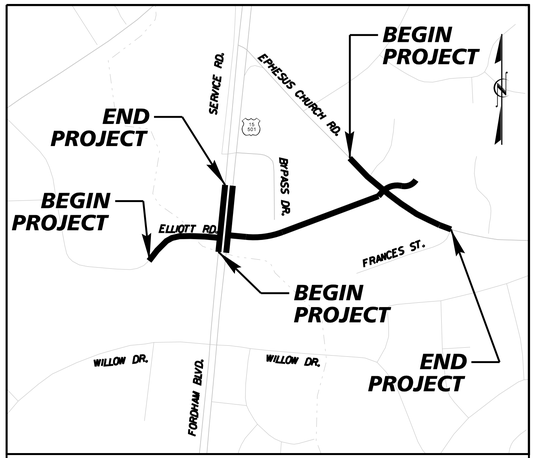
ELLIOTT ROAD EXTENSION (P21-101)

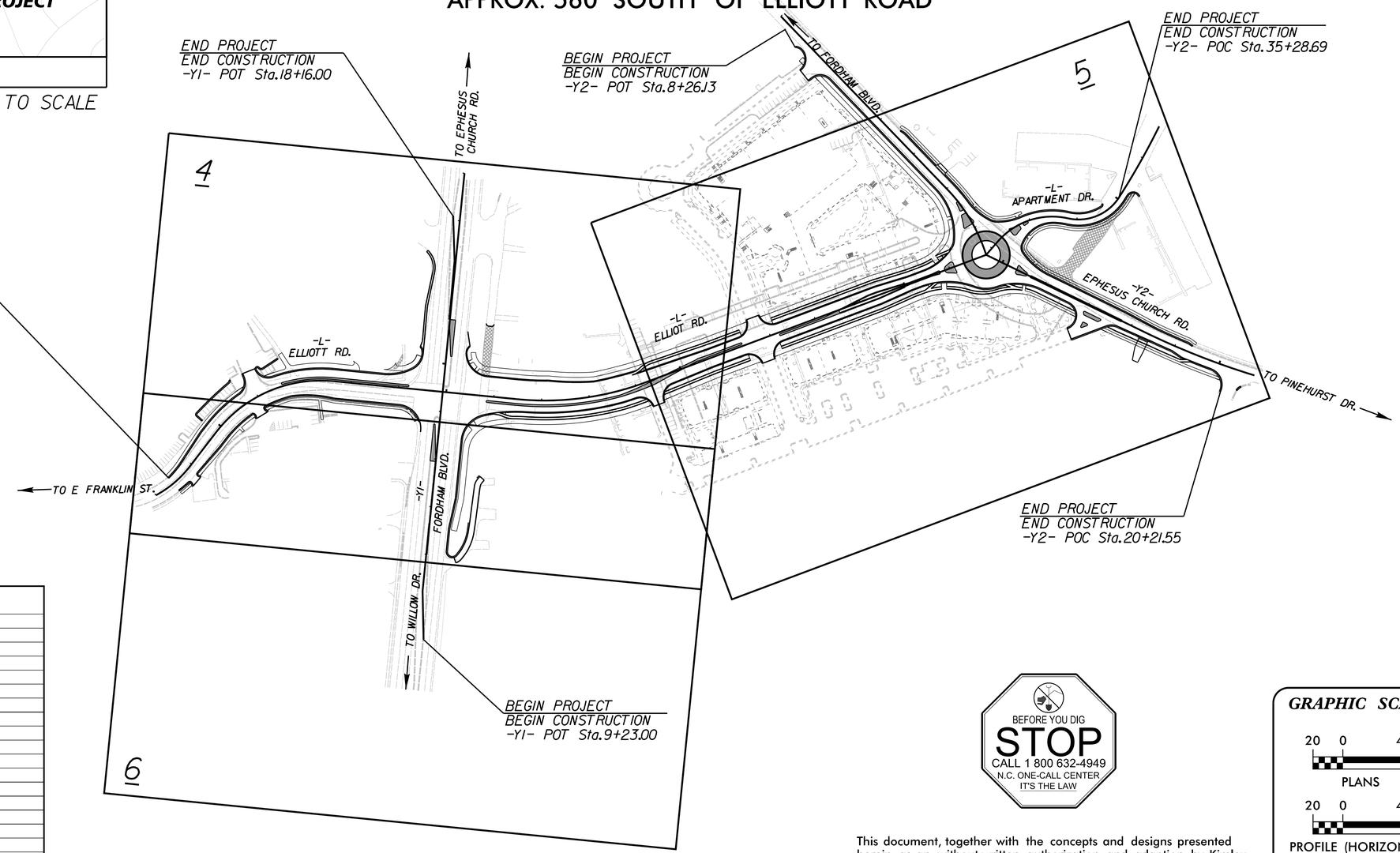
LOCATION: ELLIOTT ROAD FROM APPROX. 650' WEST OF FORDHAM BOULEVARD TO EPHESUS CHURCH ROAD; FORDHAM BOULEVARD FROM APPROX. 400' SOUTH OF ELLIOTT ROAD TO APPROX. 430' NORTH OF ELLIOTT ROAD; EPHESUS CHURCH ROAD FROM APPROX. 640' NORTH OF ELLIOTT ROAD TO APPROX. 560' SOUTH OF ELLIOTT ROAD



VICINITY MAP

NOT TO SCALE

NAD 83 (2011)



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2D	DRAINAGE DETAILS
2E	BIKE RAMP DETAILS
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PMP-1 THRU PMP-6	PAVEMENT MARKING PLAN
EC-1 THRU EC-12	EROSION CONTROL PLAN
X-1 THRU X-18	ROADWAY CROSS SECTIONS
CO1-1 THRU CO1-8	CONCRETE BOX CULVERT PLANS
CO2-1 THRU CO2-3	STEEL PIPE CULVERT PLANS
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SCP-1 THRU SCP-4	CABLE ROUTING PLANS

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N.C. ONE-CALL CENTER
IT'S THE LAW

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GRAPHIC SCALE

20 0 40
PLANS

20 0 40
PROFILE (HORIZONTAL)

5 0 10
PROFILE (VERTICAL)

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC. 27701
PHONE: 919-677-2000
FAX: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045195 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/7/2020
SCALE AS SHOWN
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TITLE SHEET

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
1

GENERAL NOTES: 2018 SPECIFICATIONS

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:

WATER AND SEWER:	ORANGE WATER AND SEWER AUTHORITY ATTN: NICK PARKER PHONE: (919) 537-4201
TELEPHONE:	AT&T ATTN: BILLY GRINER PHONE: (919) 788-2752
CABLE:	TIME WARNER CABLE ATTN: GEORGE STOTLER PHONE: (919) 573-7667
POWER:	DUKE ENERGY ATTN: EDDIE WATKINS PHONE: (919) 882-5001
GAS:	PSNC ENERGY ATTN: BECKY POOLE PHONE: (919) 367-2705

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACTOR.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. 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
DIVISION 2 - EARTHWORK	
200.02	METHOD OF CLEARING - METHOD II
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
DIVISION 3 - PIPE CULVERTS	
300.01	METHOD OF PIPE INSTALLATION
310.02	PARALLEL PIPE END SECTION - PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE
310.10	DRIVEWAY PIPE CONSTRUCTION
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	PAVEMENT REPAIRS
DIVISION 8 - INCIDENTALS	
806.01	CONCRETE RIGHT-OF-WAY MARKER
806.02	GRANITE RIGHT-OF-WAY MARKER
838.21	REINFORCED CONCRETE ENDWALL - FOR SINGLE 54" PIPE 90 SKEW
838.45	NOTES FOR REINFORCED CONCRETE ENDWALL - STD. DWG 838.21 THRU 838.40
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01	BRICK CATCH BASIN - 12" THRU 54" PIPE
840.02	CONCRETE CATCH BASIN - 12" THRU 54" PIPE
840.03	FRAME, GRATES AND HOOD - FOR USE ON STANDARD CATCH BASIN
840.14	CONCRETE DROP INLET - 12" THRU 30" PIPE
840.15	BRICK DROP INLET - 12" THRU 30" PIPE
840.16	DROP INLET FRAME AND GRATES - FOR USE WITH STD. DWG 840.14 AND 840.15
840.18	CONCRETE GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.22	FRAMES AND WIDE SLOT SAG GRATES
840.24	FRAMES AND NARROW SLOT SAG GRATES
840.25	ANCHORAGE FOR FRAMES - BRICK OR CONCRETE OR PRECAST
840.27	BRICK GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.31	CONCRETE JUNCTION BOX - 12" THRU 66" PIPE
840.32	BRICK JUNCTION BOX - 12" THRU 66" PIPE
840.34	TRAFFIC BEARING JUNCTION BOX - FOR USE WITH PIPES 42" AND UNDER
840.45	PRECAST DRAINAGE STRUCTURE
840.46	TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
840.66	DRAINAGE STRUCTURE STEPS
840.72	PIPE COLLAR
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
848.01	CONCRETE SIDEWALK
848.02	DRIVEWAY TURNOUT - RADIUS TYPE
848.04	STREET TURNOUT
848.05	CURB RAMP - PROPOSED CURB & GUTTER

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 042325 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

PROJECT NOTES

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
1A

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Note: Not to Scale

S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail — T
- Proposed Guardrail — T
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line
- Designated U/G Water Line (S.U.E.*)
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS: - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020	
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

CONVENTIONAL SYMBOLS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
1B

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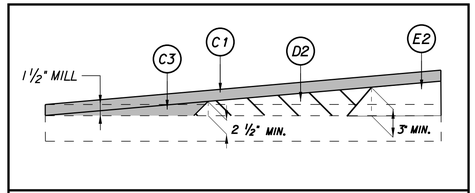
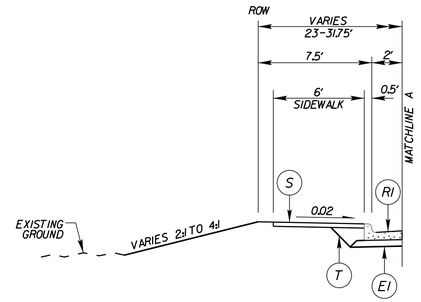
PAVEMENT SCHEDULE

C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROPOSED 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 2.5" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C. AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROPOSED 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" IN DEPTH.
E1	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0C. AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROPOSED 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" IN DEPTH OR GREATER THAN 5" IN DEPTH.
J1	PROPOSED 8" AGGREGATE BASE COURSE
J2	PROPOSED 6" AGGREGATE BASE COURSE
J3	PROPOSED 4" AGGREGATE BASE COURSE
J4	PROPOSED 12" AGGREGATE BASE COURSE
R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R3	PROPOSED 1'-6" CONCRETE CURB & GUTTER
R4	PROPOSED 8"X18" CONCRETE CURB & GUTTER
R5	PROPOSED 2'-0" CONCRETE CURB & GUTTER
R6	PROPOSED 2'-0" CONCRETE VALLEY GUTTER
R7	PROPOSED 12" CONCRETE VEHICULAR APRON
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
W	VARIABLE DEPTH ASPHALT OVERLAY (SEE DETAIL W)
U	EXISTING PAVEMENT

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS AND LIMITS OF MONOLITHIC ISLAND.
3. SUBSTITUTE E1 IN LIEU OF J1 IN AREAS OF WIDENING LESS THAN 6'.
4. GRADING OUTSIDE OF THE RIGHT OF WAY IN THE FOLLOWING LOCATIONS TO BE COMPLETED BY OTHERS. COORDINATE WITH ADJACENT SITE CONTRACTOR TO PHASE GRADING IN ORDER TO ACHIEVE FINAL GRADE.
- -L- STA. 23+92 TO STA. 31+82 LT & RT
- -Y2- STA. 8+26 TO STA. 17+84 RT

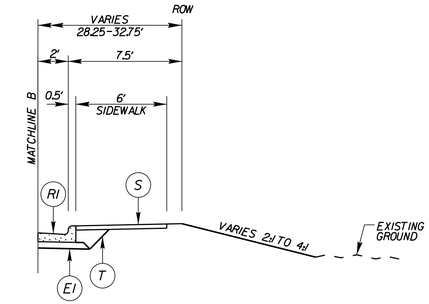


WEDGING DETAIL FOR RESURFACING W



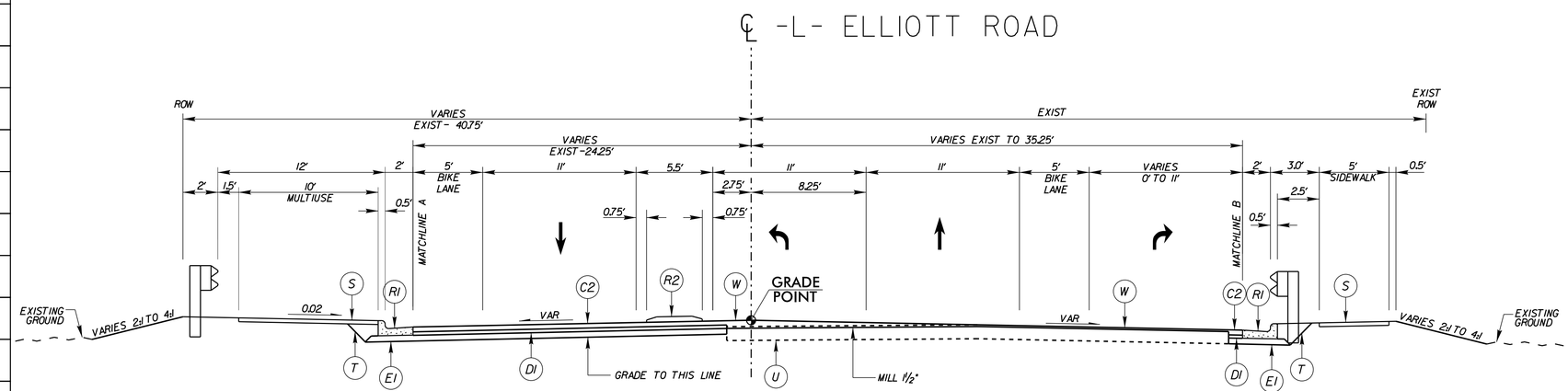
TYPICAL SECTION NO. 1A

-L- STA 13+44.00 TO STA 16+70.00 LT



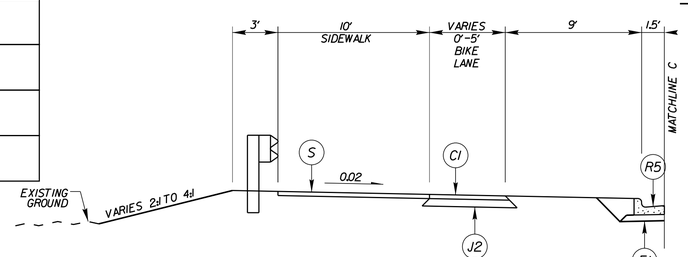
TYPICAL SECTION NO. 1B

-L- STA 13+44.00 TO STA 15+80.00 RT



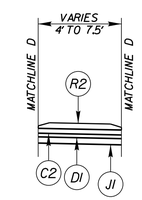
TYPICAL SECTION NO. 1

-L- STA 13+44.00 TO STA 19+44.61



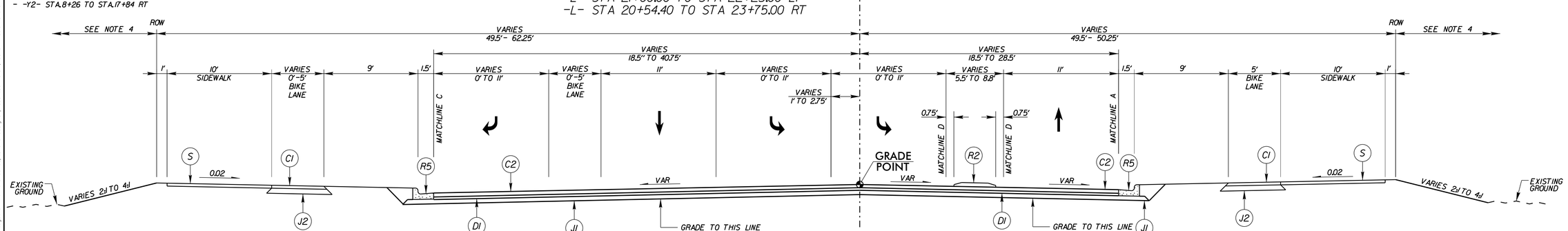
TYPICAL SECTION NO. 2A

-L- STA 21+00.00 TO STA 22+25.00 LT
-L- STA 20+54.40 TO STA 23+75.00 RT



TYPICAL SECTION NO. 2B

-L- STA 25+40.00 TO STA 28+52.86



TYPICAL SECTION NO. 2

-L- STA 20+28.00 TO STA 28+52.86

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TYPICAL SECTIONS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2

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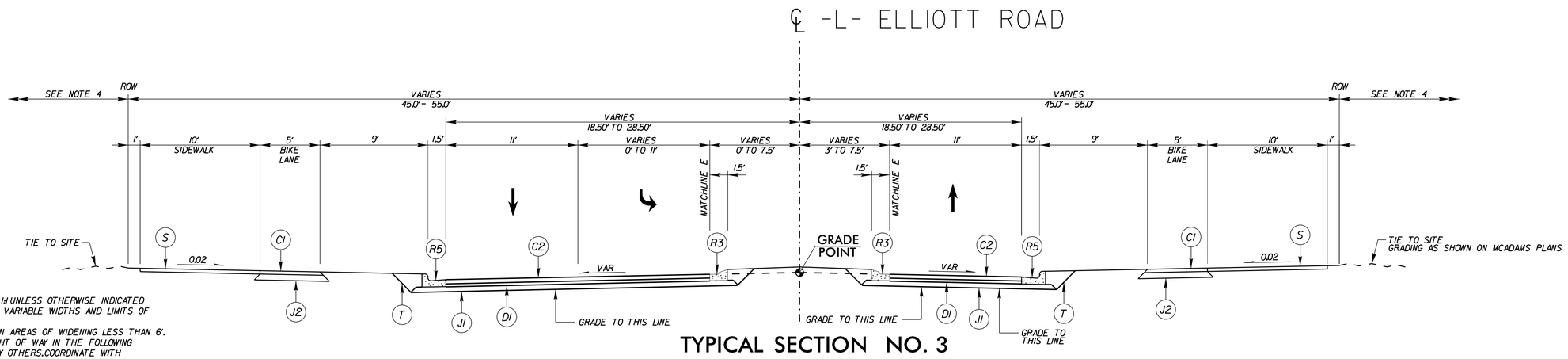
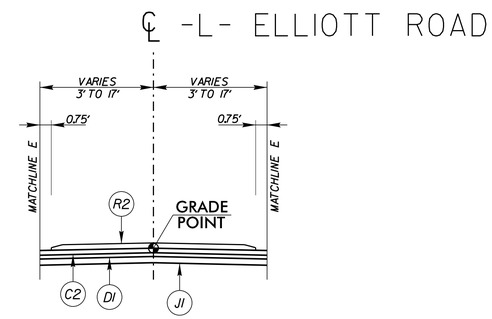


TYPICAL SECTION NO. 3

-L- STA 28+52.86 TO STA 31+11.80

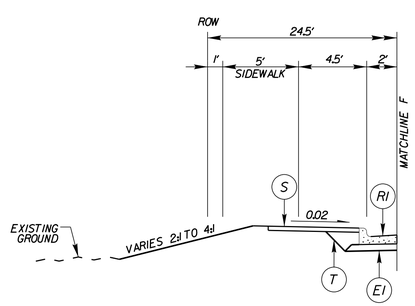
NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS AND LIMITS OF MONOLITHIC ISLAND.
3. SUBSTITUTE E1 IN LIEU OF J1 IN AREAS OF WIDENING LESS THAN 6'.
4. GRADING OUTSIDE OF THE RIGHT OF WAY IN THE FOLLOWING LOCATIONS TO BE COMPLETED BY OTHERS. COORDINATE WITH ADJACENT SITE CONTRACTOR TO PHASE GRADING IN ORDER TO ACHIEVE FINAL GRADE.
- -L- STA. 23+92 TO STA. 31+82 LT & RT
- -Y2- STA. 8+26 TO STA. 17+84 RT

PAVEMENT SCHEDULE	
C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROPOSED 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 2.5" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C. AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROPOSED 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" IN DEPTH.
E1	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE TYPE B25.0C. AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROPOSED 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" IN DEPTH OR GREATER THAN 5" IN DEPTH.
J1	PROPOSED 10" AGGREGATE BASE COURSE
J2	PROPOSED 6" AGGREGATE BASE COURSE
J3	PROPOSED 4" AGGREGATE BASE COURSE
J4	PROPOSED 12" AGGREGATE BASE COURSE
R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R3	PROPOSED 1'-6" CONCRETE CURB & GUTTER
R4	PROPOSED 8"X18" CONCRETE CURB & GUTTER
R5	PROPOSED 2'-0" CONCRETE CURB & GUTTER
R6	PROPOSED 2'-0" CONCRETE VALLEY GUTTER
R7	PROPOSED 12" CONCRETE VEHICULAR APRON
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
W	VARIABLE DEPTH ASPHALT OVERLAY (SEE DETAIL W)
U	EXISTING PAVEMENT



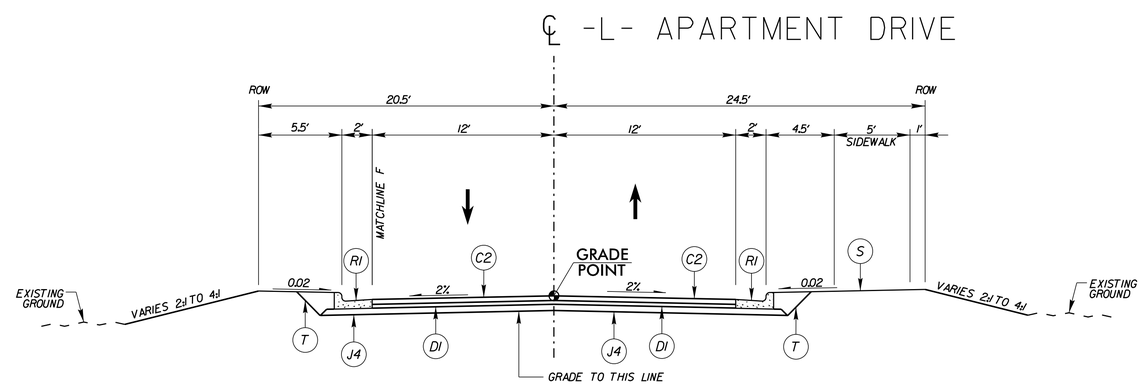
TYPICAL SECTION NO. 3A

-L- STA 29+99.41 TO STA 31+11.80



TYPICAL SECTION NO. 4A

-L- STA 32+51.95 TO STA 32+89.86



TYPICAL SECTION NO. 4

-L- STA 32+51.95 TO STA 35+28.69

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020	
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TYPICAL SECTIONS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2A

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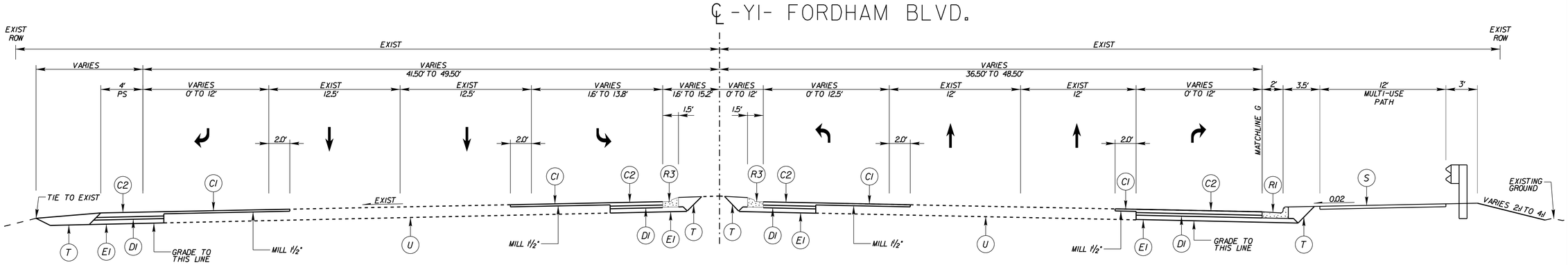
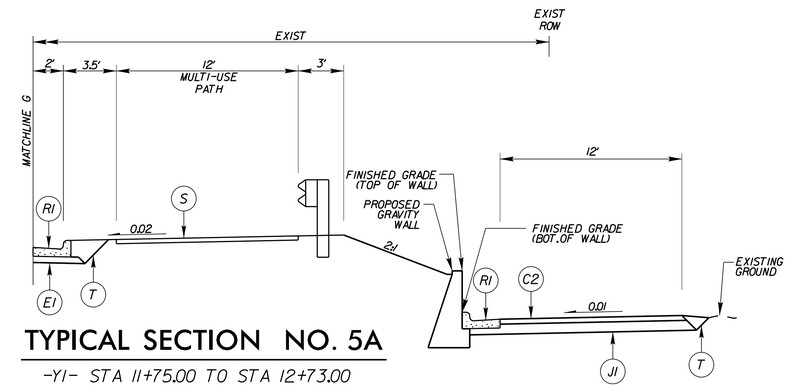


NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS AND LIMITS OF MONOLITHIC ISLAND.
3. SUBSTITUTE E1 IN LIEU OF J1 IN AREAS OF WIDENING LESS THAN 6'.
4. GRADING OUTSIDE OF THE RIGHT OF WAY IN THE FOLLOWING LOCATIONS TO BE COMPLETED BY OTHERS. COORDINATE WITH ADJACENT SITE CONTRACTOR TO PHASE GRADING IN ORDER TO ACHIEVE FINAL GRADE.
- -L- STA. 23+92 TO STA. 31+82 LT & RT
- -Y2- STA. 8+26 TO STA. 17+84 RT

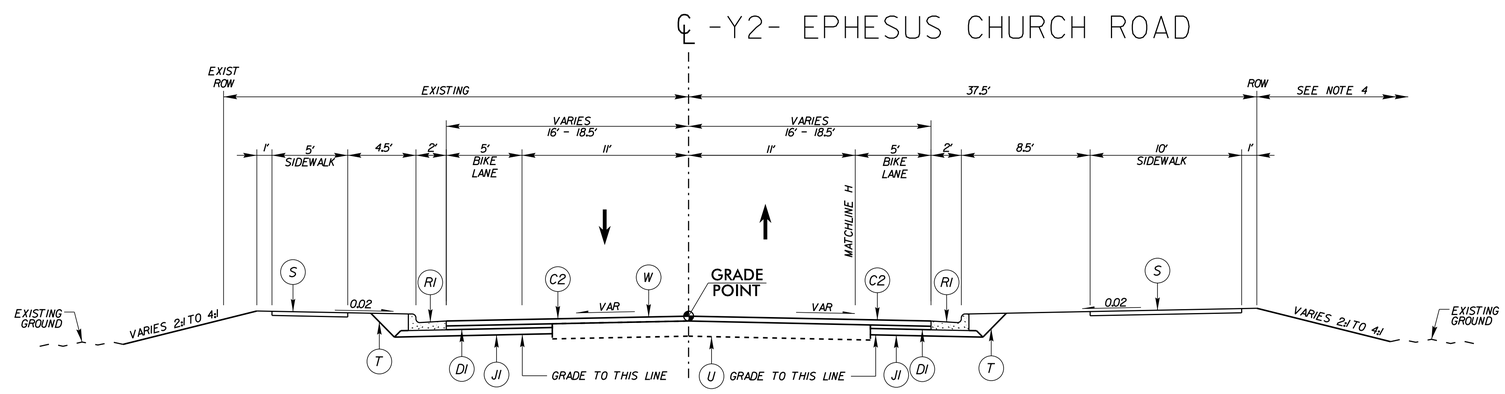
TYPICAL SECTION NO. 5

-Y1- STA 9+23.00 TO STA 18+08.90



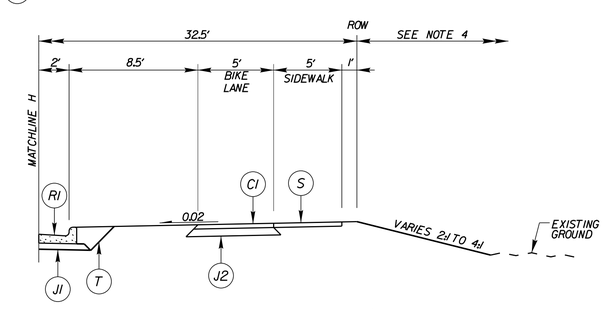
TYPICAL SECTION NO. 5A

-Y1- STA 11+75.00 TO STA 12+73.00



TYPICAL SECTION NO. 6

-Y2- STA 11+45.84 TO STA 13+92.15
-Y2- STA 15+33.02 TO STA 19+24.23



TYPICAL SECTION NO. 6A

-Y2- STA 15+33.02 TO STA 19+24.23

PAVEMENT SCHEDULE

C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROPOSED 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 2.5" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C. AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROPOSED 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" IN DEPTH.
E1	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE TYPE B25.0C. AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROPOSED 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" IN DEPTH OR GREATER THAN 5" IN DEPTH.
J1	PROPOSED 10" AGGREGATE BASE COURSE
J2	PROPOSED 6" AGGREGATE BASE COURSE
J3	PROPOSED 4" AGGREGATE BASE COURSE
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R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R3	PROPOSED 1'-6" CONCRETE CURB & GUTTER
R4	PROPOSED 8"X18" CONCRETE CURB & GUTTER
R5	PROPOSED 2'-0" CONCRETE CURB & GUTTER
R6	PROPOSED 2'-0" CONCRETE VALLEY GUTTER
R7	PROPOSED 12" CONCRETE VEHICULAR APRON
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
W	VARIABLE DEPTH ASPHALT OVERLAY (SEE DETAIL W)
U	EXISTING PAVEMENT

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TYPICAL SECTIONS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2B

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NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS AND LIMITS OF MONOLITHIC ISLAND.
3. SUBSTITUTE E1 IN LIEU OF J1 IN AREAS OF WIDENING LESS THAN 6'.
4. GRADING OUTSIDE OF THE RIGHT OF WAY IN THE FOLLOWING LOCATIONS TO BE COMPLETED BY OTHERS. COORDINATE WITH ADJACENT SITE CONTRACTOR TO PHASE GRADING IN ORDER TO ACHIEVE FINAL GRADE.
- -L- STA. 23+92 TO STA. 31+82 LT & RT
- -Y2- STA. 8+26 TO STA. 17+84 RT

PAVEMENT SCHEDULE

A1	PROPOSED 8" PORTLAND CEMENT CONCRETE PAVEMENT (PAVEMENT WITHOUT DOWELS)
C1	PROPOSED APPROX 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C. AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROPOSED 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 2.5" IN DEPTH.
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C. AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROPOSED 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" IN DEPTH.
E1	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE TYPE B25.0C. AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROPOSED 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" IN DEPTH OR GREATER THAN 5" IN DEPTH.
J1	PROPOSED 10" AGGREGATE BASE COURSE
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J3	PROPOSED 4" AGGREGATE BASE COURSE
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R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
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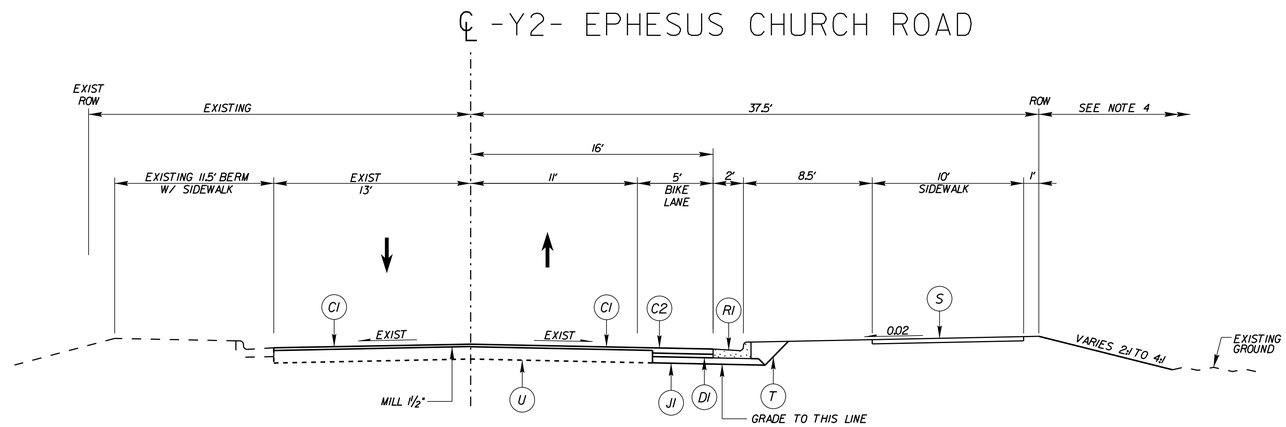
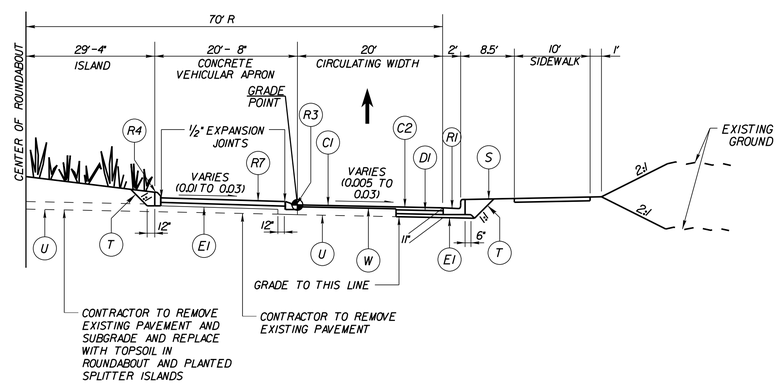
R4	PROPOSED 8"X18" CONCRETE CURB & GUTTER
R5	PROPOSED 2'-0" CONCRETE CURB & GUTTER
R6	PROPOSED 2'-0" CONCRETE VALLEY GUTTER
R7	PROPOSED 12" CONCRETE VEHICULAR APRON
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
W	VARIABLE DEPTH ASPHALT OVERLAY (SEE DETAIL W)
U	EXISTING PAVEMENT



TYPICAL SECTION NO. 7

-Y2- STA 8+26.13 TO STA 11+45.84
-Y2- STA 19+24.23 TO STA 20+21.55



TYPICAL SECTION NO. 8

ELLIOTT ROAD AND EPHESUS CHURCH ROAD ROUNDABOUT

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045313 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE NTS
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TYPICAL SECTIONS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2C

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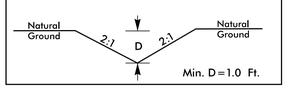
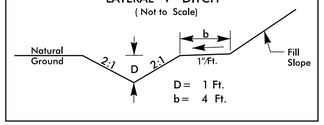
DETAIL 1
STANDARD 'V' DITCH
(Not to Scale)



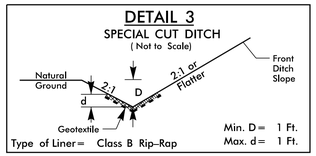
FROM –L– STA. 22+70 (LT)

DETAIL 2
LATERAL 'V' DITCH
(Not to Scale)



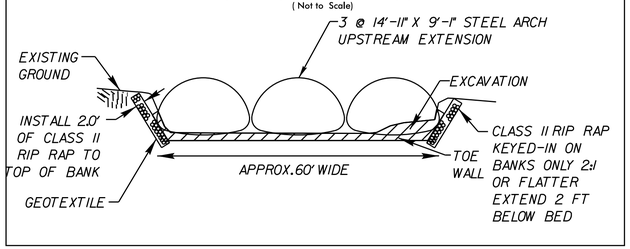
FROM –L– STA. 20+69 TO 22+66 (LT)
FROM –Y2– STA. 15+80 TO 17+00 (LT)
FROM –Y2– STA. 18+23 TO 19+00 (LT)

DETAIL 3
SPECIAL CUT DITCH
(Not to Scale)



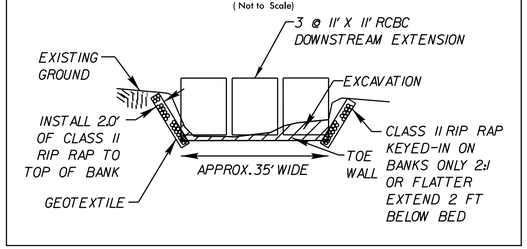
FROM –Y2– STA. 18+49 TO –Y2–STA. 20+00 (RT)

DETAIL 4
STEEL ARCH CULVERT EXTENSION
(Not to Scale)



FROM –L– STA. 16+78 TO –L–STA. 17+68 (LT)

DETAIL 5
RCBC CULVERT EXTENSION
(Not to Scale)



FROM –Y1– STA. 12+84 TO –Y1–STA. 13+45 (RT)

No.	REVISIONS	DATE	BY

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PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045324 ENGINEER CHADWICK W. BELCHER

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE NTS
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

DRAINAGE DETAILS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2D

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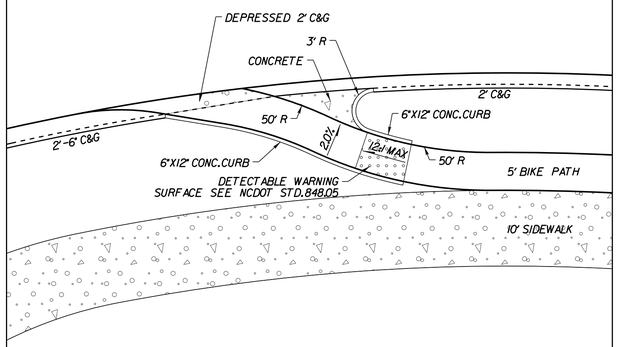
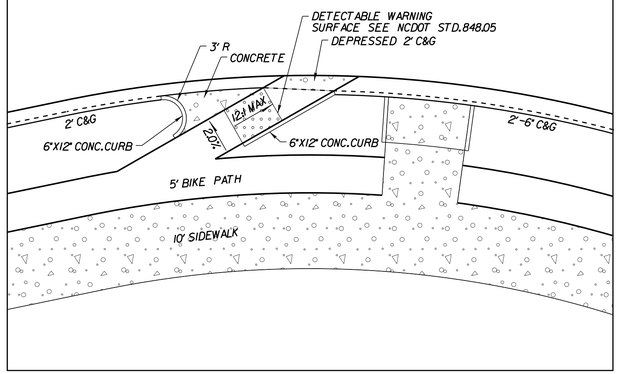
PROPOSED BIKE RAMP DETAIL 1

–L– Sta. 21+20.00 (RT)
–L– Sta. 24+25.00 (LT)



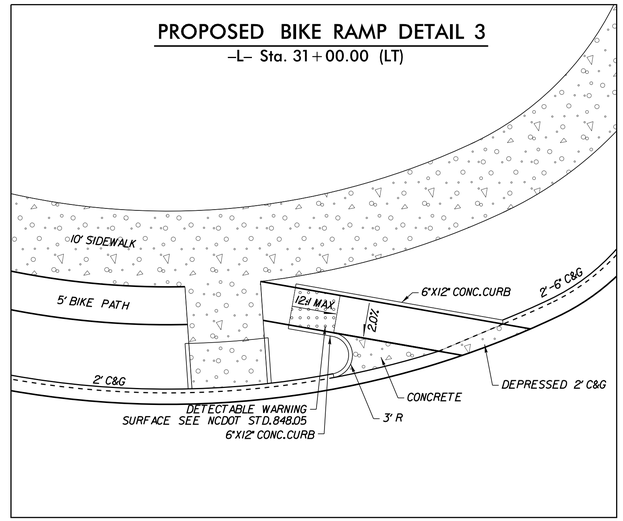
PROPOSED BIKE RAMP DETAIL 2

–L– Sta. 30+55.00 (RT)



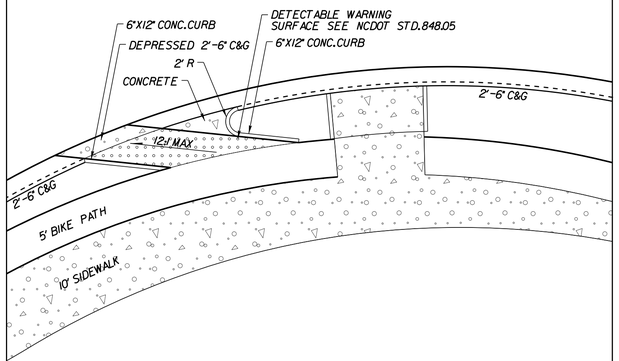
PROPOSED BIKE RAMP DETAIL 3

–L– Sta. 31+00.00 (LT)



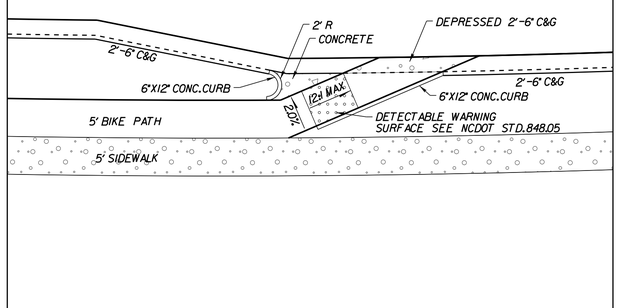
PROPOSED BIKE RAMP DETAIL 4

–Y2– Sta. 15+35.00 (RT)



PROPOSED BIKE RAMP DETAIL 5

–Y2– Sta. 19+30.00 (RT)



No.	REVISIONS	DATE	BY

Kimley»Horn
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NORTH CAROLINA PROFESSIONAL SEAL 045313 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020	
DATE	7/6/2020
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

BIKE RAMP DETAILS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2E

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COMPUTED BY: Tyler White DATE: 12/12/2019
CHECKED BY: Chad Beck DATE: 12/12/2019

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
11159020	1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	C.S. PIPE 18" (.064)	R.C. PIPE CLASS IV 15"	R.C. PIPE CLASS IV 18"	R.C. PIPE CLASS IV 36"	PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	TYPE OF GRATE E	F	G	D.I. FRAME AND GRATE STD. 840.16	TRAFFIC BEARING JUNCTION BOX 840.34	MANHOLE FRAME AND COVER 840.54	SIDE DRAIN PIPE ELBOWS NO. & SIZE	REMARKS
-L- 13+63	RT	201		267.8	264.5						1			1		1						
-L-14+68	RT	202		266.1	262.6						1			1		1						
-L- 13+63	RT	201	202		264.5	262.9		108														
-L- 15+63	RT	203		266.1	261.1						1			1		1						
-L- 14+68	RT	202	203		262.6	261.2			88													
-L- 15+63	LT	206		265.6	259.0						1	1.6		1			1					
-L- 15+63	CL	203	206		261.1	260.6			52													
-L- 14+30	LT	204		266.91	263.7						1			1			1					
-L- 15+44	LT	205		265.9	259.1						1	1.8		1			1					
-L- 14+30	LT	204	205		263.7	262.0		116														
-L- 15+44	LT	205	206		259.1	259.1				20												
-L- 15+07	LT	212		265.3	259.5						1	0.8		1		1						TIE TO EXIST
-L- 15+63	LT	208		264.7	261.5						1			1	1							
-L- 15+63	LT	208	206		261.5	260.6		28														TIE TO EXIST
-L- 16+69	LT	210		264.1	256.4						1	2.7							1	1		
-L- 15+63	LT	206	210		259.0	258.4				120												TIE TO EXIST
-L- 17+14	LT	305		264.0	260.8						1							1				
-L- 17+20	RT	302		263.3	259.7						1			1		1						
-L- 17+14	CL	305	302		260.8	259.9		36														
-L- 16+64	RT	301		263.6	260.4						1			1		1						
-L- 16+64	RT	301	302		260.4	259.8		48														
-L- 17+57	RT	303		263.1	259.9						1			1	1							
-L- 17+57	RT	303	302		259.9	259.8		32														
-L- 17+33	RT	304		263.9	259.3						1			1	1							
-L- 17+20	RT	302	304		259.7	259.4			12													
-L- 17+33	RT	304	308		259.3	259.2			20													
-L- 18+55	RT	306		263.4	258.6						1			1			1					
-L- 18+55	RT	306	307		258.6	258.1		16														
-L- 18+93	LT	404		263.9	260.7						1			1		1						
-L- 18+42	LT	403		263.8	259.9						1			1		1						
-L- 18+93	LT	404	403		260.7	260.2		48														
-L- 17+75	LT	402		264.1	253.0						1	5.0	1.1	1		1						
-L- 18+42	LT	403	402		259.9	259.3			48													
-L- 17+75	LT	402	401		253.0	252.7			32													
-Y1- 13+64	RT	501		264.0	260.7						1			1		1						
-Y1- 12+75	RT	502		264.2	258.2						1	1.0		1		1						
-Y1- 13+64	RT	501	502		260.7	259.8		88														
-Y1- 11+49	LT	506		264.7	259.6						1	0.1		1	1							
-Y1- 11+53	RT	505		264.3	259.3						1			1		1						
-Y1- 12+27	RT	504		264.1	258.7						1	0.4		1	1							
-Y1- 11+53	RT	505	504		259.3	259.0		72														
-Y1- 12+27	RT	504	502		258.7	258.3			48													
-Y1- 12+75	RT	503		256.3	252.7						1							1				
-Y1- 12+75	RT	502	503		258.2	252.8	44														18" CMP w/ Elbow	
-Y1- 12+75	RT	503	507		252.7	252.6			12													
-Y1- 16+25	CL	512		264.6	261.5						1			1	1							
-Y1- 16+94	LT	510		264.5	258.2						1	1.3		1	1							
-Y1- 16+25	CL	512	510		261.5	260.8		68														TIE TO EXIST

SHEET TOTALS:

SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC)	12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
SHEET TOTALS	0	0	0	0	0	0	0	0	0	0	0	0

PIPE	12"	15"	18"	24"	30"	36"	42"	48"
C.S. PIPE (.064 .064 .064 .064 .079 .079 .109 .109)	0	0	44	0	0	0	0	0
R.C. PIPE CLASS III	0	0	0	0	0	0	0	0
R.C. PIPE CLASS IV	0	660	312	0	0	140	0	0

** R.C. PIPE (CLASS V)	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	**** RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
0	0	0	0	0	0	0

QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL."B") PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G
26	15	1	23	7	12	4

CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	TRAFFIC BEARING JUNCTION BOX 840.34	MANHOLE FRAME AND COVER 840.54	CONVERT D.I. TO C.B.	ADJUST 2GI	MEDIAN CURB FOR CATCH BASIN 852.05	DROP INLETS IN CONCRETE ISLANDS 852.06
0	0	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0

SIDE DRAIN PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

No.	REVISIONS	DATE	BY

Kimley»Horn

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC, 27701
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK
FINAL DRAWINGS – FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE NTS
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

DRAINAGE SUMMARY SHEET

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2F

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

COMPUTED BY: Tyler White DATE: 12/12/2019
CHECKED BY: Chad Beck DATE: 12/12/2019

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
11159020	2

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	REMARKS
-L- 20+62	LT	602		256.6	249.0			
-L- 21+00	LT	603		264.4	248.6			
-L- 20+62	LT	602	603		249.0	248.7		
-L- 21+00	CL	603	604		248.6	247.8		
-L- 21+60	LT	701		262.6	259.4			
-L- 22+62	LT	702		261.8	252.8			
-L- 21+60	LT	701	702		259.4	258.5		
-L- 22+66	LT	703	702		254.9	254.6		
-L- 22+81	RT	704		261.8	258.6			
-L- 22+81	CL	704	702		258.6	258.5		
-L- 22+58	RT	705		263.7	252.0			
-L- 22+62	LT	702	705		252.8	252.1		
-L- 25+44	LT	711		266.5	263.3			
-L- 25+44	LT	712		266.8	262.8			
-L- 25+44	LT	711	712		263.3	263.1		
-L- 25+44	RT	713		266.7	263.1			
-L- 25+44	CL	713	712		263.1	262.9		
-L- 24+51	LT	709		264.3	261.1			
-L- 24+51	RT	710		264.9	260.6			
-L- 24+51	CL	709	710		261.1	260.9		
-L- 25+44	CL	712	710		262.8	260.7		
-L- 23+76	RT	708		264.2	259.7			
-L- 24+51	RT	710	708		260.6	259.8		
-L- 22+81	RT	706		263.7	258.7			
-L- 23+76	RT	708	706		259.7	258.8		
-L- 22+81	RT	706	705		258.7	258.1		
-L- 22+58	RT	705	707		252.0	248.9		
-L- 30+40	LT	718		287.9	284.4			
-L- 30+40	LT	725	718		284.8	284.7		TIE TO SITE
-L- 30+40	RT	719		287.9	284.1			
-L- 30+40	CL	718	719		284.4	284.4		
-L- 30+48	RT	724	719		284.5	284.4		TIE TO SITE
-L- 28+80	RT	717		280.4	276.5			
-L- 30+40	RT	719	717		284.1	276.6		
-L- 29+09	RT	723	717		277.4	277.2		TIE TO SITE
-L- 28+80	LT	716		280.4	277.0			
-L- 29+10	LT	727	716		277.4	277.2		TIE TO SITE
-L- 28+80	LT	726	716		277.3	277.2		TIE TO SITE
-L- 28+80	LT	716	717		277.0	276.6		
-L- 26+64	LT	729		271.2	267.9			
-L- 26+94	LT	720		271.2	267.3			TIE TO SITE
-L- 26+64	LT	729	720		267.9	267.8		
-L- 27+25	LT	714		273.3	267.0			
-L- 27+35	LT	728	714		270.2	270.1		TIE TO SITE
SHEET TOTALS								

