

DESIGN DESIGNATION

A.A.D.T. - 2019 = 12500

POSTED SPEED LIMIT = 40 M.P.H.

DESIGN SPEED LIMIT = 40 M.P.H.

FUNCTIONAL CLASSIFICATION- SECONDARY ARTERIAL

UTILITY CONTACT NUMBERS

UTILITY	CONTACT	PHONE
KANSAS CITY POWER & LIGHT	ANDREW CASTILLO	(816)372-8113
KCMO WATER SERVICES DEPT.	DAN RICHARDSON PAUL SOUTH	(816)898-1525 (816)513-0263
SPIRE GAS COMPANY	CHRIS COLLINS	(816)509-4400
CCI	CLARENCE GRIFFIN	(913)322-9619
ZAYO	DWIGHT DAVIS	(816)591-0282
KCMO FIBER	CHRIS LOCKEY	(816)513-8661
SPECTRUM	JOSH CUBLEY	(913)601-2504
KCMO STREET LIGHTS	VICTOR PECINA	(816)513-9868



1-800-344-7483
1-800-(DIG-RITE)
(811)

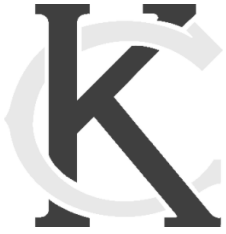
CONVENTIONAL SYMBOLS

(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

KANSAS CITY, MISSOURI
DEPARTMENT OF PUBLIC WORKS



FINAL PLANS - PHASE 1
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.

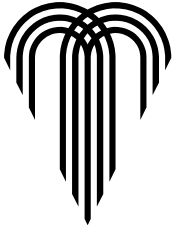
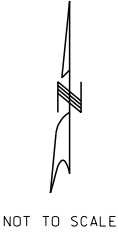


TABLE A

MINIMUM WIDTH OF TRAFFIC LANES (EXCLUDING CURB & GUTTER	10'
MINIMUM K. CREST VERTICAL CURVE	62
MINIMUM K. SAG VERTICAL CURVE	32
SIDEWALKS	NOT CONTINUOUS DOES NOT CONNECT ON NORTH SIDE STOPS SHORT ON SOUTHWEST SIDE
MINIMUM GRADE	0.00% MATCHES EXISTING
CURB RETURN RADIUS	7'



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
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STANDARD DETAILS	51-62
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LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 75+60.84
END OF PROJECT	STA. 116+81.78
APPARENT LENGTH	4120.94 FEET
EQUATIONS AND EXCEPTIONS:	
TOTAL CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	4120.94 FEET
STATE LENGTH	00.780 MILES

"I HEREBY CERTIFY THAT THIS PROJECT HAS
BEEN DESIGNED, AND THESE PLANS PREPARED,
TO MEET OR EXCEED THE DESIGN CRITERIA OF
KANSAS CITY, MISSOURI, IN CURRENT USAGE
EXCEPT AS INDICATED BELOW."

EXCEPTIONS: SEE TABLE A

ENGINEER:
Tawn Nugent, P.E., TREKK Design Group, LLC

DATE:

APPROVED BY
Assistant City Engineer, Chad Thompson, P.E.
Kansas City, Missouri

APPROVED BY
City Engineer, Jeff Martin, P.E.
Kansas City, Missouri

APPROVED BY
Director of Public Works, Sherri McIntyre, P.E.
Kansas City, Missouri

CONTRACT NO.

ADOPTED THIS _____ DAY OF _____, 20____

PROJECT NO: 8900573
SHEET 1 OF 101



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE



1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

TITLE SHEET

SHEET NO.

1 OF 101

GENERAL NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE MOST CURRENT EDITION OF KC-APWA CONSTRUCTION SPECIFICATIONS, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS AND ONE (1) COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.
3. ALL LOCATIONS OF EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN OR LOCATED CORRECTLY. CONTRACTOR SHALL CALL LOCATOR SERVICE FOR LOCATIONS PRIOR TO DIGGING. UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
4. ALL SIDEWALK RAMPS SHALL BE "TYPE 1A" UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL NOTIFY WATER SERVICES DEPARTMENT INSPECTION CONSTRUCTION OFFICE FOUR (4) DAYS IN ADVANCE FOR INSPECTION OF WATER VALVE ADJUSTMENTS. 4800 E. 63RD ST, KC MO 64130, PH NUMBER 816-513-0249.
6. THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY HIS CONSTRUCTION OPERATIONS IN ACCORDANCE WITH SECTION 2400 OF THE KC-APWA CONSTRUCTION SPECIFICATIONS.
7. THE CONTRACTOR SHALL MODIFY STORM SEWER INLET GUTTERS AND THROATS AS NEEDED TO MATCH PROPOSED ROADWAY AND CURB ELEVATIONS AND OFFSETS. WHERE EXISTING INLETS ARE TO REMAIN IN PLACE, CONTRACTOR SHALL CONSTRUCT A MINIMUM 5' CURB TRANSITION BETWEEN PROPOSED CURB AND EXISTING INLET LOCATION AND ELEVATION.
8. THE CONTRACTOR SHALL ADJUST EXISTING MANHOLES WHERE REQUIRED SUCH THAT TOPS ARE FLUSH WITH PROPOSED GRADE OF STREET AND CURB RAMPS.
9. THE CONTRACTOR SHALL CONTACT PROPERTY OWNERS OR OCCUPANTS 14 DAYS IN ADVANCE OF CONSTRUCTION INVOLVING INDIVIDUAL PROPERTIES AND PROVIDE TEMPORARY ACCESS PLAN TO PROPERTY OWNER OR OCCUPANT'S SATISFACTION.
10. EXCESS EXCAVATION SHALL BE WASTED ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE CITY AS TO THE SUITABILITY, APPEARANCE AND SITE LOCATION.
11. ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NGS NAVD 1988 DATUM. SUBTRACT 722.57 FEET FROM ELEVATIONS SHOWN TO GET TO KCMO DATUM.
12. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION SITE IN A CLEAN, ORDERLY AND SAFE CONDITION. THE CONTRACTOR SHALL MAINTAIN ALL ROADWAY, SIDEWALK AND DRIVE AREAS FREE OF DEBRIS.
13. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP ALL STREETS CLEAN OF MUD AND DEBRIS.
14. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THIS PROJECT AS PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ADHERE TO THE MINIMUM REQUIREMENTS INCLUDED IN THE SWPPP OR AS FURTHER REQUIRED BY ANY APPLICABLY RELATED FEDERAL, STATE OR LOCAL MUNICIPAL CODES.

60+00

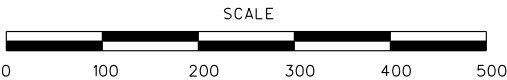
65+00

70+00

POT STA 60+00.00

NORTH OAK TRAFFICWAY

PC STA 67+12.10
PT STA 68+55.40
CURVE NORTH OAK PROP_1
PI 67+83.75
PC 67+12.10
PT 68+55.40
DELTA 0° 42' 59.4" (RT)
TAN 143.30'
R 71.65'
L 11,459.16'



MATCH LINE STA. 72+00.00



DATE PREPARED
10/19/2018

REVISIONS	DATE	BY	APPD.	NO.

DATE	BY	APPD.	NO.

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

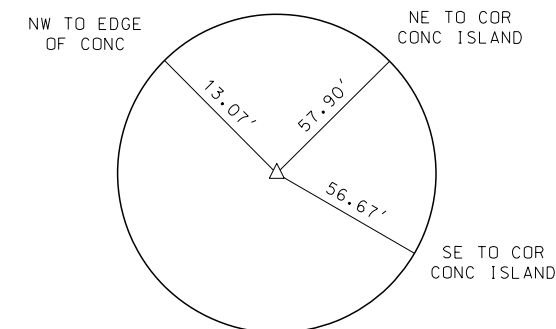
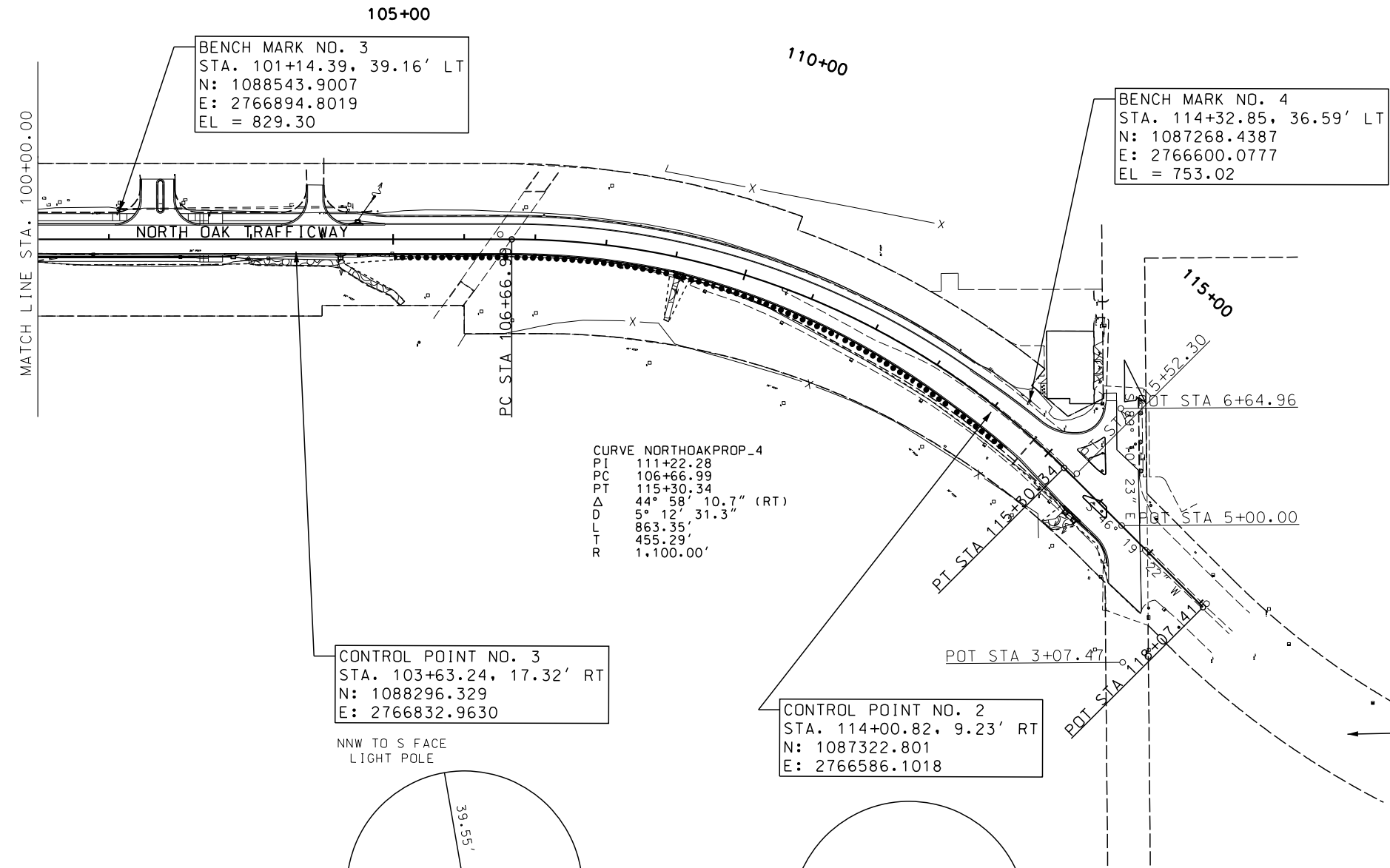
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GENERAL LAYOUT
NORTH OAK TRAFFICWAY
STA. 60+00 TO STA. 72+00

SHEET NO.

2 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

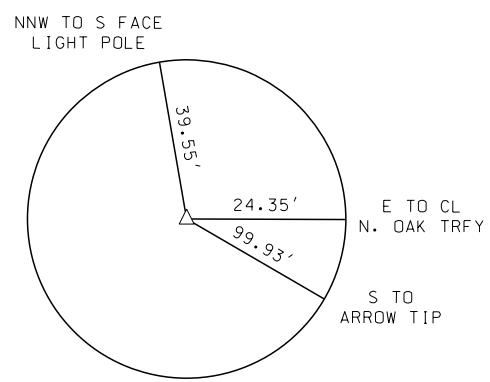


CP1
COTTON PICKER SPINDLE IN
CONC SEAM OF PAINTED ISLAND
N = 1086831.268
E = 2766121.7859
EL = 744.26

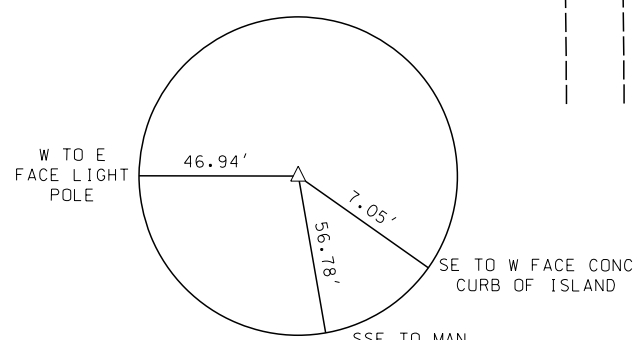
CONTROL POINT NO. 1
STA. 118+07.41, 17.80' LT
N: 1086831.268
E: 2766121.7859

CONTROL POINT NO. 3
STA. 103+63.24, 17.32' RT
N: 1088296.329
E: 2766832.9630

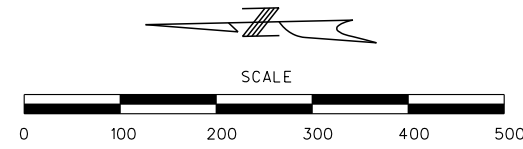
CONTROL POINT NO. 2
STA. 114+00.82, 9.23' RT
N: 1087322.801
E: 2766586.1018



CP3
MAG NAIL AT SW COR CONC
W SIDE N. OAK TRFY
N = 1088296.329
E = 2766832.9630
EL = 813.90



CP2
MAG NAIL AT S ARROW TIP
IN SB N. OAK TRFY
N = 1087322.801
E = 2766586.1018
EL = 751.01



STATE OF MISSOURI
TOWN
A
NUGENT
NUMBER
E-2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SEAL AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

DATE

APPD. BY

NO.

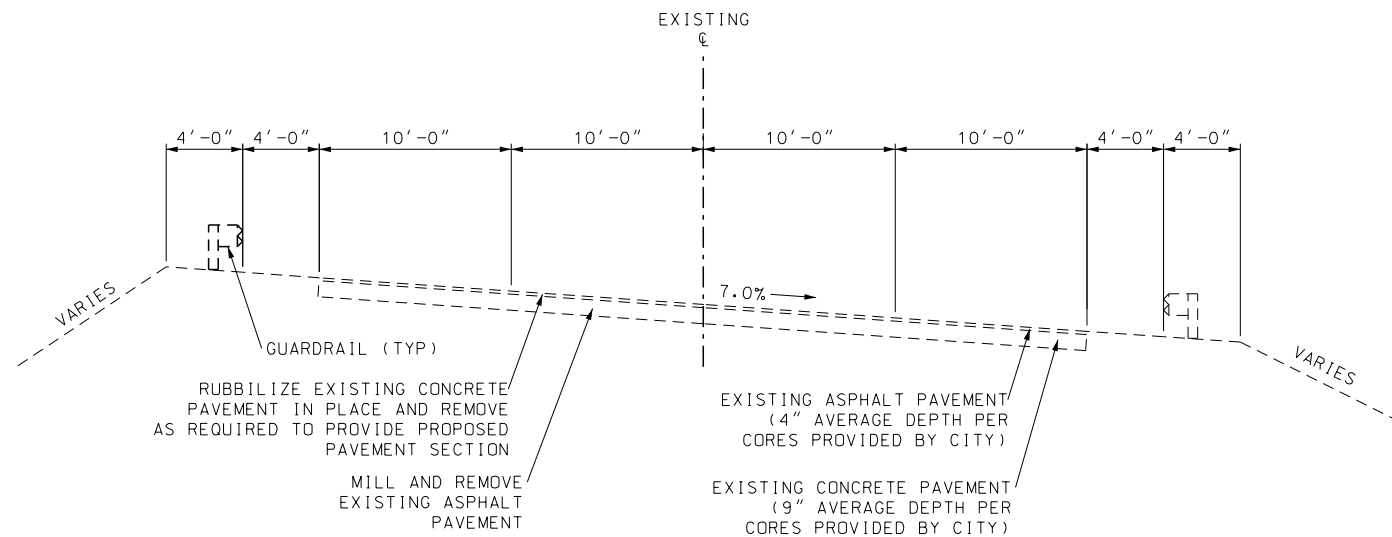
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 100'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

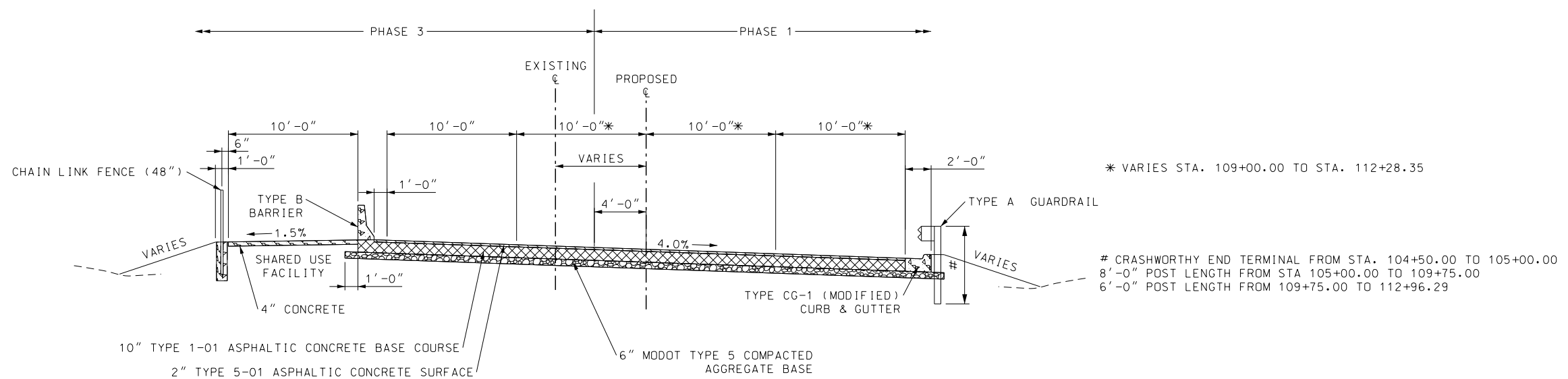
GENERAL LAYOUT
NORTH OAK TRAFFICWAY
STA. 100+00 TO STA. 119+00

SHEET NO.
4 OF 101

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EXISTING SECTION ON SUPERELEVATION



TYPICAL SECTION
STA. 104+50.00 TO STA. 112+28.35

SEE SHEET 19
FOR SUPERELEVATION DETAILS



DATE PREPARED
10/19/2018

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DESIGN GROUP, LLC
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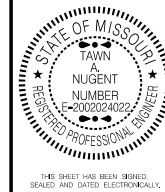
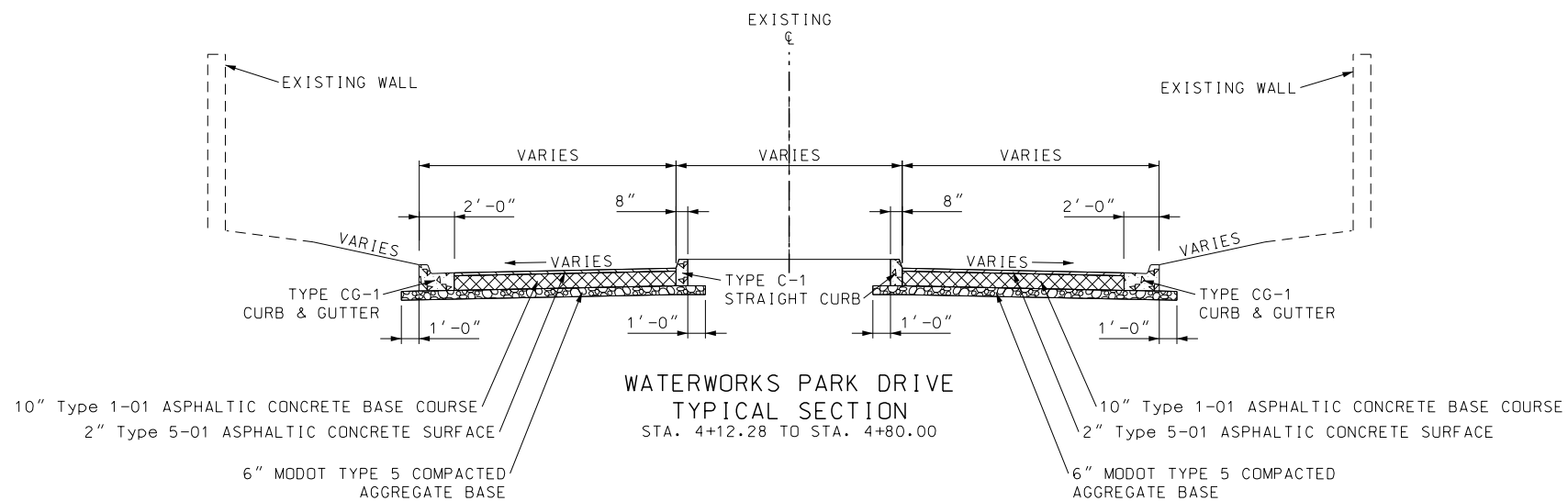
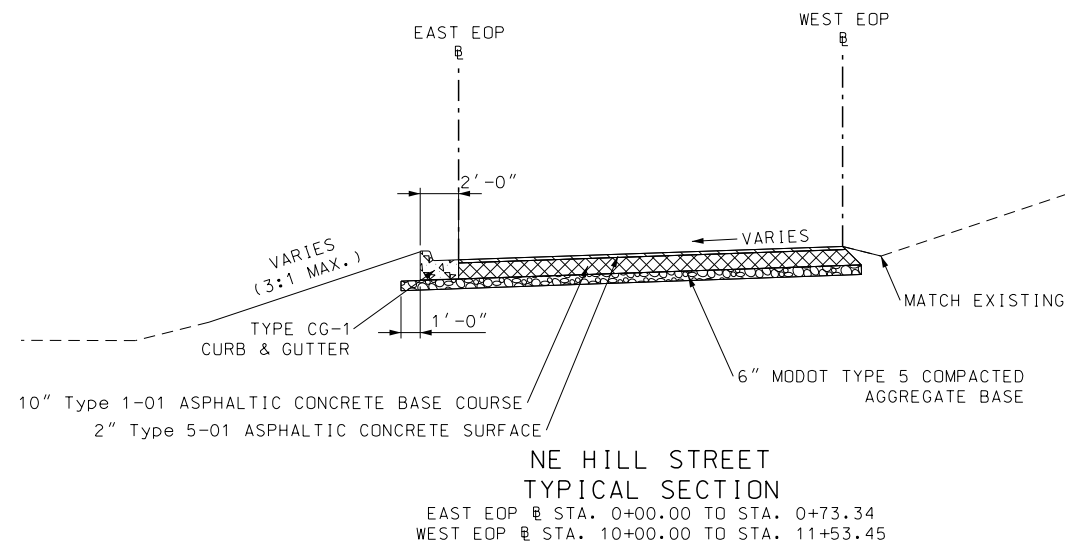
MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 5'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
TYPICAL SECTION SHEET
SHEET 2 OF 2

SHEET NO.

6 OF 101



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

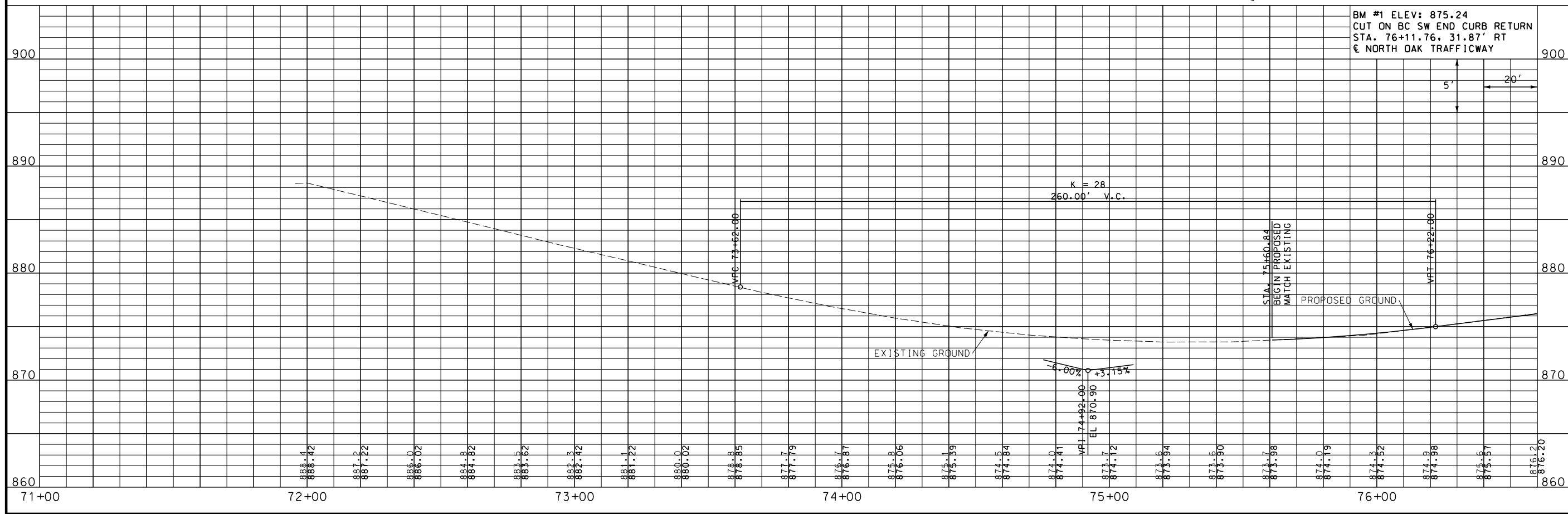
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE: 1" = 5'
DRAWN BY: WRH
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
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Clay County, Missouri

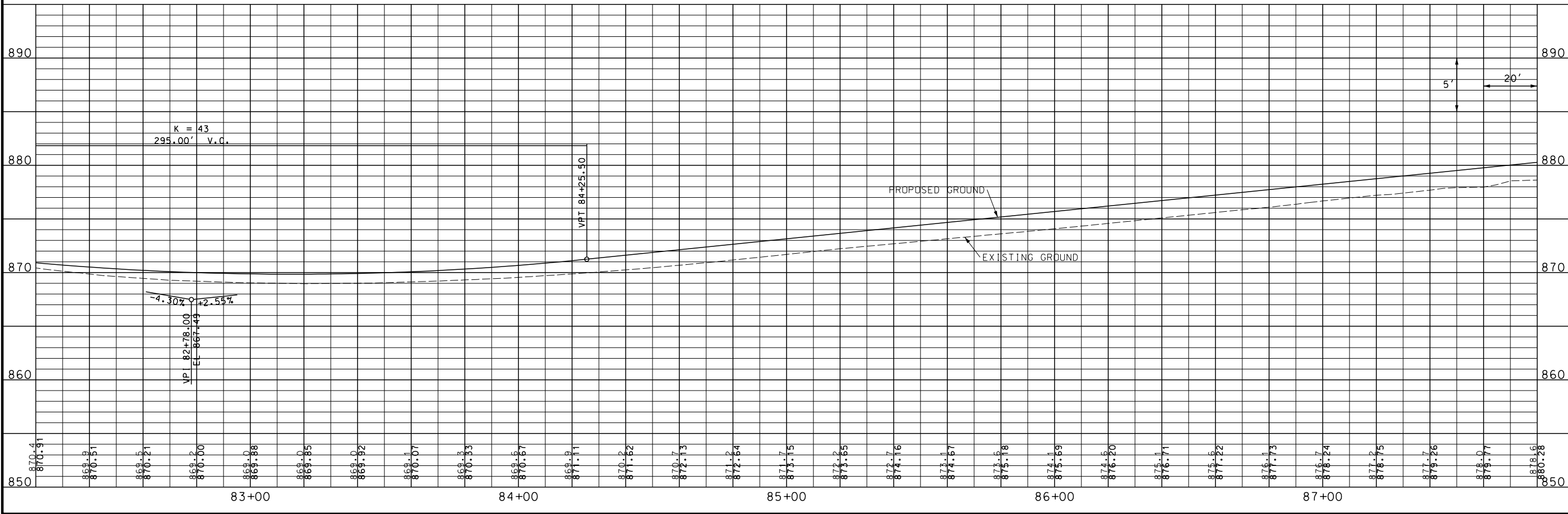
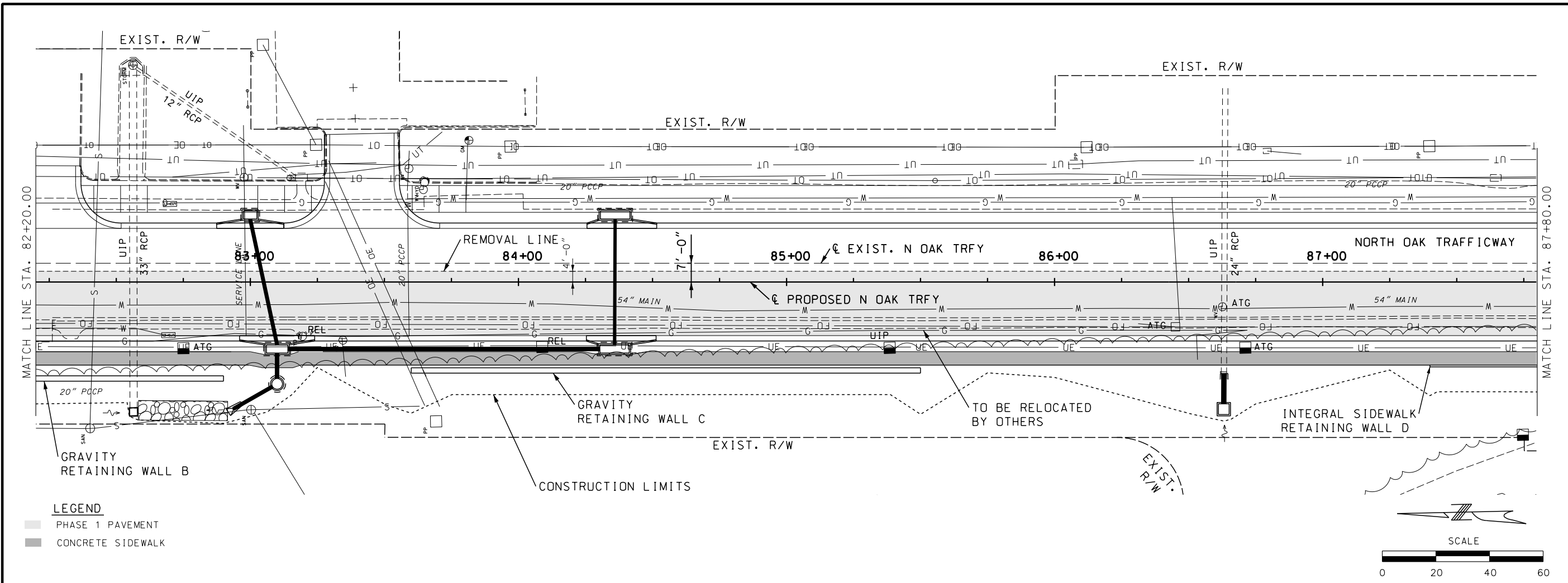
NORTH OAK TRAFFICWAY
TYPICAL SECTION SHEET
SHEET 3 OF 3

SHEET NO.

7 OF 101



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



STATE OF MISSOURI
TOWN
NUGENT
NUMBER
E-200204022
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN BOUND,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

NO. APPD. BY DATE

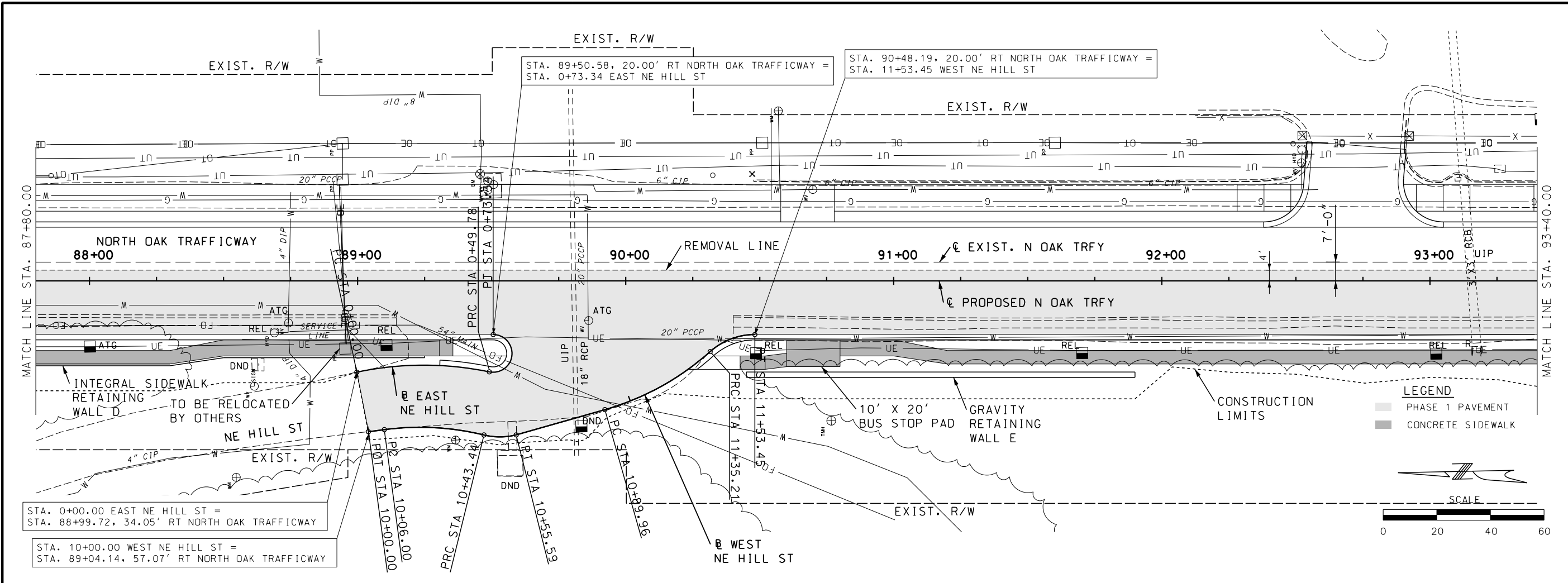
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 20'
DRAWN BY: WRH
CHECKED BY: TAN

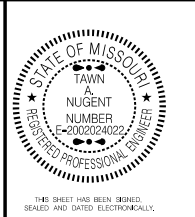
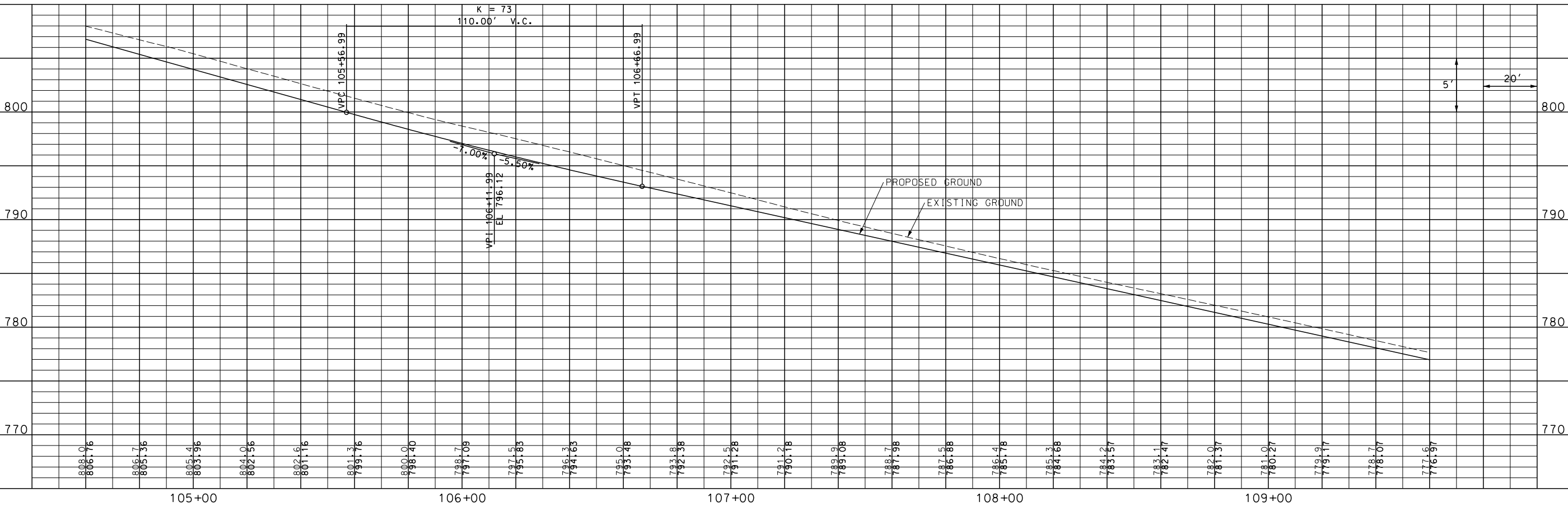
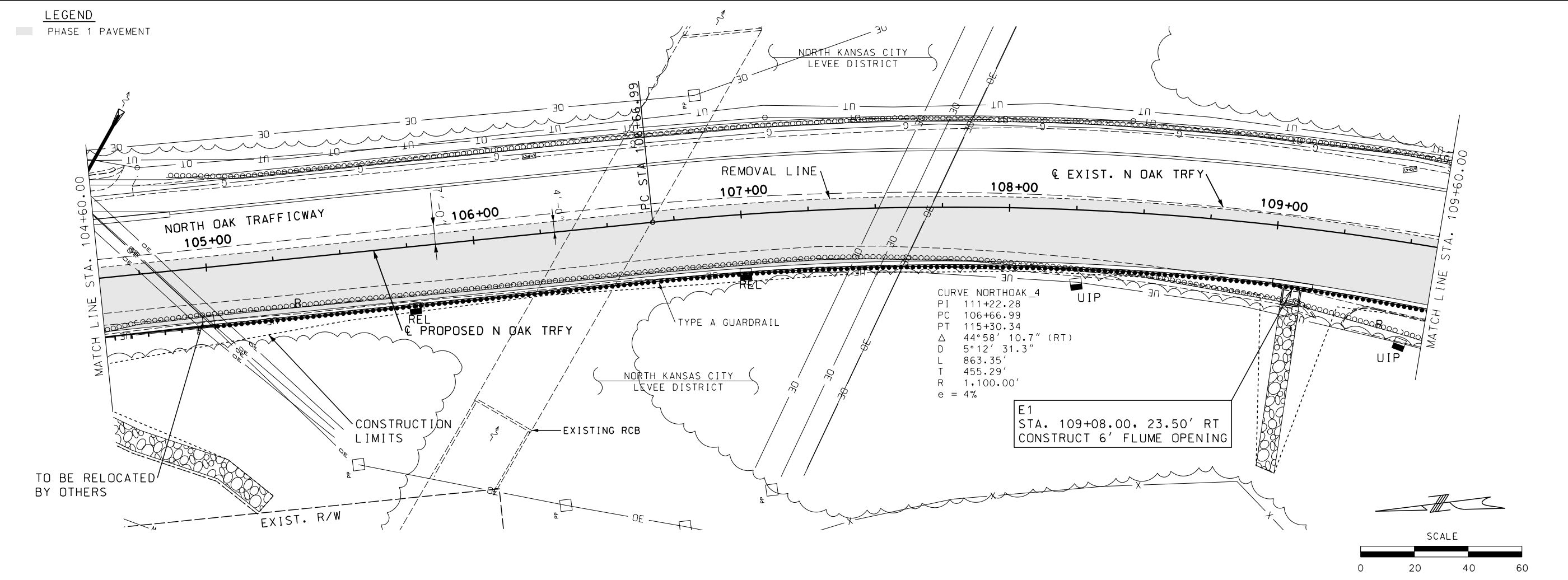
NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 82+20 TO STA. 87+80

SHEET NO.
10 of 101

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DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE

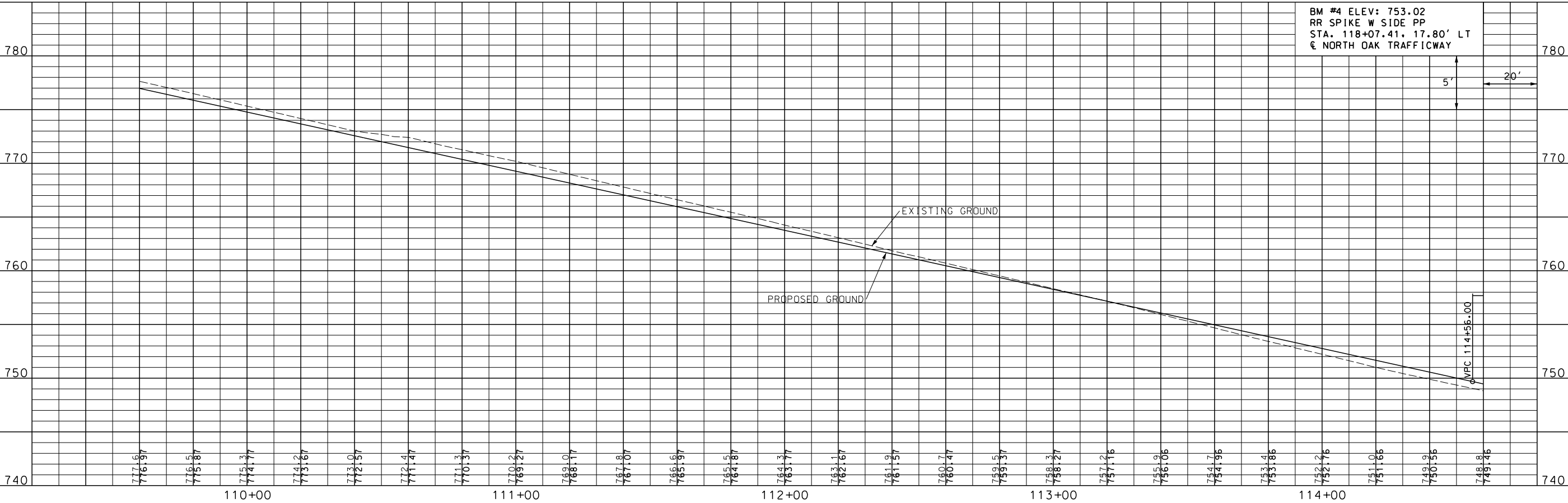
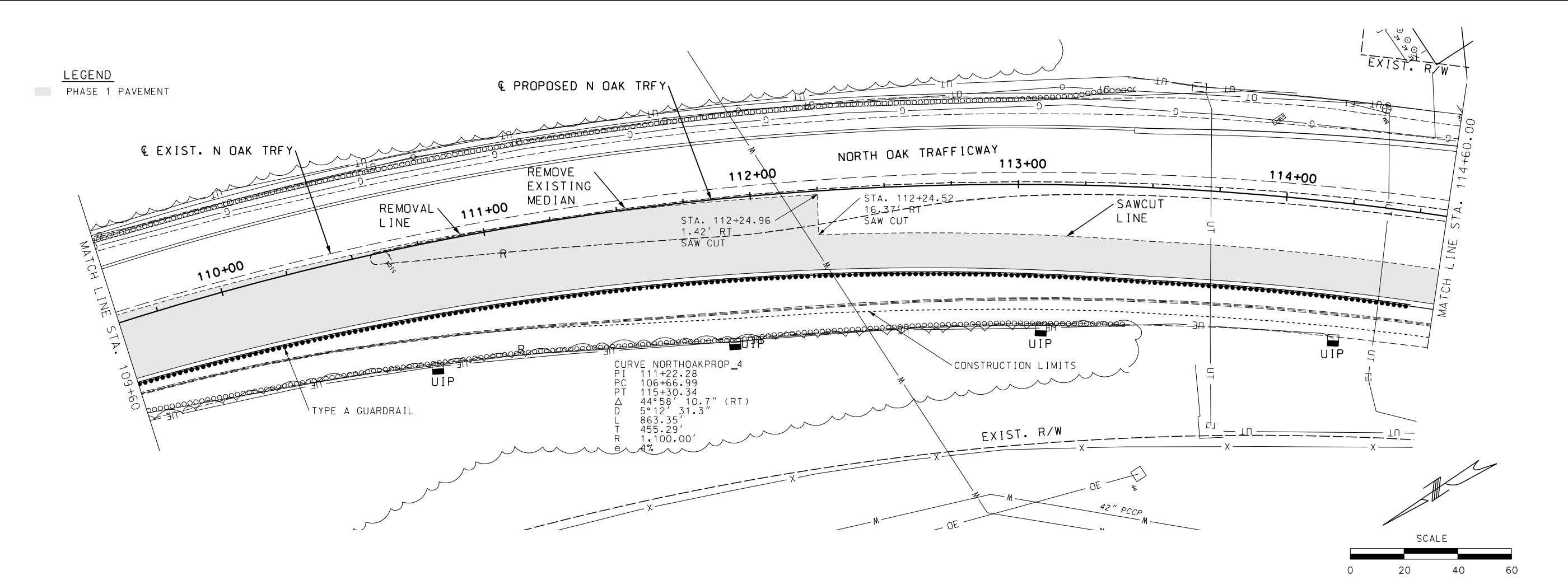
TREKK
DESIGN GROUP, LLC
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Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 104+60 TO STA. 109+60

SHEET NO.
14 OF 101



STATE OF MISSOURI
TOWN
NUGENT
NUMBER
E-200204022
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN REPRODUCED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

DATE

APPD. BY

NO.

TRKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
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Clay County, Missouri

PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 109+60 TO STA. 114+60

SHEET NO.
15 OF 101

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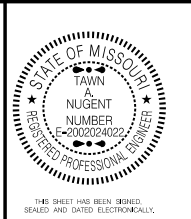
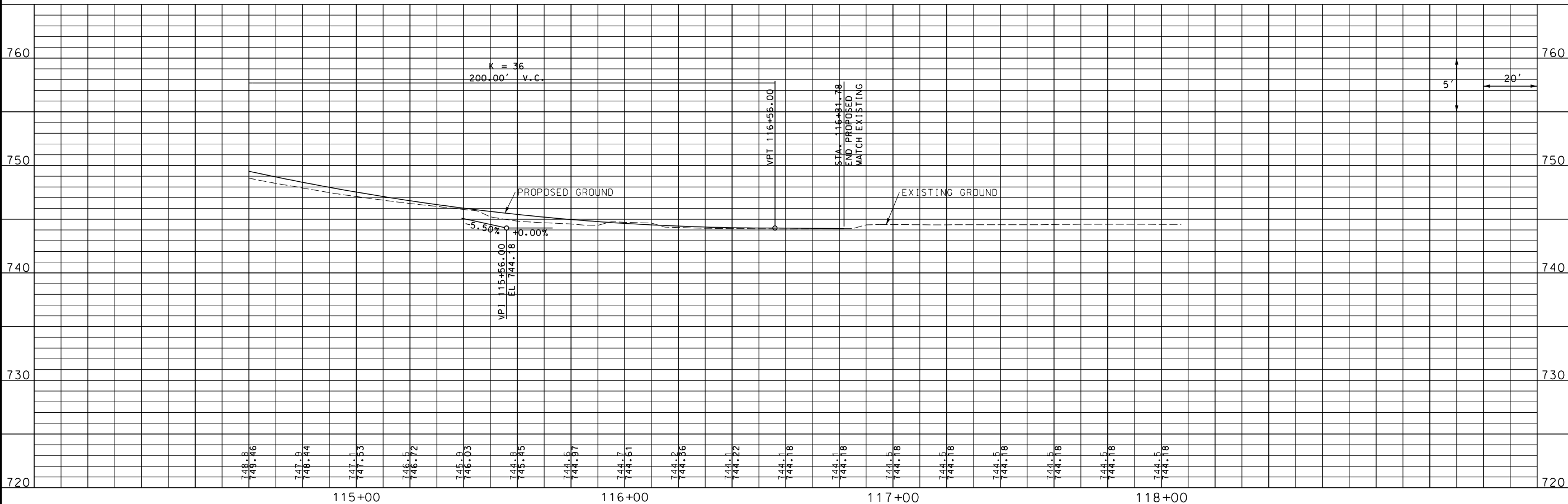
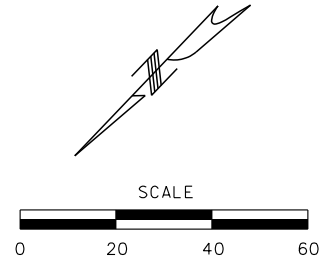
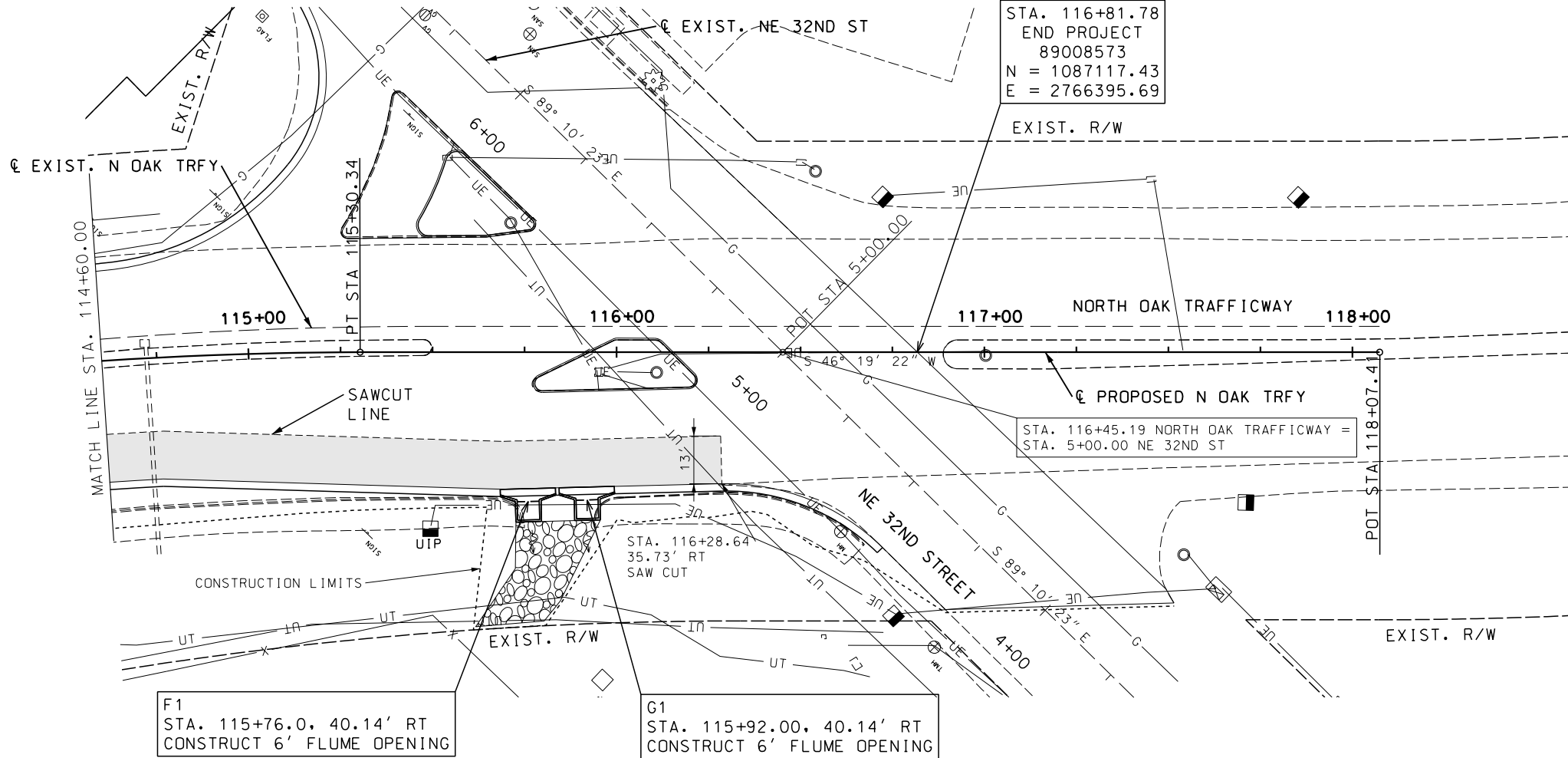
10/19/2018

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

LEGEND

PHASE 1 PAVEMENT

CURVE NORTH OAKPROP_4
PI 111+22.28
PC 106+66.99
PT 115+30.34
 Δ 44°58'10.7" (RT)
DL 5°12'31.3"
LT 863.35'
RT 455.29'
R 1,100.00'



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PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 114+60 TO STA. 118+07.41

SHEET NO.

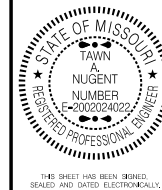
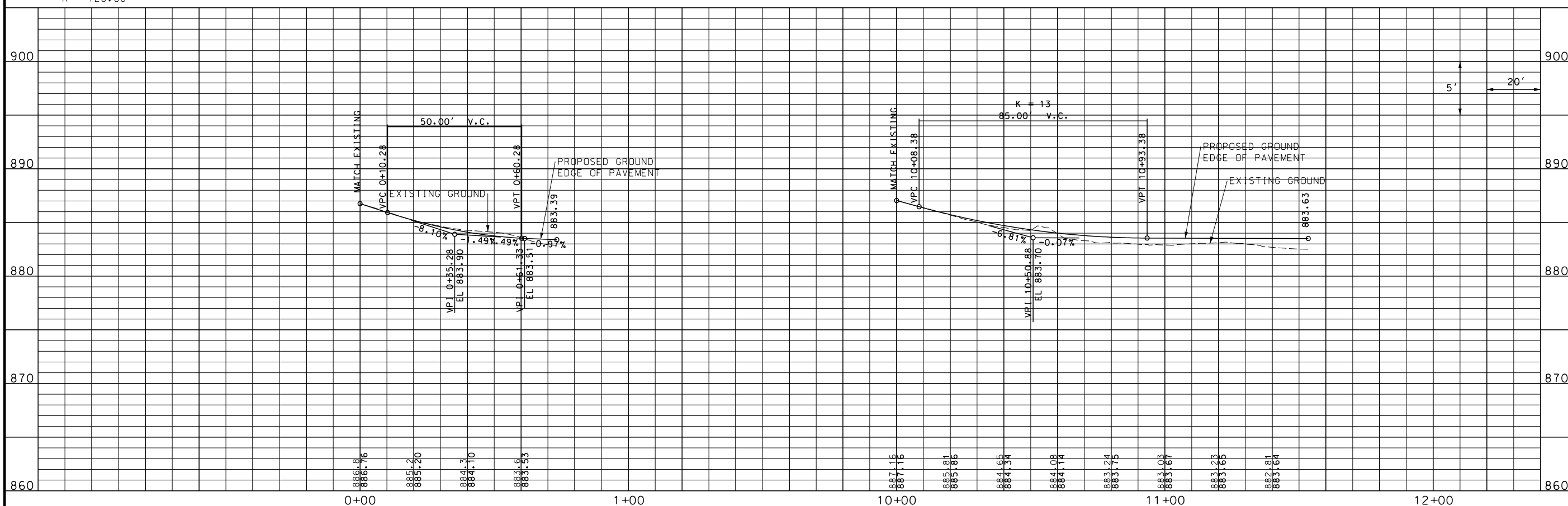
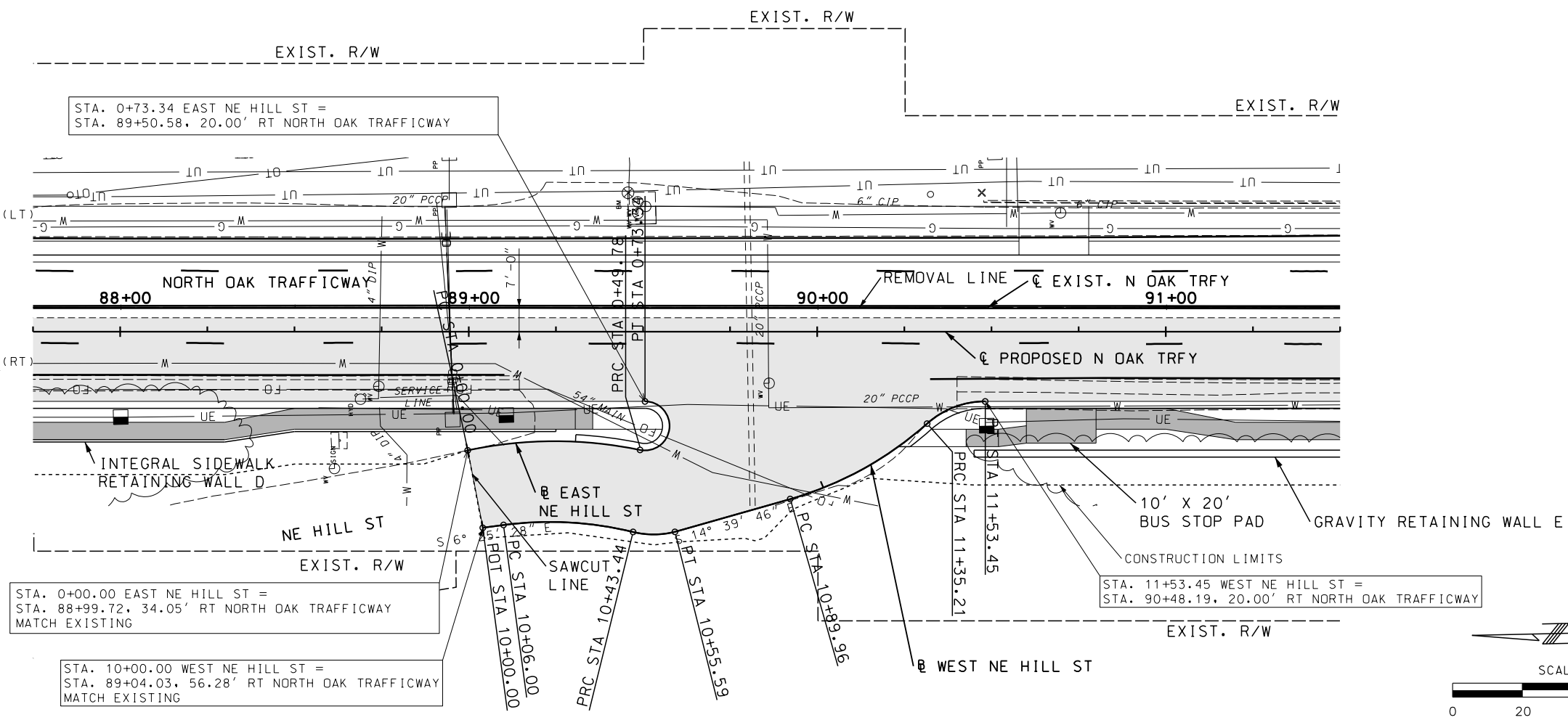
16 OF 101

PHASE 1 PAVEMENT
CONCRETE SIDEWALK

CURVE W_NE HILL-2		CURVE W_NE HILL-4	
PI	10+49.64	PI	11+44.76
PRC	10+43.44	PRC	11+35.21
PT	10+55.59	PT	11+53.45
Δ	27° 49' 39.0" (LT)	Δ	41° 49' 28.1" (RT)
D	229° 10' 59.2"	D	229° 10' 59.2"
L	12.14'	L	18.25'
T	6.19'	T	9.55'
R	25.00'	R	25.00'

CURVE E_NE_HILL_1
PI 1+18.18
PC 0+49.78
PRC 0+73.34
 Δ 191°45' 12.4" (LT)
D 813°47' 57.9"
L 23.56'
T 68.40'
R 7.04'

CURVE E_NE_HILL_2
 P1 0+25.25
 PRC 0+00.00
 PT 0+49.78
 Δ 23° 46' 05.8" (RT)
 D 47° 44' 47.3"
 L 49.78'
 T 25.25'
 R 120.00'



DATE PREPARED
10/19/2018

[illegible]

**1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675**

MO St. Cert. of Authority: 200201030

PROJ NO:	89008573
SCALE:	1" = 20'
DRAWN BY:	WRH
CHECKED BY:	TAN

NORTH OAK TRAFFICWAY -
INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

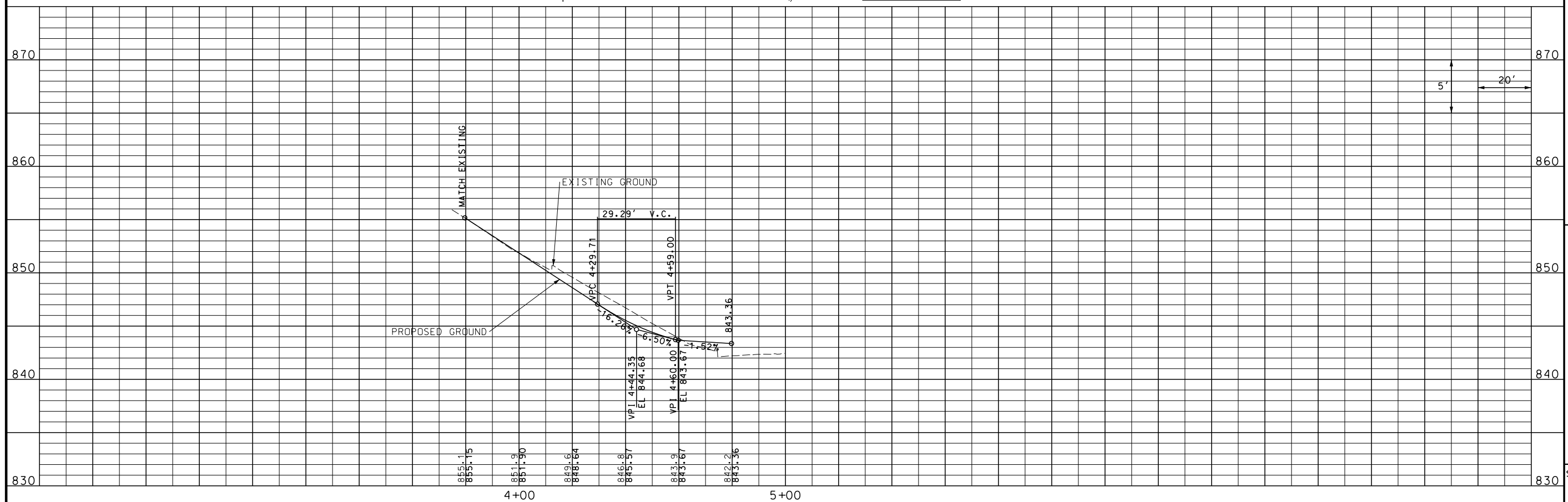
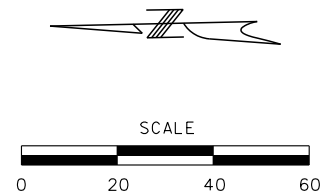
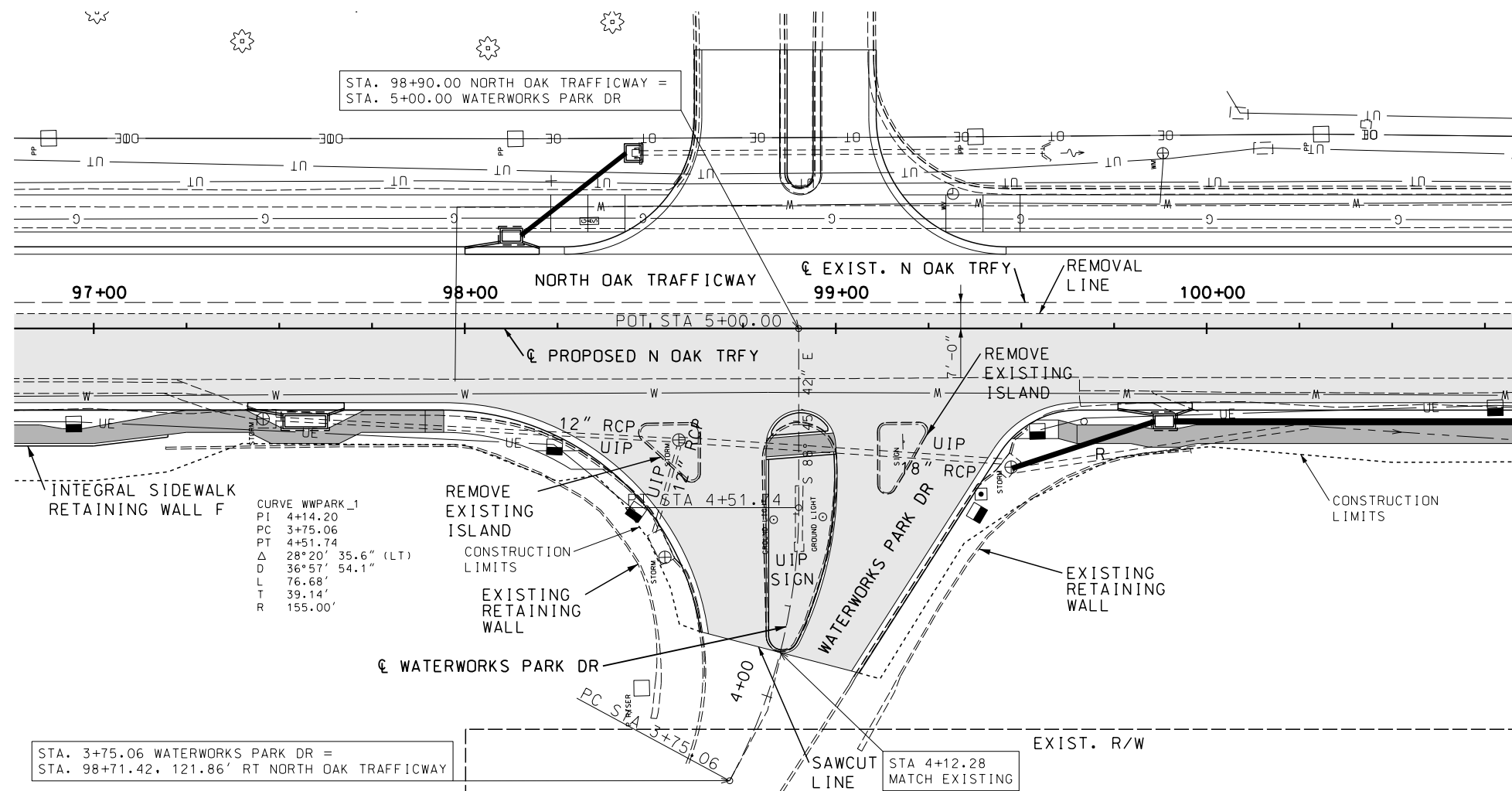
PLAN & PROFILE
NORTHEAST HILL STREET

SHEET NO.

17 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED:

PHASE 1 PAVEMENT
CONCRETE SIDEWALK

DATE PREPARED
0/19/2018

TREKK

**1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675**

St. Cert. of Authority: 2002010300

OJ NO: 89008573

SCALE: 1" = 20'

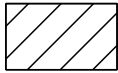
AWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
 ONE INDIANOLA DR. TO E 32ND AVE.
 DESIGN BUILD PACKAGE
 ROAD RECONSTRUCTION
 PROJECT NO. 89008573
 For the City of Kansas City,
 Clay County, Missouri

PLAN & PROFILE WATERWORKS PARK DRIVE

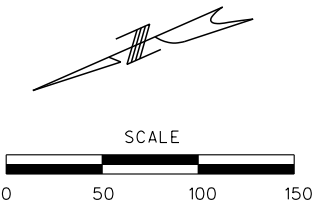
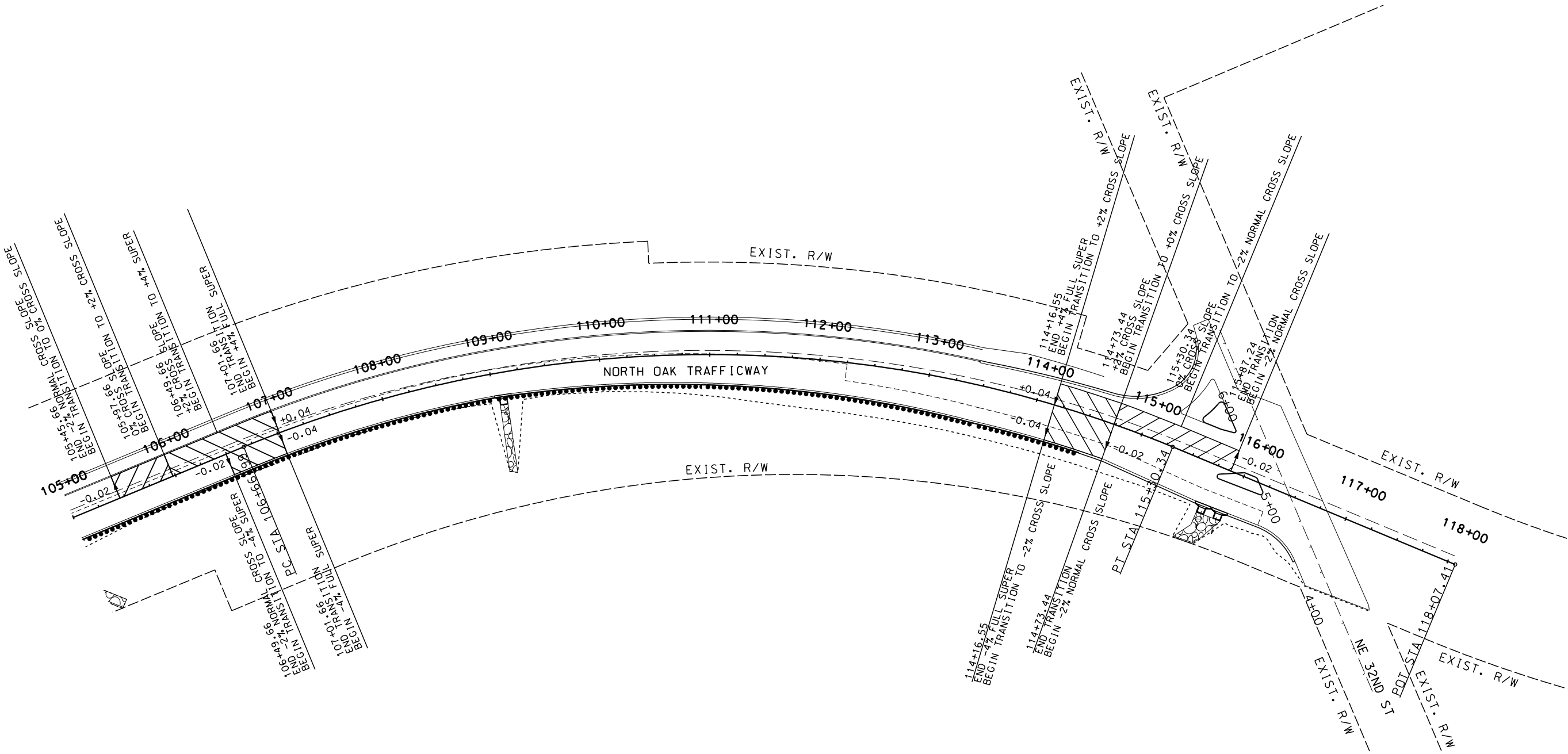
SHEET NO. _____

18 OF 101



LEGEND

SUPERELEVATION TRANSITION FT/FT



STATE OF MISSOURI

TAN

NUGENT

NUMBER

E-2002024022

REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN REVIEWED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

DATE

APPD. BY

NO.

TRKK

DESIGN GROUP, LLC

1411 E 104th St

Kansas City, MO 64131

Tel (816) 874-4655

Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

CHECKED BY: TAN

NORTH OAK TRAFFICWAY -

NE INDIANOLA DR. TO E 32ND AVE.

DESIGN BUILD PACKAGE

ROAD RECONSTRUCTION

PROJECT NO. 89008573

For the City of Kansas City,

Clay County, Missouri

SUPERELEVATION

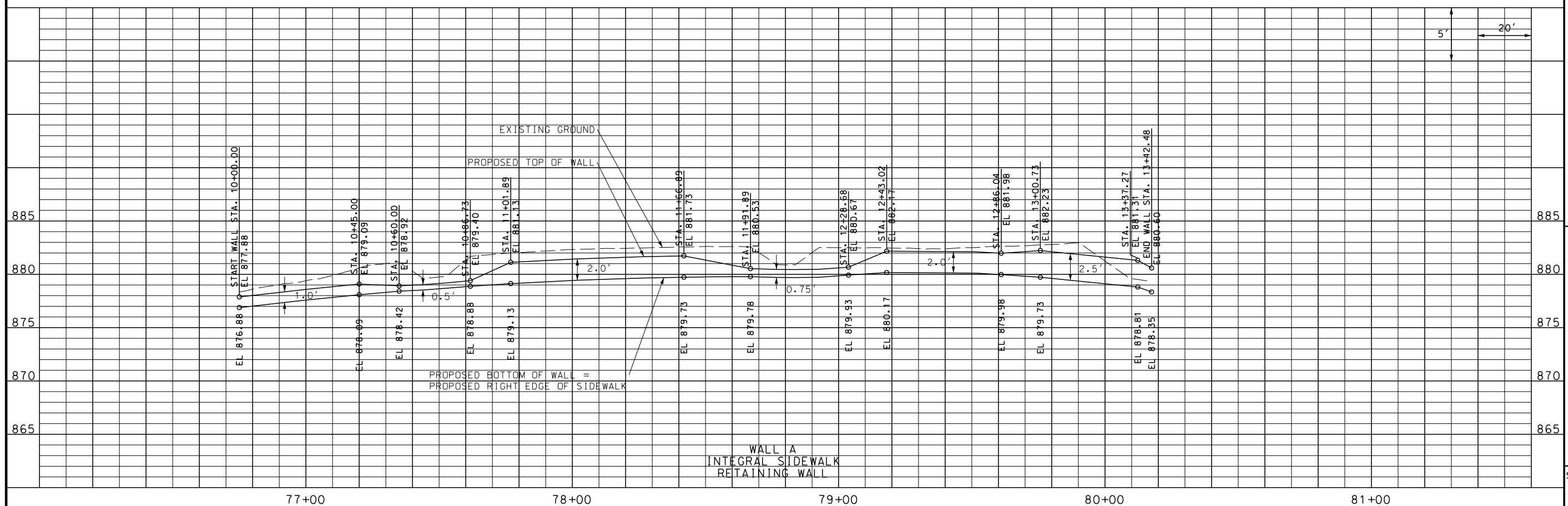
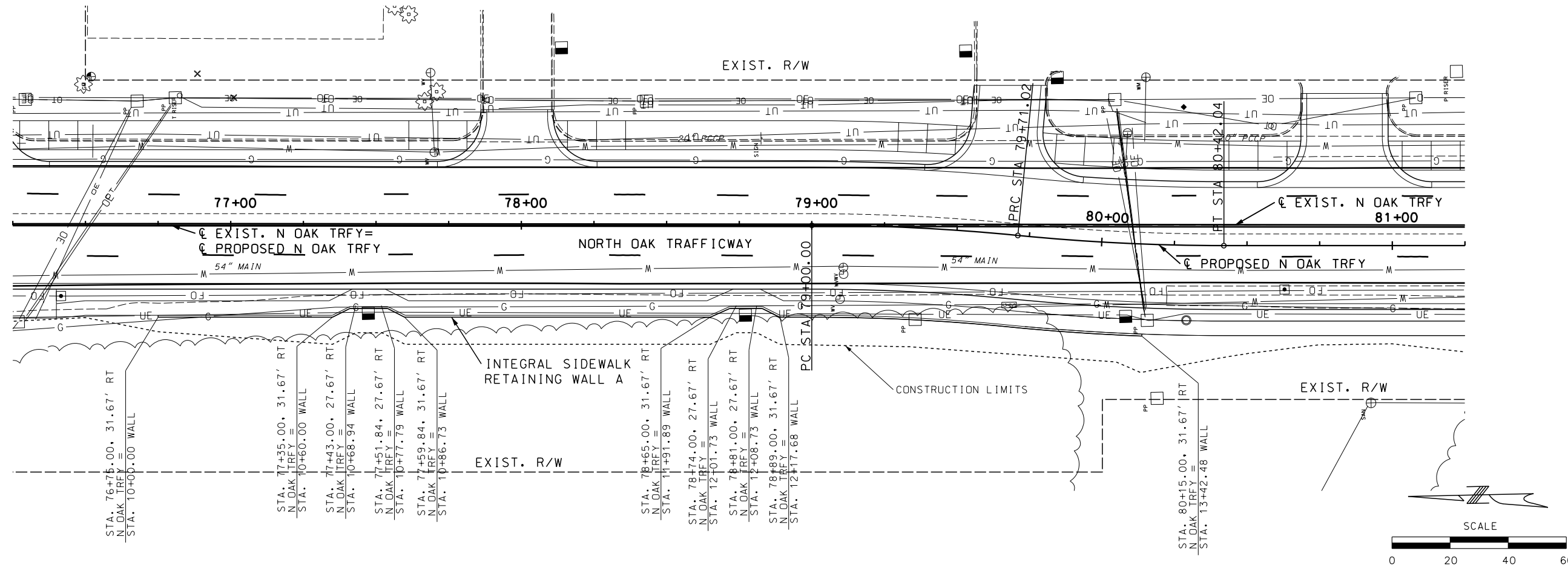
NORTH OAK TRAFFICWAY

SHEET NO.

19 OF 101

019_18-104_SE_150_001.DGN 9:26:53 AM 10/19/2018

* NOTE: GRAVITY WALL ALIGNMENTS ARE DRAWN AT THE FACE OF WALL. SEE INSET DETAILS FOR LOCATING POINT.
FOR INTEGRAL SIDEWALK RETAINING WALL, SEE STANDARD DETAIL FOR LOCATING POINT.



DATE PREPARED
0/19/2018

[illegible]

**1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675**

St. Cert. of Authority: 20020103

OJ NO: 89008573

SCALE: 1" = 20'

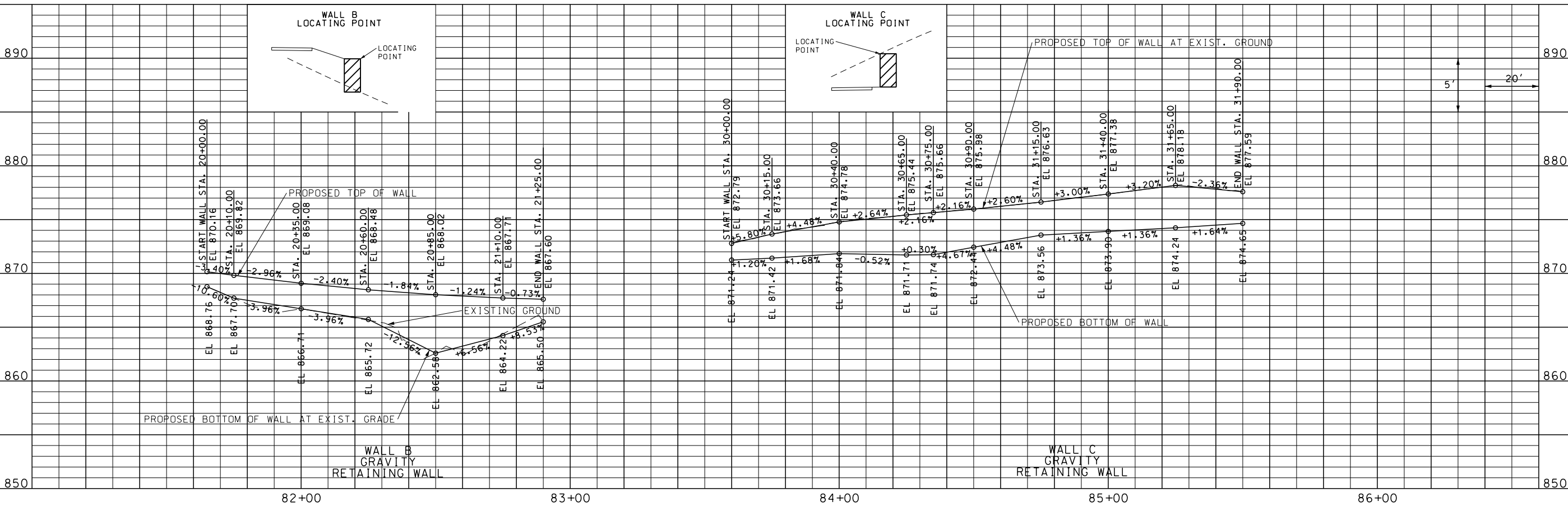
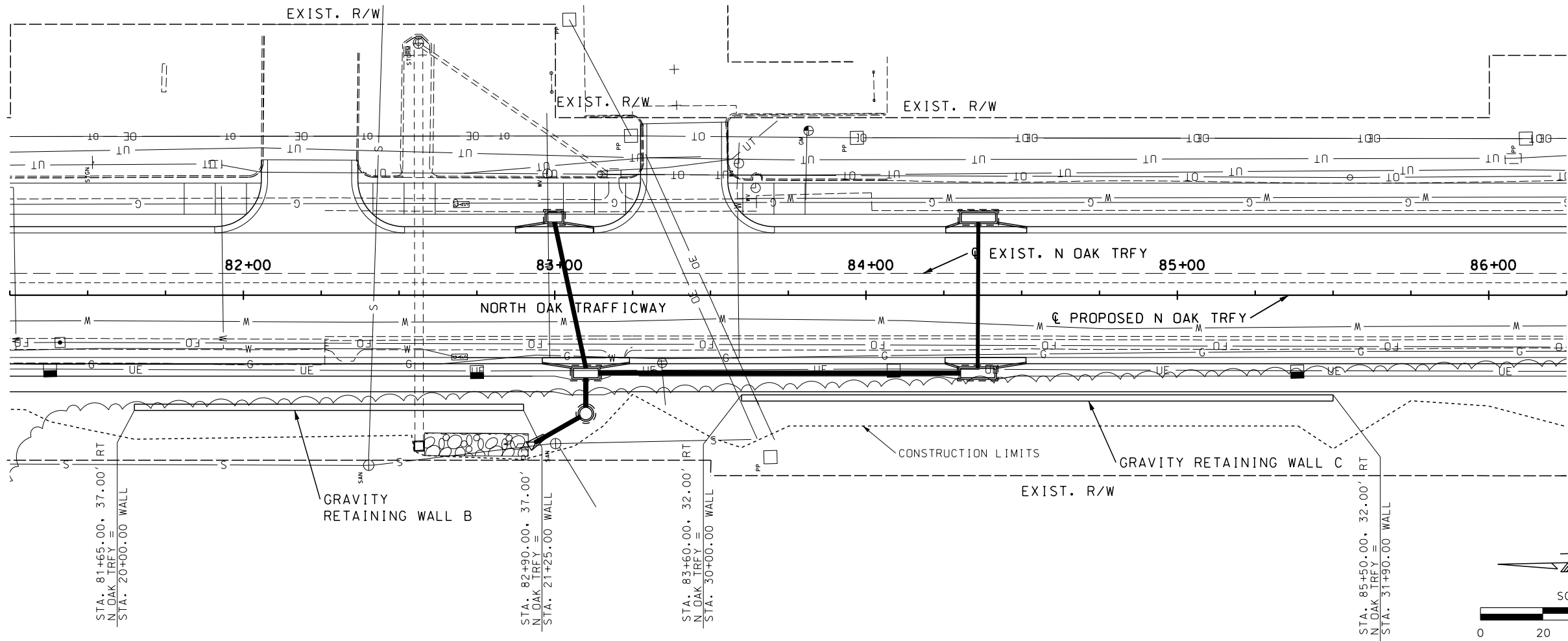
HECKED BY: TAN

NORTH OAK TRAFFICWAY -
INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

RETAINING WALL
PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 76+75 TO STA. 80+15
WALL A

SHEET NO. _____

20 OF 101



DATE PREPARED
10/19/2018

NO.	APPD. BY	DATE	REVISIONS

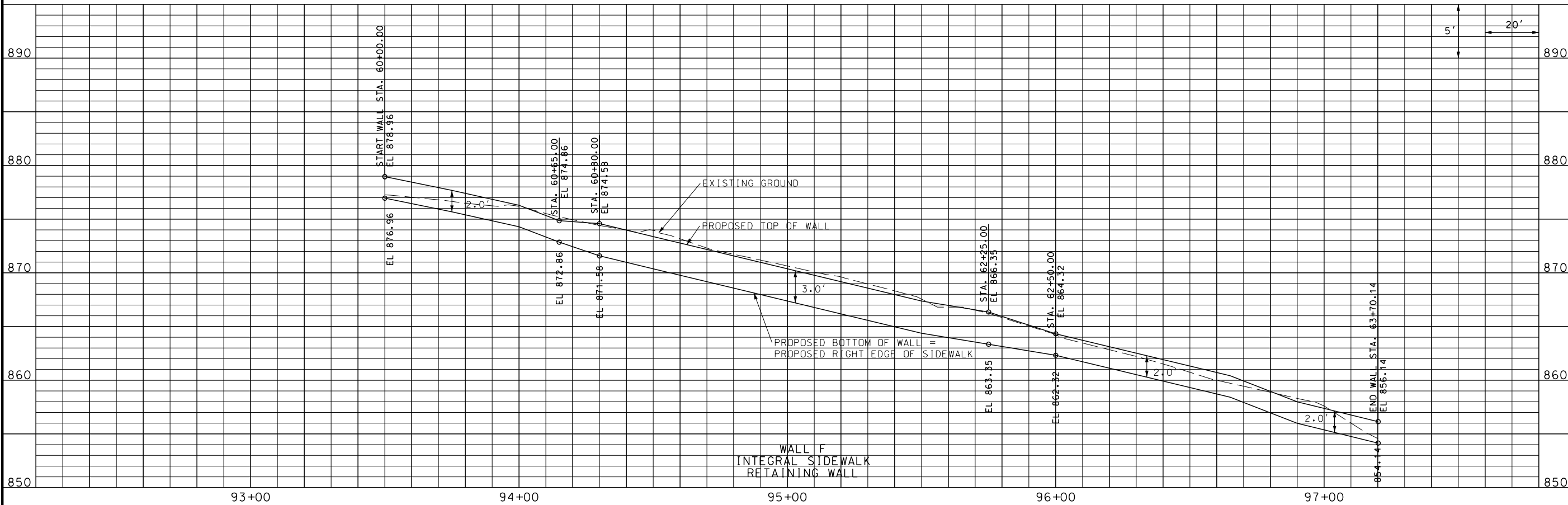
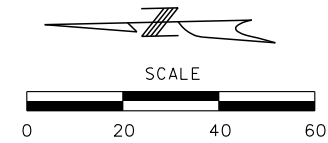
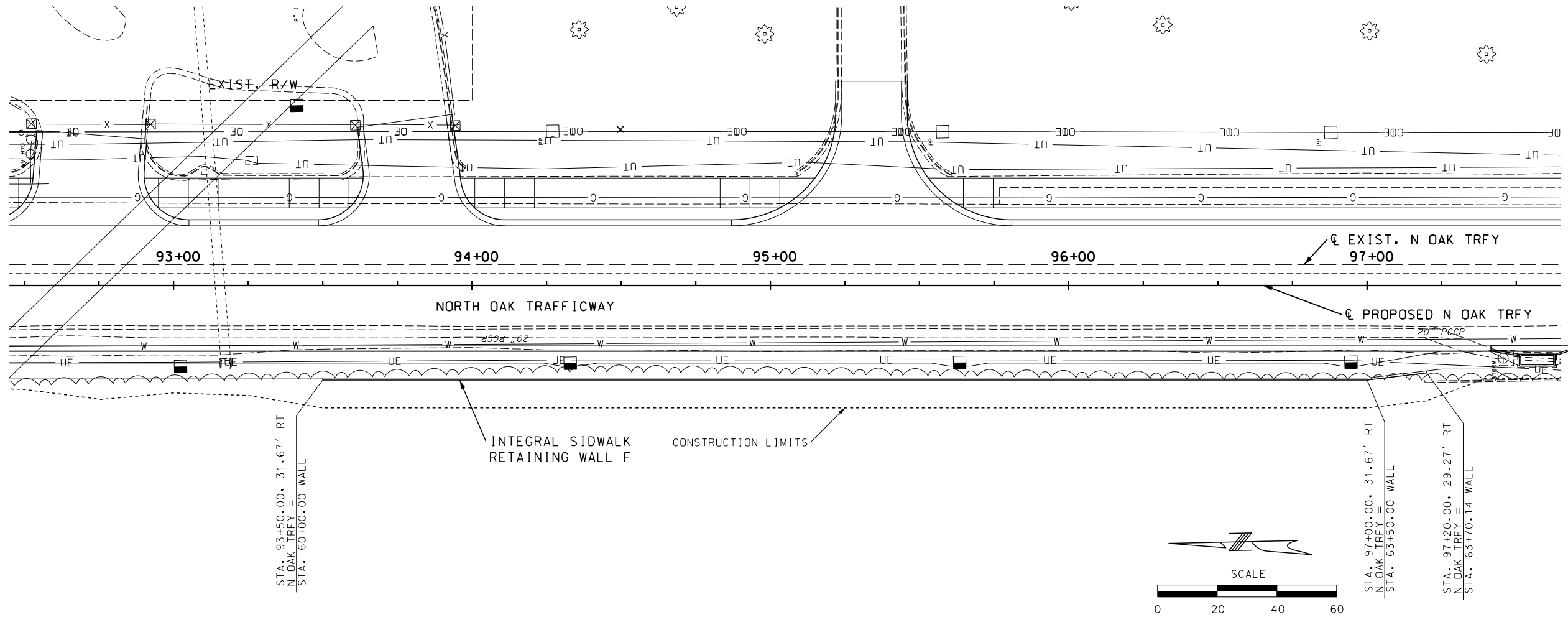
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE: 1" = 20'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

RETAINING WALL
PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 81+65 TO STA. 82+90 AND
STA. 83+60 TO STA. 85+50
WALLS B & C

SHEET NO.
21 OF 101



STATE OF MISSOURI

TOWN OF NUGENT

PROJECT NUMBER 200204022

REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN E-SEAL, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

NO. APPD. BY DATE

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DESIGN GROUP, LLC

1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE: 1" = 20'

DRAWN BY: WRH

CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

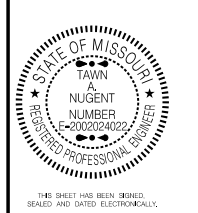
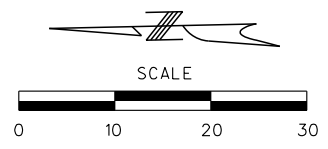
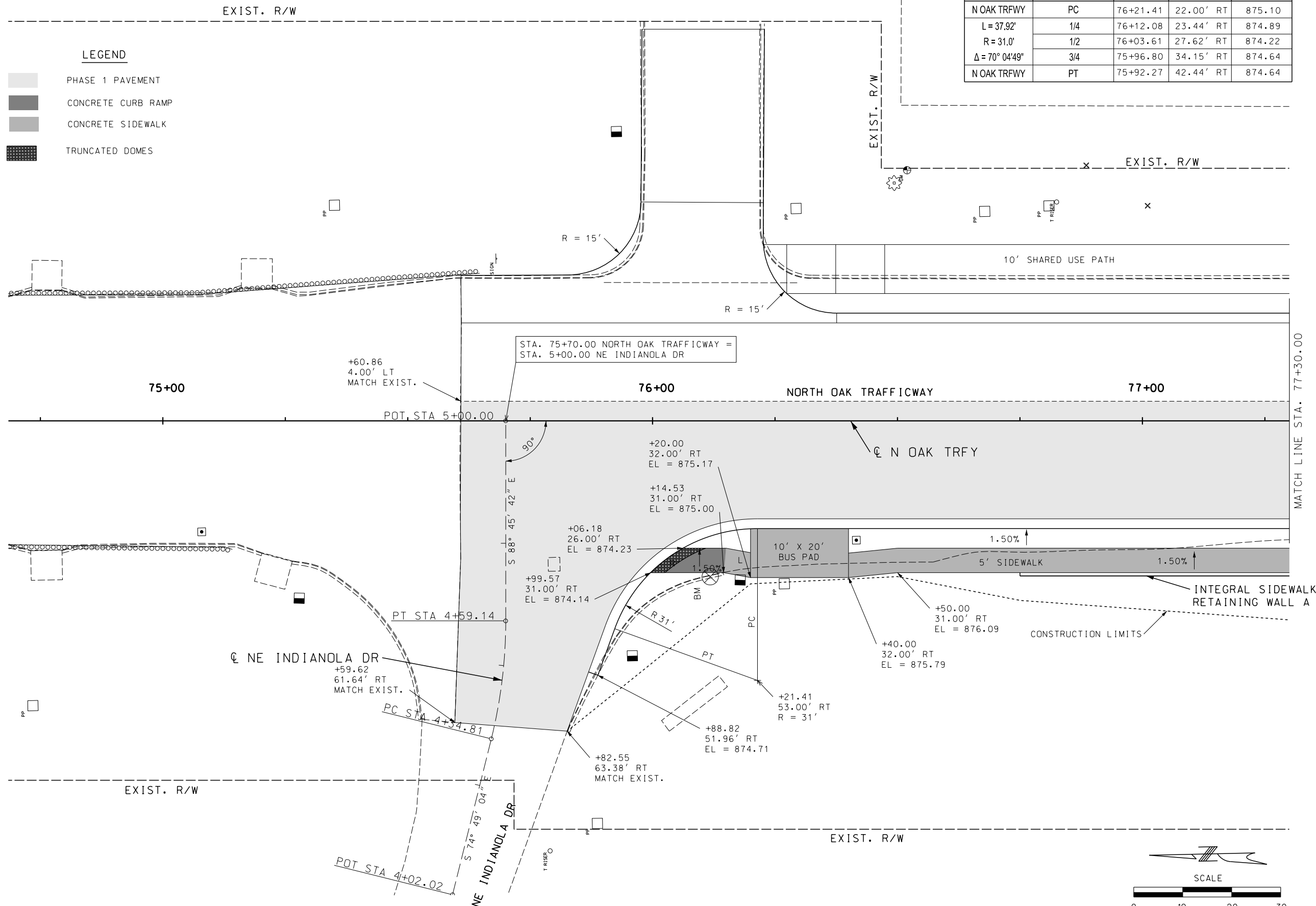
RETAINING WALL
PLAN & PROFILE
NORTH OAK TRAFFICWAY
STA. 93+50 TO STA. 97+20
WALL F

SHEET NO.
23 of 101

023_18-104_RW_I20_004.dgn 9:26:56 AM 10/19/2018

- LEGEND**
- PHASE 1 PAVEMENT
 - CONCRETE CURB RAMP
 - CONCRETE SIDEWALK
 - TRUNCATED DOMES

SW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	76+21.41	22.00' RT	875.10
L = 37.92' R = 31.0' Δ = 70° 04'49"	1/4	76+12.08	23.44' RT	874.89
	1/2	76+03.61	27.62' RT	874.22
N OAK TRFWY	PT	75+92.27	42.44' RT	874.64



