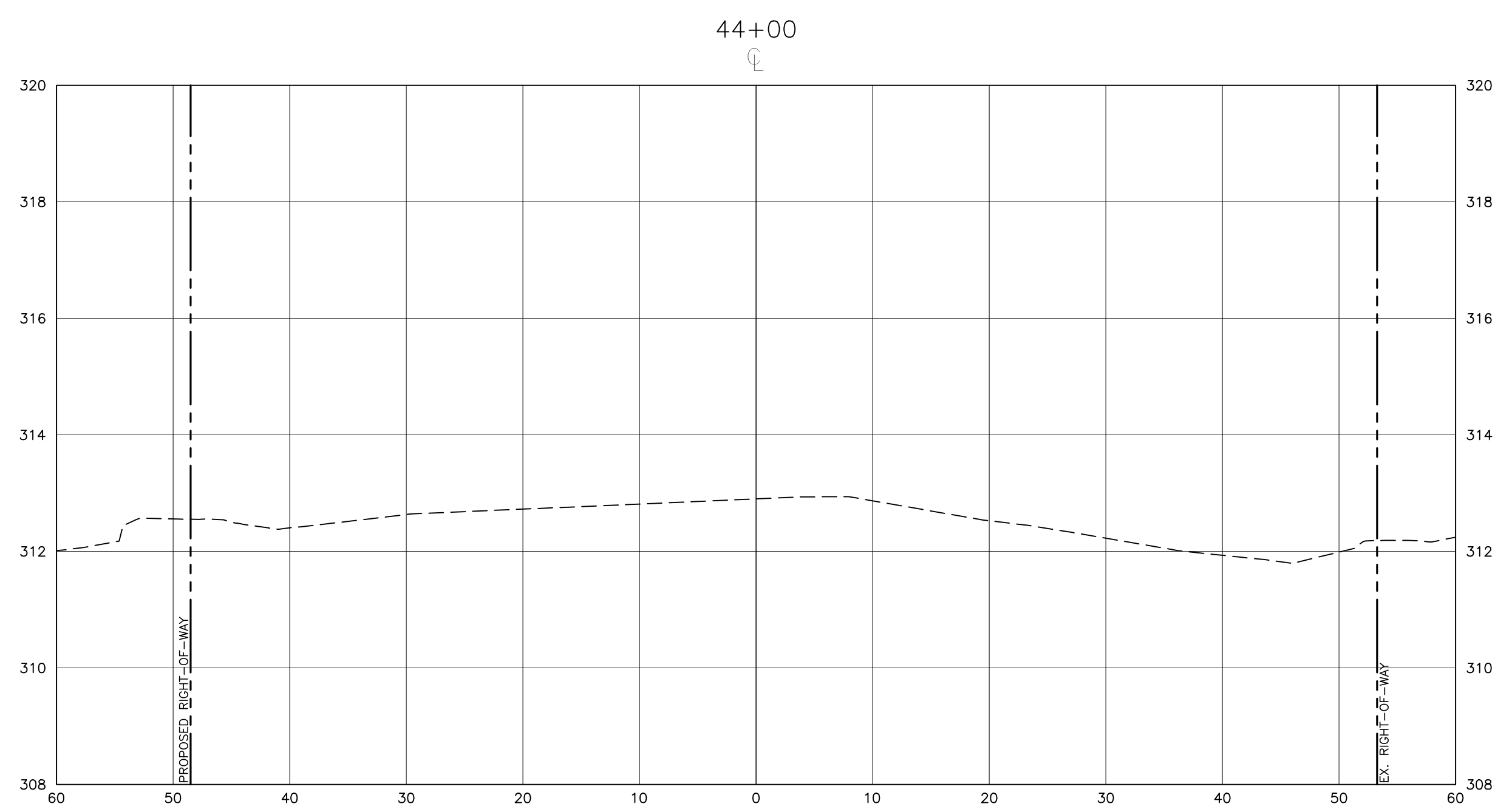
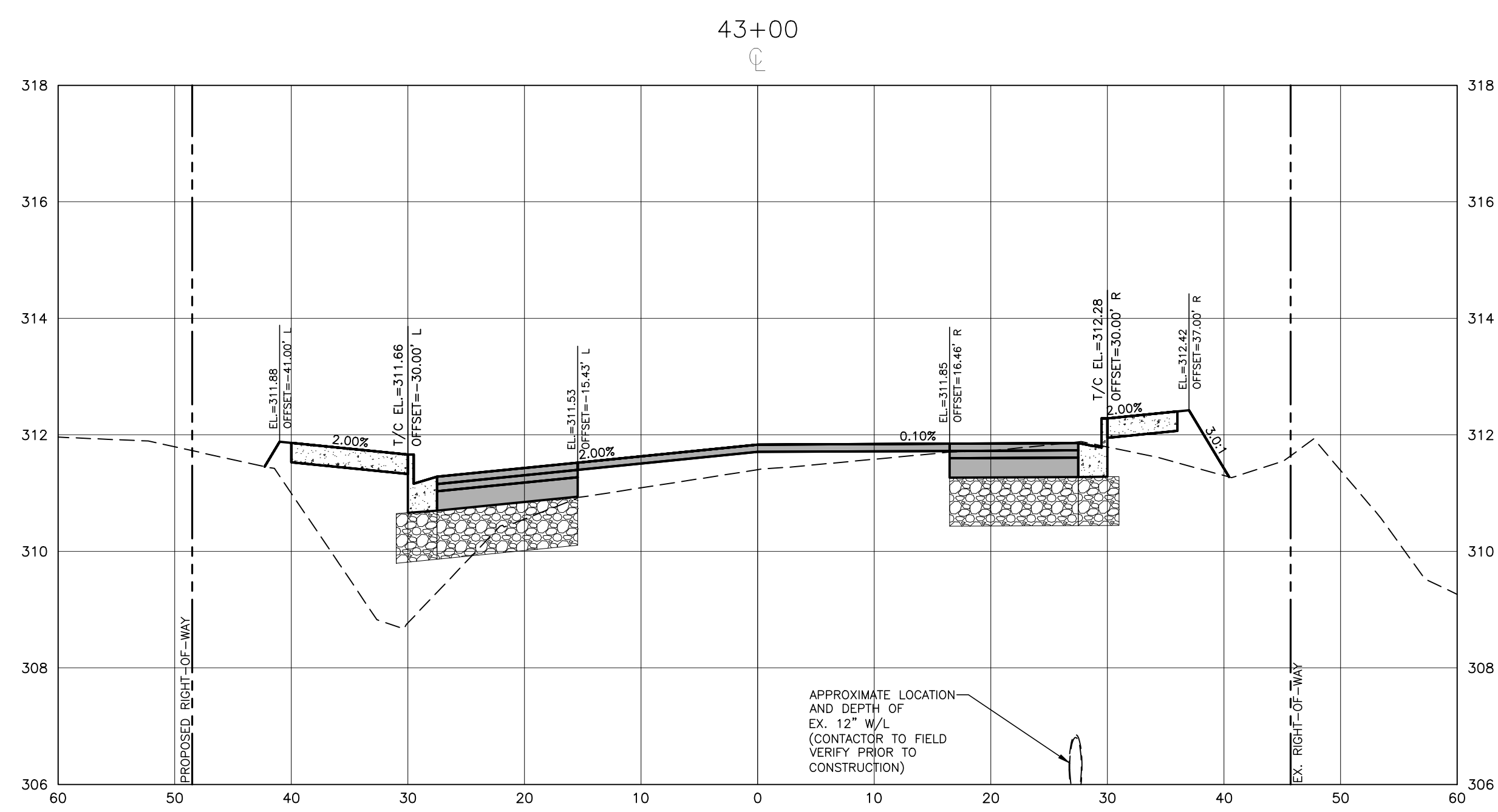
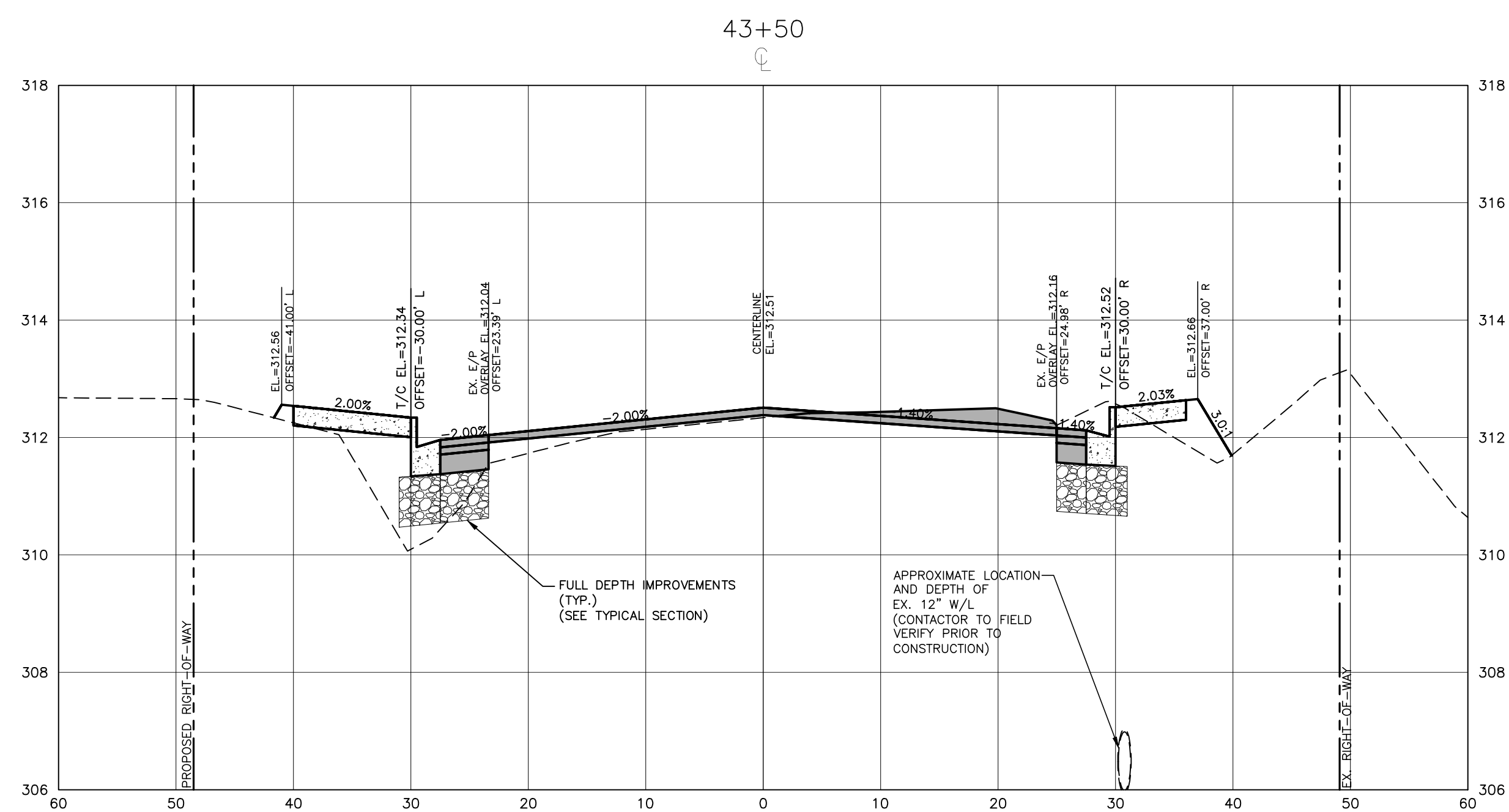
North Carolina Professional Engineer
 001452
 JEREMY V. FINCH
 Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V. Finch, o=NC, ou=North Carolina, email=jeremy@jvfinch.com, c=US
 Date: 2024.02.27 16:53:34 -0500
 Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-XS1
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 41+00 THRU STA. 42+50
C7.21

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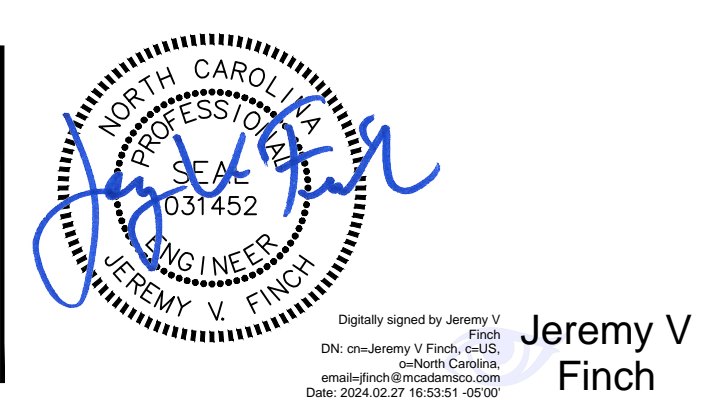


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REVISIONS

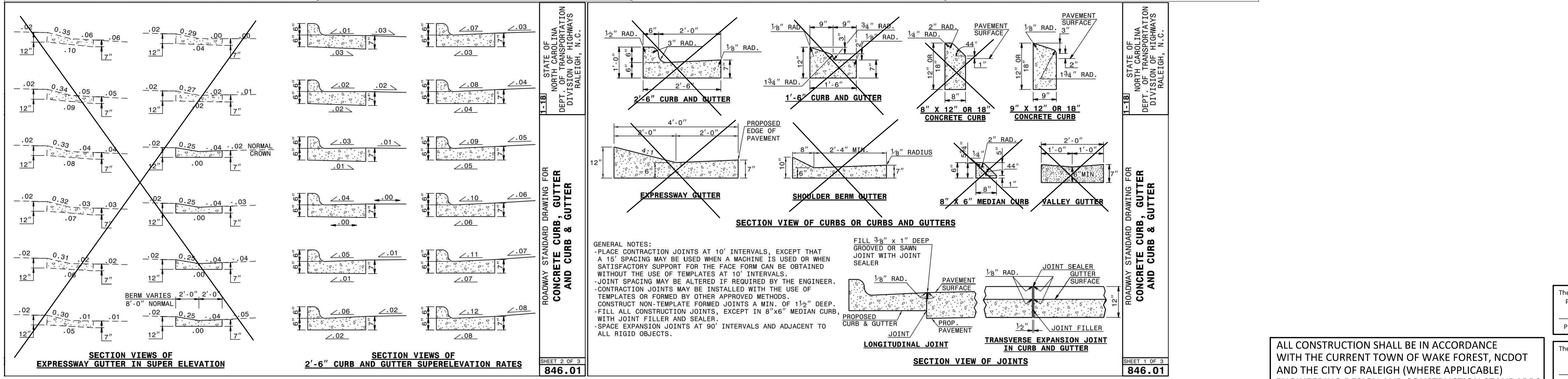
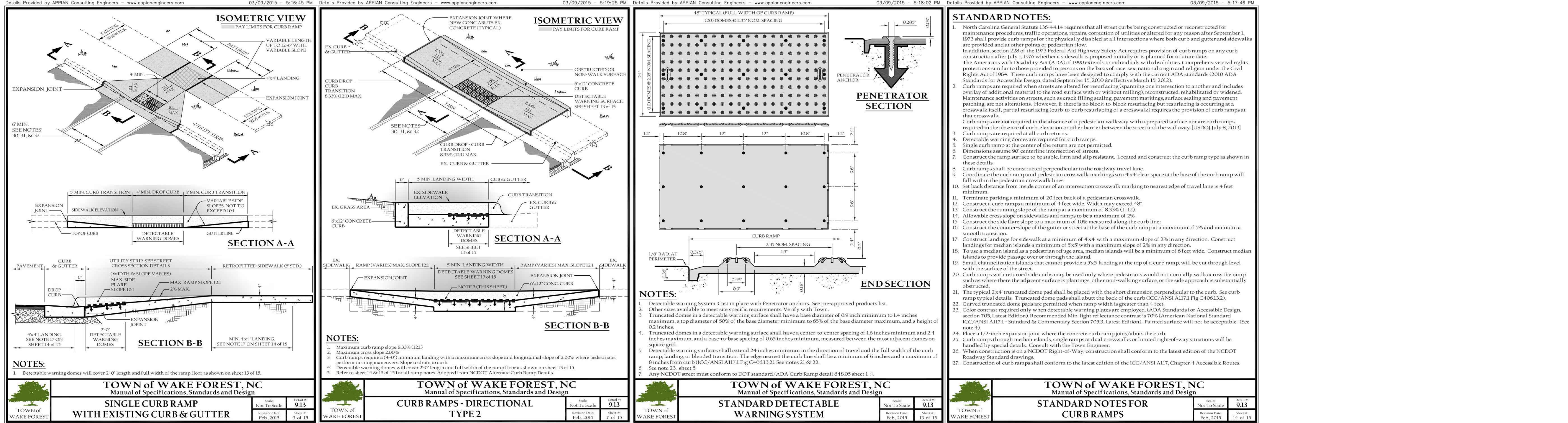
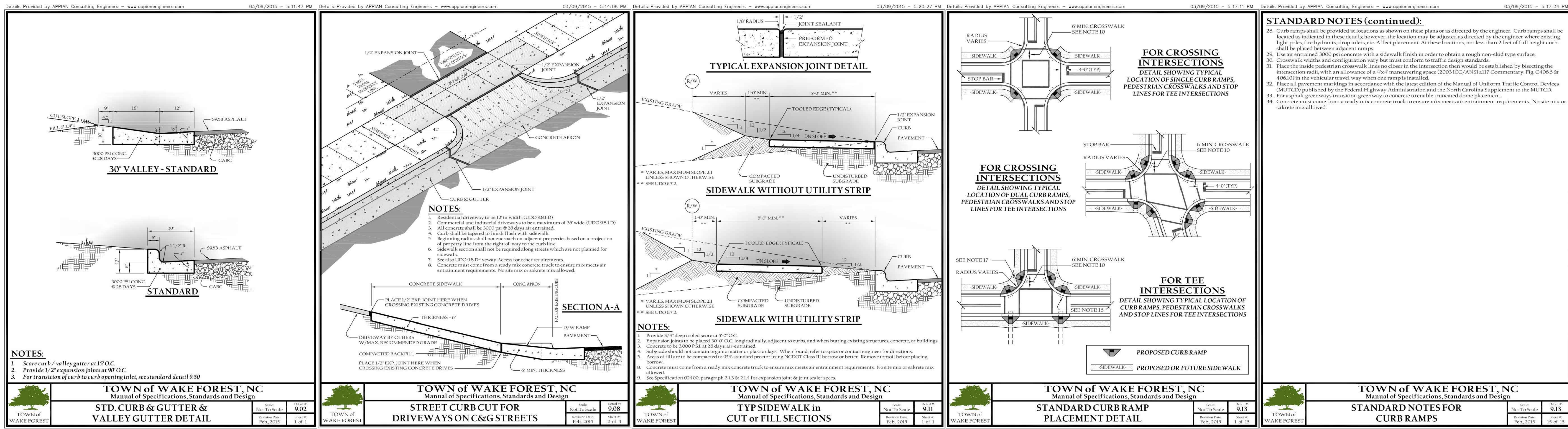
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TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
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 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
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 CHECKED BY DLP
 DRAWN BY RJF
 SCALE 1"=10' H, 1"=2' V
 DATE 02. 23. 2024

CROSS SECTIONS
 S. FRANKLIN, STA. 43+00 THRU STA. 44+00
C7.22



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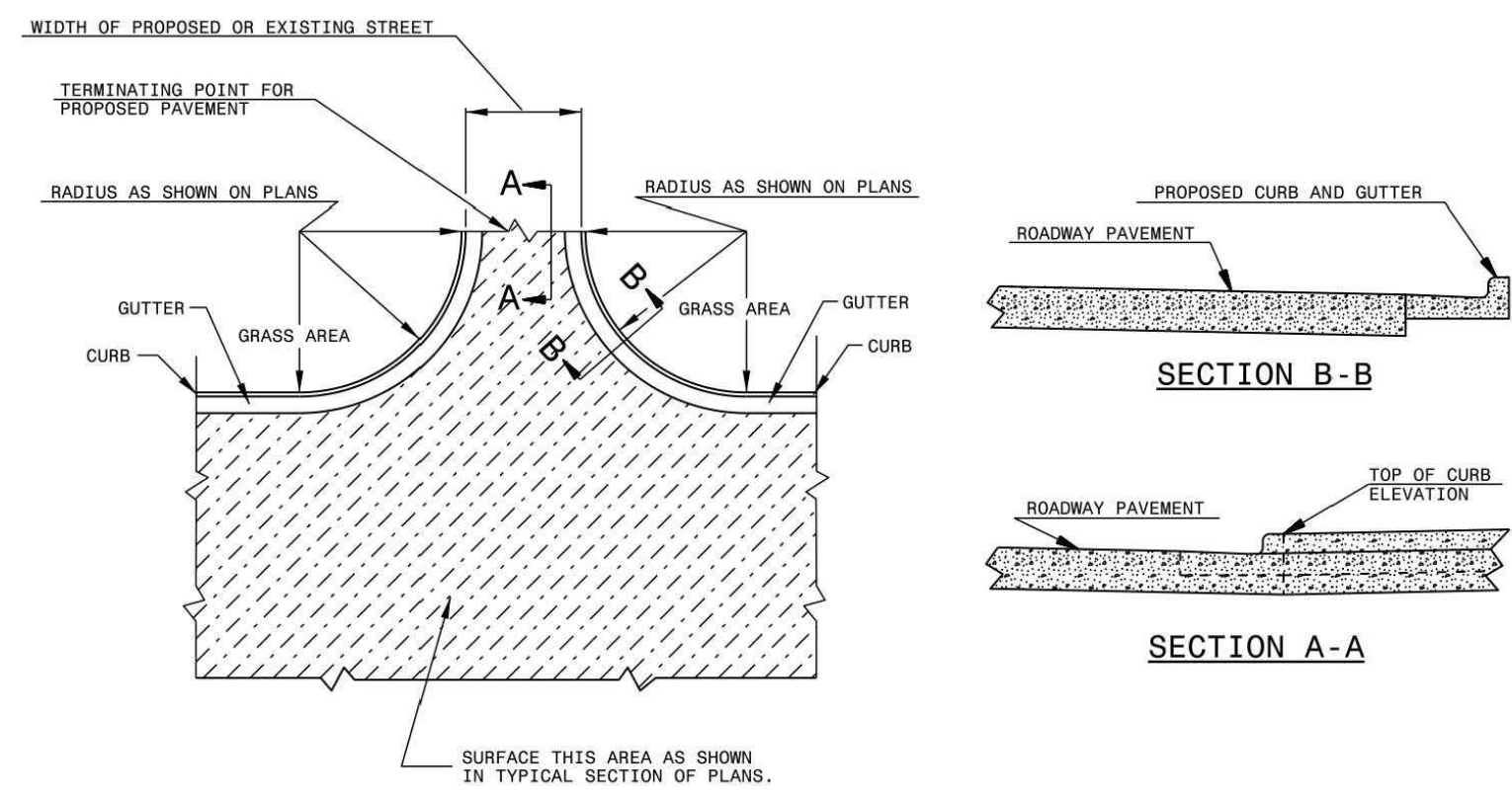
Professional Engineer Seal for Jeremy V. Finch, No. 31452, State of North Carolina.

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS CONSTRUCTION DRAWINGS 0 SOUTH FRANKLIN STREET WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-D1
 CHECKED BY DLP
 DRAWN BY RUF
 SCALE N.T.S.
 DATE 02. 23. 2024

SITE DETAILS
 C8.00

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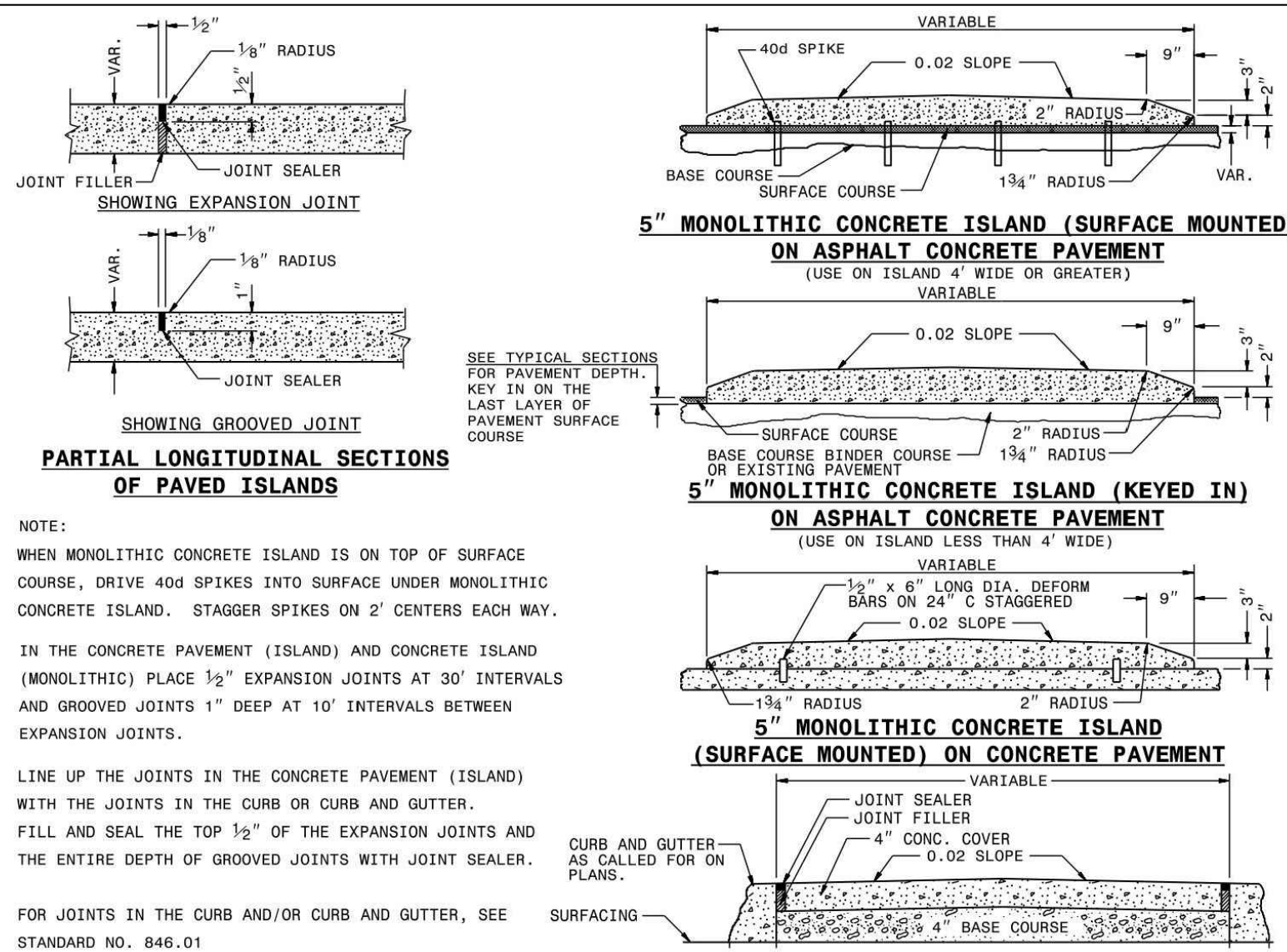


PARTIAL PLAN OF PAVED STREET TURNOUT
USE ON PROPOSED AND EXISTING STREET INTERSECTIONS OR MAJOR TYPE COMMERCIAL ENTRANCES.

STATE OF NORTH CAROLINA
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
STREET TURNOUT

SHEET 1 OF 1
862.04

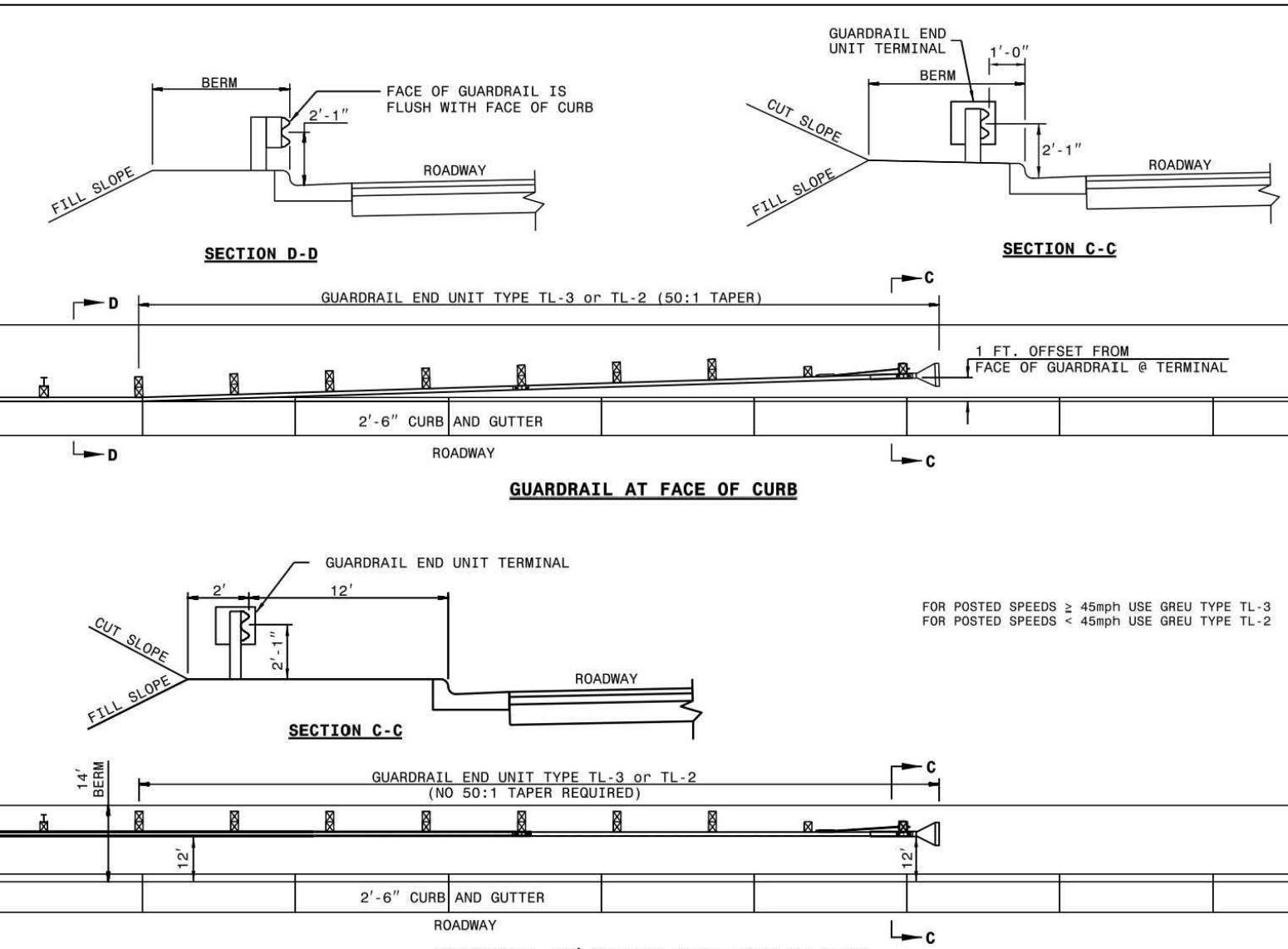


NOTE:
WHEN MONOLITHIC CONCRETE ISLAND IS ON TOP OF SURFACE COURSE, DRIVE 40d SPIKES INTO SURFACE UNDER MONOLITHIC CONCRETE ISLAND. STAGGER SPIKES ON 2' CENTERS EACH WAY.
IN THE CONCRETE PAVEMENT (ISLAND) AND CONCRETE ISLAND (MONOLITHIC) PLACE 1/2" EXPANSION JOINTS AT 30' INTERVALS AND GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS.
LINE UP THE JOINTS IN THE CONCRETE PAVEMENT (ISLAND) WITH THE JOINTS IN THE CURB OR CURB AND GUTTER.
FILL AND SEAL THE TOP 1/2" OF THE EXPANSION JOINTS AND THE ENTIRE DEPTH OF GROOVED JOINTS WITH JOINT SEALER.
FOR JOINTS IN THE CURB AND/OR CURB AND GUTTER, SEE STANDARD NO. 846.01

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ROADWAY STANDARD DRAWING FOR
CONCRETE ISLANDS

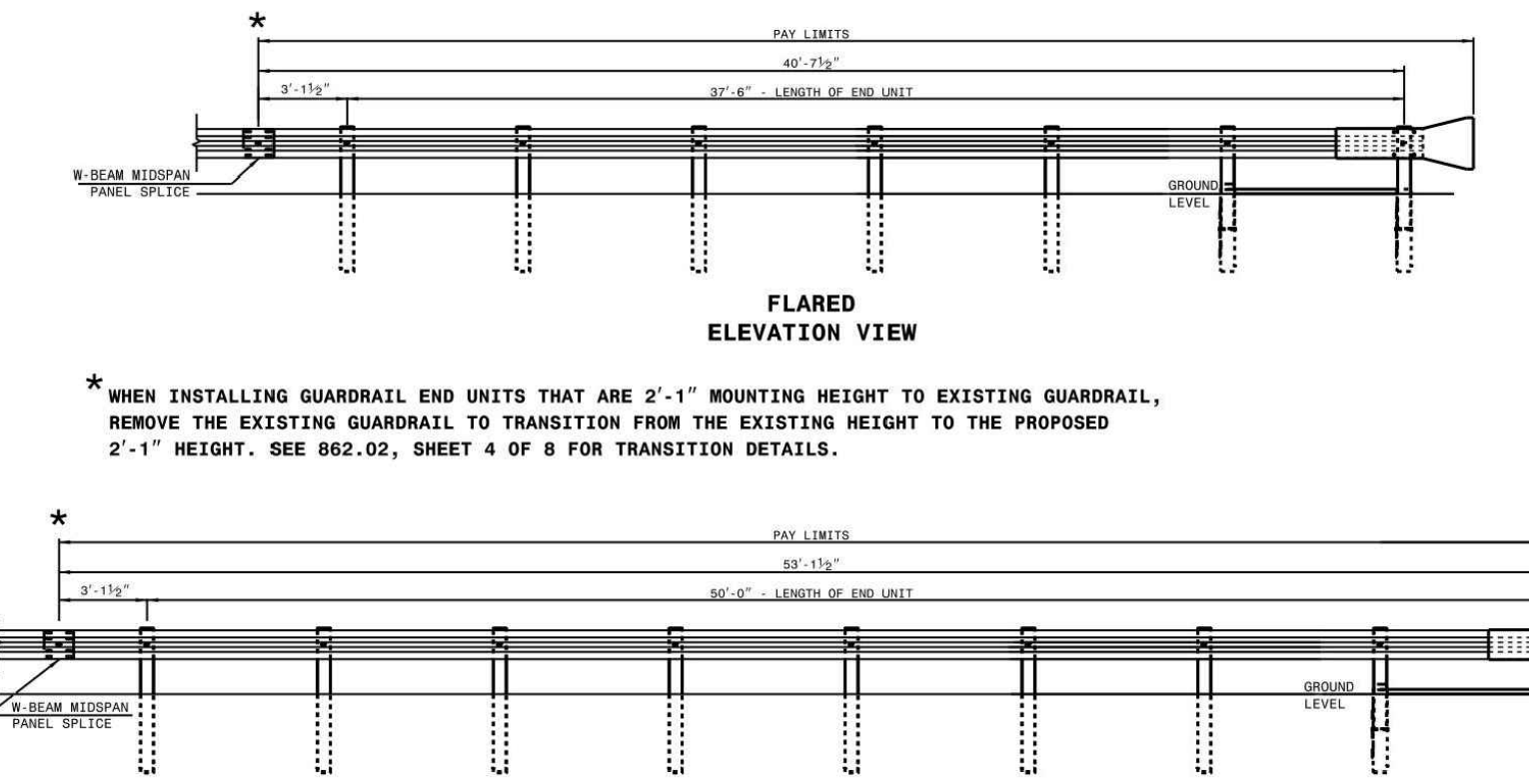
SHEET 1 OF 1
862.01



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
GUARDRAIL PLACEMENT AT CURB AND GUTTER