STATION	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	R.C. PIPE CLASS III 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 12"	15"	18"	24"	30"	36"	42"	48"
-L- 20+62																																				
-L- 21+00																																				
-L- 20+62																											152									
-L- 21+00																											52									
-L- 21+60																																				
-L- 22+62																																				
-L- 21+60																														92						
-L- 22+66																																			32	
-L- 22+81																																				
-L- 22+81																														16						
-L- 22+58																																				
-L- 22+62																																			48	
-L- 25+44																																				
-L- 25+44																																				
-L- 25+44																														16						
-L- 25+44																																				
-L- 25+44																															24					
-L- 24+51																																				
-L- 24+51																																				
-L- 24+51																														28						
-L- 25+44																															92					
-L- 23+76																																				
-L- 24+51																															72					
-L- 22+81																																				
-L- 23+76																															96					
-L- 22+81																															20					
-L- 22+58																																			64	
-L- 30+40																																				
-L- 30+40																														32						
-L- 30+40																																				
-L- 30+40																														28						
-L- 30+48																														32						
-L- 28+80																																				
-L- 30+40																															160					
-L- 29+09																														40						
-L- 28+80																																				
-L- 29+10																														40						
-L- 28+80																														28						
-L- 28+80																														40						
-L- 26+64																																				
-L- 26+94																																				
-L- 26+64																														28						
-L- 27+25																																				
-L- 27+35																														28						
SHEET TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	340	464	0	0	0	112	0

STATION	** R.C. PIPE (CLASS V)	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	TRAFFIC BEARING JUNCTION BOX 840.34	MANHOLE FRAME AND COVER 840.54	CONVERT D.I. TO C.B.	ADJUST 2GI	MEDIAN CURB FOR CATCHBASIN 852.05	DROP INLETS IN CONCRETE ISLANDS 852.06	SIDE DRAIN PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.
-L- 20+62								1	2.6																	1		1								
-L- 21+00								1	5.0	5.8																	1	1								
-L- 20+62																																				
-L- 21+00																																				
-L- 21+60								1			1			1																						
-L- 22+62								1	4.0		1	1																								
-L- 21+60																																				
-L- 22+66																																				
-L- 22+81								1			1	1																								
-L- 22+81																																				
-L- 22+58								1	5.0	1.7								1																		
-L- 22+62																																				
-L- 25+44								1			1		1																							
-L- 25+44								1										1																		
-L- 25+44																																				
-L- 25+44								1			1			1																						
-L- 25+44																																				
-L- 24+51								1			1		1																							
-L- 24+51								1										1																		
-L- 24+51																																				
-L- 25+44																																				
-L- 23+76								1										1																		
-L- 24+51																																				
-L- 22+81								1										1																		
-L- 23+76																																				
-L- 22+81																																				
-L- 22+58																																				
-L- 30+40								1			1		1																							
-L- 30+40																																				
-L- 30+40								1			1			1																						
-L- 30+40																																				
-L- 30+48																																				
-L- 28+80								1			1			1																						
-L- 30+40																																				
-L- 29+09																																				
-L- 28+80								1			1		1																							
-L- 29+10																																				
-L- 28+80																																				
-L- 28+80																																				
-L- 26+64								1			1		1																							
-L- 26+94								1			1			1																						
-L- 26+64																																				
-L- 27+25								1			1		1																							
-L- 27+35																																				
SHEET TOTALS	0	0	0	0	0	0	0	15	5	2	10	0	6	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

ABBREVIATIONS	
C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

No.	REVISIONS	DATE	BY

Kimley»Horn

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC, 27701
PHONE: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035539 CHADWICK W. BECK
FINAL DRAWINGS – FOR REVIEW PURPOSES ONLY

KHA PROJECT	DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:
011159020	7/6/2020	NTS	CWB	TDW	CWB

DRAINAGE SUMMARY SHEET

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2G

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

COMPUTED BY: Tyler White DATE: 3/27/2020

CHECKED BY: Chad Beck DATE: 3/27/2020

PROJECT NO.	SHEET NO.
11159020	3

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS III 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 12"	15"	18"	24"	30"	36"	42"	48"
																				.064	.064	.064	.064	.079	.079	.109	.109																		
-L- 26+94	LT	720	714		267.3	267.1																																		44				
-L- 27+25	RT	715		273.3	266.5																																							
-L- 28+80	RT	717	715		276.5	269.8																																152							
-L- 27+25	LT	714	715		267.0	266.6																																		40				
-L- 27+25	RT	722	715		270.2	270.1																															28							
-L- 27+25	RT	715	721		266.5	265.9																																		68				
-Y2- 20+75	RT	909	908		301.1	300.5																																80						
-Y2 18+15	LT	907		295.9	292.2																																							
-Y2- 18+23	LT	910	907		293.1	292.3																																24						
-Y2- 17+44	LT	906		294.5	290.8																																							
-Y2- 17+44	RT	912		294.5	291.3																																							
-Y2 18+15	LT	907	906		292.2	290.9																																68						
-Y2- 17+44	RT	912	906		291.3	291.2																															20							
-Y2- 15+75	LT	905		292.6	288.7																																							
-Y2- 17+44	LT	906	905		290.8	289.2																																168						
-Y2- 15+80	LT	911	905		290.5	289.2																															28							
-Y2- 15+75	RT	904		292.8	289.6																																							
-Y2- 15+75	RT	904	905		289.6	289.4																															40							
-Y2- 15+52	LT	913		291.2	286.7																																							
-Y2- 15+75	LT	905	913		287.8	286.8																																		36				
-Y2- 32+70	RT	901		291.9	286.4																																							
-Y2- 15+52	LT	913	901		286.7	286.5																																		32				
-Y2- 32+54	LT	902		291.8	286.1																																							
-Y2- 32+70	RT	901	902		286.4	286.2																																		56				
-Y2- 13+75	LT	903		290.7	285.7																																							
-Y2- 32+54	LT	902	903		286.1	285.8																																		56				
-Y2- 12+82	LT	805		286.8	282.7																																							
-Y2- 13+75	LT	903	805		285.7	282.8																																		96				
-Y2- 12+82	RT	804		286.9	283.7																																							
-Y2- 12+82	CL	804	805		283.7	283.6																															32							
-Y2- 11+62	LT	803		281.2	277.1																																							
-Y2- 12+82	LT	805	803		282.7	277.2																																		120				
-Y2- 11+62	RT	802		282.0	276.8																																							
-Y2- 11+62	LT	803	802		277.1	276.9																																		32				
-Y2- 11+65	RT	806	802		278.9	278.8																															24							
-Y2- 9+71	RT	801		273.3	268.0																																							
-Y2- 11+62	RT	802	801		276.8	269.3																																		192				
-Y2- 9+71	RT	801	807		268.0	266.5																																		52				
SHEET TOTALS								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	168	672	0	0	0	0	0	0

STATION	*** R.C. PIPE (CLASS V)	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	*** RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) R.C.P.	ENDWALLS CU. YARDS C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL. "B")	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	TRAFFIC BEARING JUNCTION BOX 840.34	MANHOLE FRAME AND COVER 840.54	ADJUST CB	ADJUST 2CB	MEDIAN CURB FOR CATCHBASIN 852.05	DROP INLETS IN CONCRETE ISLANDS 852.06	SIDE DRAIN PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-L- 26+94																																							
-L- 27+25								1	1.8			1			1																								
-L- 28+80																																							
-L- 27+25																																							
-L- 27+25																																							TIE TO SITE
-L- 27+25																																							TIE TO SITE
-Y2- 20+75																																							
-Y2 18+15								1				1			1																								
-Y2- 18+23																																							
-Y2- 17+44								1				1			1																								
-Y2- 17+44								1												1																			
-Y2 18+15																																							
-Y2- 17+44																																							
-Y2- 15+75								1				1			1																								
-Y2- 17+44																																							
-Y2- 15+80																																							
-Y2- 15+75								1				1			1																								
-Y2- 15+75																																							
-Y2- 15+52								1																	1		1												
-Y2- 15+75																																							
-Y2- 32+70								1	0.5			1	1																										
-Y2- 15+52																																							
-Y2- 32+54								1	0.7			1			1																								
-Y2- 32+70																																							
-Y2- 13+75								1				1			1																								
-Y2- 32+54																																							
-Y2- 12+82								1				1			1																								
-Y2- 13+75																																							
-Y2- 12+82								1				1			1																								
-Y2- 12+82																																							
-Y2- 11+62								1				1			1																								
-Y2- 12+82																																							
-Y2- 11+62								1	0.2			1			1																								
-Y2- 11+62																																							
-Y2- 11+65																																							TIE TO SITE
-Y2- 9+71								1	0.3			1			1																								
-Y2- 11+62																																							
-Y2- 9+71																																							TIE TO SITE
SHEET TOTALS	0	0	0	0	0	0	0	11	1.7	0	0	10	1	5	4	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0							

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

No.	REVISIONS	DATE	BY

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK N. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE NTS
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

DRAINAGE SUMMARY SHEET

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
2H

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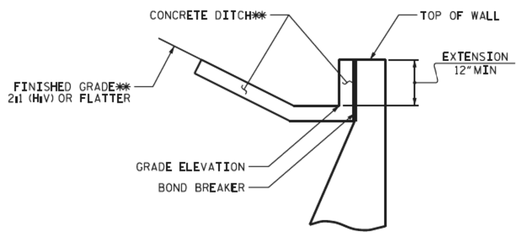
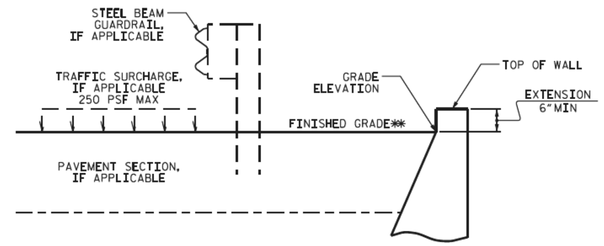


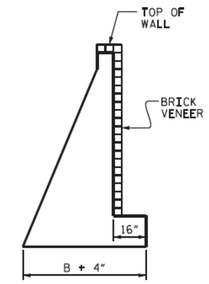
SLOPE CASE

**SEE ROADWAY PLANS FOR CONCRETE DITCH AND FINISHED GRADE DETAILS.



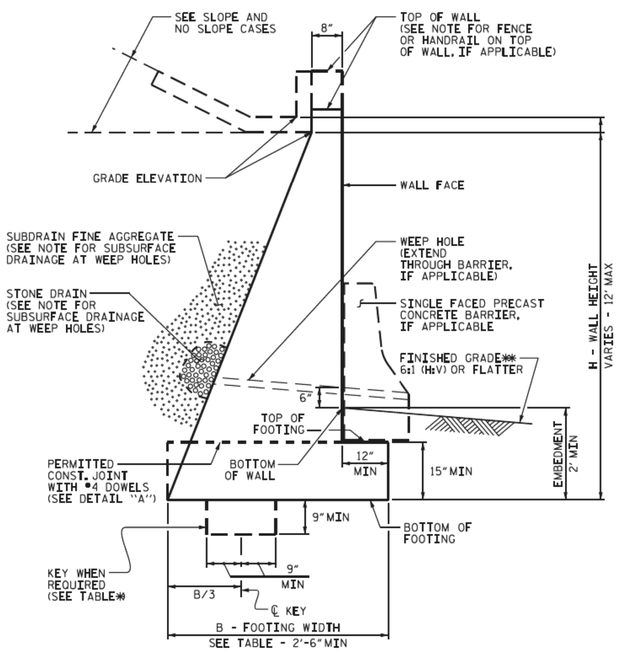
NO SLOPE CASE

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



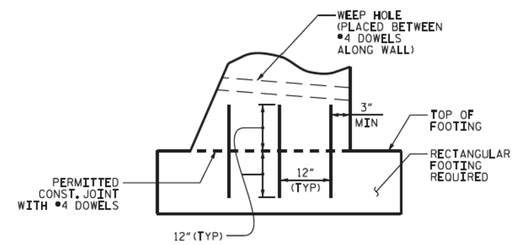
BRICK VENEER DETAIL

(WHEN APPLICABLE)



STANDARD CIP GRAVITY WALL

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



DETAIL "A"

H (FT)	3 - < 6	6 - 9	> 9 - 12
SLOPE CASE	.66	.70*	.75*
NO SLOPE CASE WITH TRAFFIC SURCHARGE	.80	.75*	.70*
NO SLOPE CASE WITHOUT TRAFFIC SURCHARGE	.60	.60	.60

B/H RATIO (B = 2'-6" MIN)

*KEY IS REQUIRED FOR "SLOPE CASE" OR "NO SLOPE CASE WITH TRAFFIC SURCHARGE" WHEN H IS 6' OR GREATER.

NOTES:

FOR STANDARD CIP GRAVITY RETAINING WALLS, SEE SECTION 453 OF THE STANDARD SPECIFICATIONS.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

FOR FENCES OR HANDRAILS ON TOP OF WALLS, SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

FOR SUBSURFACE DRAINAGE AT WEEP HOLES, SEE ARTICLE 414-8 OF THE STANDARD SPECIFICATIONS.

STANDARD CIP GRAVITY WALLS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
- UNIT WEIGHT, γ = 120 PCF
- FRICTION ANGLE, ϕ = 35 DEGREES (GROUNDWATER WITHIN 7' OF BOTTOM OF FOOTING)
- FRICTION ANGLE, ϕ = 30 DEGREES (GROUNDWATER MORE THAN 7' BELOW BOTTOM OF FOOTING)
- COHESION, c = 0 PSF

DO NOT USE STANDARD CIP GRAVITY WALLS IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE BOTTOM OF FOOTING.

DO NOT USE STANDARD CIP GRAVITY WALLS WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS BELOW WALLS.

BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION, SURVEY WALL LOCATIONS AND SUBMIT WALL PROFILE VIEWS (WALL ENVELOPES) FOR REVIEW. FOR WALL ENVELOPES, INCLUDE BOTTOM OF WALL, EXISTING GROUND AND GRADE ELEVATIONS AND OTHER ELEVATIONS AS NEEDED AT INTERVALS OF 25' OR LESS ALONG WALLS. DO NOT START WALL CONSTRUCTION UNTIL WALL ENVELOPES ARE ACCEPTED.

FOR BRICK VENEERS, SUBMIT BRICK SAMPLES FOR APPROVAL BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION.

DO NOT PLACE CONCRETE FOR FOOTINGS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

WHEN CONSTRUCTING STANDARD CIP GRAVITY WALLS WITH A CONSTRUCTION JOINT AS SHOWN IN DETAIL "A", PROVIDE A MINIMUM OF 3 EQUALLY SPACED #4 DOWELS AT INTERVALS OF 1'-6" ALONG WALLS.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

STANDARD DETAIL NO. 453.01

STANDARD
CAST-IN-PLACE (CIP)
GRAVITY RETAINING WALL

DATE: 1-16-18

SHEET NO. -

No.	REVISIONS	DATE	BY

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE NTS
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

GRAVITY RETAINING WALL DETAIL

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
21

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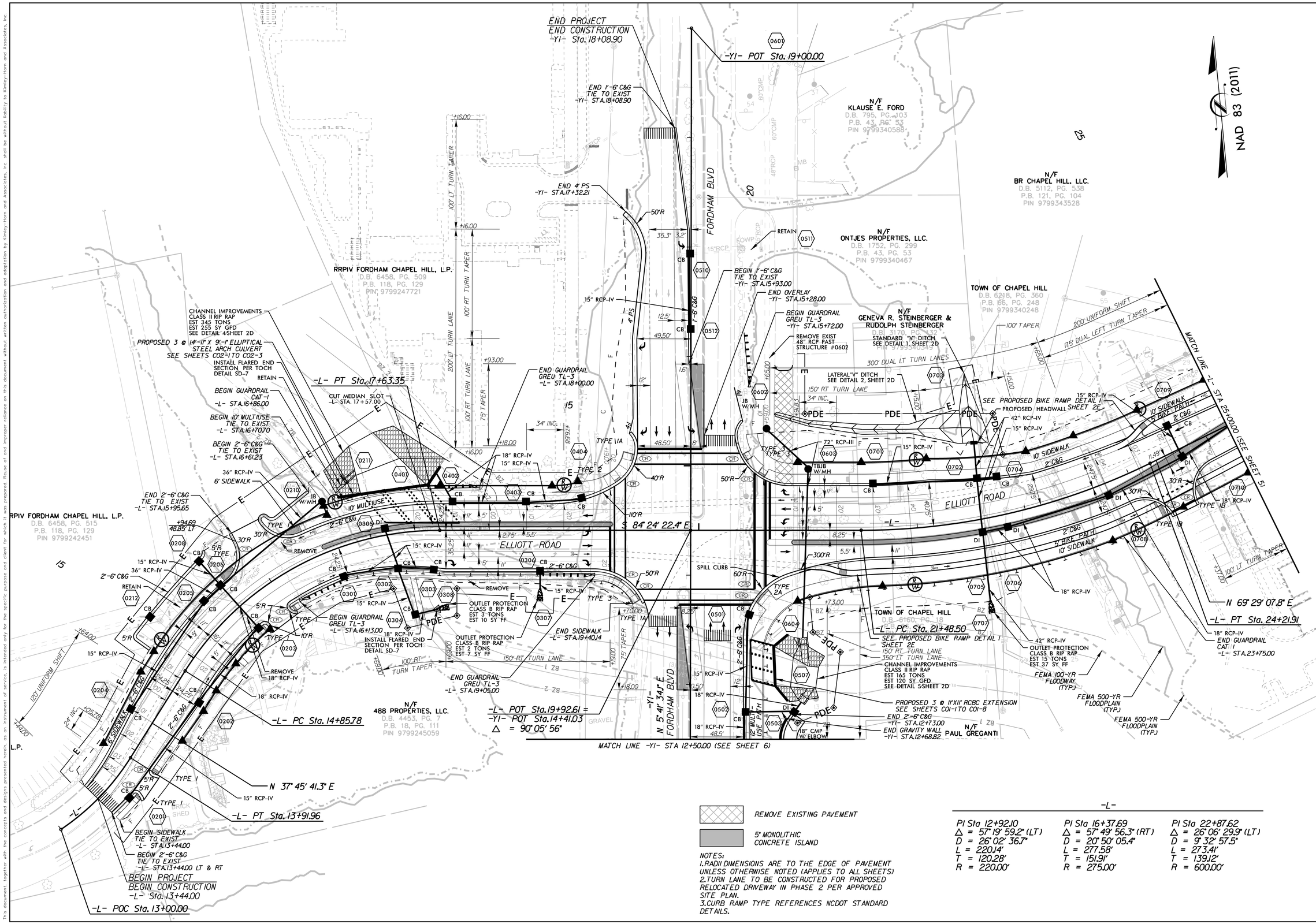

REMOVE EXISTING PAVEMENT

5" MONOLITHIC
CONCRETE ISLAND

NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. TURN LANE TO BE CONSTRUCTED FOR PROPOSED RELOCATED DRIVEWAY IN PHASE 2 PER APPROVED SITE PLAN.
3. CURB RAMP TYPE REFERENCES NCDOT STANDARD DETAILS.

-L-

PI Sta 12+92.10	PI Sta 16+37.69	PI Sta 22+87.62
Δ = 57° 19' 59.2" (LT)	Δ = 57° 49' 56.3" (RT)	Δ = 26° 06' 29.9" (LT)
D = 26° 02' 36.7"	D = 20° 50' 05.4"	D = 9° 32' 57.5"
L = 220.14'	L = 277.58'	L = 273.41'
T = 120.28'	T = 151.91'	T = 139.12'
R = 220.00'	R = 275.00'	R = 600.00'

No.	REVISIONS	DATE	BY

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-677-2050
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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	1" = 40'
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

PLAN VIEW

ELLIOTT ROAD EXTENSION

PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

4

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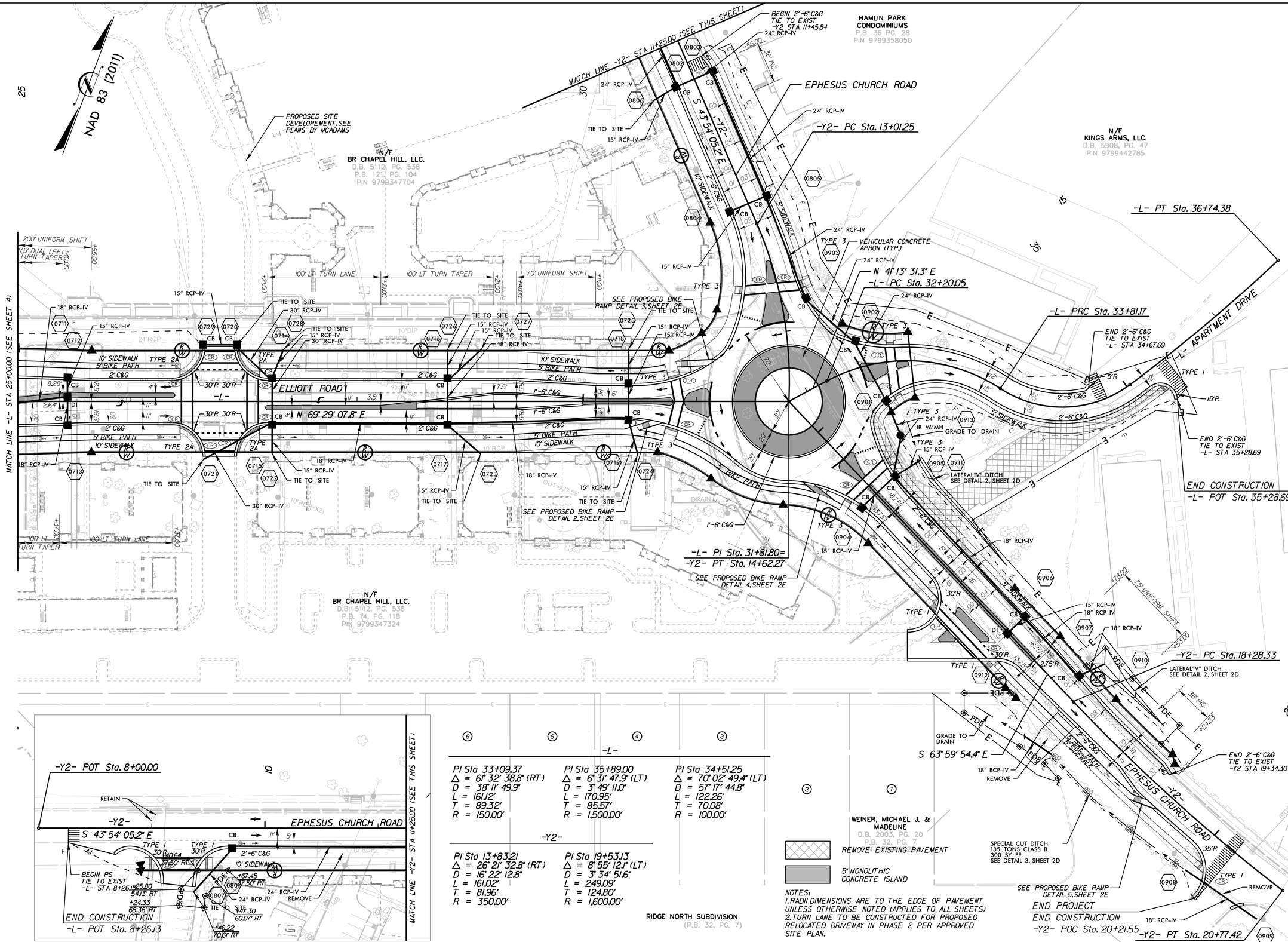

	-L-		
	PI Sta 33+09.37	PI Sta 35+89.00	PI Sta 34+51.25
	Δ = 61° 32' 38.8" (RT)	Δ = 6° 31' 47.9" (LT)	Δ = 70° 02' 49.4" (LT)
	D = 38° 11' 49.9"	D = 3° 49' 11.0"	D = 57° 17' 44.8"
	L = 161.12'	L = 170.95'	L = 122.26'
	T = 89.32'	T = 85.57'	T = 70.08'
	R = 150.00'	R = 1,500.00'	R = 100.00'

-Y2-	
PI Sta 13+83.21	PI Sta 19+53.13
Δ = 26° 21' 32.8" (RT)	Δ = 8° 55' 12.1" (LT)
D = 16° 22' 12.8"	D = 3° 34' 51.6"
L = 161.02'	L = 249.09'
T = 81.96'	T = 124.80'
R = 350.00'	R = 1,600.00'

NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. TURN LANE TO BE CONSTRUCTED FOR PROPOSED RELOCATED DRIVEWAY IN PHASE 2 PER APPROVED SITE PLAN.