DATE PREPARED
10/19/2018

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DESIGN GROUP, LLC

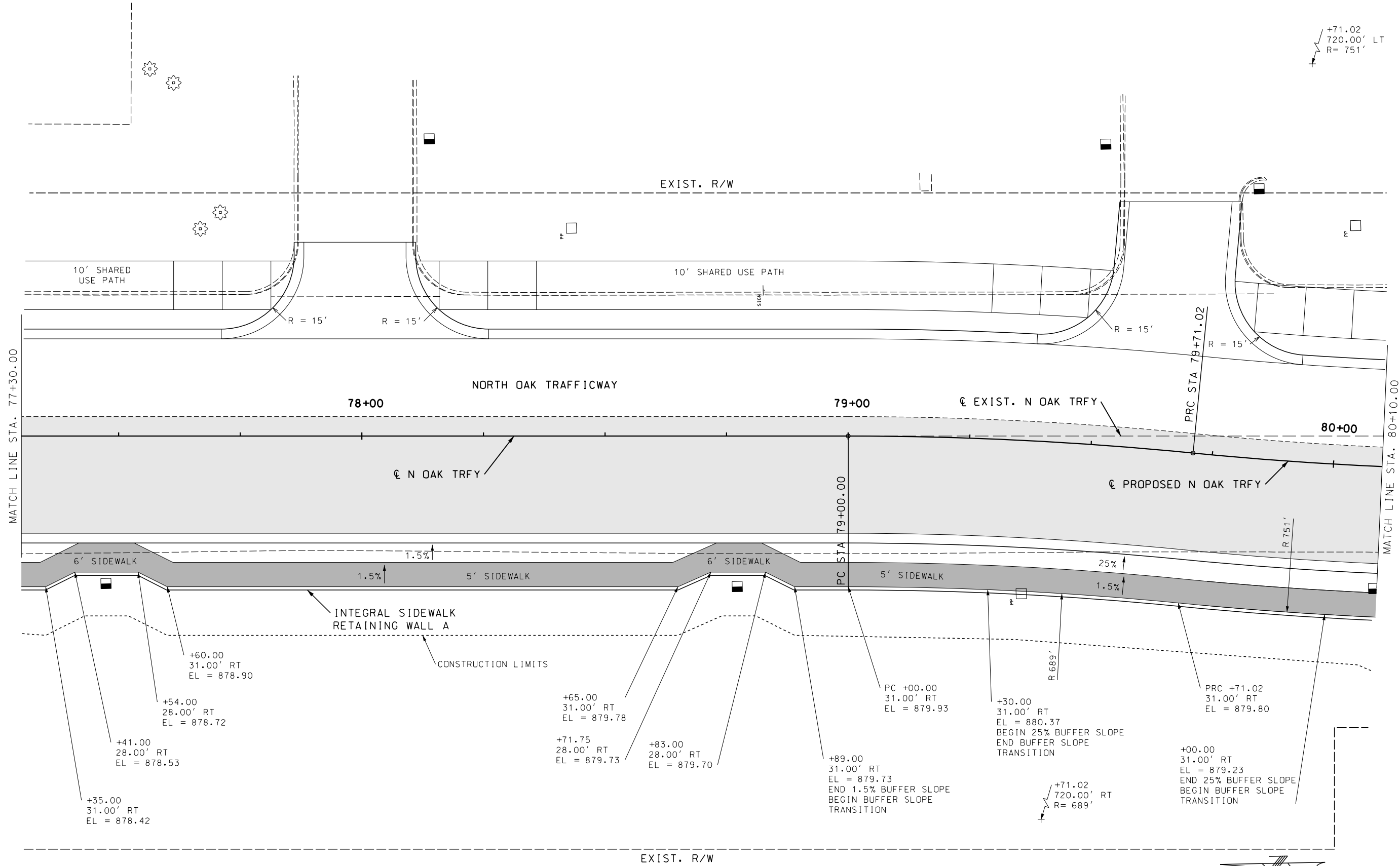
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 74+50 to STA. 77+30

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



DATE PREPARED
10/19/2018

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1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

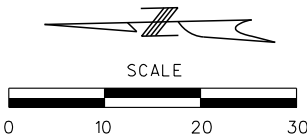
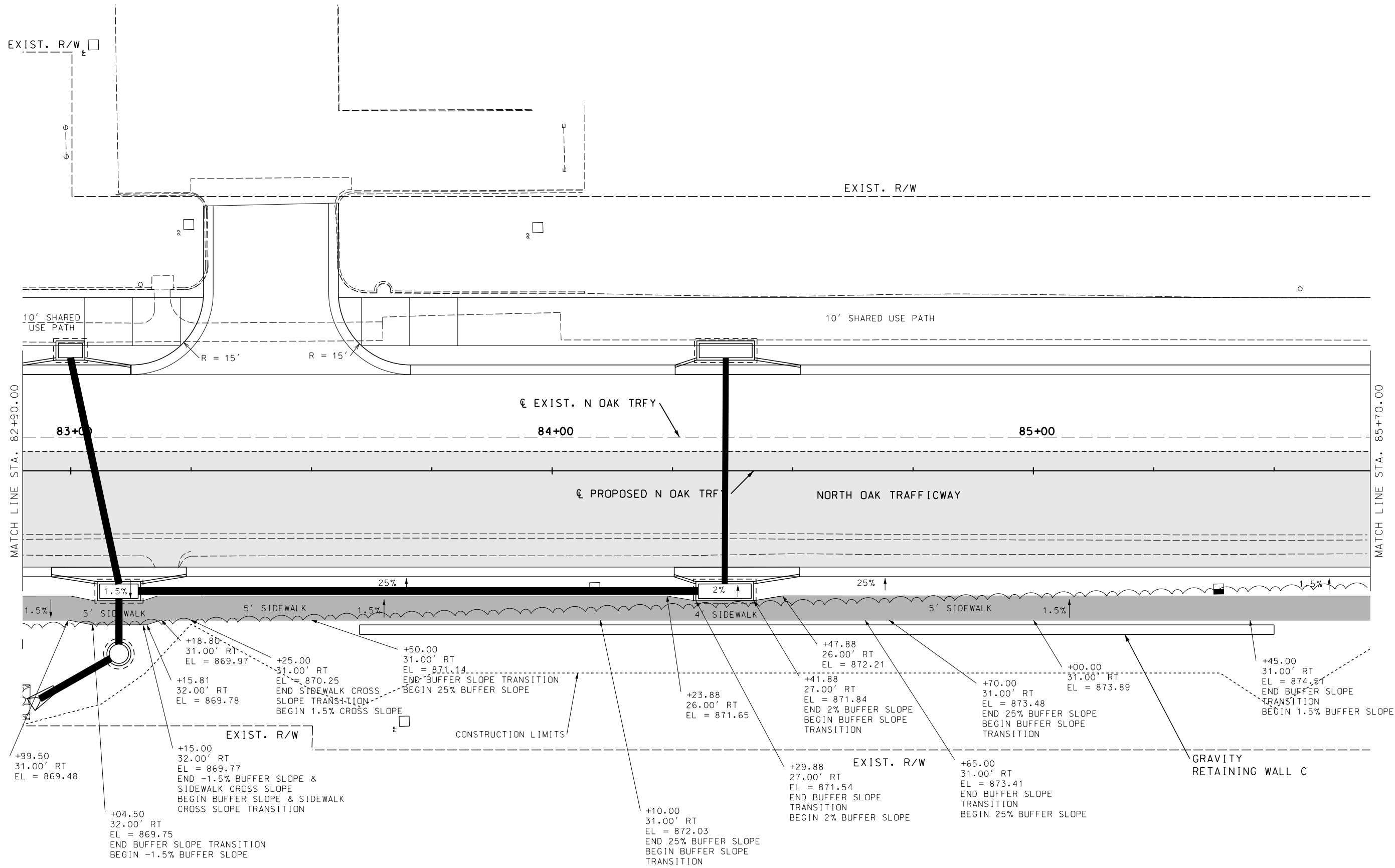
PROJ. NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 77+30 TO STA. 80+10

SHEET NO.

25 OF 101



DATE PREPARED
10/19/2018

NO.	APPD. BY	DATE	REVISIONS

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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE: 1" = 10'
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CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFICWAY
STA. 83+00 TO STA. 85+70

SHEET NO.
27 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

NW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	89+50.58	22.00' RT	883.37
L = 16.87' R = 5.0'	1/4	89+54.47	23.83' RT	883.45
	1/2	89+55.59	27.56' RT	883.50
Δ = 191° 45' 12"	3/4	89+53.56	31.11' RT	884.11
N OAK TRFWY	PRC	89+49.55	31.98' RT	884.26
L = 18.98' R = 122.0'	1/4	89+44.89	31.10' RT	884.40
	1/2	89+40.20	30.41' RT	884.59
Δ = 8° 54' 47"	3/4	89+35.48	29.89' RT	884.79
N OAK TRFWY	PT	89+30.75	29.57' RT	885.02

SW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	90+48.19	22.00' RT	884.11
L = 17.00' R = 23.0'	1/4	90+43.97	22.39' RT	884.13
	1/2	90+39.88	23.55' RT	884.16
Δ = 40° 20' 33"	3/4	90+36.09	25.44' RT	884.14
N OAK TRFWY	PT	90+32.70	28.00' RT	883.66
N OAK TRFWY	POT	90+26.63	33.00' RT	883.65

LEGEND

PHASE 1 PAVEMENT

CONCRETE CURB RAMP

CONCRETE SIDEWALK

TRUNCATED DOMES



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK

DESIGN GROUP, LLC

1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

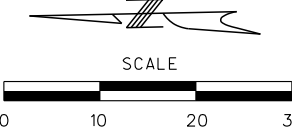
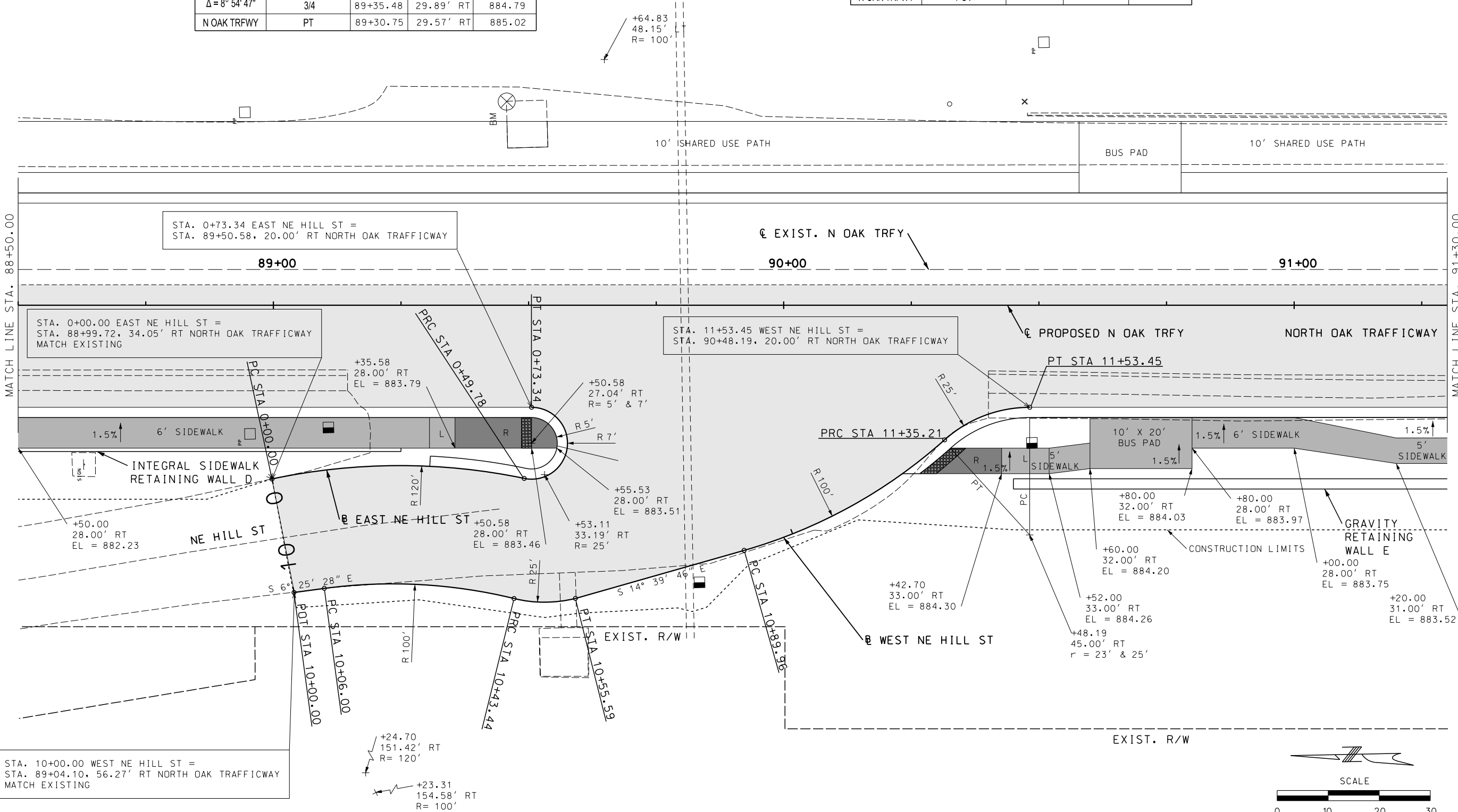
MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

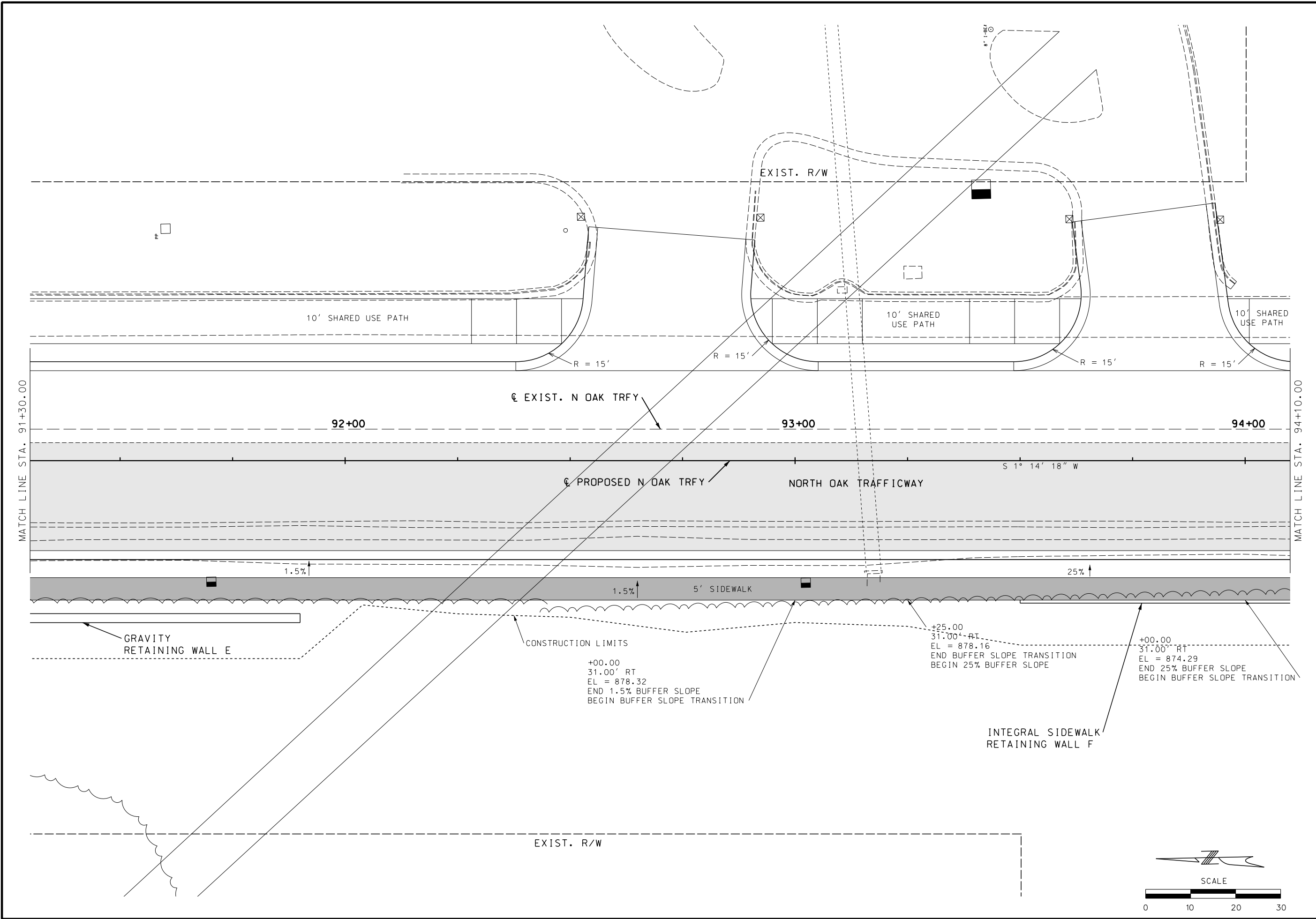
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK AVENUE
STA. 88+70 TO STA. 91+50

SHEET NO.

29 OF 101





STATE OF MISSOURI
TOWN
A
NUGENT
NUMBER
2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN REVIEWED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

NO. APPD. BY DATE

REVISIONS

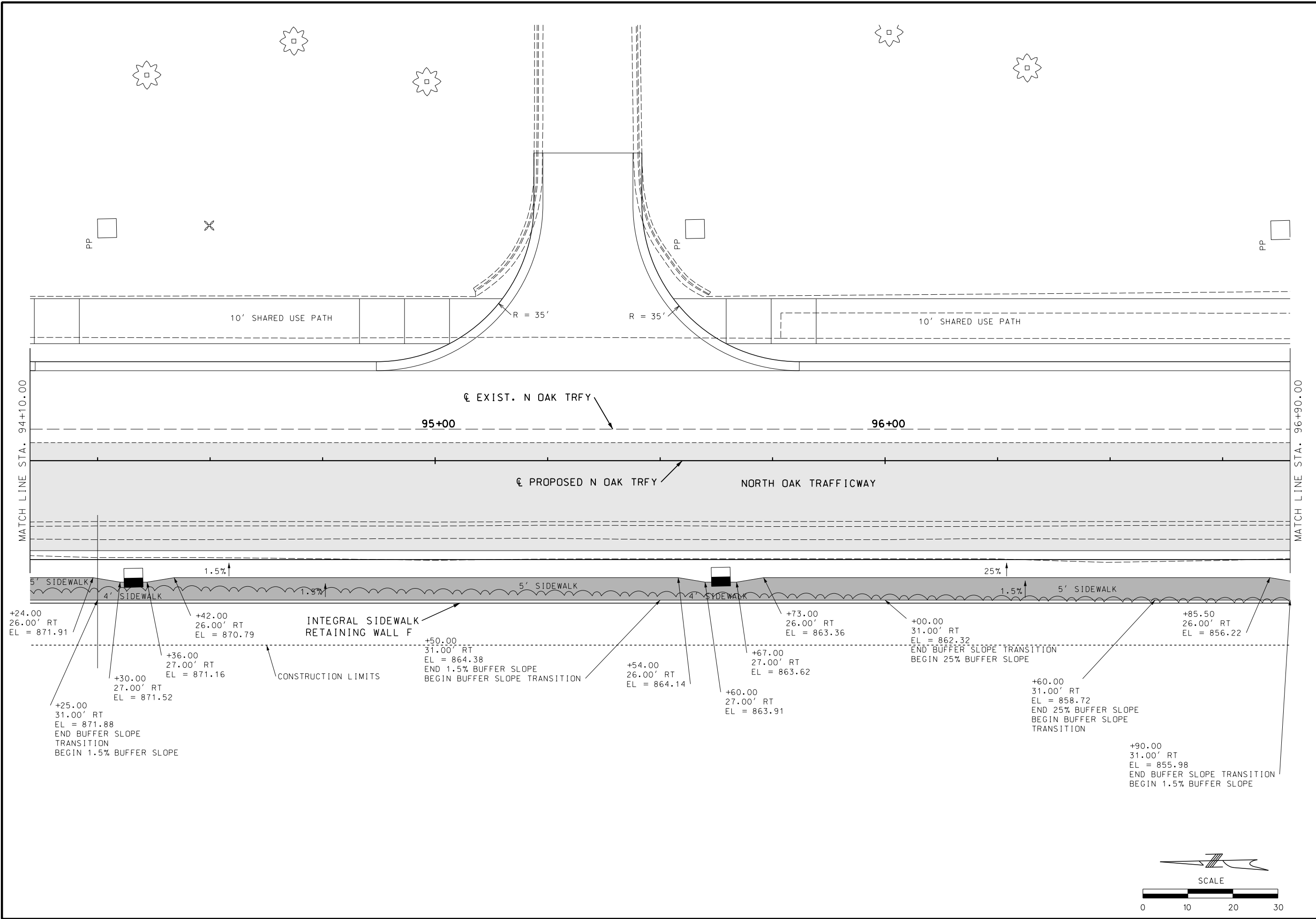
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 91+30 TO STA. 94+10

SHEET NO.
30 OF 101

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STATE OF MISSOURI

A

TOWN

NUGENT

NUMBER

E-2002024022

REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN E-SEAL

SEALING AND DATED ELECTRONICALLY.

DATE PREPARED

10/19/2018

REVISIONS

DATE

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DESIGN GROUP, LLC

1411 E 104th St

Kansas City, MO 64131

Tel (816) 874-4655

Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO.: 89008573

SCALE: 1" = 10'

DRAWN BY: WRH

CHECKED BY: TAN

NORTH OAK TRAFFICWAY -

NE INDIANOLA DR. TO E 32ND AVE.

DESIGN BUILD PACKAGE

ROAD RECONSTRUCTION

PROJECT NO. 89008573

For the City of Kansas City,

Clay County, Missouri

GEOMETRIC DETAILS

NORTH PAK TRAFFIC WAY

STA. 94+10 TO STA. 96+90

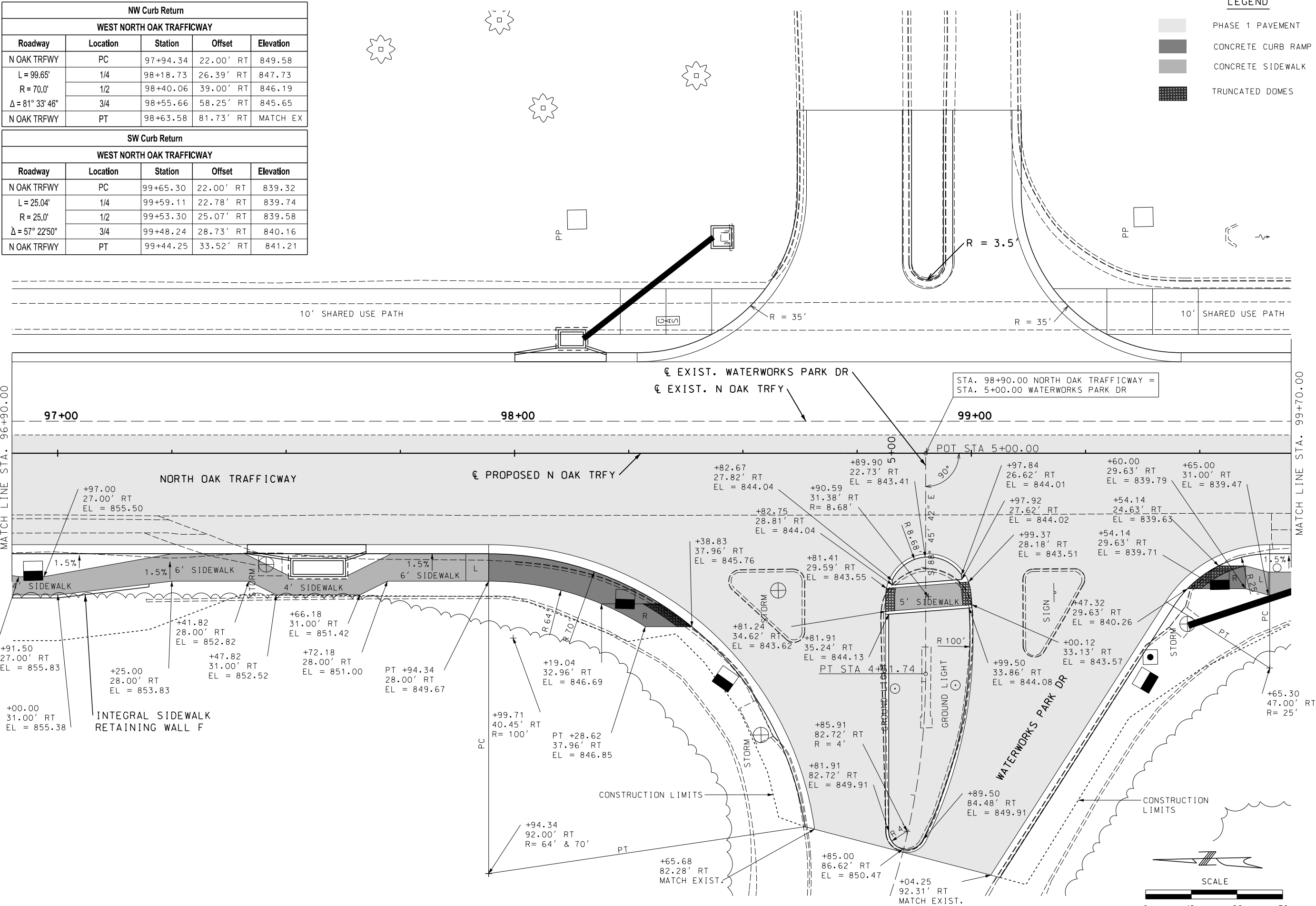
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31 OF 101

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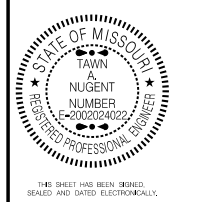
NW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	97+94.34	22.00' RT	849.58
L = 99.65' R = 70.0' Δ = 81° 33' 46"	1/4	98+18.73	26.39' RT	847.73
	1/2	98+40.06	39.00' RT	846.19
	3/4	98+55.66	58.25' RT	845.65
N OAK TRFWY	PT	98+63.58	81.73' RT	MATCH EX

SW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	99+65.30	22.00' RT	839.32
L = 25.04' R = 25.0' Δ = 57° 22' 50"	1/4	99+59.11	22.78' RT	839.74
	1/2	99+53.30	25.07' RT	839.58
	3/4	99+48.24	28.73' RT	840.16
N OAK TRFWY	PT	99+44.25	33.52' RT	841.21



LEGEND

- PHASE 1 PAVEMENT
- CONCRETE CURB RAMP
- CONCRETE SIDEWALK
- TRUNCATED DOMES



DATE PREPARED
10/19/2018

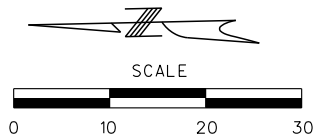
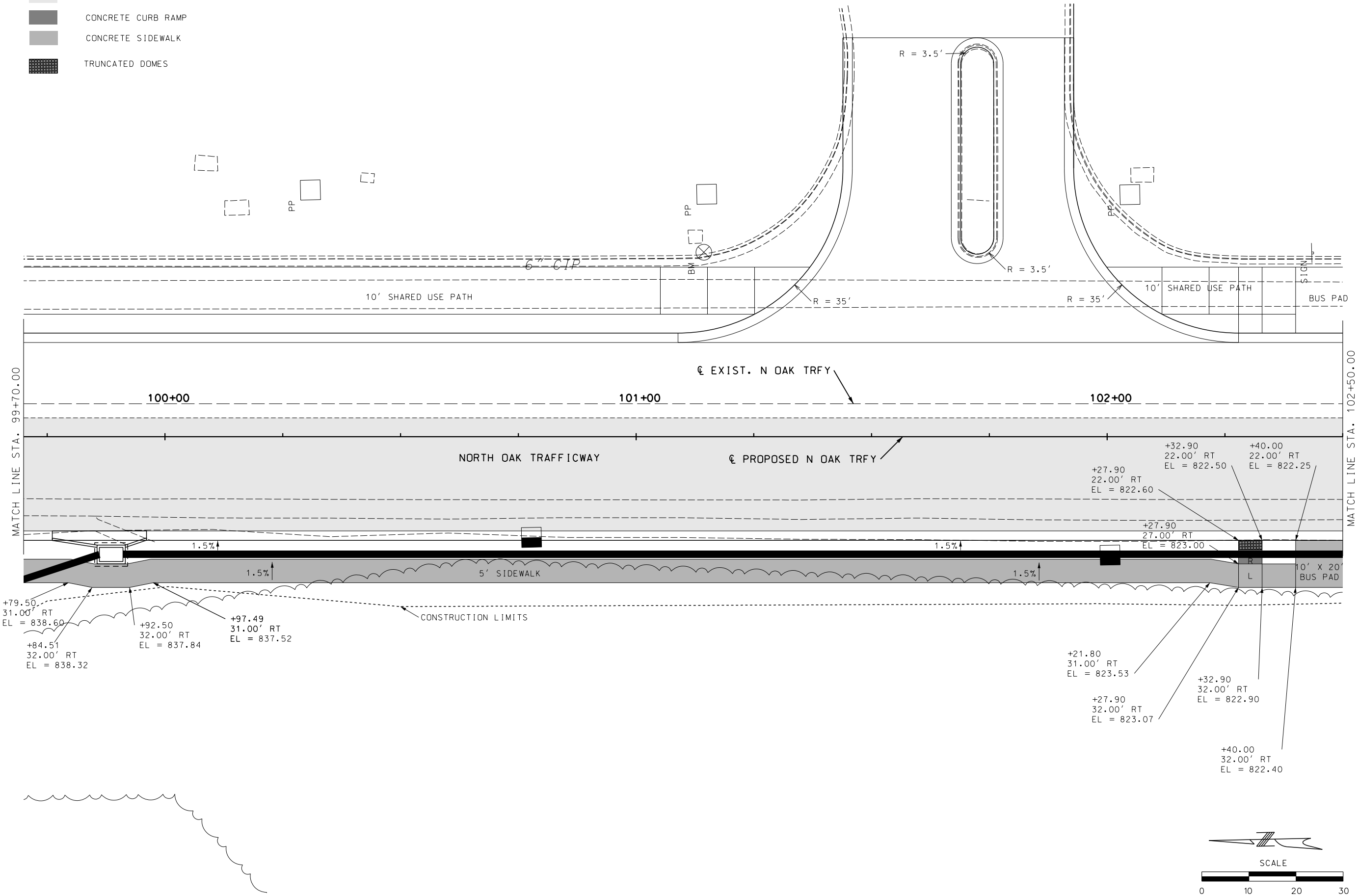
NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 96+90 TO STA. 99+70

- LEGEND
- PHASE 1 PAVEMENT
 - CONCRETE CURB RAMP
 - CONCRETE SIDEWALK
 - TRUNCATED DOMES



DATE PREPARED
10/19/2018

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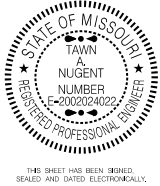
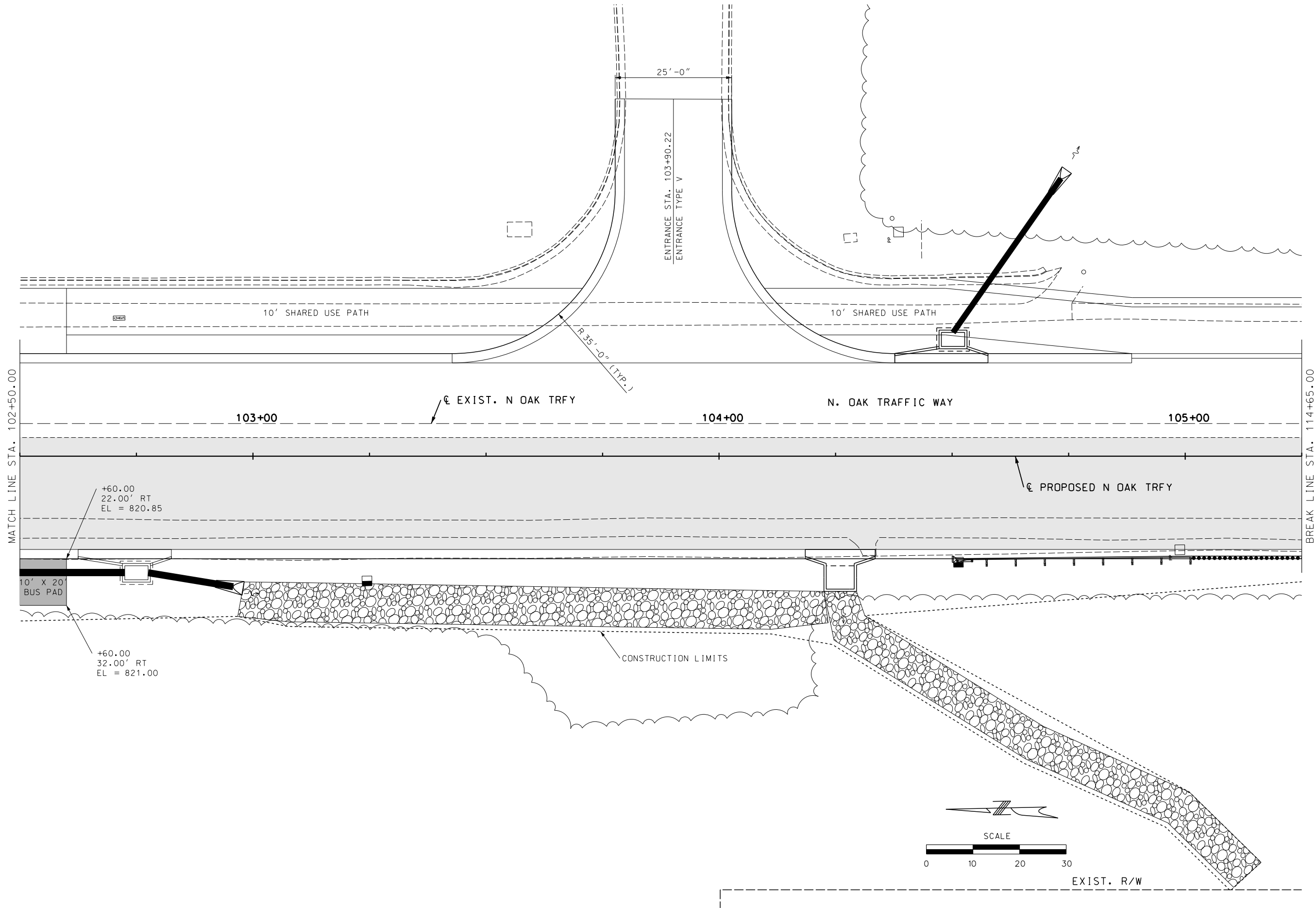
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFICWAY
STA. 99+70 TO STA. 102+50

SHEET NO.

33 OF 101



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
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MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

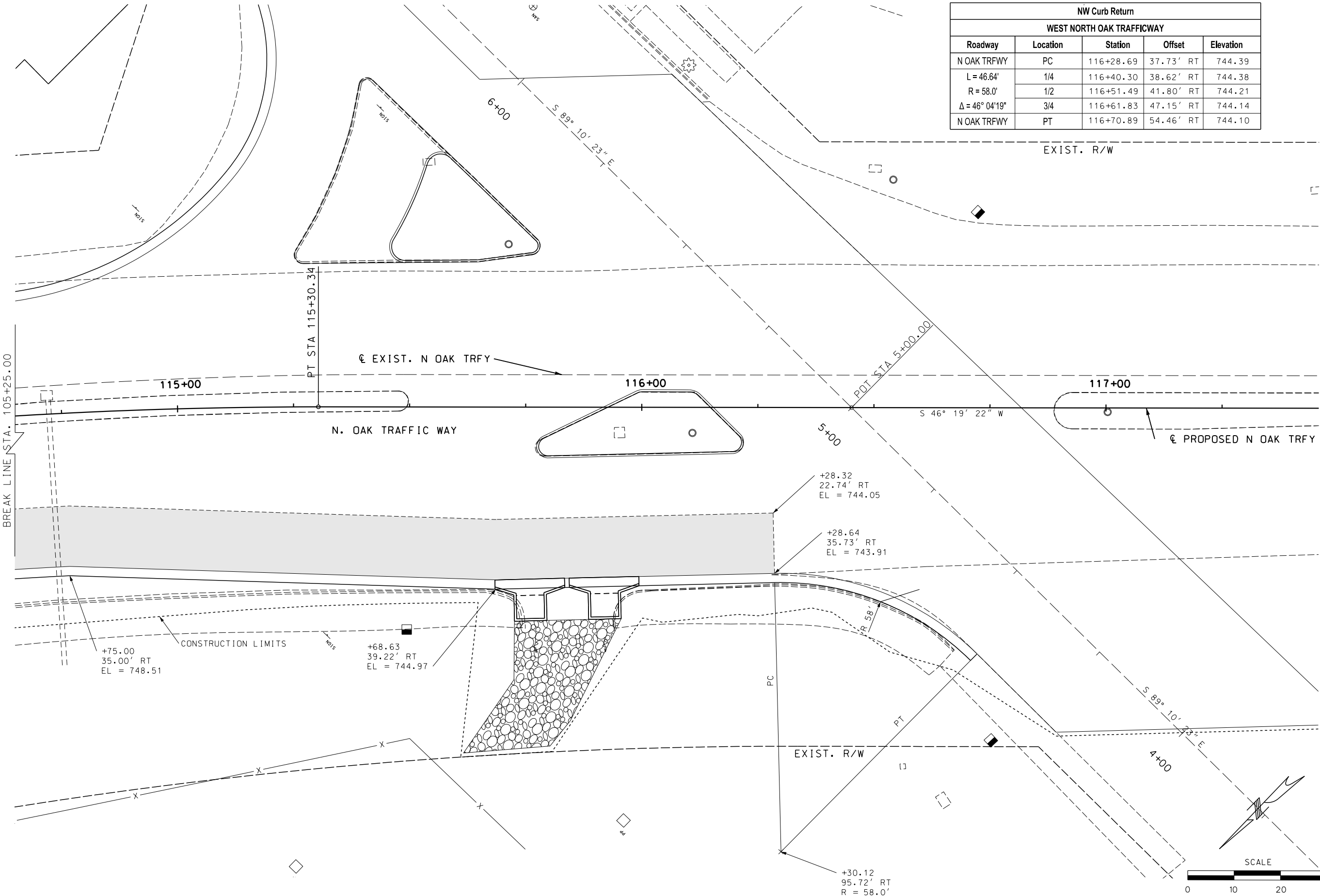
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 102+50 TO STA. 105+25

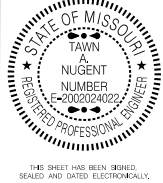
SHEET NO.

34 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



NW Curb Return				
WEST NORTH OAK TRAFFICWAY				
Roadway	Location	Station	Offset	Elevation
N OAK TRFWY	PC	116+28.69	37.73' RT	744.39
L = 46.64' R = 58.0' Δ = 46° 04'19"	1/4	116+40.30	38.62' RT	744.38
	1/2	116+51.49	41.80' RT	744.21
	3/4	116+61.83	47.15' RT	744.14
N OAK TRFWY	PT	116+70.89	54.46' RT	744.10



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS



1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

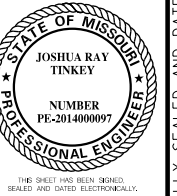
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE: 1" = 10'
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

GEOMETRIC DETAILS
NORTH OAK TRAFFIC WAY
STA. 114+65 TO STA. 117+45

SHEET NO.

34A OF 101



DATE PREPARED
10/18/2018

REVISIONS

DATE

NO. APPD. BY



1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE: 1" = 20'

DRAWN BY: WRH

CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
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ROAD RECONSTRUCTION
PROJECT NO. 89008573
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Clay County, Missouri

STORM SEWER PLAN & PROFILE
NORTH OAK TRAFFICWAY
LINE B AND LINE C

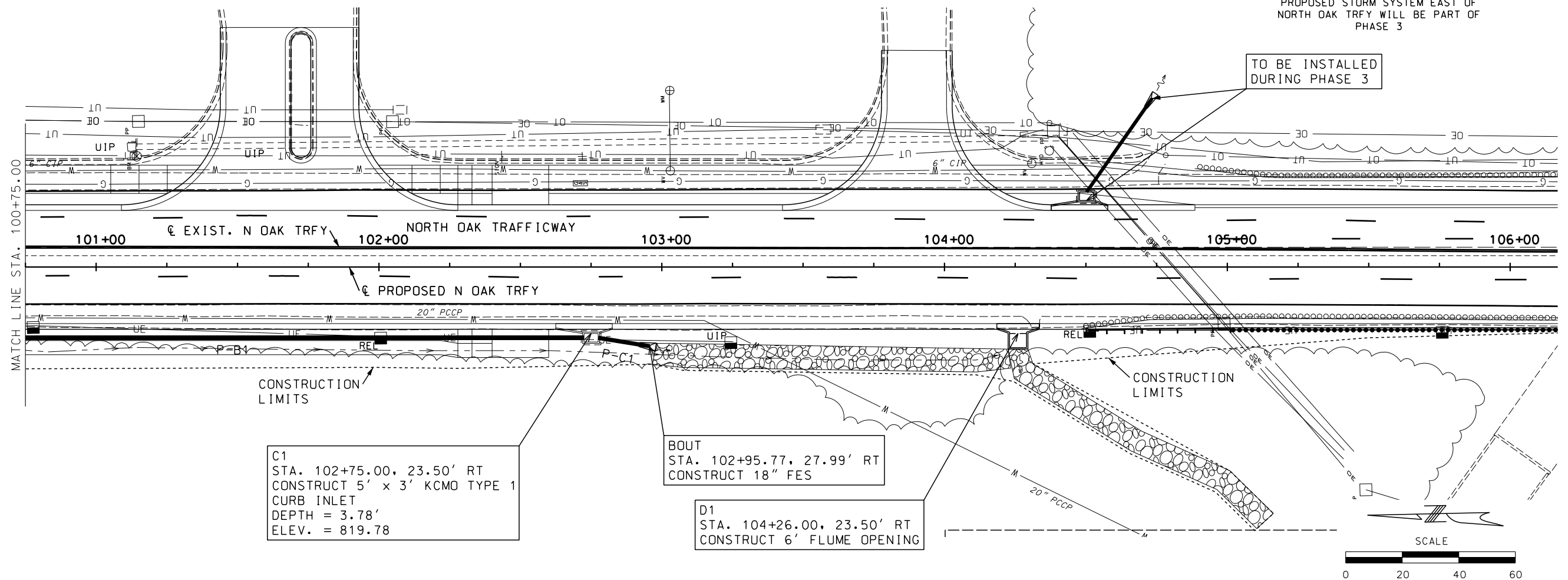
SHEET NO.

37 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

PROPOSED STORM SYSTEM EAST OF
NORTH OAK TRFY WILL BE PART OF
PHASE 3

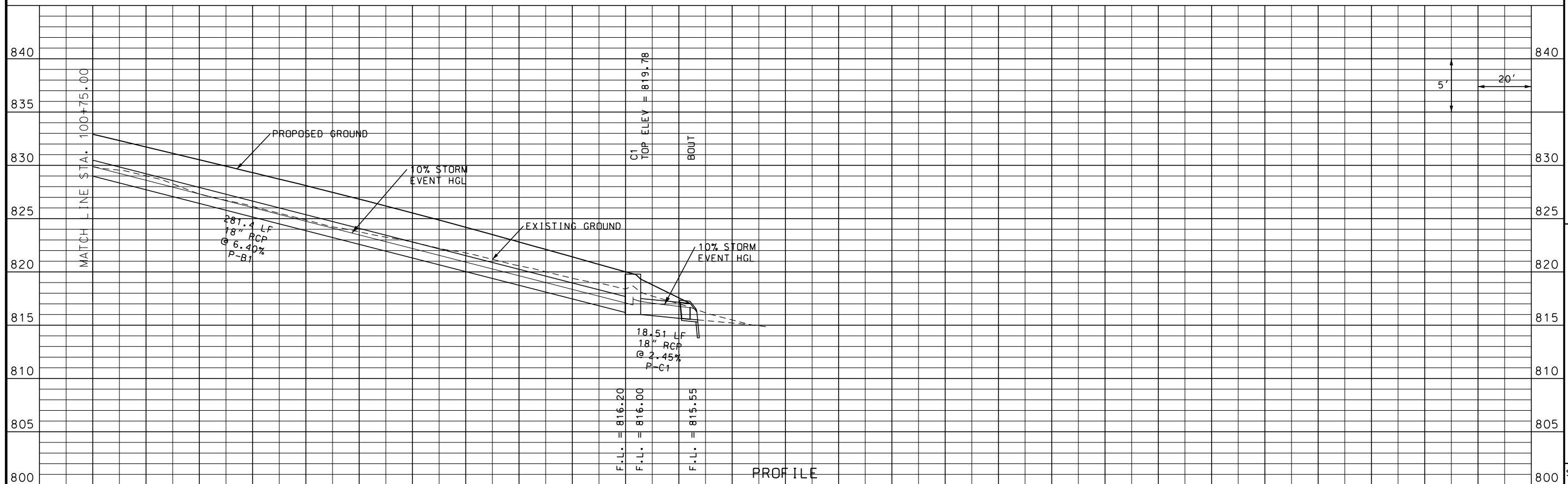
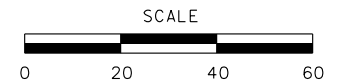
TO BE INSTALLED
DURING PHASE 3



C1
STA. 102+75.00, 23.50' RT
CONSTRUCT 5' x 3' KCMO TYPE 1
CURB INLET
DEPTH = 3.78'
ELEV. = 819.78

BOUT
STA. 102+95.77, 27.99' RT
CONSTRUCT 18" FES

D1
STA. 104+26.00, 23.50' RT
CONSTRUCT 6' FLUME OPENING



TEMPORARY TRAFFIC CONTROL NOTES

1. ALL SIGNS, BARRICADES, DRUMS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING IN POSITION, CLEANING, AND REPLACING DAMAGED TRAFFIC CONTROL DEVICES, STREET LIGHTS, AND OR OTHER UTILITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL TRAFFIC LANES CLEAR OF MUD AND DEBRIS.
4. ADEQUATE CLEARANCE AT INTERSECTIONS SHALL BE MAINTAINED TO PROVIDE PROPER SIGHT DISTANCE FOR THE SAFE OPERATION OF VEHICLES, SIGNALS, AND PROVIDE SAFETY FOR PEDESTRIAN TRAFFIC.
5. FOR AREAS WHERE REMOVAL OF ADJACENT PAVEMENT RESULTS IN A TRAVEL LANE PAVEMENT DIFFERENTIAL OF 2" OR MORE THE CONTRACTOR SHALL PROVIDE A TEMPORARY WEDGE WITH A MAX BREAKOVER OF 5%.
6. FOR AREAS WHERE REMOVAL OF ADJACENT PAVEMENT RESULTS IN A PAVEMENT EDGE DIFFERENTIAL OF 2" OR MORE THE CONTRACTOR SHALL PROVIDE TEMPORARY WEDGE WITH A MAX SLOPE OF 1:1.
7. ELIMINATE TRAFFIC CONTROL SIGN DUPLICATION. BAG OR COVER ALL NON-APPLICABLE SIGNAGE.
8. REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS OR CHANNELIZING DEVICES IN CONJUNCTION WITH ESTABLISHING TRAFFIC CONTROL.
9. MAINTAIN A MINIMUM LANE WIDTH OF 11 FEET WHEN ONLY ONE LANE IS AVAILABLE ON NORTH OAK TRAFFICWAY IN EACH DIRECTION.
10. TRAFFIC CONTROL MODIFICATIONS DUE TO FIELD CONDITIONS ARE ALLOWED AS APPROVED BY THE ENGINEER.
11. CONTRACTOR SHALL INSTALL WORK ZONE SPEED LIMIT SIGNS AT EACH END OF THE PHASE LIMITS (30 MPH).
12. CONTRACTOR SHALL INSTALL A PORTABLE CHANGEABLE MESSAGE SIGN AT EACH END OF THE PROJECT LIMITS (NORTH OF E 32ND AVENUE AND SOUTH OF NE 38TH TERRACE) A MINIMUM OF 5 DAYS IN ADVANCE OF PROPOSED CONSTRUCTION WORK AND TRAFFIC CHANGES TO NOTIFY THE PUBLIC.