SHEET 11 OF 11
862.01

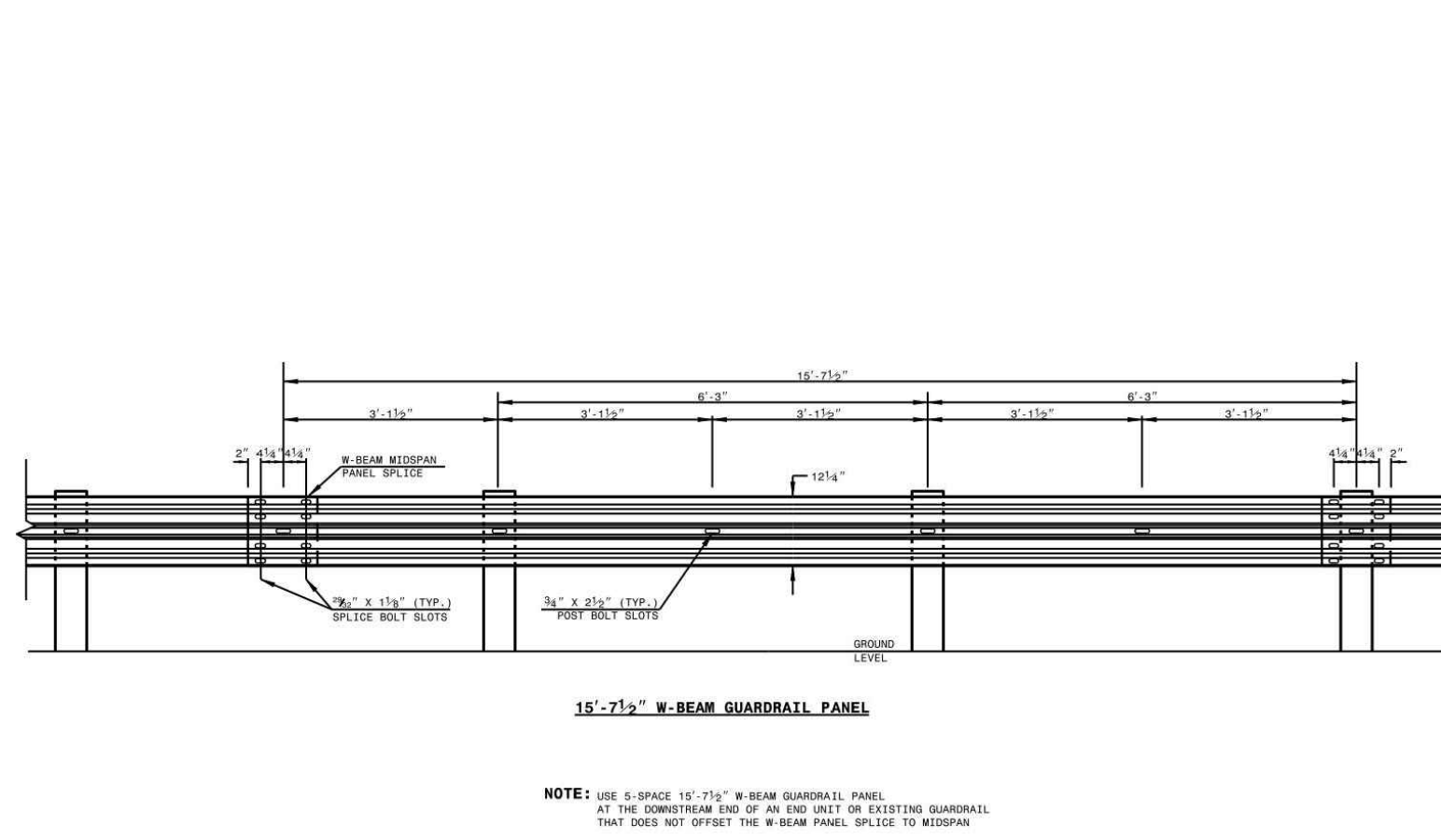


APPROACH END UNITS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 8
862.02

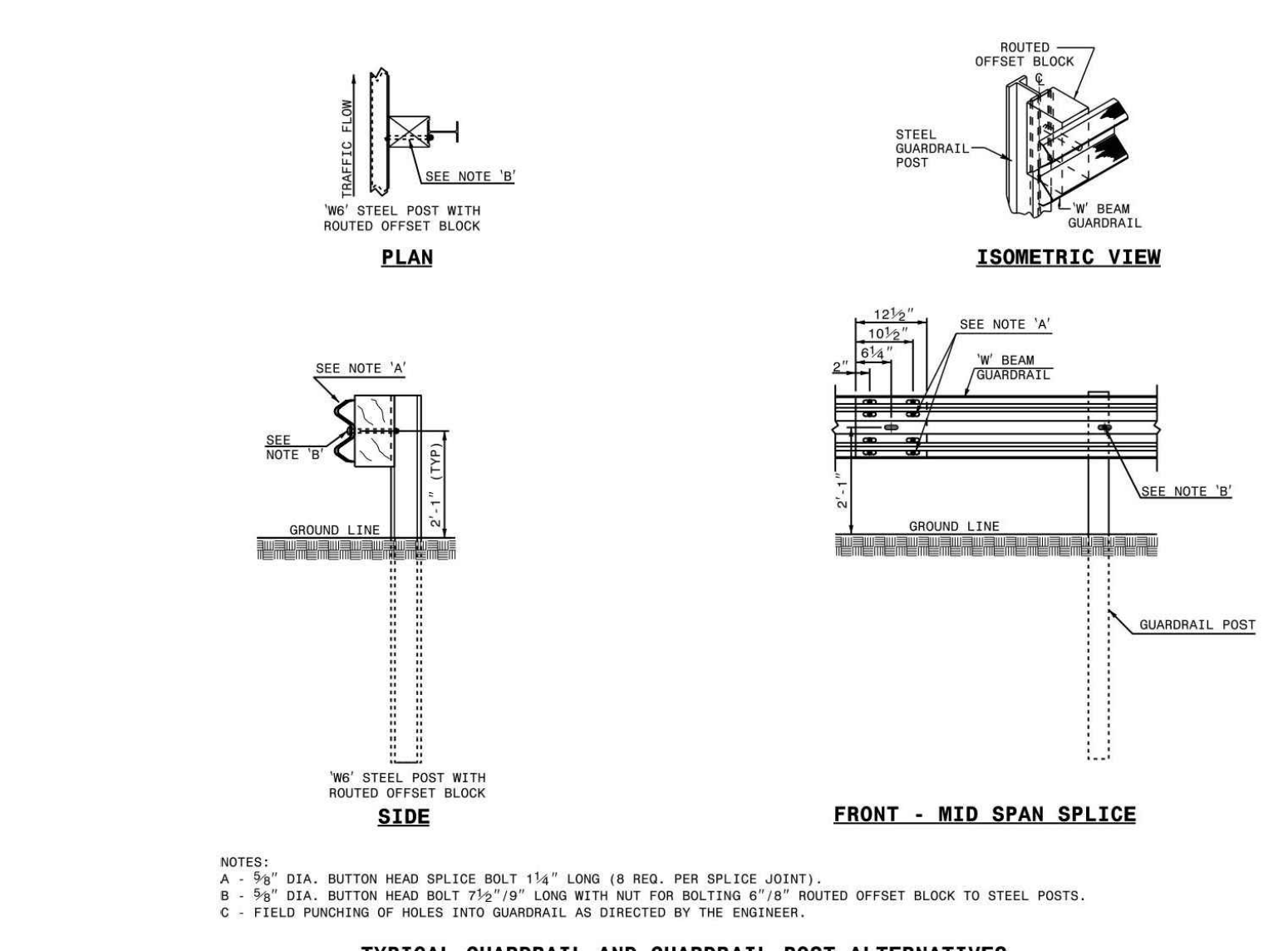


NOTE: USE 3" SPACE 15'-7 1/2" W-BEAM GUARDRAIL PANEL AT THE DOWNSTREAM END OF AN END UNIT ON EXISTING GUARDRAIL THAT DOES NOT MEET THE W-BEAM PANEL SPACING REQUIREMENTS.

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ROADWAY STANDARD DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 3 OF 8
862.02

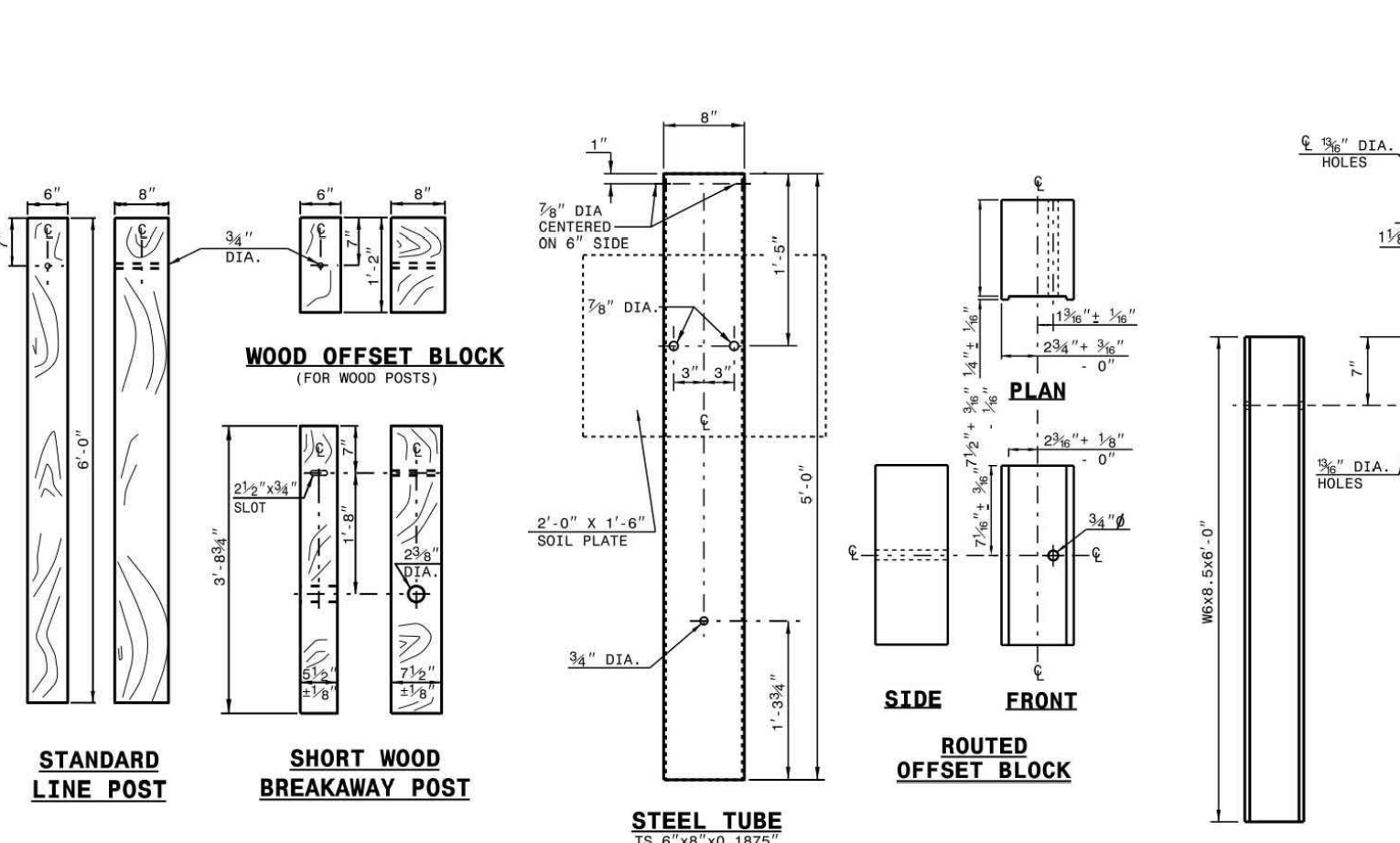


NOTES:
A - 5/8" DIA. BUTTON HEAD SPLICE BOLT 1 1/4" LONG (8 REQ. PER SPLICE JOINT).
B - 5/8" DIA. BUTTON HEAD BOLT 7 7/8" LONG WITH NUT FOR BOLTING 8" BENT ROUTED OFFSET BLOCK TO STEEL POSTS.
C - FIELD PUNCHING OF HOLES INTO GUARDRAIL AS DIRECTED BY THE ENGINEER.

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ROADWAY STANDARD DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 5 OF 8
862.02

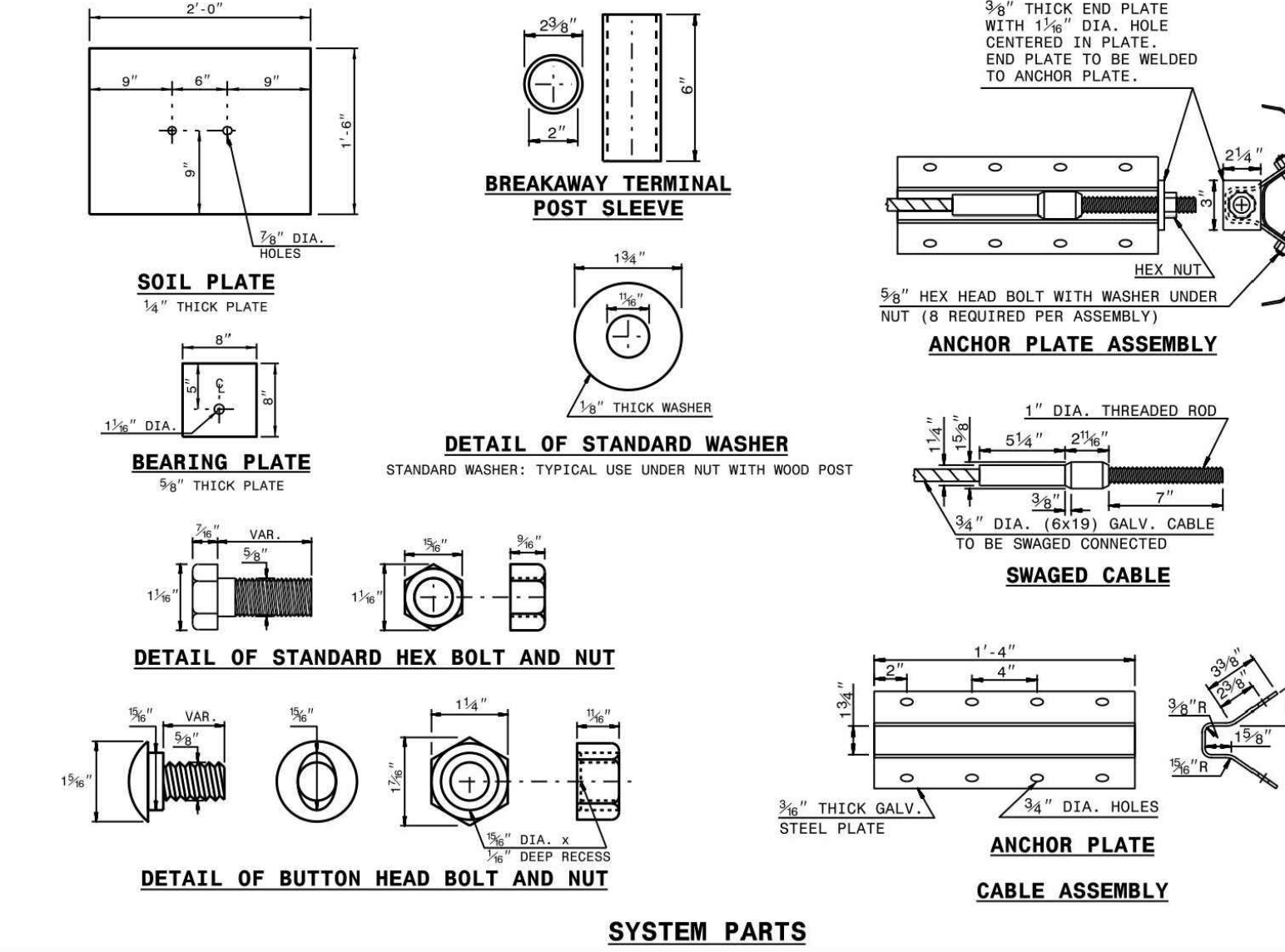


SYSTEM PARTS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862.02

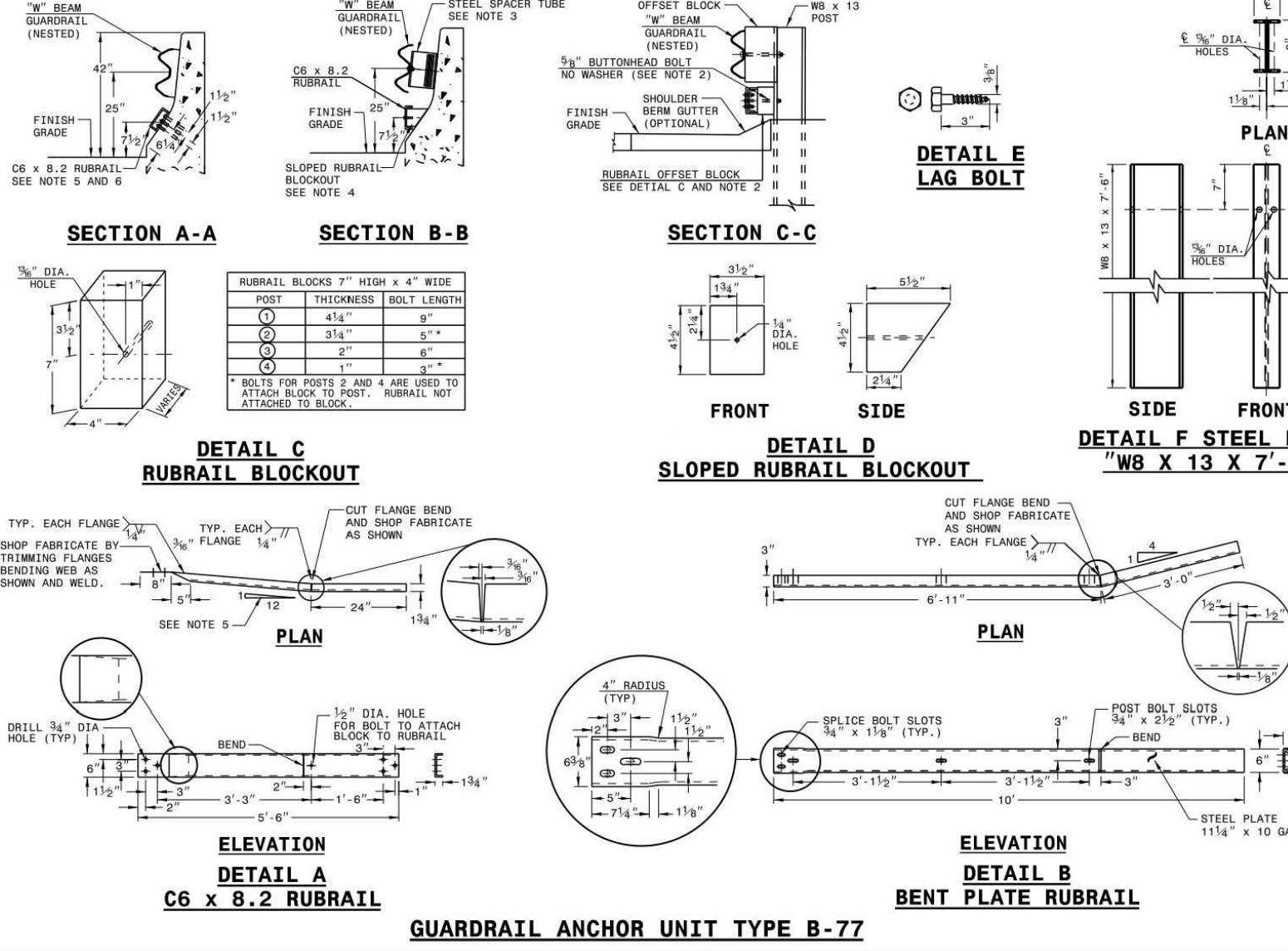


SYSTEM PARTS

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DIVISION OF HIGHWAYS
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ROADWAY STANDARD DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 7 OF 8
862.02



GUARDRAIL ANCHOR UNIT TYPE B-77

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
STRUCTURE ANCHOR UNIT GUARDRAIL ANCHOR UNIT TYPE B-77 FOR F-SHAPE BARRIER

SHEET 5 OF 8
862.03

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Planning

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FINAL DRAWING - RELEASED FOR CONSTRUCTION



The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

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TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

REVISIONS

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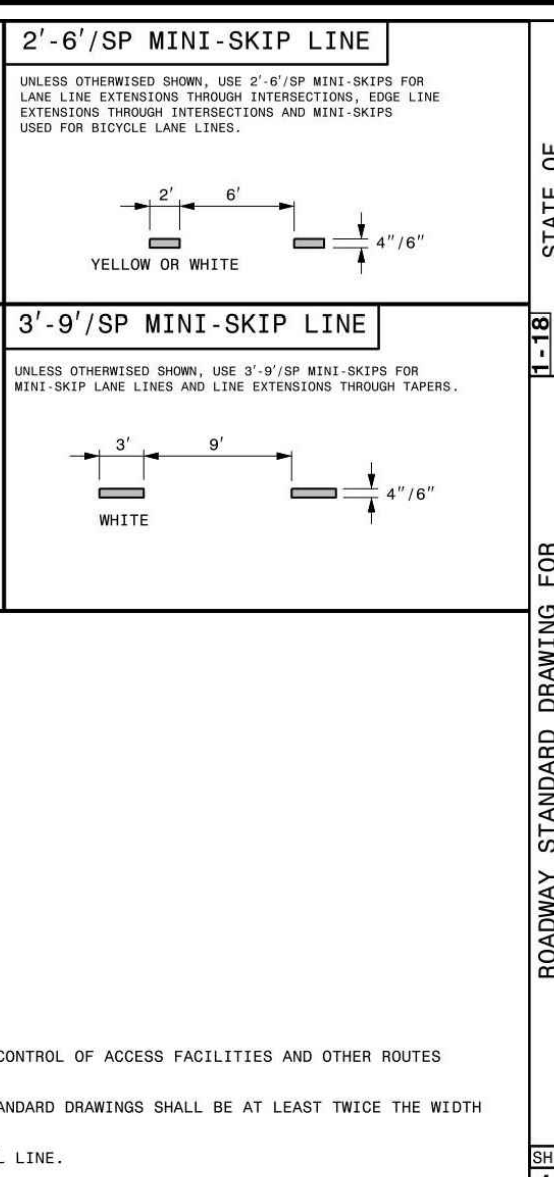
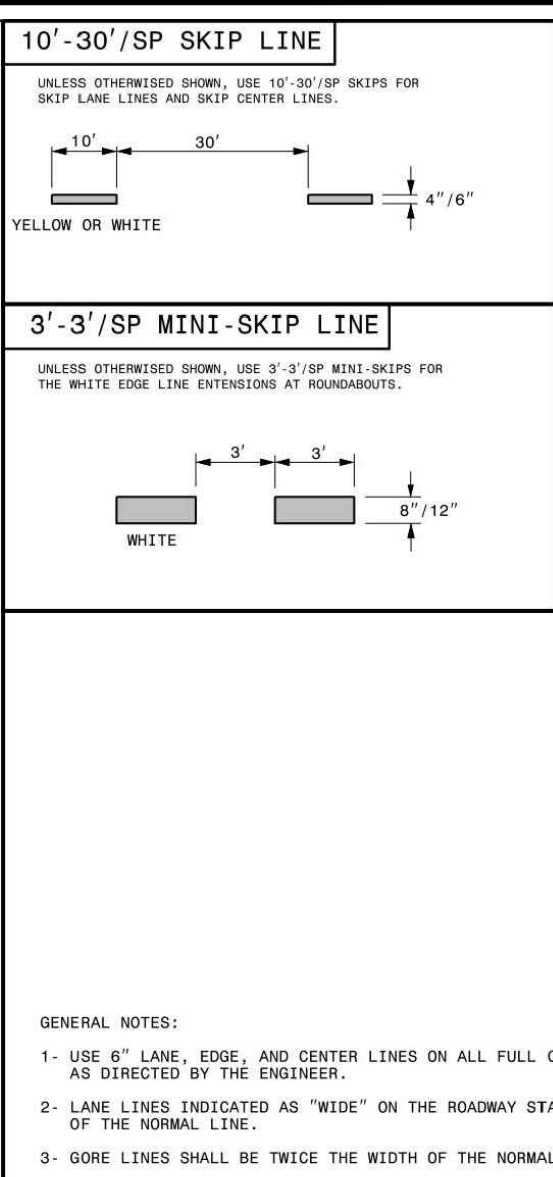
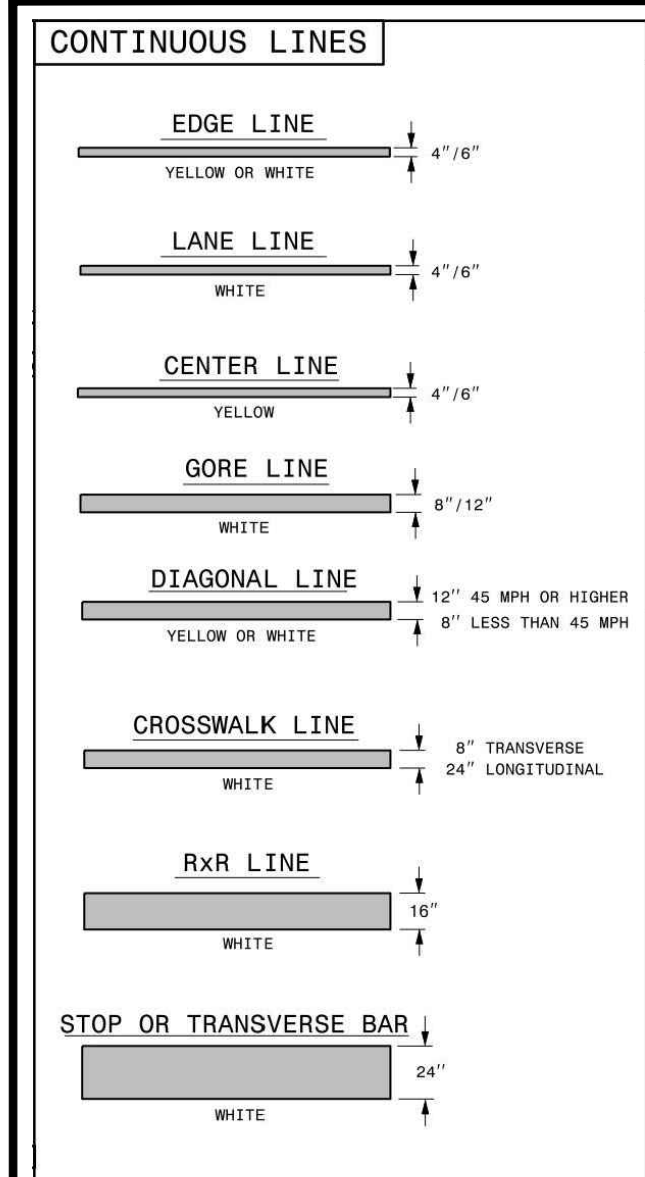
North Carolina Professional Engineer
031452
JEREMY V. FINCH
Digitally signed by Jeremy V Finch
DN: cn=Jeremy V Finch, o=McAdams Company, email=jvf@mcadamsco.com, c=USA
Date: 2024.02.23 16:42:09 -0500

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP-19000
FILENAME RAP19000-SF-D1
CHECKED BY DLP
DRAWN BY RJF
SCALE N.T.S.
DATE 02.23.2024

SITE DETAILS

C8.01



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

SHEET 1 OF 2
1205.01

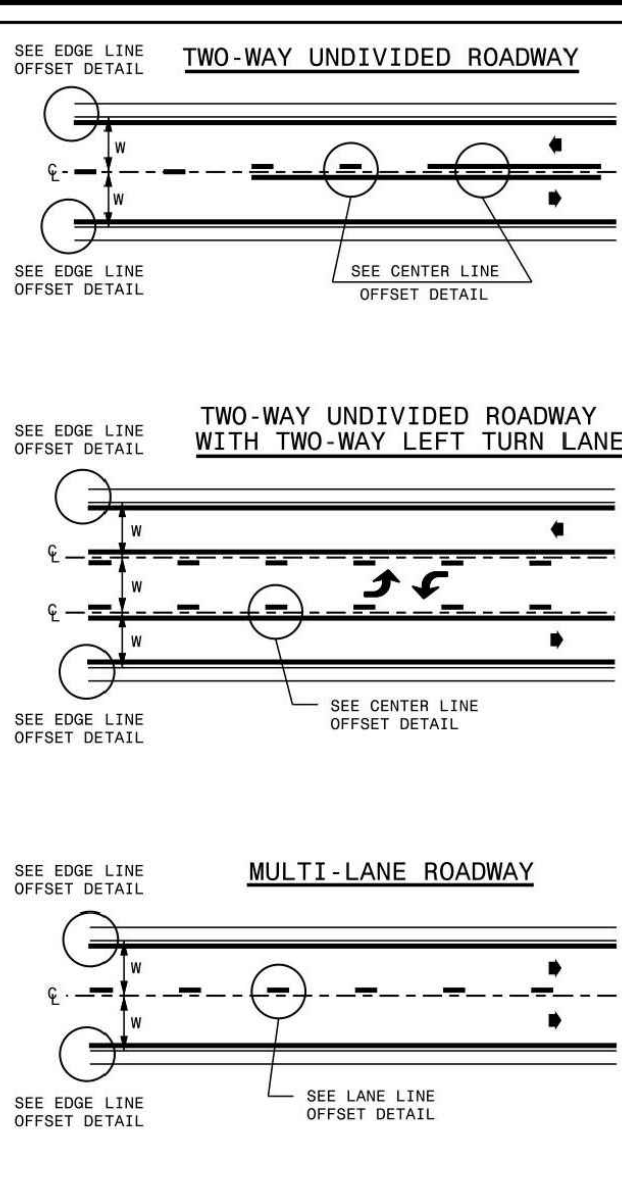
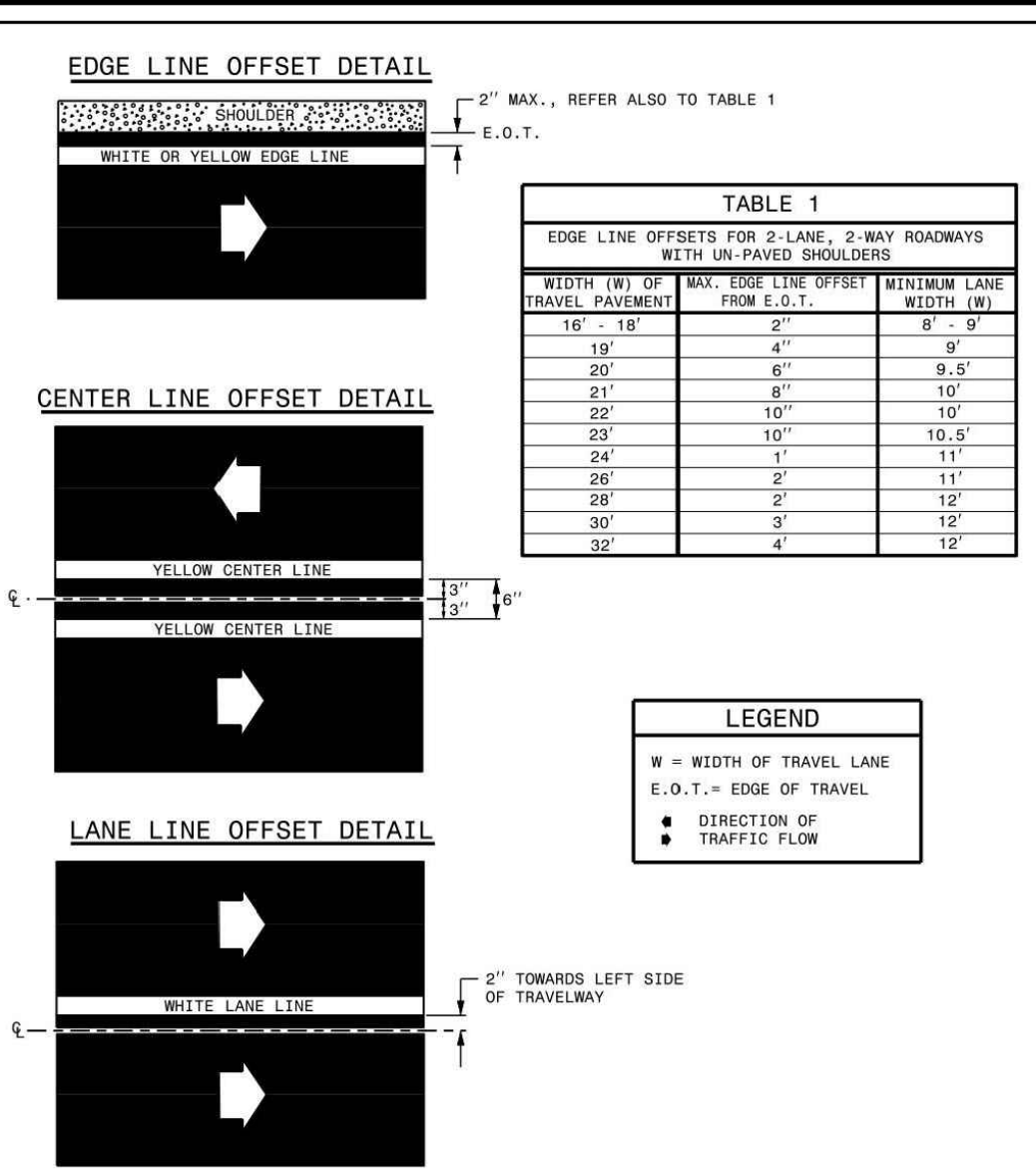


TABLE 1

EDGE LINE OFFSETS FOR 2-LANE, 2-WAY ROADWAYS WITH UNPAVED SHOULDERS

WIDTH (W) OF TRAVEL LANE (FEET)	MAX. EDGE LINE OFFSET FROM E.O.T. (FEET)	MINIMUM LANE WIDTH (W) (FEET)
16' - 18'	2'	8' 9"
19'	4"	9' 5"
20'	6"	10' 1"
21'	8"	10' 7"
22'	10"	10' 13"
23'	12"	10' 19"
24'	14"	11' 1"
26'	2'	11' 7"
28'	2'	12' 3"
30'	2'	12' 9"
32'	4'	13'