No.	REVISIONS	DATE	BY

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PHONE: 919-677-2000
FAX: 919-682-5883
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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

PLAN VIEW

ELLIOTT ROAD EXTENSION

PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
5

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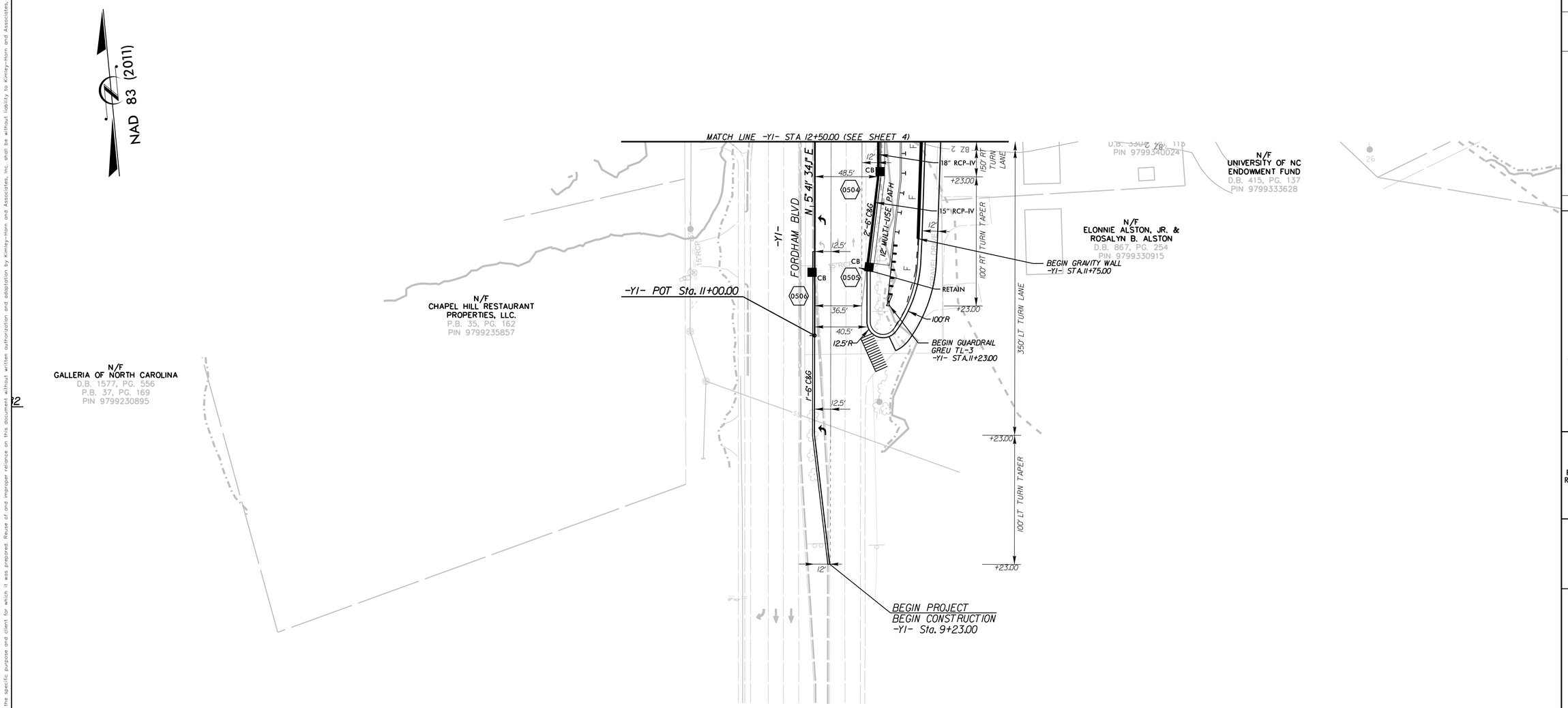

REMOVE EXISTING PAVEMENT

5" MONOLITHIC CONCRETE ISLAND

NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. TURN LANE TO BE CONSTRUCTED FOR PROPOSED RELOCATED DRIVEWAY IN PHASE 2 PER APPROVED SITE PLAN.

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FAX: 919-677-2050
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FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

PLAN VIEW

ELLIOTT ROAD EXTENSION
PREPARED FOR
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CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
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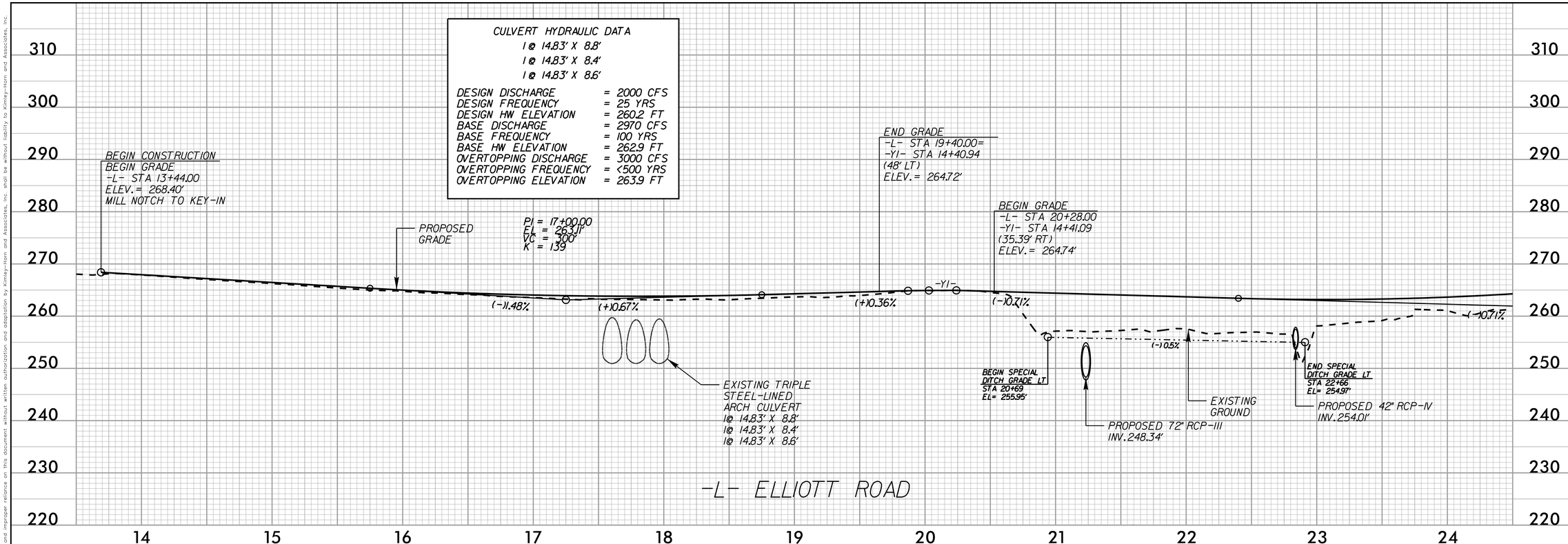

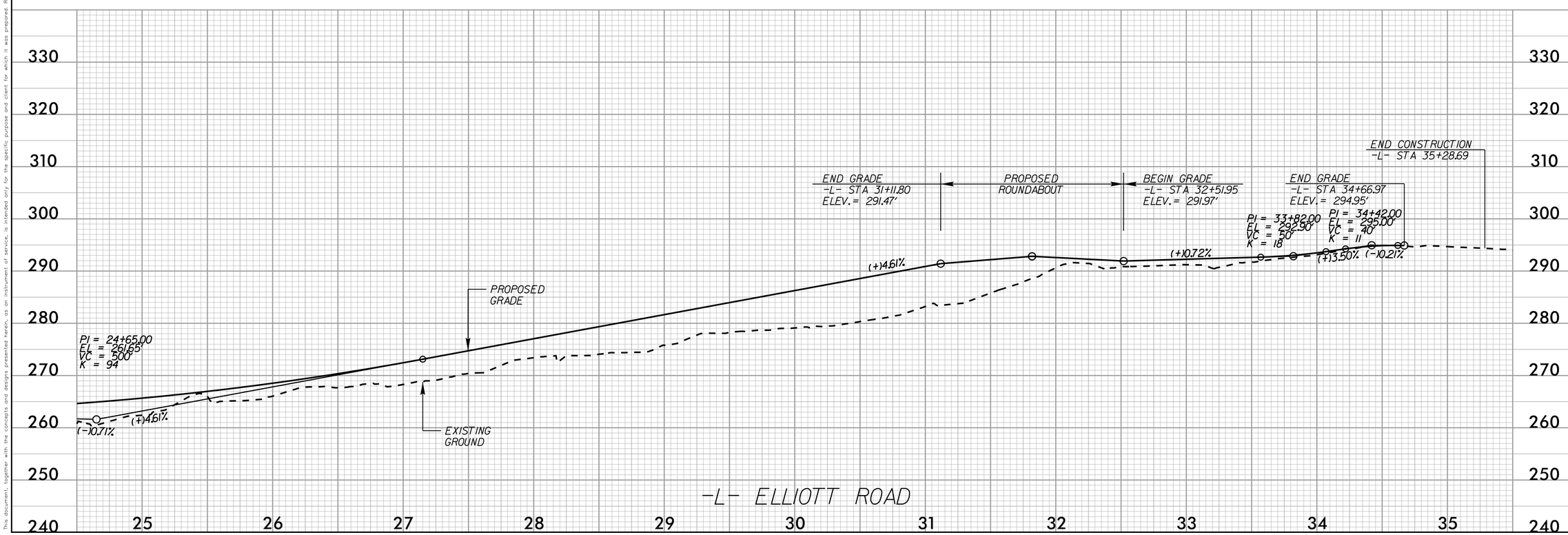

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

PROFILE

ELLIOTT ROAD EXTENSION

PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
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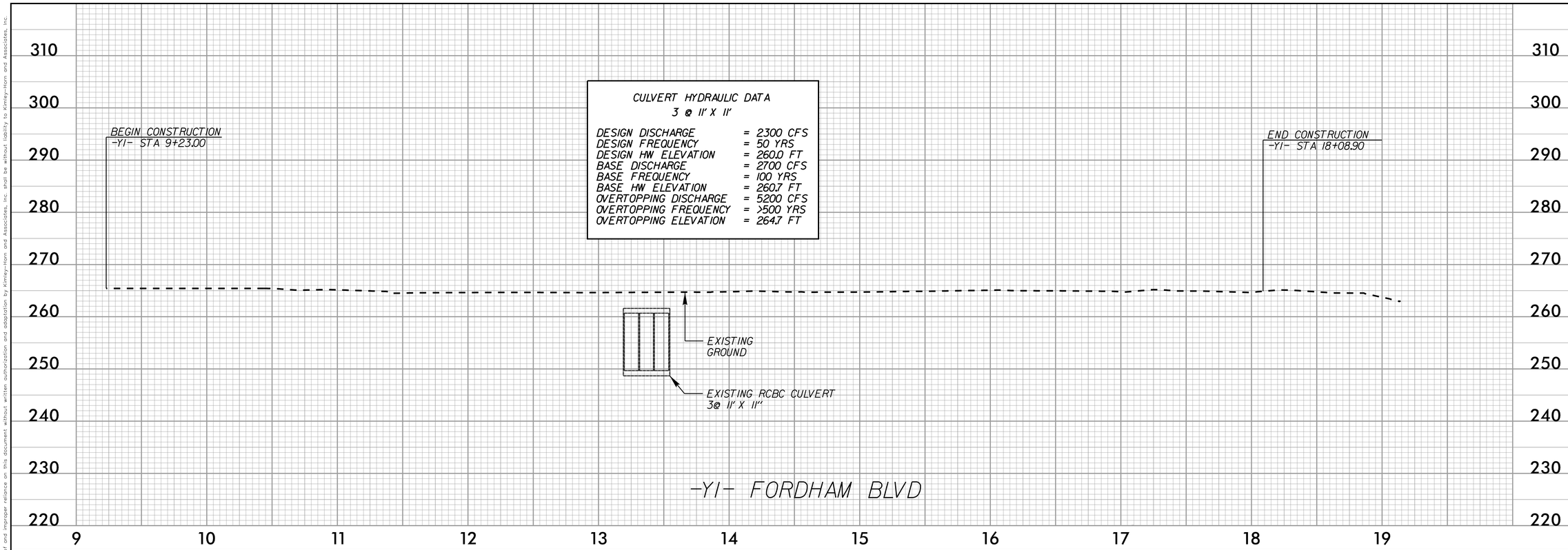

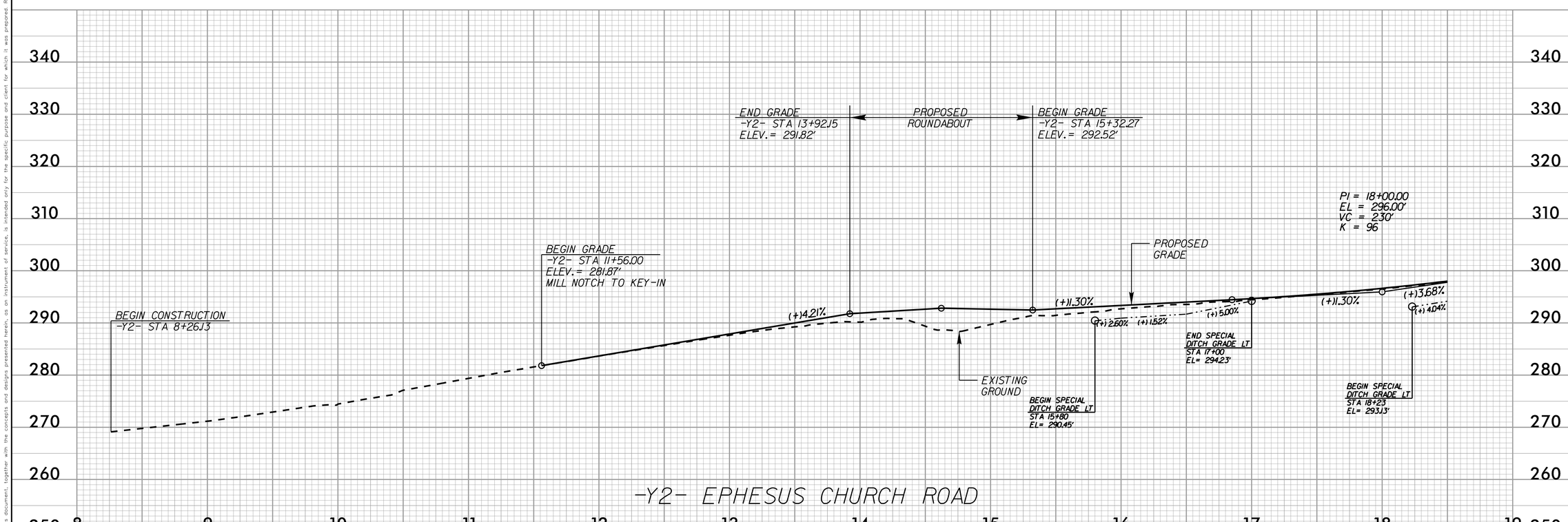

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

PROFILE

ELLIOTT ROAD EXTENSION

PREPARED FOR
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CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
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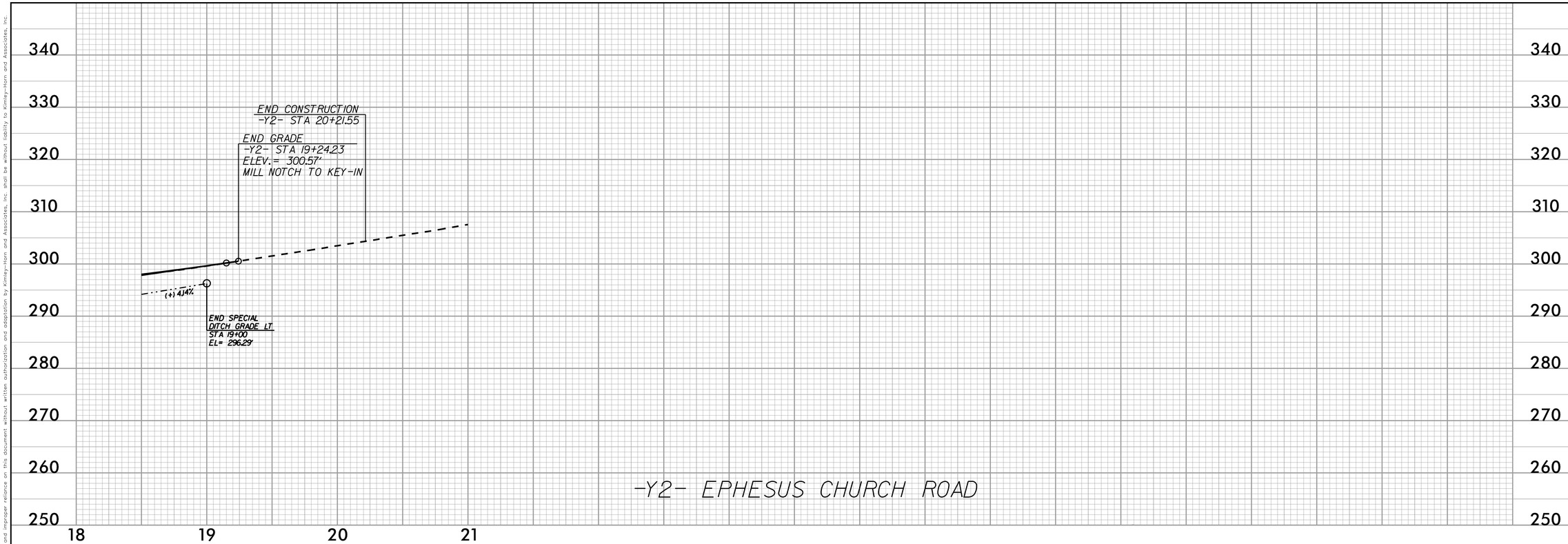

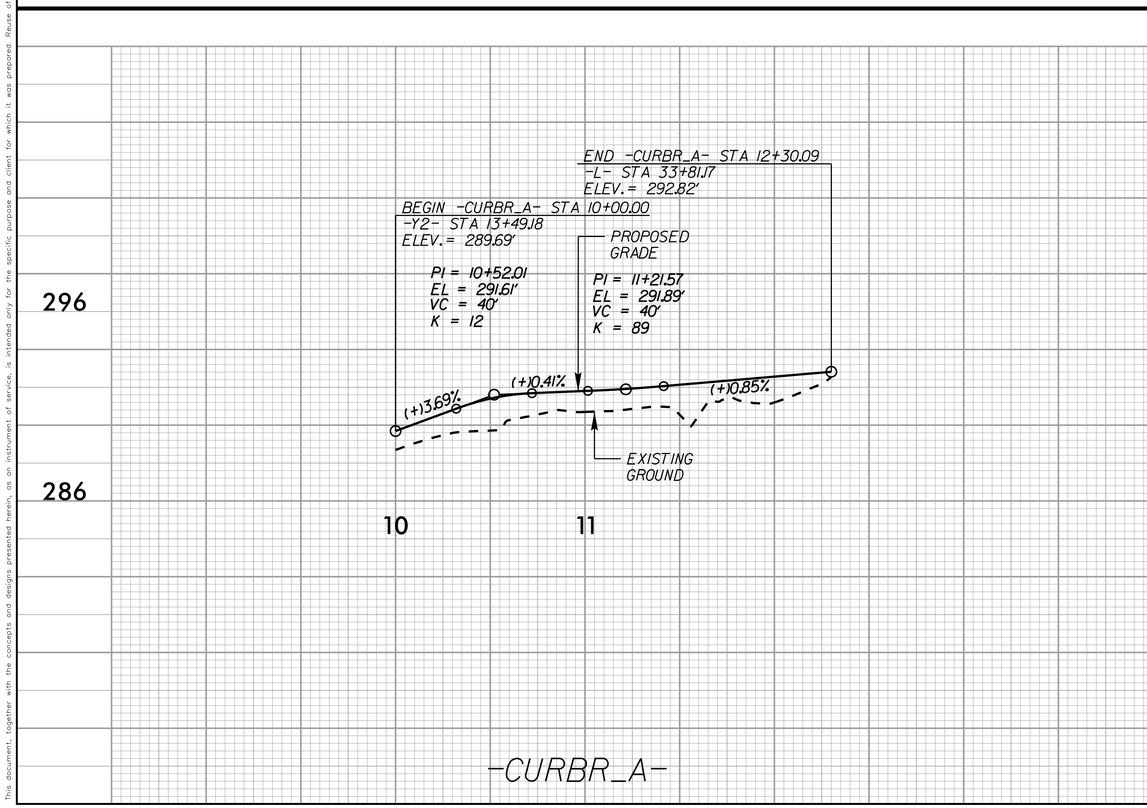

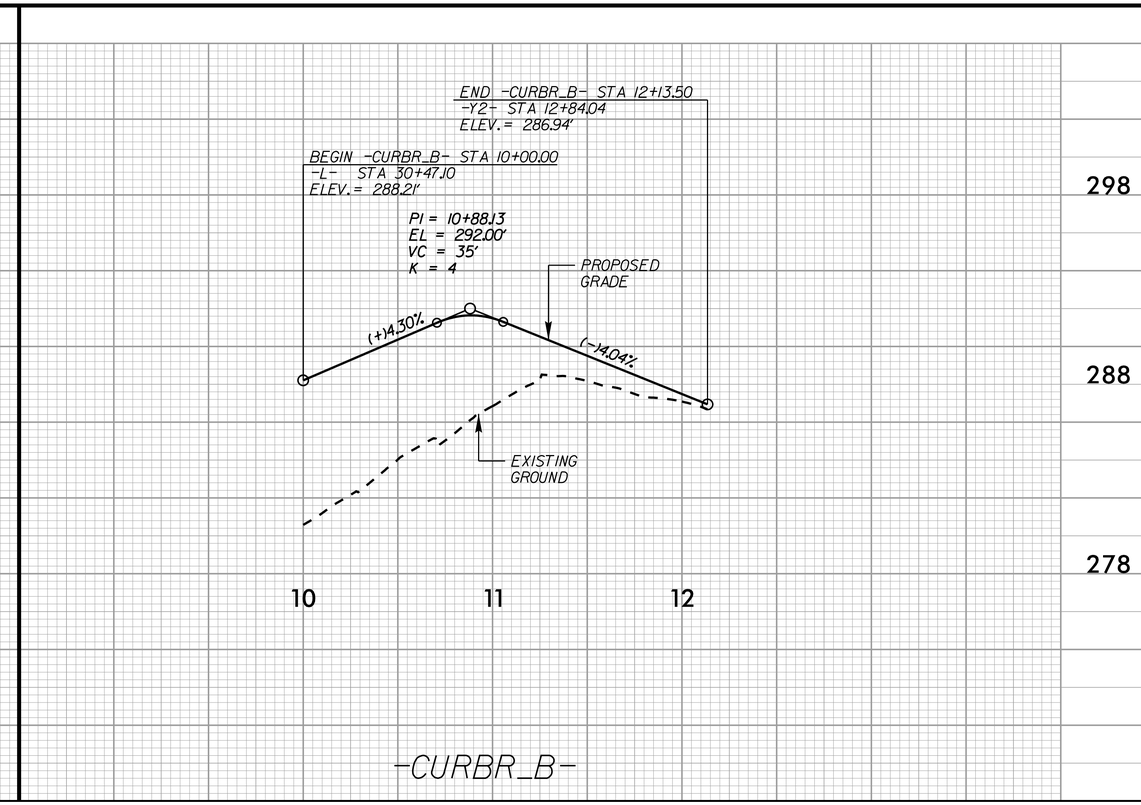

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

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DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