MUTCD TYPICAL APPLICATIONS

- TA-11 LANE CLOSURE ON A TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES
TA-30 INTERIOR LANE CLOSURE ON A MULTI-LANE STREET
TA-32 HALF ROAD CLOSURE ON A MULTI-LANE, HIGH-SPEED HIGHWAY

OVERALL PHASING

PHASE 1 - WEST SIDE OF NORTH OAK TRAFFICWAY
CONSTRUCT 24 FEET OF BASE PAVEMENT, SIDEWALK, AND RETAINING WALL (WHERE NEEDED). TRAFFIC REDUCED TO TWO OPPOSING 11 FOOT LANES ON THE EAST SIDE.

PHASE 2 - WATER MAIN & CONDUIT INSTALLATION
CONSTRUCT WATER MAINS AND CONDUIT/TRACER WIRE ON THE EAST SIDE OF NORTH OAK TRAFFICWAY. NORTHBOUND TRAFFIC ON INSIDE EXISTING 11 FOOT NORTHBOUND LANE AND SOUTHBOUND TRAFFIC ON NEW 10' LANES.

PHASE 3 - EAST SIDE OF NORTH OAK TRAFFICWAY
CONSTRUCT REMAINING 16 FEET OF PAVEMENT AND SHARED USE FACILITY. TRAFFIC REDUCED TO TWO 11 FOOT LANES ON THE NEW WEST SIDE PAVEMENT.

PHASE 4 - ASPHALT SURFACE COURSE AND PERMANENT PAVEMENT MARKINGS
CONSTRUCT ASPHALT SURFACE COURSE AND INSTALL PAVEMENT MARKINGS AND SIGNANGE. TRAFFIC TO BE REDUCED TO ONE LANE IN EACH DIRECTION FOR PAVING OPERATIONS AND A MOBILE OPERATION WORK ZONE USED FOR PAVEMENT MARKINGS.

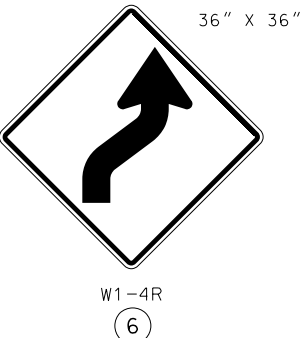
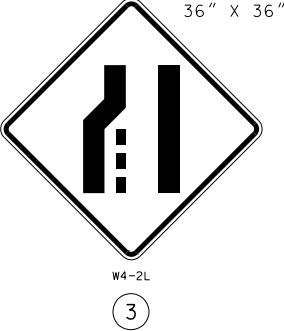
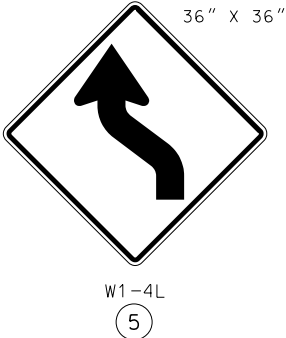
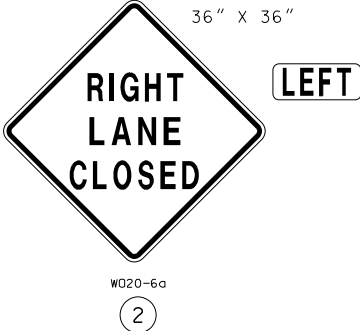
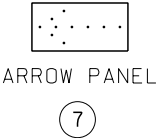
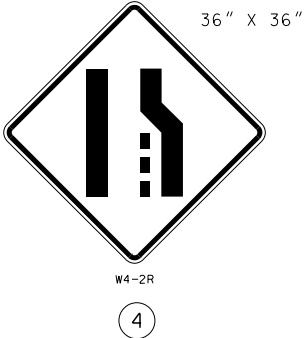
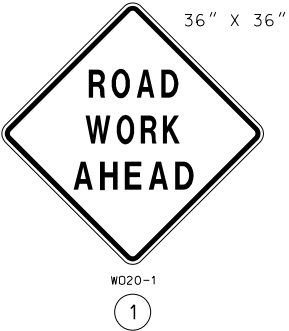
32ND STREET RECONSTRUCTION
32ND STREET SHALL BE PHASED IN SMALL WORK ZONES TO ALLOW ONE LANE IN NORTHBOUND AND SOUTHBOUND DIRECTION AT ALL TIMES. 32ND STREET THROUGH TRAFFIC MAY BE CLOSED DURING 32ND STREET RECONSTRUCTION. THE EXISTING TRAFFIC SIGNAL SHALL BE MODIFIED TO CORRELATE WITH EACH TEMPORARY LANE CONFIGURATION.

MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS			
ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (LOW SPEED)	100 FT	100 FT	100 FT
URBAN (HIGH SPEED)	350 FT	350 FT	350 FT
RURAL	500 FT	500 FT	500 FT
EXPRESSWAY/FREEWAY	1,000 FT	1,500 FT	2,640 FT

NOTE: NORTH OAK TRAFFICWAY IS AN URBAN LOW SPEED ROAD (40 MPH POSTED SPEED)

FORMULAS FOR DETERMINING TAPER LENGTHS	
SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

MAXIMUM CHANNELIZER SPACING	
THROUGH TAPER	THROUGH WORK AREA
40 FT	80 FT



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PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

TRAFFIC CONTROL
NORTH OAK TRAFFICWAY
GENERAL NOTES

SHEET NO.
38 OF 101

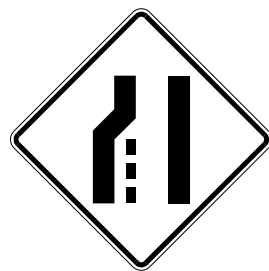


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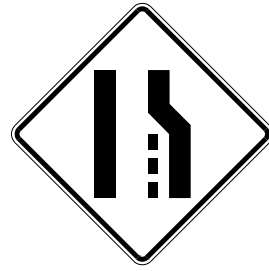


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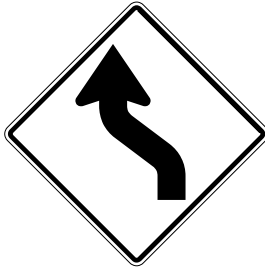
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W4-2L
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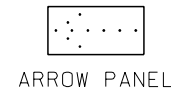
W4-2R
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W1-4L
5



W1-4R
6



ARROW PANEL
7

END
ROAD WORK
G020-2
8

WORK
ZONE
G020-5aP

SPEED
LIMIT
30
R2-1
9

SPEED
LIMIT
40
R2-1
10



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10/19/2018

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For the City of Kansas City,
Clay County, Missouri

TRAFFIC CONTROL
NORTH OAK TRAFFICWAY
STA. 68+00 TO STA. 82+00

SHEET NO.

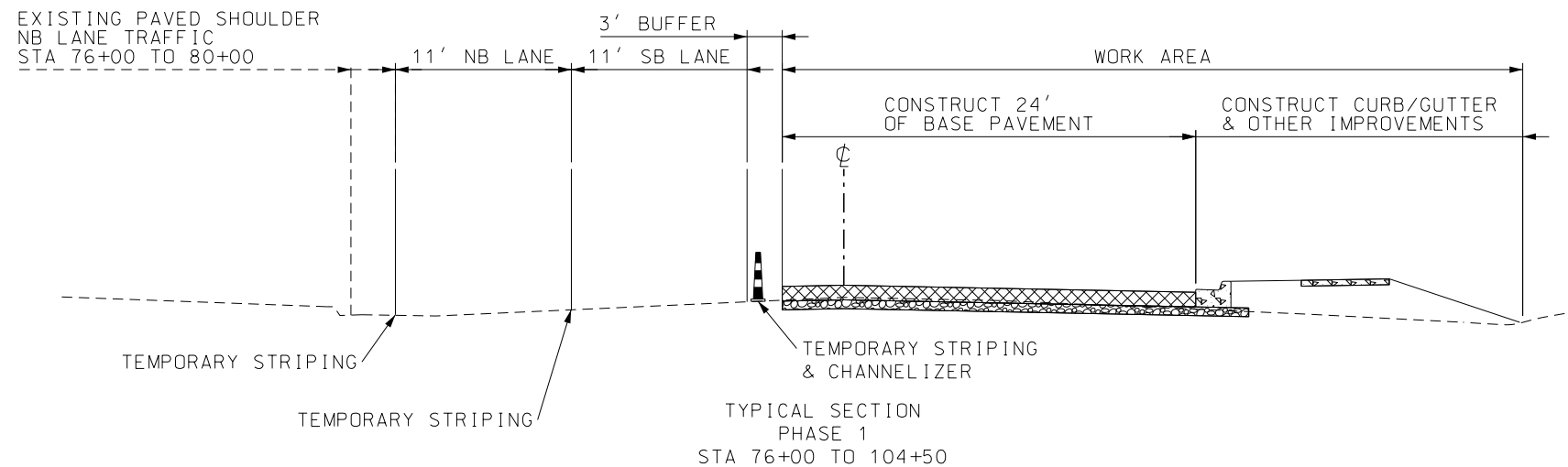
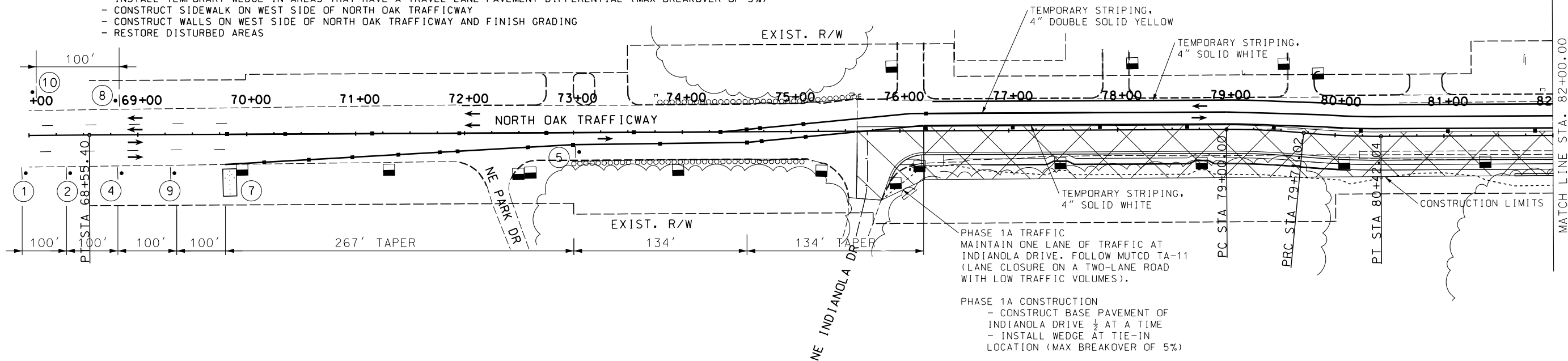
39 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

PRIOR TO CONSTRUCTION:
MILL EXISTING CONCRETE GUTTER ON EAST SHOULDER AND OVERLAY TO ALLOW FOR
TEMPORARY 11' NB LANE.

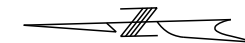
PHASE 1 TRAFFIC:
SHIFT TRAFFIC TO EAST HALF OF ROADWAY (MUTCD TA-32). MAINTAIN ONE 11 FOOT LANE
IN EACH DIRECTION THROUGHOUT THE PROJECT. MAINTAIN ACCESS TO ALL ADJACENT
PROPERTIES AT ALL TIMES

- PHASE 1 CONSTRUCTION:
- REMOVE MEDIAN ON NORTH OAK TRAFFICWAY NEAR 32ND STREET (USE TA-30)
 - REMOVE OR RUBBLIZE EXISTING PAVEMENT IN PHASE 1 WORK AREA LIMITS
 - PROVIDE TEMPORARY WEDGE WITH MAX SLOPE OF 1:1 IN AREAS THAT HAVE A PAVEMENT EDGE DIFFERENTIAL
 - CONSTRUCT LIGHTING IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
 - CONSTRUCT STORM IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
 - CONSTRUCT BASE PAVEMENT IN PHASE 1 WORK AREA LIMITS
 - INSTALL TEMPORARY WEDGE IN AREAS THAT HAVE A TRAVEL LANE PAVEMENT DIFFERENTIAL (MAX BREAKOVER OF 5%)
 - CONSTRUCT SIDEWALK ON WEST SIDE OF NORTH OAK TRAFFICWAY
 - CONSTRUCT WALLS ON WEST SIDE OF NORTH OAK TRAFFICWAY AND FINISH GRADING
 - RESTORE DISTURBED AREAS



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- TRAFFIC FLOW
- ▨ WORK AREA
- ▨ INTERSECTION WORK AREA



SCALE
0 50 100 150

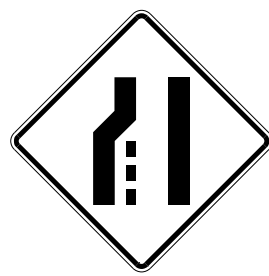


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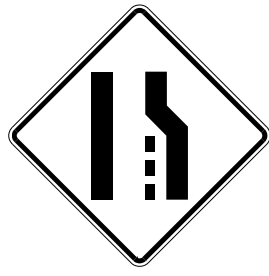


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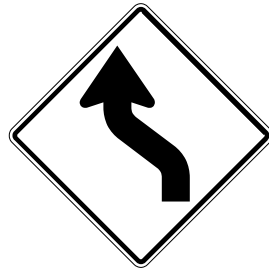
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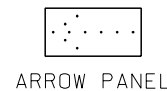
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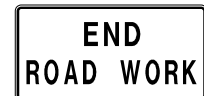
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6



7



8



9



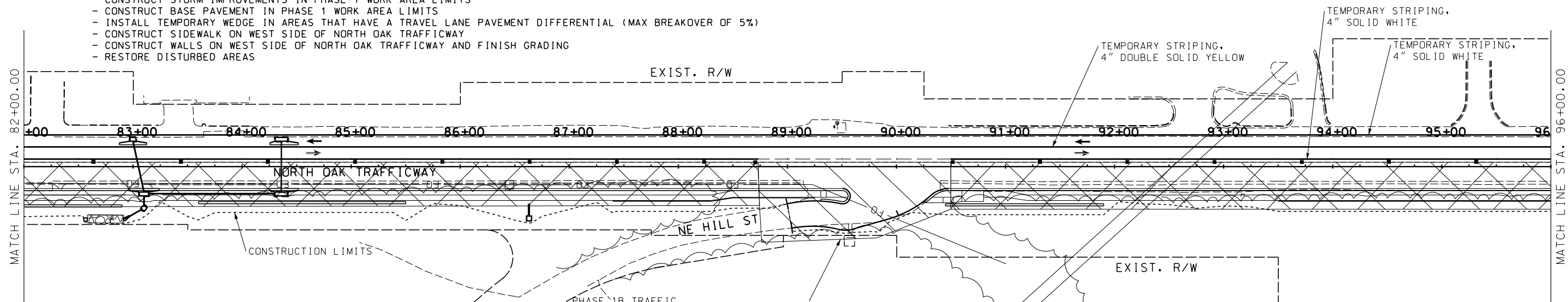
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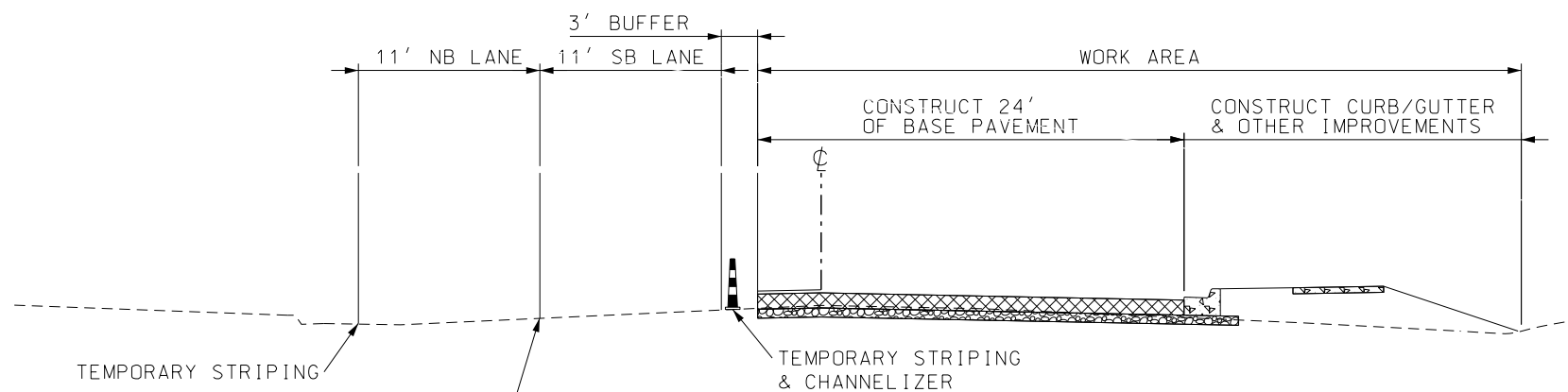
PHASE 1 TRAFFIC:
SHIFT TRAFFIC TO EAST HALF OF ROADWAY (MUTCD TA-32). MAINTAIN ONE 11 FOOT LANE IN EACH DIRECTION THROUGHOUT THE PROJECT. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES

- PHASE 1 CONSTRUCTION:
- REMOVE MEDIAN ON NORTH OAK TRAFFICWAY NEAR 32ND STREET (USE TA-30)
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 - PROVIDE TEMPORARY WEDGE WITH MAX SLOPE OF 1:1 IN AREAS THAT HAVE A PAVEMENT EDGE DIFFERENTIAL
 - CONSTRUCT LIGHTING IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
 - CONSTRUCT STORM IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
 - CONSTRUCT BASE PAVEMENT IN PHASE 1 WORK AREA LIMITS
 - INSTALL TEMPORARY WEDGE IN AREAS THAT HAVE A TRAVEL LANE PAVEMENT DIFFERENTIAL (MAX BREAKOVER OF 5%)
 - CONSTRUCT SIDEWALK ON WEST SIDE OF NORTH OAK TRAFFICWAY
 - CONSTRUCT WALLS ON WEST SIDE OF NORTH OAK TRAFFICWAY AND FINISH GRADING
 - RESTORE DISTURBED AREAS



PHASE 1B TRAFFIC
MAINTAIN ONE LANE OF TRAFFIC AT HILL STREET. FOLLOW MUTCD TA-11 (LANE CLOSURE ON A TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES).

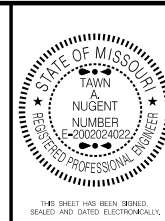
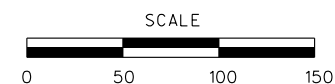
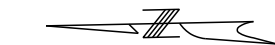
- PHASE 1B CONSTRUCTION
- CONSTRUCT BASE PAVEMENT
 - INSTALL WEDGE AT TIE-IN LOCATION (MAX BREAKOVER OF 5%)



TYPICAL SECTION
PHASE 1
STA 76+00 TO 104+50

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- TRAFFIC FLOW
- ▨ WORK AREA
- ▨ INTERSECTION WORK AREA



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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

TRAFFIC CONTROL
NORTH OAK TRAFFICWAY
STA. 82+00 TO STA. 96+00

SHEET NO.

40 OF 101

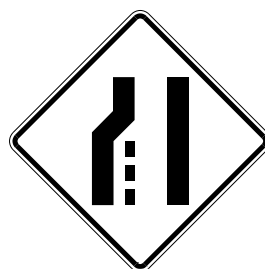


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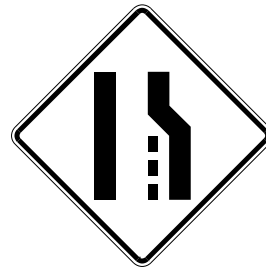


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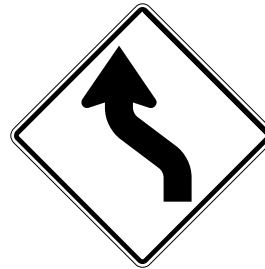
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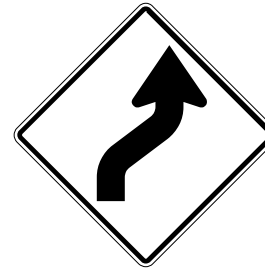
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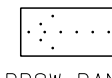
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5



6



7

END
ROAD WORK

8

WORK
ZONE

G020-5aP

SPEED
LIMIT
30

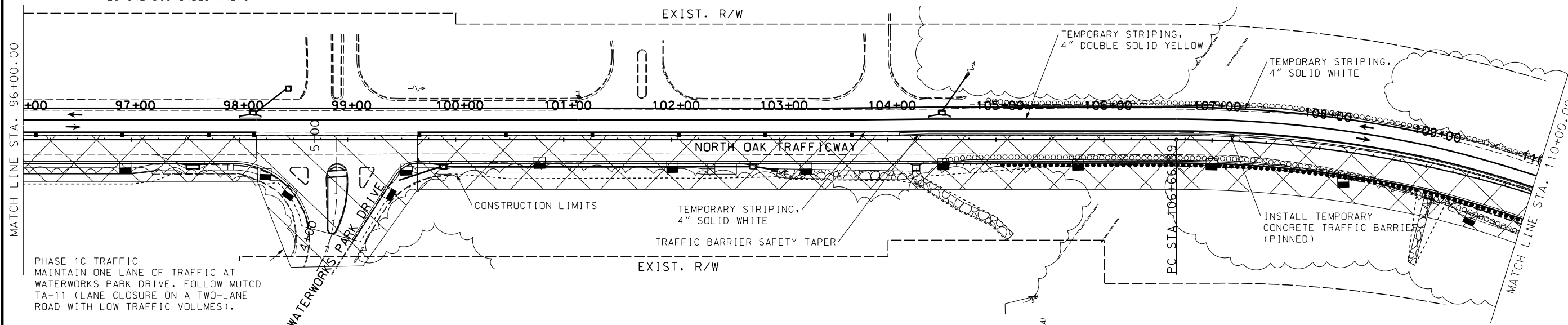
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SPEED
LIMIT
40

10

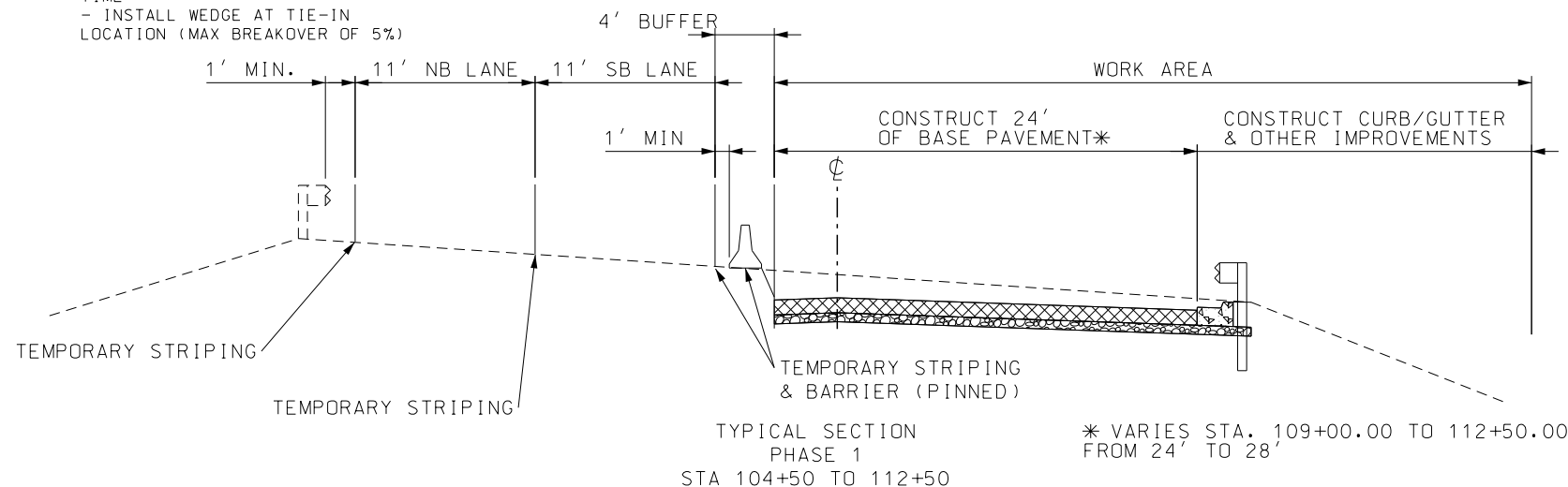
PHASE 1 TRAFFIC:
SHIFT TRAFFIC TO EAST HALF OF ROADWAY (MUTCD TA-32). MAINTAIN ONE 11 FOOT LANE
IN EACH DIRECTION THROUGHOUT THE PROJECT. MAINTAIN ACCESS TO ALL ADJACENT
PROPERTIES AT ALL TIMES

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 - REMOVE OR RUBBLIZE EXISTING PAVEMENT IN PHASE 1 WORK AREA LIMITS
 - PROVIDE TEMPORARY WEDGE WITH MAX SLOPE OF 1:1 IN AREAS THAT HAVE A PAVEMENT EDGE DIFFERENTIAL
 - CONSTRUCT LIGHTING IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
 - CONSTRUCT STORM IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
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 - CONSTRUCT WALLS ON WEST SIDE OF NORTH OAK TRAFFICWAY AND FINISH GRADING
 - RESTORE DISTURBED AREAS



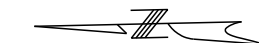
PHASE 1C TRAFFIC
MAINTAIN ONE LANE OF TRAFFIC AT
WATERWORKS PARK DRIVE. FOLLOW MUTCD
TA-11 (LANE CLOSURE ON A TWO-LANE
ROAD WITH LOW TRAFFIC VOLUMES).

- PHASE 1C CONSTRUCTION
- CONSTRUCT BASE PAVEMENT $\frac{1}{2}$ AT A
TIME
 - INSTALL WEDGE AT TIE-IN
LOCATION (MAX BREAKOVER OF 5%)

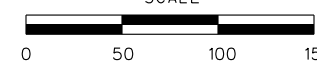


TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- TRAFFIC FLOW
- ▨ WORK AREA
- ▨ INTERSECTION WORK AREA



SCALE



DATE PREPARED
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For the City of Kansas City,
Clay County, Missouri

TRAFFIC CONTROL
NORTH OAK TRAFFICWAY
STA. 96+00 TO STA. 110+00

SHEET NO.

41 OF 101



W020-1

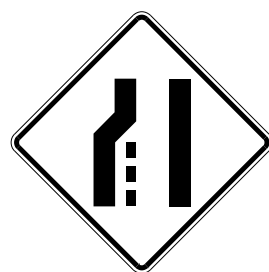
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W020-6a

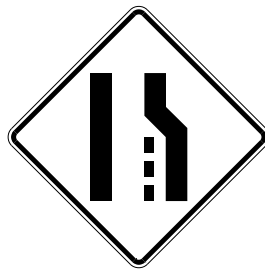
2

LEFT



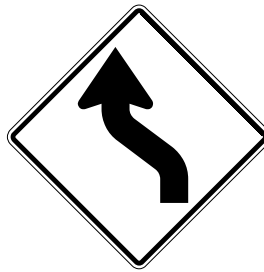
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3



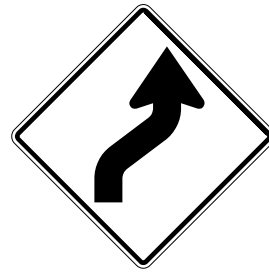
W4-2R

4



W1-4L

5



W1-4R

6



ARROW PANEL

7

END
ROAD WORK

G020-2

8

WORK
ZONE

G020-5aP

SPEED
LIMIT
30

R2-1

9

SPEED
LIMIT
40

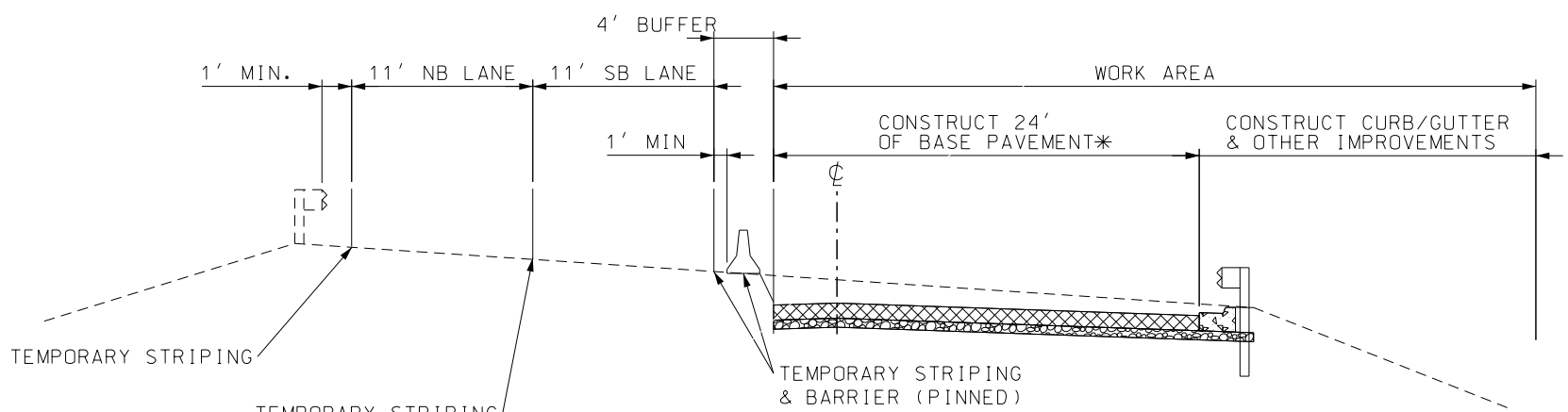
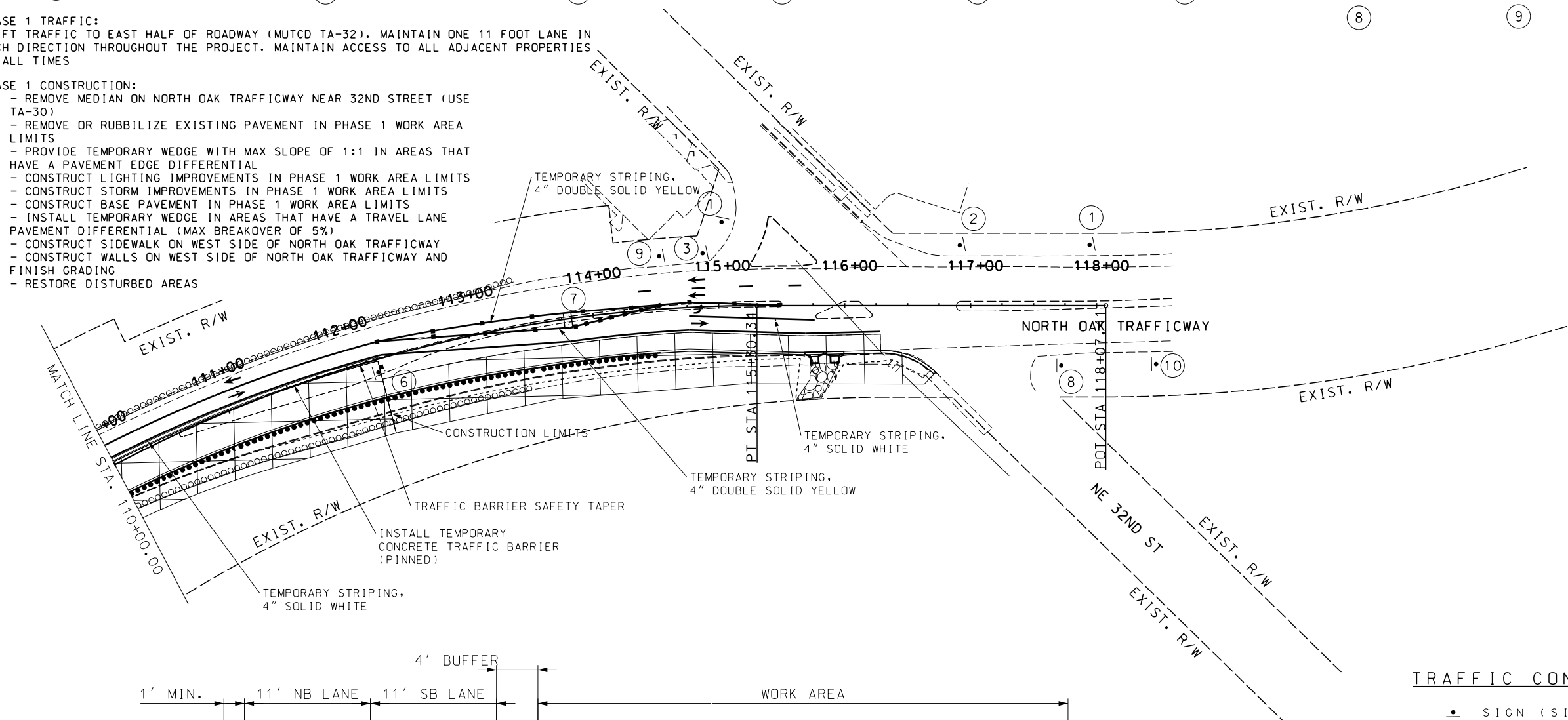
R2-1

10

PHASE 1 TRAFFIC:
SHIFT TRAFFIC TO EAST HALF OF ROADWAY (MUTCD TA-32). MAINTAIN ONE 11 FOOT LANE IN EACH DIRECTION THROUGHOUT THE PROJECT. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES

PHASE 1 CONSTRUCTION:

- REMOVE MEDIAN ON NORTH OAK TRAFFICWAY NEAR 32ND STREET (USE TA-30)
- REMOVE OR RUBBLIZE EXISTING PAVEMENT IN PHASE 1 WORK AREA LIMITS
- PROVIDE TEMPORARY WEDGE WITH MAX SLOPE OF 1:1 IN AREAS THAT HAVE A PAVEMENT EDGE DIFFERENTIAL
- CONSTRUCT LIGHTING IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
- CONSTRUCT STORM IMPROVEMENTS IN PHASE 1 WORK AREA LIMITS
- CONSTRUCT BASE PAVEMENT IN PHASE 1 WORK AREA LIMITS
- INSTALL TEMPORARY WEDGE IN AREAS THAT HAVE A TRAVEL LANE PAVEMENT DIFFERENTIAL (MAX BREAKOVER OF 5%)
- CONSTRUCT SIDEWALK ON WEST SIDE OF NORTH OAK TRAFFICWAY
- CONSTRUCT WALLS ON WEST SIDE OF NORTH OAK TRAFFICWAY AND FINISH GRADING
- RESTORE DISTURBED AREAS

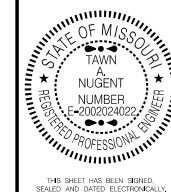
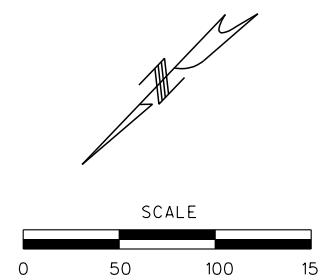


TYPICAL SECTION
PHASE 1
STA 104+50 TO 112+50

* VARIES STA. 109+00.00 TO 112+50.00
FROM 24' TO 28'

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- TRAFFIC FLOW
- ▨ WORK AREA



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC

1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO.: 89008573

SCALE:

DRAWN BY: WRH

CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

TRAFFIC CONTROL
NORTH OAK TRAFFICWAY
STA. 110+00 TO STA. 118+07.41

SHEET NO.

42 OF 101



THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

ROUTE AA	STAT MC
DISTRICT KC	SHEET

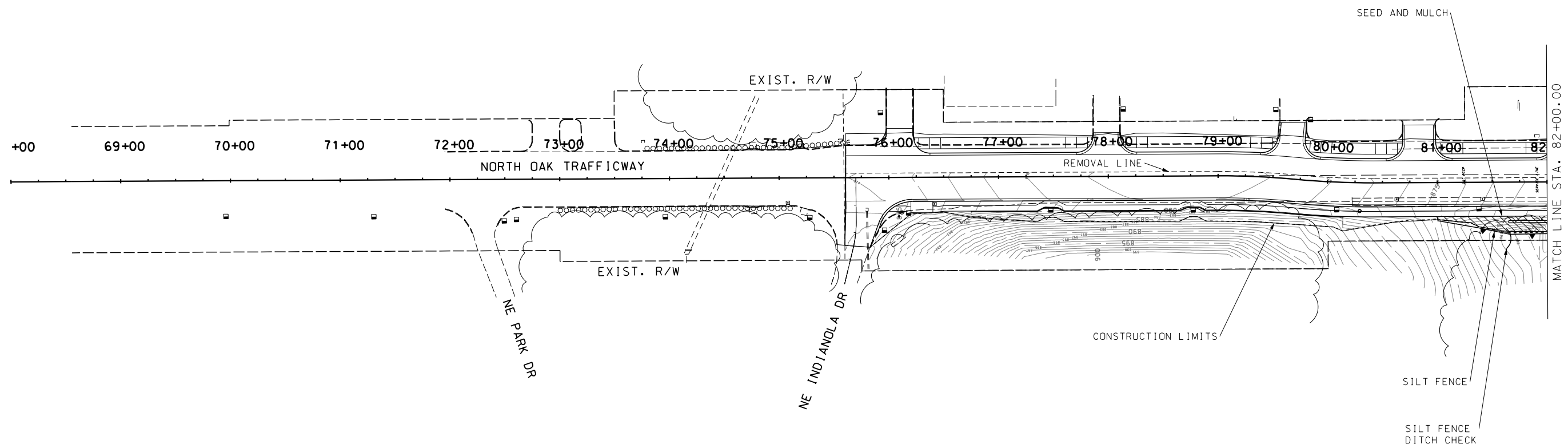
BRIDGE NO.

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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Mo.

EROSION CONTROL PHASE 1
NORTH OAK TRAFFICWAY
STA. 68+00 TO STA. 82+00

43

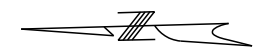


 INLET SEDIMENT PROTECTION

INLET SEDIMENT PROTECTION

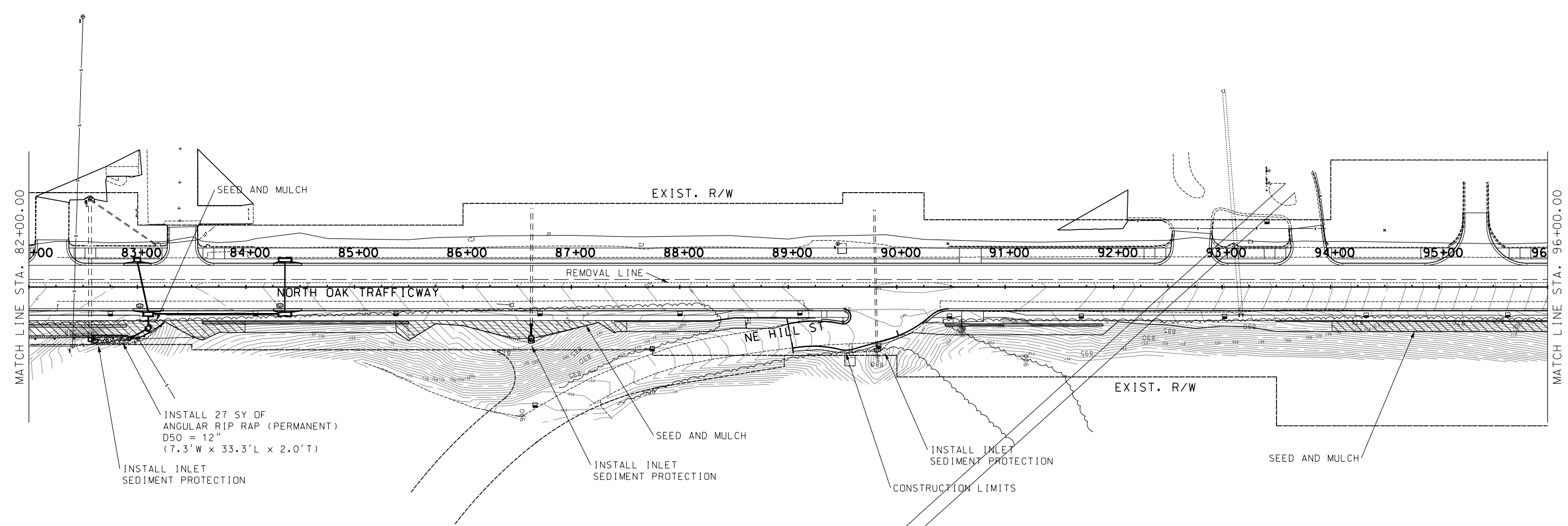
SILT FENCE

SEED AND MULCH



SCALE





INSTALL 27 SY OF
ANGULAR RIP RAP (PERMANENT)
D50 = 12"
(7.3'W x 33.3'L x 2.0'T)

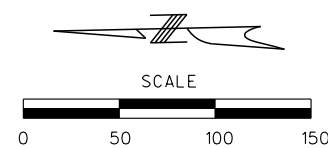
INSTALL INLET
SEDIMENT PROTECTION

INSTALL INLET
SEDIMENT PROTECTION

INSTALL INLET
SEDIMENT PROTECTION

TEMPORARY EROSION CONTROL LEGEND

-  INLET SEDIMENT PROTECTION
-  SILT FENCE
-  SEED AND MULCH
-  ANGULAR RIP RAP



STATE OF MISSOURI

A

NUGENT

NUMBER

E-2002024022

REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN REVIEWED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

ROUTE
AA

DISTRICT
KC

STATE
MO

SHEET NO.

COUNTY
JACKSON

JOB NO.
J4S2029B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

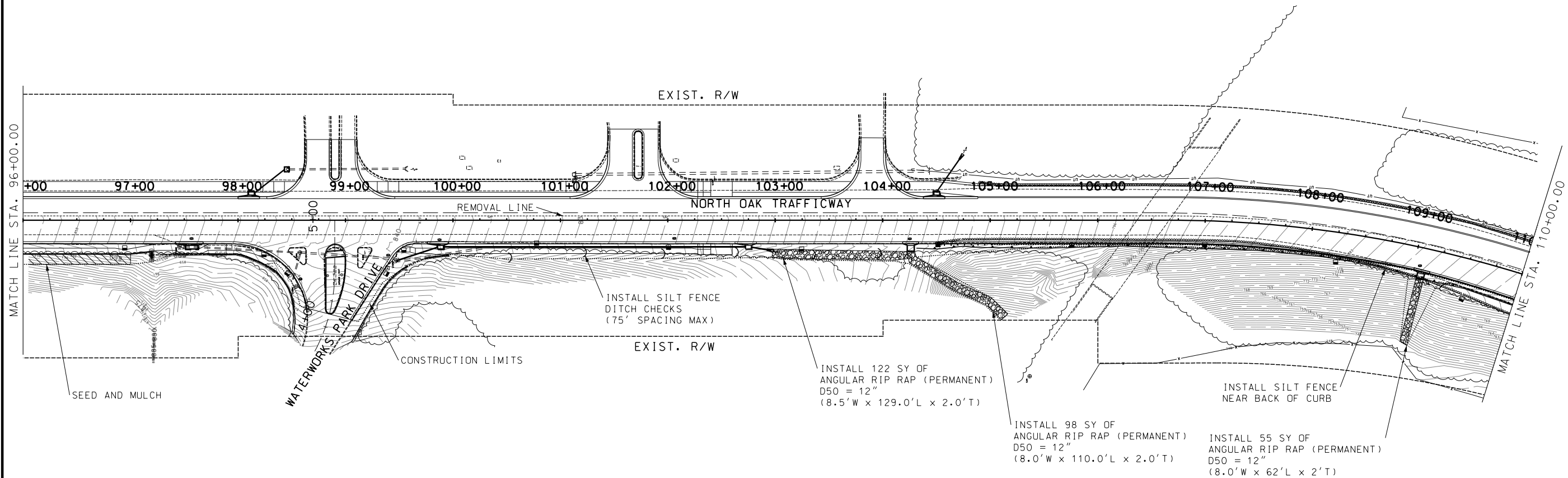
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

EROSION CONTROL PHASE 1
NORTH OAK TRAFFICWAY
STA. 82+00 TO STA. 96+00

44

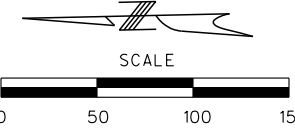
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044_18-104_EC_150_002.dgn 9:27:11 AM 10/19/2018



TEMPORARY EROSION CONTROL LEGEND

-  INLET SEDIMENT PROTECTION
-  SILT FENCE
-  SEED AND MULCH
-  ANGULAR RIP RAP



STATE OF MISSOURI
A
TAXIN
NUGENT
NUMBER
E-2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN EROSION
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

DATE

APPD. BY

NO.