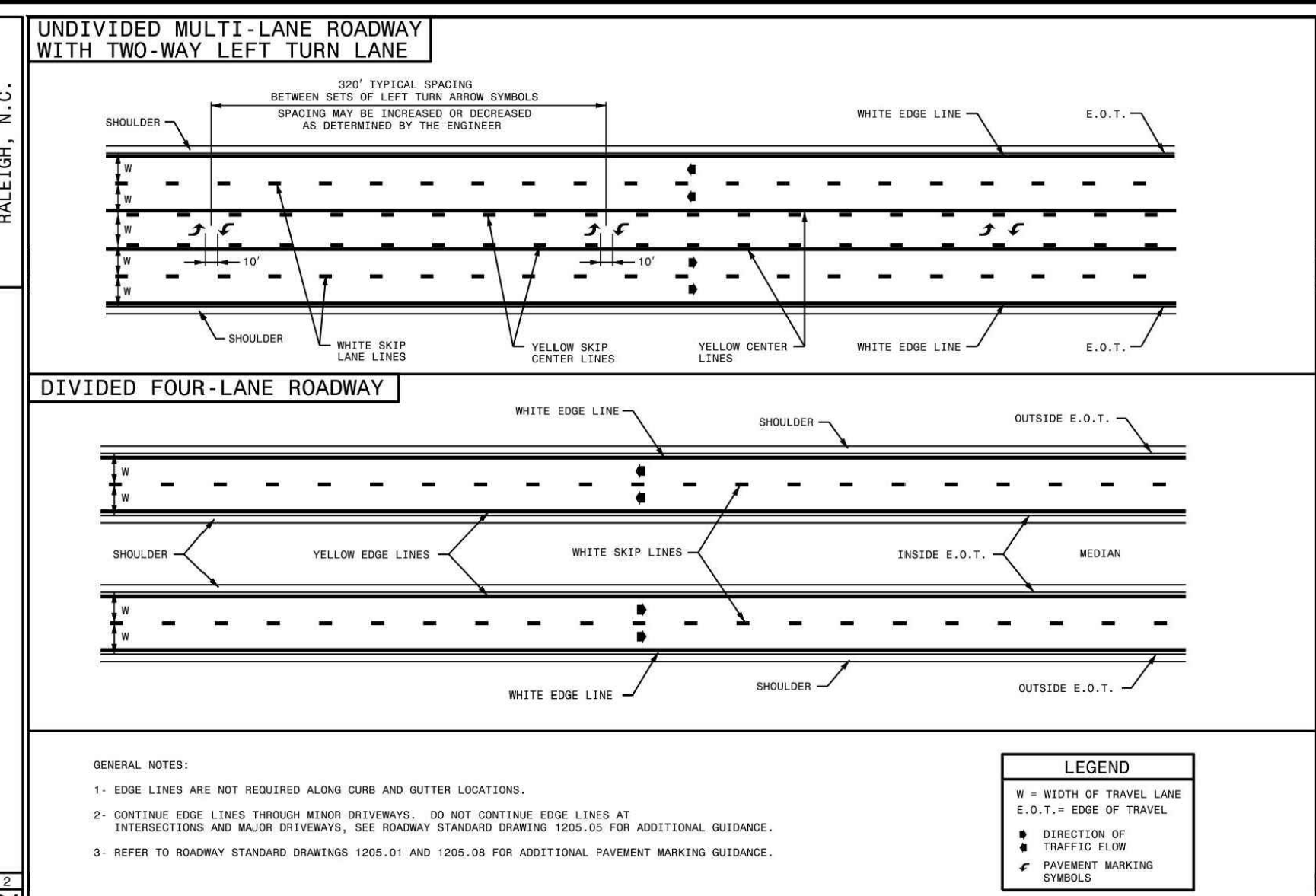
LEGEND

W = WIDTH OF TRAVEL LANE
E.O.T. = EDGE OF TRAVEL
• = DIRECTION OF TRAFFIC FLOW

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

SHEET 2 OF 2
1205.01



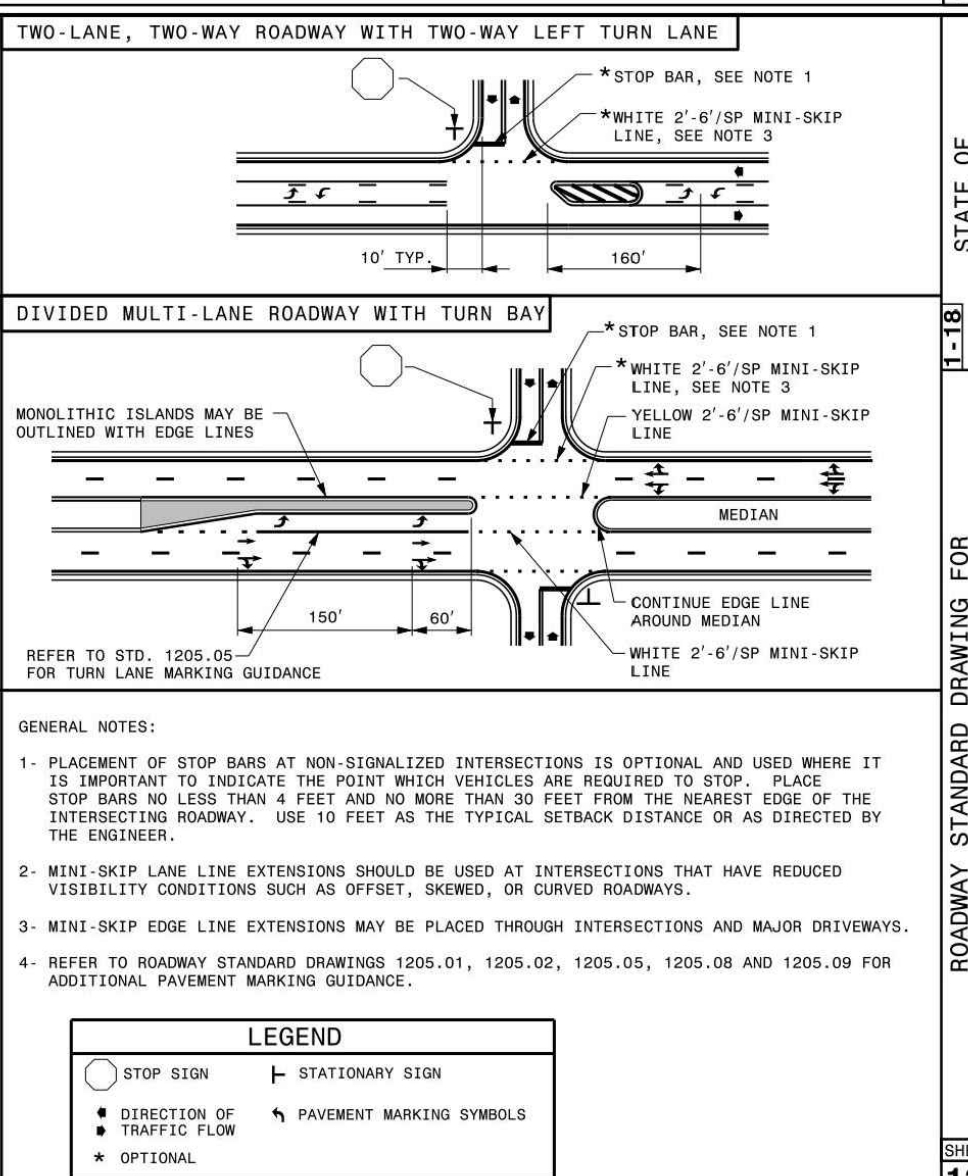
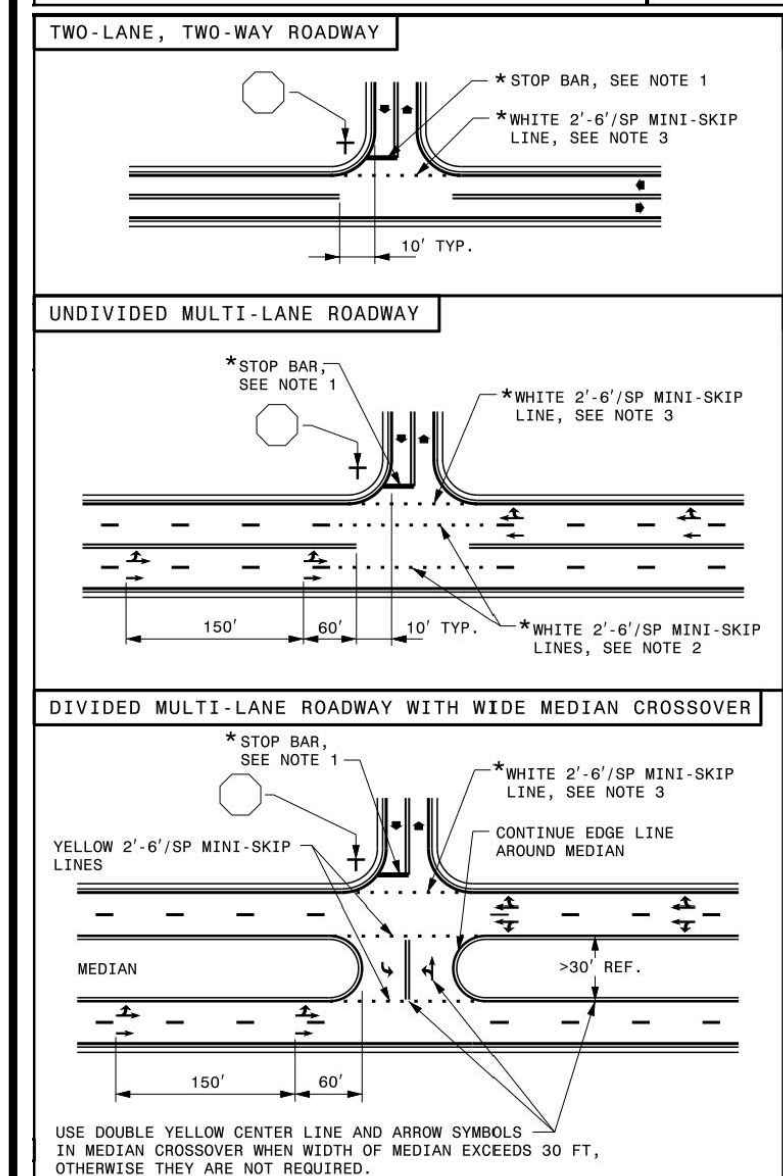
LEGEND

W = WIDTH OF TRAVEL LANE
E.O.T. = EDGE OF TRAVEL
• = DIRECTION OF TRAFFIC FLOW
• = PAVEMENT MARKING SYMBOL

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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
TWO-LANE AND MULTI-LANE ROADWAYS

SHEET 2 OF 2
1205.02



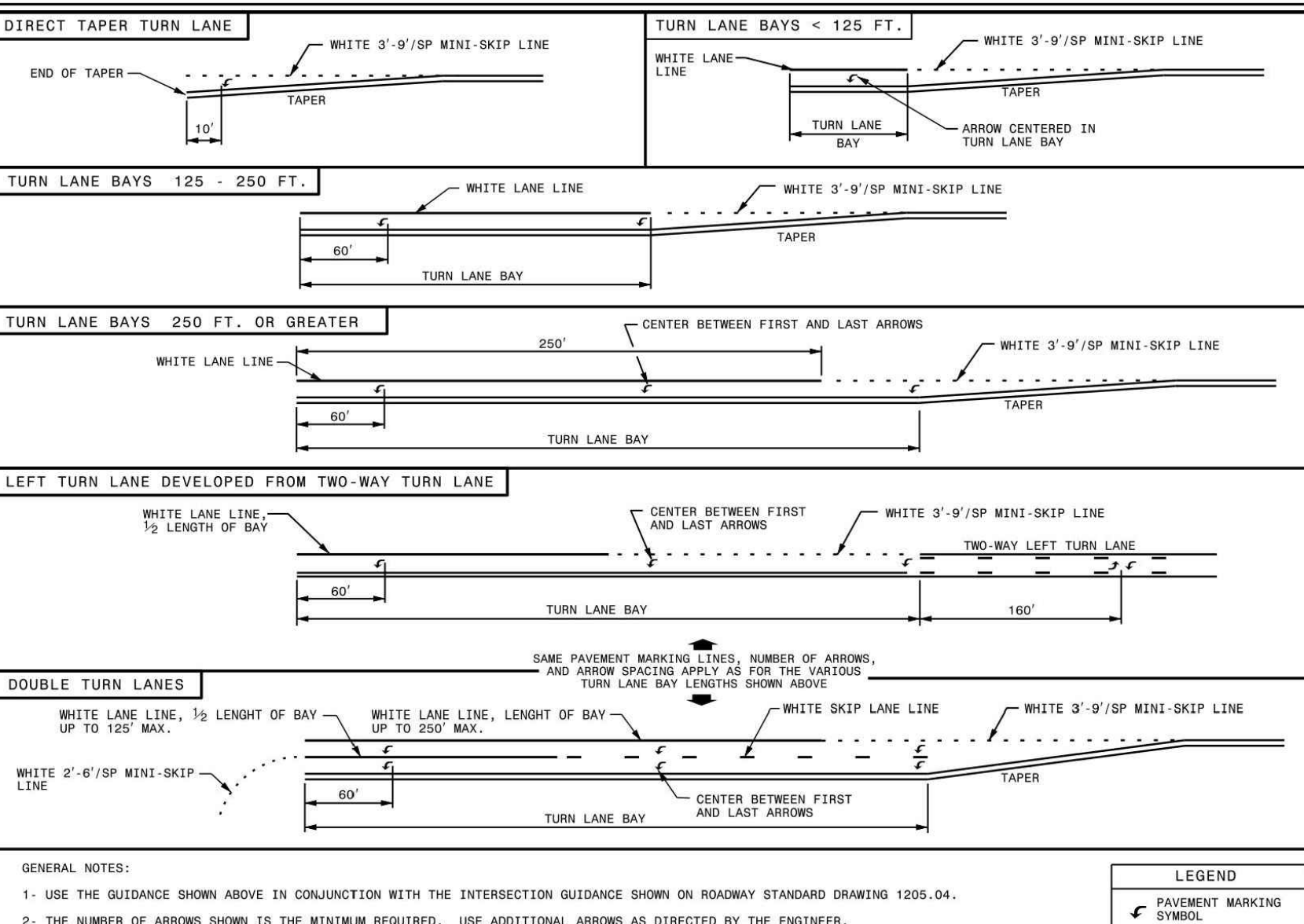
LEGEND

STOP SIGN
STATIONARY SIGN
• = DIRECTION OF TRAFFIC FLOW
• = OPTIONAL

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
INTERSECTIONS

SHEET 2 OF 2
1205.04



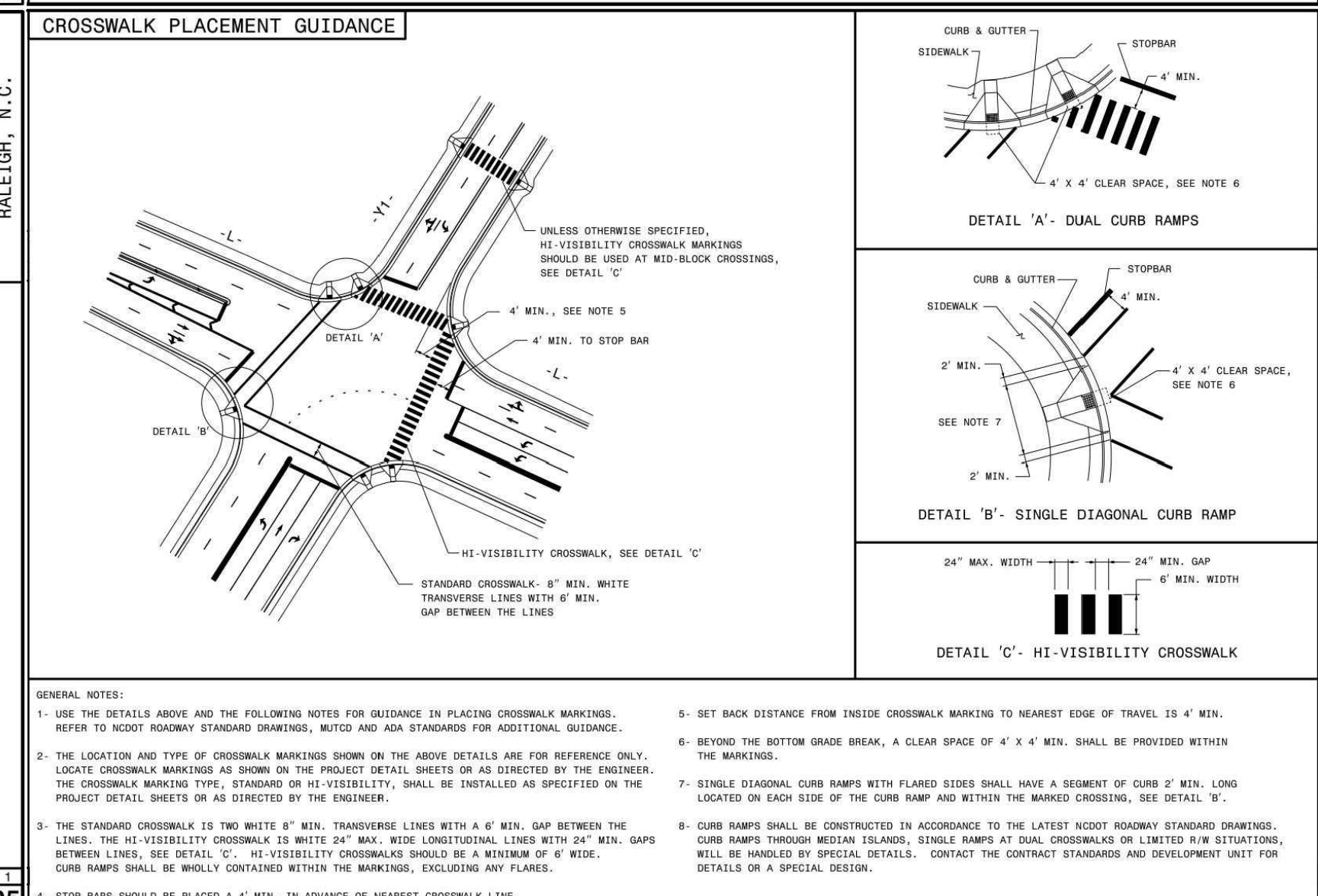
LEGEND

PAVEMENT MARKING SYMBOL

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
TURN LANES

SHEET 1 OF 1
1205.05



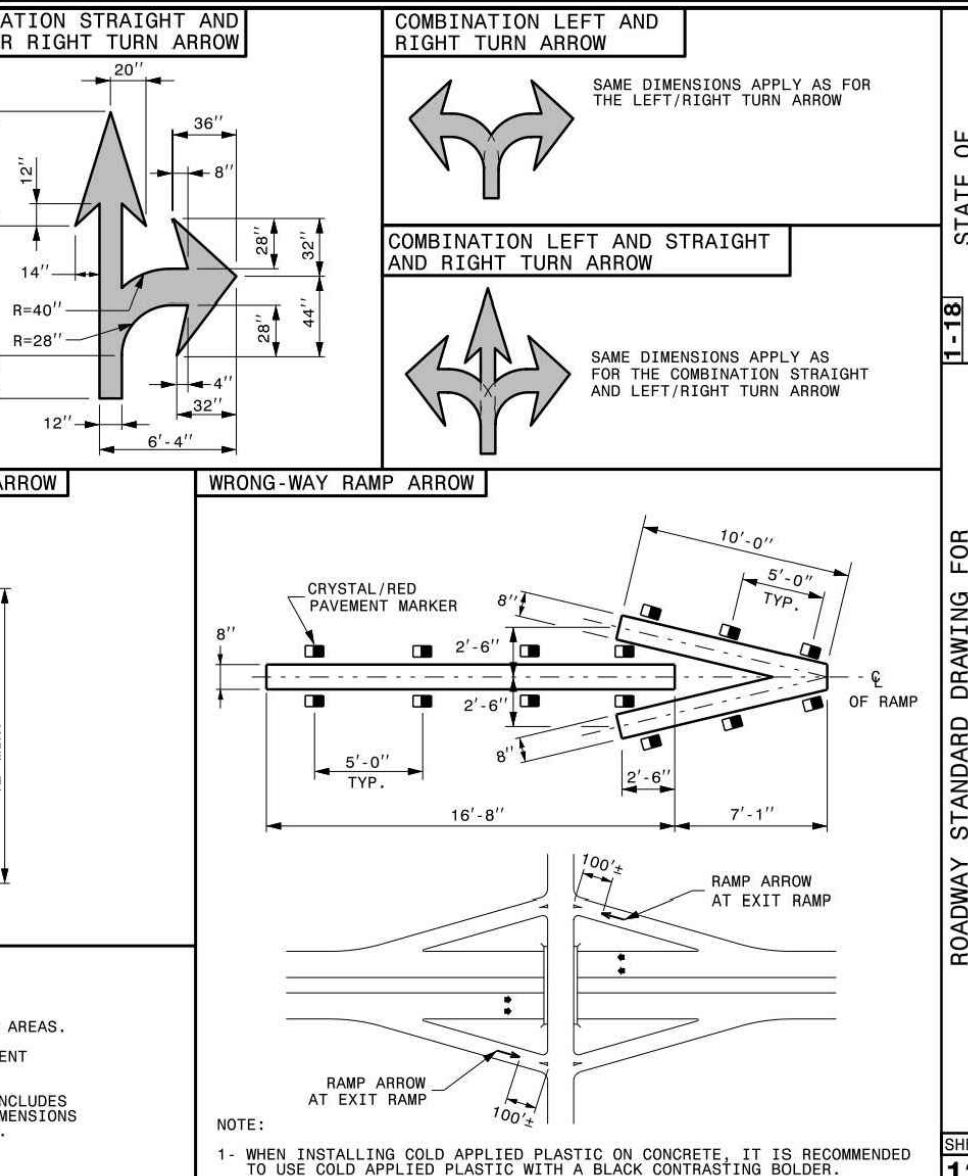
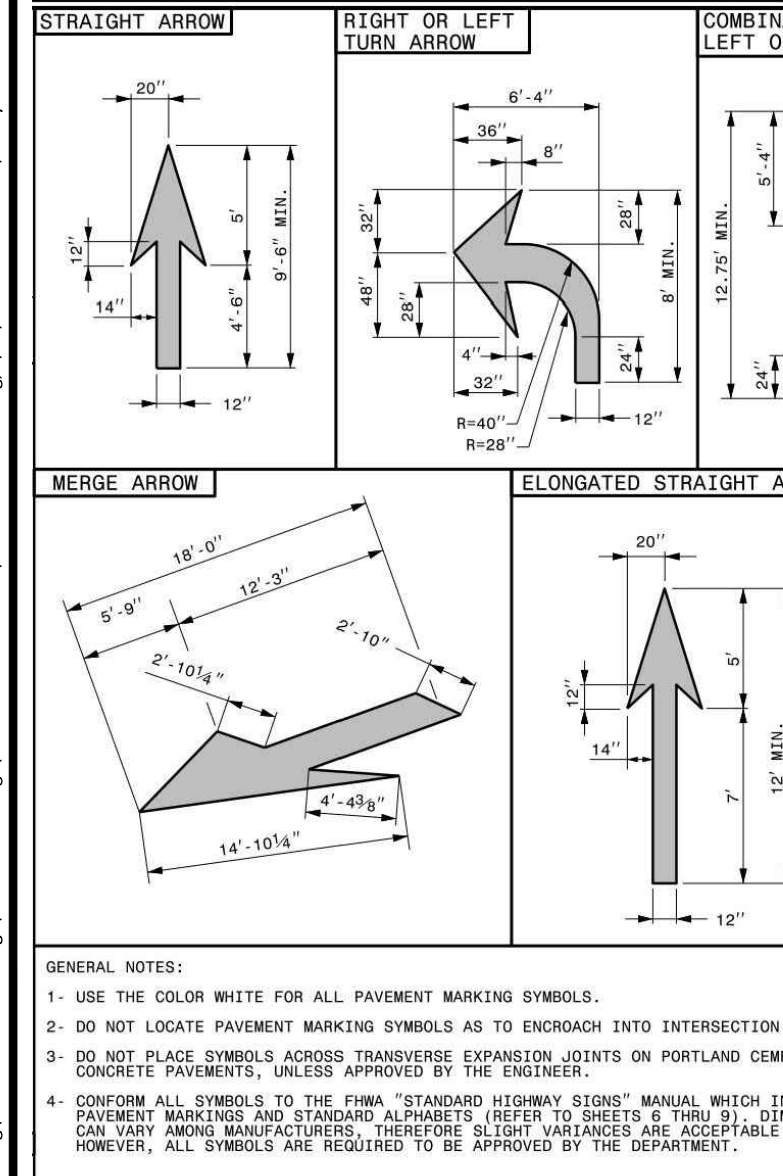
GENERAL NOTES:

- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS.
- REFER TO NCOTD ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
- LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
- THE STANDARD CROSSWALK IS TWO WHITE 4" WIDE TRANSVERSE LINES WITH A 4" WIDE GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" WIDE, WIDE LONGITUDINAL LINES WITH 24" WIDE GAPS BETWEEN LINES. SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 4' WIDE. CURB RAMPS SHALL BE MOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.
- STOP BARS SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.
- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.
- SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB OF 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. SEE DETAIL 'B'.
- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCOTD ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDING AND DEVELOPMENT UNIT FOR DETAILS OR A SPECIAL DESIGN.

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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
PEDESTRIAN CROSSWALKS

SHEET 1 OF 1
1205.07



GENERAL NOTES:

- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.
- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCRUSH INTO INTERSECTION AREAS.
- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.
- CONFORM ALL SYMBOLS TO THE FPM "STANDARD HIGHWAY SIGNS" MANUAL WHICH INCLUDES PAVEMENT MARKING AND STATIONARY ALPHABETIC LETTERS TO SPECIFY TURN AND STOP. DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

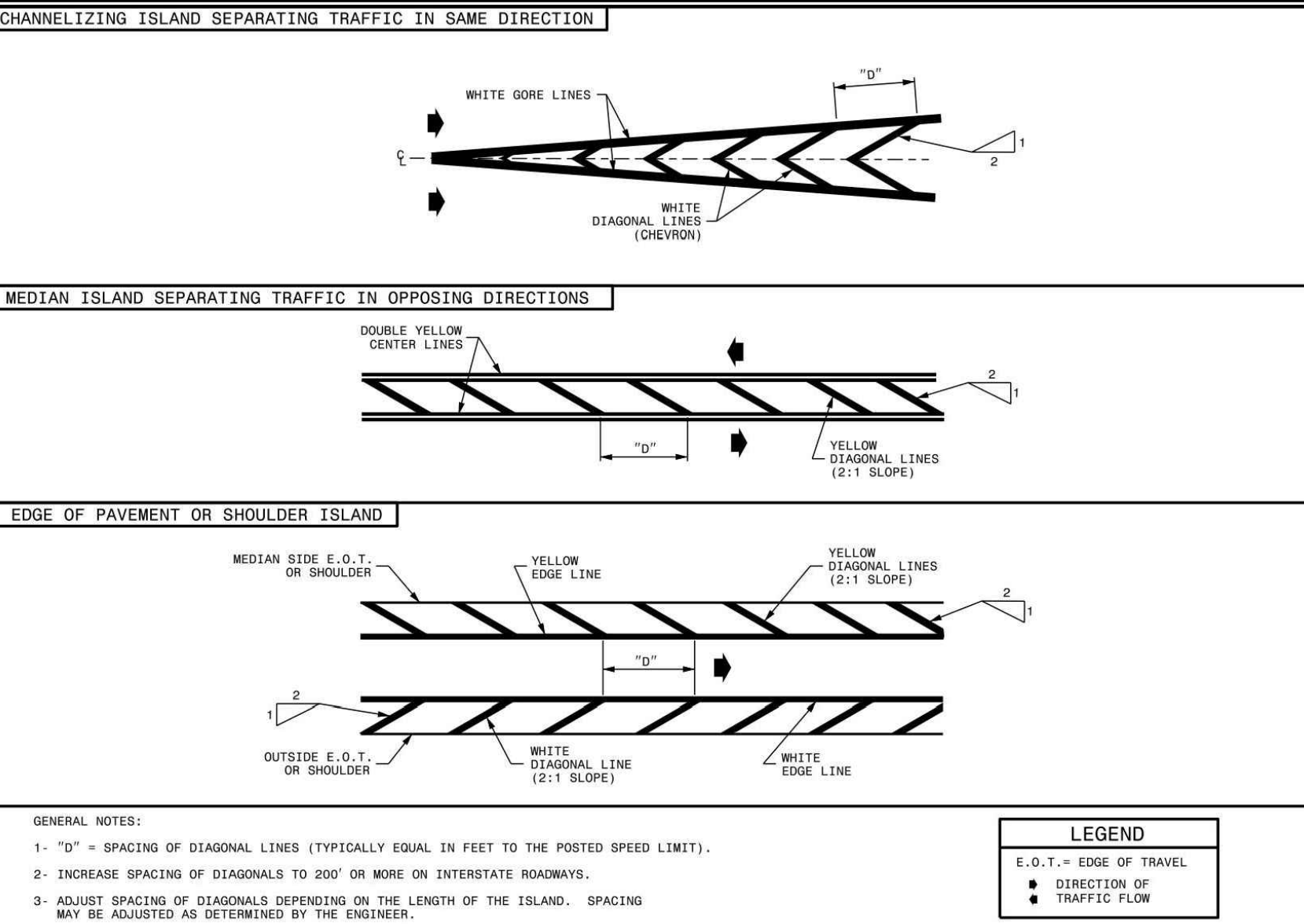
NOTE:

- WHEN INSTALLING COLD APPLIED PLASTIC ON CONCRETE, IT IS RECOMMENDED TO USE COLD APPLIED PLASTIC WITH A BLACK CONTRASTING BORDER.

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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
SYMBOLS AND WORD MESSAGES

SHEET 1 OF 9
1205.08



LEGEND

E.O.T. = EDGE OF TRAVEL
• = DIRECTION OF TRAFFIC FLOW

GENERAL NOTES:

- 10' = SPACING OF DIAGONAL LINES (TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT).
- INCREASE SPACING OF DIAGONALS TO 200' OR MORE ON INTERSTATE ROADWAYS.
- ADJUST SPACING OF DIAGONALS DEPENDING ON THE LENGTH OF THE ISLAND. SPACING MAY BE ADJUSTED AS DETERMINED BY THE ENGINEER.

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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
PAINTED ISLANDS

SHEET 1 OF 1
1205.09

PAVEMENT MARKER SPACING CHART

TYPE OF PAVEMENT MARKING	TYPICAL SPACING (FT)
SKIP LINES AND CENTER LINES ALONG THRU LANES	80
SKIP LINES ALONG TANGENT SECTIONS AND HORIZONTAL CURVES LESS THAN 6'	40
SKIP LINES ALONG TANGENT SECTIONS AND HORIZONTAL CURVES ≥ 6'	40
TURN LANES - MINI-SKIP LINES	24
SKIP LINES	20
SOLID LINES	20
CENTER LINES	40
MINI-SKIP LINES AT LANE DROP APPROACHES	24
TWO-WAY RAMP CENTER LINES	40
GORE LINES	20
PAINTED ISLANDS - WHITE	20
PAINTED ISLANDS - YELLOW	40
RAISED MEDIAN ISLANDS	40
WRONG WAY RAMP ARROW	5
TAPERS	40
NARROW BRIDGES - EDGE LINE	20
CENTER LINE	40
ONE LANE BRIDGES - EDGE LINE	20
WORK ZONE APPLICATIONS	
2-LANE, 2-WAY ON-SITE DIVERSION	20 FT. FOR CENTER LINE
ALL OTHER DIVERSIONS	1/2 NORMAL SPACING

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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
INSTALLATION SPACING

SHEET 1 OF 3
1250.01

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04/25/2024
Public Works/Engineering

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Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION

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2905 Meridian Parkway
Durham, NC 27713

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

www.mcadamsco.com

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301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

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By signed by Jeremy V. Finch
on 04/25/2024
at 10:45 AM
in Wake Forest, NC
Professional Engineer
No. 031452
Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS

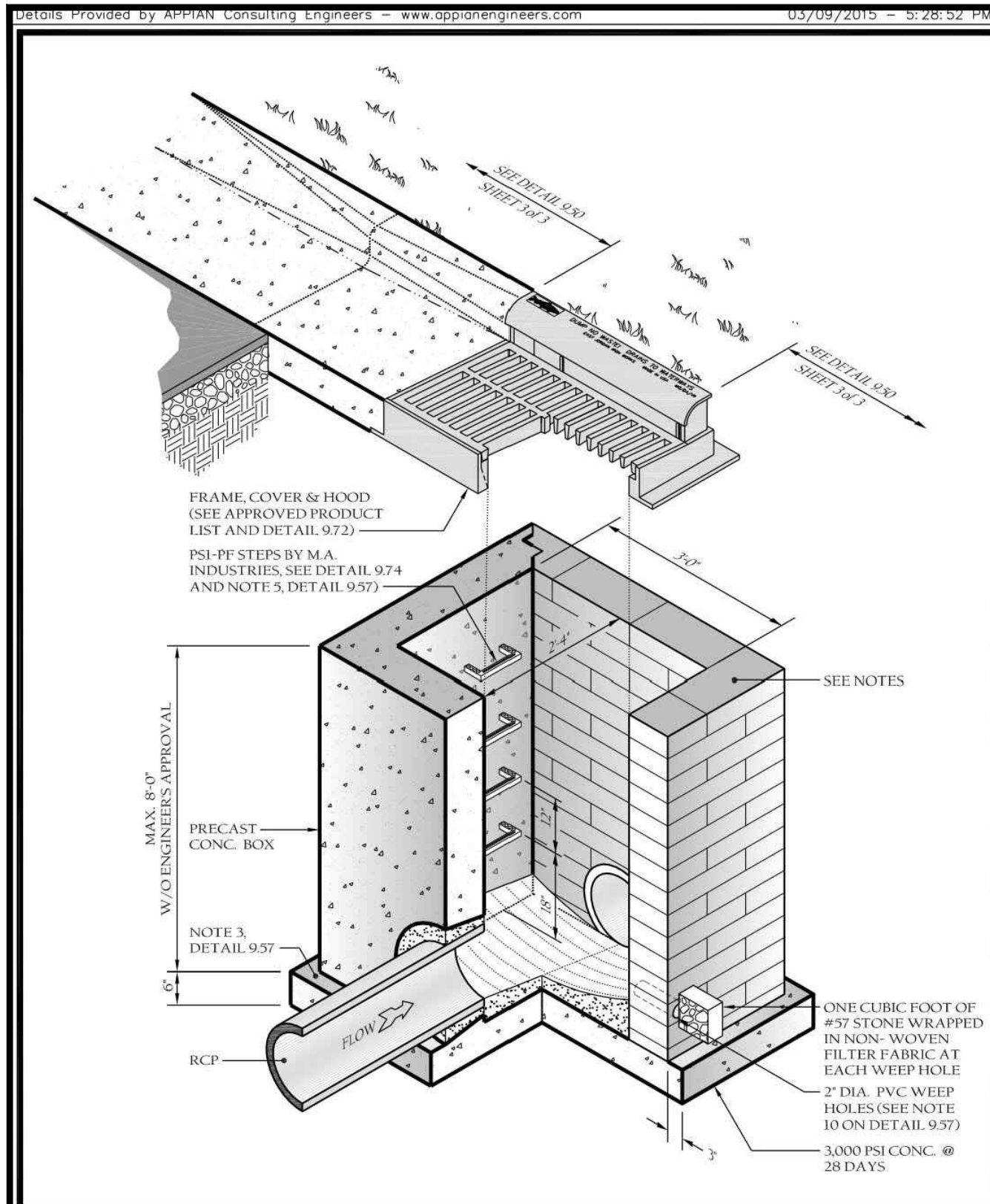
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO. RAP-19000
FILENAME RAP19000-SF-D1
CHECKED BY DLP
DRAWN BY RUF
SCALE N.T.S.
DATE 02. 23. 2024

PAVEMENT MARKING DETAILS

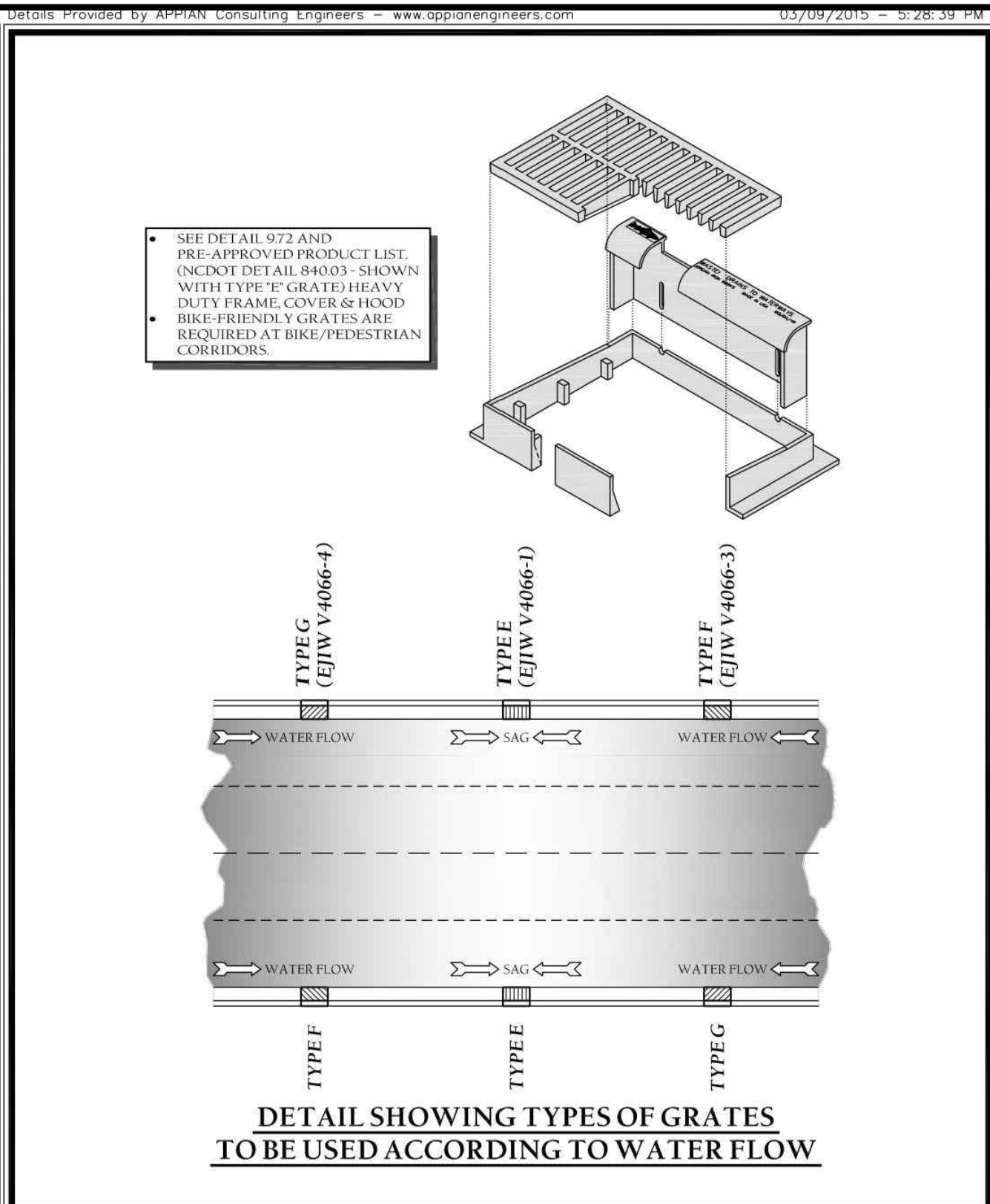
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TOWN OF WAKE FOREST, NC
Manual of Specifications, Standards and Design