CURB PROFILE

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
NORTH CAROLINA
CHAPEL HILL

SHEET NUMBER
9

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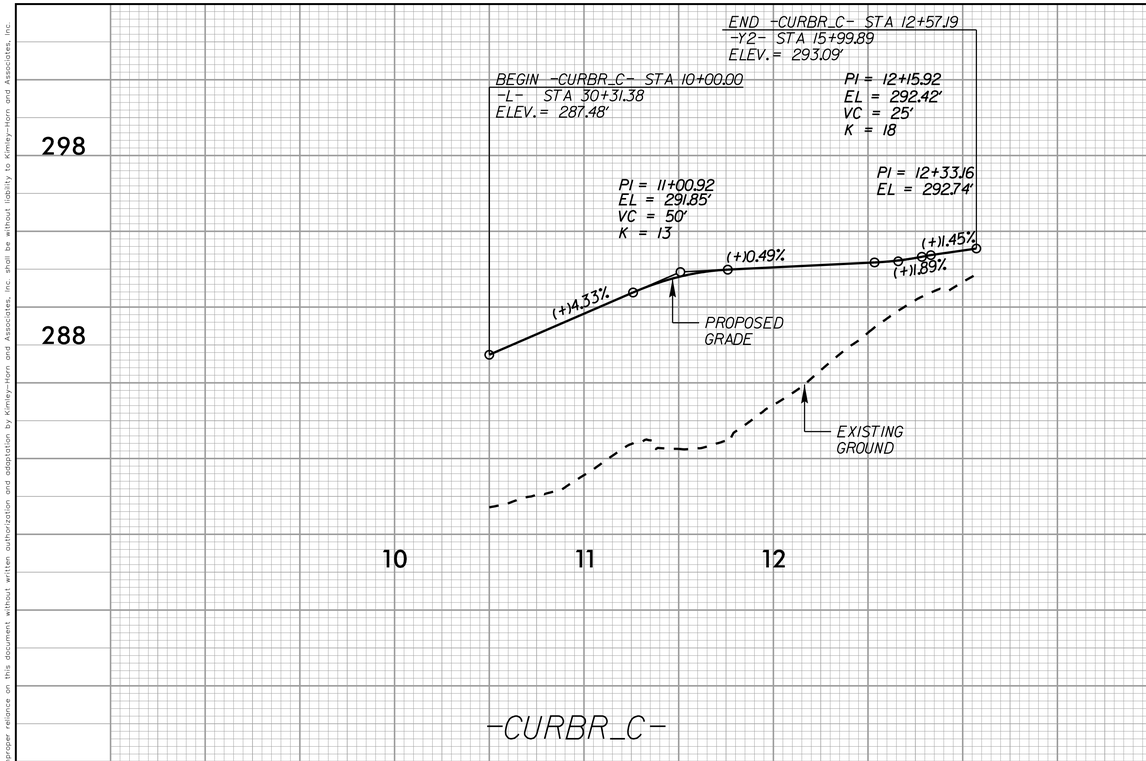

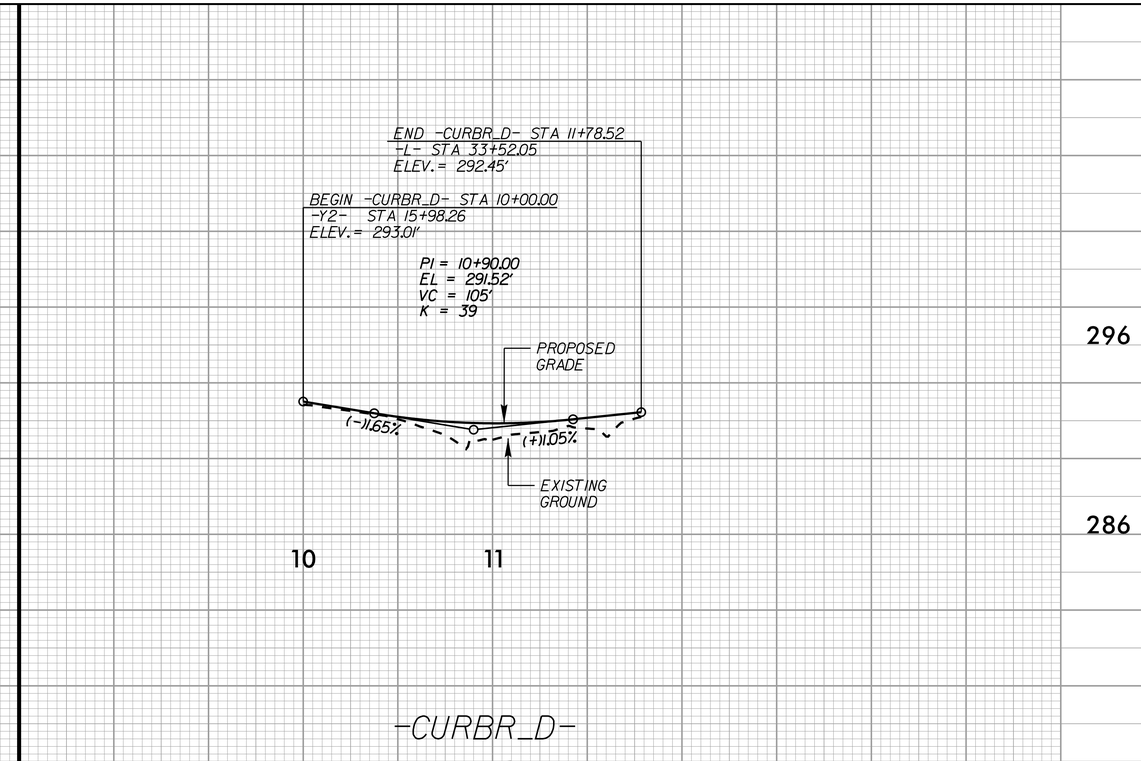

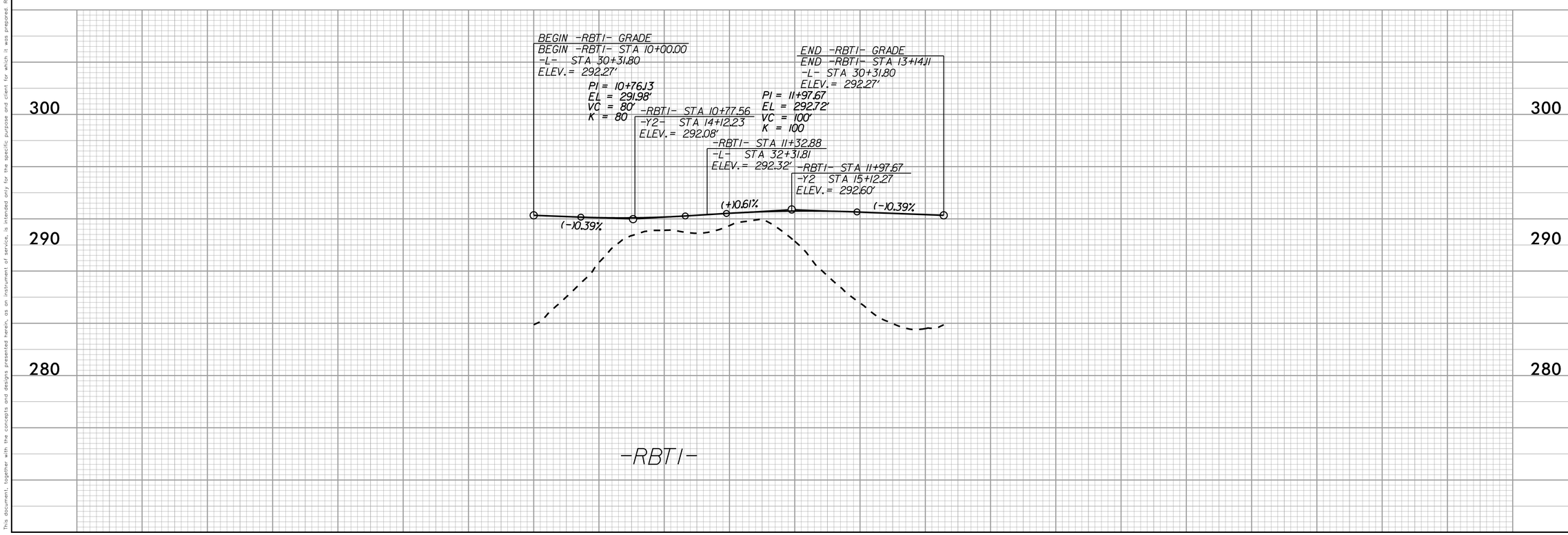

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NORTH CAROLINA PROFESSIONAL SEAL 045325 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

ROUNDABOUT PROFILE

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
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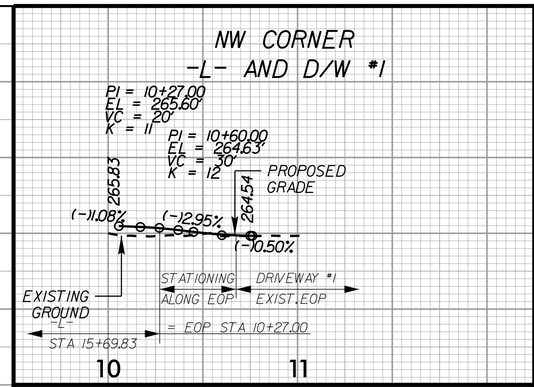

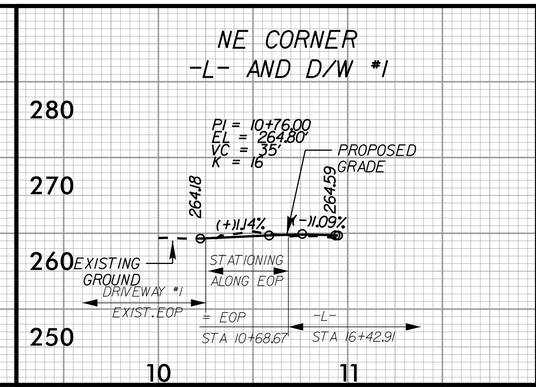

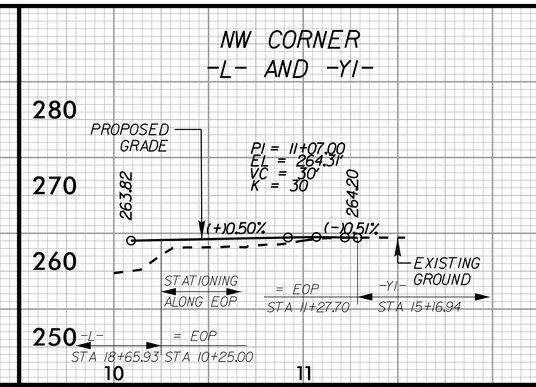

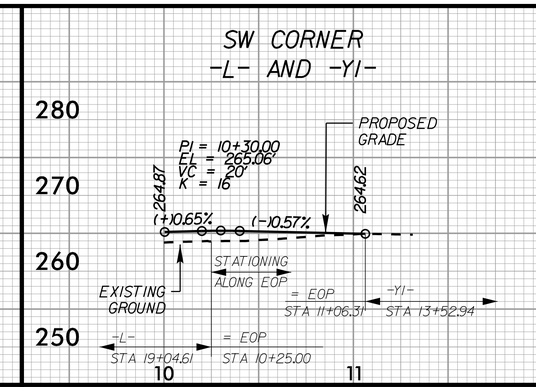

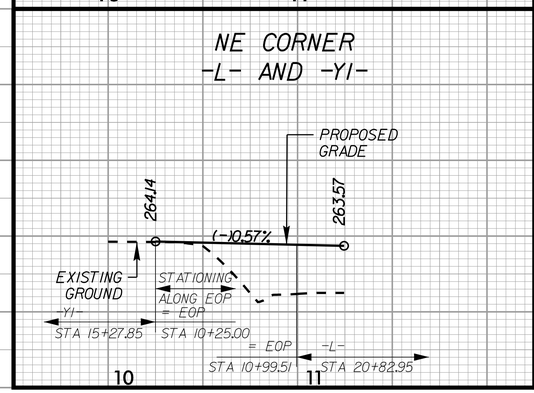

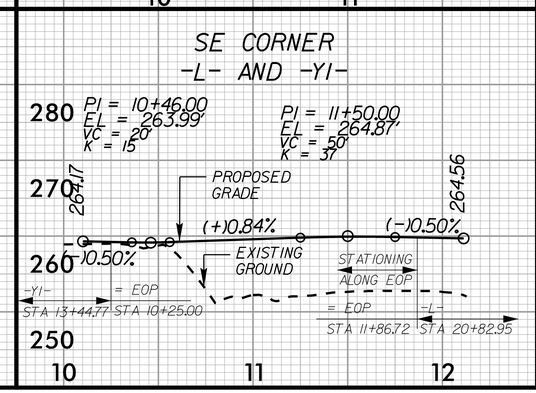

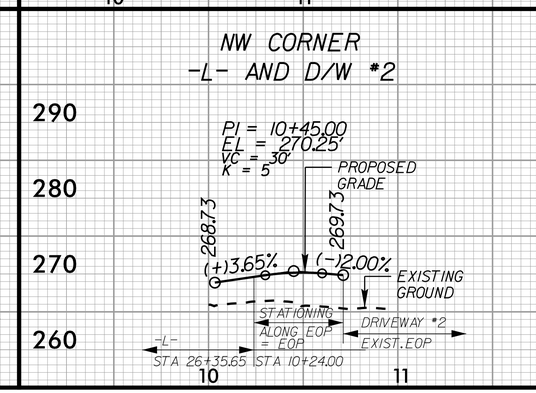

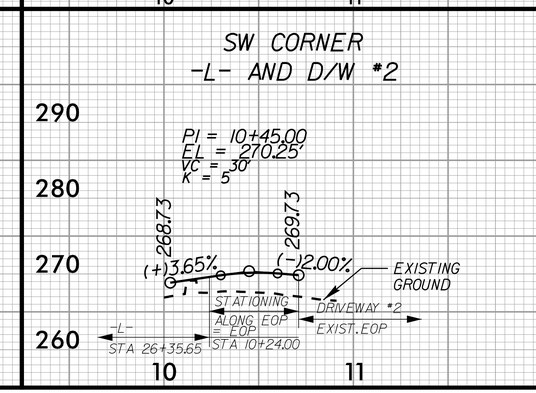

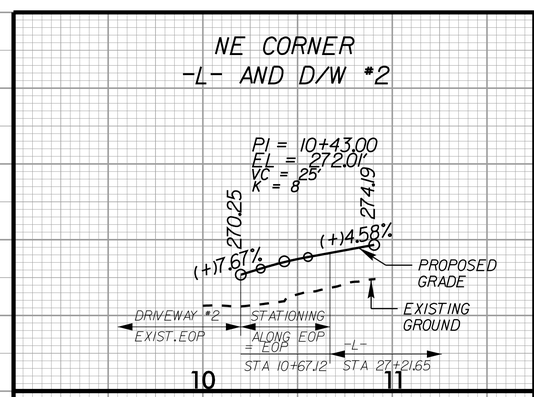

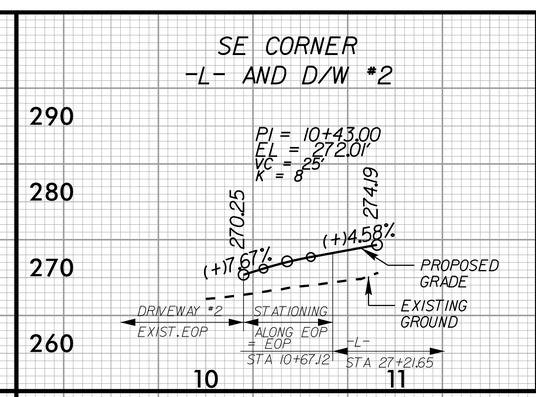

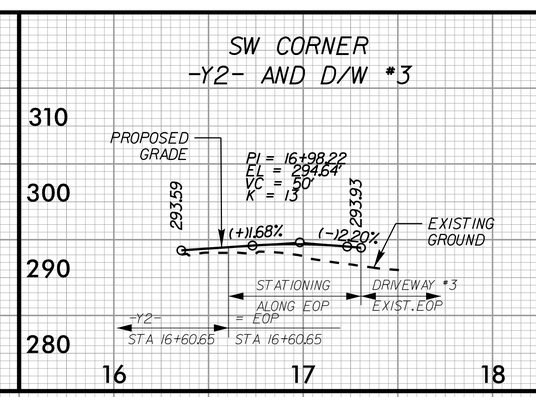

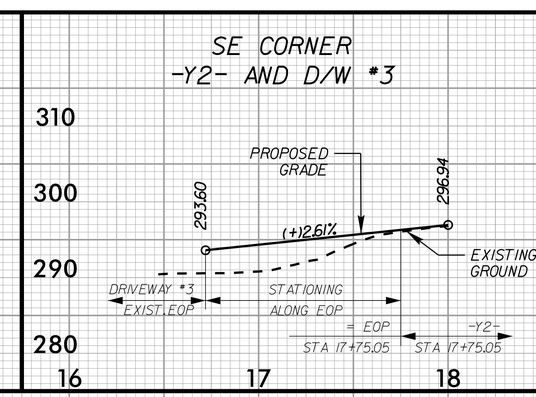

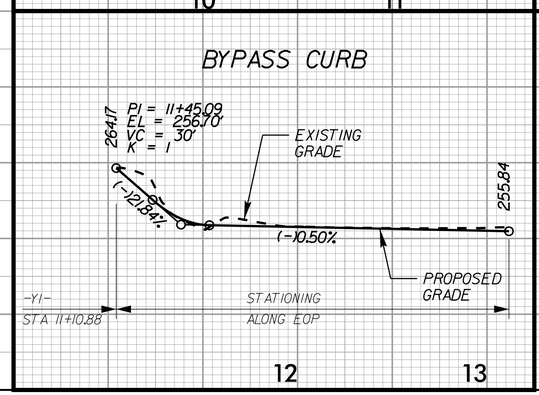

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Kimley»Horn

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PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

EDGE OF PAVEMENT PROFILES

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
11

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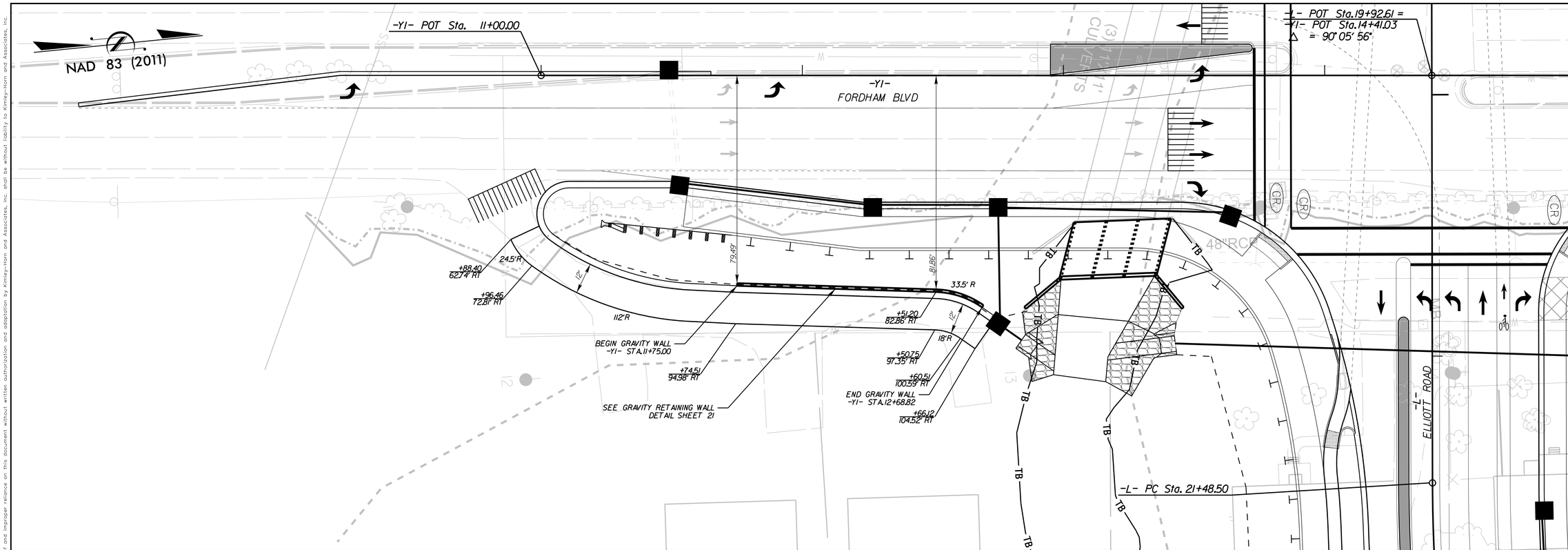

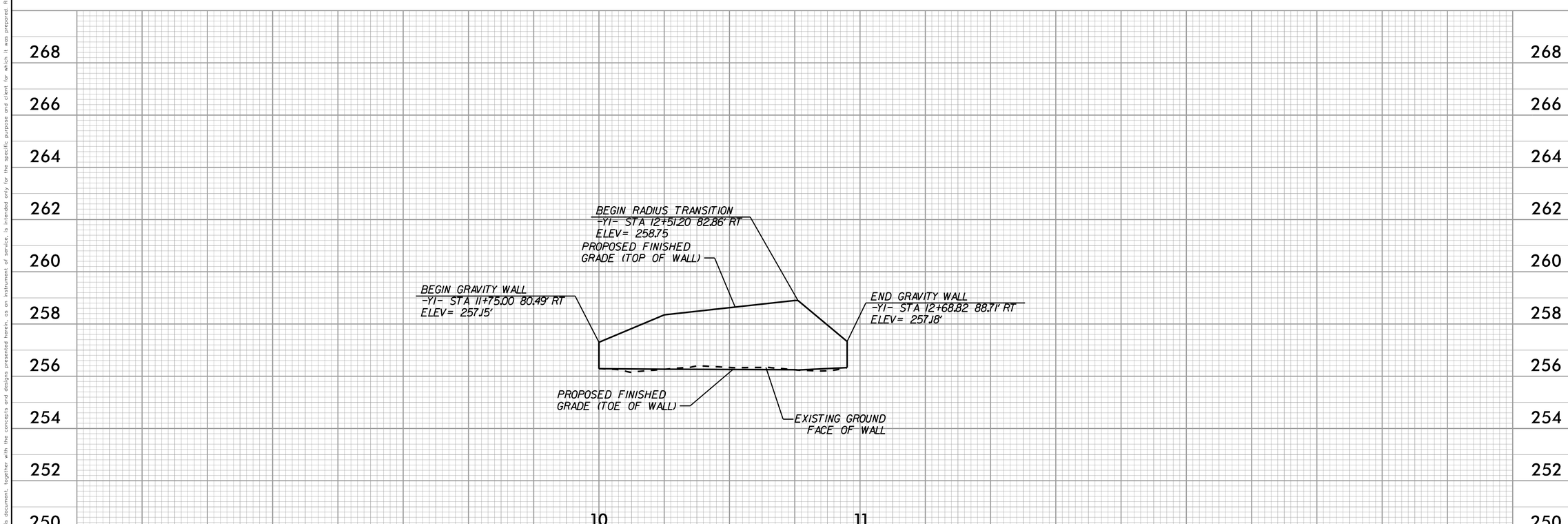

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FAX: 919-677-2050
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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 20'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

GRAVITY WALL ENVELOPE

ELLIOTT ROAD EXTENSION

PREPARED FOR
TOWN OF CHAPEL HILL, NC
NORTH CAROLINA
CHAPEL HILL

SHEET NUMBER
12

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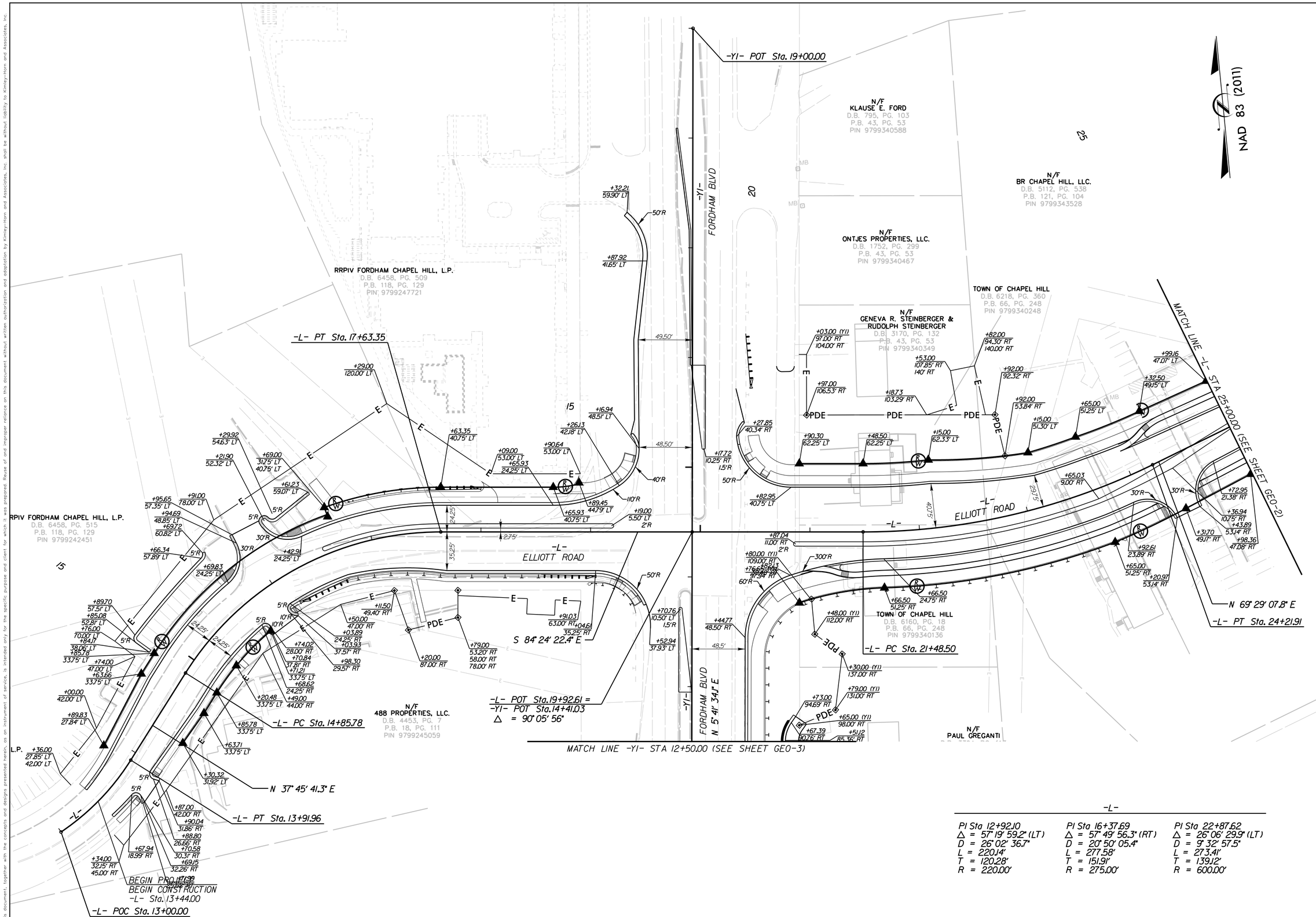