TREKK
DESIGN GROUP, LLC

1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

CHECKED BY: TAN

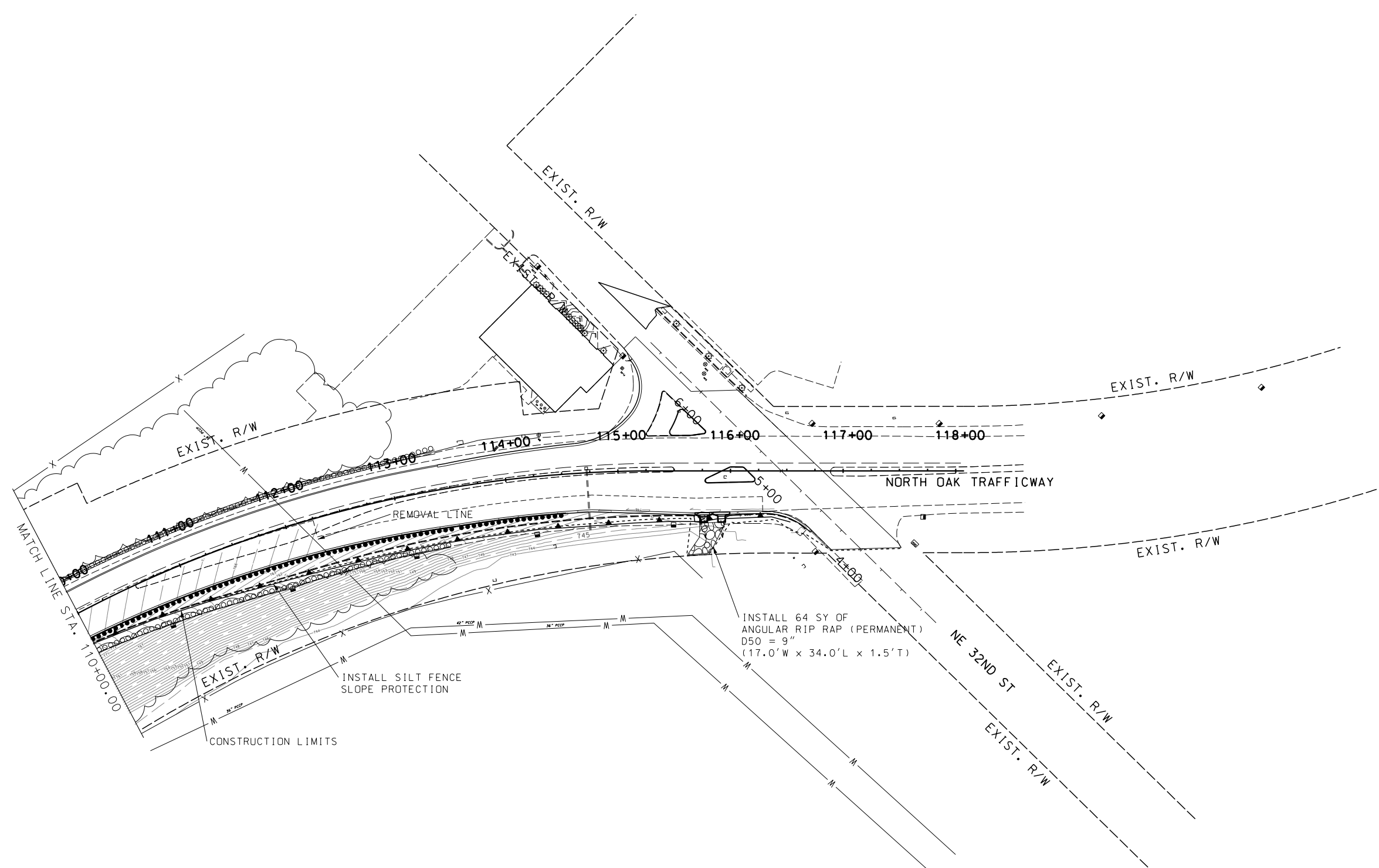
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

EROSION CONTROL PHASE 1
NORTH OAK TRAFFICWAY
STA. 96+00 TO STA. 110+00

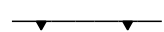
SHEET NO.
45 OF 101

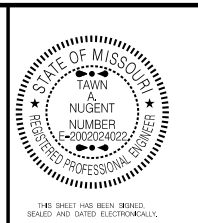
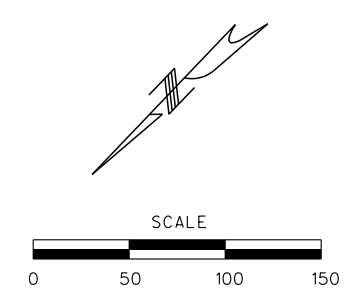
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



TEMPORARY EROSION CONTROL LEGEND

-  INLET SEDIMENT PROTECTION
-  SILT FENCE
-  ANGULAR RIP RAP



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

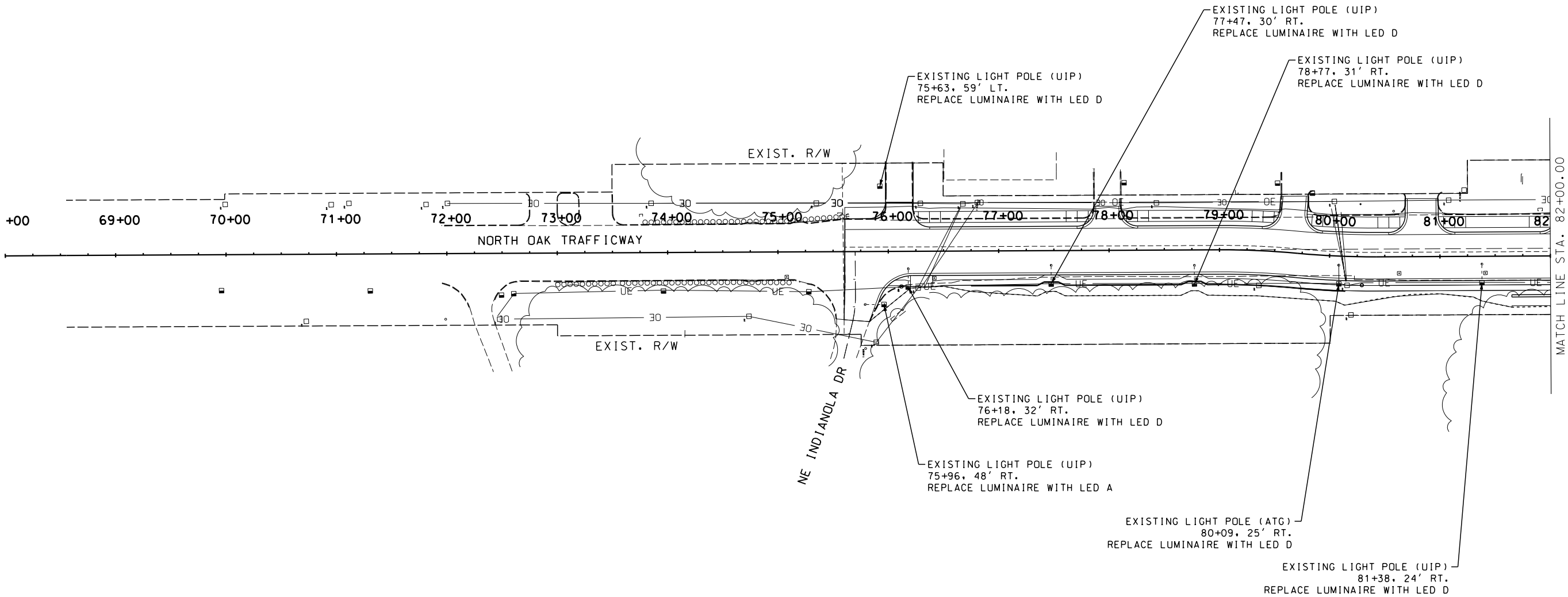
MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

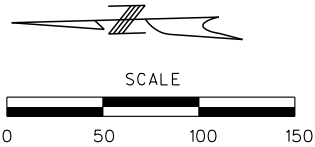
EROSION CONTROL PHASE 1
NORTH OAK TRAFFICWAY
STA. 110+00 TO STA. 118+00

SHEET NO.
46 OF 101

GENERAL NOTES:
ATG = ADJUST TO GRADE
REL = RELOCATE
UIP = USE IN PLACE



NOTE
LED D LUMINAIRES SHALL BE ONE OF THE FOLLOWING MODELS:
AMERICAN ELECTRIC MODEL ATB2-80BLEDE85-MVOLT-R2
GE EVOLVE MODEL ERL2-0-27-C3-40-D-GRAY-A
PHILIPS MODEL RFL-241W112LED4K-G2-R2M-UNV-DMG-API-PH9-RC07-SP2-GY3



DATE PREPARED
10/19/2018

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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
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CHECKED BY: TAN

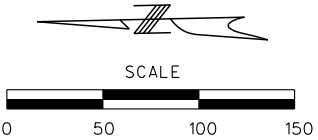
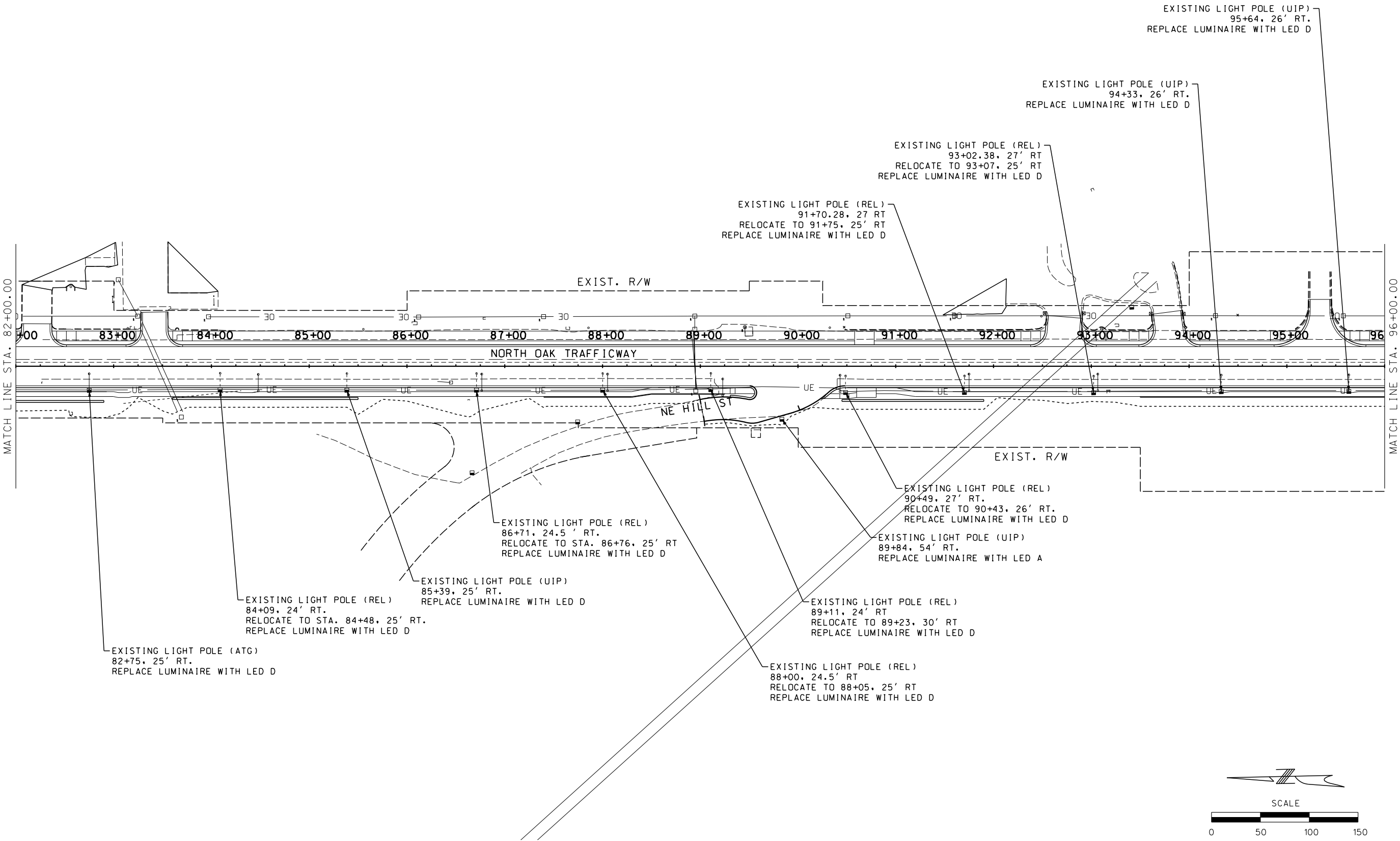
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

LIGHTING
NORTH OAK TRAFFICWAY
STA. 68+00 TO STA. 82+00

SHEET NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

GENERAL NOTES:
ATG = ADJUST TO GRADE
REL = RELOCATE
UIP = USE IN PLACE



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

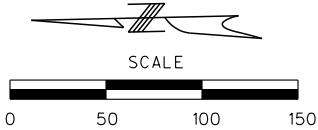
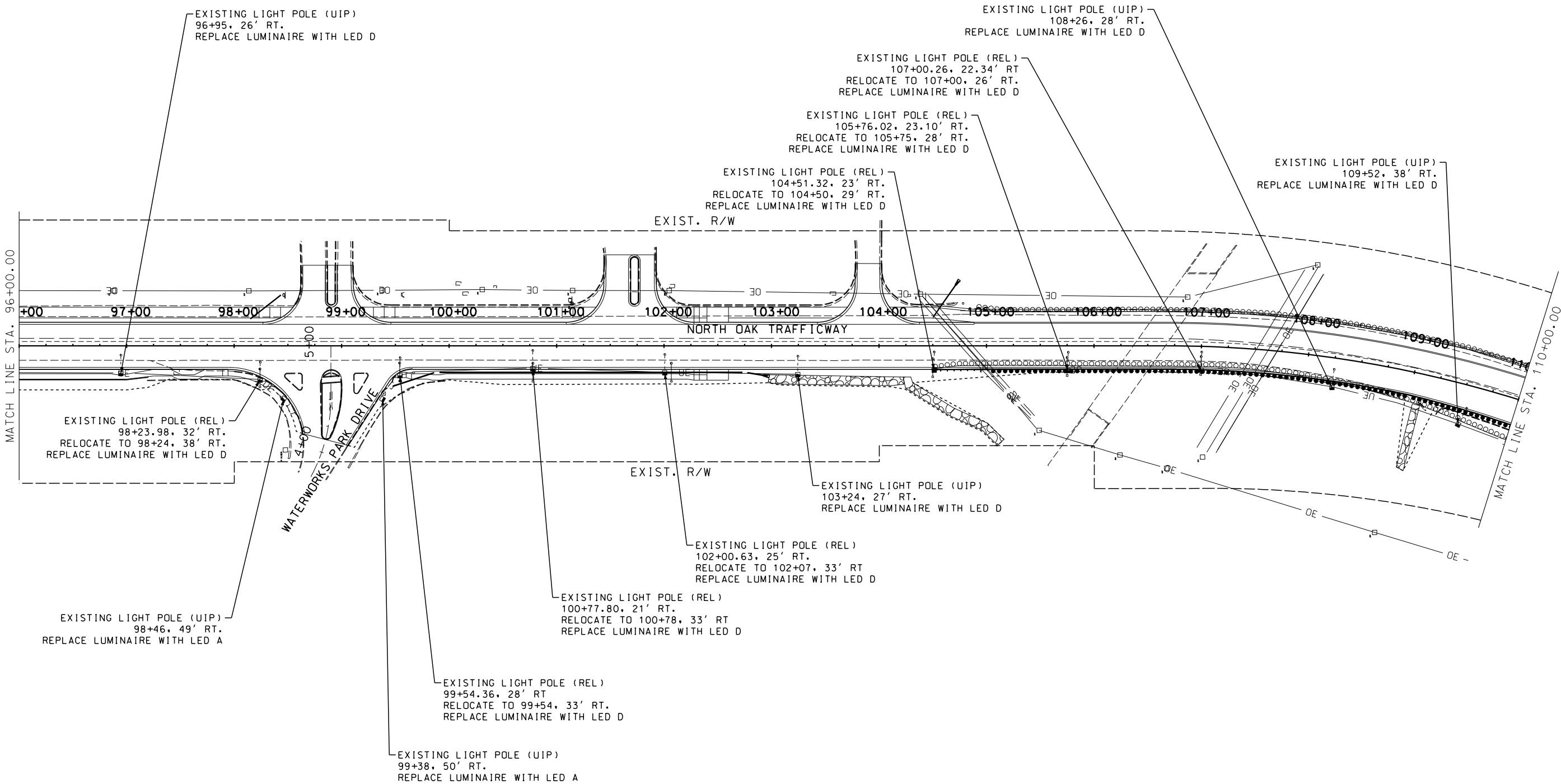
LIGHTING
NORTH OAK TRAFFICWAY
STA. 82+00 TO STA. 96+00

SHEET NO.

48 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

GENERAL NOTES:
ATG = ADJUST TO GRADE
REL = RELOCATE
UIP = USE IN PLACE



STATE OF MISSOURI
TAXIN
A
NUGENT
NUMBER
E-2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN E-SEAL
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

REVISIONS

DATE

APPD. BY

NO.

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
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CHECKED BY: TAN

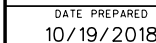
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

LIGHTING
NORTH OAK TRAFFICWAY
STA. 96+00 TO STA. 110+00

SHEET NO.
49 OF 101

049_18-104_LT_150_003.dgn 9:27:15 AM 10/19/2018

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

[illegible]

TREK
DESIGN GROUP.

MO St. Cert. of Authority: 2002

DRAWN BY: WDH

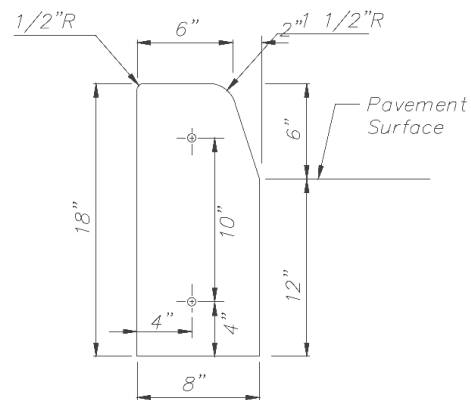
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CHECKED BY: TAN

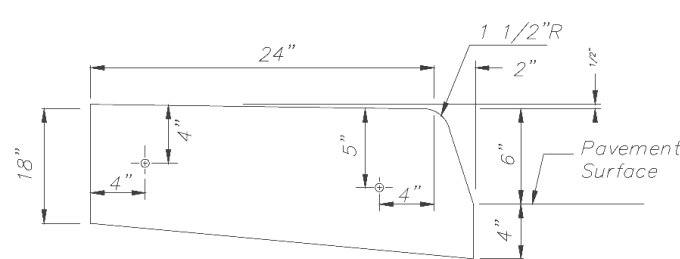
LIGHTING
NORTH OAK TRAFFICWAY
STA. 110+00 TO STA. 118+07.41

SHEET NO.

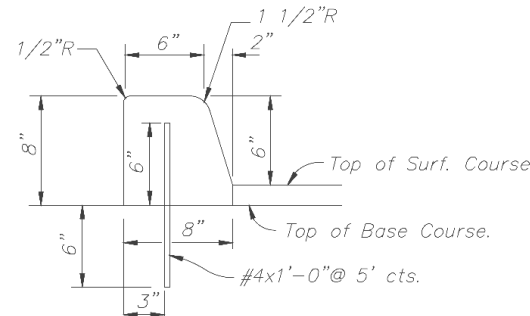
50 OF 10



STRAIGHT CURB
(TYPE C-1)

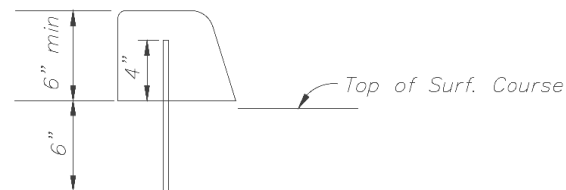


INTEGRAL CURB & SIDEWALK
(TYPE C-S)

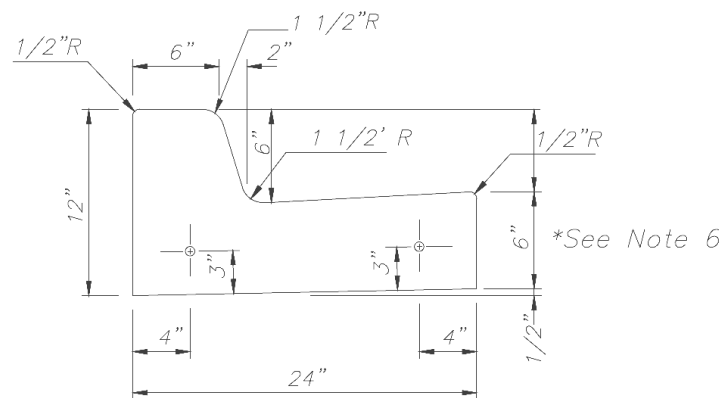


DOWELLED CURB
(TYPE DC)

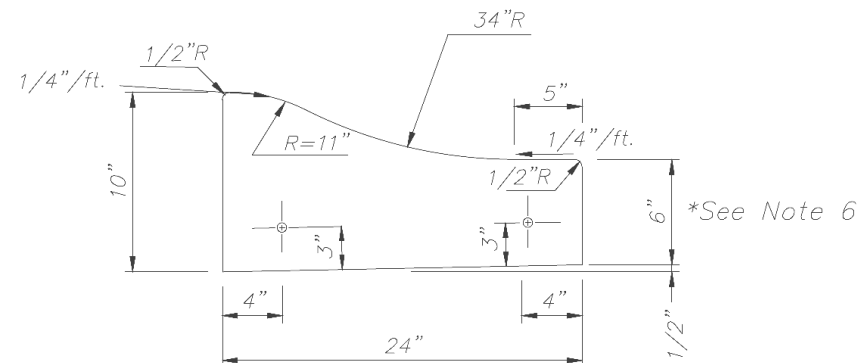
1. 1/2" Expansion Joints With 2' dowels shall be placed at radius points and at 150' intervals. These dowels shall be greased and wrapped on one end with expansion tubes.
2. 1" deep Contraction Joints shall be installed at approximately 10' intervals. These joints shall pass across the entire curb section.
3. Fix dowels with bar supports.
4. Concrete shall conform to Section 2200 unless otherwise specified in plans project manual. For CBD of K.C.MO. See section 2300 of standard specifications and design criteria.
5. Use 5/8" diameter by smooth dowels at locations shown on each typical section.
6. Depth of gutter shall be a minimum of 8" thru the handicap access ramp.
7. Only White curing membranes shall be permitted and shall conform to standard specification section 2200.



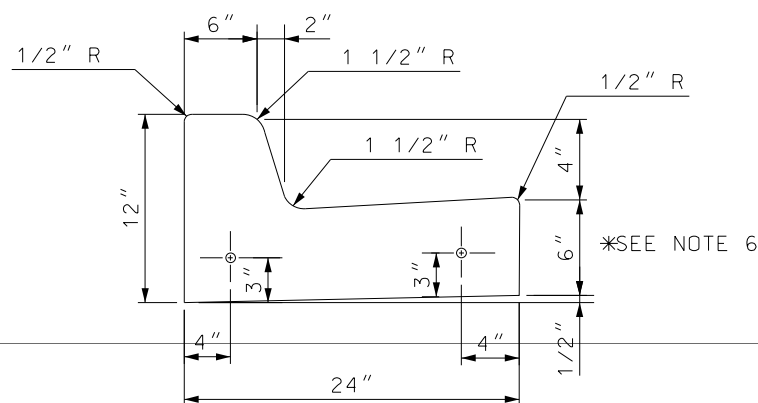
DOWELLED CURB
(TYPE DC-2)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



ROLL BACK CURB & GUTTER
(TYPE CG-2)



TYPE CG-1 MODIFIED

	Director of Public Works _____ Date _____
	Entry No. _____
	Kansas City, Missouri Public Works Department Engineering Division
CURBS	STANDARD DRAWING NUMBER C



DATE PREPARED
10/19/2018

NO.	APPD.	BY	DATE	REVISIONS



1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ NO: 89008573

SCALE:

DRAWN BY: WRH

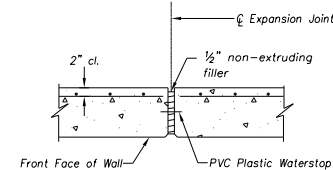
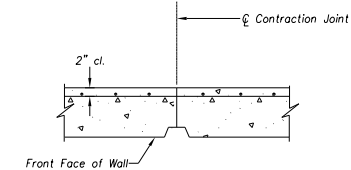
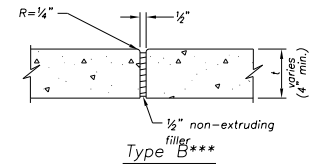
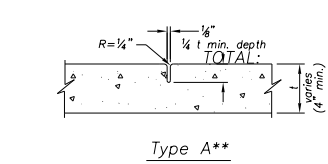
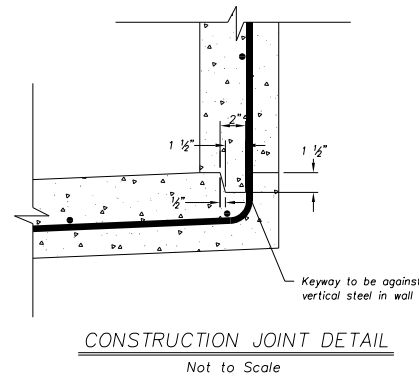
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS
CURB DETAILS

SHEET NO.

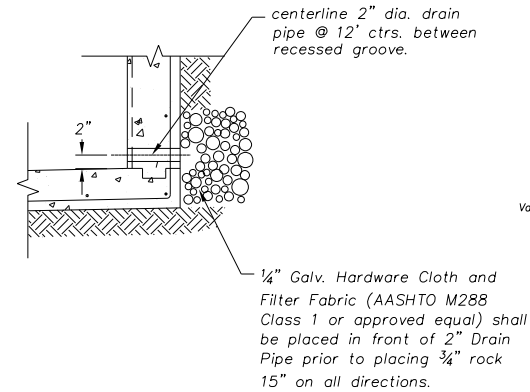
51 OF 101



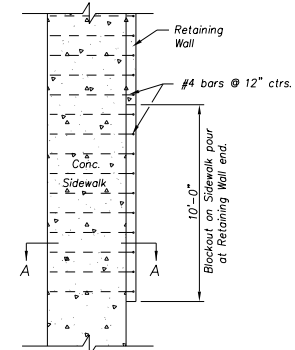
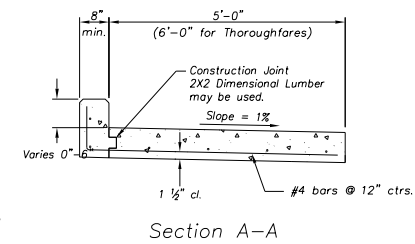
Scale: $3/4"=1'-0"$
(Rev. Jan. 2004)

12. Sidewalk and retaining wall expansion joints shall have $\frac{5}{8}$ " smooth dowel assemblies with greased caps @ 12" ctrs. max.

22. All filter fabric used for pipe underdrain construction shall meet the requirements of AASHTO M288 Class A or approved equal.



Scale: $3/4"=1'-0"$



Not to Scale

INTEGRAL SIDEWALK AND RETAINING WALL				
STA. TO STA.	SIDE	LOCATION	HEIGHT FEET	LENGTH LIN. FEET
76+75.00 TO 80+15.00	RT	WALL A	VARIES	340
87+40.00 TO 89+25.00	RT	WALL D	VARIES	185
93+50.00 TO 97+20.00	RT	WALL F	VARIES	370

DATE PREPARED
10/19/2018

REVISIONS

DATE _____

NO.	APPD. BY
-----	----------

TREKK
DESIGN GROUP, LLC

**1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675**

10 St. Cert. of Authority: 20020103

PROJ NO: 89008573

DRAWN BY: WRH

CHECKED BY: TAN

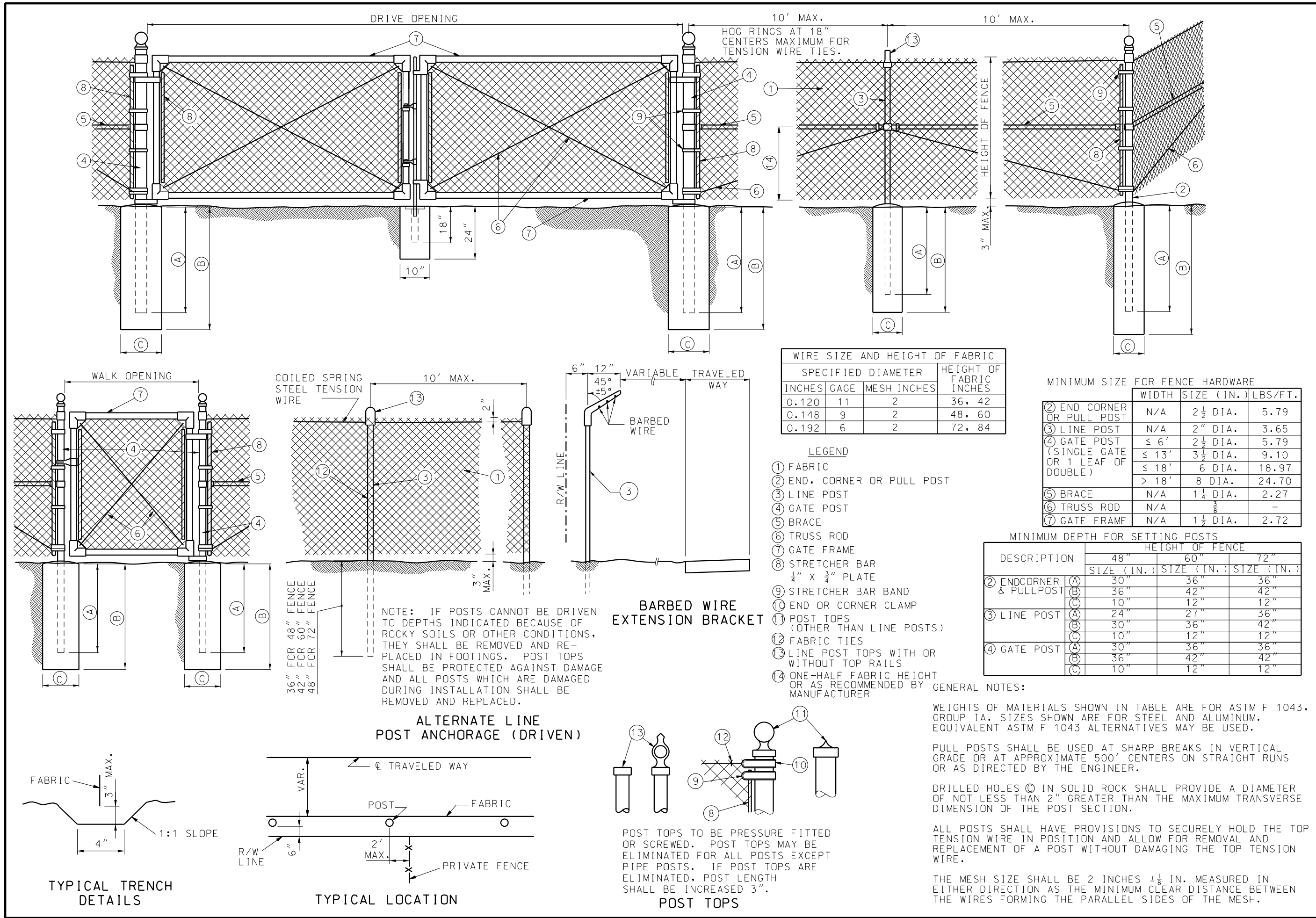
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS

INTEGRAL SIDEWALK AND RETAINING WALL DETAIL

SHEET NO.

52 OF 101



STATE OF MISSOURI
TOWN
NUGENT
NUMBER
200204022
REGISTERED PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN REVIEWED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/19/2018

NO. APPD. BY DATE

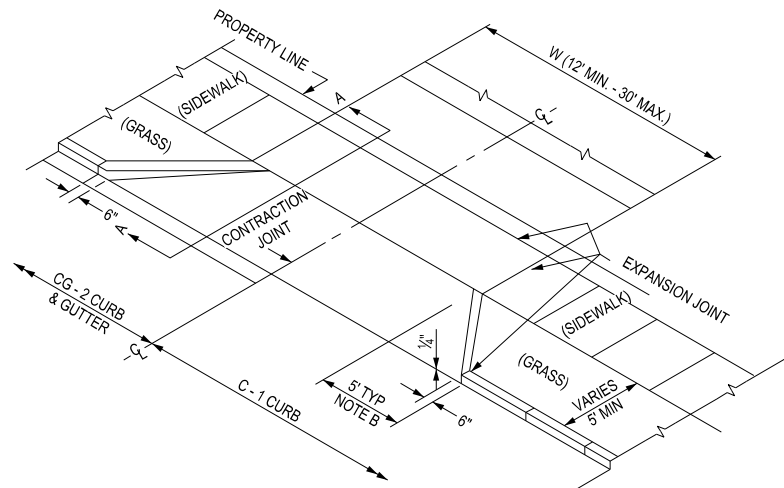
REVISIONS

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675
MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

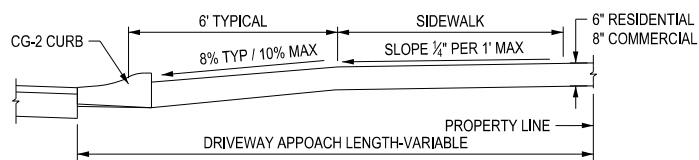
NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS
CHAIN LINK FENCE DETAIL

SHEET NO.
53 OF 101

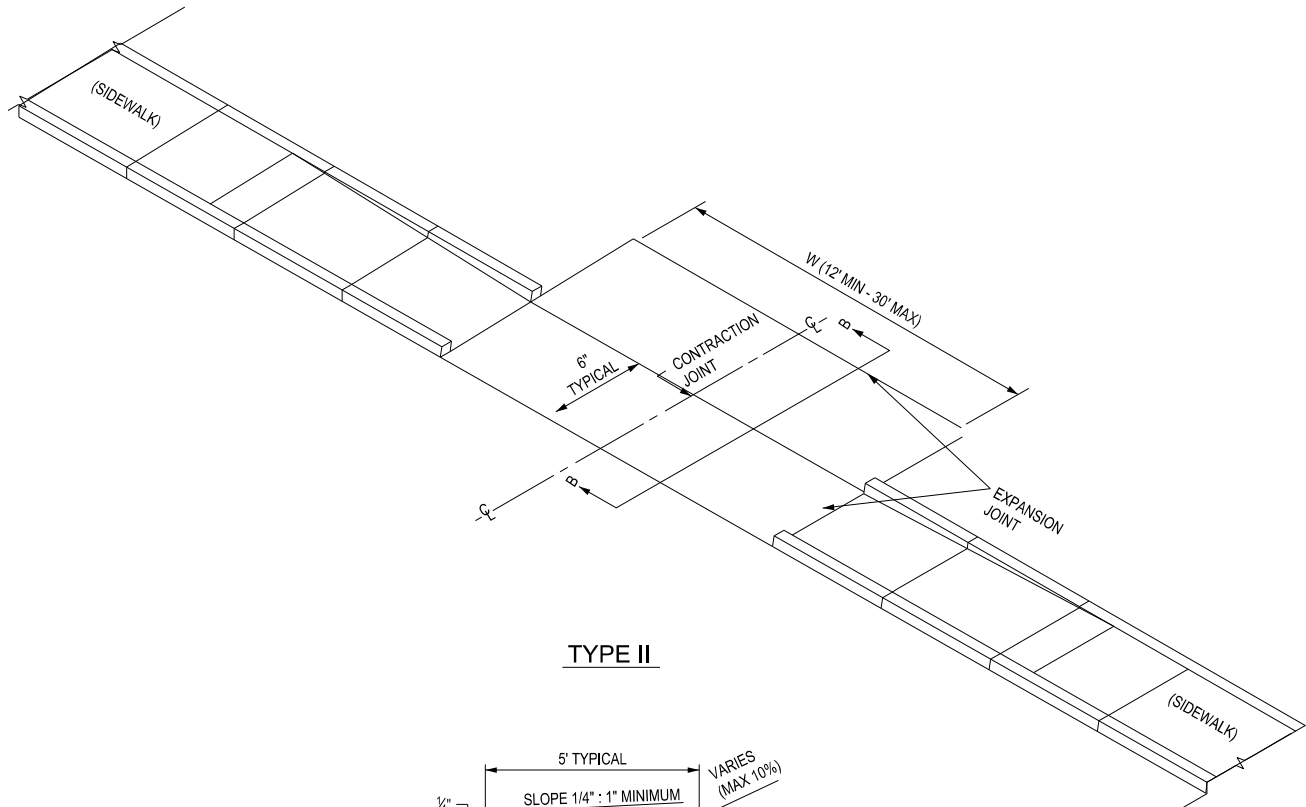


TYPE I

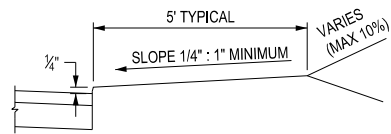


SECTION A-A (CG-2 CURB SHOWN)

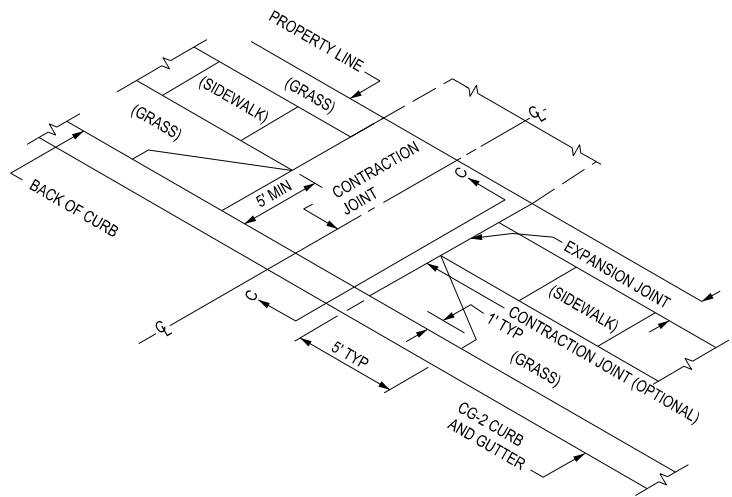
- A. TYPE I LAYOUT MAY BE ADAPTED TO CG-2 CURB.
- B. WHERE DRIVE WIDTH IS 14 FEET OR LESS FLARES SHALL BE 7.5 FEET WIDE AT CURB AND SHALL EXTEND AT A 45° ANGLE THROUGH THE SIDEWALK.



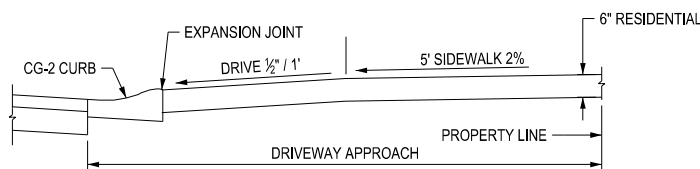
TYPE II



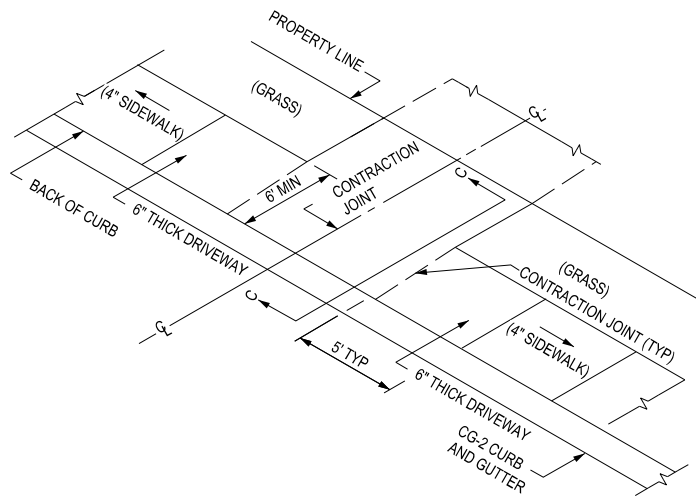
SECTION B-B (CG-2 CURB)



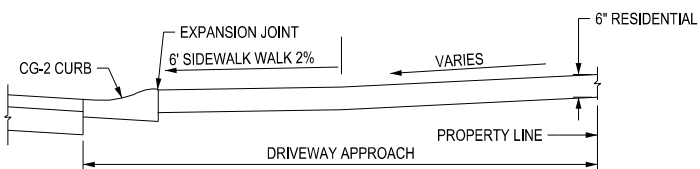
TYPE III DRIVEWAY ENTRANCE (6" CONCRETE) - (WITH GREEN SPACE)



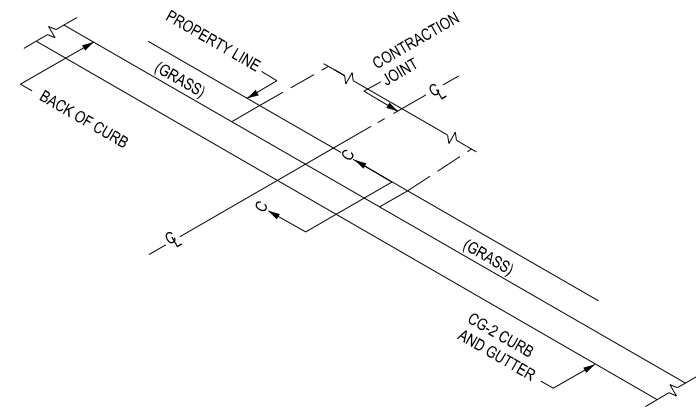
SECTION C-C (CG-2 CURB)



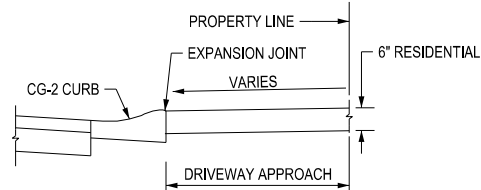
TYPE III DRIVEWAY ENTRANCE (6" CONCRETE) - (SIDEWALK ADJACENT TO CURB)



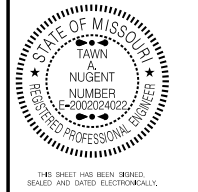
SECTION C-C (CG-2 CURB)



TYPE IV DRIVEWAY ENTRANCE (6" CONCRETE)



SECTION C-C (CG-2 CURB)



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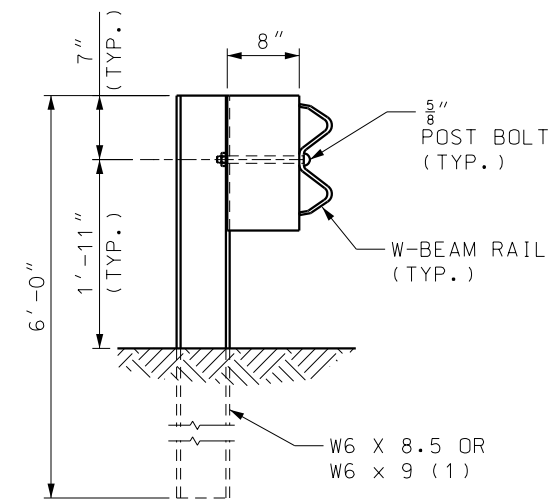
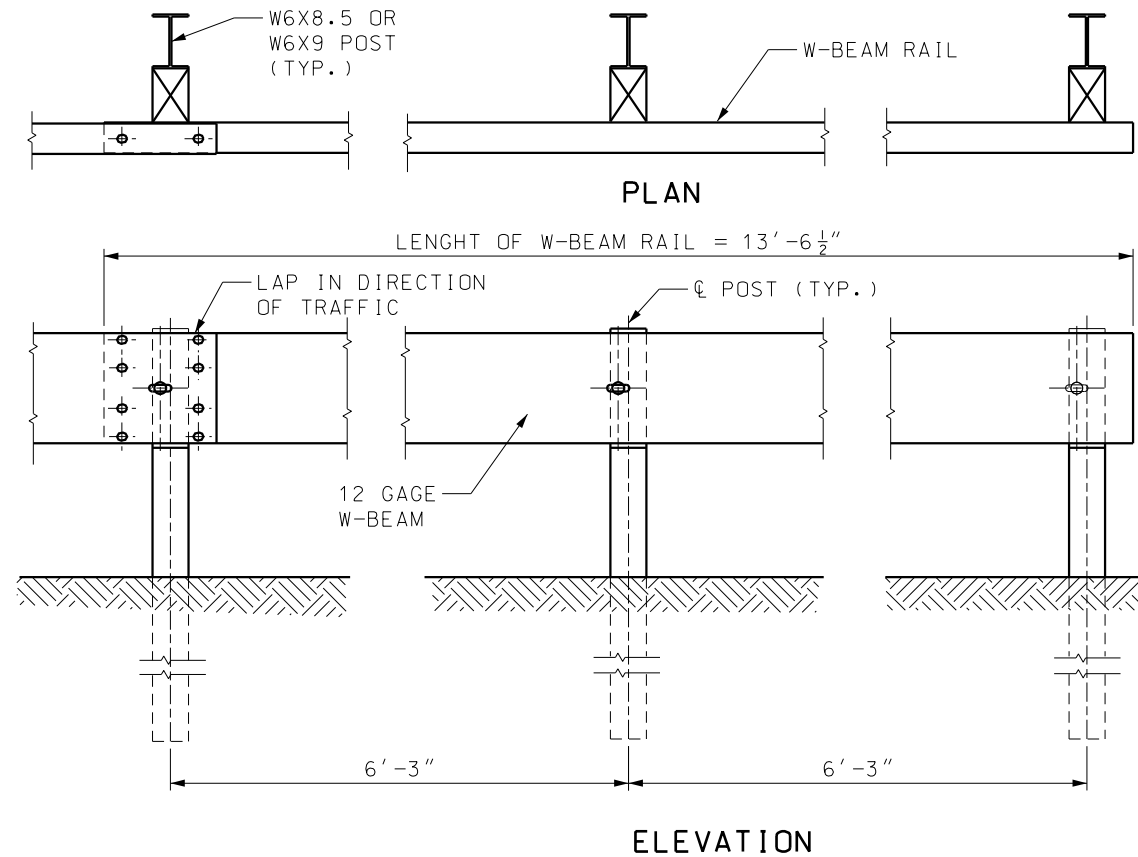
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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

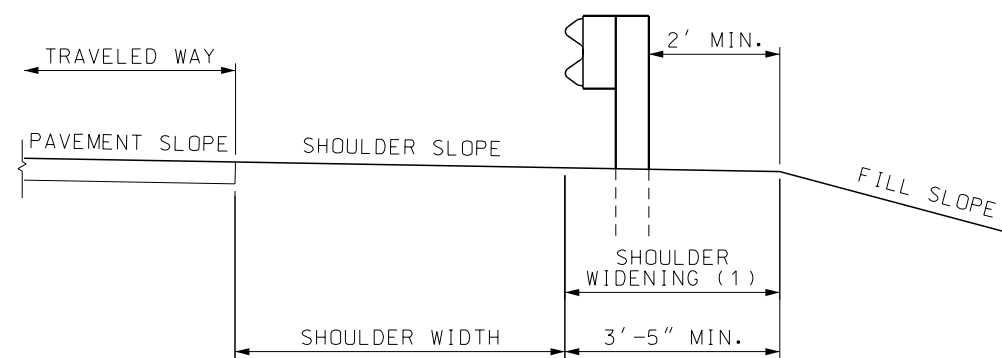
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS
DRIVEWAY ENTRANCE DETAILS

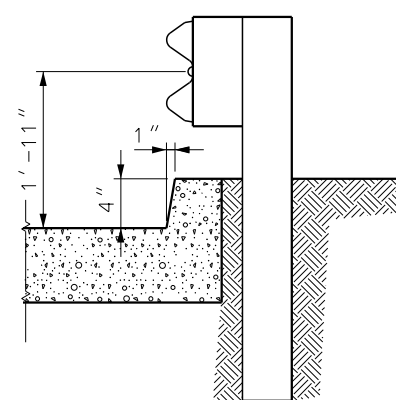
SHEET NO.
54 OF 101



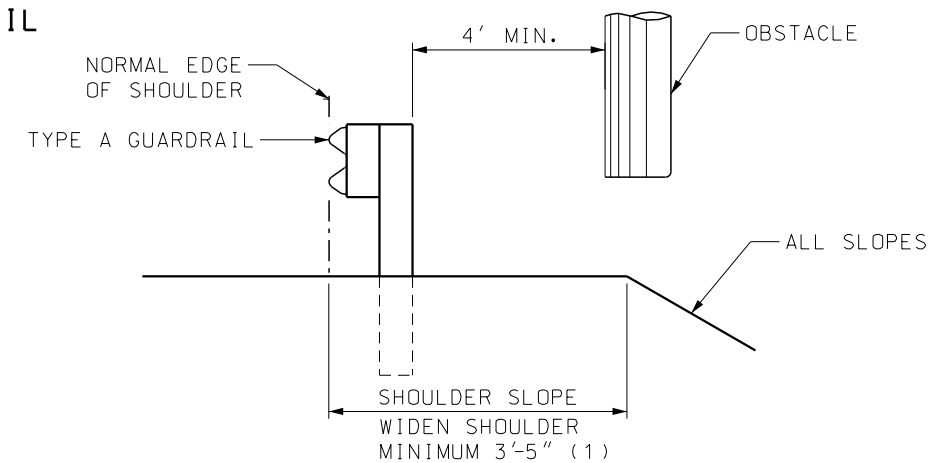
STEEL POST & WOOD OR
PLASTIC BLOCK



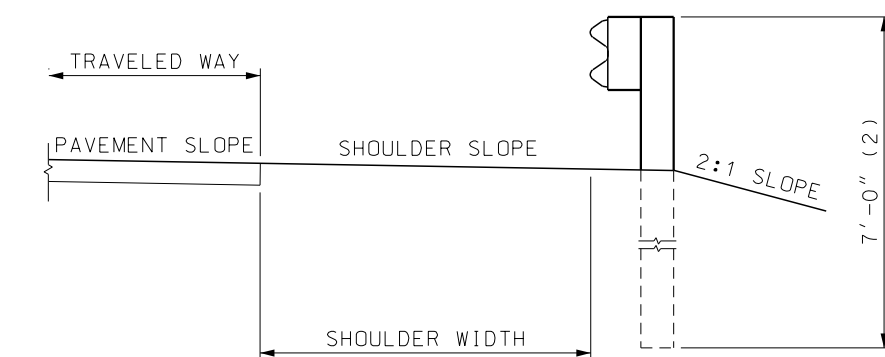
TYPICAL SECTION



GUARDRAIL AT CURBS (3)



LOCATION OTHER THAN & MEDIAN
LATERAL PLACEMENT OF GUARDRAIL
FOR SHOULDER INSTALLATION



ALTERNATE TYPICAL SECTION AT SLOPE BREAKPOINT

- (1) SHOULDER WIDENING SHALL CONSIST OF EMBANKMENT MATERIAL COMPACTED IN ACCORDANCE WITH SEC 203.4 OF THE STANDARD SPECIFICATIONS.
- (2) POST SHALL BE SPACED AT 3'-1 1/2" ON CENTER.
- (3) WHEN GUARDRAIL IS CONSTRUCTED OVER CURBS, THE CURBS SHALL BE CONSTRUCTED AS SHOWN.