STD. C&G INLET W/HOOD
DETAIL

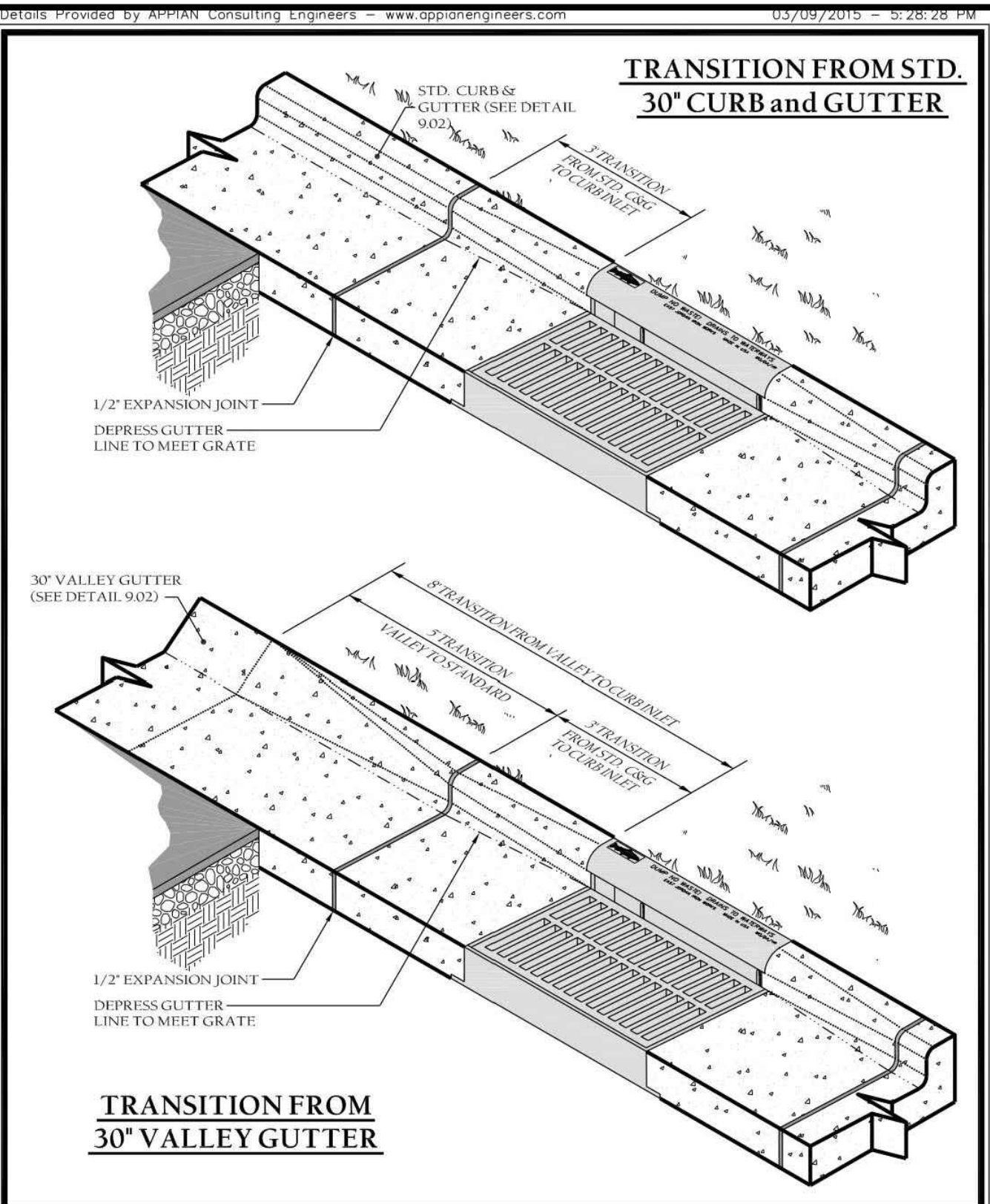
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Revision Date: Feb. 2015
Sheet # 1 of 3



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STD. C&G INLET W/HOOD
DETAIL

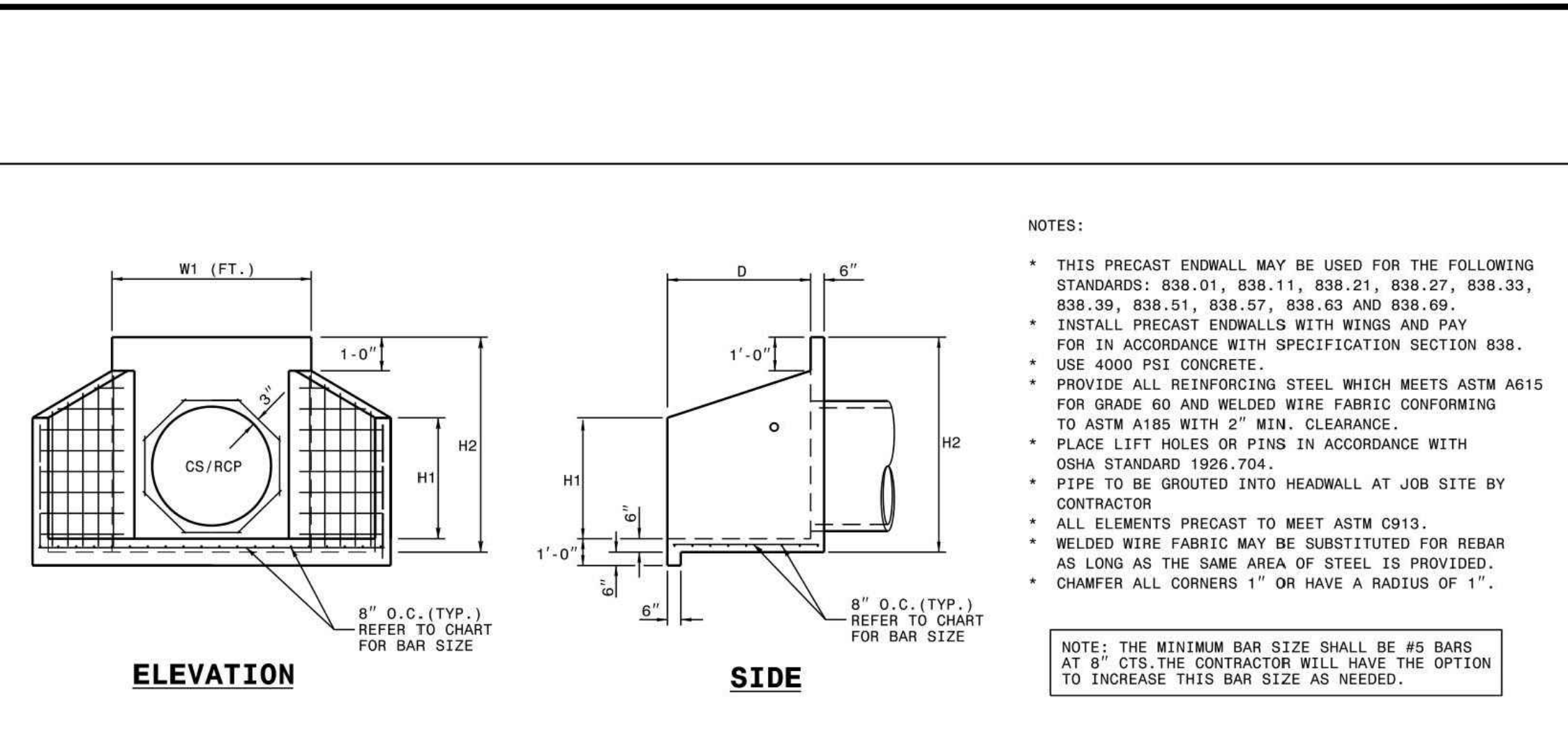
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Revision Date: Feb. 2015
Sheet # 2 of 3



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Manual of Specifications, Standards and Design

STD. C&G INLET W/HOOD
DETAIL

Scale: Not To Scale
Sheet # 9.50
Revision Date: Feb. 2015
Sheet # 3 of 3



ENDWALL DIMENSIONS

PIPE DIA.	BAR SIZE	MINIMUM	MIN. / MAX.	MIN. / MAX.	MIN. / MAX.	MIN. / MAX.	MIN. / MAX.
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00	
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.00/3.75	6.50/6.75	
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75	
2.0	#5 @ 8"	2.50/3.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25	
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50	
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75	
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25	
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.00/6.75	13.00/13.25	
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75	
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75	
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75	
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75	

TOWN OF WAKE FOREST, NC
Manual of Specifications, Standards and Design

STD. C&G INLET W/HOOD
DETAIL

Scale: Not To Scale
Sheet # 9.50
Revision Date: Feb. 2015
Sheet # 3 of 3

TOWN OF WAKE FOREST, NC
Manual of Specifications, Standards and Design

STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 1 of 3

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Manual of Specifications, Standards and Design

STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 2 of 3

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STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 3 of 3

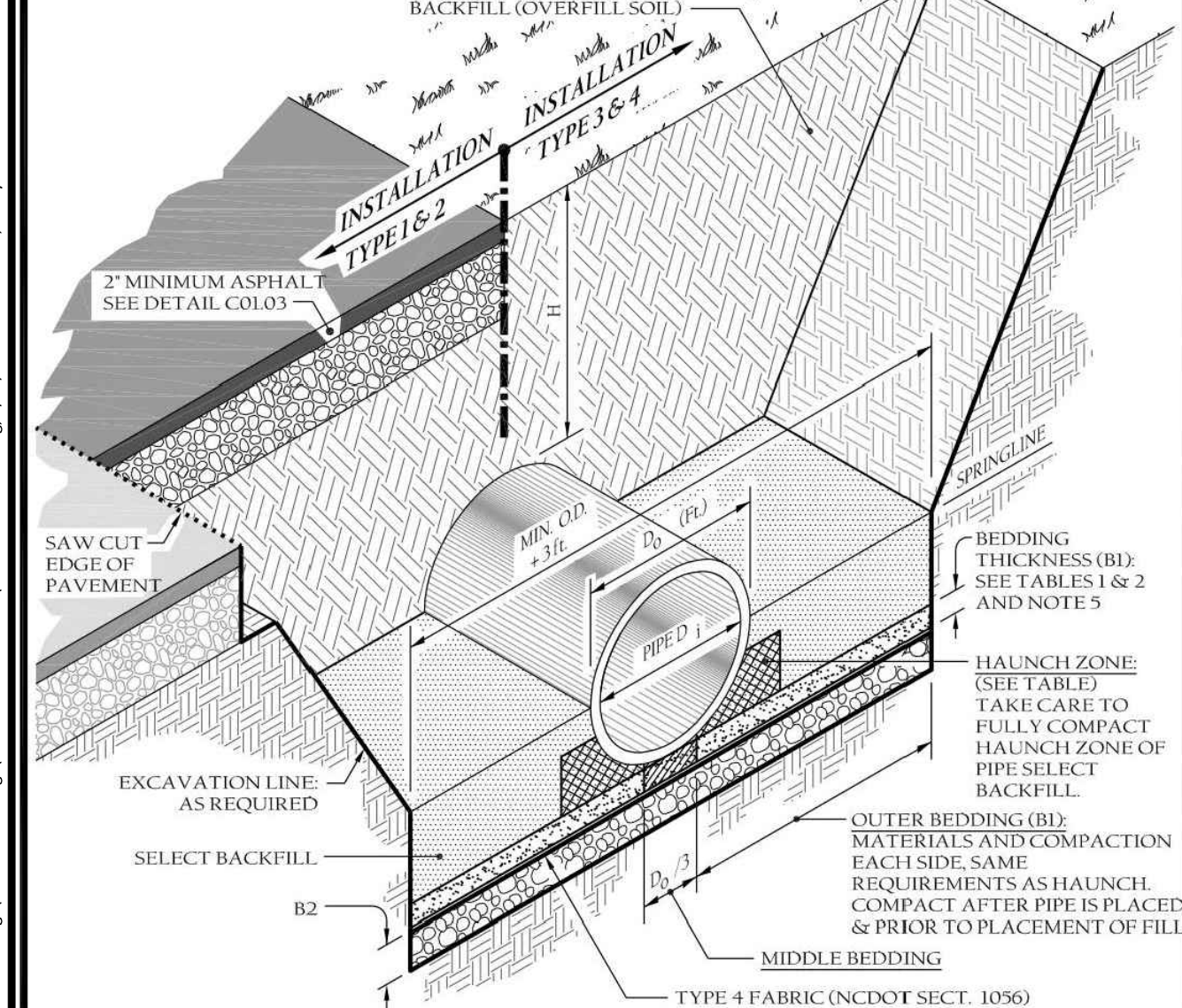


Table 1
Equivalent USCS^a and AASHTO Soil Classifications for SIDD^b Soil Designations

SIDD	USCS	AASHTO
Gravelly Sand (Category I)	SW, SP, GW, GP	NC DOT Class II Type 1 (crushed stone screenings), LL < 30; PI < 6.
Sandy Silt (Category II)	GM, SM, Also GC, SC with less than 20% passing #200 sieve	NC DOT Class III, Type 1 (2S or 2MS), LL < 30; PI < 6.
Silty Clay (Category III)	CL, MH, GC, SC	NC DOT Class II Type 2 (AASHTO M145 for soil classification A-1 or A-3)

Table 2
Standard Installations Soils and Minimum Compaction Requirements

Installation Type	Bedding Thickness	Outer Bedding (B1)	Haunch Zone & Select Backfill Area	Location
Type 1	B1 = D16 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2" of 1/2", 12" min/24" max	95% Category I	90% Category I, 95% Category II	Paved Areas with 2' or less bury
		90% Category I	85% Category I, 90% Category II	Paved Areas with greater than 2' of bury
Type 2	B1 = D16 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2" of 1/2", 12" min/24" max	85% Category I	90% Category I, 95% Category II, or 85% Category III	In RW outside of Pavement
		No Compaction required, except if Category III, use 85% Category III	No Compaction required, except if Category III, use 85% Category III	Natural Areas

Fill Height Table^a

Inside Pipe Diameter D _i (inches)	Type 3 (Bedding) Installation (0.01 Inch Crack)		Type 4 (Bedding) Installation (0.01 Inch Crack)	
	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)
15	2 min, 12 max	1 min, 20 max	3 min, 7 max	2 min, 12 max
18	2 min, 12 max	1 min, 20 max	3 min, 7 max	1 min, 13 max
24	1 min, 12 max	1 min, 20 max	2 min, 8 max	1 min, 13 max
30	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
36	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
42	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
48	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
54	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
60	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
72	1 min, 11 max	1 min, 19 max	1 min, 7 max	1 min, 13 max

Fill Height Tables Based On:

- Yes = 120 pcf (backfill load)
- AASHTO HL-93 live load
- Positive Projecting Embankment Condition (this gives conservative results in comparison to trench conditions).
- Pipe = Reinforced Concrete Pipe meeting ASTM C76 (AASHTO M170), wall C thickness.
- Concrete pipe should be installed in accordance with AASHTO LRFD Bridge Construction Specifications, Section 27 or ASTM C1479.

^aFill Height Tables, the portion excerpted here, was developed by the American Concrete Pipe Association (ACPA) using the indirect design method in accordance with Section 12.10.4.3 of the AASHTO LRFD Bridge Design Specification, 4th Edition, 2007 with 2008 Interim.

TOWN OF WAKE FOREST, NC
Manual of Specifications, Standards and Design

STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 1 of 3

TOWN OF WAKE FOREST, NC
Manual of Specifications, Standards and Design

STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 2 of 3

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Scale: Not To Scale
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Sheet # 3 of 3

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STORM DRAIN PIPE INSTALLATION

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STORM DRAIN PIPE INSTALLATION

Scale: Not To Scale
Sheet # 9.53
Revision Date: Feb. 2015
Sheet # 3 of 3

McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

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Jeremy V. Finch
Professional Engineer
No. 03452
State of North Carolina
Date: 2014/02/27 16:54:53 -05'00'

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO. RAP-19000
FILENAME RAP19000-SF-D1
CHECKED BY DLP
DRAWN BY RJF
SCALE N.T.S.
DATE 02.23.2024

STORM DRAINAGE DETAILS

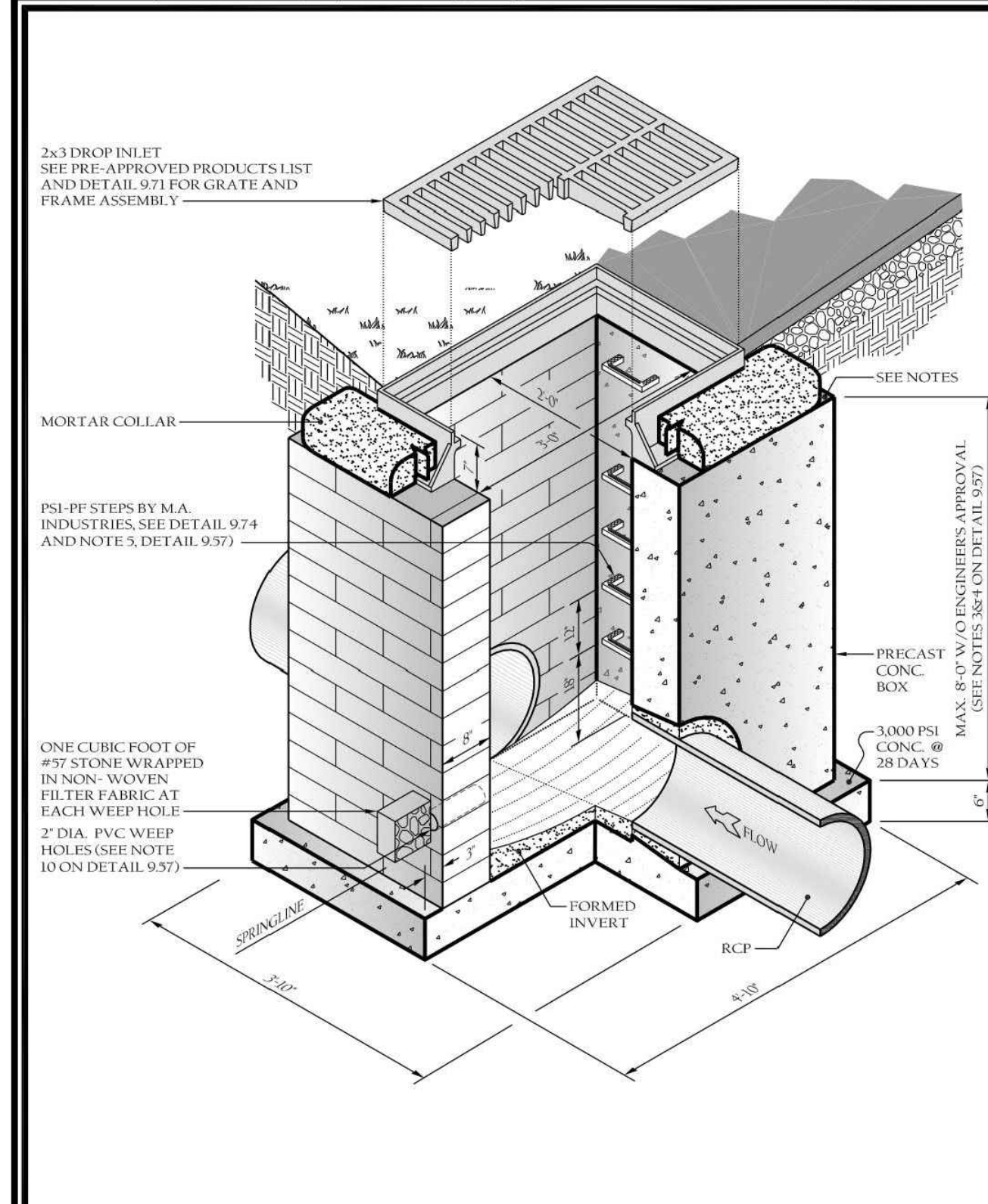
C8.03

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST, NCDOT AND THE CITY OF RALEIGH (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

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smeyer
04/25/2024
Public Works/Engineering

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Planning

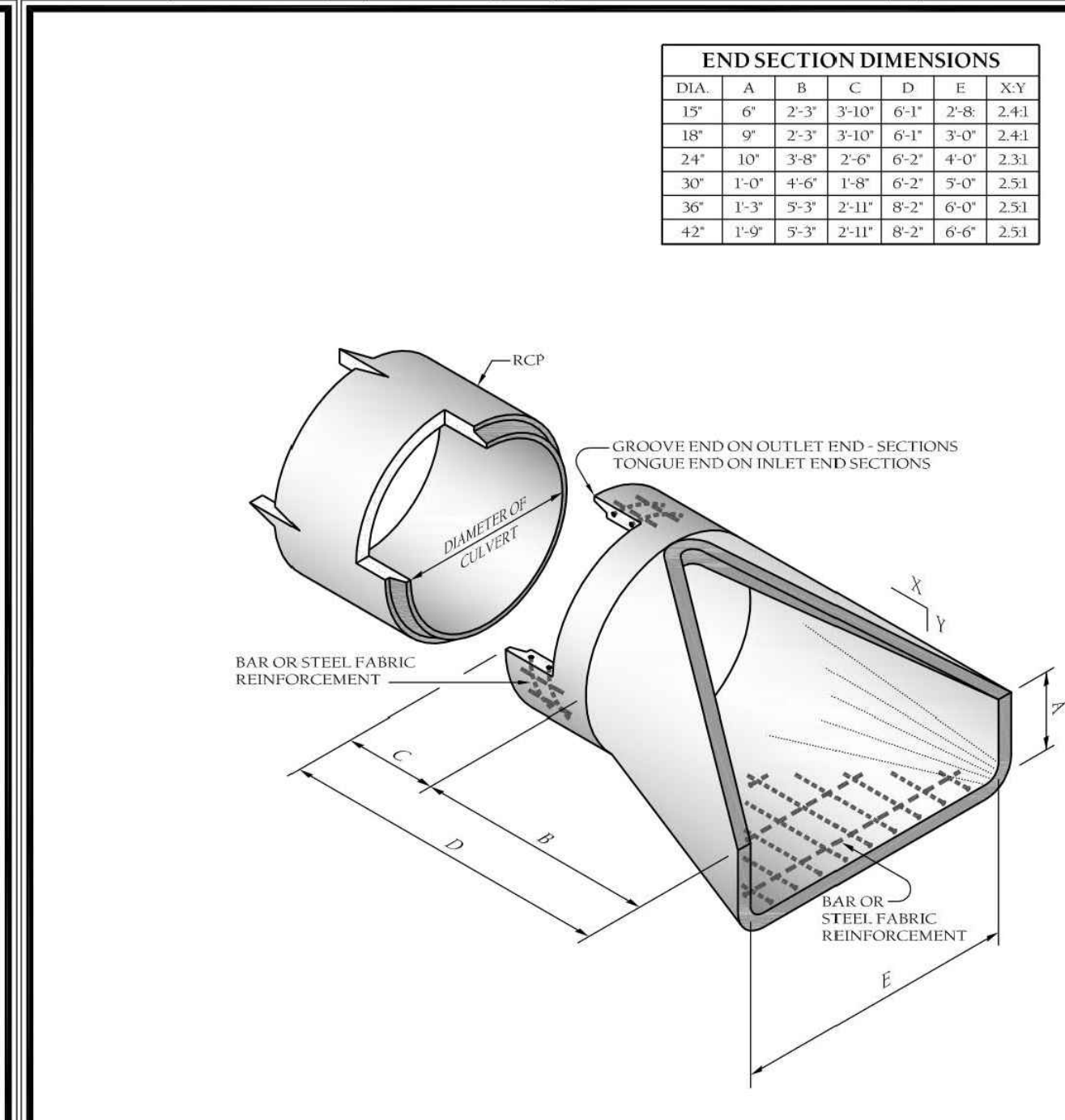
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TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design

STANDARD 2x3 CATCH BASIN

Scale: Not To Scale	Sheet # 9.51
Revision Date: Feb. 2015	Sheet # 1 of 1



TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design

STD. FLARED ENDS SECTIONS DESIGN AID DETAIL

Scale: Not To Scale	Sheet # 9.52
Revision Date: Feb. 2015	Sheet # 1 of 1

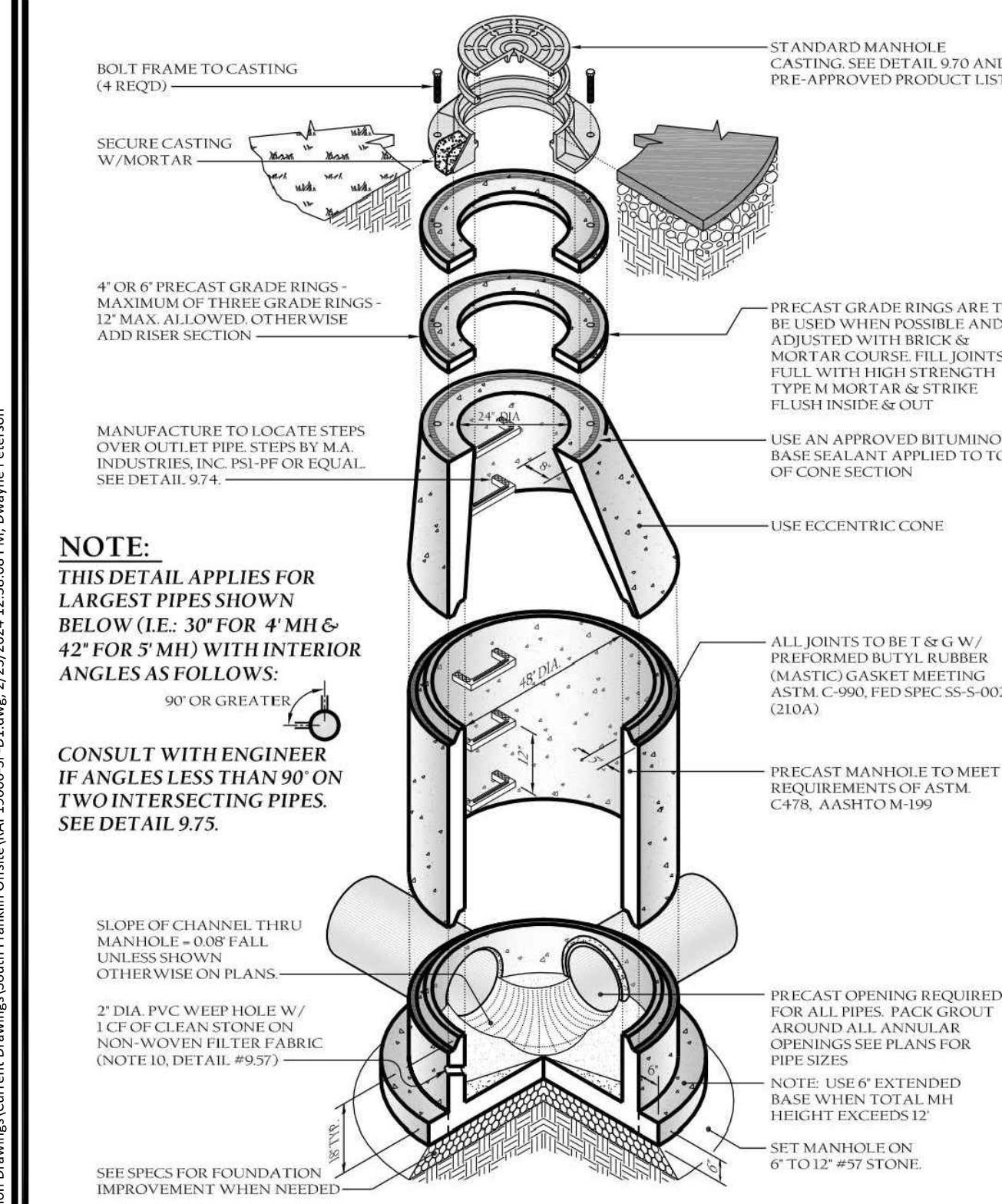
TOWN of WAKE FOREST, NC
Manual of Specifications, Standards and Design

DRAINAGE STRUCTURE NOTES

Notes:

Drainage Structures Notes:

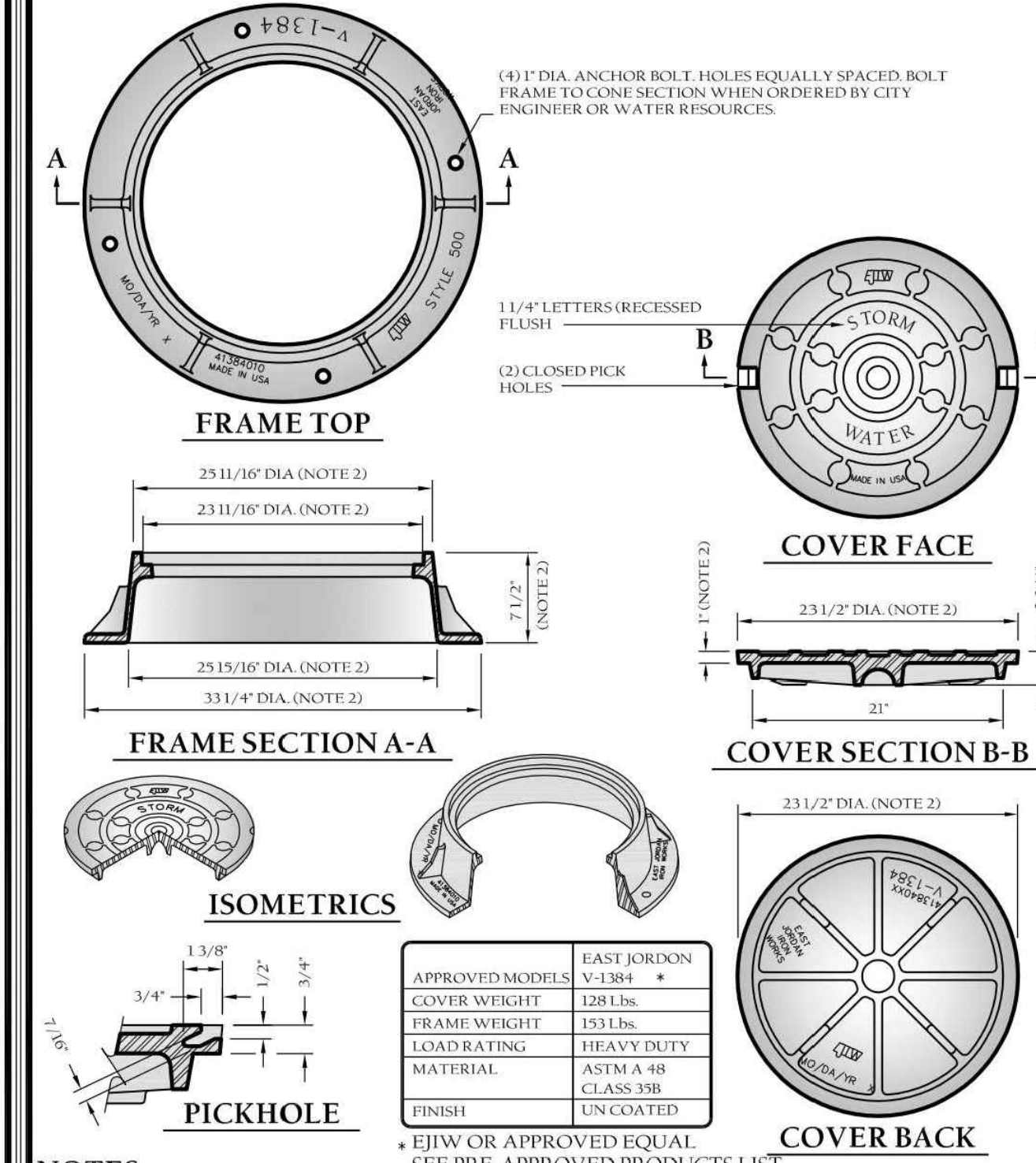
- Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.
- Any non-standard box (non-standard meaning not shown in this manual) is to be designed by a NC Professional Engineer.
- The maximum height of an unreinforced masonry drainage structure with 8" walls shall be limited to 8' 0" from invert of the outlet pipe to the top of the iron casting. Depths greater than 8' 0" shall have walls 12" thick. Basins over 12' in total depth shall be designed by a NC Professional Engineer. Four inch walls are not allowed on drainage structures. Bottom slab on structures shall be reinforced when box depth exceeds 8ft. The maximum horizontal span of an unreinforced brick/block box at 8' deep without engineering - 5'-0" clear ($K_c=0.66$, EFP-65 psf silty/clayey sand).
- Steps are to be provided on all basins deeper than 42".
- Steps are to be PSI-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls. See detail 9.574.
- Mortar in masonry boxes is to be type M.
- Clay brick structures are not allowed.
- Concrete pipe is to be minimum class III.
- Concrete building brick is to meet ASTM C-90 for Type II. Solid concrete block to be used in lieu of clay brick for minor drainage structure and manholes to meet ASTM C139.
- Basin located in wet areas, or as otherwise required by the town engineer, shall have weep holes as shown on details.
- All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS-20-44 loading. See manufacturers details for wall, top and bottom thickness.
- Place minimum 6" #5 stone bedding beneath precast structures.