-L-

PI Sta 12+92.10	PI Sta 16+37.69	PI Sta 22+87.62
Δ = 57° 19' 59.2" (LT)	Δ = 57° 49' 56.3" (RT)	Δ = 26° 06' 29.9" (LT)
D = 26° 02' 36.7"	D = 20° 50' 05.4"	D = 9° 32' 57.5"
L = 220.14'	L = 277.58'	L = 273.41'
T = 120.28'	T = 151.91'	T = 139.12'
R = 220.00'	R = 275.00'	R = 600.00'

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FAX: 919-677-2050
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NORTH CAROLINA PROFESSIONAL SEAL 049 ENGINEER ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	1" = 40'
DESIGNED BY:	CMB
DRAWN BY:	TDW
CHECKED BY:	CMB

GEOMETRY SHEET

ELLIOTT ROAD EXTENSION

PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

GEO-1

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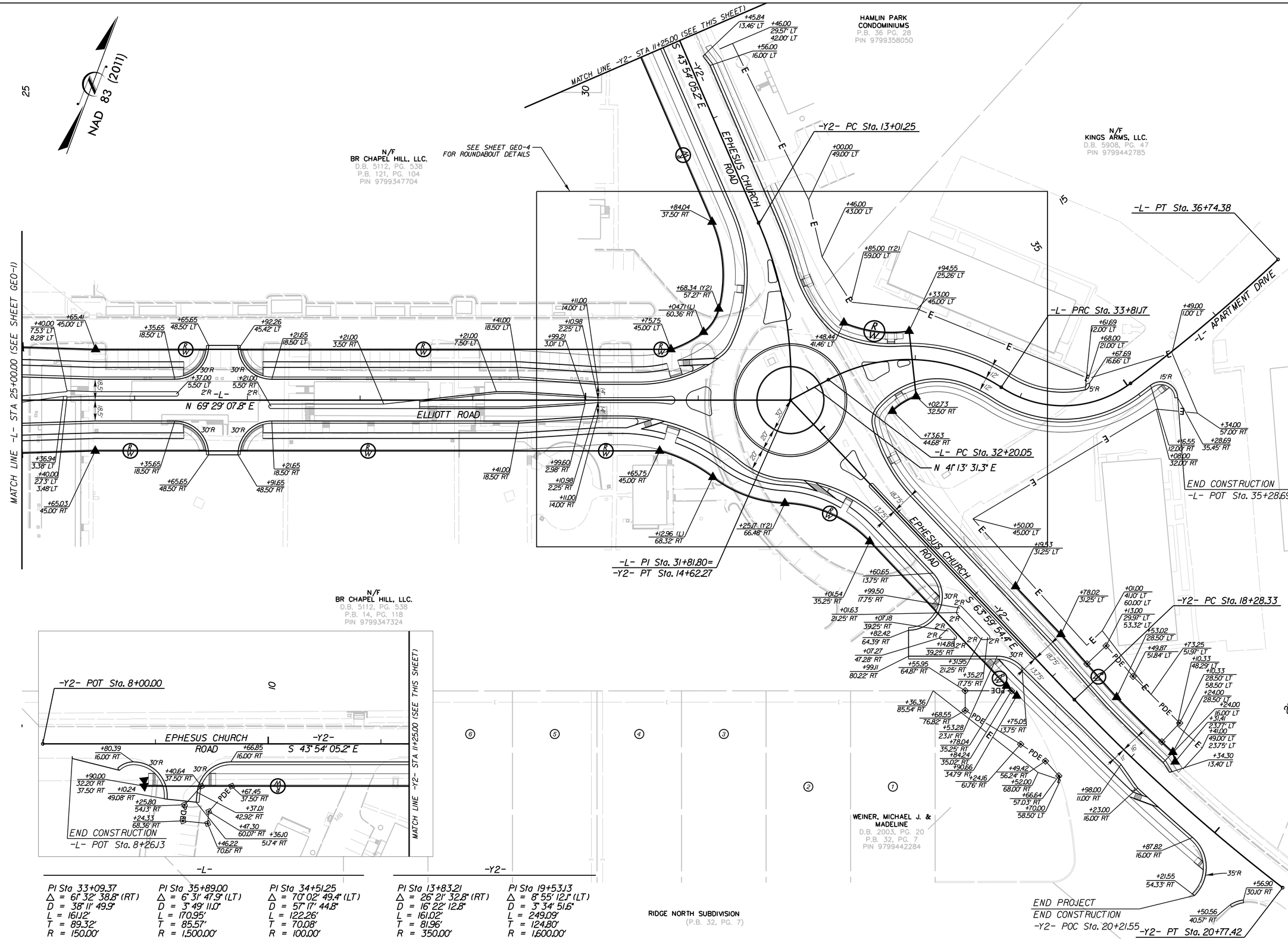

-L-

PI Sta 33+09.37	PI Sta 35+89.00	PI Sta 34+51.25
Δ = 61° 32' 38.8" (RT)	Δ = 6° 31' 47.9" (LT)	Δ = 70° 02' 49.4" (LT)
D = 38° 11' 49.9"	D = 3° 49' 11.0"	D = 57° 17' 44.8"
L = 161.12'	L = 170.95'	L = 122.26'
T = 89.32'	T = 85.57'	T = 70.08'
R = 150.00'	R = 1,500.00'	R = 100.00'

-Y2-

PI Sta 13+83.21	PI Sta 19+53.13
Δ = 26° 21' 32.8" (RT)	Δ = 8° 55' 12.1" (LT)
D = 16° 22' 12.8"	D = 3° 34' 51.6"
L = 161.02'	L = 249.09'
T = 81.96'	T = 124.80'
R = 350.00'	R = 1,600.00'

No.	REVISIONS	DATE	BY

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

GEOMETRY SHEET

ELLIOTT ROAD EXTENSION

PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
GEO-2

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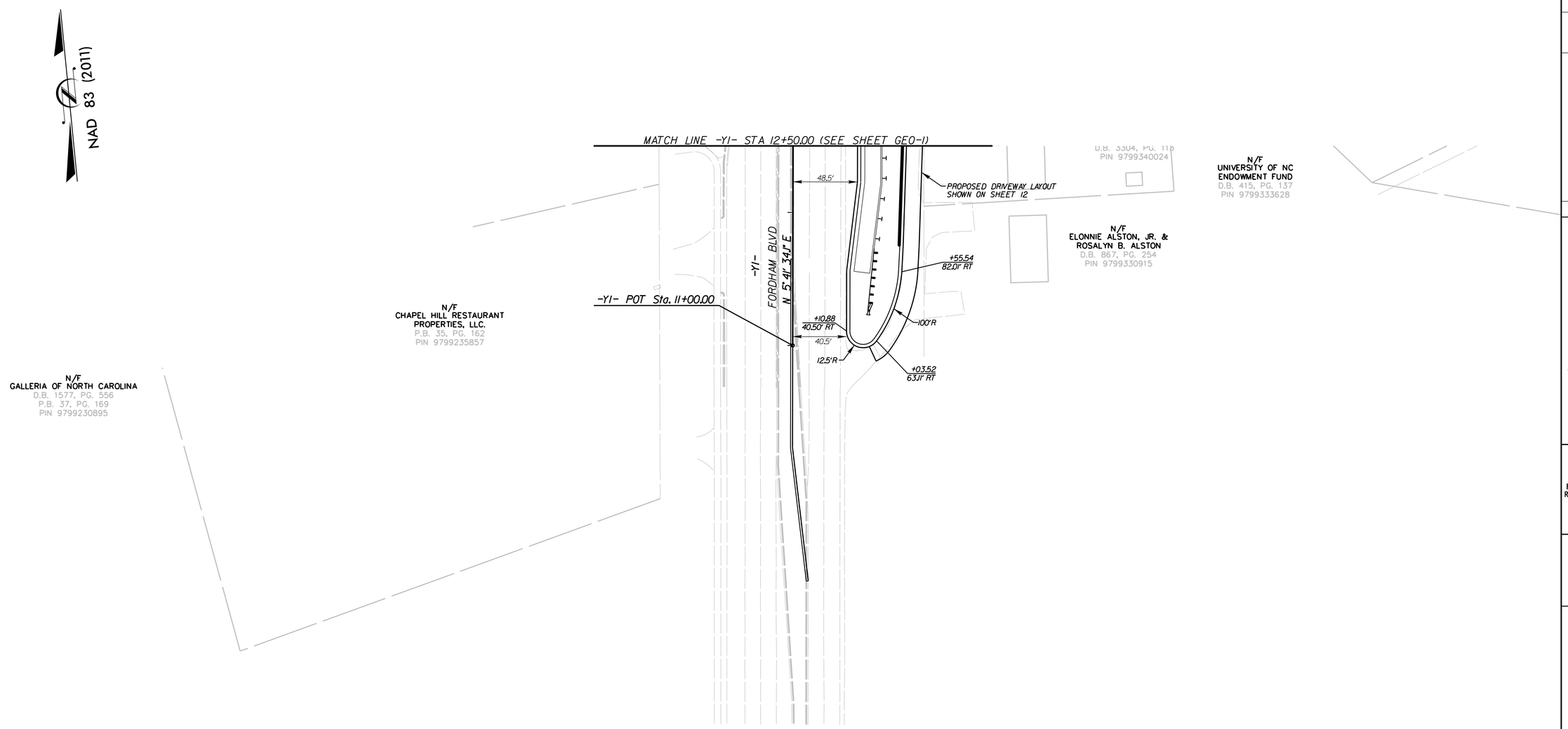

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NORTH CAROLINA PROFESSIONAL SEAL 045351 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020

DATE 7/6/2020

SCALE 1" = 40'

DESIGNED BY: CWB

DRAWN BY: TDW

CHECKED BY: CWB

GEOMETRY SHEET

ELLIOTT ROAD EXTENSION

PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

GEO-3

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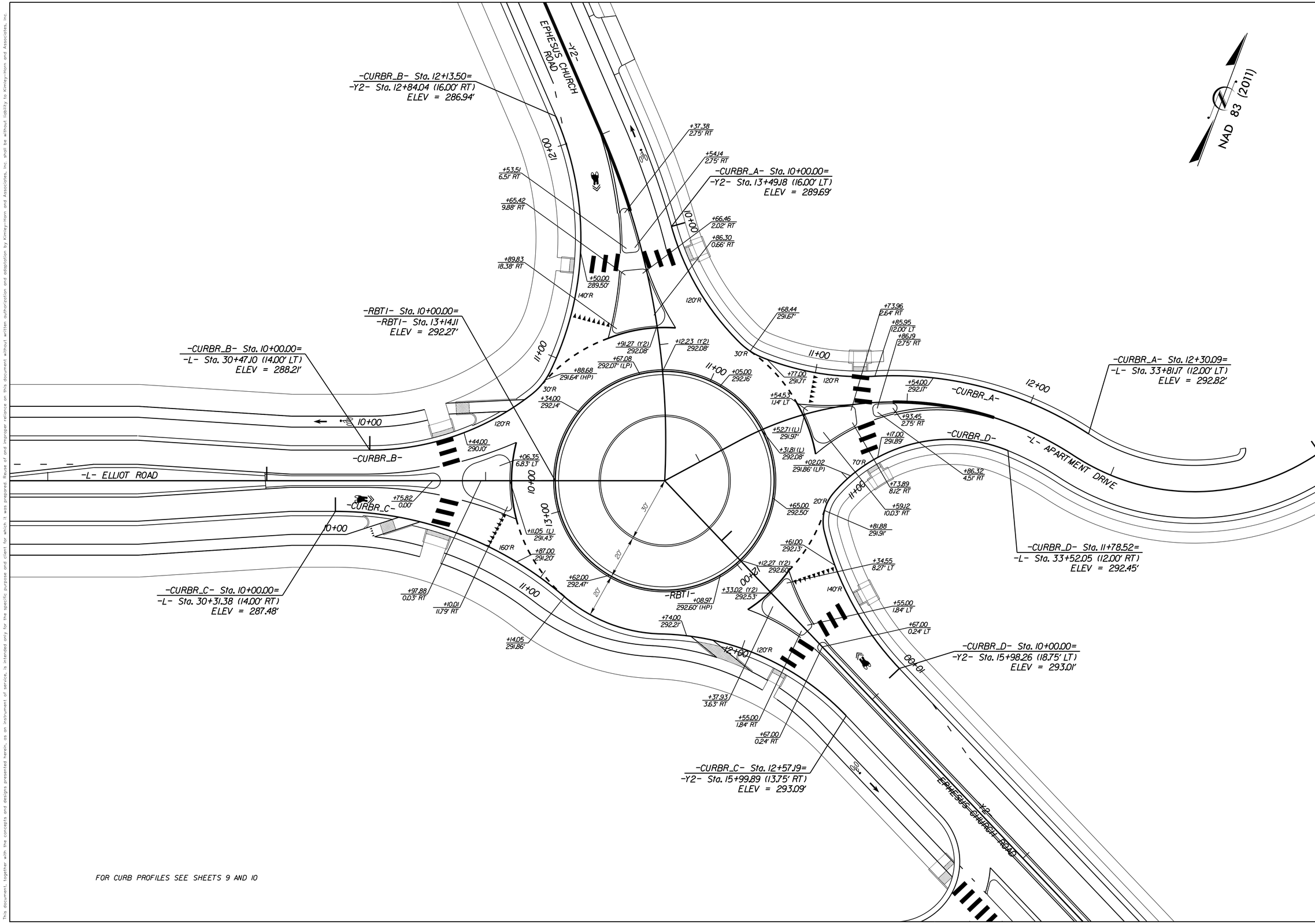

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK, N. DECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 20'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

GEOMETRY SHEET

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
GEO-4

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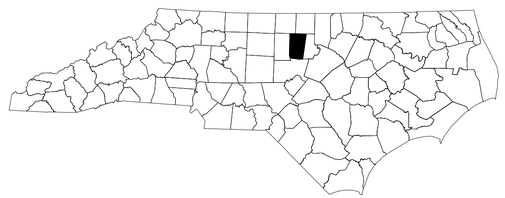
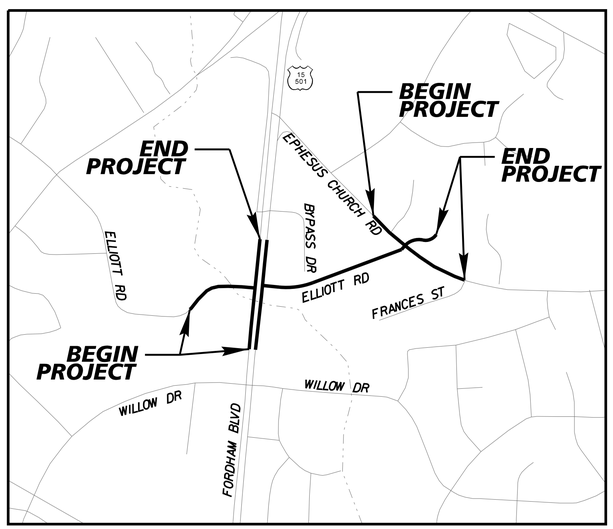
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ORANGE COUNTY





INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	COVER SHEET
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2	GENERAL NOTES
TMP-3	PHASING NOTES
TMP-4 - TMP-6	PHASE I PLANS AND DETAILS
TMP-7 - TMP-9	PHASE II PLANS AND DETAILS
TMP-10	PHASE IIB PLANS AND DETAILS
TMP-11 - TMP-13	PHASE III PLANS AND DETAILS
TMP-14	SPECIAL SIGN DESIGN

No.	REVISIONS	DATE	BY

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PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 19530 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-1

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PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
ORANGE COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. 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
1101.03	TEMPORARY ROAD 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
1180.01	SKINNY - DRUM
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
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

TEMPORARY PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

PA - PAINT (4" WHITE, 2X)	EDGELINE
PB - PAINT (4" YELLOW, 2X)	EDGELINE
PC - PAINT (4" WHITE, 2X)	4' X 10'/SP SKIP
PD - PAINT (4" WHITE, 2X)	3' X 9'/SP MINISKIP
PE - PAINT (4" WHITE, 2X)	SOLID LANE LINE
PI - PAINT (4" YELLOW, 2X)	DOUBLE CENTER LINE
PO - PAINT (6" WHITE, 2X)	EDGELINE LINE
PQ - PAINT (8" WHITE, 2X)	EDGELINE
PR - PAINT (8" WHITE, 2X)	GORELINE
PV - PAINT (4" YELLOW, 2X)	DIAGONAL LINE
PX - PAINT (8" WHITE, 2X)	CROSSWALK
P2 - PAINT (24" WHITE, 2X)	STOP BAR
TP - THERMO (8" WHITE, 90 MILS)	GORELINE

PAVEMENT MARKING SYMBOLS

QA - PAINT 2X (LEFT TURN ARROW)
QB - PAINT 2X (RIGHT TURN ARROW)
QC - PAINT 2X (STRAIGHT ARROW)
QD - PAINT 2X (COMBINATION STRAIGHT & LEFT TURN ARROW)
QE - PAINT 2X (COMBINATION STRAIGHT & RIGHT TURN ARROW)
QG - PAINT 2X (COMBINATION LEFT, STRAIGHT, & RIGHT TURN ARROW)
QI - PAINT 2X (ALPHANUMERIC CHARACTER)
QM - PAINT 2X (U-TURN ARROW)
QS - PAINT 2X (YEILD LINE)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT. -------- EXIST. PVMT.
- WORK AREA
- REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM
- SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC. 27701
PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 042325 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-1A

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GENERAL NOTES

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: REFER TO INTERMEDIATE CONTRACT TIME PROJECT SPECIAL PROVISIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
FORDHAM BLVD	7:00 AM TO 9:00 AM & 4:00 PM TO 9:00 PM MON. THRU FRI.
ELLIOTT RD	7:00 AM TO 9:00 AM & 4:00 PM TO 6:00 PM MON. THRU FRI.
EPHESUS CHURCH RD (NO SCHOOL)	7:00 AM TO 9:00 AM & 4:00 PM TO 6:00 PM MON. THRU FRI.
EPHESUS CHURCH ED (SCHOOL)	7:00 AM TO 9:00 AM & 2:00 PM TO 6:00 PM MON. THRU FRI.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

ELLIOTT RD
FORDHAM BLVD
EPHESUS CHURCH RD

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

9. FOR UNC ATHLETIC EVENTS AT KENAN MEMORIAL STADIUM AND DEAN E. SMITH CENTER.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
ELLIOTT RD FORDHAM BLVD EPHESUS CHUCH RD	ANYTIME

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
ELLIOTT RD	7:00 AM TO 9:00 AM & 4:00 PM TO 6:00 PM MON. THRU FRI.
EPHESUS CHURCH RD (NO SCHOOL)	7:00 AM TO 9:00 AM & 4:00 PM TO 6:00 PM MON. THRU FRI.
EPHESUS CHURCH ED (SCHOOL)	7:00 AM TO 9:00 AM & 2:00 PM TO 6:00 PM MON. THRU FRI.
FORDHAM BLVD	ANYTIME

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) 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.

G) 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.

H) 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.

I) 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.

J) 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

K) 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.

TRAFFIC PATTERN ALTERATIONS

L) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

M) 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.

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

O) INSTALL BLACK ON ORANGE ''DIP'' SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

P) 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.

Q) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

R) 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

S) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ELLIOTT RD	PAINT	NONE
FORDHAM BLVD	PAINT	NONE
EPHESUS CHURCH RD	PAINT	NONE

T) 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.

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

V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

W) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

X) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE ''PAVEMENT ENDS'' SIGNS (W8-3) 500 AND 500 RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

Y) 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.

Z) 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.).

AA) CONTRACTOR TO PROVIDE TEMPORARY LIGHTING AT THE INTERSECTION OF FORDHAM BLVD AND ELLIOTT RD DURING NIGHT TIME HOURS THROUGHOUT CONSTRUCTION OR UNTIL PERMANENT LIGHTING IS IN OPERATION.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 19032 ENGINEER CHADWICK W. BECK
FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020	
DATE 7/6/2020	
SCALE 1" = 40'	
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-2

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CONSTRUCTION PHASING

PHASE 1

STEP 1
PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL WORK ZONE ADVANCE WARNING SIGNS AS SHOWN ON RSD. 1101.01.

STEP 2
USING RSD 1101.02 AS NECESSARY PERFORM THE FOLLOWING AS SHOWN ON SHEETS TMP-4 THRU TMP-6:
- INSTALL TRAFFIC CONTROL DEVICES AND PORTABLE CONCRETE BARRIER ALONG -Y1- FORDHAM BLVD
- INSTALL TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS ALONG -Y2- EPHESUS CHURCH RD
- AWAY FROM TRAFFIC BEGIN CONSTRUCTION OF NEW LOCATION -L- ELLIOTT RD INCLUDING PART OF THE PROPOSED ROUNDABOUT AS SHOWN ON TMP-6 AND ASSOCIATED WIDENING RIGHT OF -Y1- FORDHAM BLVD BETWEEN STATIONS -Y1- STA. 10+95 AND -Y1- STA. 15+72.

STEP 3
WHILE MAINTAINING TRAFFIC IN THE EXISTING PATTERN AND USING RSD 1101.02 AS NECESSARY PERFORM THE FOLLOWING:
- MAINTAIN EXIST PEDESTRIAN MULTI-USE PATHWAY LEFT OF -L- ELLIOTT RD
- CONSTRUCT NEW MULTI-USE PATHWAY LEFT OF -L- ELLOTT RD FROM STA. 16+70 (APPROX) TO STA. 18+90 (APPROX)
- WIDEN LEFT OF -L- BETWEEN STA. 13+44 AND THE INTERSECTION OF -L- ELLIOTT RD AND -Y1- FORDHAM BLVD INCLUDING ALL ASSOCIATED WIDENING ON -Y1- FORDHAM BLVD BUT DO NOT IMPACT THE EXISTING PEDESTRIAN PATHWAY.

STEP 4
INSTALL SAFETY FENCE ALONG NEWLY CONSTRUCTED MULTI-USE PATHWAY AND SHIFT PEDESTRIAN TRAFFIC ONTO NEWLY CONSTRUCTED MULTI-USE PATHWAY.

STEP 5
AWAY FROM PEDESTRIAN TRAFFIC COMPLETE WIDENING OF -L- ELLIOTT RD FROM -L- STA. 13+44 TO THE INTERSECTION OF -L- ELLIOTT RD AND -Y1- FORDHAM BLVD UP TO THE EXISTING EDGE OF TRAVEL WHILE MAINTAING TRAFFIC IN THE EXISTING PATTERN.
COMPLETE WIDENING OF -Y1- FORDHAM BLVD FROM -Y1- STA. 14+50 TO -Y1- STA. 17+32 AND COMPLETE ALL WIDENING RIGHT OF -Y2- EPHESUS CHURCH RD BETWEEN STATIONS -Y2- STA. 8+26.13 AND -Y2- STA. 20+21.48.

NOTES:
- STEP 2 MAY CONTINUE DURING STEP 3 THRU STEP 5.
- PROVIDE WEDGING AS REQUIRED TO ENSURE SMOOTH TRANSITIONS AND POSITIVE DRAINAGE.

PHASE 2

NOTE: ALL WORK AWAY FROM TRAFFIC AS DESCRIBED IN PHASE 1 STEP 2 MAY CONTINUE THROUGH PHASE 2.