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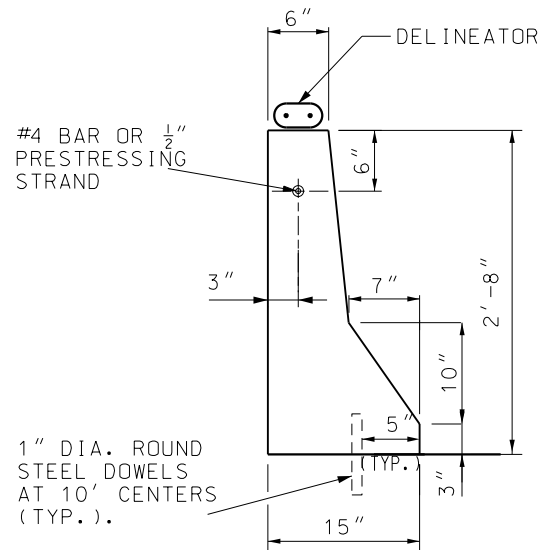
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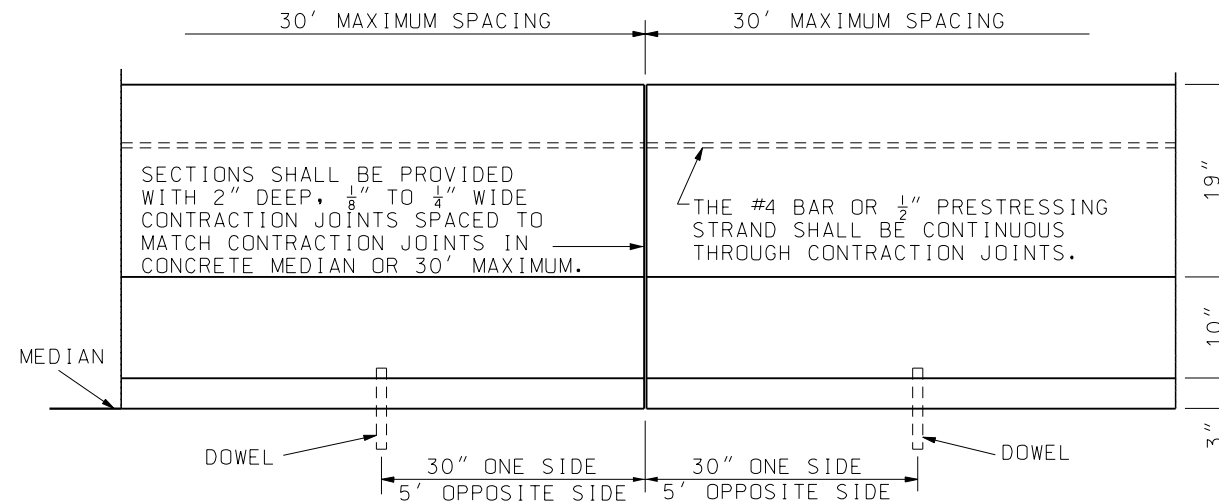
STANDARD DETAILS
TYPE A GUARDRAIL DETAIL

SHEET NO.

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TYPICAL VIEW
TYPE B - ONE TRAFFIC FACE

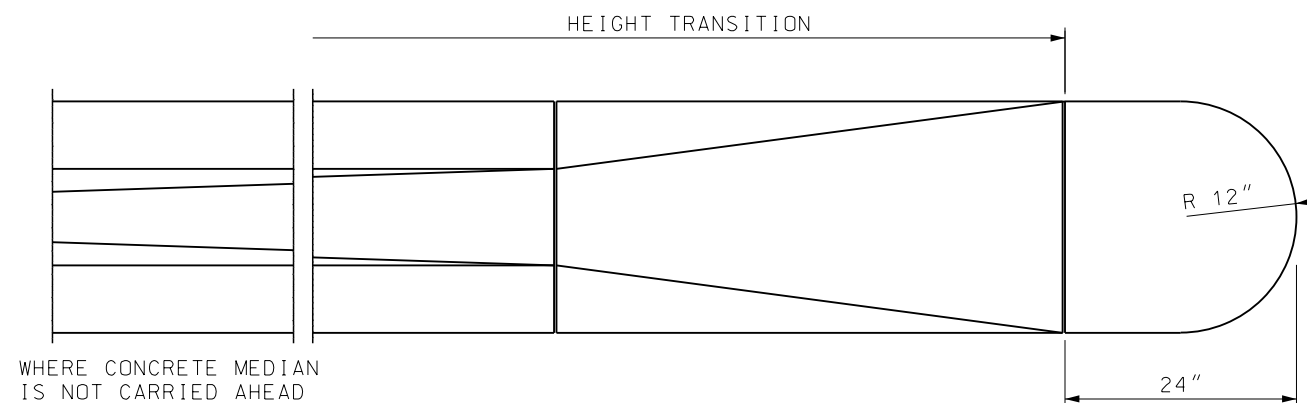


GENERAL NOTES:

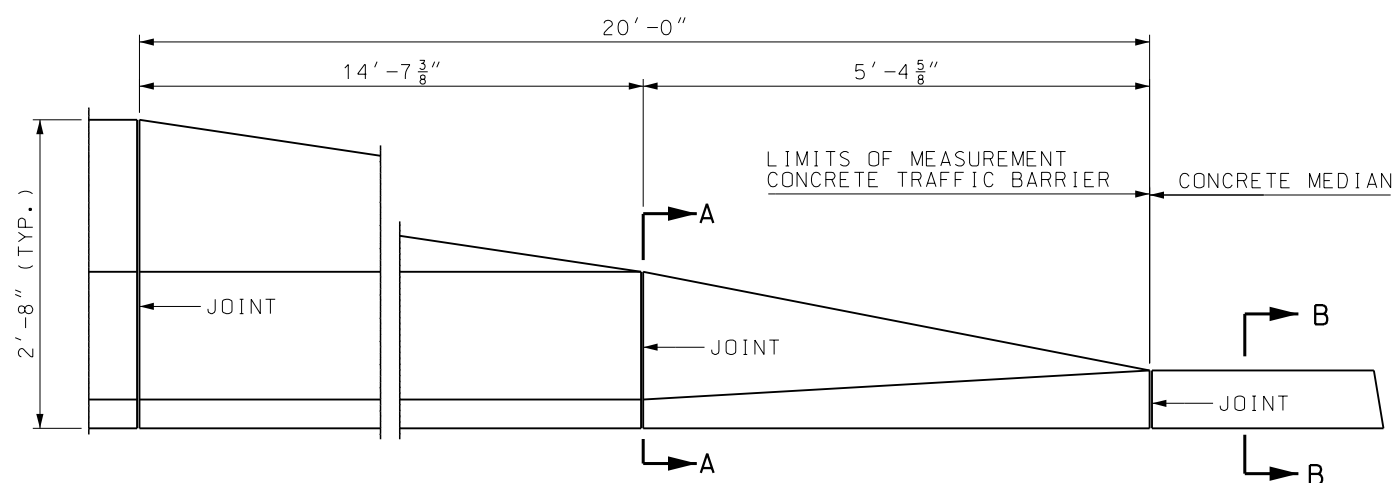
ALL TOP AND END EDGES SHALL BE CHAMFERED $\frac{3}{4}$ INCH.

EXPANSION JOINTS SHALL BE PROVIDED IN THE BARRIER TO MATCH EXPANSION JOINTS IN PAVEMENT.

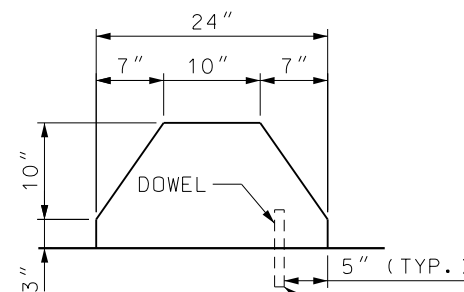
FOR CONCRETE TRAFFIC BARRIER DELINEATION DETAILS SEE MODOT STD PLAN 903.03.



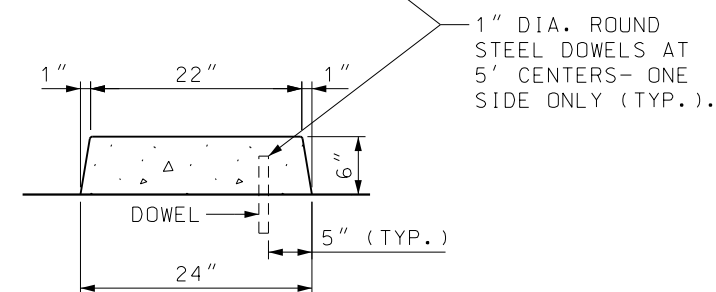
PLAN



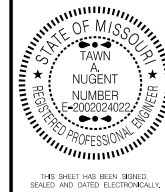
ELEVATION
BARRIER HEIGHT TRANSITION



SECTION A-A



SECTION B-B



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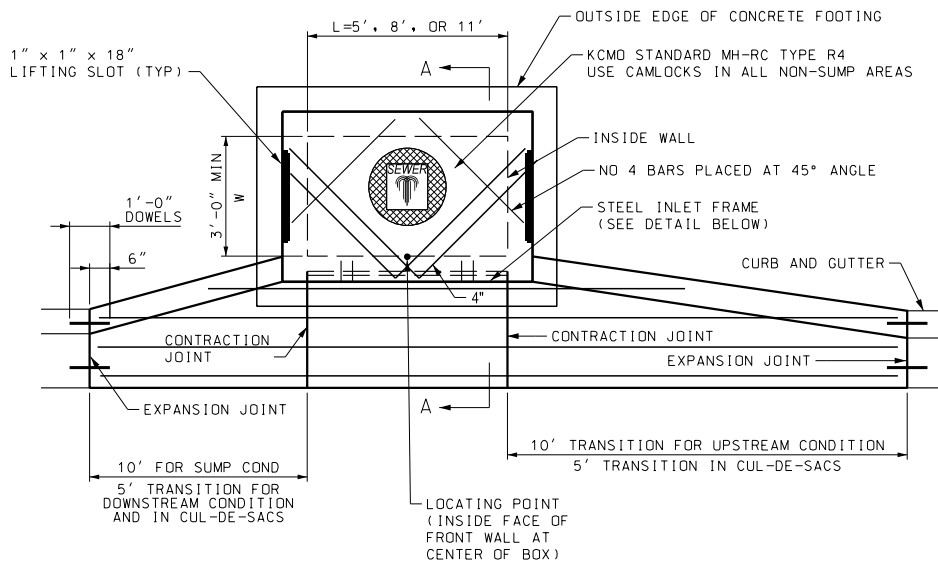
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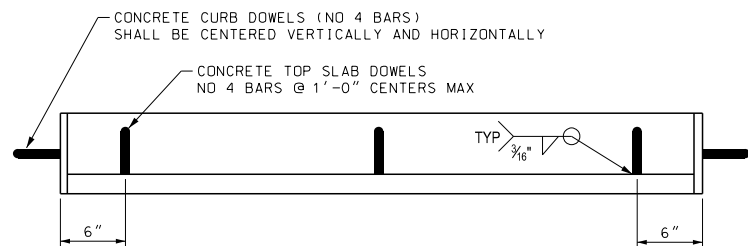
STANDARD DETAILS
TYPE B PERMANENT CONCRETE
TRAFFIC BARRIER DETAIL

SHEET NO.

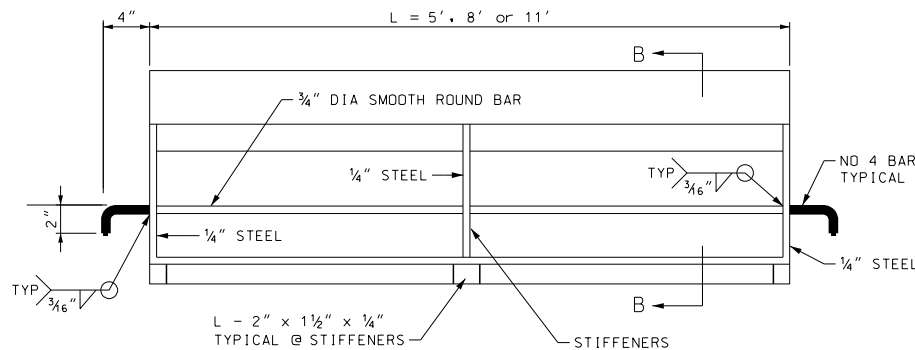
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PLAN



TOP VIEW

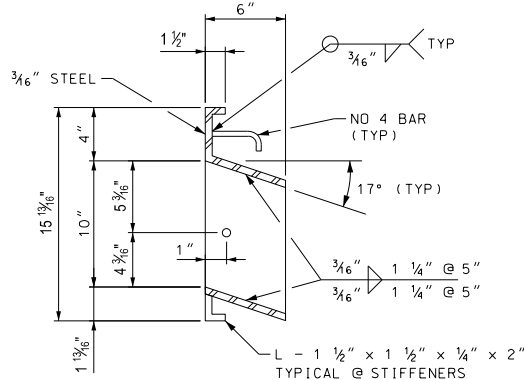


FRONT VIEW

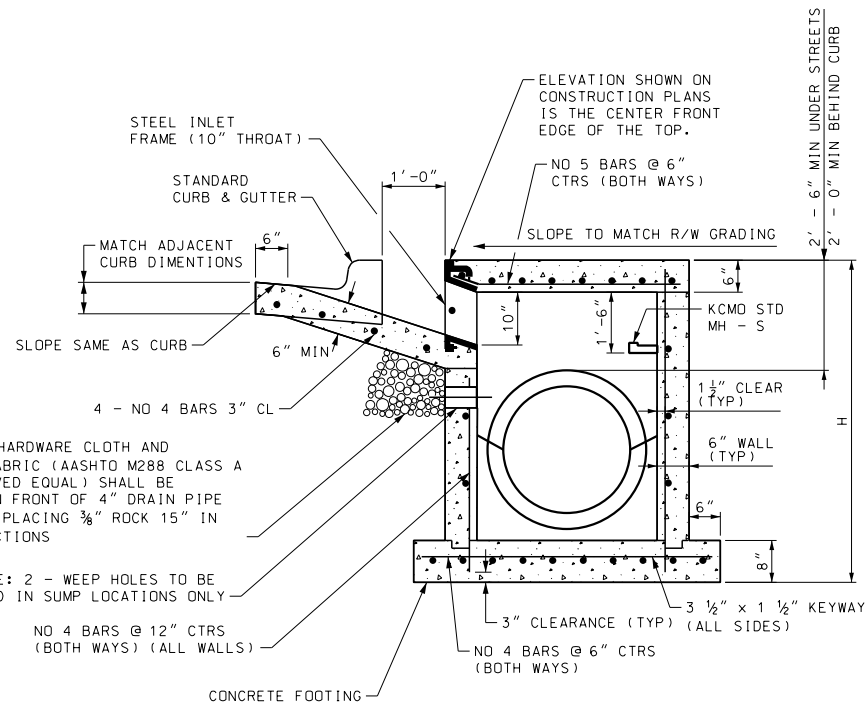
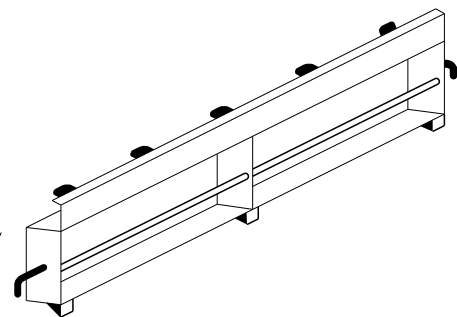
STEEL INLET FRAME NOTES

- ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
- ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
- THE ENTIRE FRAME SHALL BE HOT DIP ZINC COATED IN ACCORDANCE WITH ASTM A - 123.
- STEEL INLET FRAME STIFFENERS SHALL BE PLACED AT EQUAL INTERVALS NOT TO EXCEED 4' - 0".

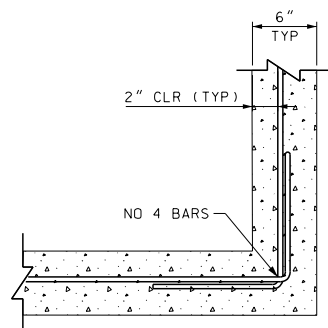
- ALL WORK SHALL MEET THE REQUIREMENTS OF APWA-KCMO 2600.
- INLET LID AND THROAT SHALL CONFORM TO THE STREET GRADE, EXCEPT SUMP INLETS WHICH SHALL BE LEVEL.
- THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
- LOCATE KCMO STANDARD MH-RC RING AND COVER OVER OUTLET. ADD A SECOND RING AND COVER OVER INLET WHEN L = 11'.
- STEPS SHALL BE SPACED AT 1' - 4" O.C. VERTICALLY. THE DISTANCE FROM THE LAST STEP TO THE TOP OF CONCRETE INVERT SHOULD BE A MAXIMUM OF 24".
- BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
- EXPANSION JOINT MATERIAL SHALL COMPLY WITH APWA - KCMO 2209.
- THE TOPS MAY BE PRECAST. WHEN POURED IN PLACE, THE WALL STEEL SHALL BE LEFT EXPOSED TO A HEIGHT 2" BELOW THE FINISH TOP ELEVATION.
- BOXOUTS SHALL NOT PROJECT THROUGH THE STRUCTURE CORNERS. REINFORCING SHALL BE BENT AROUND PIPE OPENINGS WHEN POSSIBLE. WHEN REINFORCING IS CUT, A DIAGONAL BAR SHALL BE USED TO TIE ALL CUT ENDS TOGETHER.
- FLOOR OF INLET SHALL BE SHAPED WITH INVERT TO PROVIDE SMOOTH FLOW.
- REINFORCING STEEL SHALL BE ASTM A615 GRADE 40 NEW BILLET, AS PER ASTM A615, AND SHALL BE BENT COLD.
- ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. A CLEARANCE OF 2" SHALL BE PROVIDED THROUGHOUT UNLESS NOTED. TOLERANCE OF +/- 3/8" SHALL BE PERMITTED.
- ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
- THE BOTTOM SLAP SHALL BE AT LEAST 24 HRS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
- PRECAST INLETS SHALL BE SET ON FOUR 8" SOLID CONCRETE BLOCKS WITH ONE AT EACH CORNER, AND THE BASE AND INVERT SHALL BE POURED MONOLITHICALLY. THE VERTICAL REINFORCING SHALL BE AS PER CAST IN PLACE, EXCEPT THAT THE BARS SHALL NOT PROTRUDE THROUGH THE LID AND BASE.
- ALL CURB INLET TOPS ARE TO BE CONSTRUCTED AFTER FINAL CURB STRING LINE HAS BEEN APPROVED BY THE ENGINEER AND PRIOR TO CURB CONSTRUCTION.
- PIPE CONNECTIONS TO PRECAST STRUCTURES SHALL HAVE A MINIMUM OF 6" OF CONCRETE AROUND THE ENTIRE PIPE WITHIN 2' OF THE STRUCTURE, UNLESS SEALED WITH APPROVED FLEXIBLE WATERPROOF GASKETS IN PRECAST OPENINGS. MINIMUM CLEARANCE BETWEEN PIPE BOXOUTS AND PRECAST RISER JOINTS IS 8" WITHOUT SPECIAL DESIGN.
- BACK FILL AROUND STRUCTURES SHALL COMPLY WITH APWA-KCMO 2604.3.D.
- THESE DRAWINGS ARE NOT DRAWN TO SCALE. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
- THE STRUCTURE ELEVATION SHOWN ON THE PLANS IS THE TOP SURFACE OVER THE LOCATING POINT.
- THE CURB INLET THROAT SHALL BE 2' WIDE AT THE EXPANSION JOINTS, REGARDLESS OF CURB TYPE.



SECTION B-B



SECTION A - A



WALL CORNER DETAIL



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1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

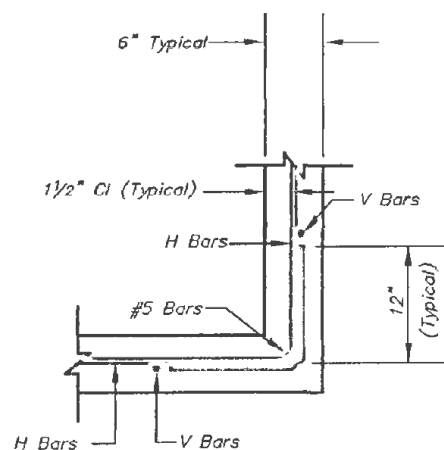
MO St. Cert. of Authority: 2002010300
PROJ NO: 89008573
SCALE:
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

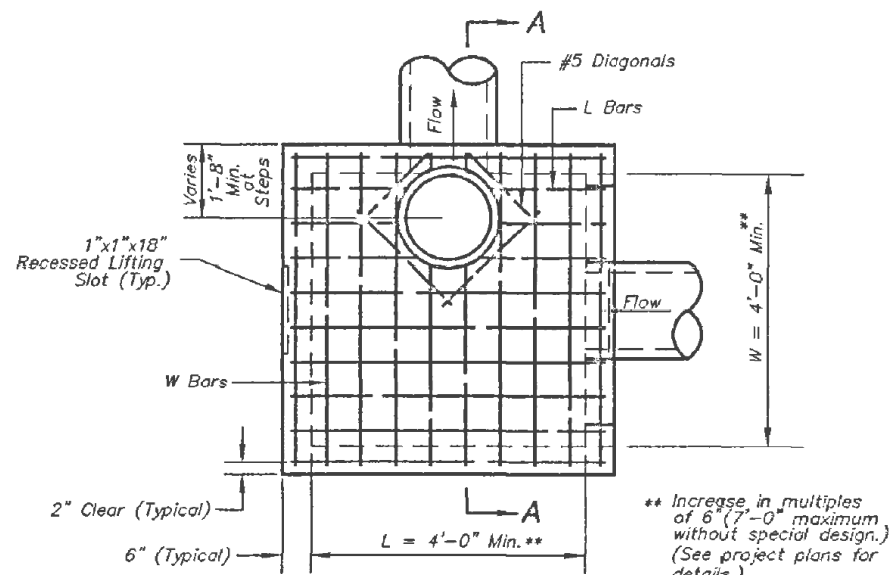
STANDARD DETAILS
CURB INLET

SHEET NO.

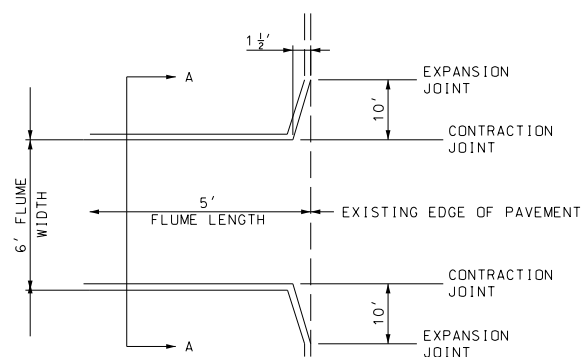
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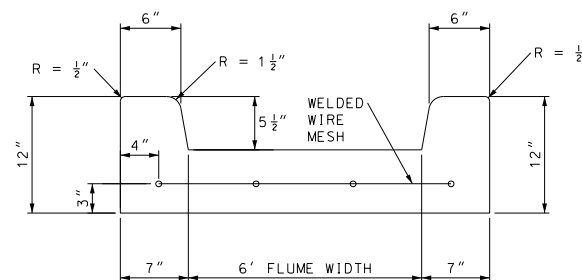
CORNER DETAIL



PLAN

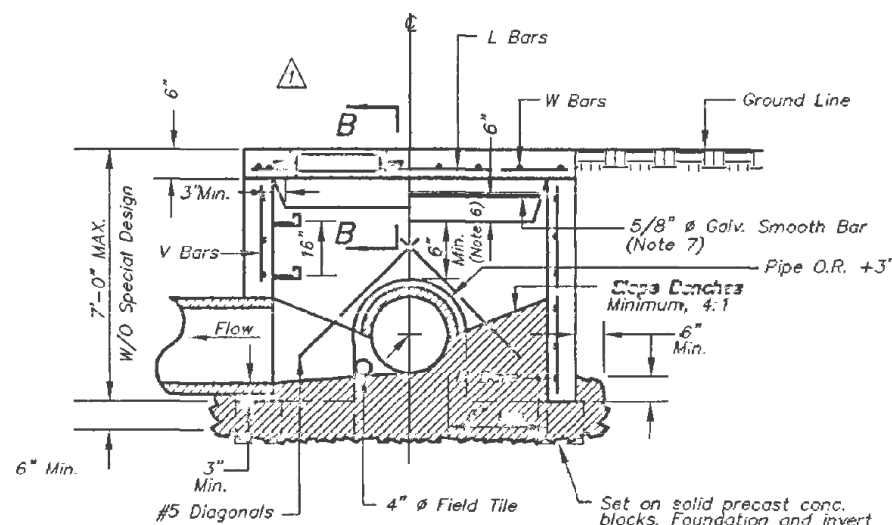


PLAN VIEW



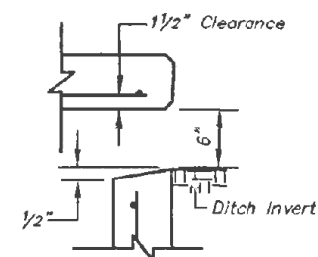
SECTION A-A

FLUME



SECTION A-A

(Precast - See Note 12)



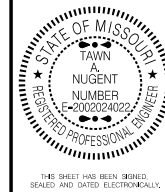
SECTION B-B

REINFORCING

BAR	SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

GENERAL NOTES:

1. Locate ring and cover over outlet.
2. All work and materials shall conform to APWA Sect. 2600.
3. Use 3/4 inch chamfer strip or 1/2 inch edger tool on all exposed concrete corners, including bottom of top slab at the openings.
4. Steps required at 16 inch O.C. when depth from top of casting to invert exceeds 4'.
5. Boxouts will not be allowed to project through the corners of the structure, and the minimum distance between box outs is 6" with 1 corner bar.
6. The minimum reinforcing shall be 1 H-bar over a cast-in place pipe and 2 H-bars over a precast boxout.
7. Limit opening height to 6" with 5/8 inch galvanized smooth bars extending to corner rebars.
8. Show field inlet orientation on plans plus number and size of openings. Locating point at center of structure.
9. O.R. = outside pipe radius
10. Use KCMO Standard MH-RC ring and cover Type 4.
11. 4 inch field tile or precast hole shall be located at entering pipes. These tiles or openings shall be capped with 1/4 inch galvanized wire mesh on the outside of the inlet and clear the invert and base concrete.
12. For cast-in-place structures, V bars shall extend 3" into base and clear soil by 3", add 2-#5 diagonal bars under pipes, and the invert may be poured separate (3" Min.).



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DESIGN GROUP, LLC
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Kansas City, MO 64131
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Fax (816) 874-4675

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PROJECT NO. 89008573
For the City of Kansas City,
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STANDARD DETAILS
FIELD INLET AND FLUME

SHEET NO.

58 OF 101

7/1/03 KCMO STD. DRAWING SUPPLEMENT

ADOPTED: DIRECTOR OF PUBLIC WORKS

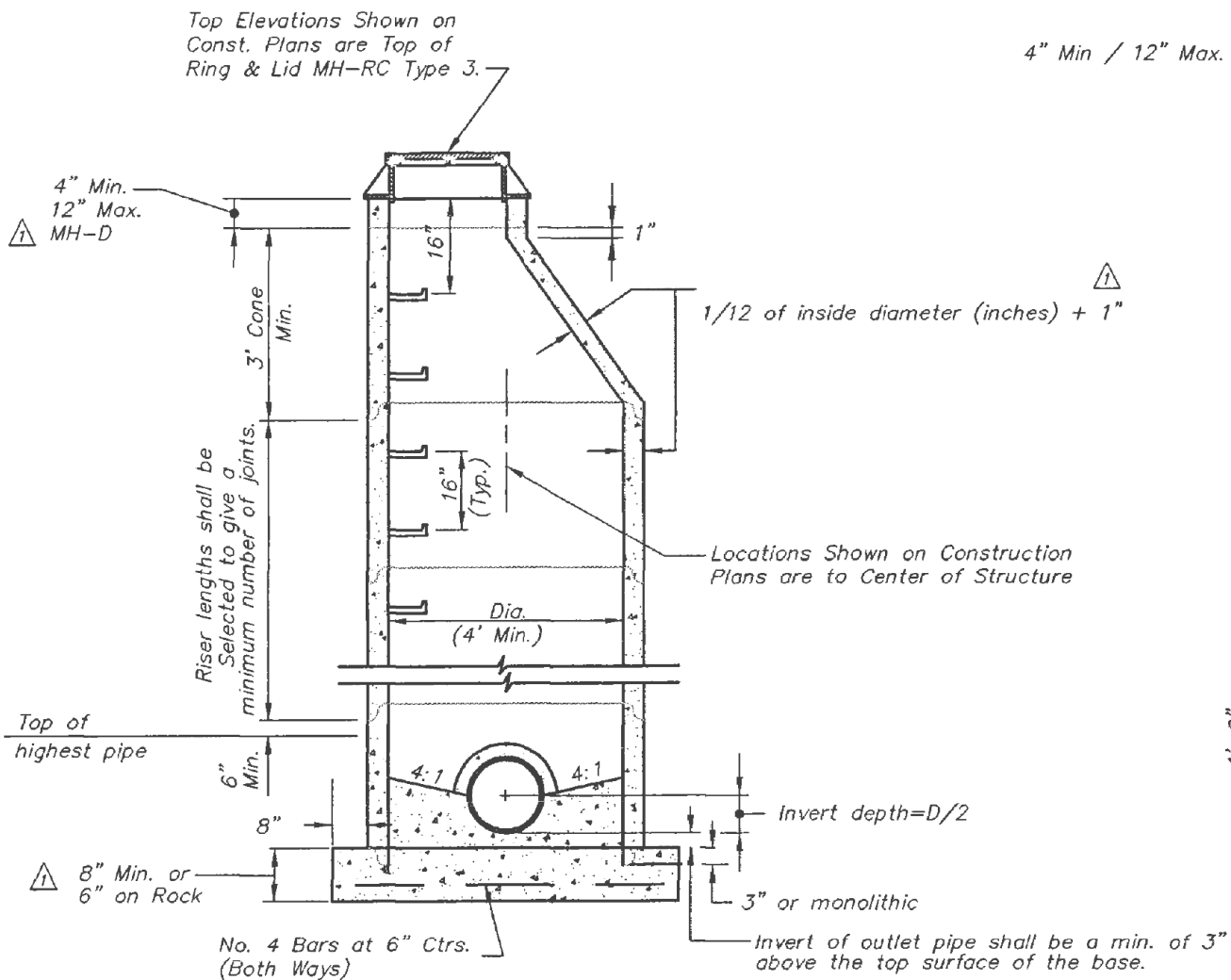
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METROPOLITAN CHAPTER

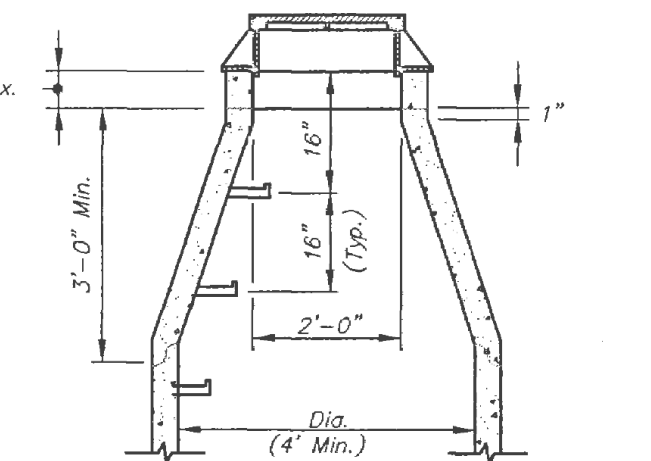
FIELD INLET DETAILS

STANDARD DRAWING NUMBER FI - 1

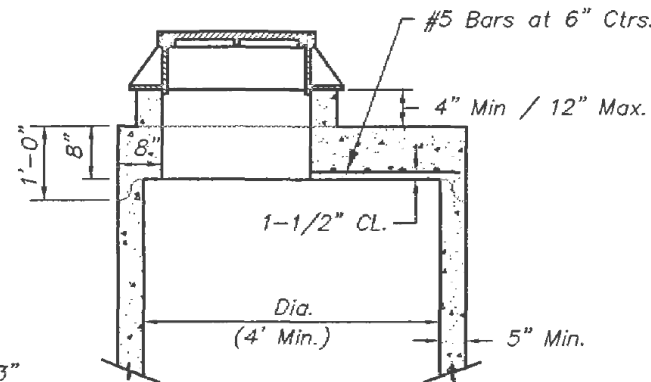
ADOPTED: APRIL 17, 1953



STANDARD PRECAST MANHOLE (ECCENTRIC CONE)



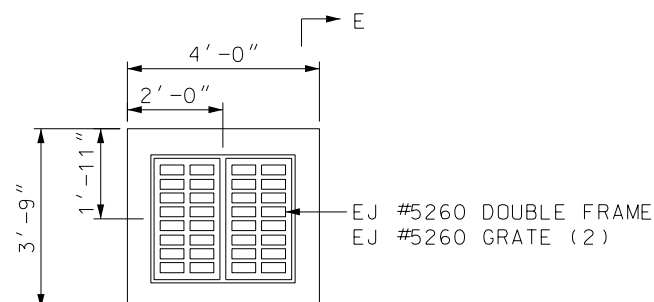
STANDARD PRECAST MANHOLE (CONCENTRIC CONE)
(See Eccentric Cone For Other Details)



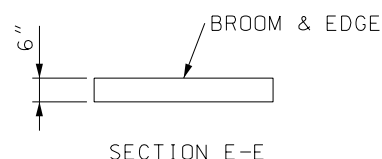
STANDARD PRECAST MANHOLE (SHALLOW TYPE)
(See Eccentric Cone For Other Details)

GENERAL NOTES:

- All manholes are to be precast concrete and of Eccentric Cone type unless otherwise specified.
- Manhole top adjustments shall be accomplished by the use of concrete adjustment rings.
- Top of manhole casting shall be set flush and on same slope as finished surface or as directed by the Engineer.
- Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 specifications.
- The engineer shall designate modifications for manholes with special designs.
- The inside diameter of the manhole shall be 4'-0" for pipe diameters from 12" thru 24", 5'-0" for pipe diameters from 27" thru 36", and 6'-0" for pipe diameters 42" thru 48".
- Clearance Tolerance of Pipe Openings: The Maximum Allowable Pipe Opening on a Horizontal Axis Shall be the Outside Diameter of the Pipe Plus 12". The Maximum Allowable Pipe Opening on Vertical Axis Shall be the Outside Diameter Plus 8". The Minimum Clearance Between the Outside Surface of an Installed pipe and the Concrete of the Manhole Shall be 2".
- Installation of Pipe Openings: All required pipe openings shall be plant cast in manhole units. Field alterations of openings will be permitted provided walls are scored with a masonry saw to a depth sufficient to sever reinforcing steel. A chipping hammer may then be used to remove the concrete. Minimum distance between any two adjacent pipes shall be 4".
- No direct payment for shaping floor or connecting pipes as shown on plans.
- Use KCMO Standard MH-RC Type 3 ring and cover.
- Sanitary Sewer Manholes shall be coated and conform to Section 2500.
- 4" ϕ field tile shall be located at entering pipes when used on storm sewers. These tiles shall be capped with 1/4" galvanized wire mesh on the outside of the structure, and clear the invert and base concrete.



TOP OF SLAB REINFORCING	
#5 @ 6" O.C.E.W. WITH #5 DIAGONALS AROUND CASTING	
1 1/2" CLEAR BOTTOM	
UNIT WEIGHTS	(LBS)
TOP SLAB	1,111



GRATE INLET

NOTES:
CEMENT TO BE PER ASTM C-150
REINFORCING TO BE PER ASTM A-615 GRADE 60
CONCRETE TO BE AIR ENTRAINED 4000 PSI @ 28 DAYS MINIMUM

7/1/98 KCMO STD. DRAWING SUPPLEMENT

ADOPTED: DIRECTOR OF PUBLIC WORKS	
AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METROPOLITAN CHAPTER	
MANHOLE DETAILS	STANDARD DRAWING NUMBER MH - 1
	ADOPTED: APRIL 17, 1993



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10/19/2018

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Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

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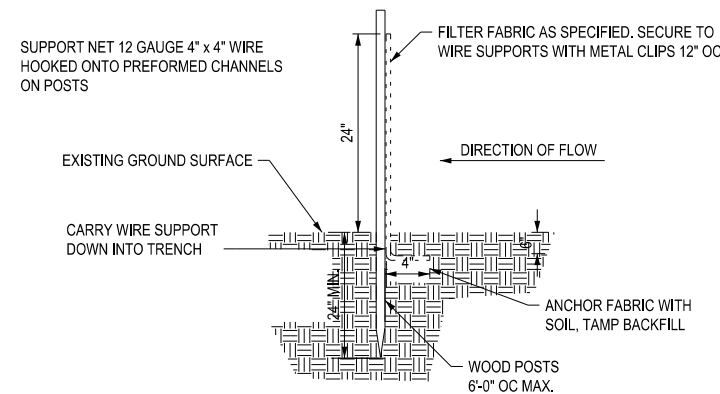
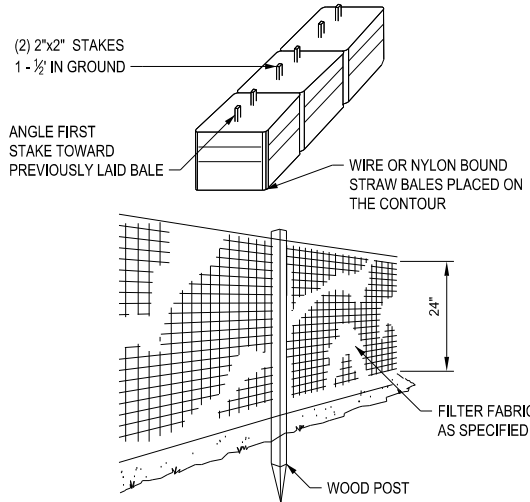
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STANDARD DETAILS
MANHOLE DETAIL

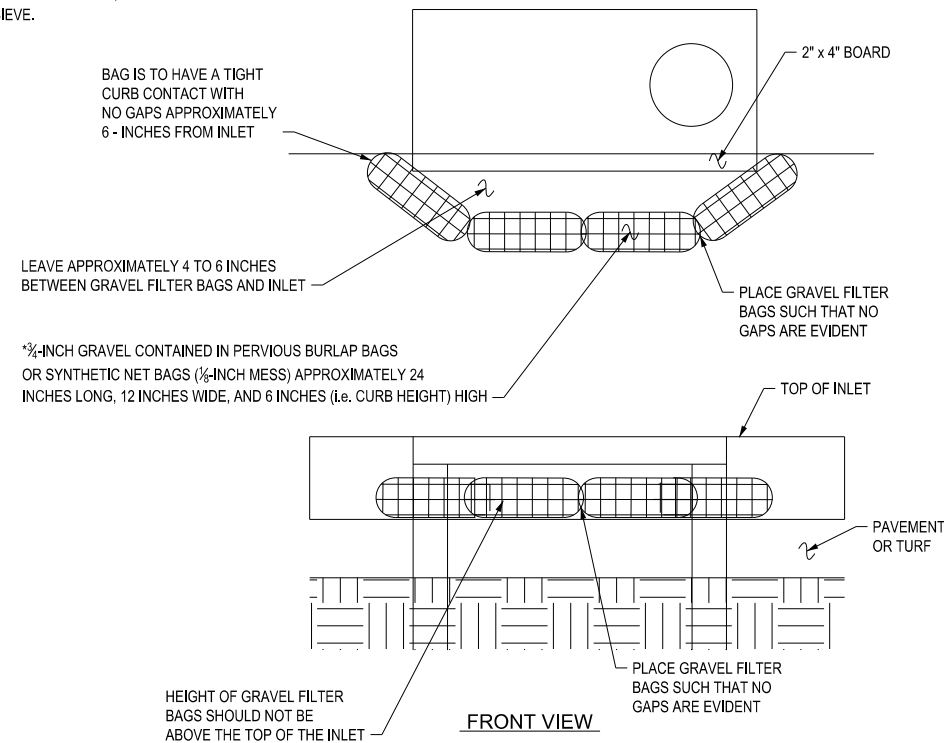
SHEET NO.

59 OF 101

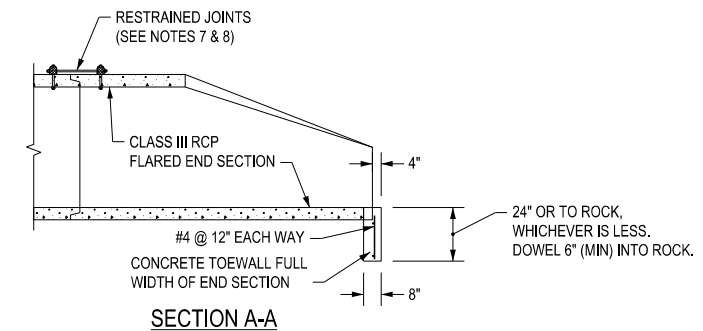
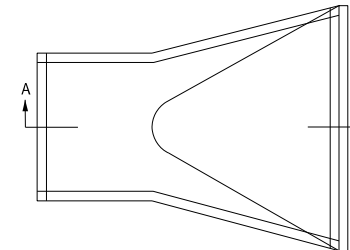


SILT FENCE

*100% PASSING 1" SIEVE, 95% RETAINED ON 1/2" SIEVE.

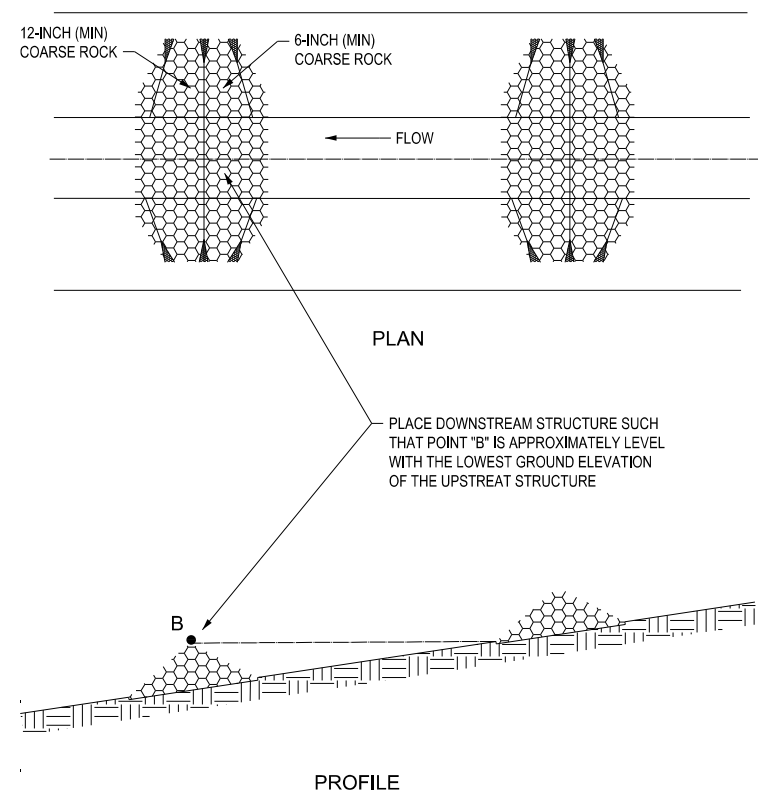


GRAVEL BAG INLET PROTECTION

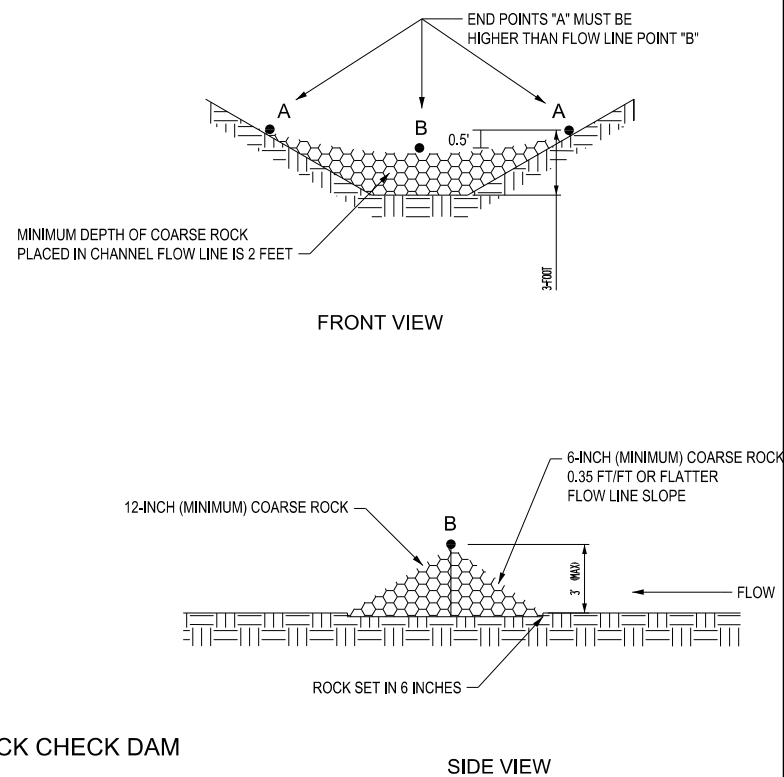


END SECTION NOTES:

1. USE KCMMB4K CONCRETE THROUGHOUT.
2. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
3. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF +/- 1/8" SHALL BE PERMITTED.
4. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
5. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
6. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
7. THE LAST THREE JOINTS OF RCP, INCLUDING THE END SECTION, SHALL BE MECHANICALLY RESTRAINED WHERE DISCHARGING INTO UNIMPROVED SYSTEMS.
8. THE RESTRAINED JOINT HARDWARE SHALL BE HOT DIP ZINC COATED IN ACCORDANCE WITH ASTM A-123.
9. THE HANDRAIL SHALL BE REQUIRED ON END SECTIONS 42" HEIGHT OT LARGER.
10. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.