TOWN of WAKE FOREST, NC
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PRECAST CONCRETE 4' DIA. MH JB

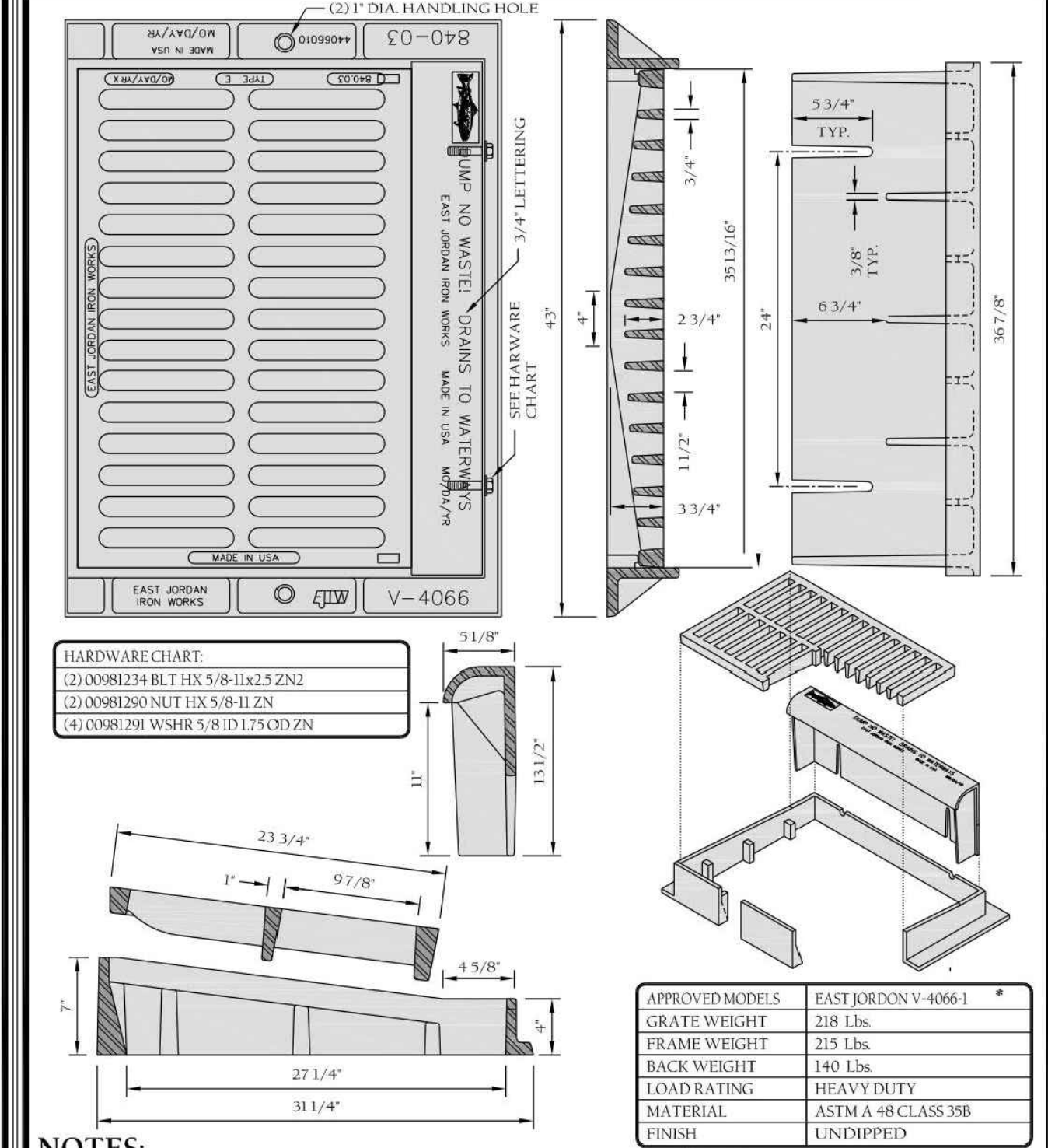
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Revision Date: Feb. 2015	Sheet # 1 of 1



TOWN of WAKE FOREST, NC
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STANDARD MANHOLE CASTING STORM DRAINAGE STRUCTURES

Scale: Not To Scale	Sheet # 9.70
Revision Date: Feb. 2015	Sheet # 1 of 1



TOWN of WAKE FOREST, NC
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STANDARD COMBINATION FRAME, HOOD & GRATE (NCDOT 840.03)

Scale: Not To Scale	Sheet # 9.72
Revision Date: Feb. 2015	Sheet # 1 of 1

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phone 919. 361. 5000
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301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

REVISIONS

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Digitally signed by Jeremy V. Finch
DN: cn=Jeremy V Finch, o=North Carolina, email=jfinch@ncdotmso.com, serial=031452, c=US

Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS

CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

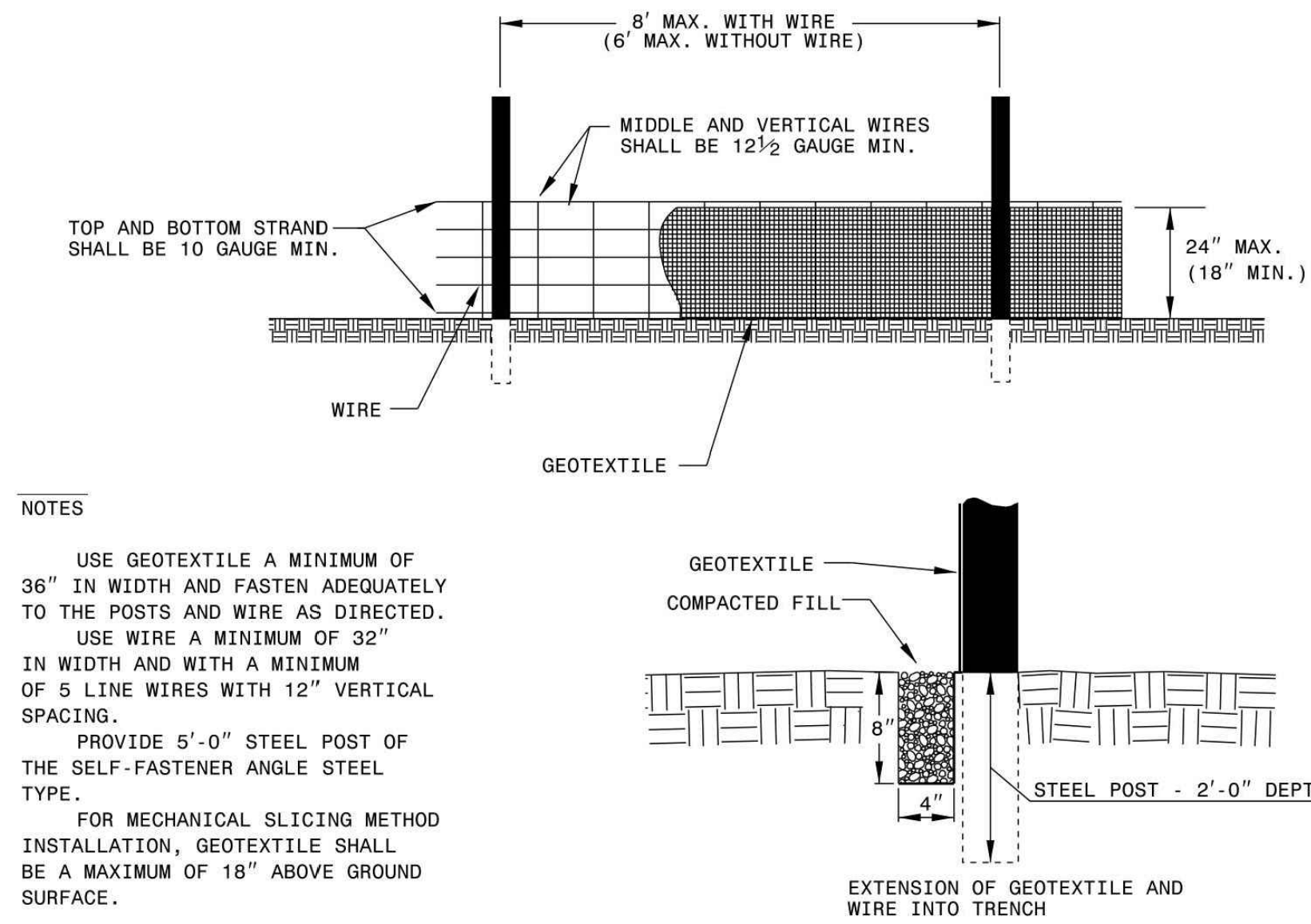
PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-D1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	N.T.S.
DATE	02. 23. 2024

STORM DRAINAGE DETAILS

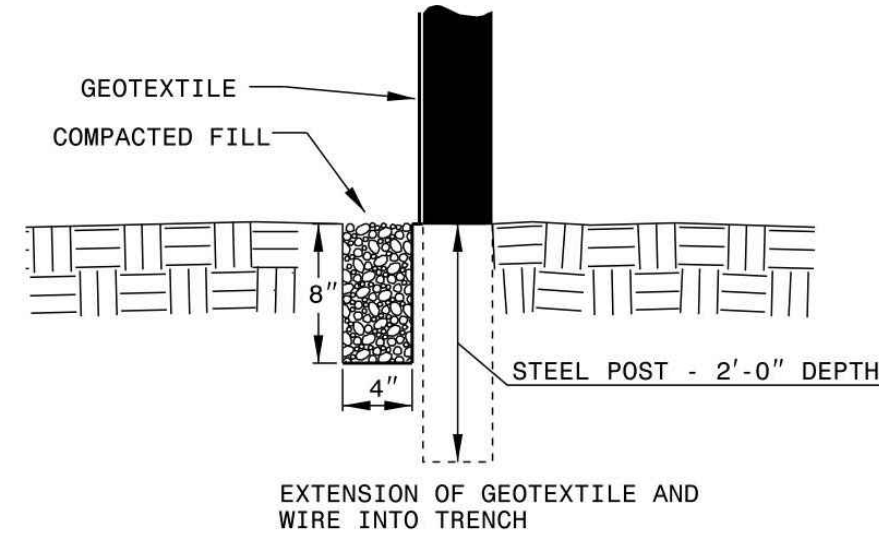
C8.04

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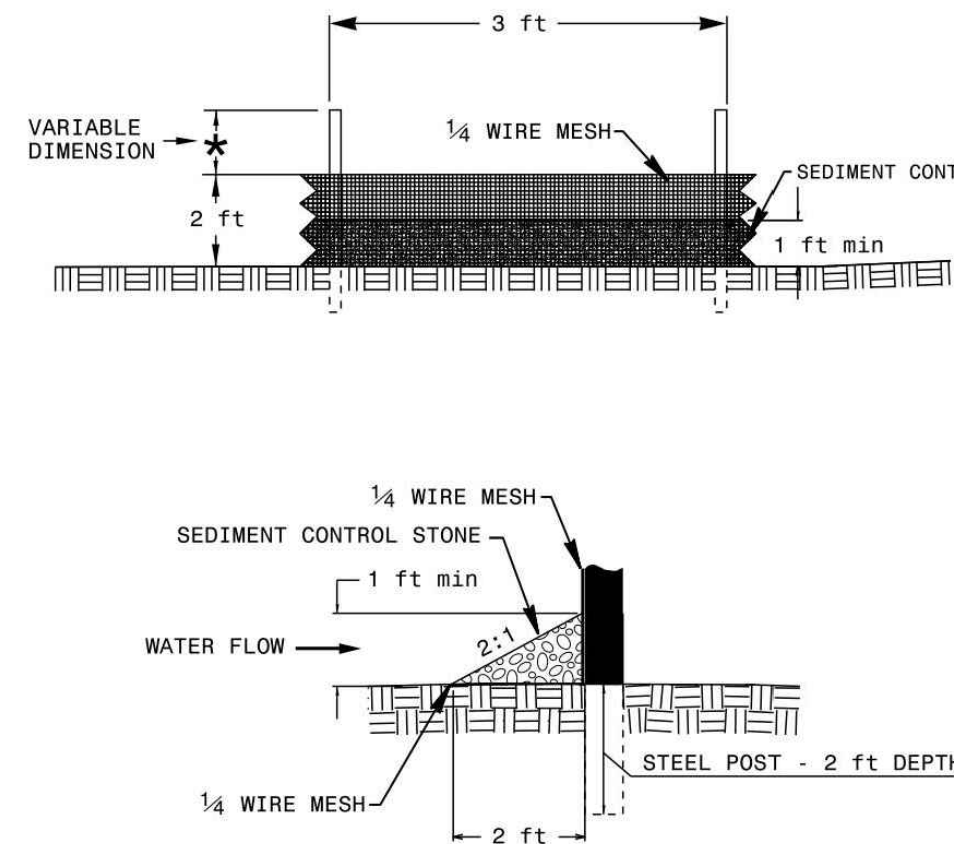
NOTES

USE GEOTEXTILE A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE POSTS AND WIRE AS DIRECTED.
 USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 5 LINE WIRES WITH 12" VERTICAL SPACING.
 PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.
 FOR MECHANICAL SLICING METHOD INSTALLATION, GEOTEXTILE SHALL BE A MAXIMUM OF 18" ABOVE GROUND SURFACE.

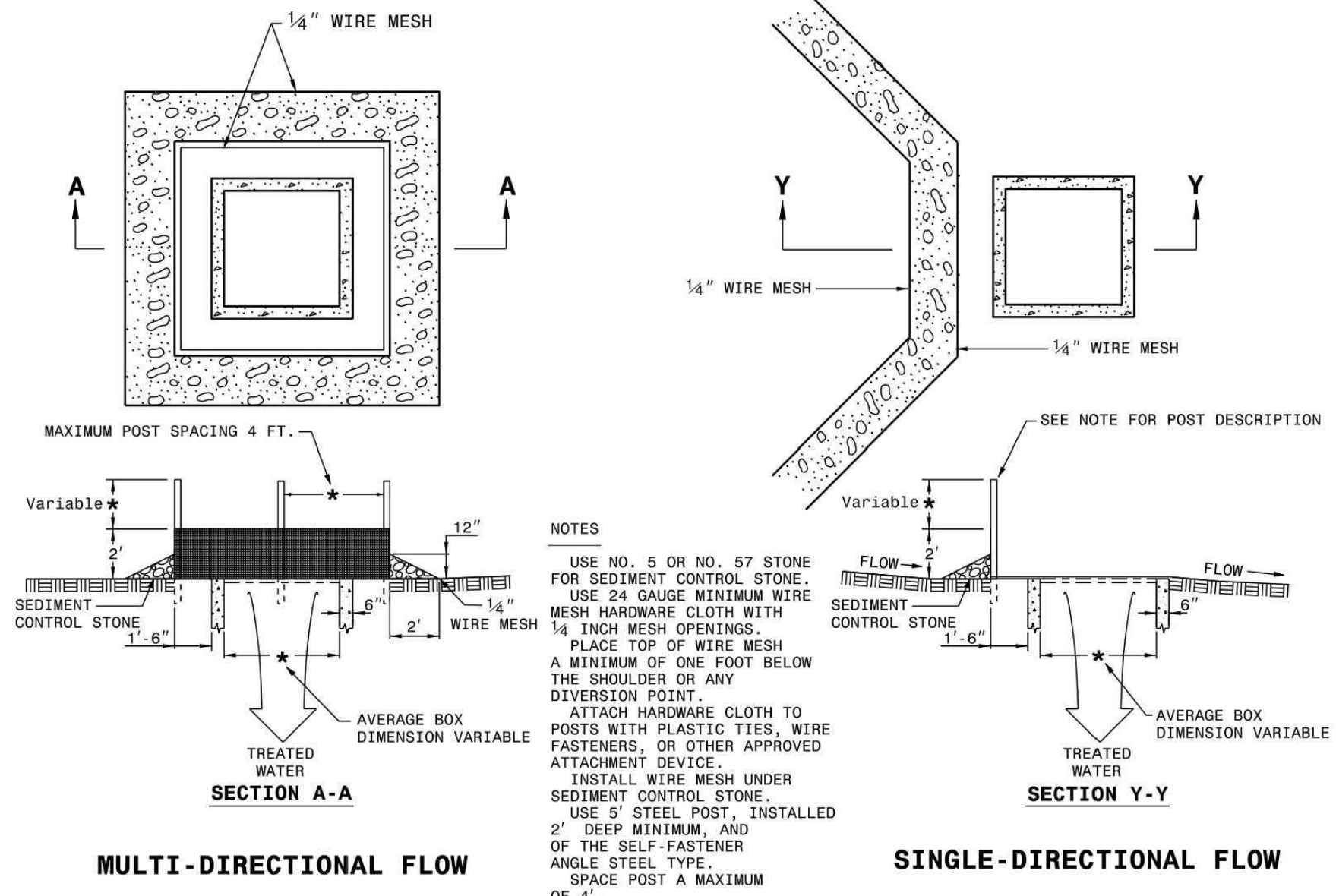


STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
TEMPORARY SILT FENCE
 SHEET 1 OF 1
1605.01

NOTES
 USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
 USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.
 INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.
 ATTACH HARDWARE CLOTH TO POSTS WITH WIRE STAPLE OR OTHER ACCEPTABLE METHODS.
 SPACE POSTS A MAXIMUM OF 3 FT.
 FOR INSTALLATION BETWEEN SECTIONS OF SILT FENCE, EXTEND SEDIMENT CONTROL STONE A MINIMUM OF 12" ON EACH SIDE OF SPECIAL SEDIMENT CONTROL FENCE SECTION.



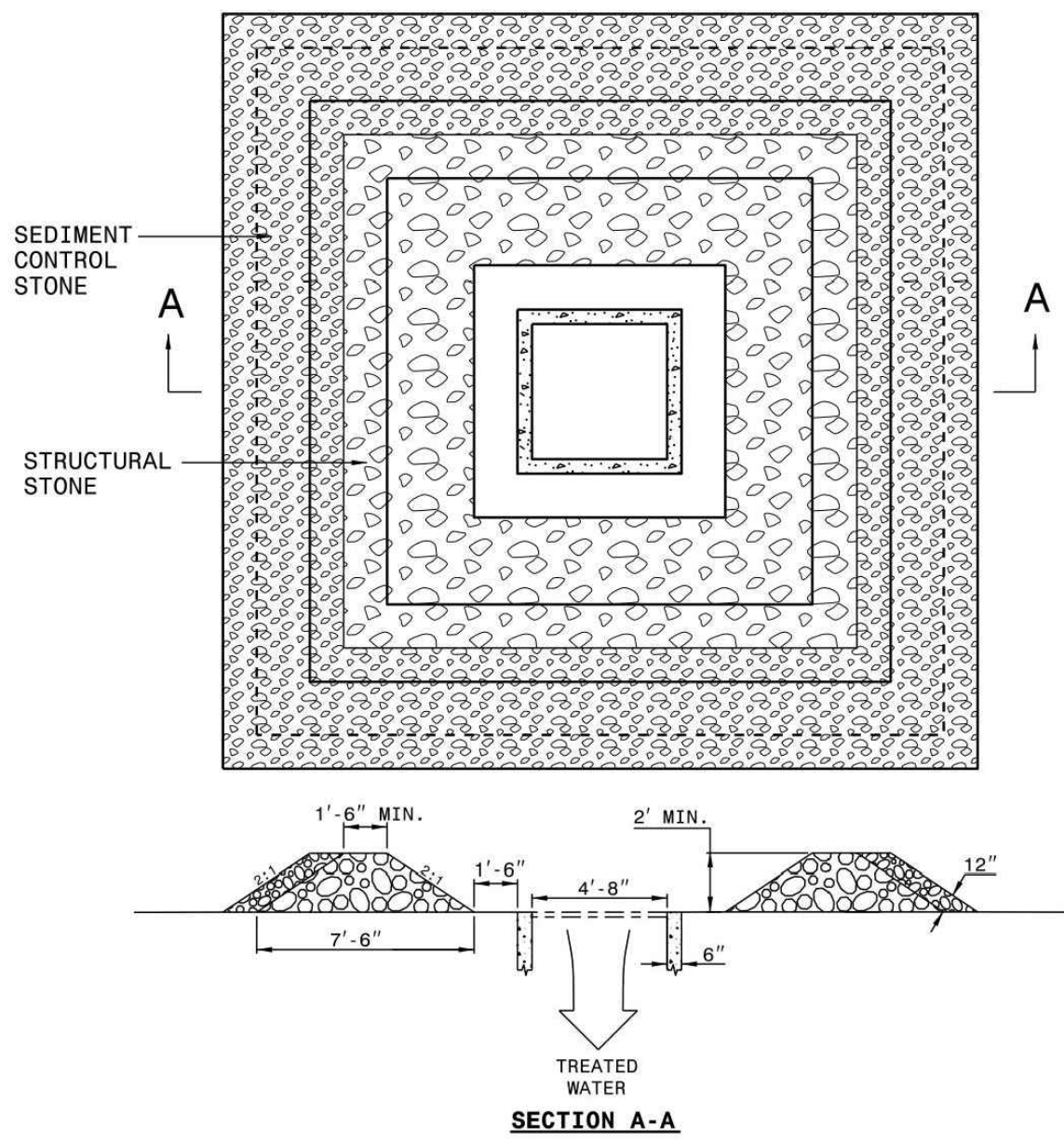
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
SPECIAL SEDIMENT CONTROL FENCE
 SHEET 1 OF 1
1606.01



MULTI-DIRECTIONAL FLOW

SINGLE-DIRECTIONAL FLOW

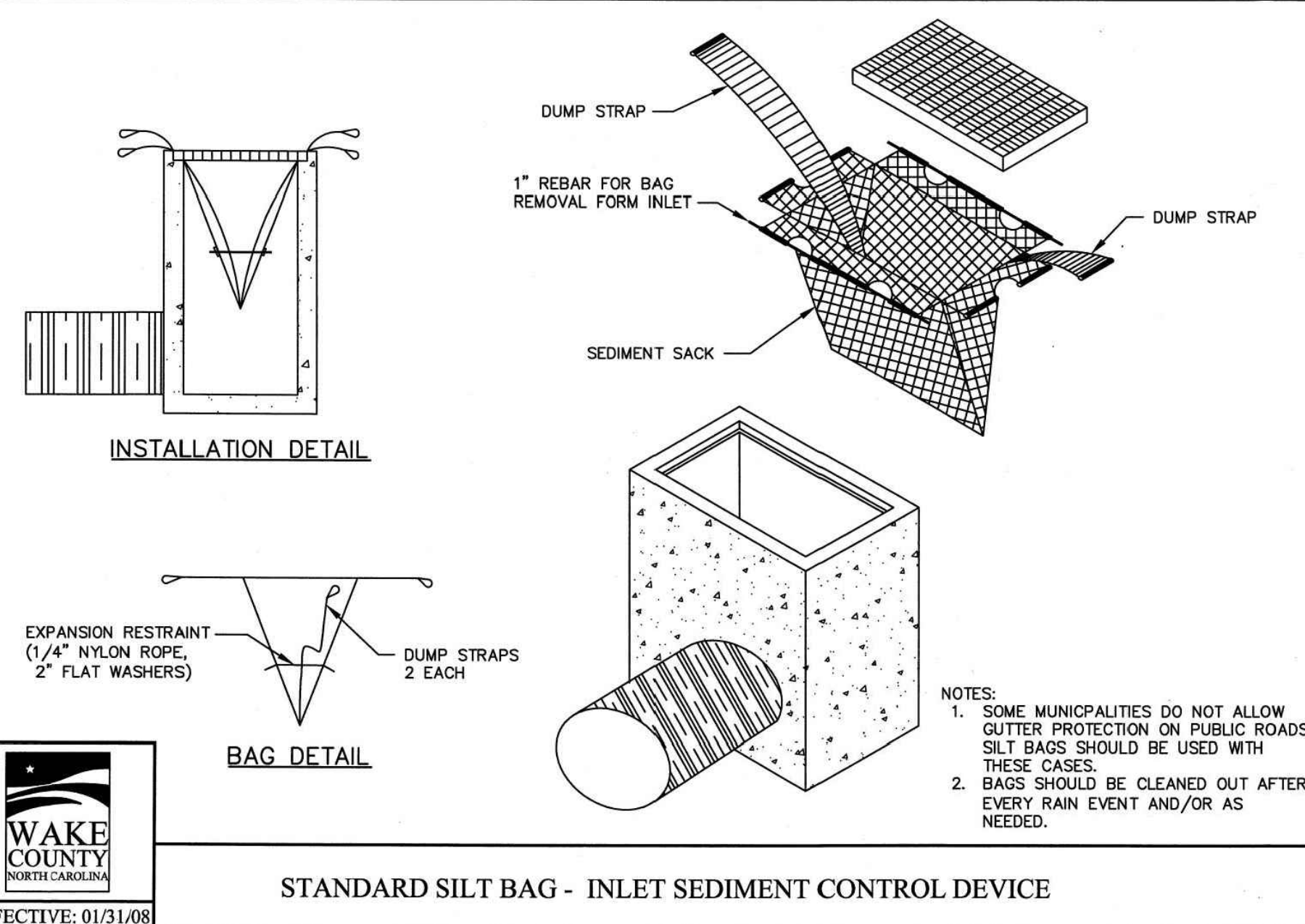
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE C
 SHEET 1 OF 1
1632.03



NOTES

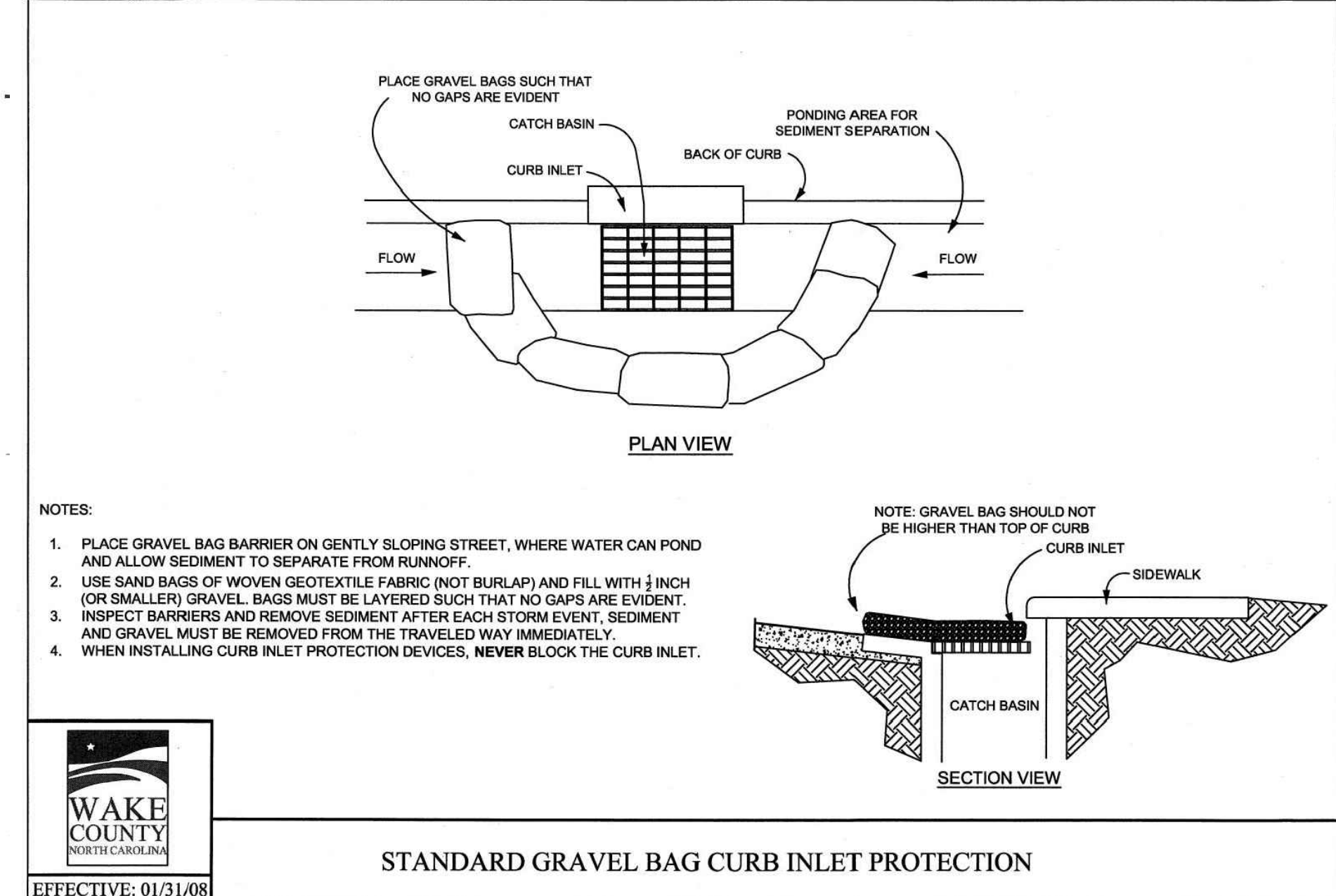
CLEAN SEDIMENT WHEN 1/2 FULL AND AS DIRECTED.
 USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
 USE CLASS B STONE FOR STRUCTURAL STONE.
 CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.

STATE OF NORTH CAROLINA
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 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE A
 SHEET 1 OF 1
1632.01



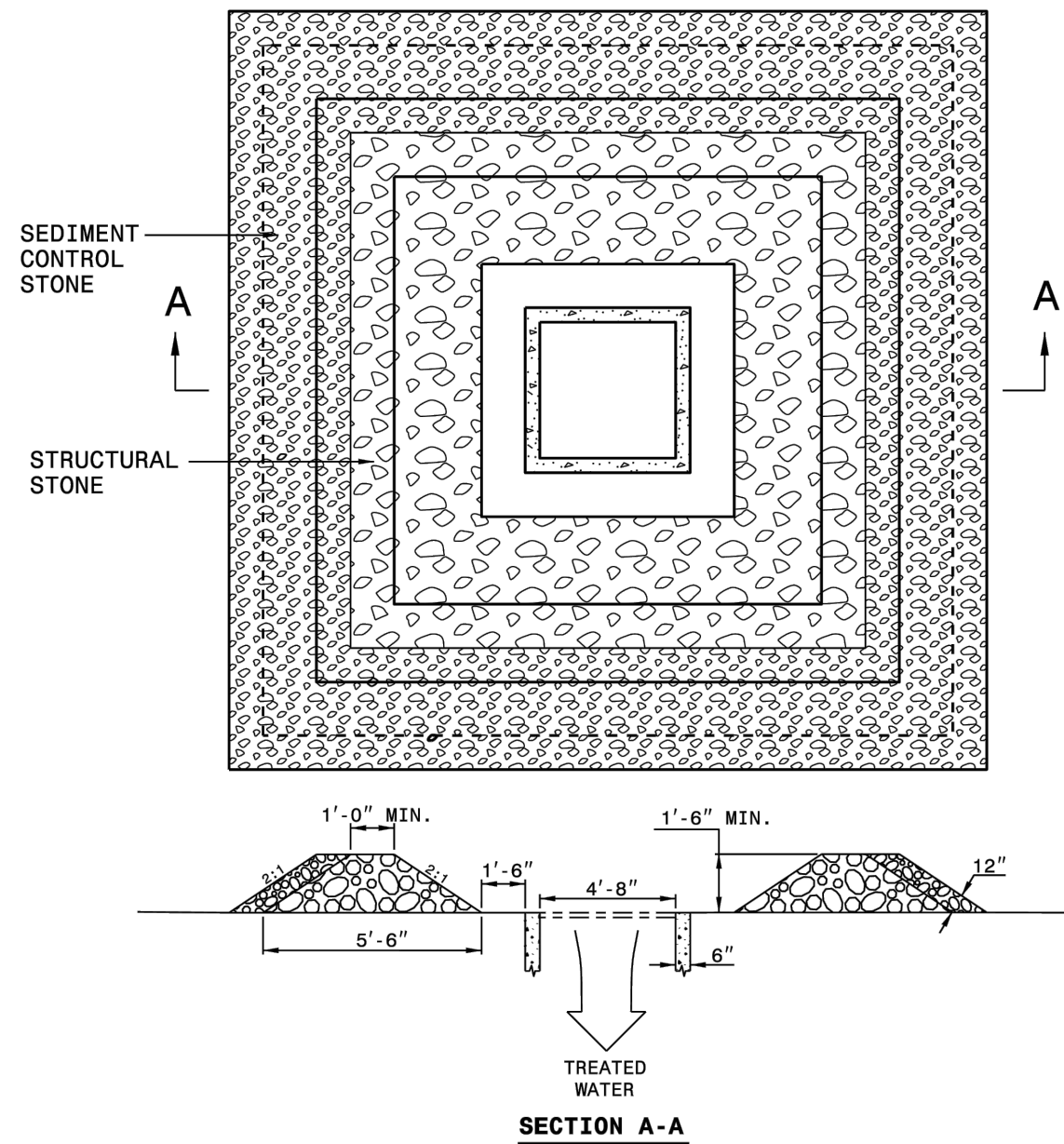
STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

WAKE COUNTY
 NORTH CAROLINA
 EFFECTIVE: 01/31/08



STANDARD GRAVEL BAG CURB INLET PROTECTION

WAKE COUNTY
 NORTH CAROLINA
 EFFECTIVE: 01/31/08



NOTES

CLEAN SEDIMENT WHEN 1/2 FULL AND AS DIRECTED.
 USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
 USE CLASS A STONE FOR STRUCTURAL STONE.
 CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE B
 SHEET 1 OF 1
1632.02

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 smeyer
 04/25/2024
 Public Works/Engineering

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 Planning

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The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713
 phone 919. 361. 5000
 fax 919. 361. 2269
 license number: C-0293, C-187
 www.mcadamsco.com

CLIENT
 TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 Patrick Reidy
 PHONE: 919. 435. 9510

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WAKE COUNTY
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 031452
 JEREMY V. FINCH
 Digitally signed by Jeremy V. Finch
 DN: cn=Jeremy V Finch, o=Wake County, email=jfinch@wakecountync.gov, c=North Carolina
 Date: 2024.02.23 16:02:00 -0500
 Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP-19000
 FILENAME RAP19000-SF-01
 CHECKED BY DLP
 DRAWN BY RJF
 SCALE N.T.S.
 DATE 02.23.2024

EROSION CONTROL DETAILS
C8.05

Table 6.10a
Temporary Seeding
Recommendations for Late
Winter and Early Spring

Seeding mixture Species
Rye (grain)

Rate (lb/acre)
420 use 110

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1 - May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Re-fertilize if growth is not fully adequate. Re-seed, re-fertilize and mulch immediately following erosion or other damage.

Table 6.10a
Temporary Seeding
Recommendations for Late
Winter and Early Spring

Seeding mixture Species
Rye (grain)

Rate (lb/acre)
420 use 110

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1 - May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Re-fertilize if growth is not fully adequate. Re-seed, re-fertilize and mulch immediately following erosion or other damage.

Table 6.10c
Temporary Seeding
Recommendations for Fall

Seeding mixture Species
Rye (grain)

Rate (lb/acre)
120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and re-fertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extent temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

HERBACEOUS PLANTS—Seeding recommendations for immediate stabilization/nurse crops
(2 to 5 weeks for development; effectiveness goal: 6 months to 1 year stabilization)

Common Name	Botanical Name / Cultivar	Native / Introduced	Seeds per Pound	Fertilizer/ Irrigation	Optimal Planting Dates		Sun/Shadow Tolerant	Wetlands	Riparian Buffer	Invasive Yes or No	Installation / Maintenance Considerations	Other information, commentary
					Months	Weeks						
Wheat	Triticum aestivum	I	30 lb	By soil test	11/1 - 4/20/15	5/15/15 - 4/15	Sun	Yes	Yes	No	Must be mowed to reduce competition with permanent or long term vegetation.	Not water tolerant. May be used in wetlands that are not continuously saturated.
German Millet	Setaria fabae	I	10 lb	By soil test	9/11 - 9/30/15	8/15/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut (disc) prior to planting primary or long term vegetation.	Not water tolerant. May be used in wetlands that are not continuously saturated.
Rowspan Millet	Alopecurus arvensis	I	10 lb	By soil test	9/11 - 9/30/15	8/15/15 - 8/15	Sun	Yes	Yes	No	Crop should be cut (disc) prior to planting primary or long term vegetation.	Not water tolerant. May be used in wetlands that are not continuously saturated.
Supergreen (Panicum)	Panicum acroanthum	I	15 lb	By soil test	NR	NR	4/15 - 8/15	Sun	No	Yes	Crop should be cut (disc) prior to planting primary or long term vegetation.	Use only when plants and seed can be combined and protected.
Kobe Lespedeza	Kummerowia striata v. kobe	I	10 lb	By soil test	9/1 - 9/1	9/1 - 9/1	Sun	No	No	No	Consult qualified horticultural or extension agent for over-seeding with primary cover.	Use in Coastal Plain.
Korean Lespedeza	Kummerowia stipulacea	I	10 lb	By soil test	9/1 - 9/1	9/1 - 9/1	Sun	No	No	No	Consult qualified horticultural or extension agent for over-seeding with primary cover.	Use in Piedmont and Mountains. May become invasive.

NOTES:
1. Seeding rates are for hulled seed unless otherwise noted.
2. Fertilizer & Limestone - rates to be applied in absence of soil tests. Recommended application rate assumes significantly disturbed site soils with little or no residual value.
3. NR means Species not recommended for this region or application area.
4. Invasive designation as determined by the N.C. Exotic Pest Plant Council and N.C. Native Plant Society.
5. Springing is not recommended for immediate stabilization unless terrain is the heavy mulch is applied and no other immediate stabilization method is practical.