STEP 1
INSTALL TEMPORARY SIGNAL AT THE INTERSECTION OF -L- ELLIOTT RD AND -Y1 FORDHAM BLVD. COVER SIGNAL HEADS AND DO NOT ACTIVATE.

STEP 2
USING RSD 1101.02 SHEETS 1 AND 2 OF 14 AS REQUIRED INSTALL TEMPORARY PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES AS SHOWN IN SHEETS TMP-7 THRU TMP-9. REMOVE ALL CONFLICTING MARKINGS, ACTIVATE TEMPORARY SIGNAL AND SHIFT TRAFFIC ONTO NEW PATTEN.

STEP 3
INSTALL ALL MARKINGS, TEMPORARY CURB RAMPS AND SAFETY FENCE ASSOCIATED WITH THE TEMPORARY PEDESTRIAN DETOURS AS SHOWN ON TMP-7 AND TMP-8. CLOSE THE EXISTING SIDEWALK AND SHIFT PEDESTRIAN TRAFFIC ONTO DETOUR ROUTES.

STEP 4
USING RSD 1101.02 AS REQUIRED PERFORM THE FOLLOWING AS SHOWN ON SHEETS TMP-7 THRU TMP-9:
- WIDEN RIGHT OF -L- BETWEEN STA. 13+44 AND THE INTERSECTION OF -L- ELLIOTT RD AND -Y1- FORDHAM BLVD
- WIDEN LEFT OF -Y2- EHPESUS CHURCH RD BETWEEN STATIONS -Y2- STA. 11+39.63 AND -Y2- STA.19+34.18

NOTE: PROVIDE WEDGING AS REQUIRED TO ENSURE SMOOTH TRANSITIONS AND POSITIVE DRAINAGE.

PHASE 2B

NOTE: ALL WORK AWAY FROM TRAFFIC AS DESCRIBED IN PHASE 1 STEP 2 MAY CONTINUE THROUGH PHASE 2B.

STEP 1
MAINTAIN PEDESTRIAN DETOUR AND TRAFFIC CONTROL DEVICES AS INSTALLED IN PHASE 2 UNLESS DIRECTLY CONFLICTING WITH THE TRAFFIC PATTERN SHOWN ON TMP-10

STEP 2
INSTALL TEMPORARY MARKINGS AS SHOWN ON SHEET TMP-10 USING RSD 1101.02 SHEET 1 AND 2 OF 14 AS REQUIRED. REMOVE CONFLICTING MARKINGS, OPEN NEW -L- APARTMENT DRIVE AND SHIFT TRAFFIC ONTO NEW PATTERN.

STEP 3
USING RSD 1101.02 AS REQUIRED REMOVE EXISTING APARTMENT DRIVE AND CONSTRUCT NEW CURB AND GUTTER ALONG -Y2- EPHESUS CHURCH RD BETWEEN STATIONS -Y2- STA. 15+85 AND -Y2- STA. 16+65 AS SHOWN ON SHEET TMP-10.

NOTE: PROVIDE WEDGING TO ENSURE POSITIVE DRAINAGE AND SMOOTH TRANSITIONS.

PHASE 3

STEP 1
CONTINUE WORK ON NEW LOCATION -L- ELLIOTT RD

STEP 2
INSTALL TEMPORARY SIGNAL AT THE INTERSECTION OF -L- ELLIOTT RD AND -Y1- FORDHAM BLVD. COVER HEADS AND DO NOT ACTIVATE

STEP 3
USING RSD 1101.02 SHEETS 1 AND 2 OF 14 AS REQUIRED INSTALL TEMPORARY PAVEMENT MARKINGS AT THE INTERSECTION OF -L- ELLIOTT RD AND -Y1- FORDHAM BLVD AS SHOWN ON SHEET TMP-11, REMOVE CONFLICTING MARKINGS, ACTIVATE NEW SIGNAL AND SHIFT TRAFFIC ONTO NEW PATTERN.

STEP 4
ONE WEEK PRIOR TO INSTALLING THE PHASE 3 TEMPORARY PATTERN ON -Y2- EPHESUS CHURCH RD, INSTALL CHANGEABLE MESSAGE SIGNS (CMS) IN BOTH DIRECTIONS 500 FT IN ADVANCE OF THE PROPOSED LOCATION OF THE TEMPORARY ONE-LANE SIGNALIZED PATTERN. DISPLAY THE FOLLOWING MESSAGE FOR ONE WEEK PRIOR TO IMPLEMENTING TEMPORARY PATTERN.

MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGIN *(DATE)*

CHANGEABLE MESSAGE SIGN

STEP 5
RELOCATE CMS 500′ IN ADVANCE OF THE FIRST PROPOSED ADVANCE WARNING SIGN IN BOTH DIRECTIONS ON -Y2- EPHESUS CHURCH RD. USING RSD 1101.02 SHEET 1 OF 14 AS REQUIRED, INSTALL TEMPORARY PAVEMENT MARKINGS, ADVANCE WARNING SIGNS AND TEMPORARY TRAFFIC SIGNALS ON -Y2- EPHESUS CHURCH ROAD AS SHOWN ON SHEET TMP-12. ACTIVATE TEMPORARY SIGNALS AND SHIFT TRAFFIC ONTO TEMPORARY ONE LANE, TWO-WAY PATTERN.

MODIFY CMS MESSAGE TO THE FOLLOWING:

MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	OBEY TRAFFIC SIGNALS

CHANGEABLE MESSAGE SIGN

STEP 6
WHILE MANTAINING ACCESS TO KINGS ARMS APARTMENTS AT ALL TIMES AND USING THE TEMPORARY TRAFFIC PATTERNS AS SHOWN ON TMP-11 THRU TMP-14 PERFORM THE FOLLOWING:
- CONSTRUCT PROPOSED MONOLITHIC ISLANDS AND REMAINING ROUNDABOUT TRUCK APRON AND CURB AND GUTTER AT THE INTERSECTION OF -L- ELLIOTT RD AND -Y2- EPHESUS CHURCH RD
- LEFT TURN LANE WIDENING ON -Y1- FORDHAM BLVD BETWEEN STATIONS -Y1- STA. 9+22.97 AND -Y1- STA. 11+68.83

STEP 4:
COMPLETE NEW LOCATON -L- ELLIOTT RD. INSTALL FINAL PAVEMENT MARKINGS USING RSD 1101.02 SHEET 1 AND 2 OF 14 , REMOVE CONFLICTING MARKINGS, REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL LANES TO TRAFFIC.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC. 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045325 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
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CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-3

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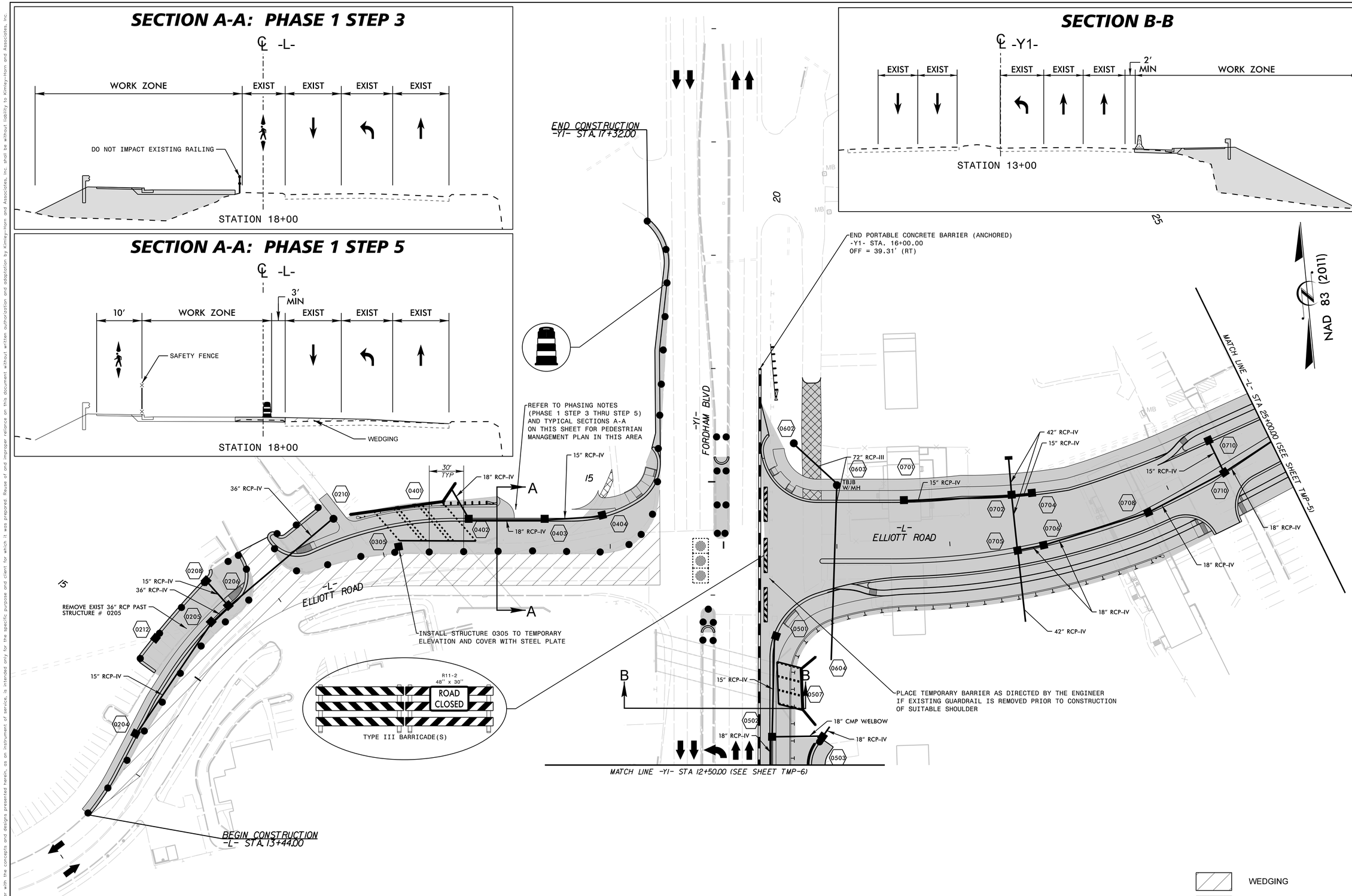
SECTION A-A: PHASE 1 STEP 3

SECTION A-A: PHASE 1 STEP 5

SECTION B-B



WEDGING

PAVEMENT REMOVAL

WORK AREA

CONSTRUCTION PHASE 1

No.	REVISIONS	DATE	BY

Kimley»Horn

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020

DATE 7/6/2020

SCALE 1″ = 40′

DESIGNED BY: CWB

DRAWN BY: TDW

CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION

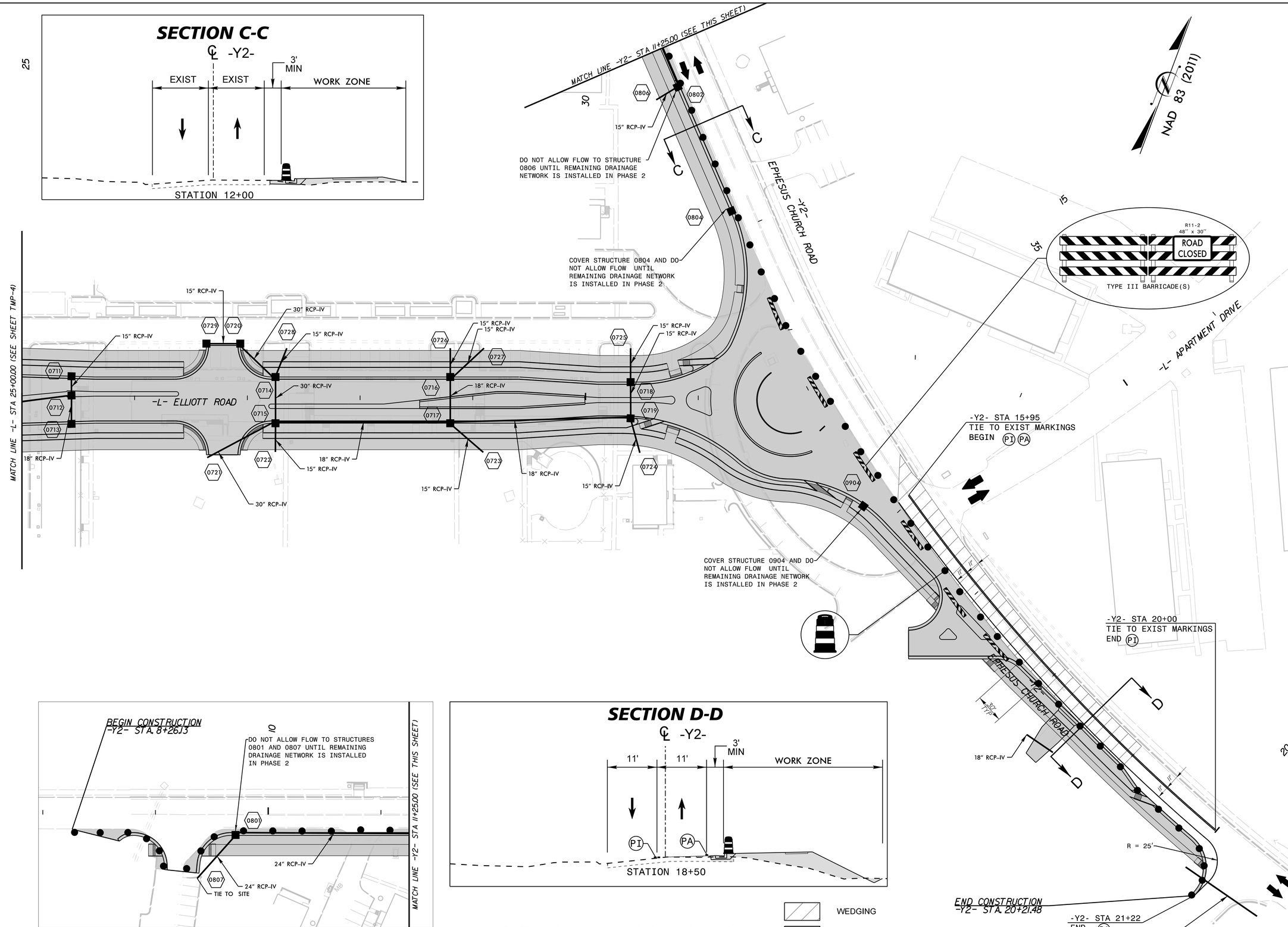
PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

TMP-4



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Kimley»Horn

© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. DECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION

PREPARED FOR
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CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
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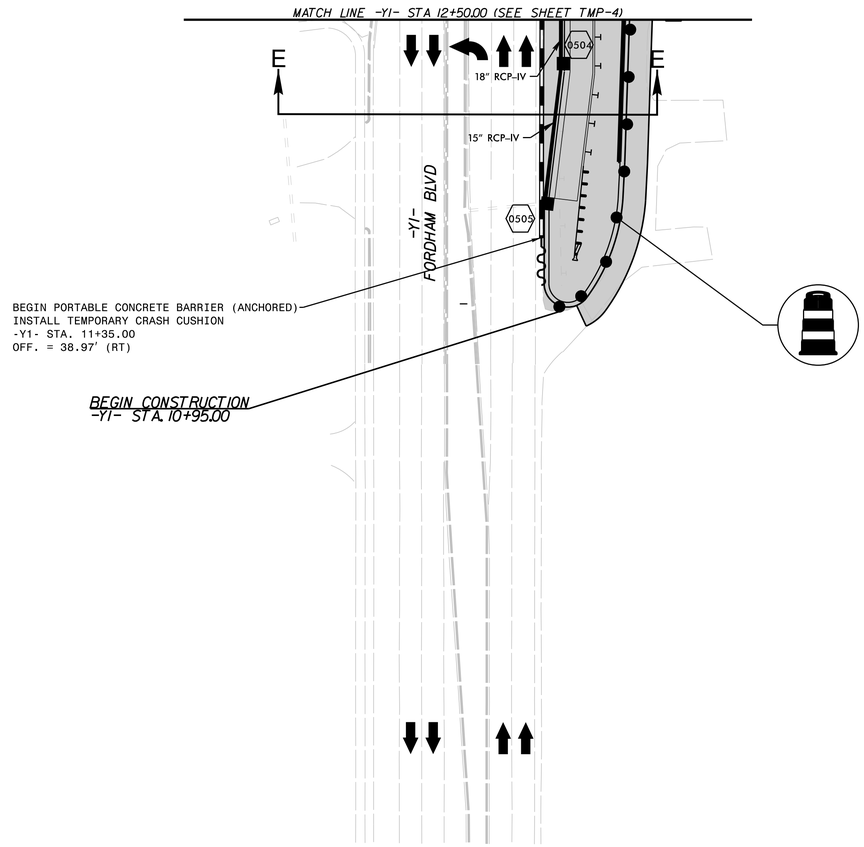
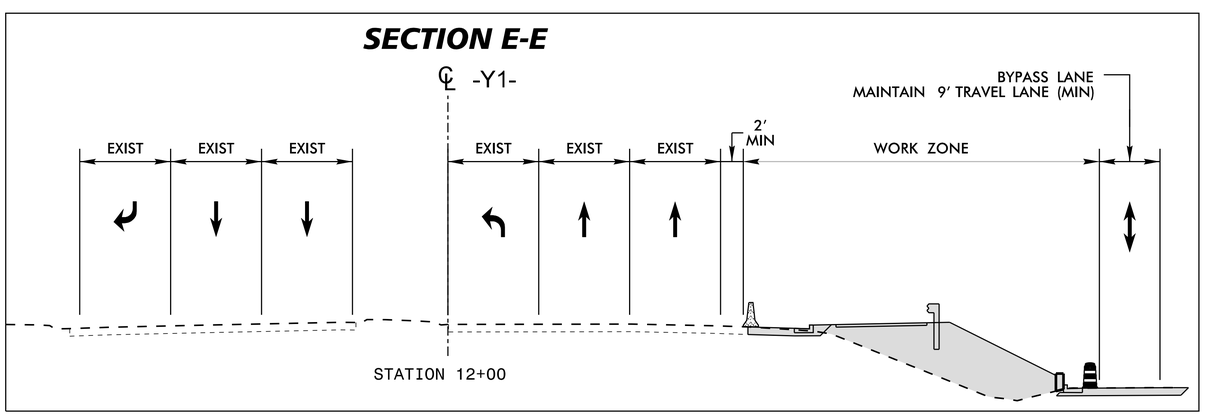
NAD 83 (2011)





CONSTRUCTION PHASE 1 WORK AREA

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
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NORTH CAROLINA PROFESSIONAL SEAL 045325 ENGINEER CHADWICK W. BECKER

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SCALE 1" = 40'	
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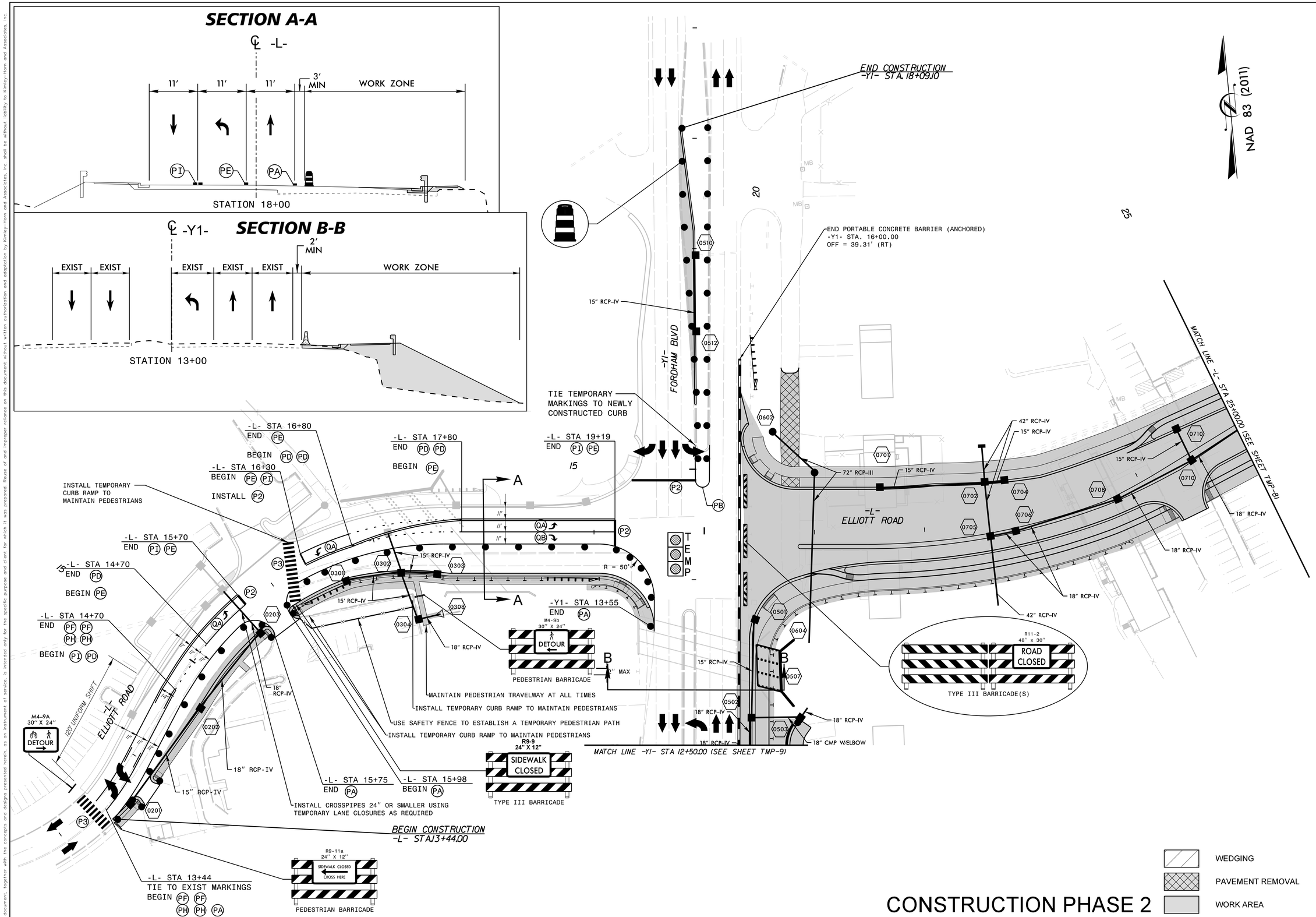
SECTION A-A

SECTION B-B



CONSTRUCTION PHASE 2

No.	REVISIONS	DATE	BY

Kimley»Horn

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045 ENGINEER CHADWICK W. BECK

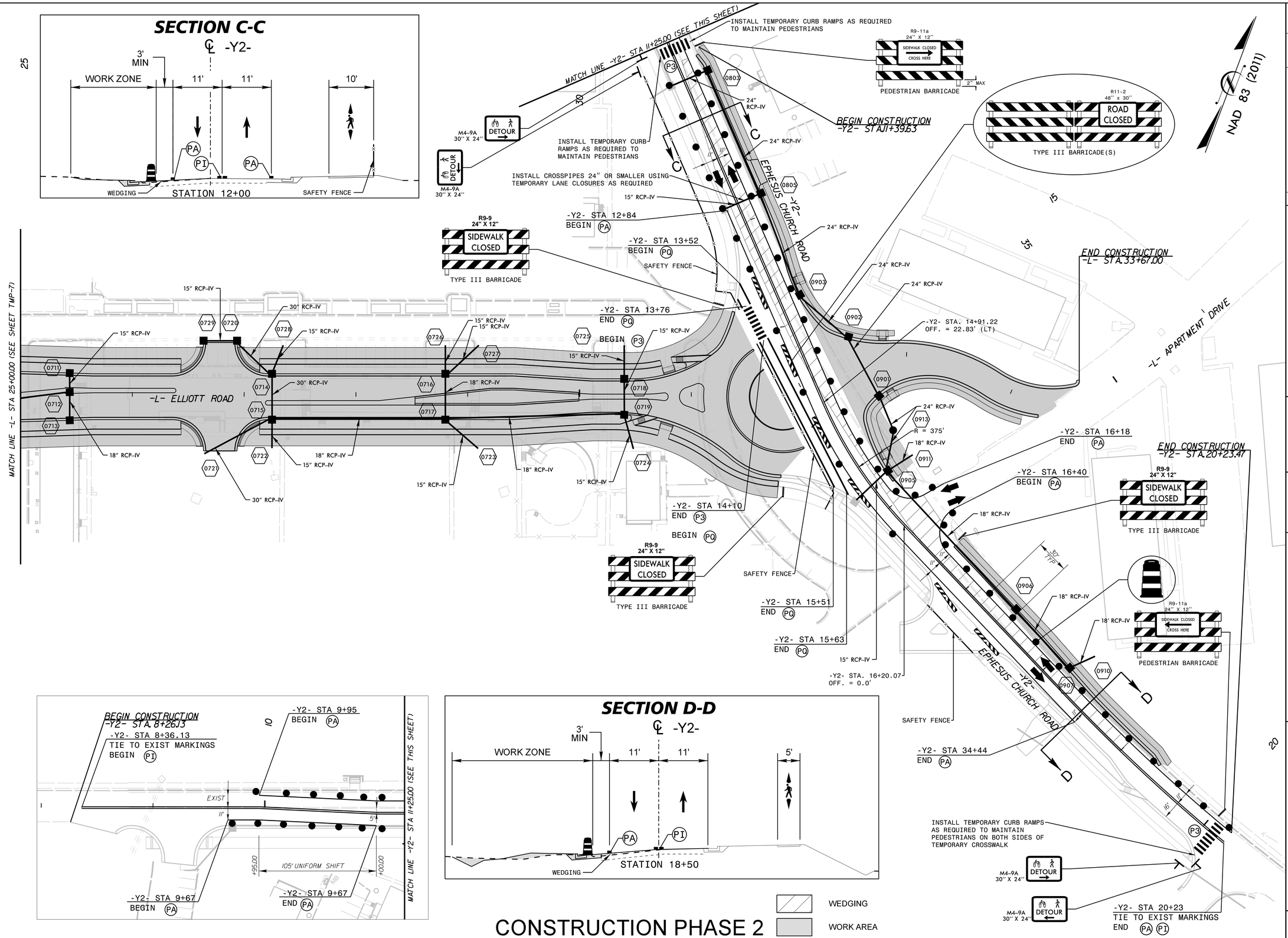
FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	1″ = 40′
DESIGNED BY:	CMB
DRAWN BY:	TDW
CHECKED BY:	CMB