TEMPORARY ROCK CHECK DAM



CONCRETE END SECTION WITH TOE WALL



DATE PREPARED
10/19/2018

REVISIONS

DATE

NO. APPD. BY

TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

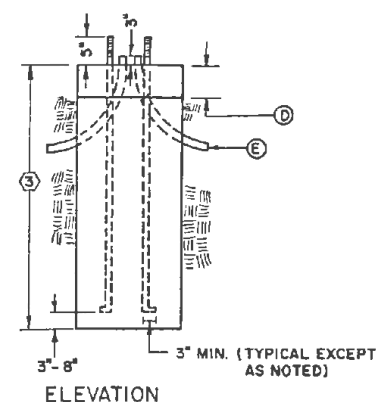
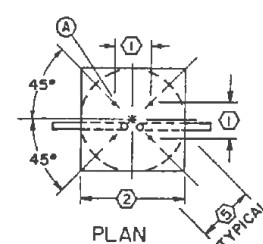
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

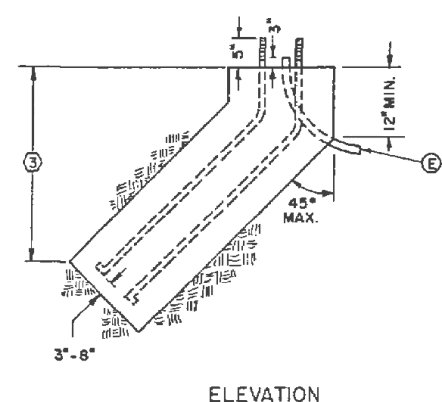
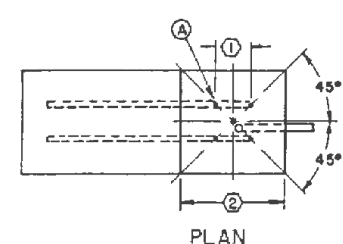
STANDARD DETAILS
EROSION CONTROL DETAILS

SHEET NO.

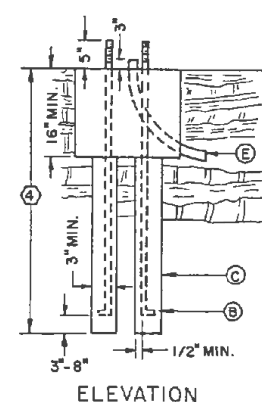
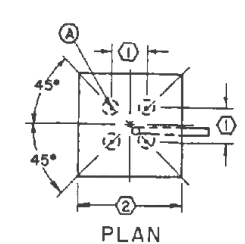
60 OF 101



TYPE A
STANDARD EARTH



TYPE B
OFFSET



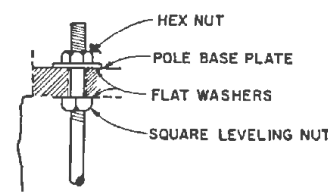
TYPE C
SOLID ROCK

STREET LIGHT FOUNDATIONS

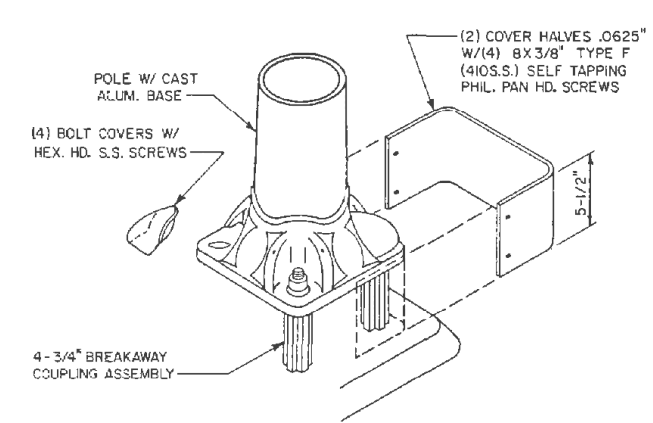
DIMENSIONS		DIMENSIONS BY MOUNTING HEIGHTS			
NO.	ITEM	25'	30'	35'	40'
①	BOLT SPACING	7'-3/8"	7'-3/4"	8'-1/8"	8'-1/2"
②	MIN. DIAMETER OF FOUNDATION	21"	22"	23"	24"
③	DEPTH OF FOUNDATION	5'-0"	6'-0"	7'-0"	8'-0"
④	DEPTH OF FOUNDATION TYPE C	3'-6"	3'-6"	4'-0"	4'-0"
⑤	BOLT CIRCLE DIAMETER	10'-1/2"	11"	11'-1/2"	12"

SPECIFICALLY LABELED POINTS

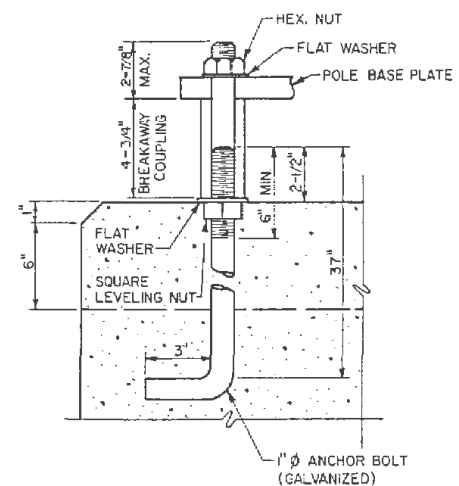
- Ⓐ 1" DIAMETER ANCHOR BOLTS EXTENDED WITH #6 REBAR AS REQUIRED.
- Ⓑ CUT ANCHOR BOLTS AS REQUIRED & DEFORM BOTTOM ENDS TO LOCK POSITIVELY.
- Ⓒ WITH MODIFIED ANCHOR RODS IN PLACE, FILL DRILLED HOLES WITH EPOXY RESIN SIKADUR HI-MOD CARTER WATERS 202 TYPE II OR EQUIVALENT.
- Ⓓ 6" DEEP SQUARE TOP (ROUND TOP ACCEPTABLE IN EARTH SURFACE). THIS 6" CAP TO BE POURED AFTER POLE IS ERECTED AND PLUMBED. EXPANSION JOINT TO BE USED WHERE PAVING ADJOINS FOUNDATION.
- Ⓔ PLUG ALL CONDUIT OPENINGS WITH DUXSEAL OR EQUIVALENT BEFORE PLACING CONCRETE & AFTER CABLE INSTALLATION. SEE PLANS FOR NUMBER & DIRECTION OF BENDS.



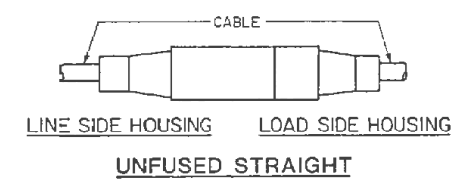
ANCHOR BOLT DETAIL



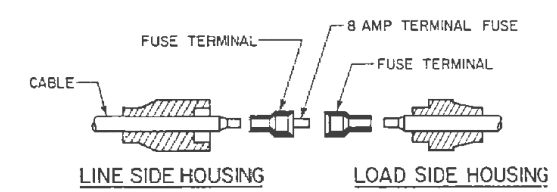
LIGHT POLE BASE



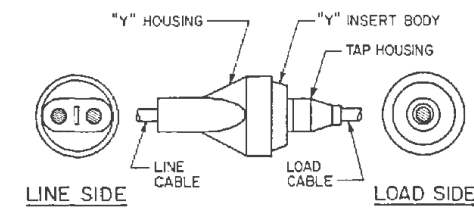
ANCHOR BOLT



BREAKAWAY DETAILS



FUSED STRAIGHT



ELECTRICAL CONNECTOR KITS

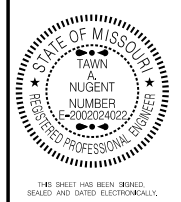
- NOTES:
- TOP 8" OF ANCHOR BOLT TO BE HOT-DIP GALVANIZED.
 - BOTTOM ENDS OF ANCHOR BOLTS MUST HAVE 3" MINIMUM CONCRETE COVER.
 - USE BOLT POSITIONING JIG OF SUFFICIENT WEIGHT & STRENGTH TO MAINTAIN ACCURATE ANCHOR BOLT LOCATION DURING CONCRETE PLACEMENT.
 - CITY-AUTHORIZED INSPECTOR MUST INSPECT EACH EXCAVATION, WITH ALL FORMS, ANCHOR BOLTS, REINFORCING STEEL, CONDUIT, & CONDUIT PLUGS IN PLACE IMMEDIATELY PRIOR TO PLACING CONCRETE.
 - CONCRETE FOR FOUNDATIONS OUTSIDE THE C.B.D. SHALL BE MCIB MIX NO. A558-1-2 OR MCIB MIX NO. A613-1-4. CONCRETE FOR FOUNDATIONS IN THE C.B.D. SHALL BE PER OFFICIAL DOCUMENT NO. 85199 DATED 8/20/69 & ANY REVISION OR REPLACEMENT THEREOF.
 - CONCRETE TO BE VIBRATED DURING PLACEMENT.
 - FOUNDATIONS IN EARTH TO BE 1" ABOVE ANY ADJACENT EARTH & HAVE EDGES BEVELED.
 - TIE ANCHOR BOLTS NEAR THE BOTTOM. USE TWO #3 REBAR HOOPS SPACED 12" TWO #3 REBAR "U"'S SPACED 12", OR TWO TURNS OF #3 REBAR SPIRAL WITH 12" PITCH.



AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER

STREET LIGHTING
MISC. DETAILS

STANDARD DRAWING
NUMBER SL-3
ADOPTED:
DECEMBER 15, 1982



DATE PREPARED
10/19/2018

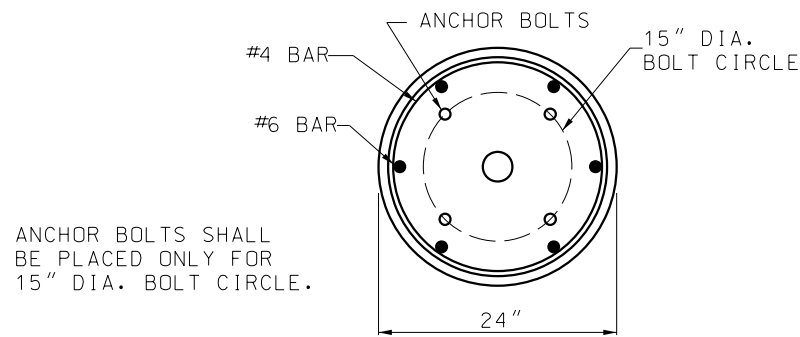
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TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

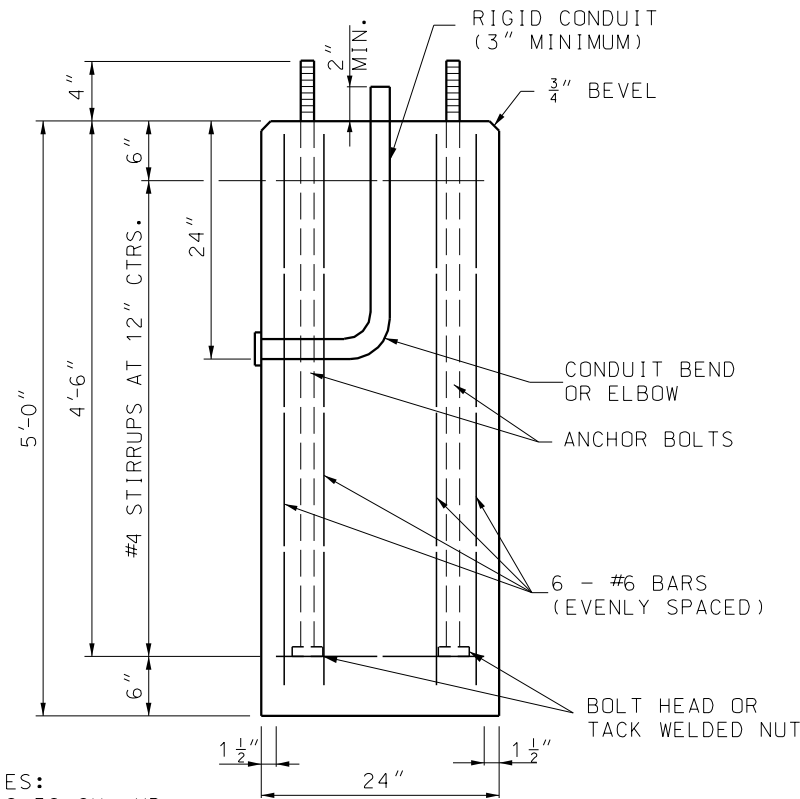
NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS
LIGHTING DETAILS



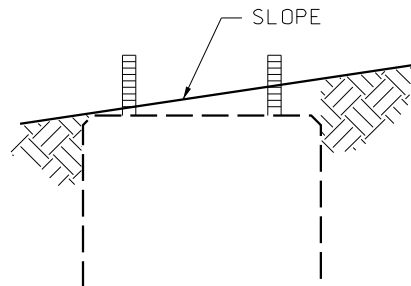
ANCHOR BOLTS SHALL BE PLACED ONLY FOR 15" DIA. BOLT CIRCLE.

PLAN

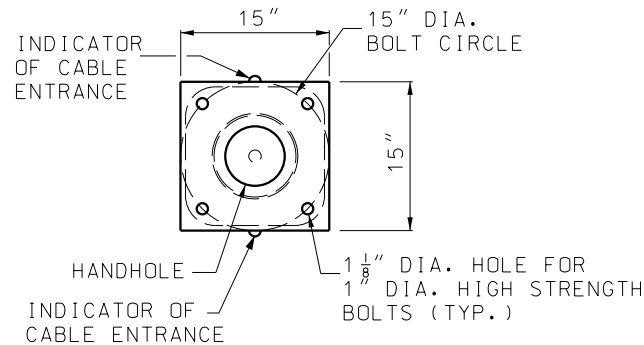


QUANTITIES:
CONC. = 0.58 CU. YD.
REIN. = 64 LBS.

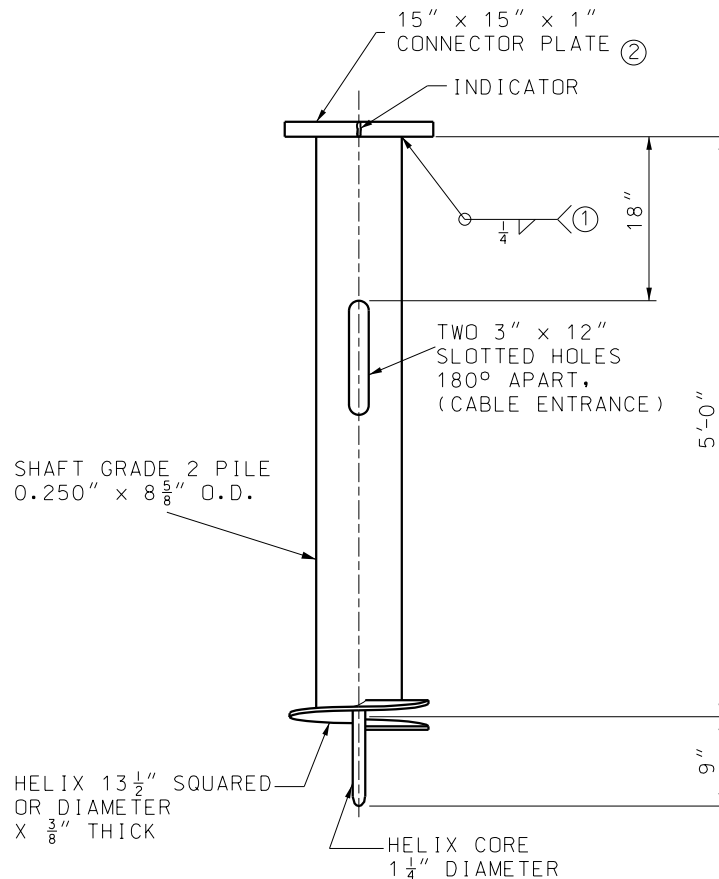
ELEVATION
DETAILS OF CONCRETE
FOUNDATION ③



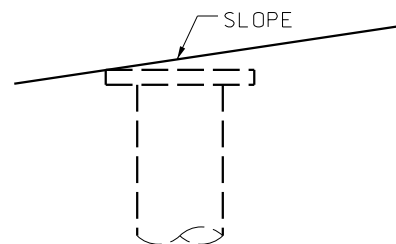
CONCRETE FOUNDATION
EMBEDMENT



PLAN



ELEVATION
DETAILS OF SCREW
ANCHOR FOUNDATION



SCREW ANCHOR
EMBEDMENT

DRIVE HOLES WILL BE PERMITTED PROVIDED THAT THEY DO NOT CONFLICT WITH OR COMPROMISE THE STRUCTURAL INTEGRITY OF THE PLATE, THE WELD BETWEEN THE PLATE AND SHAFT, OR THE BOLT HOLES.

NOTES:

- ① GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.
- ② FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.
- ③ AT THE OPTION OF THE CONTRACTOR THE CONCRETE FOUNDATION MAY BE PRECAST. IF PRECAST, THEY SHALL BE SET IN DRILLED HOLES 3 FEET IN DIAMETER AND 6 INCHES DEEPER THAN THE BOTTOM OF THE CONCRETE FOUNDATION. THE BOTTOM 6 INCHES OF THE HOLE AND THE REMAINING SPACE AROUND THE FOUNDATION SHALL BE BACKFILLED WITH WET TAMPED LIMESTONE SCREENINGS IN LAYERS NOT EXCEEDING 12 INCHES.

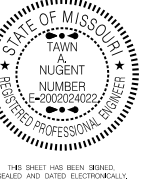
GENERAL NOTES:

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL CONNECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1" DIA. HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.



DATE PREPARED
10/19/2018

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NO.



1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

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NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

STANDARD DETAILS
LIGHTING DETAILS

SHEET NO.

62 OF 101

GENERAL NOTE: FULL PAVEMENT SECTION SHOWN FOR CLARITY.
PHASE 1 CONSTRUCTION SHOWN ON PLANS



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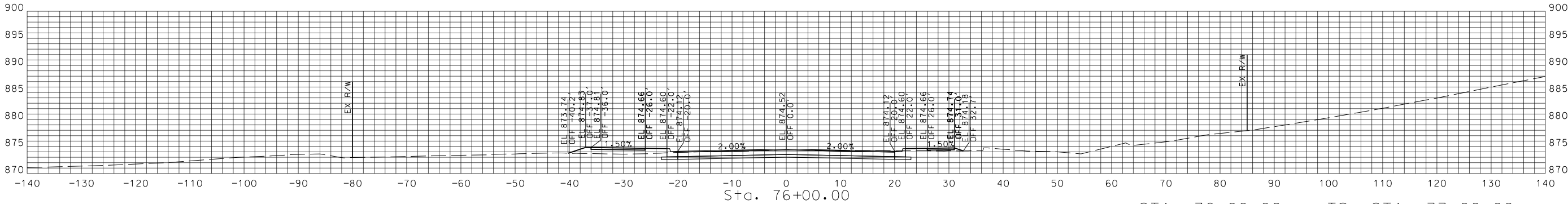
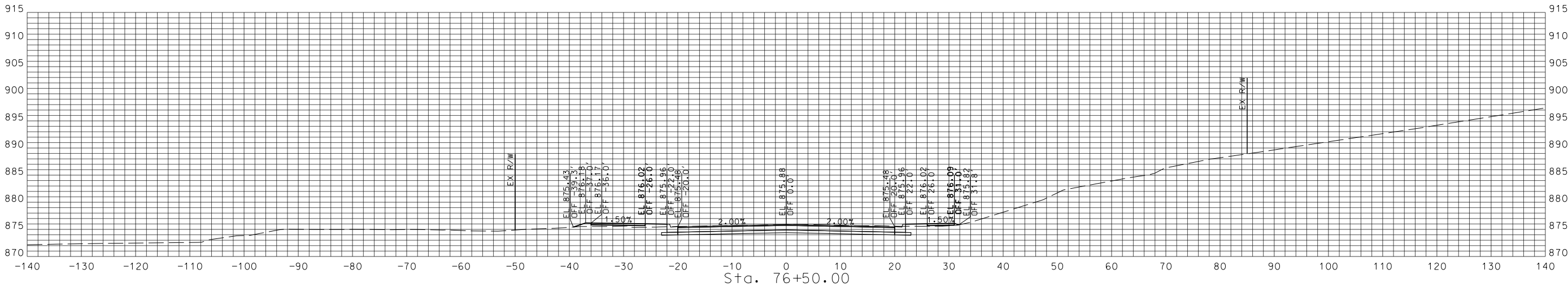
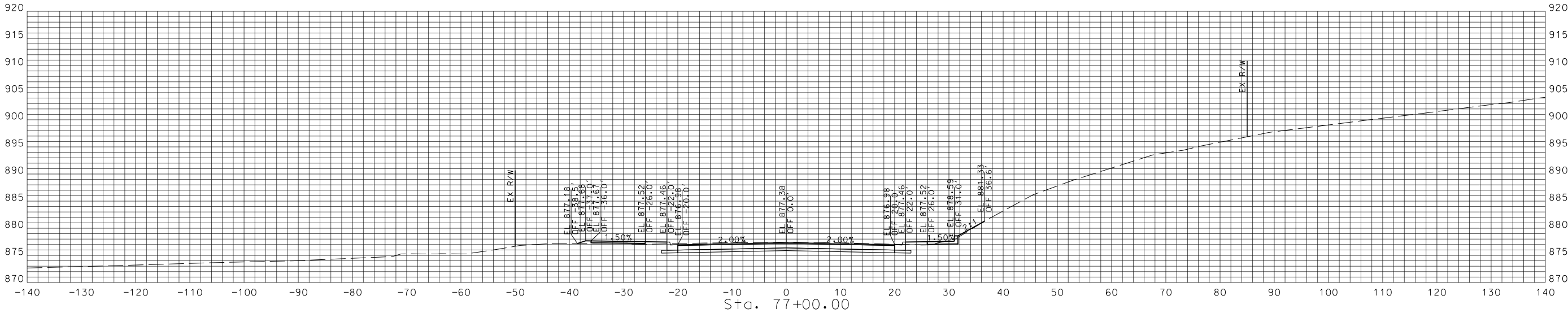
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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

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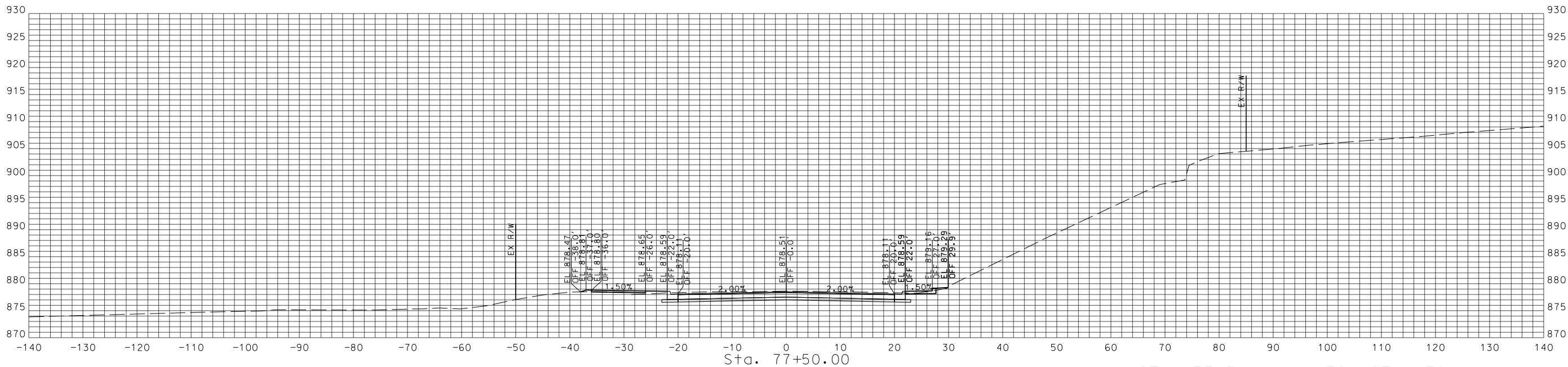
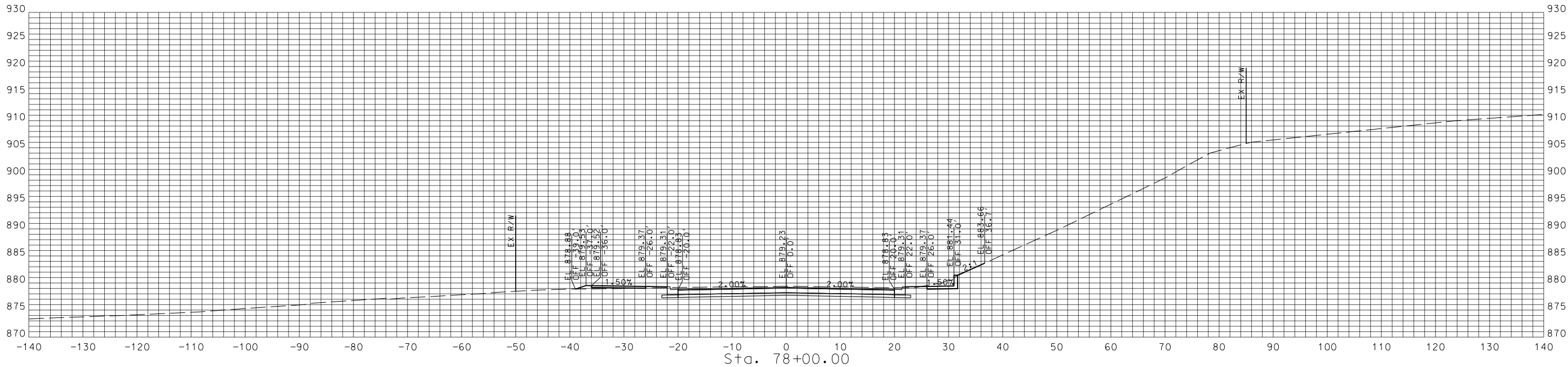
NORTH OAK TRAFFICWAY -
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ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
63 OF 101



STA. 76+00.00 TO STA. 77+00.00



STA. 77+50.00 TO STA. 78+00.00



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10/23/2018

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1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

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SCALE:

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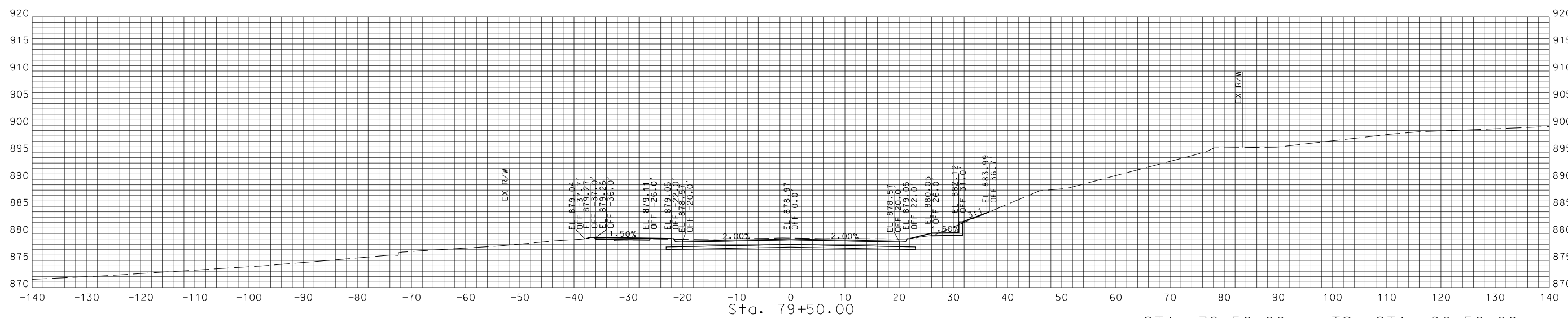
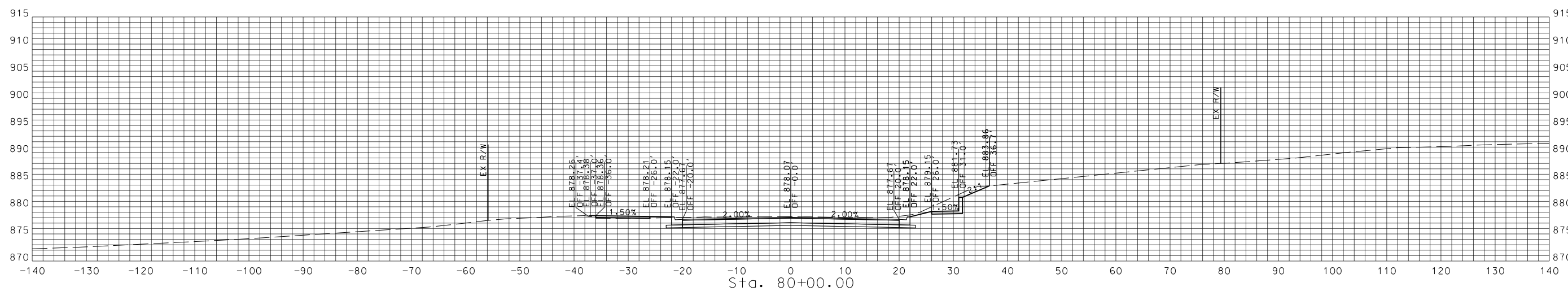
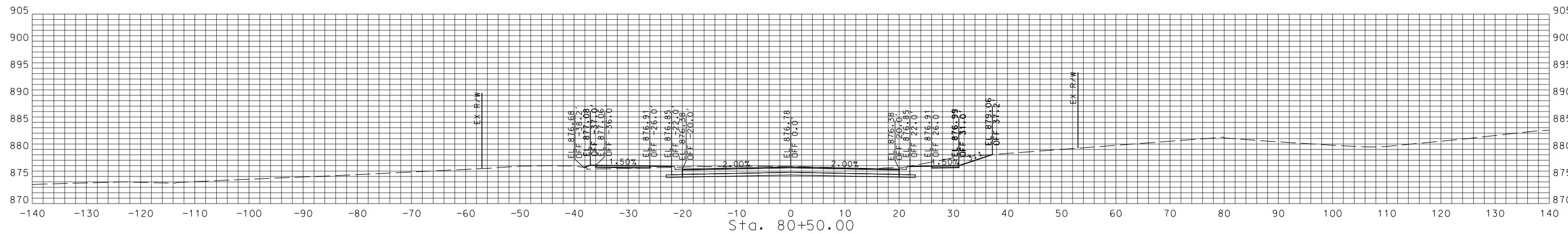
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
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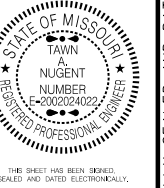
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

64 OF 101



STA. 79+50.00 TO STA. 80+50.00

DATE PREPARED
0/23/2018[illegible]

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Kansas City, MO 64131
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Fax (816) 874-4675**

St. Cert. of Authority: 2002010300

ROJ NO: 89008573

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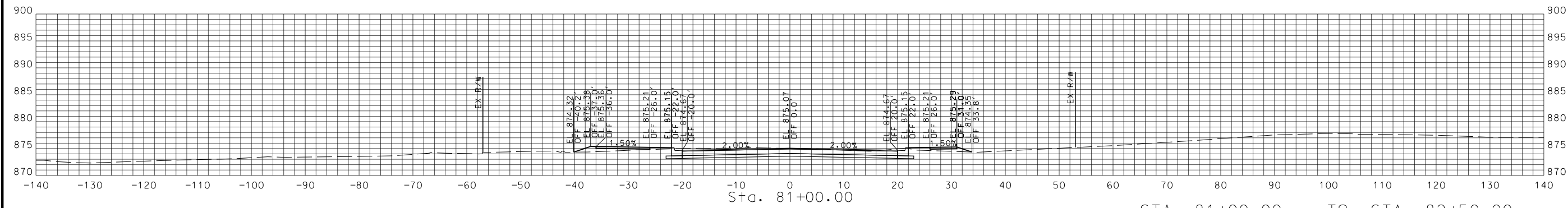
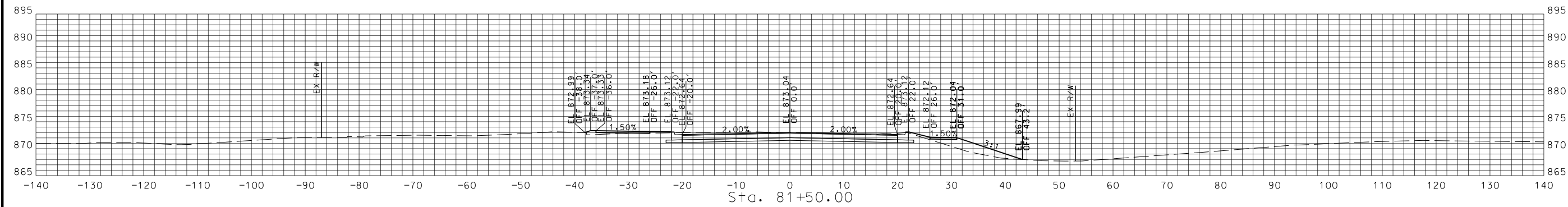
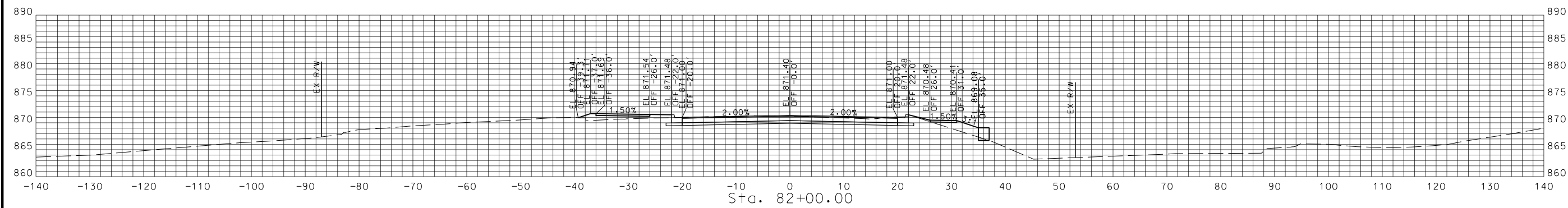
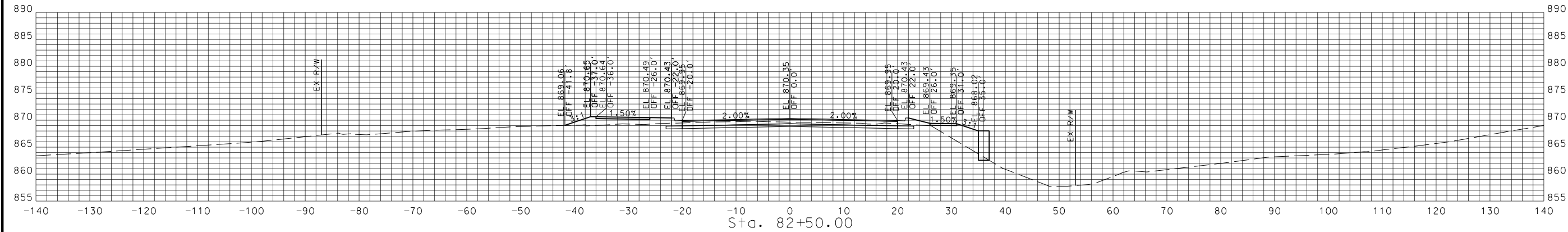
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ROAD RECONSTRUCTION
PROJECT NO. 89008573**
For the City of Kansas City,
Clay County, Missouri

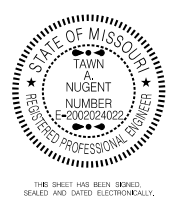
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

66 OF 101



STA. 81+00.00 TO STA. 82+50.00



DATE PREPARED
10/23/2018

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NO.	APPD.	BY	DATE



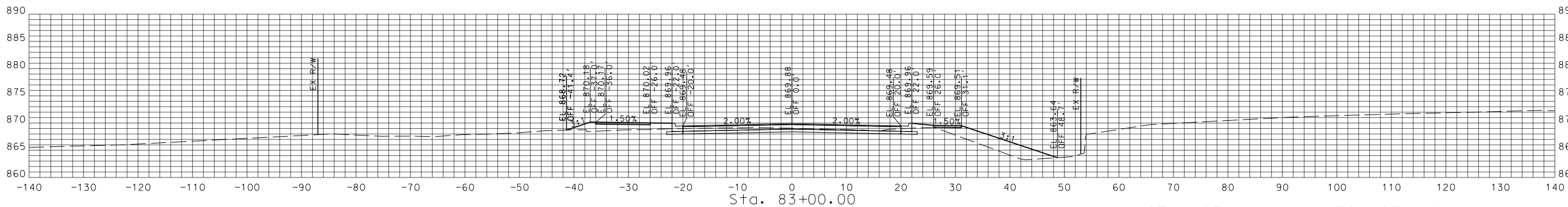
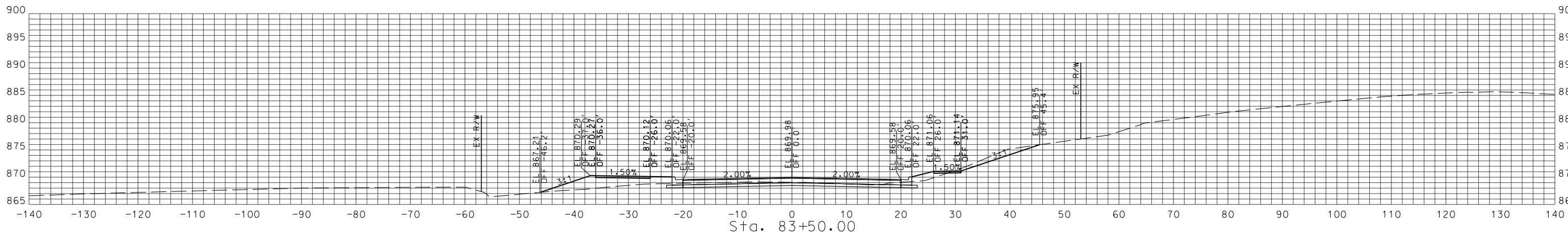
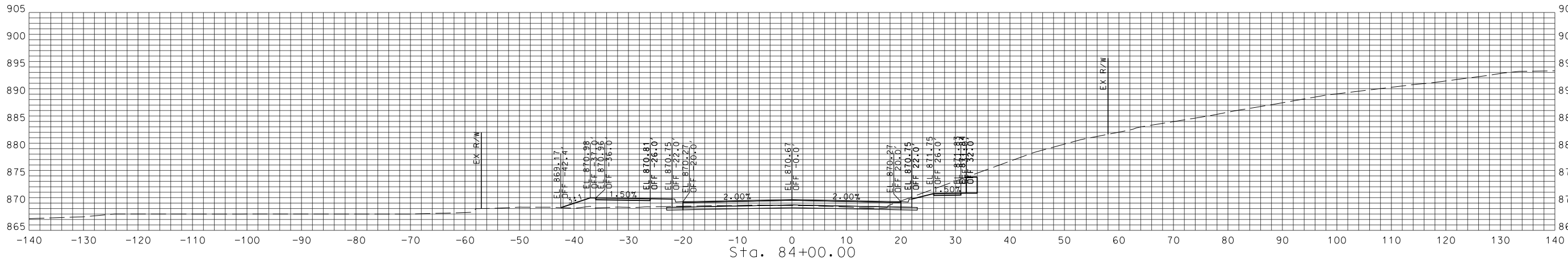
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4655

MO St. Cert. of Authority: 2020210300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

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NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
67 OF 101



STA. 83+00.00 TO STA. 84+00.00



DATE PREPARED
10/23/2018

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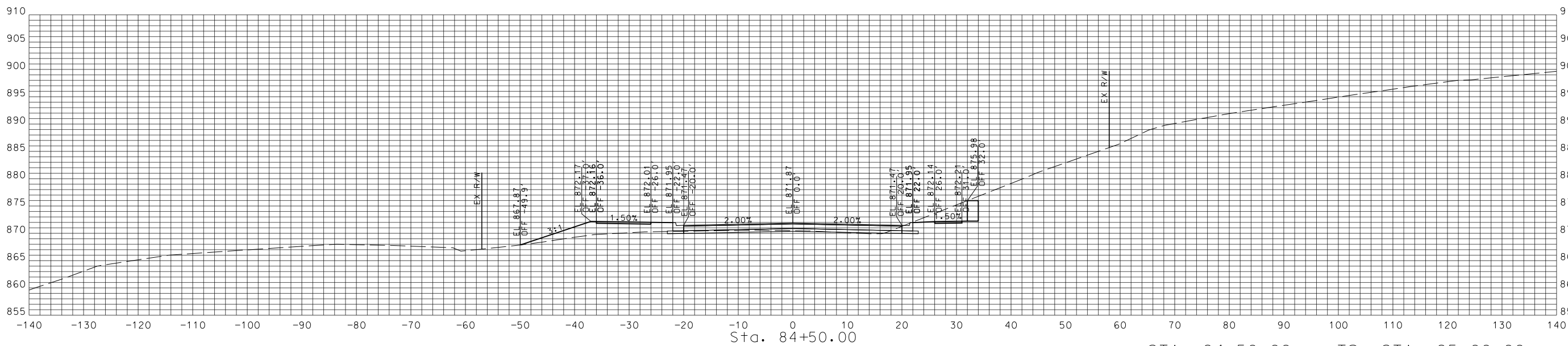
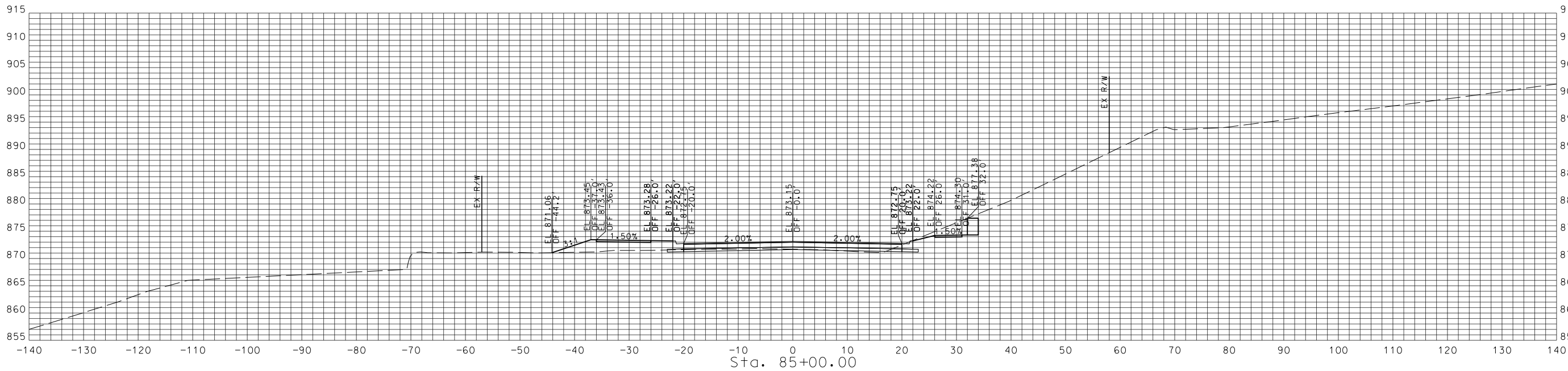
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

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NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
68 OF 101



STA. 84+50.00 TO STA. 85+00.00



DATE PREPARED
10/23/2018

NO.	APPD.	BY	DATE

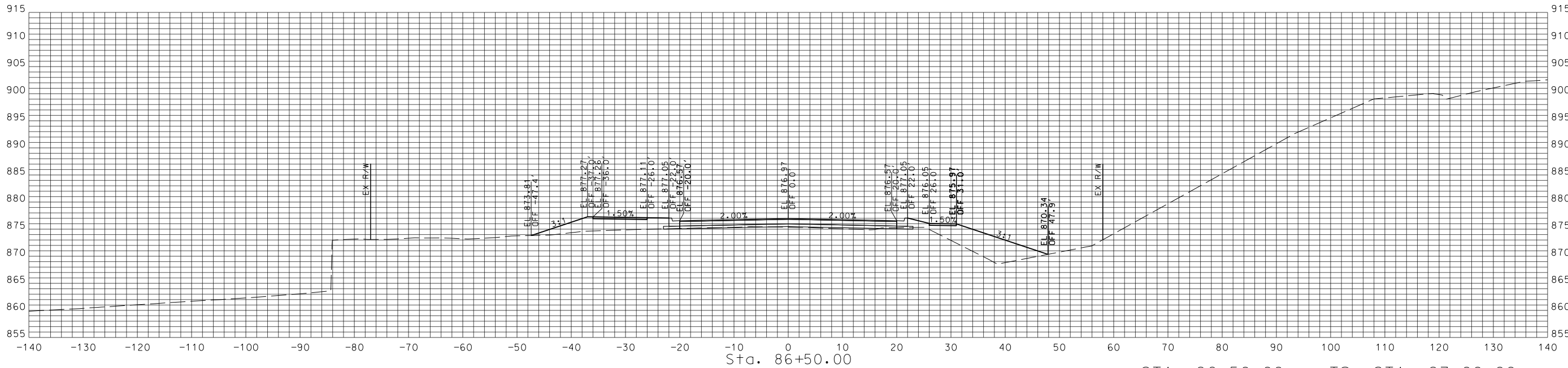
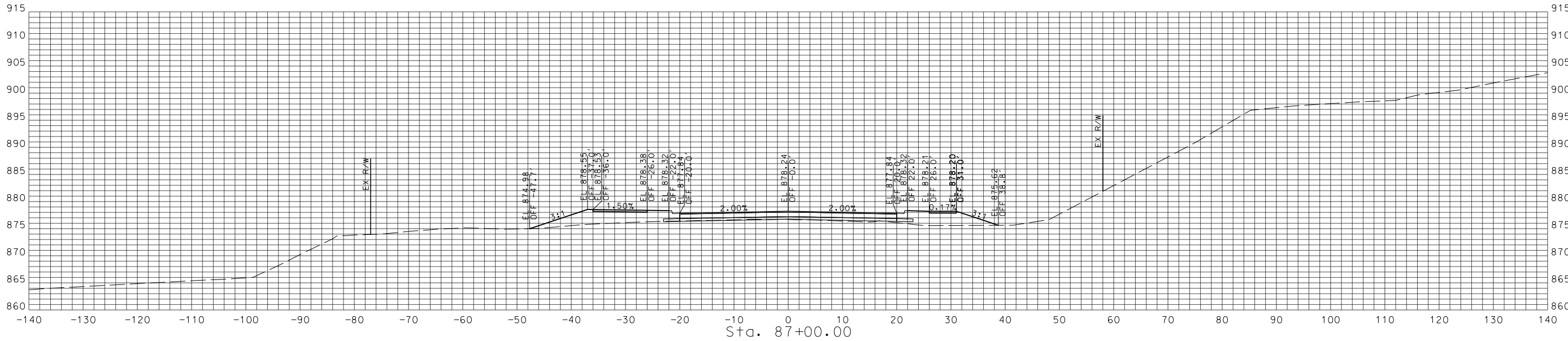
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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
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CROSS SECTIONS