HERBACEOUS PLANTS—Seeding recommendations for primary stabilization
Successful development depends on planting date (effectiveness goal: 6 mo. - 3 yrs. without an ongoing maintenance program)

Common Name	Botanical Name / Cultivar	Native / Introduced	Seeds per Pound	Fertilizer/ Irrigation	Optimal Planting Dates		Sun/Shadow Tolerant	Wetlands	Riparian Buffer	Invasive Yes or No	Installation / Maintenance Considerations	Other information, commentary	
					Months	Weeks							
Barren Lespedeza	Lespedeza cuneata 'Dumof'	I	15 lb	By soil test	9/1 - 9/1	9/1 - 9/1	Sun	NR	NR	Yes	Response well to controlled burns.	Severe threat. Invasive species.	
Crown Vetch	Securigera varia (Coronilla varia)	I	15 lb	By soil test	3/15-4/30	NR	Sun	NR	NR	Yes	Highly competitive, not recommended unless an acceptable alternative is not available.	Prefer neutral soils.	
Crested Grass	Eriochloa clypeata	I	5 lb	By soil test	NR	Eastern only	9/1 - 9/1	Sun	NR	NR	No	Significant maintenance may be required to obtain desired cover.	Does not tolerate high traffic.
KY 31 Tall Fescue	Schedonorus pruriens (Festuca arundinacea)	I	100 lb	By soil test	9/15-9/1	9/1-4/15	9/30 - 3/15	Sun / Occ. Shade	NR	NR	Yes	If utilized, it is imperative that maintenance includes a containment plan.	Acceptable for sodding.
KY Blue Grass	Poa pratensis	I	15 lb	By soil test	9/15-9/1	NR	NR	Sun	NR	NR	Yes	If utilized, it is imperative that maintenance includes a containment plan.	Prefer neutral soils, highly competitive, not recommended unless an acceptable alternative is not available. Acceptable for sodding.
Hard Fescue	Festuca arvensis (Festuca drydenii)	I	15 lb	By soil test	9/1 - 9/1	NR	NR	Shade	NR	NR	No	Not recommended for slopes greater than 8%.	Low growth, bunch grass.
Bermuda Grass	Cynodon dactylon	I	25 lb	By soil test	NR	4/15-6/30	4/15-6/30	Sun	NR	NR	Yes	If utilized, it is imperative that maintenance includes a containment plan.	Extremely aggressive, not recommended and should be avoided unless an acceptable alternative is not available. May be sodded or sprigged.

HERBACEOUS PLANTS—Seeding recommendations for primary stabilization
Successful development depends on planting date (effectiveness goal: 6 mo. - 3 yrs. without an ongoing maintenance program)

Common Name	Botanical Name / Cultivar	Native / Introduced	Seeds per Pound	Fertilizer/ Irrigation	Optimal Planting Dates		Sun/Shadow Tolerant	Wetlands	Riparian Buffer	Invasive Yes or No	Installation / Maintenance Considerations	Other information, commentary
					Months	Weeks						
Indiangrass	Sorghastrum nutans / Cynopogon	N	8	By soil test	NR	12/1 - 5/1	1/1 - 5/1	Sun	NR	Well	No	Response well to controlled burns. Mix with 3 to 5 other seed varieties that have similar soil drainage adaptations.
Indiangrass	Sorghastrum nutans / Cynopogon	N	8	By soil test	NR	12/1 - 5/1	1/1 - 5/1	Sun	NR	Well	No	Response well to controlled burns. Mix with 3 to 5 other seed varieties that have similar soil drainage adaptations.
Indiangrass	Sorghastrum nutans / Cynopogon	N	8	By soil test	NR	12/1 - 5/1	1/1 - 5/1	Sun	NR	Well	No	Response well to controlled burns. Mix with 3 to 5 other seed varieties that have similar soil drainage adaptations.
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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Required Ground Stabilization Timeframes	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None	
(b) High Quality Water (HWQ) Zones	7	None	
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HWQ Zones -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14		
(e) Areas with slopes flatter than 4:1	14		

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roller erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roller erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

CONCRETE WASHOUTS

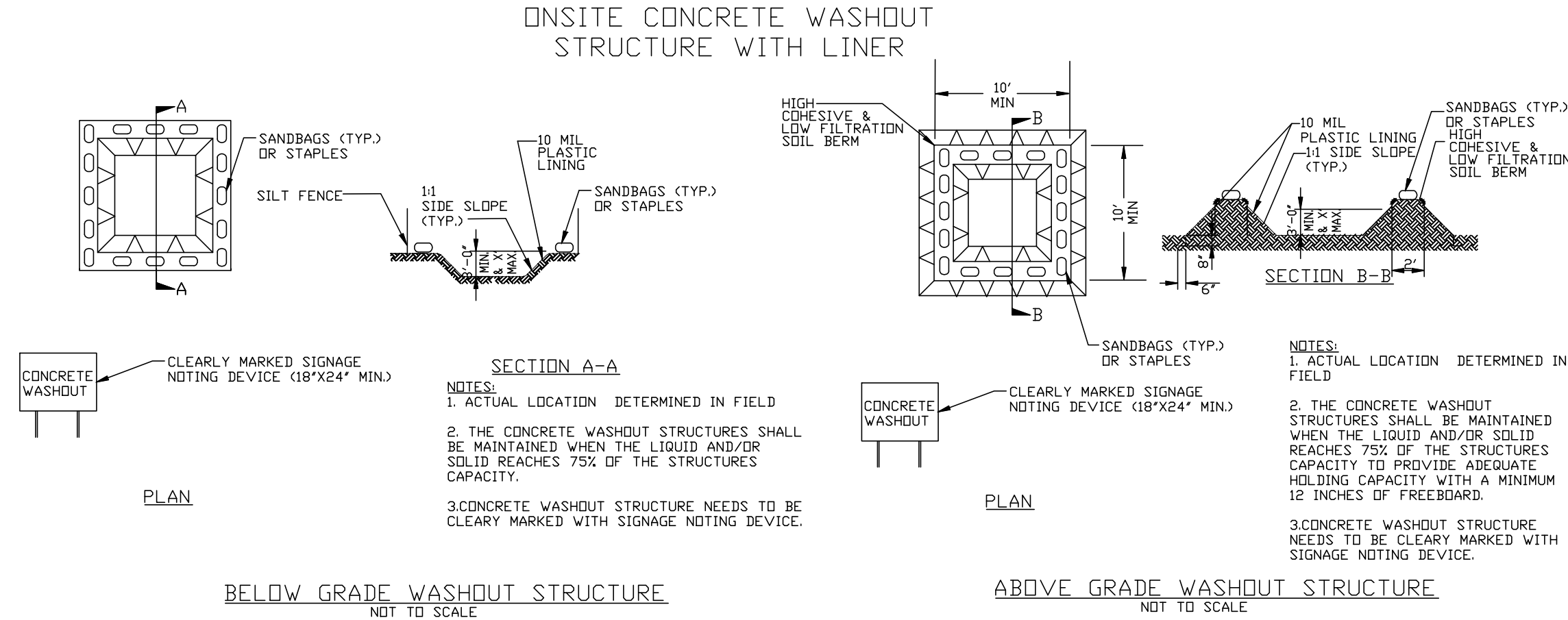
- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.



NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days in which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfall inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicator of sewerage pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken. 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(c) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading/pretreatment of perimeter E&SC measures, clearing and grubbing, installation of storm water control facilities, completion of all land disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. **E&SC Plan Documentation**

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. **Additional Documentation to be Kept on Site**

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. **Documentation to be Retained for Three Years**

All data used to complete the e-AOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. (40 CFR 122.41)

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. **Occurrences that Must be Reported**

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref. 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref. 40 CFR 302.4 or G.S. 143-215.8).
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

2. **Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses (40 CFR 122.41(m)(3))	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses (40 CFR 122.41(m)(3))	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment (40 CFR 122.41(i)(7))	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, the causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. (40 CFR 122.41(i)(6)). Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. **Occurrences that Must be Reported**

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref. 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref. 40 CFR 302.4 or G.S. 143-215.8).
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

2. **Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses (40 CFR 122.41(m)(3))	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses (40 CFR 122.41(m)(3))	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment (40 CFR 122.41(i)(7))	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, the causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. (40 CFR 122.41(i)(6)). Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

McADAMS

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

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

TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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Digitally signed by Jeremy V. Finch
DN: cn=Jeremy V. Finch, o=City of Wake Forest, ou=Engineering, email=jrfinch@mcadamsco.com, date=2024.07.18.10:51:00-0400

Jeremy V. Finch

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS CONSTRUCTION DRAWINGS

0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-D1
CHECKED BY	DLP
DRAWN BY	RJF
SCALE	N.T.S.
DATE	02. 23. 2024

C8.07

FINAL DRAWING - RELEASED FOR CONSTRUCTION

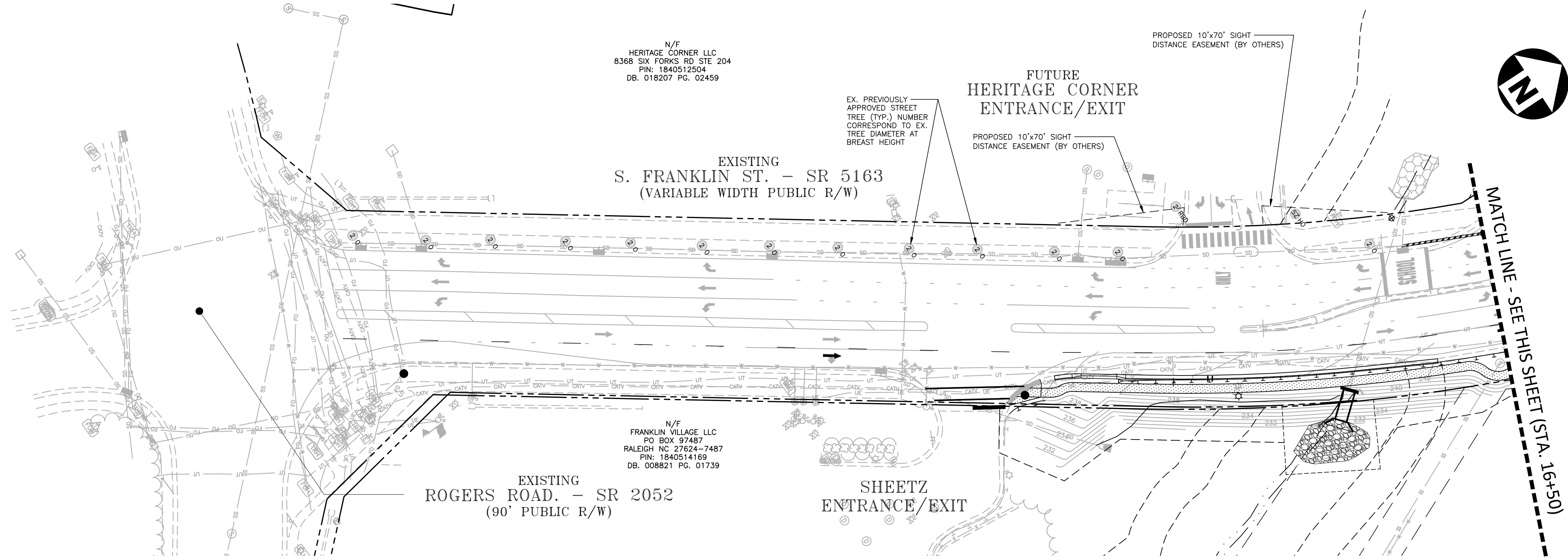
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST, NCDOT AND THE CITY OF RALEIGH (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

These plans have been electronically approved for construction by the Town of Wake Forest Public Works and Engineering Department. This approval may not be edited once issued.

04/25/2024
Public Works/Engineering

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Planning



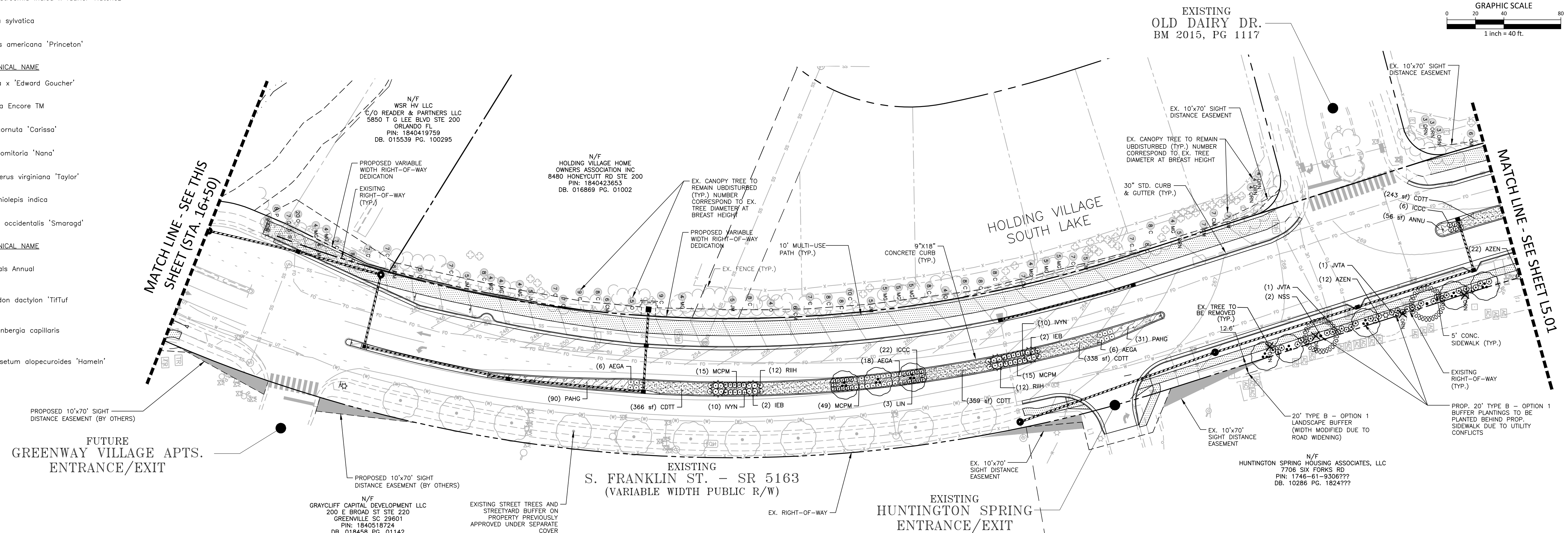
SITE LEGEND

	SIGNAGE
	TRAFFIC DIRECTIONAL ARROW
	ACCESSIBLE PARKING STALL
	ACCESSIBLE RAMP
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	EASEMENT LINE
	CENTERLINE
	FENCE
	TREE CONSERVATION

PLANT SCHEDULE

TREES	CODE	COMMON NAME	BOTANICAL NAME
	IEB	Emily Bruner Holly	Ilex x 'Emily Bruner'
	LIN	Natchez Crape Myrtle Multi-Trunk	Lagerstroemia indica x fauriei 'Natchez'
	NSS	Sour Gum	Nyssa sylvatica
	UAP	American Elm	Ulmus americana 'Princeton'
	AEGA	Edward Goucher Abelia	Abelia x 'Edward Goucher'
	AZEN	Encore Azalea	Azalea Encore TM
	ICCG	Carissa Holly	Ilex cornuta 'Carissa'
	IVYN	Dwarf Yaupon Holly	Ilex vomitoria 'Nano'
	JVTA	Taylor Eastern Redcedar	Juniperus virginiana 'Taylor'
	RIH	Indian Hawthorn	Rhaphiolepis indica
	TOEG	Emerald Green Arborvitae	Thuja occidentalis 'Smaragd'
SHRUBS	CODE	COMMON NAME	BOTANICAL NAME
	AEGA	Edward Goucher Abelia	Abelia x 'Edward Goucher'
	AZEN	Encore Azalea	Azalea Encore TM
	ICCG	Carissa Holly	Ilex cornuta 'Carissa'
	IVYN	Dwarf Yaupon Holly	Ilex vomitoria 'Nano'
	JVTA	Taylor Eastern Redcedar	Juniperus virginiana 'Taylor'
	RIH	Indian Hawthorn	Rhaphiolepis indica
	TOEG	Emerald Green Arborvitae	Thuja occidentalis 'Smaragd'
GROUND COVERS	CODE	COMMON NAME	BOTANICAL NAME
	ANNU	Annuals	Annuals Annual
	CDDT	Bermuda Grass	Cynodon dactylon 'TifTuf'
	MCPM	Pink Muhly Grass	Muhlenbergia capillaris
	PAHG	Hameln Fountain Grass	Pennisetum alopecuroides 'Hameln'

NOTE: SEE SHEET L5.10 FOR LANDSCAPE DETAILS AND ADDITIONAL SCHEDULE INFORMATION.



ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH (WATER AND SEWER) AND NCDOT STANDARDS AND SPECIFICATIONS.

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Public Works/Engineering
04/25/2024

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The John R. McAdams Company, Inc.
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Durham, NC 27713

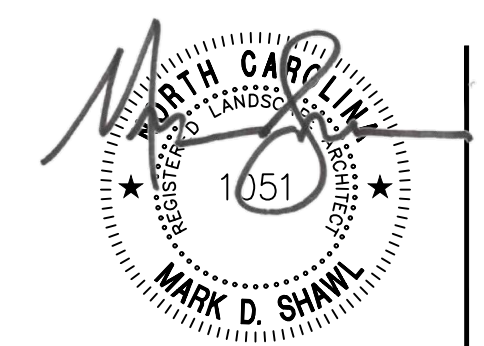
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WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

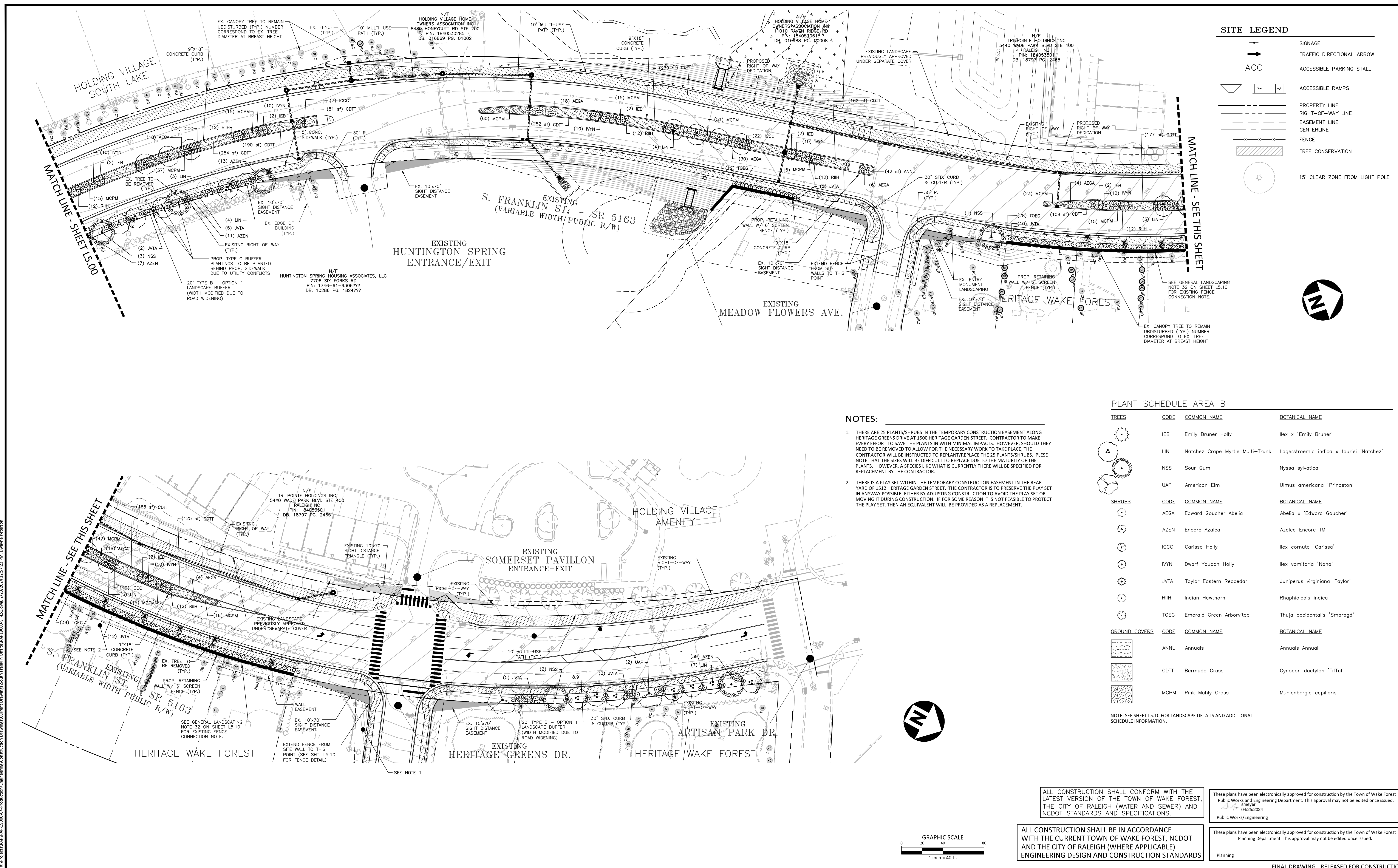
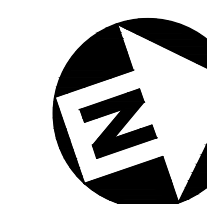
PLAN INFORMATION

PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-L51
CHECKED BY	MDS
DRAWN BY	MDS
SCALE	1" = 40'
DATE	02. 23. 2024

CODE LANDSCAPE PLAN
S. FRANKLIN STREET

L5.00

SITE LEGEND	
	SIGNAGE
	TRAFFIC DIRECTIONAL ARROW
	ACCESSIBLE PARKING STALL
	ACCESSIBLE RAMPS
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	EASEMENT LINE
	CENTERLINE
	FENCE
	TREE CONSERVATION
	15' CLEAR ZONE FROM LIGHT POLE



- NOTES:**
- THERE ARE 25 PLANTS/SHRUBS IN THE TEMPORARY CONSTRUCTION EASEMENT ALONG HERITAGE GARDENS DRIVE AT 1500 HERITAGE GARDEN STREET. CONTRACTOR TO MAKE EVERY EFFORT TO SAVE THE PLANTS IN WITH MINIMAL IMPACTS. HOWEVER, SHOULD THEY NEED TO BE REMOVED TO ALLOW FOR THE NECESSARY WORK TO TAKE PLACE, THE CONTRACTOR WILL BE INSTRUCTED TO REPLANT/REPLACE THE 25 PLANTS/SHRUBS. PLEASE NOTE THAT THE SIZES WILL BE DIFFICULT TO REPLACE DUE TO THE MATURITY OF THE PLANTS. HOWEVER, A SPECIES LIKE WHAT IS CURRENTLY THERE WILL BE SPECIFIED FOR REPLACEMENT BY THE CONTRACTOR.
 - THERE IS A PLAY SET WITHIN THE TEMPORARY CONSTRUCTION EASEMENT IN THE REAR YARD OF 1512 HERITAGE GARDEN STREET. THE CONTRACTOR IS TO PRESERVE THE PLAY SET IN ANYWAY POSSIBLE, EITHER BY ADJUSTING CONSTRUCTION TO AVOID THE PLAY SET OR MOVING IT DURING CONSTRUCTION. IF FOR SOME REASON IT IS NOT FEASIBLE TO PROTECT THE PLAY SET, THEN AN EQUIVALENT WILL BE PROVIDED AS A REPLACEMENT.

PLANT SCHEDULE AREA B			
TREES	CODE	COMMON NAME	BOTANICAL NAME
	IEB	Emily Bruner Holly	Ilex x 'Emily Bruner'
	LIN	Natchez Crape Myrtle Multi-Trunk	Lagerstroemia indica x fauriei 'Natchez'
	NSS	Sour Gum	Nyssa sylvatica
	UAP	American Elm	Ulmus americana 'Princeton'
SHRUBS	CODE	COMMON NAME	BOTANICAL NAME
	AEGA	Edward Goucher Abelia	Abelia x 'Edward Goucher'
	AZEN	Encore Azalea	Azalea Encore TM
	ICCC	Carissa Holly	Ilex cornuta 'Carissa'
	IVYN	Dwarf Yaupon Holly	Ilex vomitoria 'Nana'
	JVTA	Taylor Eastern Redcedar	Juniperus virginiana 'Taylor'
	RIH	Indian Hawthorn	Rhaphiolepis indica
	TOEG	Emerald Green Arborvitae	Thuja occidentalis 'Smaragd'
GROUND COVERS	CODE	COMMON NAME	BOTANICAL NAME
	ANNU	Annuals	Annuals Annual
	CDTT	Bermuda Grass	Cynodon dactylon 'Trituf'
	MCPM	Pink Muhly Grass	Muhlenbergia capillaris

NOTE: SEE SHEET L5.10 FOR LANDSCAPE DETAILS AND ADDITIONAL SCHEDULE INFORMATION.

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST, PUBLIC WORKS AND ENGINEERING DEPARTMENT. THIS APPROVAL MAY NOT BE EDITED ONCE ISSUED.

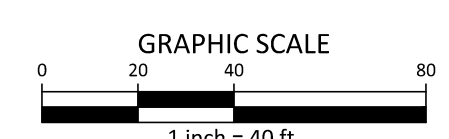
DATE: 04/25/2024
Public Works/Engineering

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DATE: 04/25/2024
Planning

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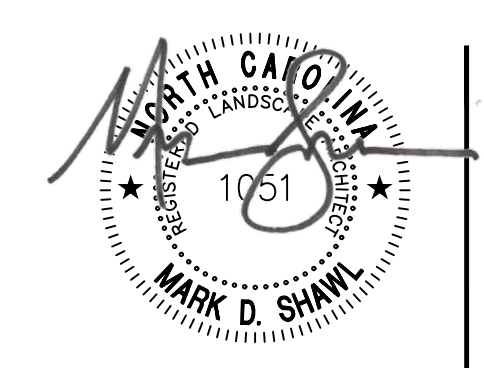

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NO.	DATE	REVISIONS
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CLIENT
TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510



TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION	
PROJECT NO.	RAP-19000
FILENAME	RAP19000-SF-L5.1
CHECKED BY	MDS
DRAWN BY	MDS
SCALE	1" = 40'
DATE	02. 23. 2024

CODE LANDSCAPE PLAN
S. FRANKLIN STREET

L5.01

FINAL DRAWING - RELEASED FOR CONSTRUCTION

GENERAL LANDSCAPE NOTES:

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF WAKE FOREST AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE SITE INSPECTION BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE BEGINNING DEMOLITION OR INSTALLATION.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
- ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THIS PLAN IS FOR PLANTING PURPOSES ONLY. FOR INFORMATION REGARDING BUILDINGS, GRADING, WALLS, ETC., REFER TO ARCHITECTURE, SITE AND GRADING PLANS.
- VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- CONTRACTOR TO ENSURE PROPER STABILIZATION AND SEEDING OF THE SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- LANDSCAPE MATERIAL SHALL BE WELL FORMED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS AND DISEASES. MATERIAL SHALL EQUAL OR SURPASS #1 QUALITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
- ALL PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES AND/OR FOLIAGE OF THE PLANT. MISHANDLED PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFICIENT PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- ALL PLANTS TO BE A MINIMUM OF WHAT IS SPECIFIED IN THE PLANT SCHEDULE. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO ANY HOLE BEING DUG.
- CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/SEEDS/SOD IF NOT SPECIFICALLY SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL PLANTING AREAS.
- PROPOSED TREES TO BE PLANTED A MINIMUM 10 FEET FROM ANY LIGHT POLE AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
- PROPOSED TREES TO BE PLANTED A MINIMUM 5 FEET FROM ANY FIRE HYDRANT AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
- CONTRACTOR SHALL COMPLETE SOIL TEST IN ALL PLANTING AREAS TO DETERMINE SOIL AMENDMENT REQUIREMENTS UNLESS WAIVED BY OWNER'S REPRESENTATIVE. CONTRACTOR SHALL ADJUST PH AND FERTILITY BASED UPON THE SOIL TEST RESULTS.
- TOPSOIL SHALL BE FREE OF MATERIAL LARGER THAN 1.0 INCH IN DIAMETER OR LENGTH AND SHALL NOT CONTAIN SLAG, CINDERS, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH, OR OTHER EXTRANEIOUS MATERIAL.

- LOOSEN SUBGRADE / SURFACE SOIL TO A MINIMUM DEPTH OF 6 INCHES. APPLY SOIL AMENDMENTS AND FERTILIZERS AS REQUIRED BY THE SOIL TEST RESULTS TO ACHIEVE A HEALTHY GROWING MEDIA AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOIL. SPREAD PLANTING SOIL MIX TO A DEPTH OF 6 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- IF IMPORTED TOPSOIL IS REQUIRED, THE SUBGRADE SHALL BE SCARIFIED OR TILLED TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO INSTALLATION OF IMPORTED TOPSOIL. FOLLOWING INSTALLATION OF IMPORTED TOPSOIL, THE TOPSOIL SHALL BE TILLED TO INTEGRATE THE SOIL PROFILES.
- PLANT MATERIALS ARE TO BE GUARANTEED FOR A PERIOD OF 12 MONTHS. PLANT MATERIALS WHICH REMAIN UNHEALTHY WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR BEFORE THE EXPIRATION OF THE GUARANTEE PERIOD OR IMMEDIATELY IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
- ALL TREE PLANTINGS SHALL BE MULCHED WITH 3 INCHES OF SHREDDED BARK OR 4 INCHES OF PINE STRAW IN A 3-FOOT RADIUS AROUND THE TREE, OR TO THE DRILLLINE, WHICHEVER IS GREATER. MULCH SHALL BE FREE OF TRASH AND MAINTAINED WEED FREE. MULCH SHALL NOT COVER THE ROOT FLARE. CONFIRM MULCH SPECIFICATIONS WITH OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
- DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF EXTERIOR PLANTS DURING DELIVERY. DO NOT DROP EXTERIOR PLANTS DURING DELIVERY AND HANDLING.
- DELIVER EXTERIOR PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IMMEDIATELY AFTER UNLOADING, STAND THE TREES UP TO REDUCE THE RISK OF SUN SCALD. PROPERLY STAGED TREES ARE STANDING, UNTIED AND SPACED. UNLESS IMMEDIATELY INSTALLED, SET EXTERIOR PLANTS AND TREES IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
- SEE LANDSCAPE DETAILS FOR TREE STAKING REQUIREMENTS.
- EXCAVATE EDGES OF ALL PLANTING BEDS TO 2 INCH DEPTH TO FORM A NEAT AND CRISP DEFINITION.
- CONTRACTOR SHALL REMOVE DEBRIS AND FINE GRADE ALL PLANTING AREAS PRIOR TO INSTALLATION.
- REMOVE GUY WIRES AND STAKES AT END OF WARRANTY PERIOD OR ESTABLISHMENT.
- FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL AND RAKE. REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISHED GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.
- CONTRACTOR TO PERFORM PHOTO/VIDEO DOCUMENTATION OF EXISTING CONDITIONS OF THE ENTIRE LENGTH OF THE PROJECT PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
- CONTRACTOR TO REPLACE ANY EXISTING REMOVED OR DAMAGED VEGETATION RELATED TO DEMOLITION OR CONSTRUCTION OF PROPOSED ROADWAY IMPROVEMENTS UNLESS DESIGNATED TO BE REMOVED OUTSIDE OF CONSTRUCTION LIMITS.
- ALL EXISTING ALUMINUM FENCING WITHIN THE LIMITS OF CONSTRUCTION ASSOCIATED WITH RESIDENTIAL/HOA PROPERTY OR OTHERWISE SHALL BE REPLACED WITH THE 6" BLACK ALUMINUM PRIVACY FENCE. ALL EX. WOODEN FENCING (PRIVATE YARD FENCES) SHALL BE REPLACED IN-KIND.

LANDSCAPE CALCULATIONS

20' TYPE B BUFFER - OPTION 1

SOUTH FRANKLIN STREET @ HERITAGE GREEN DRIVE 320 LF

CANOPY TREES
REQUIRED: 4 (1/100 LF)
PROVIDED: 4

EVERGREEN TREES
REQUIRED: 8 (2/100 LF)
PROVIDED: 8

UNDERSTORY TREES
REQUIRED: 7 (2/100 LF)
PROVIDED: 7

SHRUBS
REQUIRED: 39 (12/100 LF)
PROVIDED: 39 (50% EVERGREEN SPECIES MIN.)

SOUTH FRANKLIN STREET @ HUNTINGTON SPRING 435 LF

CANOPY TREES
REQUIRED: 5 (1/100 LF)
PROVIDED: 5

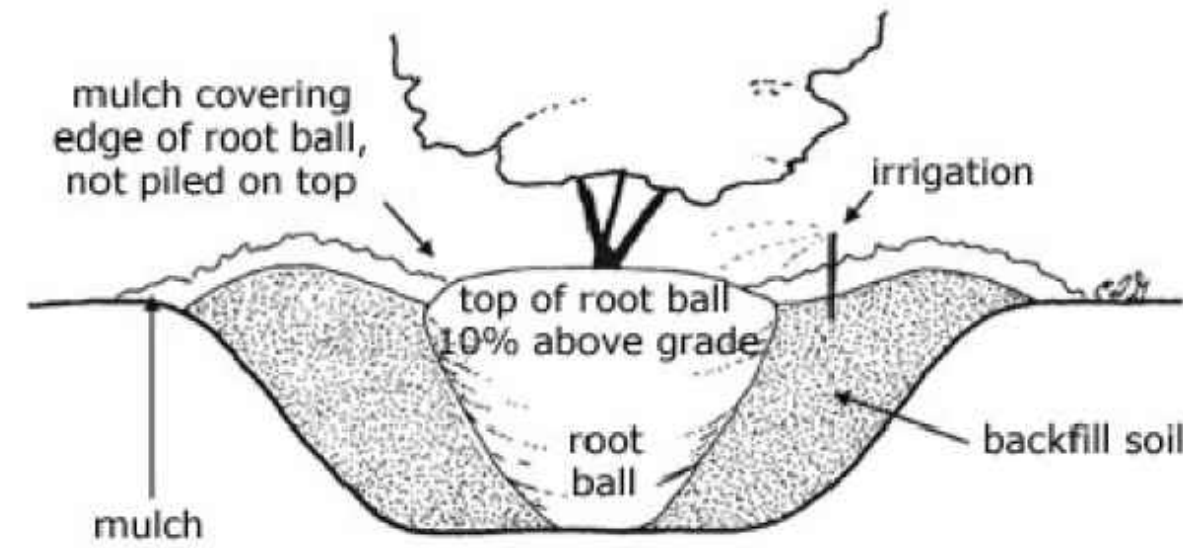
EVERGREEN TREES
REQUIRED: 10 (2/100 LF)
PROVIDED: 10

UNDERSTORY TREES
REQUIRED: 10 (2/100 LF)
PROVIDED: 10

SHRUBS
REQUIRED: 60 (12/100 LF)
PROVIDED: 65 (50% EVERGREEN SPECIES MIN.)