TRAFFIC MANAGEMENT PLANS

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-7



No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 919-677-2000
FAX: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020	
DATE	7/6/2020
SCALE	1" = 40'
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION

PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

TMP-8

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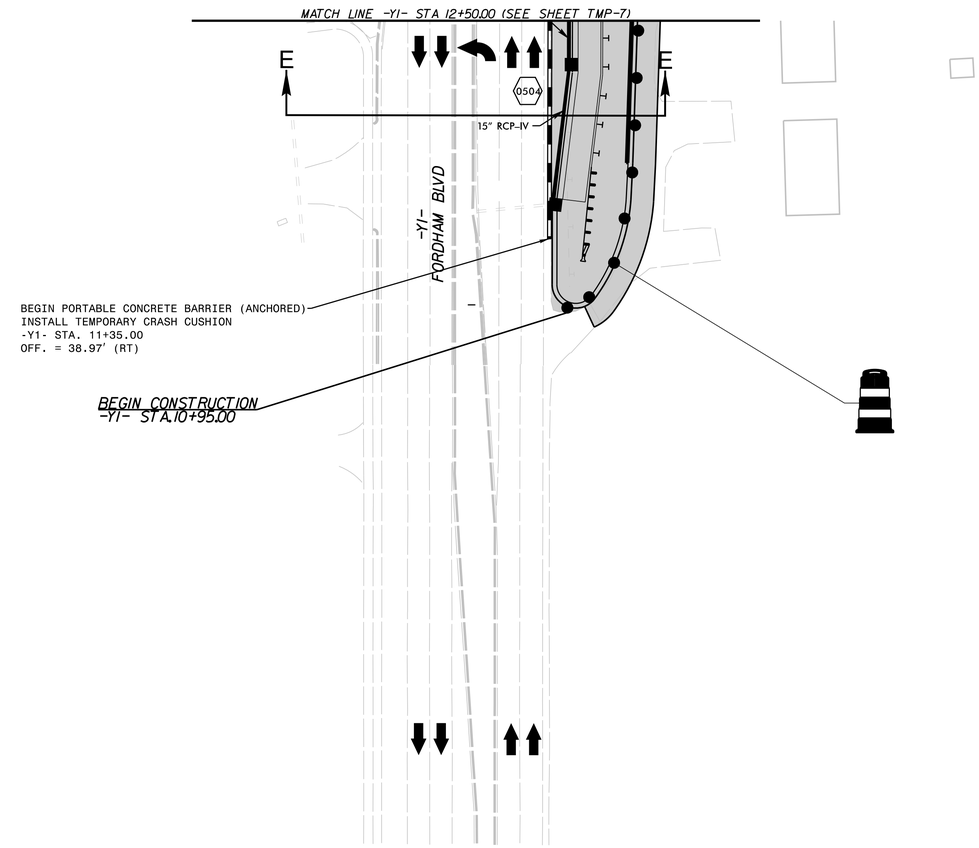

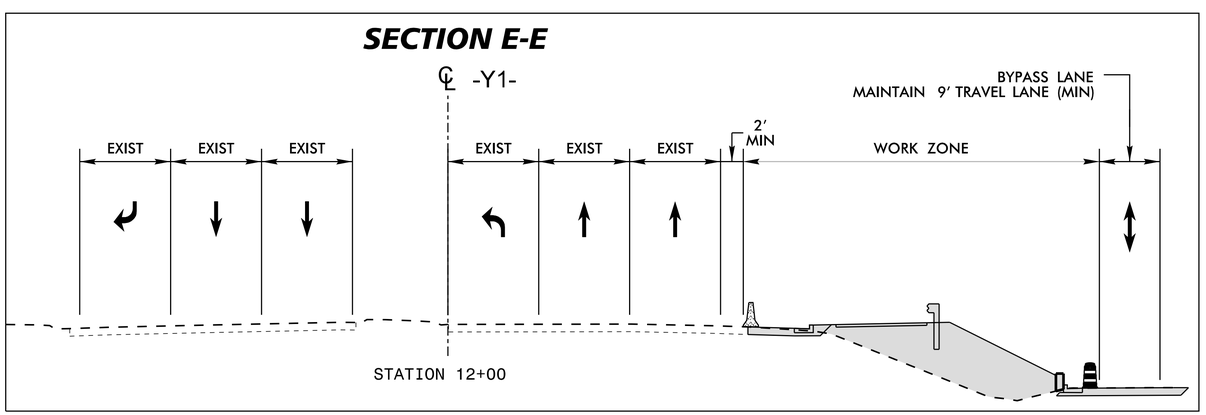

CONSTRUCTION PHASE 2 WORK AREA

No.	REVISIONS	DATE	BY

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NORTH CAROLINA PROFESSIONAL SEAL 045351 ENGINEER CHADWICK W. BECKER

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-9

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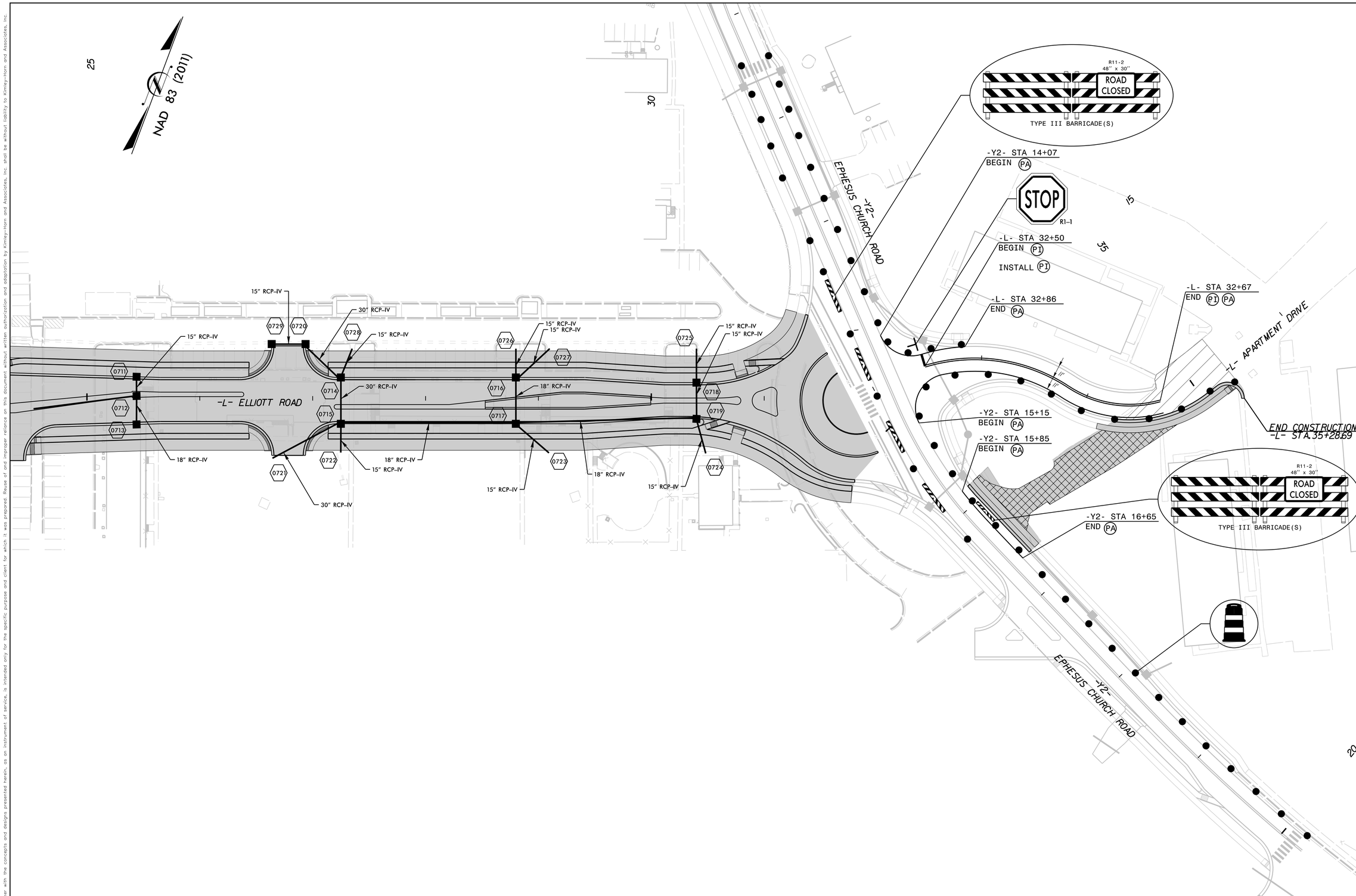

NOTES:
1. MAINTAIN ALL PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES INSTALLED IN PHASE 2
2. MAINTAIN TEMPORARY PEDESTRIAN DETOUR INSTALLED IN PHASE 2
3. WORK ON NEW LOCATION -L- ELLIOTT RD MAY CONTINUE THROUGH PHASE 2B

CONSTRUCTION PHASE 2B

PAVEMENT REMOVAL

WORK AREA

No.	REVISIONS	DATE	BY

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION

PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-10

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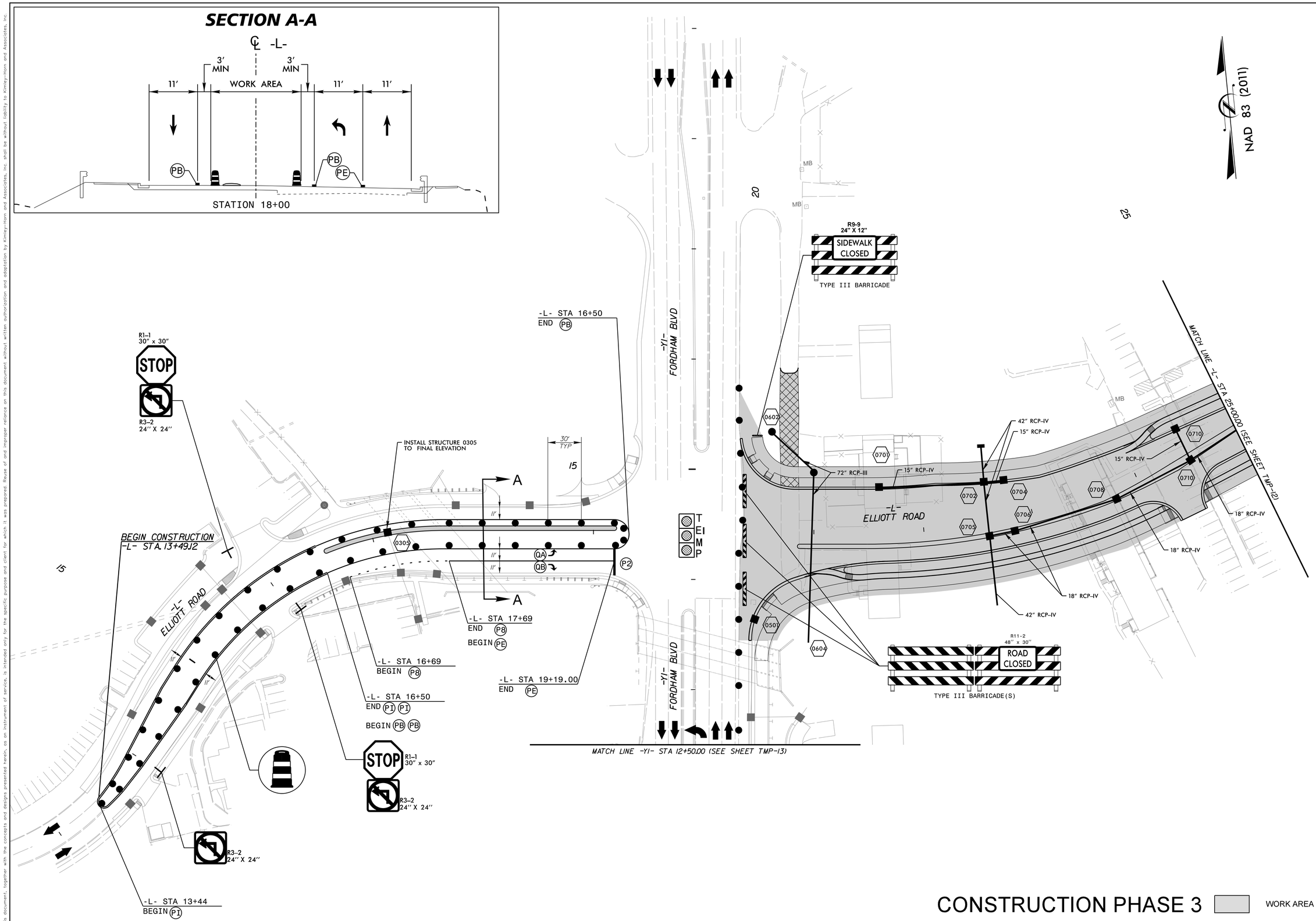
SECTION A-A



CONSTRUCTION PHASE 3 — WORK AREA

No.	REVISIONS	DATE	BY

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NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045193 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	1" = 40'
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TRAFFIC MANAGEMENT PLANS

ELLIOTT ROAD EXTENSION

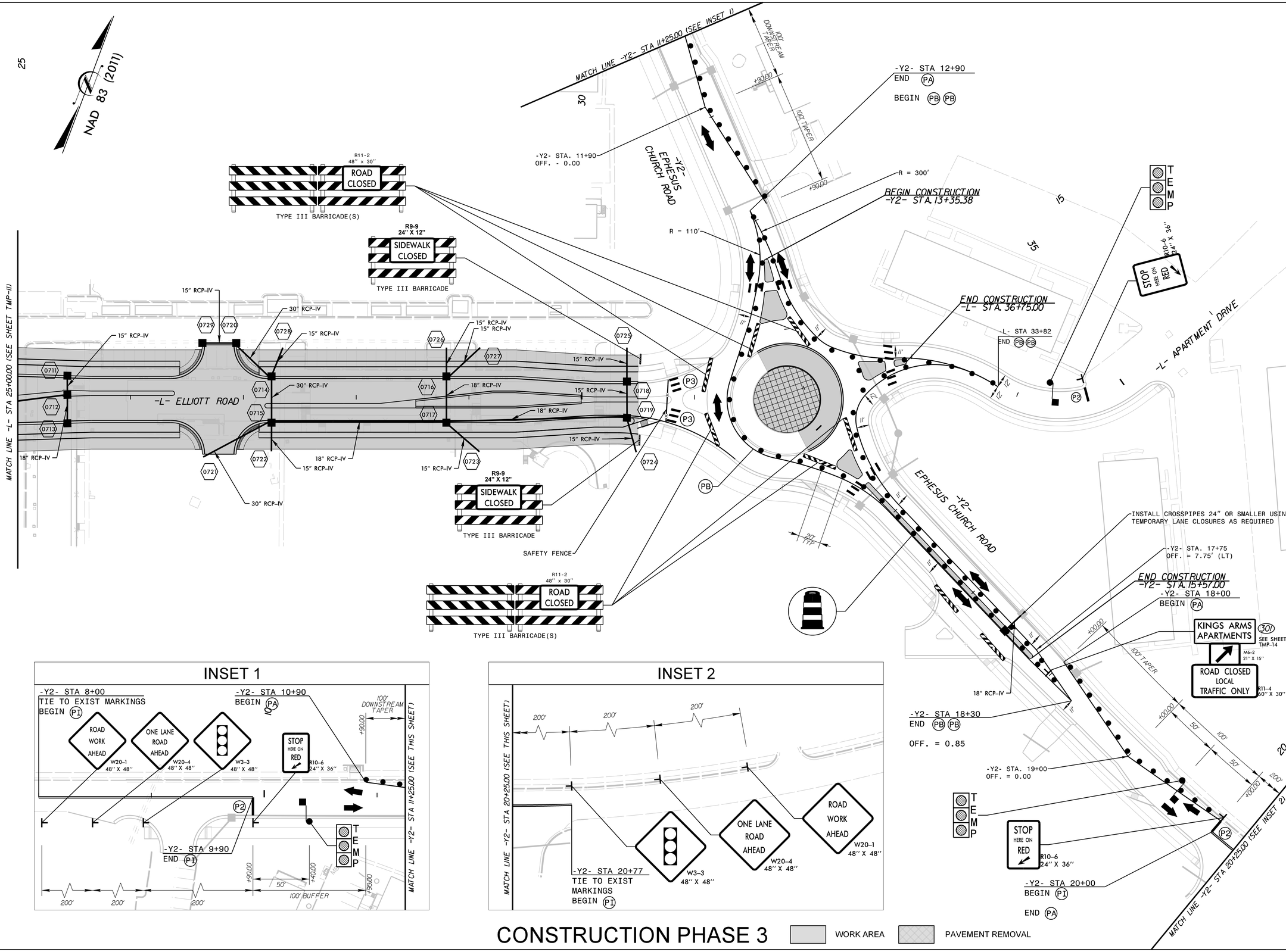
PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

TMP-11



CONSTRUCTION PHASE 3

No.	REVISIONS	DATE	BY

Kimley»Horn
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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-677-2483
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT	011159020
DATE	7/6/2020
SCALE	1" = 40'
DESIGNED BY:	CWB
DRAWN BY:	TDW
CHECKED BY:	CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-12

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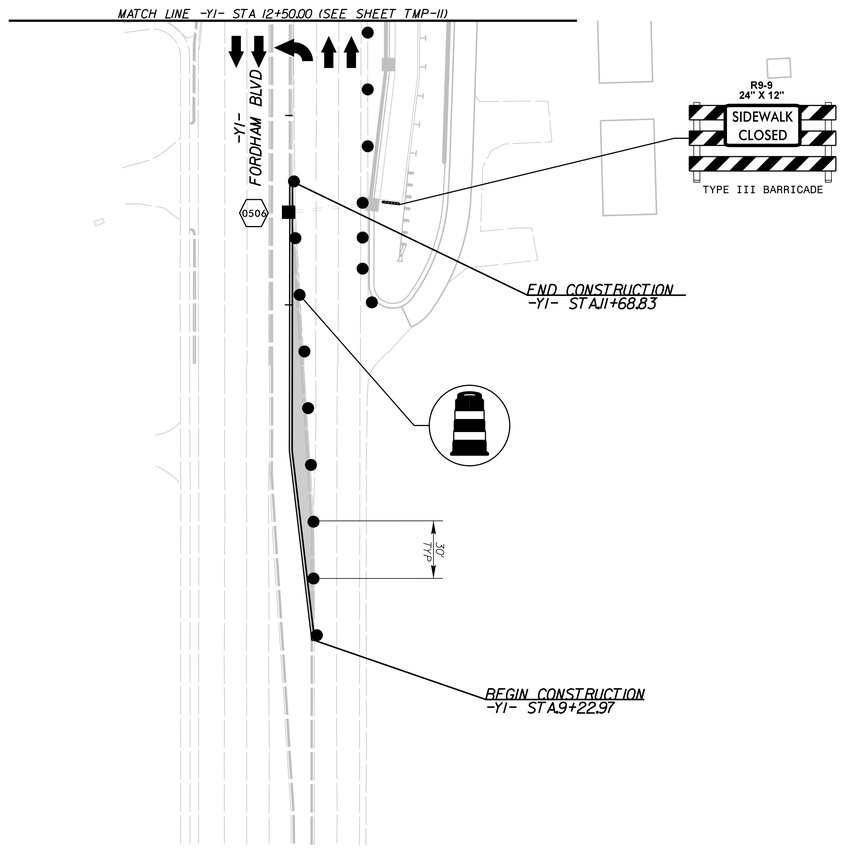
NAD 83 (2011)



CONSTRUCTION PHASE 3

WORK AREA

WEDGING

No.	REVISIONS	DATE	BY

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PHONE: 919-677-2000
FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 045193 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020

DATE 7/6/2020

SCALE 1" = 40'

DESIGNED BY: CWB

DRAWN BY: TDW

CHECKED BY: CWB

TRAFFIC MANAGEMENT PLAN

ELLIOTT ROAD EXTENSION

PREPARED FOR

TOWN OF CHAPEL HILL, NC

CHAPEL HILL NORTH CAROLINA

SHEET NUMBER

TMP-13

SIGN NUMBER: name
TYPE: D
QUANTITY: 1

SIGN WIDTH: 4′-0″
HEIGHT: 2′-0″
TOTAL AREA: 8.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0.38″
WIDTH: 0.63″
RADII: 1.5″

NO. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

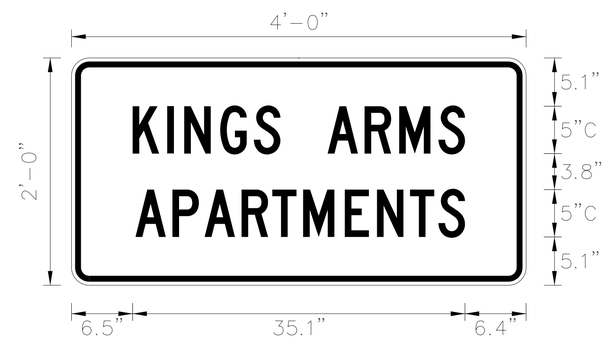
SYMBOL	X	Y	WID	HT

MAT'L: 0.063″ (1.6 mm) ALUMINUM
0.080″ (2.0 mm) ALUMINUM
0.125″ (3.2 mm) ALUMINUM

DESIGN BY: EGP
PROJECT ID: ELLIOTT RD EXTENSION
CHECKED BY:
LOCATION:
Dec 12, 2019
DIV: DIV

USE NOTES:

1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
2. Background shall be Grade A, B, or C reflective sheeting.
3. Shields; A, B, and C type arrows shall be on 0.032″ (0.8mm) aluminum with Grade C reflective sheeting and demountable.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																											Series/Size Text Length
		K	I	N	G	S		A	R	M	S																C 2000
	6.5	3.7	1.8	3.8	3.6	2.8	5	3.9	3.7	4.1	2.8	6.4															35.1
		A	P	A	R	T	M	E	N	T	S																C 2000
	6.8	3.9	3.4	3.9	3.3	3.3	4.4	3.4	3.5	3	2.8	6.4															34.8

FILENAME: 011159020_tmp_psh_14_SignDesign

NORTH CAROLINA D.O.T. SIGN DETAIL

No.	REVISIONS	DATE	BY

Kimley»Horn

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300 WEST MORGAN STREET, SUITE 1500, DURHAM, NC 27701
PHONE: 919-677-2000
FAX: 919-682-3583
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

NORTH CAROLINA PROFESSIONAL SEAL 042325 ENGINEER CHADWICK W. BECK

FINAL DRAWINGS - FOR REVIEW PURPOSES ONLY

KHA PROJECT 011159020
DATE 7/6/2020
SCALE 1" = 40'
DESIGNED BY: CWB
DRAWN BY: TDW
CHECKED BY: CWB

SPECIAL SIGN DESIGN

ELLIOTT ROAD EXTENSION
PREPARED FOR
TOWN OF CHAPEL HILL, NC
CHAPEL HILL NORTH CAROLINA

SHEET NUMBER
TMP-14

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