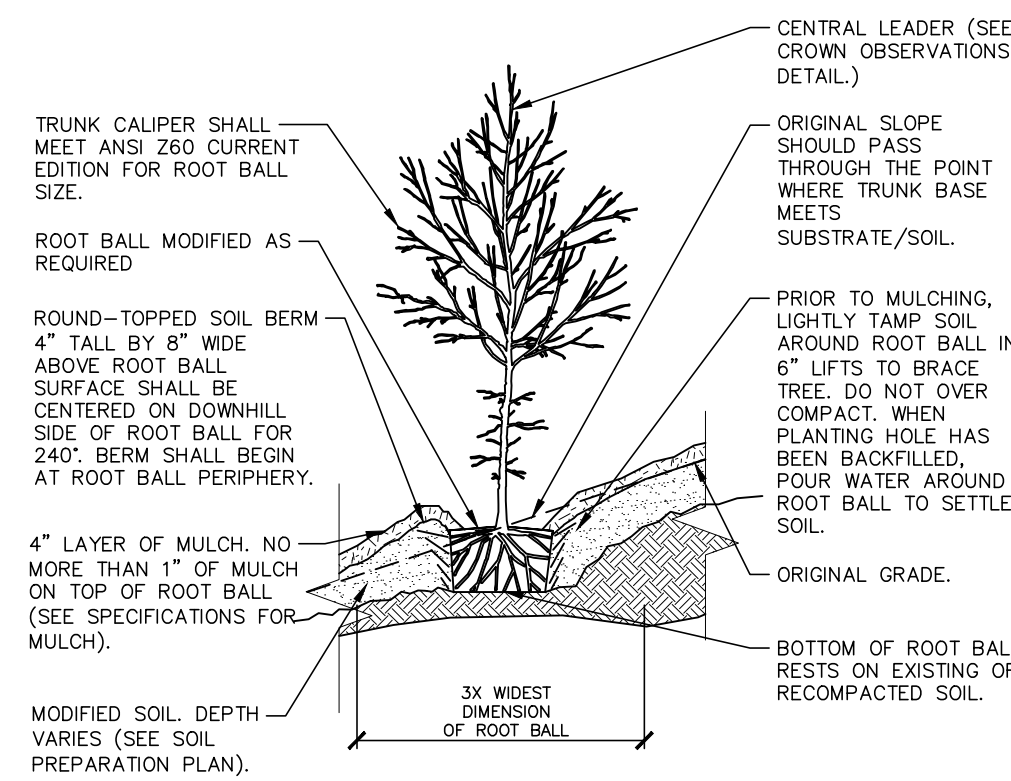
NOTE:

ALL OTHER BUFFER REQUIREMENTS ALONG ROADWAY SHALL BE SATISFIED WITH 6" SOLID SCREEN FENCE AND EVERGREEN PLANTINGS PER TOWN OF WAKE FOREST PLANNING.



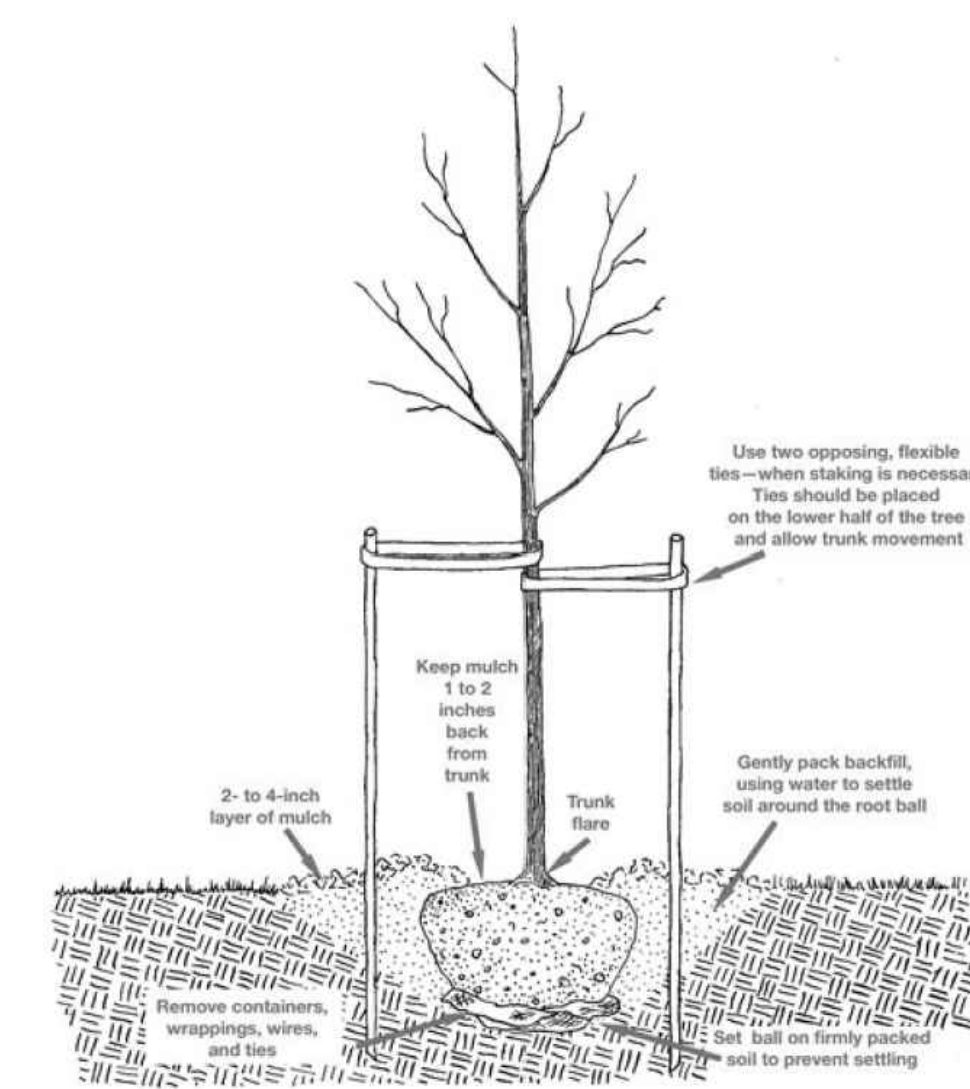
01 TREE INSTALLATION (TOWN OF WAKE FOREST TYP. DETAIL)

SCALE: NTS



02 PREFERRED TREE STAKING METHODS (TOWN OF WAKE FOREST TYP. DETAIL)

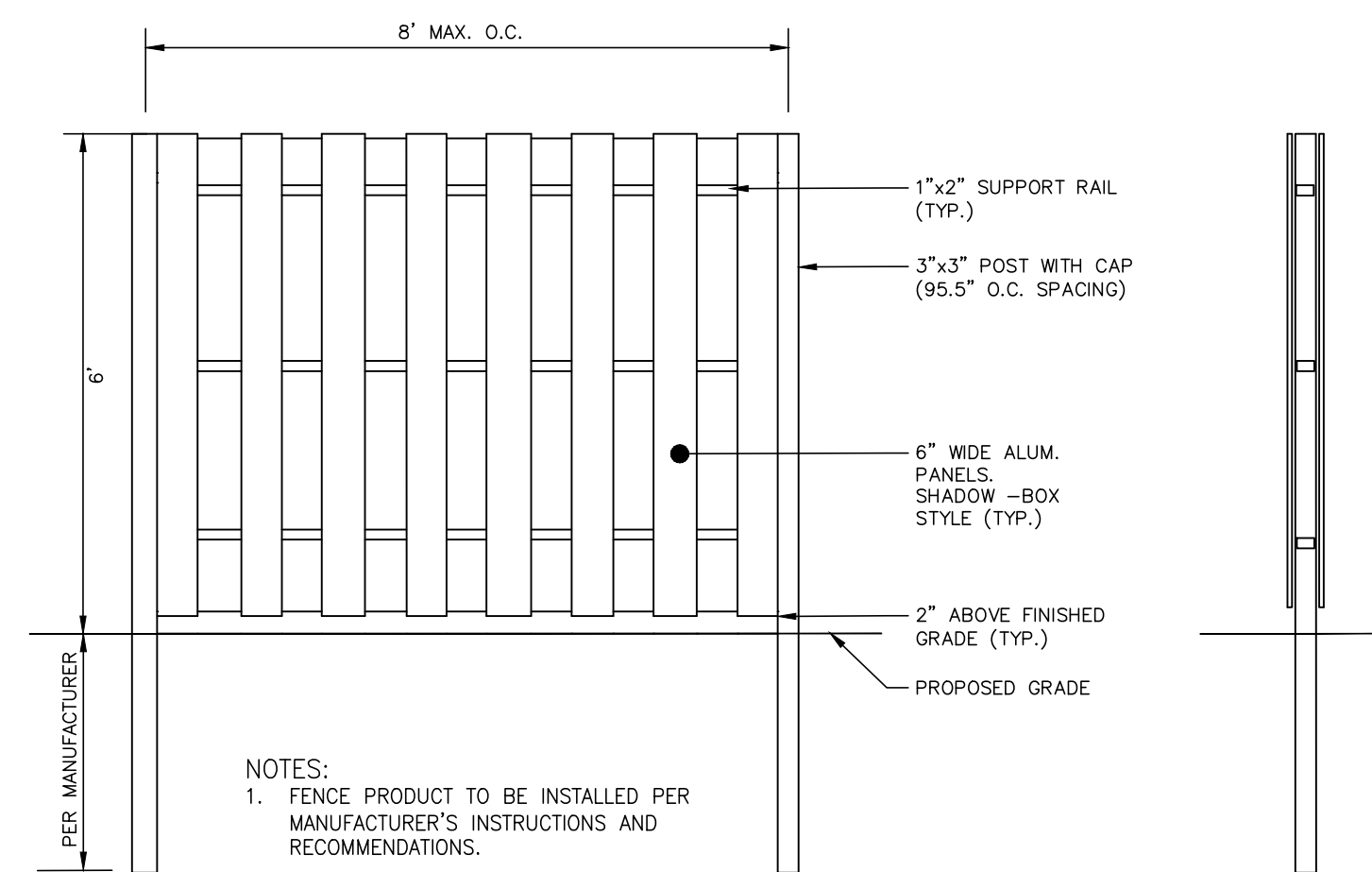
SCALE: NTS



- NOTES:
- TREES SHALL BE OF QUALITY PRESCRIBED IN CROWN OBSERVATIONS AND CROWN OBSERVATIONS DETAILS AND SPECIFICATIONS.
 - SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

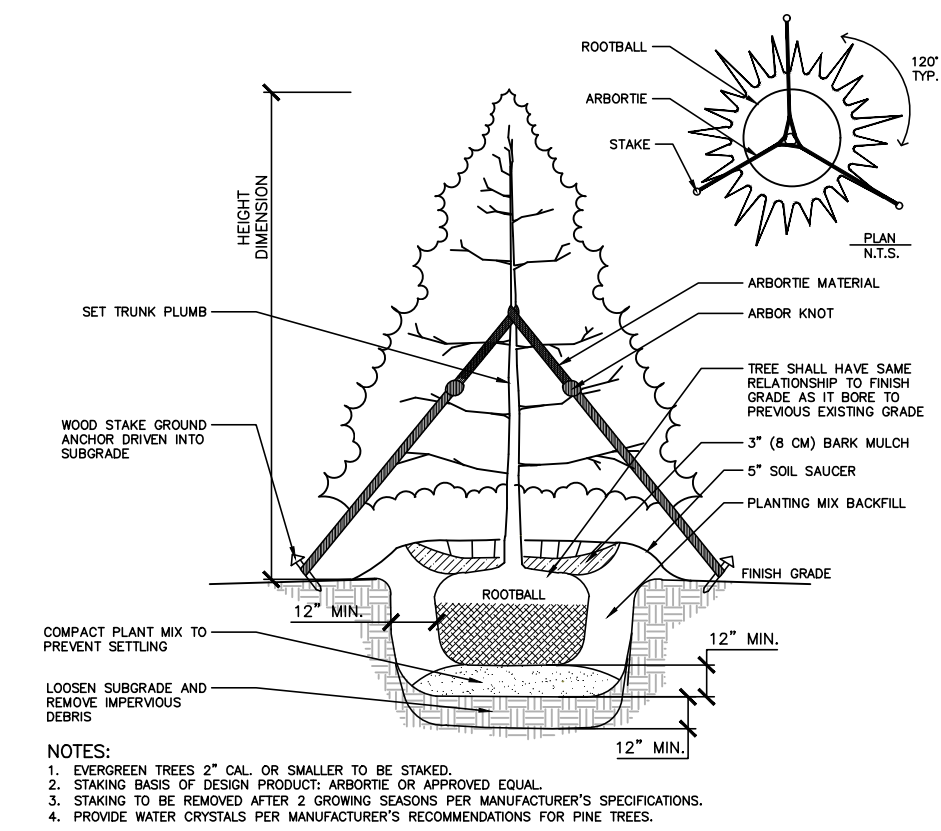
03 TREE ON SLOPE 5% (20:1) TO 50% (2:1) - MODIFIED SOIL

SCALE: N.T.S.



04 ALTERNATE TREE STAKING METHOD (TOWN OF WAKE FOREST TYP. DETAIL)

SCALE: NTS



- NOTES:
- FENCE PRODUCT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

PRODUCT INFORMATION:
SUPPLIER: FENCE DEPOT.COM
MODEL: RESIDENTIAL SOLID PANEL PRIVACY FENCE
<https://www.fence-depot.com/fence/residential-solid-panel-aluminum-privacy-fence/>
1.833.442.3655

05 ALUMINUM PRIVACY FENCE

SCALE: NTS

06 EVERGREEN TREE PLANTING

SCALE: NTS

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH (WATER AND SEWER) AND NCDOT STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST VERSION OF THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH (WATER AND SEWER) AND NCDOT STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST, NCDOT AND THE CITY OF RALEIGH (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

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04/25/2024
Public Works/Engineering

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Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION

OVERALL PLANT SCHEDULE

TREES	CODE	QTY	AREA_A	AREA_B	BOTANICAL / COMMON NAME	CAL	HEIGHT	CONT	
	IEB	16	4		Ilex x 'Emily Bruner' / Emily Bruner Holly	-	6-8'		
	LIN	20	3		Lagerstroemia indica x fauriei 'Natchez' / Natchez Crape Myrtle Multi-Trunk	-	6-8'		
	NSS	8	2		Nyssa sylvatica / Sour Gum	2.5"			
	UAP	7	3		Ulmus americana 'Princeton' / American Elm	2.5"			
SHRUBS	CODE	QTY	AREA_A	AREA_B	BOTANICAL / COMMON NAME	HEIGHT	SPACING	CONT	
	AEA	122	30		Abelia x 'Edward Goucher' / Edward Goucher Abelia	18" min		3 gal	
	AZEN	39			Azalea Encore TM / Encore Azalea	24"			
	ICCC	107	28		Ilex cornuta 'Carissa' / Carissa Holly	24"			
	IVYN	80	20		Ilex vomitoria 'Nana' / Dwarf Yaupon Holly	24"			
	JVTA	35			Juniperus virginiana 'Taylor' / Taylor Eastern Redcedar	48" min		7 gal	
	RIIH	96	24		Rhaphiolepis indica / Indian Hawthorn	18-24"			
	TOEG	79			Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae	48" min			
GROUND COVERS	CODE	QTY	AREA_A	AREA_B	BOTANICAL / COMMON NAME	CONT	HEIGHT	SPREAD	SPACING
	ANNU	98 sf	56 sf		Annuals Annual / Annuals	-			
	CDTT	4,007 sf	1,698 sf	2,309 sf	Cynodon dactylon 'TifTuf' / Bermuda Grass	Sod			
	MCPM	401	80	321	Muhlenbergia capillaris / Pink Muhly Grass	1 gal		24" o.c.	
	PAHG	121	121		Pennisetum alopecuroides 'Hamelin' / Hamelin Fountain Grass	1 gal		30" o.c.	

NOTE: PREVIOUSLY APPROVED STREET TREE SPECIES AND QUANTITIES NOT INCLUDED WITH OVERALL PLANT SCHEDULE. SEE SHEETS L5.00 AND L5.01 FOR LOCATION OF PREVIOUSLY APPROVED STREET TREES

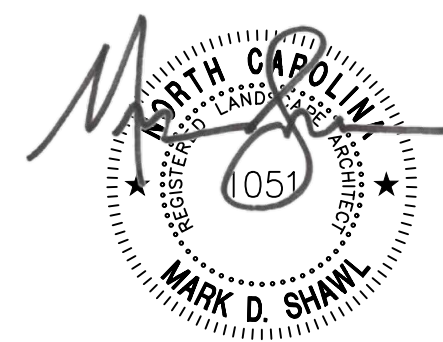
X:\Projects\RAP\19000\04-Production\Engineering\Construction Drawings\Current Drawings\South Franklin Office\19000-SF-L5.dwg, 2/23/2024 11:57:49 PM, Dwayne Peterson

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsc.com

CLIENT
TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
Patrick Reidy
PHONE: 919. 435. 9510

REVISIONS

NO.	DATE
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TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP-19000
FILENAME RAP19000-SF-L51
CHECKED BY MDS
DRAWN BY MDS
SCALE NTS
DATE 02. 23. 2024

LANDSCAPE DETAILS
S. FRANKLIN STREET

L5.10

TRAFFIC NOTES

ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST MUTCD AND 2018 NCDOT STANDARDS

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 5163 (S. FRANKLIN STREET)	MONDAY THROUGH FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM

B) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 5163 (S. FRANKLIN STREET)	ANYTIME

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 5163 (S. FRANKLIN STREET)	MONDAY THROUGH FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 300 IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE TOWN ENGINEER AND NCDOT DISTRICT ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE 3 DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 300 IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

P) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS SHOWN ON PLAN SHEETS.

R) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

U) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

V) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" – NC DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED ATTENUATOR
1180.01	SKINNY – DRUMS
1205.01	PAVEMENT MARKINGS – LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS – TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS – INTERSECTIONS
1205.05	PAVEMENT MARKINGS – TURN LANES
1205.07	PAVEMENT MARKINGS – PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS – SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS – PAINTED ISLANDS

MANAGEMENT STRATEGIES

THE INTENT IS TO USE LANE CLOSURES AND TEMPORARY FLAGGING TO CONSTRUCT THE IMPROVEMENTS IN PHASES AS DIRECTED BELOW. THE EXISTING TRAFFIC PATTERN WILL BE RESTORED FOR PEAK HOUR TRAVEL FOR PHASES 1 AND 2. LANE SHIFTS WITH TEMPORARY MARKING WILL BE UTILIZED FOR MEDIAN CONSTRUCTION FOR PHASE 3 AND LEFT IN PLACE UNTIL FINAL SURFACING.

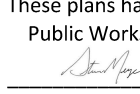
TRAFFIC TO BE MAINTAINED ON SOUTH FRANKLIN STREET IN BOTH DIRECTIONS AT ALL TIMES WITH THE EXCEPTION OF FLAGGING OPERATIONS AS NECESSARY FOR THE INSTALLATION OF STORM DRAINAGE, UTILITIES OR OTHER INCIDENTAL CONSTRUCTION WHERE LANE CLOSURES CANNOT BE AVOIDED.

ACCESS TO EXISTING DRIVEWAYS AND CONNECTING ROADS WILL BE MAINTAINED FOR THE DURATION OF THE PROJECT. CONTRACTOR TO COORDINATE WITH ADJACENT PROPERTY OWNERS.

SEE GENERAL NOTES, PHASING NOTES, AND DETAIL SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

INDEX OF SHEETS

SHEET NO.	TITLE
C10.00	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND INDEX OF SHEETS)
C10.01	TRAFFIC CONTROL PHASING & SECTIONS
C10.10	TRAFFIC CONTROL PLAN PHASE 1 STA. 10+00 – STA. 26+00
C10.11	TRAFFIC CONTROL PLAN PHASE 1 STA. 26+00 – STA. 46+00
C10.20	TRAFFIC CONTROL PLAN PHASE 2 STA. 10+00 – STA. 26+00
C10.21	TRAFFIC CONTROL PLAN PHASE 2 STA. 26+00 – STA. 46+00
C10.30	TRAFFIC CONTROL PLAN PHASE 3 STA. 10+00 – STA. 26+00
C10.31	TRAFFIC CONTROL PLAN PHASE 3 STA. 26+00 – STA. 46+00

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 Public Works/Engineering

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The John R. McAdams Company, Inc.
 2905 Meridian Parkway
 Durham, NC 27713

 phone 919.361.5000
 fax 919.361.2269
 license number: C-0293, C-187

www.mcadamsco.com

CLIENT

TOWN OF WAKE FOREST
 301 S. BROOKS STREET
 WAKE FOREST, NC 27587-2901
 PATRICK REIDY
 PHONE: 919.435.9510

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Digitally signed by David L. Smith
 DN: cn=David L. Smith, o=NCE
 email=ds@residence.com, Date: 2023.05.15 14:32:30 -0400

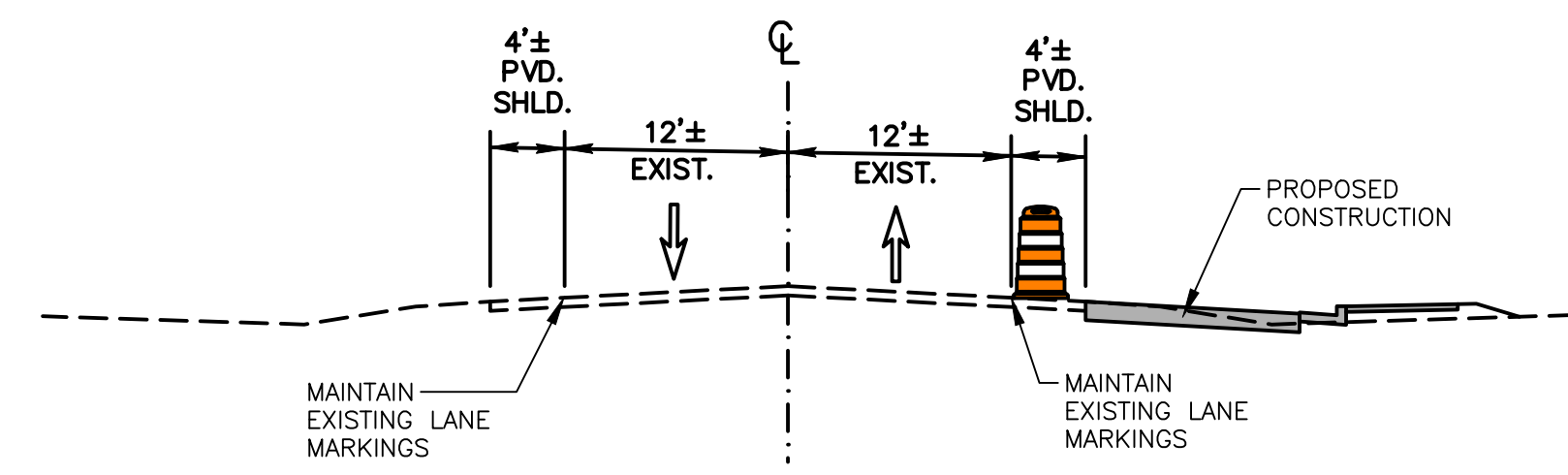
**TOWN OF WAKE FOREST SOUTH FRANKLIN
 STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 0 SOUTH FRANKLIN STREET
 WAKE FOREST, NORTH CAROLINA**

PLAN INFORMATION

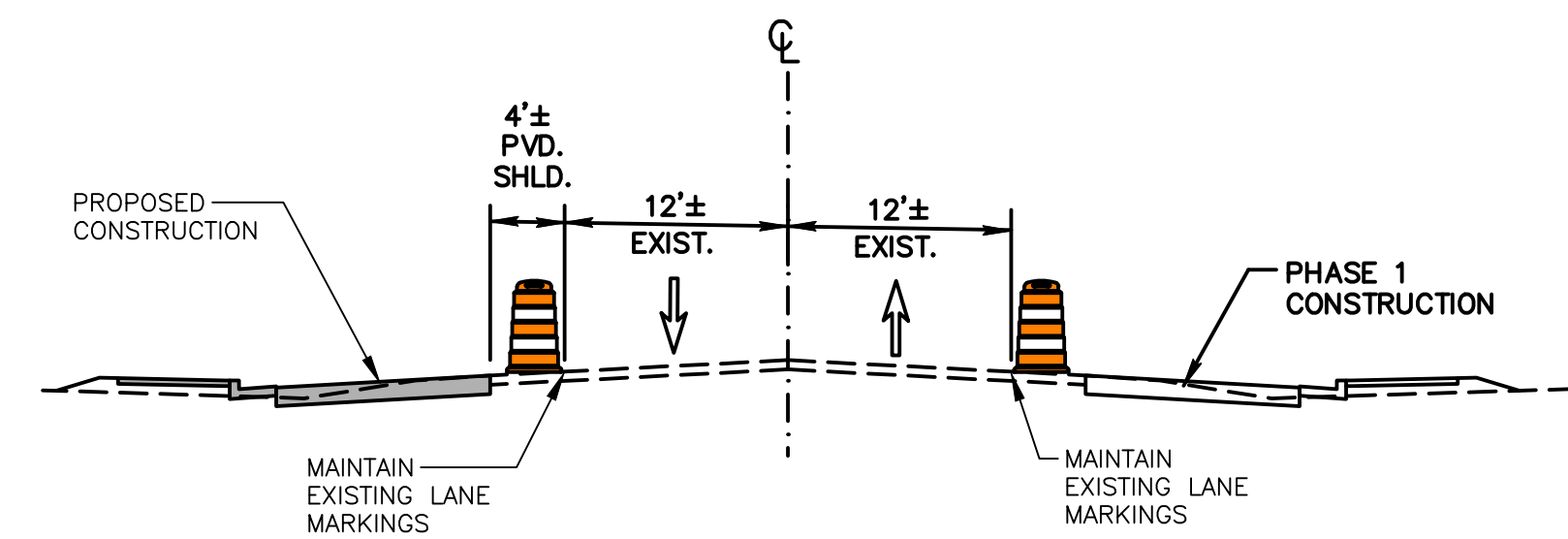
PROJECT NO. RAP19000
 FILENAME RAP19000-TCP-C1
 CHECKED BY DLS
 DRAWN BY BTB
 SCALE N/A
 DATE 05/15/2023

TRAFFIC CONTROL OPERATIONS PLAN

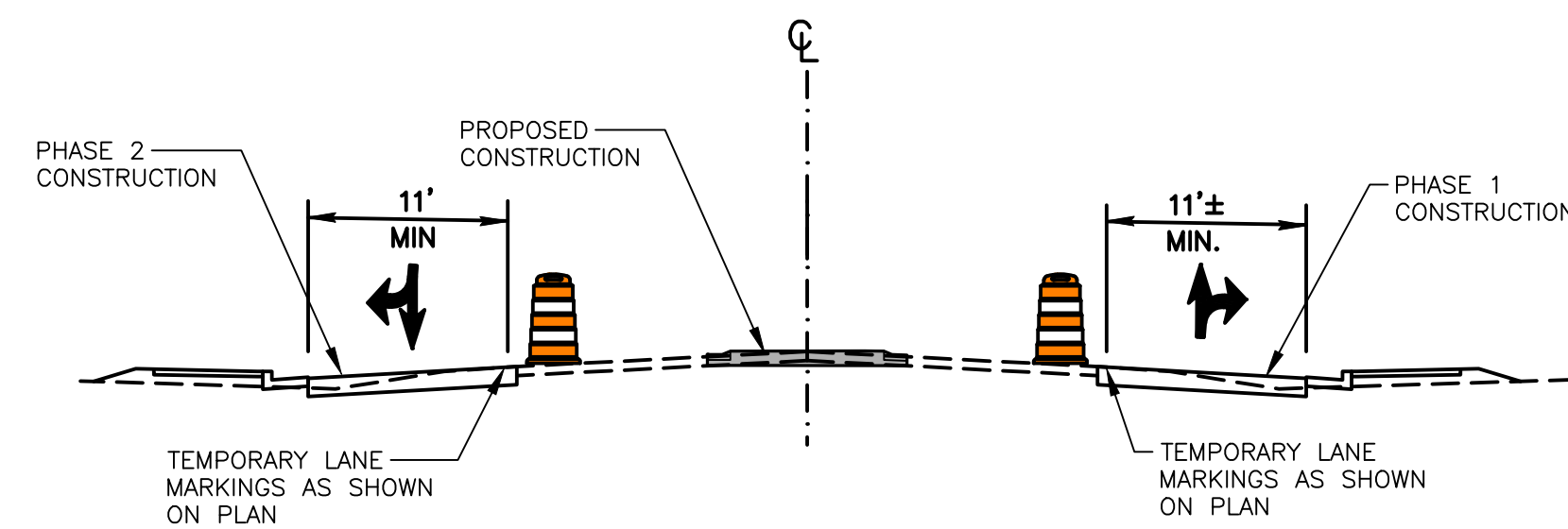
C10.00



PHASE 1 CONSTRUCTION



PHASE 2 CONSTRUCTION



PHASE 3 CONSTRUCTION

PHASE I: (SEE C10.10 AND C10.11 FOR ADDITIONAL PHASING INFORMATION)

STEP 1:
PRIOR TO BEGINNING WORK, INSTALL ADVANCED WARNING SIGNS PER NCDOT STANDARD DRAWING 1101.01 AND AS INDICATED ON PLAN SHEETS. COMPLETE EACH PHASE AND ADJUST SIGNING, AS REQUIRED, PRIOR TO MOVING TO NEXT PHASE.

STEP 2:
WHILE MAINTAINING EXISTING TRAFFIC IN BOTH DIRECTIONS AND USING NCDOT STANDARD DRAWING 1101.04 TO CLOSE SHOULDER AND/OR NCDOT STANDARD DRAWING 1101.02 TO CLOSE LANES AS SHOWN ON PLAN SHEETS, CONSTRUCT IMPROVEMENTS ON THE EAST (RIGHT) SIDE OF SOUTH FRANKLIN STREET INCLUDING MILLING, PAVEMENT WIDENING (UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE), DRAINAGE, AND GUARDRAIL.

AS NECESSARY, USING NCDOT STANDARD DRAWING 1101.02, SHEET 1 OF 14, UNDER FLAGGER CONTROL, INSTALL DRAINAGE CROSSINGS WHILE MAINTAINING AT LEAST ONE TRAVEL LANE AT ALL TIMES.

PHASE II: (SEE C10.20 AND C10.21 FOR ADDITIONAL PHASING INFORMATION)

STEP 1:
ADJUST ADVANCED WARNING SIGNS PER NCDOT STANDARD DRAWING 1101.01 AND AS INDICATED ON PLAN SHEETS.

STEP 2:
WHILE MAINTAINING EXISTING TRAFFIC IN BOTH DIRECTIONS AND USING NCDOT STANDARD DRAWING 1101.04 TO CLOSE SHOULDER AND/OR NCDOT STANDARD DRAWING 1101.02 TO CLOSE LANES AS SHOWN ON PLAN SHEETS, CONSTRUCT IMPROVEMENTS ON THE WEST (LEFT) SIDE OF SOUTH FRANKLIN STREET INCLUDING MILLING, PAVEMENT WIDENING (UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE), DRAINAGE, AND GUARDRAIL.

PHASE III: (SEE C10.30 AND C10.31 FOR ADDITIONAL PHASING INFORMATION)

STEP 1:
INSTALL PROPOSED TEMPORARY LANE MARKINGS AS SHOWN ON SHEETS C10.30 AND C10.31 AND ADJUST ADVANCED WARNING SIGNS PER NCDOT STANDARD DRAWING 1101.01

STEP 2:
SEE GENERAL NOTES ON NCDOT STANDARD DRAWING 1101.02, PAGE 2 OF 14 AND SPECIFIC REQUIREMENTS AS SHOWN ON SHEETS C10.30 AND C10.31, CLOSE MEDIAN LANES AND CONSTRUCT IMPROVEMENTS IN MEDIAN AREA WHILE MAINTAINING TRAFFIC IN BOTH DIRECTIONS OF SOUTH FRANKLIN STREET.

STEP 3:
UPON COMPLETION OF CONSTRUCTION WORK IN PHASE III, USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES, PLACE FINAL SURFACE COURSE ON THE SOUTH FRANKLIN STREET AND FINAL PAVEMENT MARKINGS AS SHOWN ON PAVEMENT MARKING PLANS (C2.10 AND C2.11). REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE

PHASE IV:

STEP 1:
UPON COMPLETION OF CONSTRUCTION WORK IN PHASE III, USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AND USING NCDOT STANDARD DRAWING 1101.02, SHEET 1 OF 14, UNDER FLAGGER CONTROL AS NECESSARY, PLACE FINAL SURFACE COURSE ON SOUTH FRANKLIN STREET.

STEP 2:
INSTALL FINAL PAVEMENT MARKINGS AS SHOWN ON PAVEMENT MARKING PLANS (C2.10 AND C2.11). REMOVE ALL TRAFFIC CONTROL DEVICES AND TEMPORARY SIGNAGE.

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smeyr
04/25/2024
Public Works/Engineering

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The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
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CLIENT
TOWN OF WAKE FOREST
301 S. BROOKS STREET
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PATRICK REIDY
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TOWN OF WAKE FOREST SOUTH FRANKLIN
STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP19000
FILENAME RAP19000-TCP-C1
CHECKED BY DLS
DRAWN BY BTB
SCALE 1"=10'
DATE 02/24/2023

TRAFFIC CONTROL PHASING & SECTIONS

C10.01

LEGEND

- WORK ZONE
- VEHICLE MOUNTED ATTENUATOR
- CHANNELIZING DEVICE (DRUM OR CONE)
- TYPE III BARRICADE
- FLASHING ARROW BOARD
- CONSTRUCTION SIGN

PAVEMENT MARKING SCHEDULE

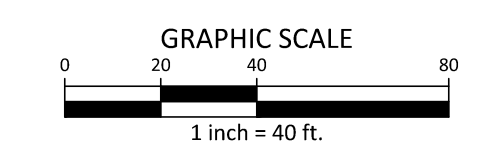
SYMBOL	DESCRIPTION
PAINT(4")	
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	3 FT. - 9 FT./SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
PAINT PAVEMENT MARKING SYMBOLS (WHITE)	
QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QE	COMBO. RIGHT/STRAIGHT ARROW

NOTE: SECTION OF ROAD WITH EXISTING EDGE OF PAVEMENTS TO BE OVERLAID.

POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

GENERAL NOTES:

- SEE SHEET C10.00 FOR LANE AND SHOULDER CLOSING REQUIREMENTS AND ADDITIONAL INFORMATION.
- SEE SHEET C10.01 FOR PHASING NOTES AND INFORMATION.
- ALL SIGNS SHALL MEET CURRENT NCDOT AND MUTCD STANDARDS FOR COLOR, REFLECTIVITY, SIZE AND LETTER SIZE.
- CONFLICTING PAVEMENT MARKINGS AND SIGNING SHALL BE REMOVED OR OTHERWISE COVERED FOR EACH PHASE OF CONSTRUCTION.
- SEE ROADWAY WIDENING PLANS FOR CONSTRUCTION INFORMATION.
- TEMPORARY PAVEMENT MARKING (PAINT) SHALL BE IN ACCORDANCE WITH NCDOT SPECIFICATIONS.
- SEE SHEET C2.10 AND C2.11 FOR FINAL PAVEMENT MARKING PLANS (PHASE IV).
- DURING CONSTRUCTION, ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. EXISTING PEDESTRIAN ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

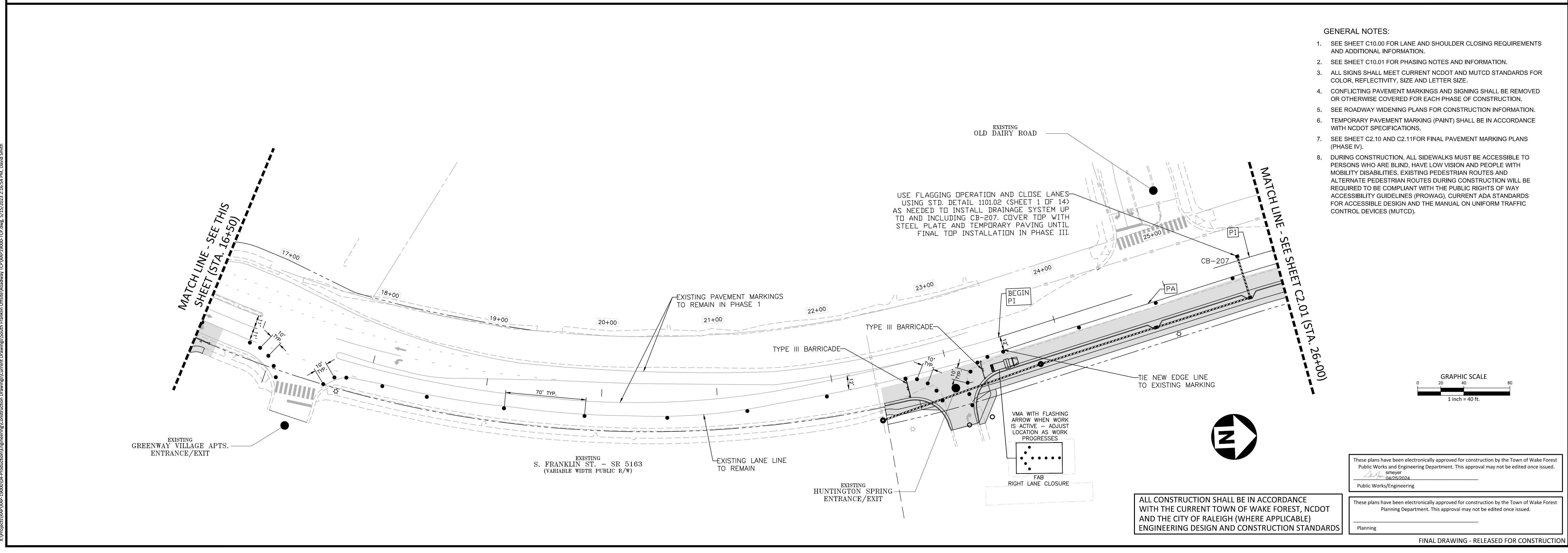
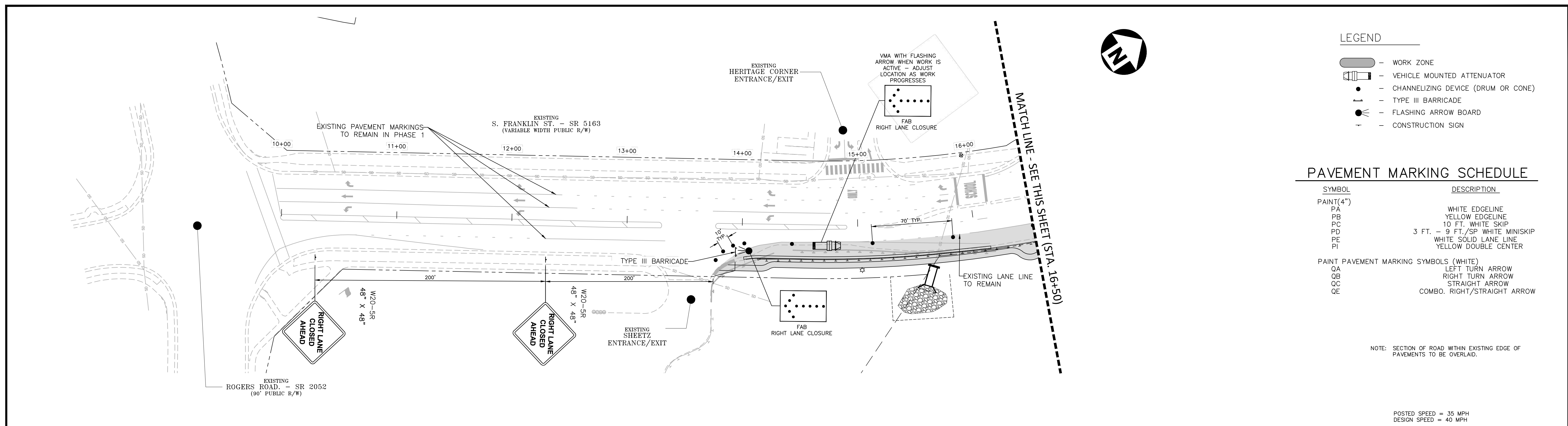


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Date: 04/25/2024
Public Works/Engineering

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Planning

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FINAL DRAWING - RELEASED FOR CONSTRUCTION



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The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919.361.5000
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license number: C-0293, C-187

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CLIENT
TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
PATRICK REIDY
PHONE: 919.435.9510

REVISIONS

NO.	DATE
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David L. Smith
Professional Engineer
State of North Carolina
No. 20744

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

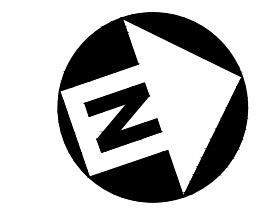
PROJECT NO.	RAP19000
FILENAME	RAP19000-TCP
CHECKED BY	DLS
DRAWN BY	BTB
SCALE	1" = 40'
DATE	05-15-2023

TRAFFIC CONTROL PLAN - PHASE 1
S. FRANKLIN STREET, STA. 10+00 - STA. 26+00

C10.10

USE FLAGGING OPERATION AND CLOSE LANES USING STD. DETAIL 1101.02 (SHEET 1 OF 14) AS NEEDED TO INSTALL DRAINAGE SYSTEM UP TO AND INCLUDING CB-308 AND CB-302. COVER TOP WITH STEEL PLATE AND TEMPORARY PAVING UNTIL FINAL TOP INSTALLATION IN PHASE III.

USE FLAGGING OPERATION AND CLOSE LANES USING STD. DETAIL 1101.02 (SHEET 1 OF 14) AS NEEDED TO INSTALL DRAINAGE SYSTEM UP TO AND INCLUDING JB-401A. COVER TOP WITH STEEL PLATE AND TEMPORARY PAVING UNTIL FINAL TOP INSTALLATION IN PHASE III.



MATCH LINE - SEE SHEET C-2.00 (STA. 26+00)

MATCH LINE - SEE THIS SHEET (STA. 37+00)

- GENERAL NOTES:**
- SEE SHEET C10.00 FOR LANE AND SHOULDER CLOSING REQUIREMENTS AND ADDITIONAL INFORMATION.
 - SEE SHEET C10.01 FOR PHASING NOTES AND INFORMATION.
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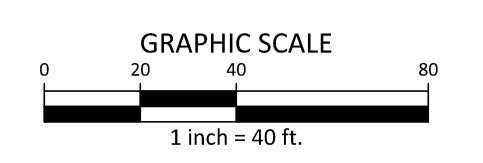
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

LEGEND

- WORK ZONE
- VEHICLE MOUNTED ATTENUATOR
- CHANNELIZING DEVICE (DRUM OR CONE)
- TYPE III BARRICADE
- FLASHING ARROW BOARD
- CONSTRUCTION SIGN

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	3 FT. - 9 FT./SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QE	COMBO. RIGHT/STRAIGHT ARROW



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Public Works/Engineering

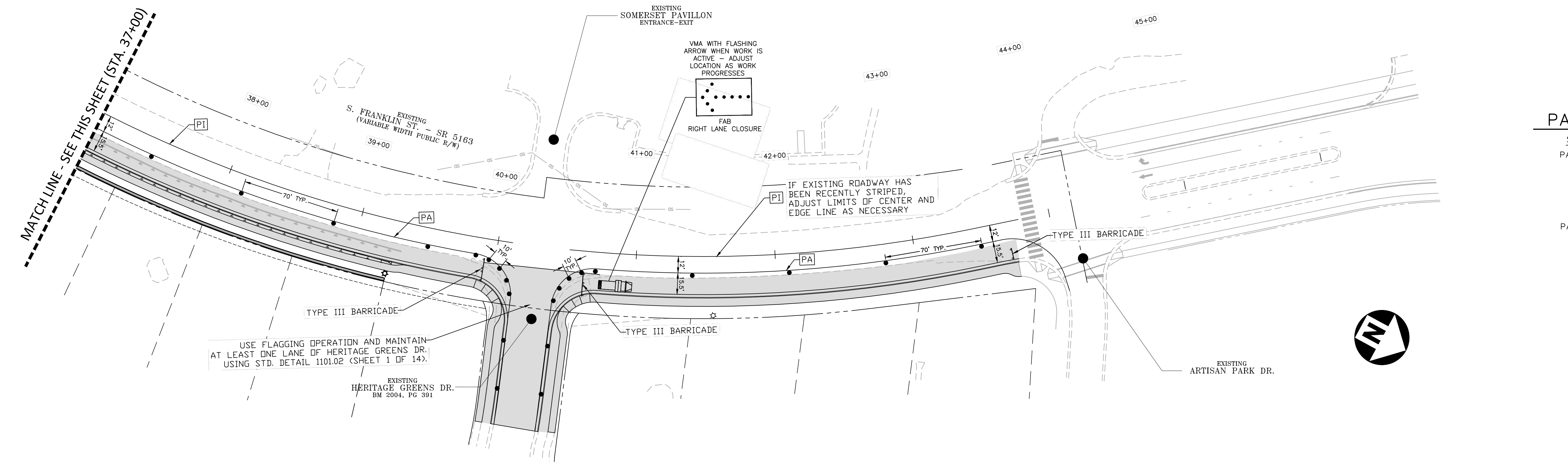
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Planning

FINAL DRAWING - RELEASED FOR CONSTRUCTION

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MATCH LINE - SEE THIS SHEET (STA. 37+00)



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WAKE FOREST, NC 27587-2901
PATRICK REIDY
PHONE: 919.435.9510

REVISIONS

NO.	DATE
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David L. Smith
Digital signed by David L. Smith
DN: cn=David L. Smith, c=US, ou=McAdams
email=ds@mcadamsco.com, o=McAdams Company, ou=Engineering
Date: 2023.05.15 14:22:09Z

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP19000
FILENAME RAP19000-TCP
CHECKED BY DLS
DRAWN BY BTB
SCALE 1" = 40'
DATE 5/15/2023

TRAFFIC CONTROL PLAN - PHASE 1
S. FRANKLIN STREET, STA. 26+00 - STA. 46+00

C10.11

LEGEND

- WORK ZONE
- VEHICLE MOUNTED ATTENUATOR
- CHANNELIZING DEVICE (DRUM OR CONE)
- TYPE III BARRICADE
- FLASHING ARROW BOARD
- CONSTRUCTION SIGN

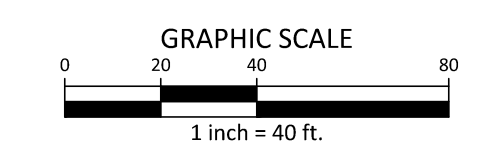
PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PAINT(4")	
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	3 FT. - 9 FT./SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
PAINT PAVEMENT MARKING SYMBOLS (WHITE)	
QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QE	COMBO. RIGHT/STRAIGHT ARROW

POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

GENERAL NOTES:

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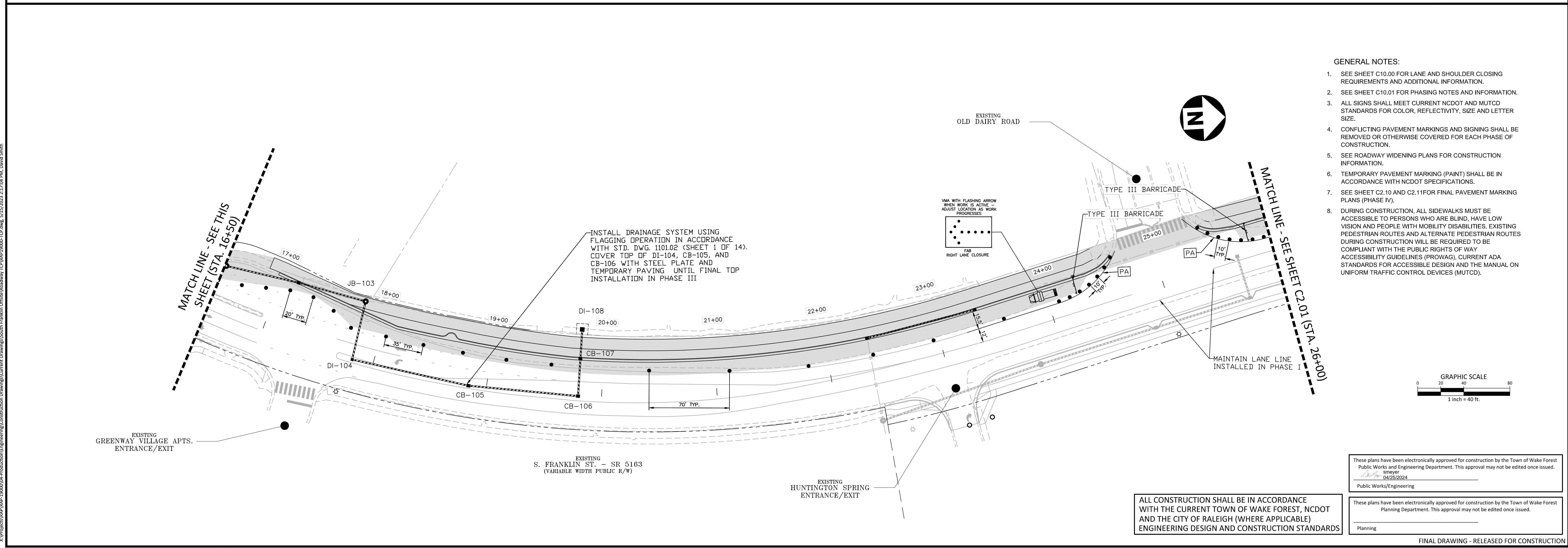
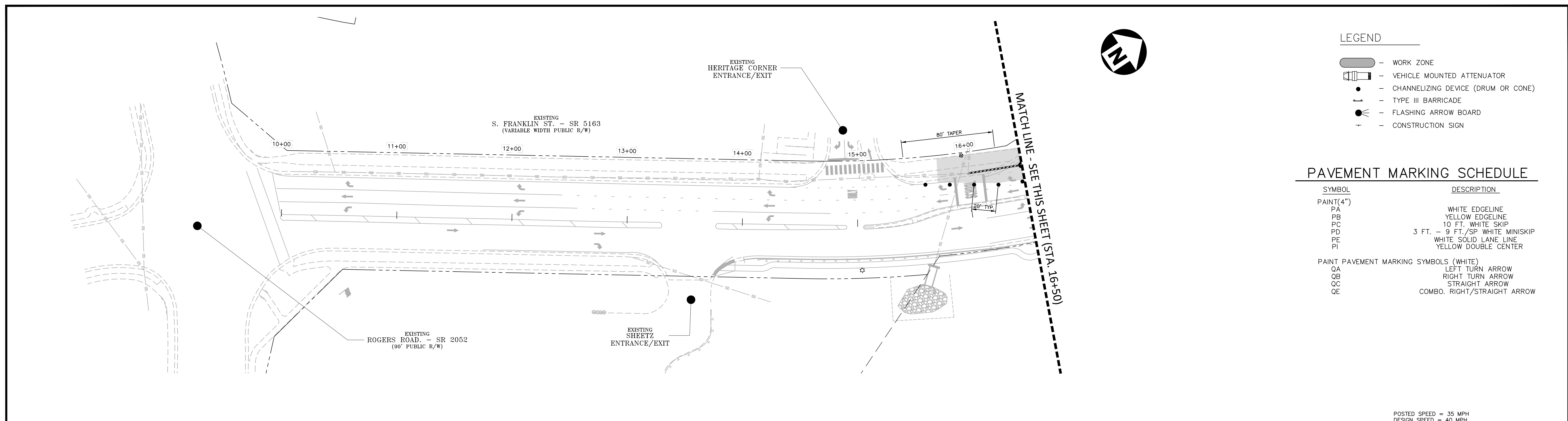


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04/25/2024
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FINAL DRAWING - RELEASED FOR CONSTRUCTION



X:\Projects\BMP\BMP-19000\04-Production\Engineering\Construction Drawings\Current Drawings\South Franklin Office\Roadway\TCP\BMP19000\TCP.dwg, 5/15/2023, 2:17:04 PM, David Smith



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REVISIONS

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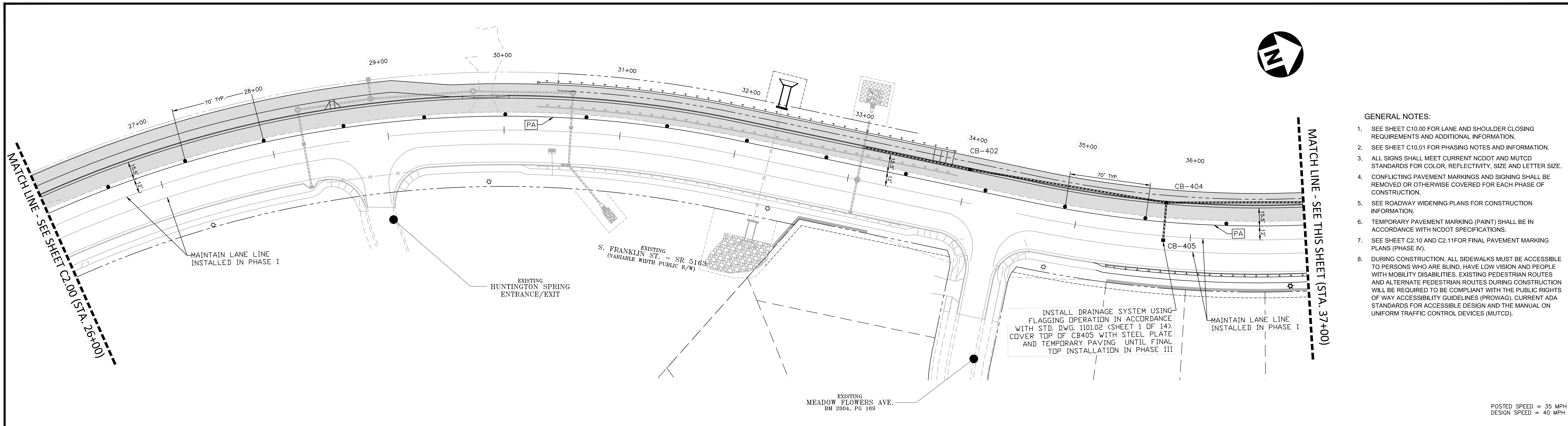
David L. Smith
Digital signed by David L. Smith
DN: cn=David L. Smith, c=US, ou=McAdams
email=dsmith@mcadamsco.com
Date: 2023.05.15 14:42:31 -0400

TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP19000
FILENAME RAP19000-TCP
CHECKED BY DLS
DRAWN BY BTB
SCALE 1" = 40'
DATE 05/15/2023

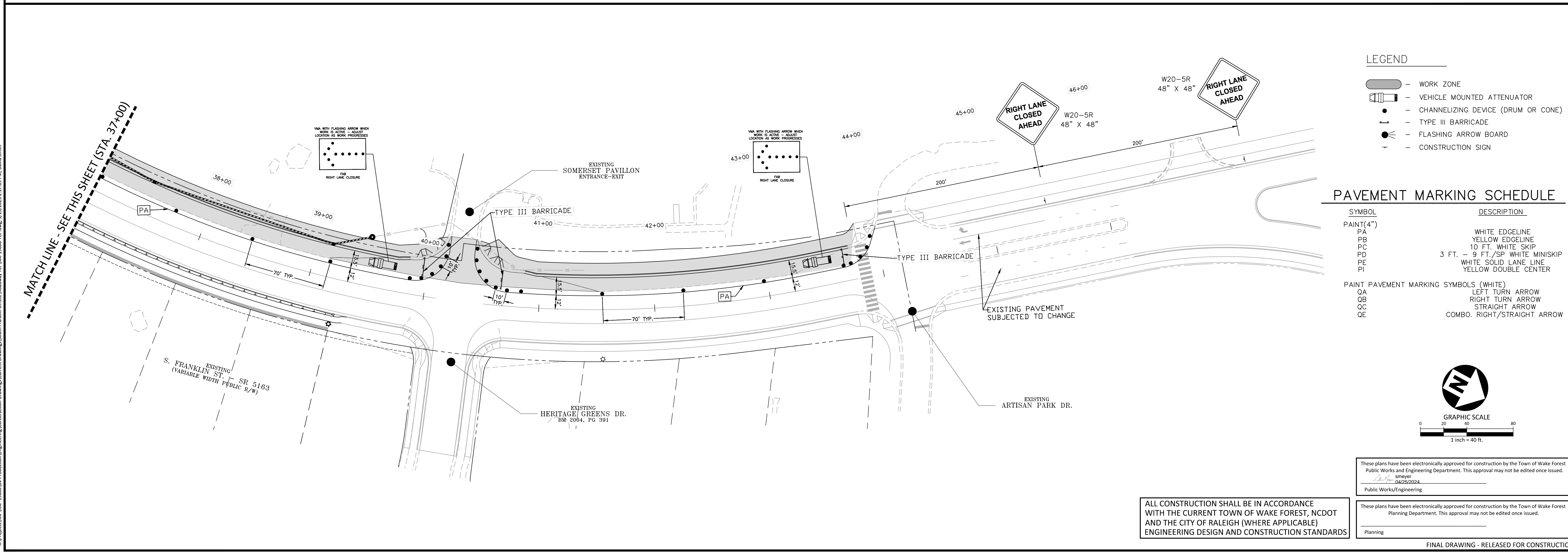
TRAFFIC CONTROL PLAN - PHASE 2
S. FRANKLIN STREET, STA. 10+00 - STA. 26+00

C10.20



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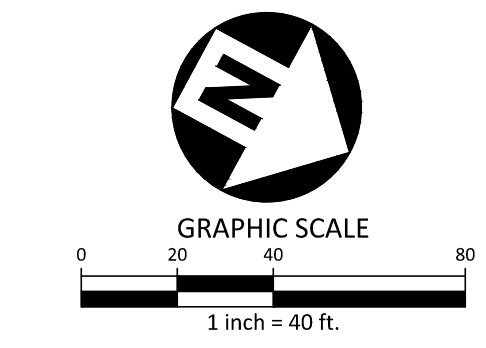
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH



- LEGEND**
- WORK ZONE
 - VEHICLE MOUNTED ATTENUATOR
 - CHANNELIZING DEVICE (DRUM OR CONE)
 - TYPE III BARRICADE
 - FLASHING ARROW BOARD
 - CONSTRUCTION SIGN

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PAINT (4")	
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	3 FT. - 9 FT./SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
PAINT PAVEMENT MARKING SYMBOLS (WHITE)	
QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QE	COMBO. RIGHT/STRAIGHT ARROW



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Planning

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2905 Meridian Parkway
Durham, NC 27713

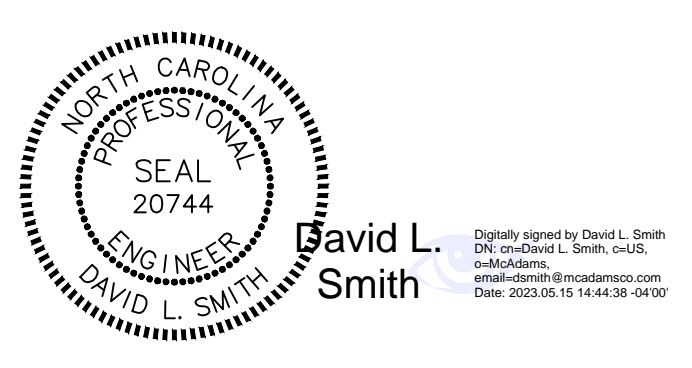
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fax 919.361.2269
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TOWN OF WAKE FOREST
301 S. BROOKS STREET
WAKE FOREST, NC 27587-2901
PATRICK REIDY
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TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
PROJECT NO. RAP19000
FILENAME RAP19000-TCP
CHECKED BY DLS
DRAWN BY BTB
SCALE 1" = 40'
DATE 5/15/2023

TRAFFIC CONTROL PLAN - PHASE 2
S. FRANKLIN STREET, STA. 26+00 - STA. 46+00

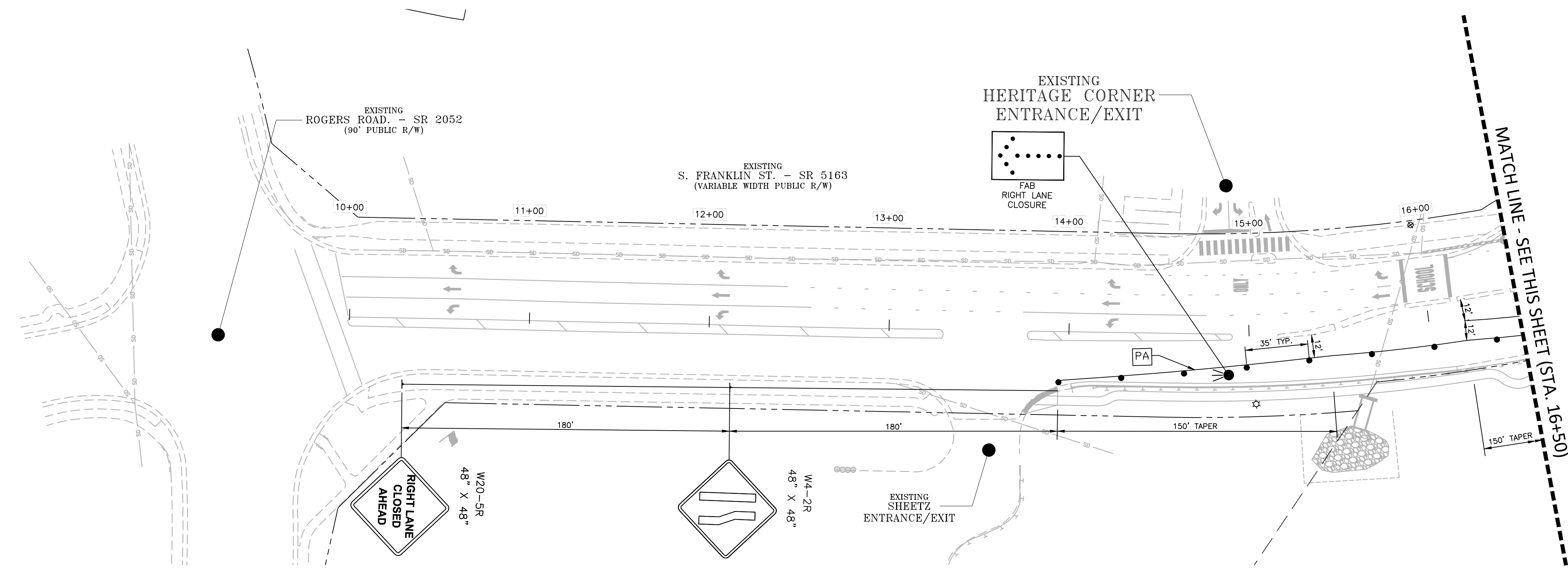
C10.21

LEGEND

- WORK ZONE
- VEHICLE MOUNTED ATTENUATOR
- CHANNELIZING DEVICE (DRUM OR CONE)
- TYPE III BARRICADE
- FLASHING ARROW BOARD
- CONSTRUCTION SIGN

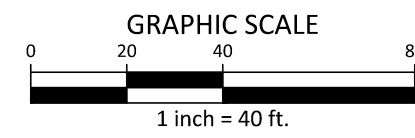
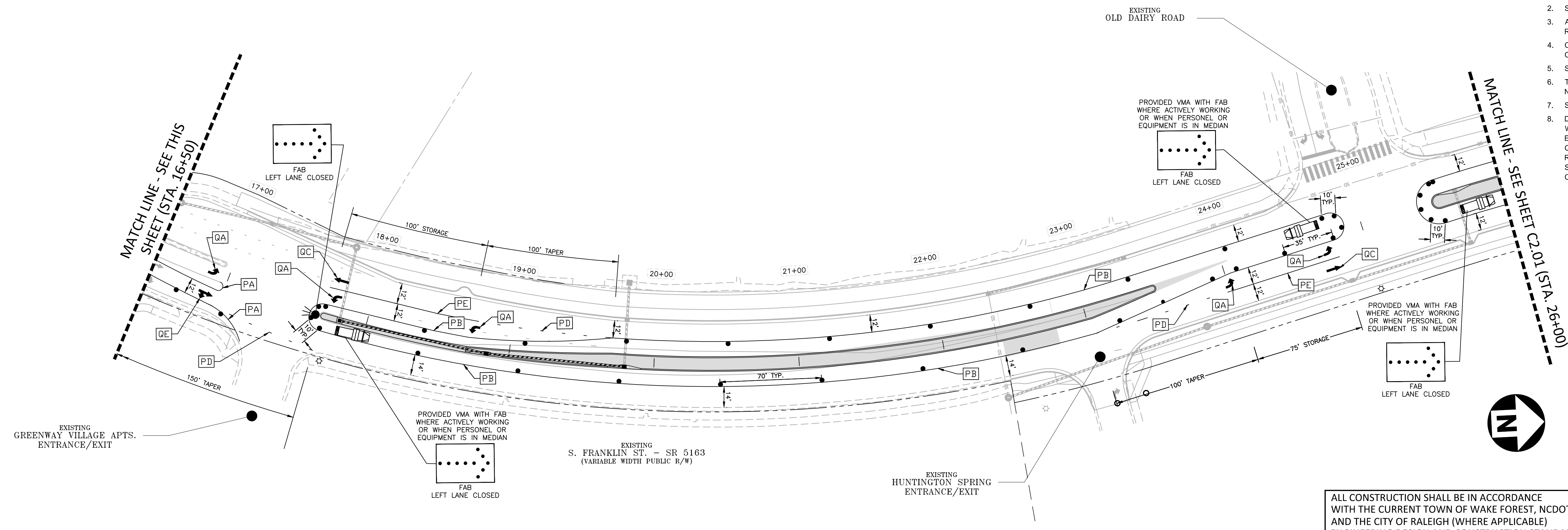
PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PAINT(4")	
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 smeyer
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 Public Works/Engineering

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REVISIONS

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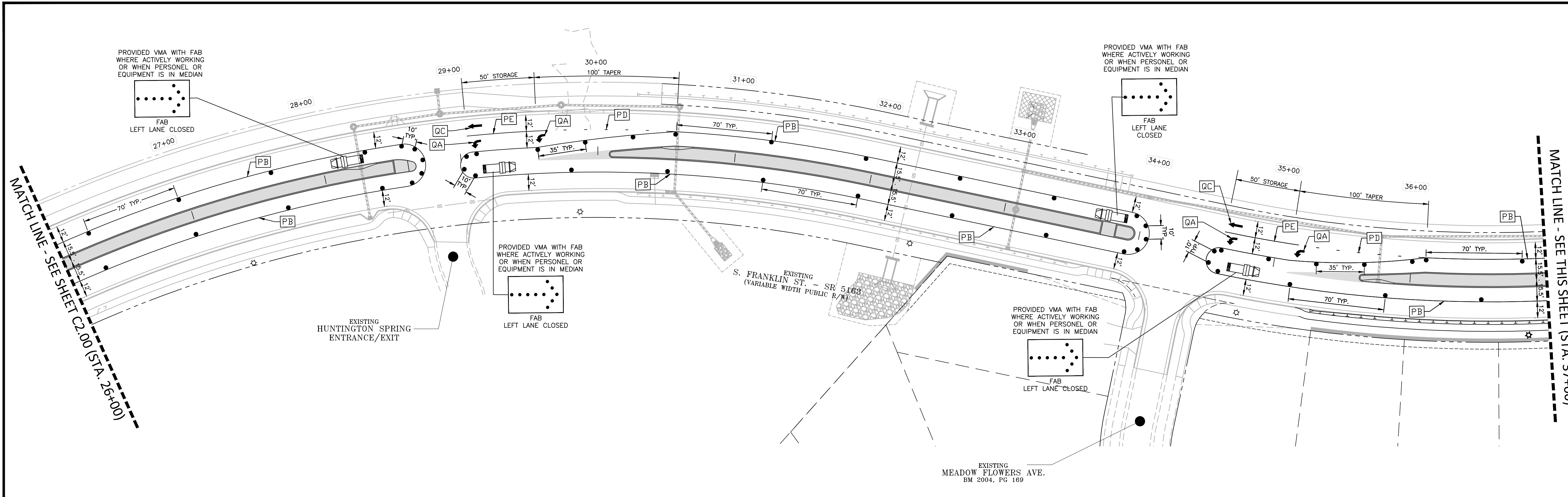


TOWN OF WAKE FOREST SOUTH FRANKLIN STREET IMPROVEMENTS
 CONSTRUCTION DRAWINGS
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 WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION
 PROJECT NO. RAP19000
 FILENAME RAP19000-TCV
 CHECKED BY DLS
 DRAWN BY BTB
 SCALE 1" = 40'
 DATE 05/15/2023

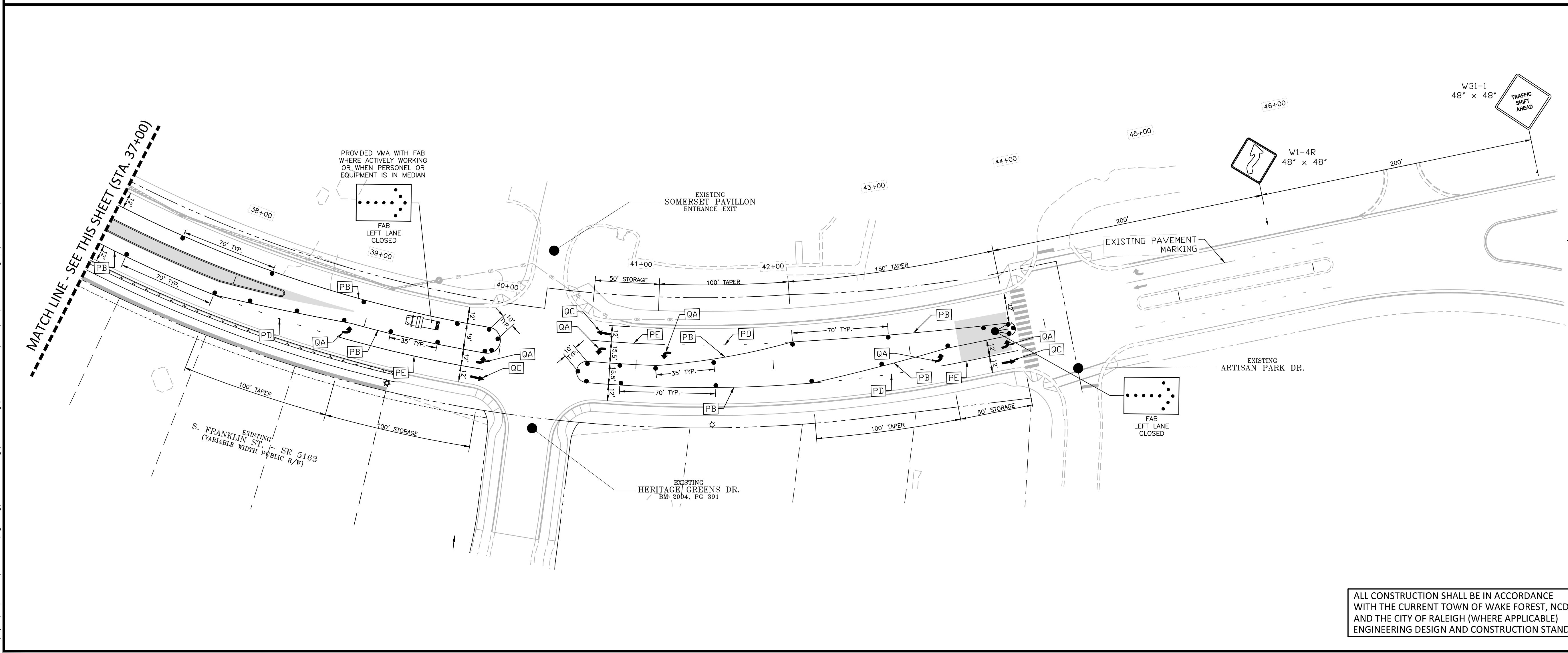
TRAFFIC CONTROL PLAN - PHASE 3
 S. FRANKLIN STREET, STA. 10+00 - STA. 26+00

C10.30



- GENERAL NOTES:**
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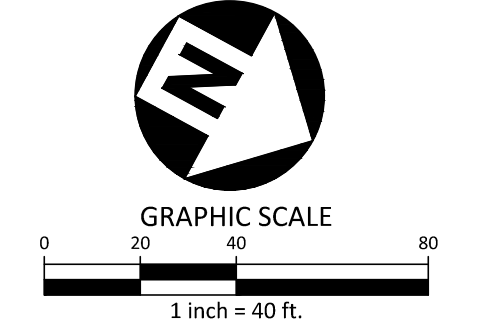
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH



- LEGEND**
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 - VEHICLE MOUNTED ATTENUATOR
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 - CONSTRUCTION SIGN

PAVEMENT MARKING SCHEDULE

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PAINT(4")	
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PB	YELLOW EDGELINE
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PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
PAINT PAVEMENT MARKING SYMBOLS (WHITE)	
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CONSTRUCTION DRAWINGS
0 SOUTH FRANKLIN STREET
WAKE FOREST, NORTH CAROLINA

PLAN INFORMATION

PROJECT NO.	RAP19000
FILENAME	RAP19000-TCP
CHECKED BY	DLS
DRAWN BY	BTB
SCALE	1" = 40'
DATE	5/15/2023

TRAFFIC CONTROL PLAN - PHASE 3
S. FRANKLIN STREET, STA. 26+00 - STA. 46+00

C10.31