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69 OF 101



STA. 86+50.00 TO STA. 87+00.00



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10/23/2018

NO.	APPD.	BY	DATE

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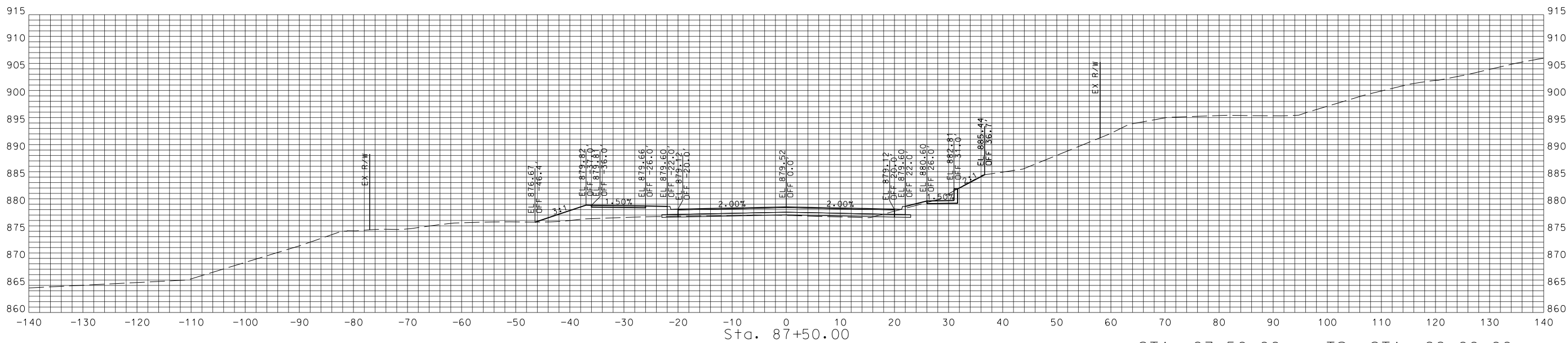
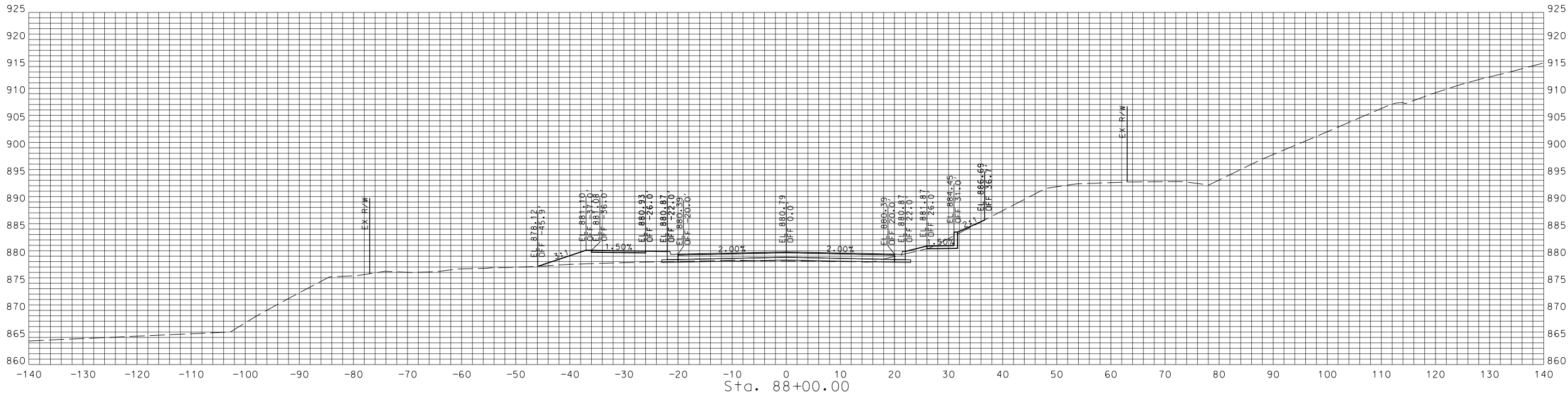
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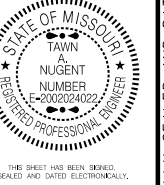
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For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
71 OF 101



STA. 87+50.00 TO STA. 88+00.00



DATE PREPARED
10/23/2018

REVISIONS

NO. APPD. BY DATE

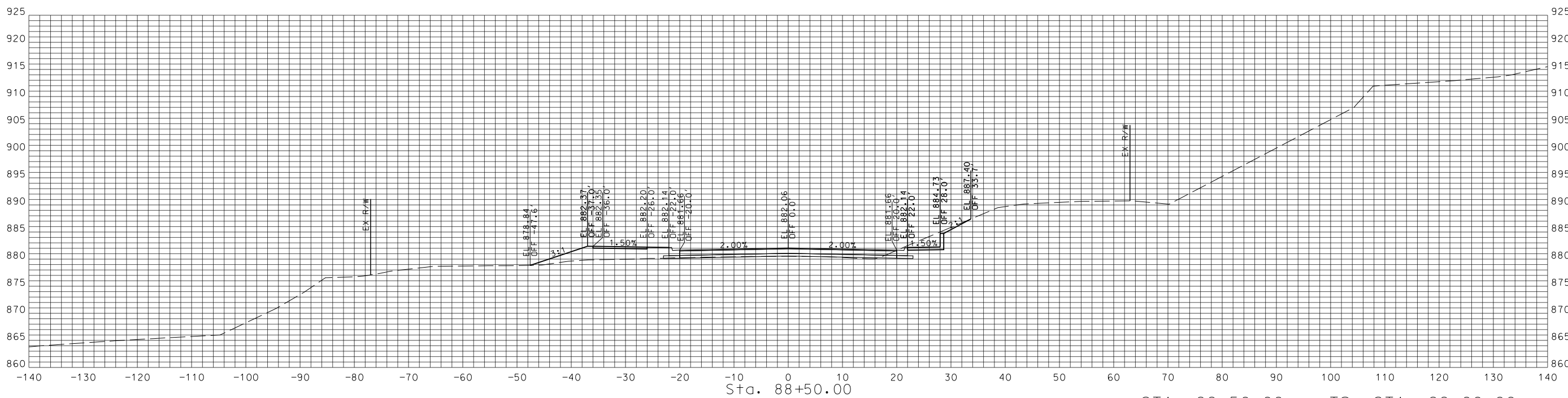
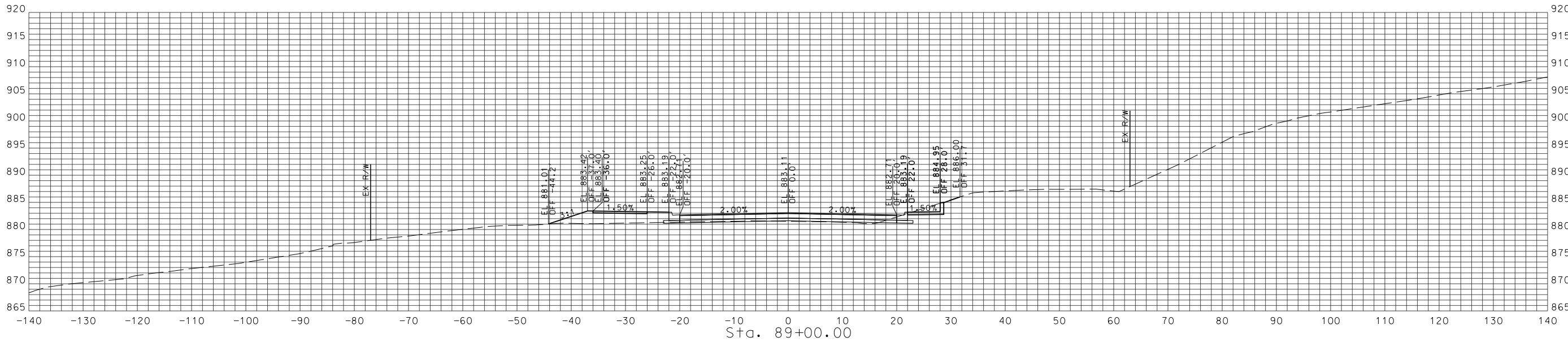
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
72 OF 101



STA. 88+50.00 TO STA. 89+00.00



DATE PREPARED
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PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

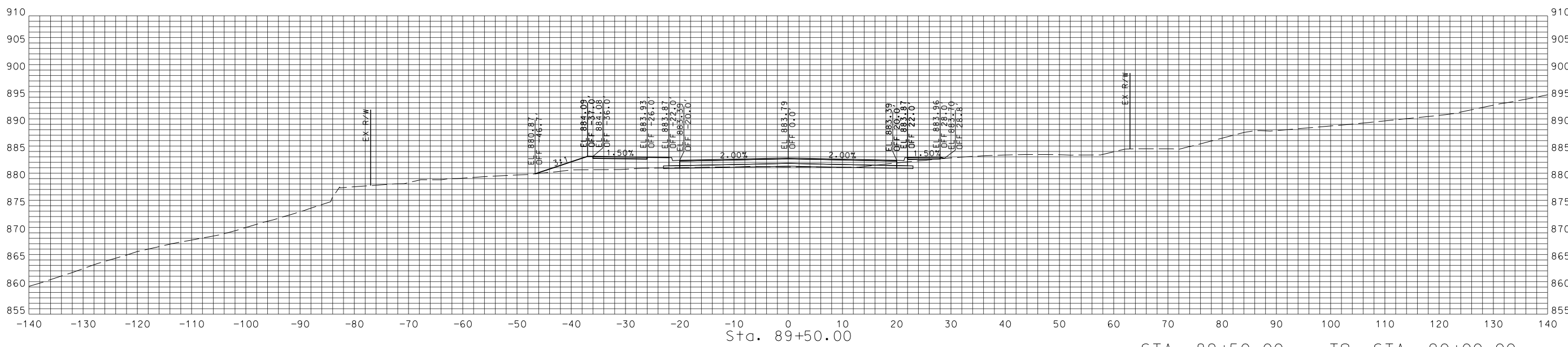
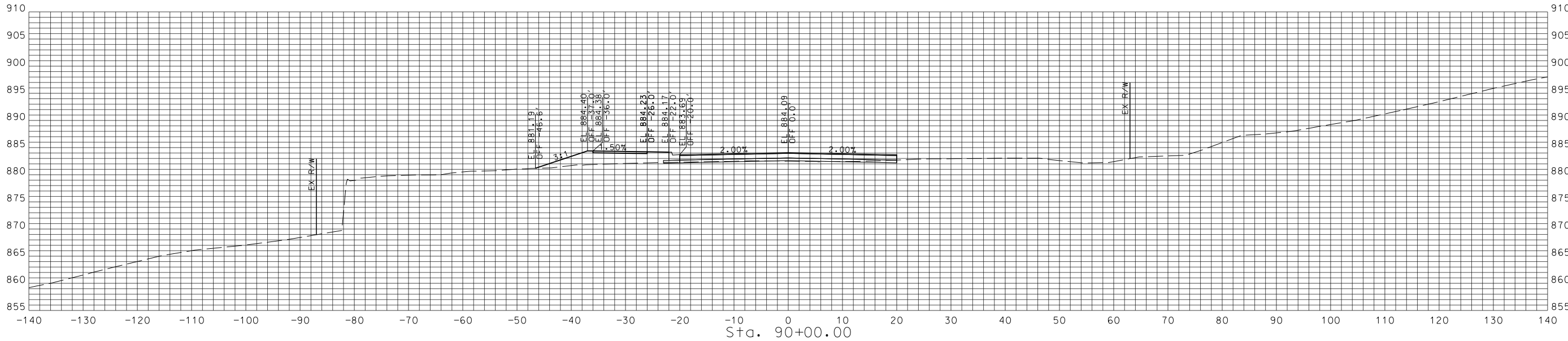
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

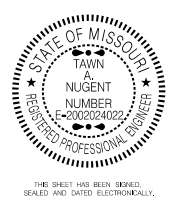
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

73 OF 101



STA. 89+50.00 TO STA. 90+00.00



DATE PREPARED
10/23/2018

NO.	APPD. BY	DATE

REVISIONS

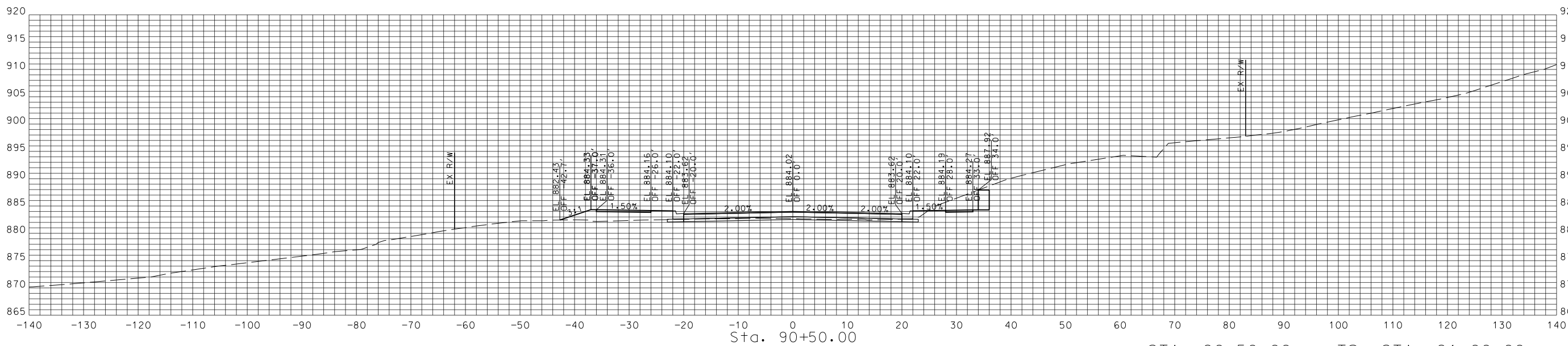
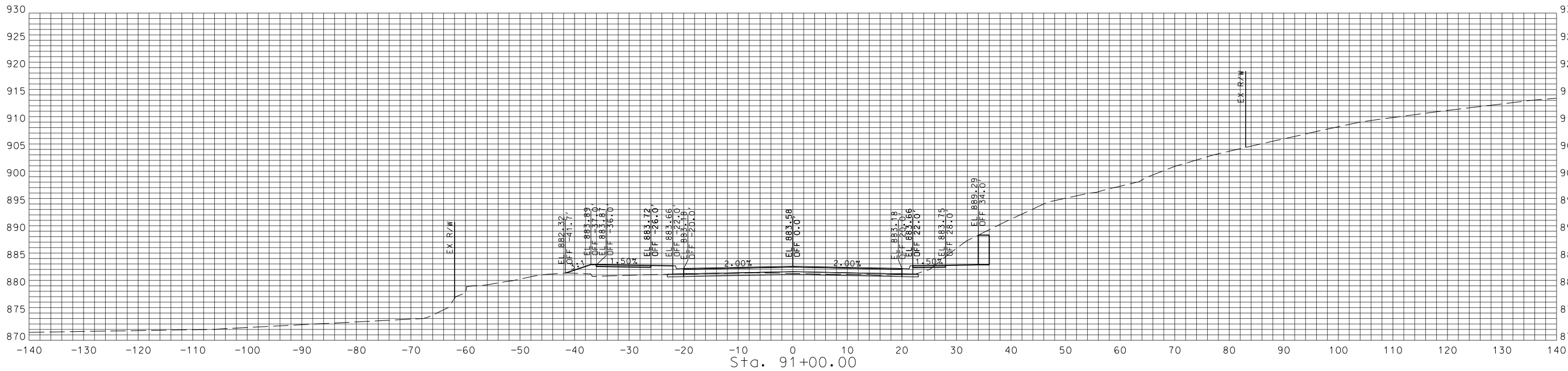
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
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MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
74 OF 101



STA. 90+50.00 TO STA. 91+00.00



DATE PREPARED
10/23/2018

NO.	APPD.	BY	DATE

REVISIONS

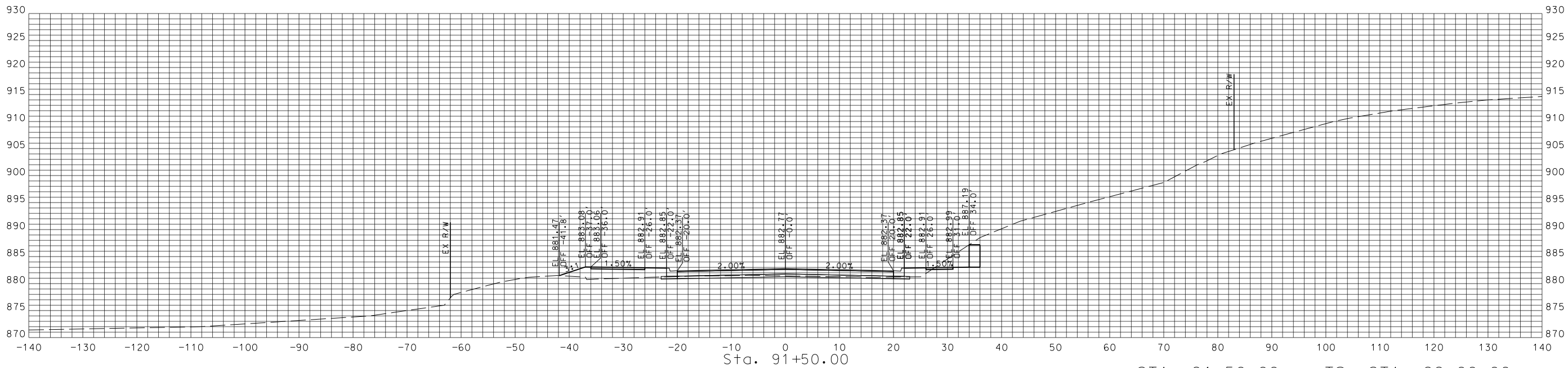
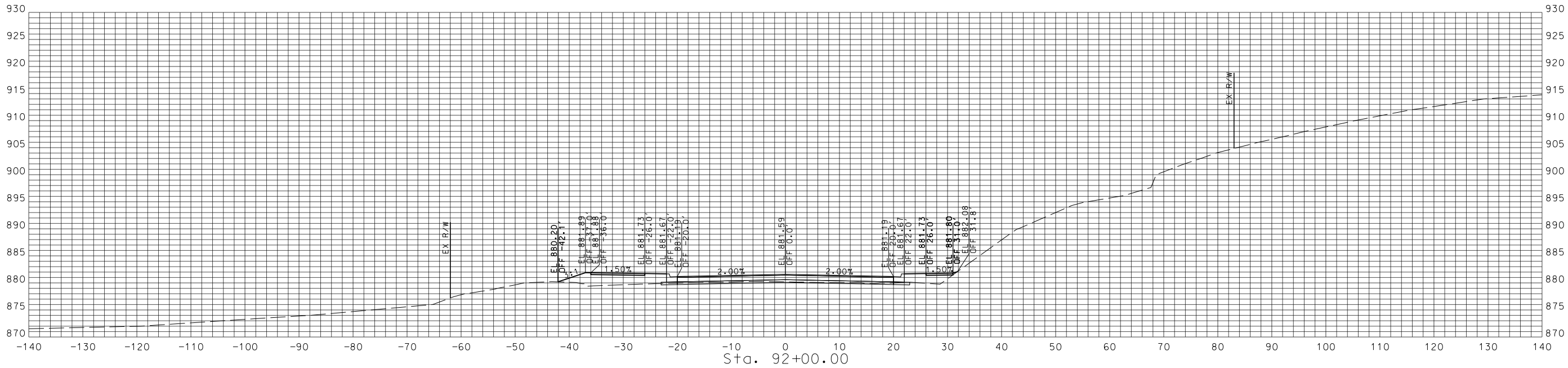
TREKK
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MO St. Cert. of Authority: 2002010300
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
75 OF 101



STA. 91+50.00 TO STA. 92+00.00



DATE PREPARED
10/23/2018

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MO St. Cert. of Authority: 2002010300

PROJ. NO.: 89008573

SCALE:

DRAWN BY: WRH

CHECKED BY: TAN

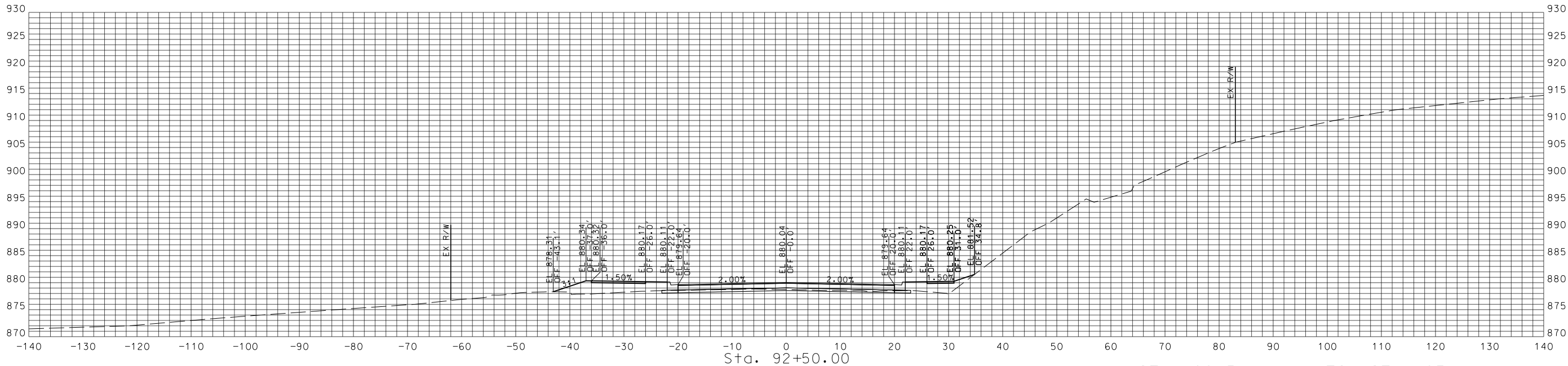
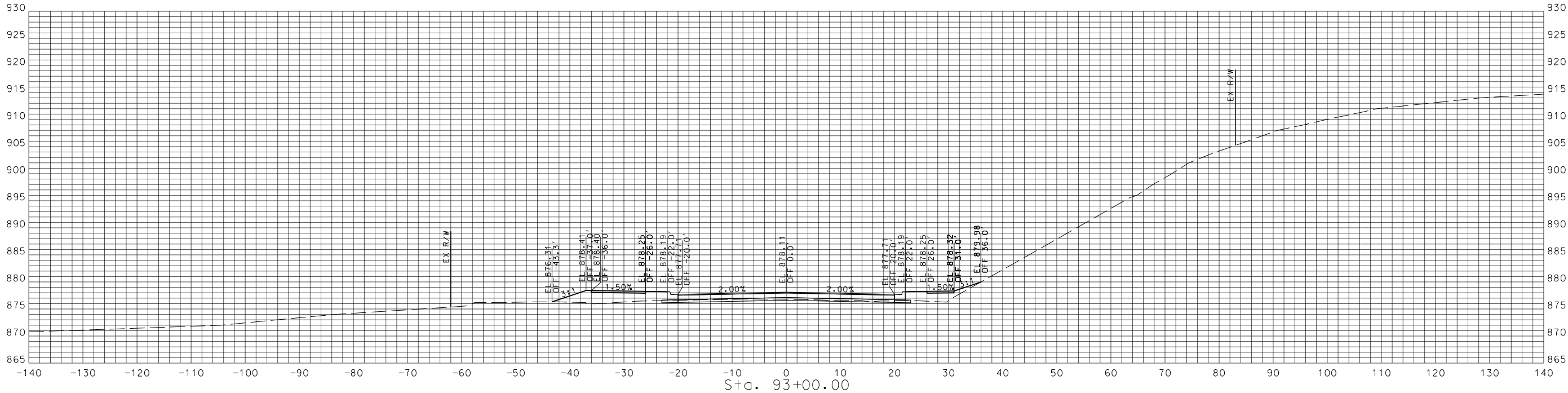
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

76 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



STA. 92+50.00 TO STA. 93+00.00

STATE OF MISSOURI
A
TOWN
NUGENT
NUMBER
E-2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/23/2018

REVISIONS

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Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300

PROJ. NO.: 89008573

SCALE:

DRAWN BY: WRH

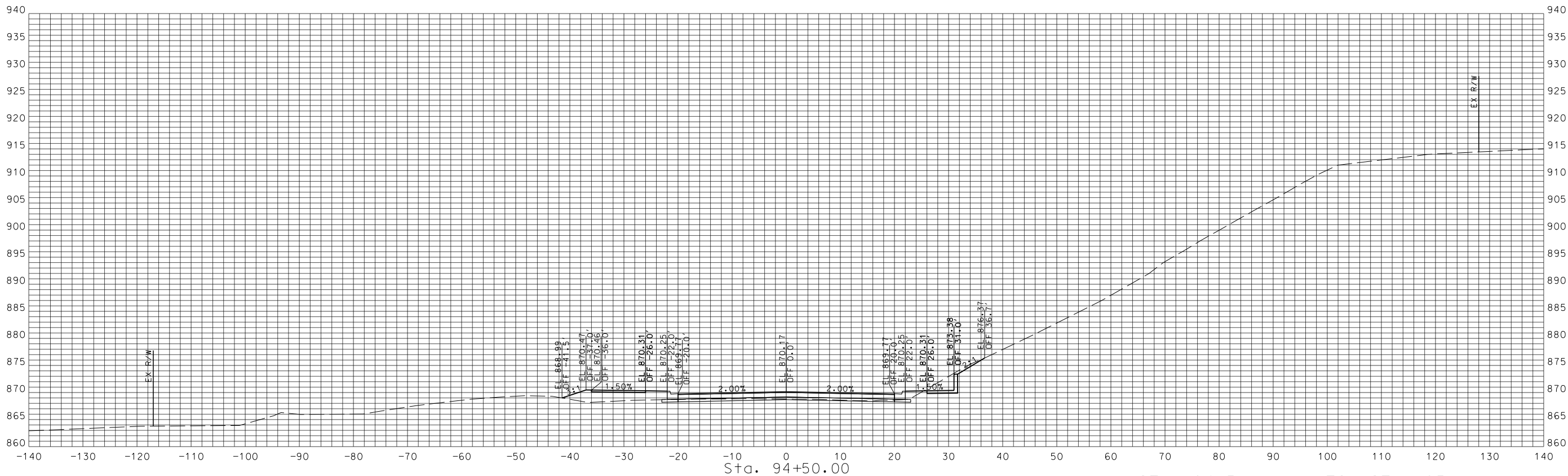
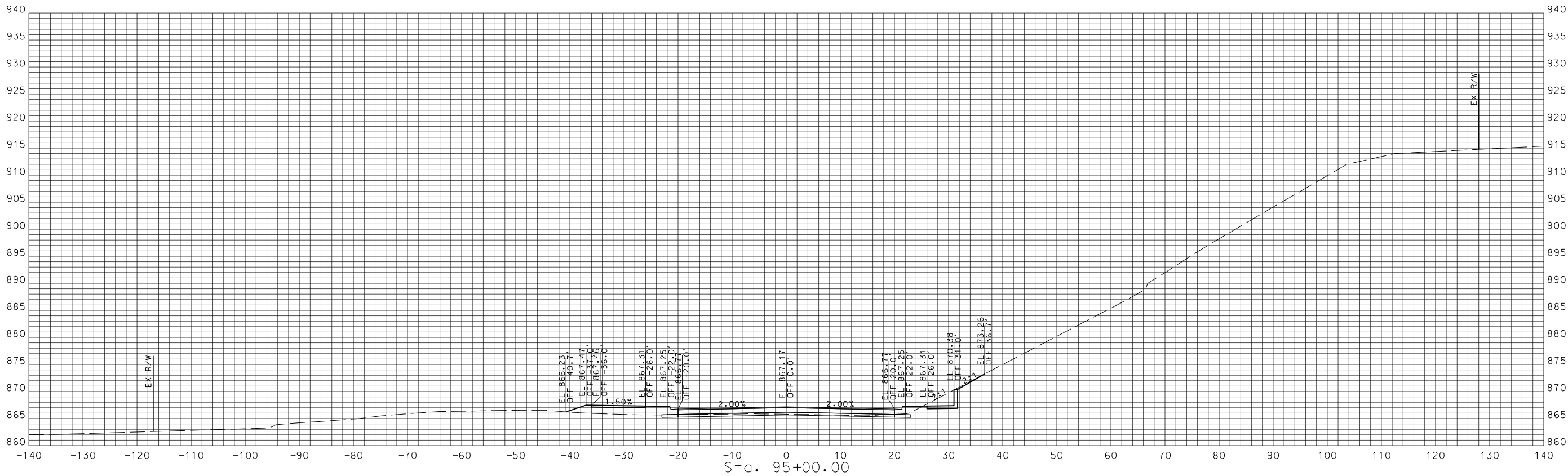
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
77 OF 101

18-104_XS_NorthOak.dgn 8:04:58 AM 10/23/2018



STA. 94+50.00 TO STA. 95+00.00



DATE PREPARED
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DESIGN GROUP, LLC
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Kansas City, MO 64131
Tel (816) 874-4655
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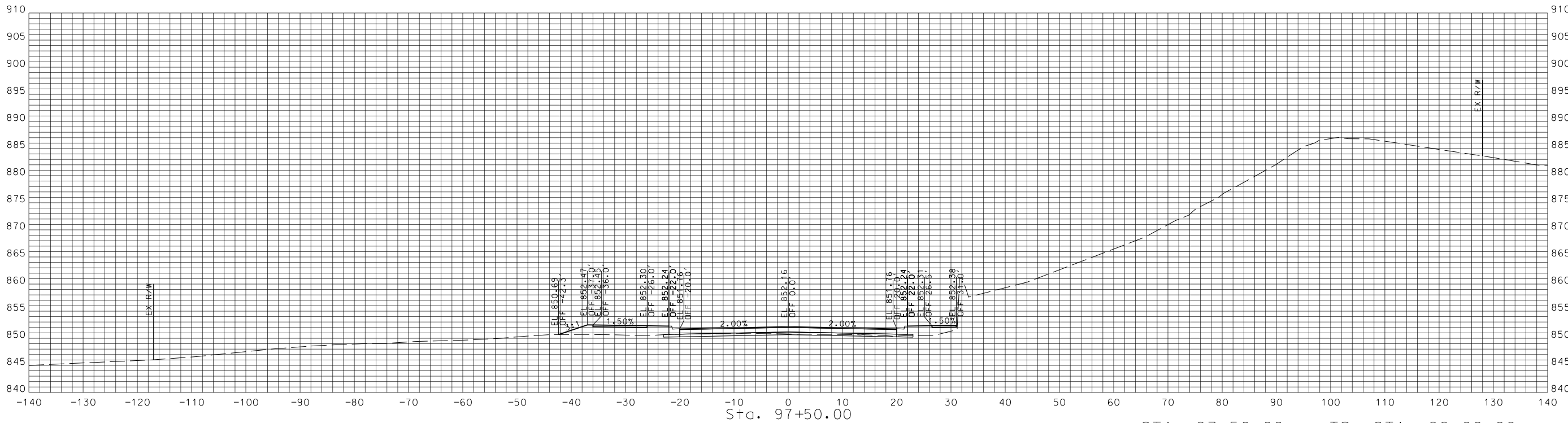
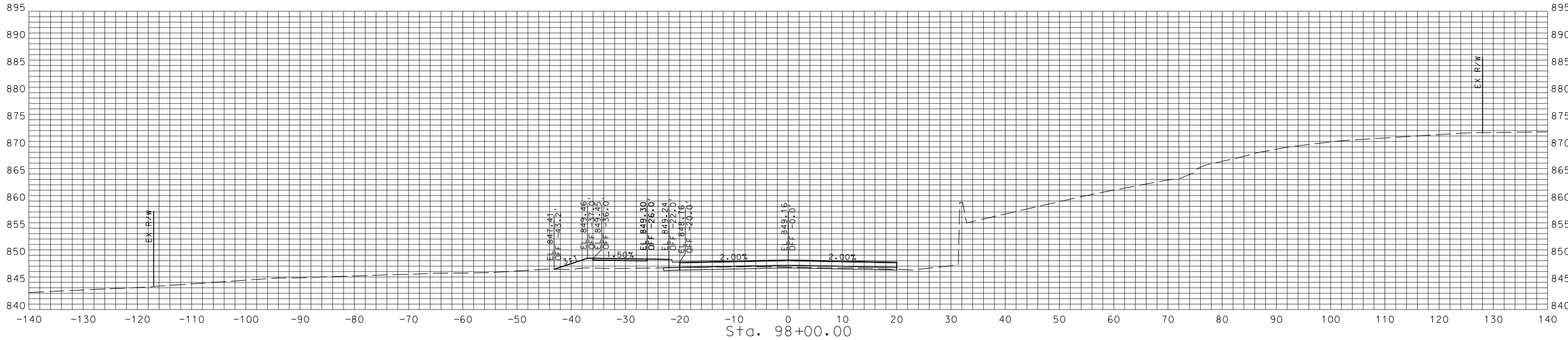
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

79 OF 101



STA. 97+50.00 TO STA. 98+00.00



DATE PREPARED
10/23/2018

NO.	APPD.	BY	DATE

NO.	APPD.	BY	DATE

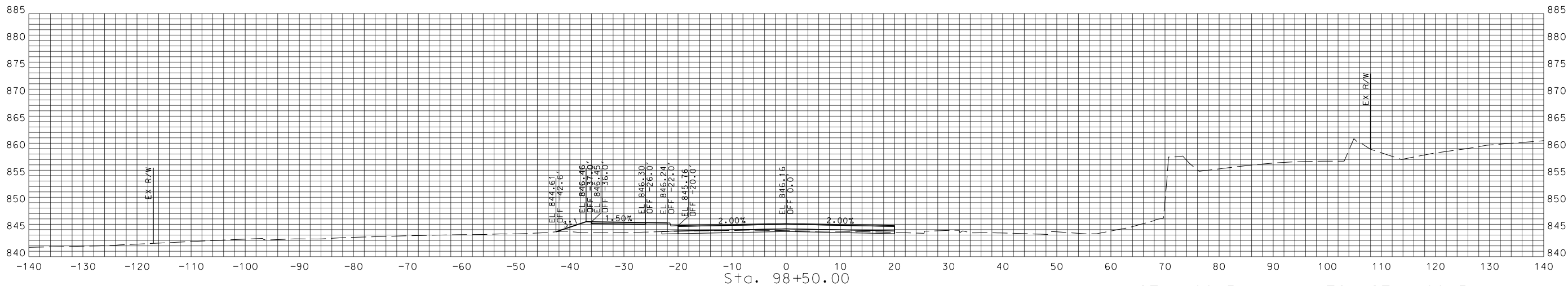
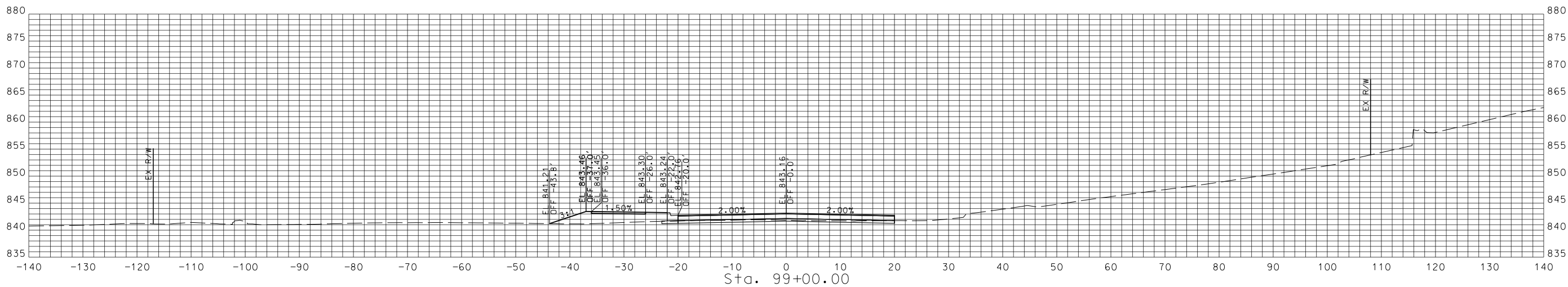
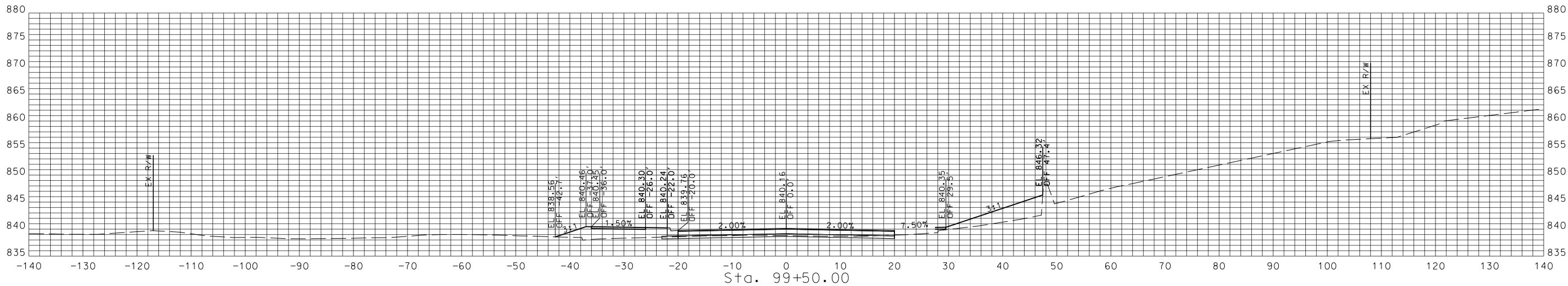
TREKK
DESIGN GROUP, LLC
1411 E 104th St
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Tel (816) 874-4655
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MO St. Cert. of Authority: 2002010300
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
82 OF 101



STA. 98+50.00 TO STA. 99+50.00



DATE PREPARED
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MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

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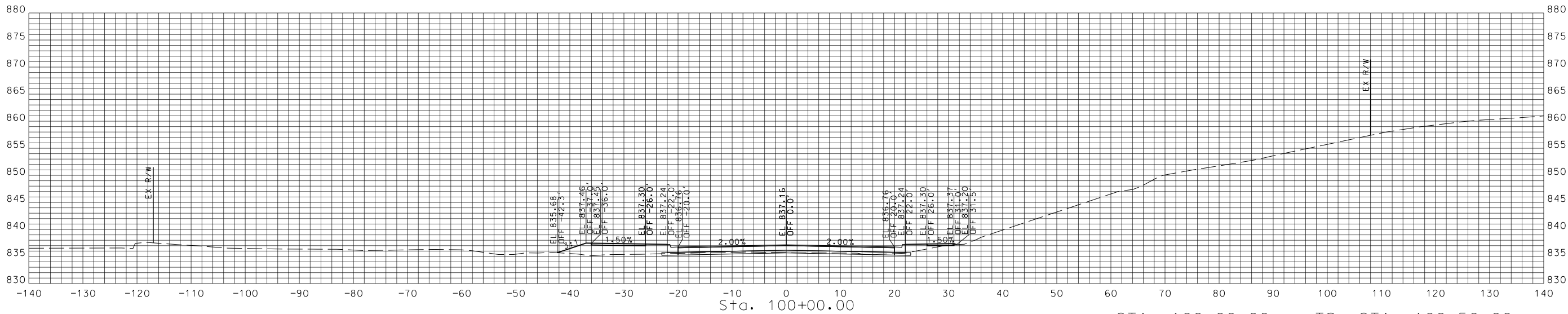
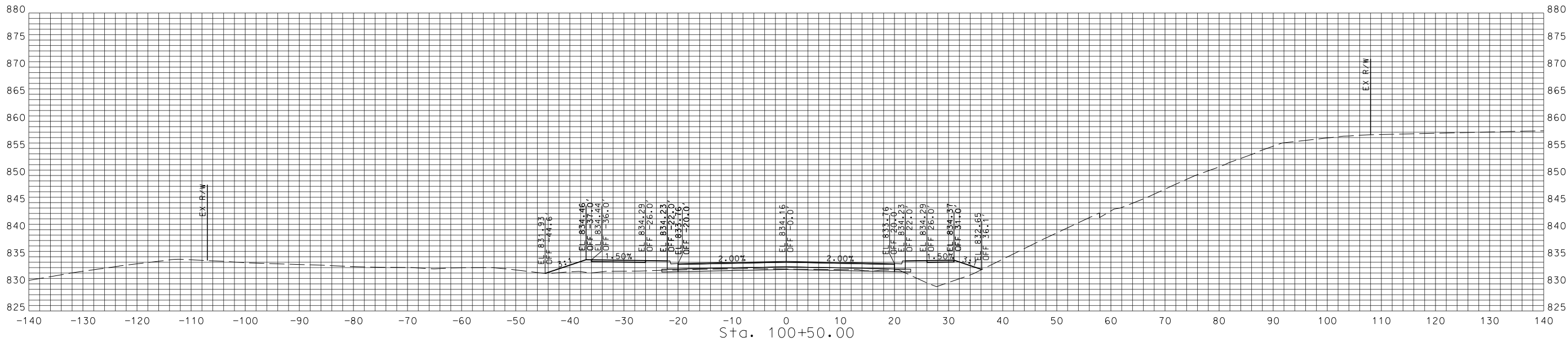
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

83 OF 101



STA. 100+00.00 TO STA. 100+50.00



DATE PREPARED
10/23/2018

NO.	APPD.	BY	DATE	REVISIONS

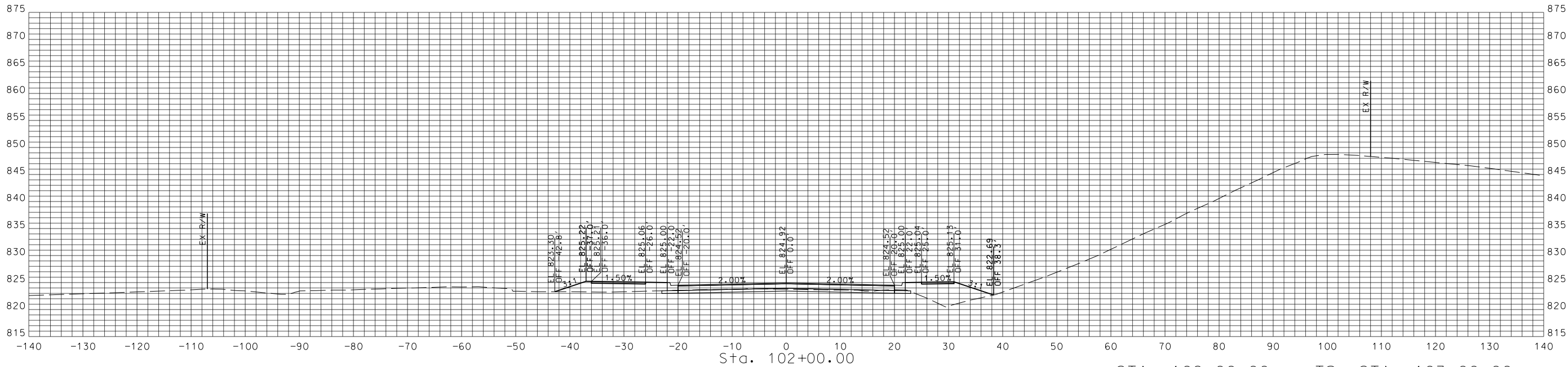
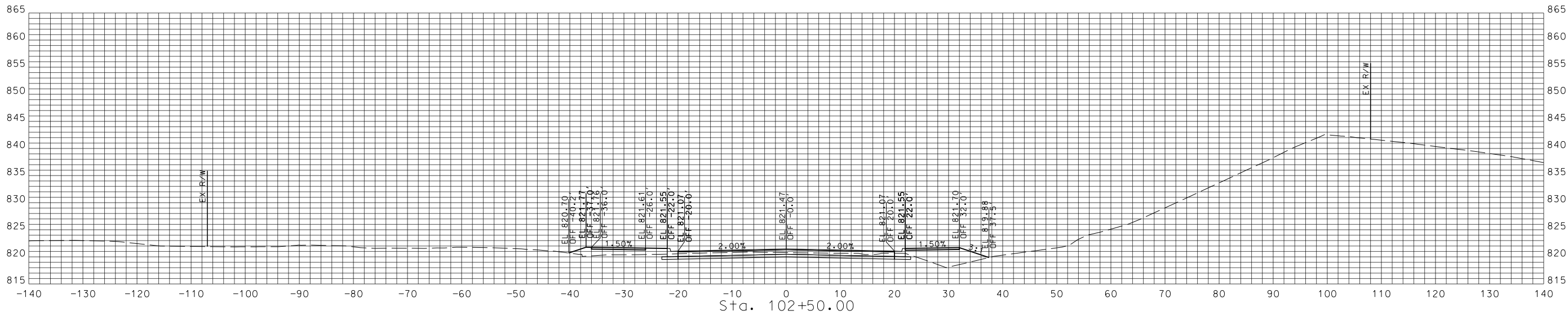
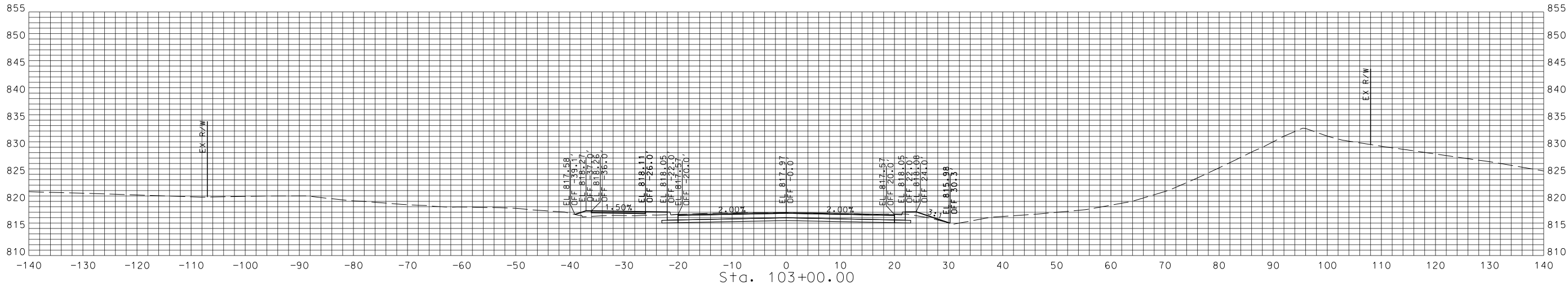
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
SCALE:
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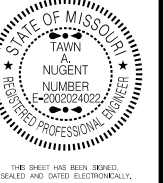
NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
84 OF 101



STA. 102+00.00 TO STA. 103+00.00



DATE PREPARED
10/23/2018

NO.	APPD.	BY	DATE

NO.	APPD.	BY	DATE

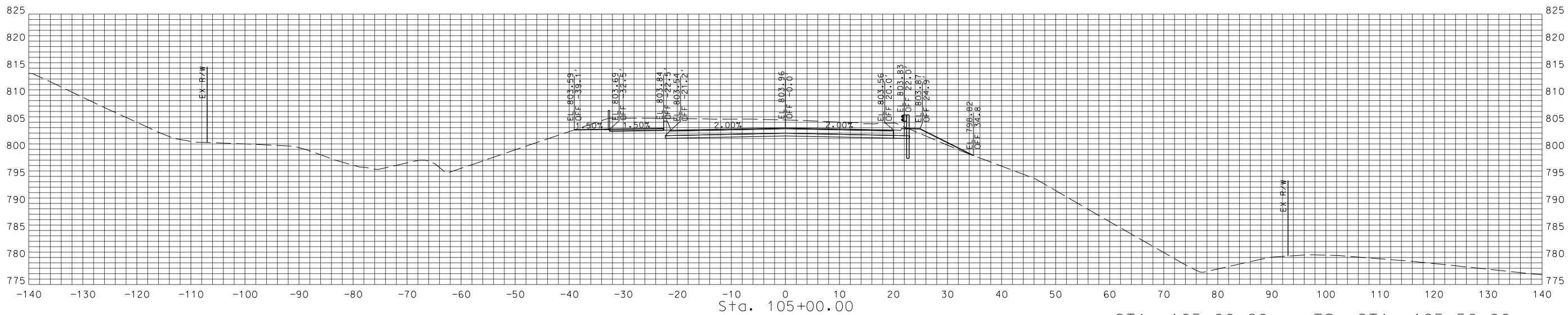
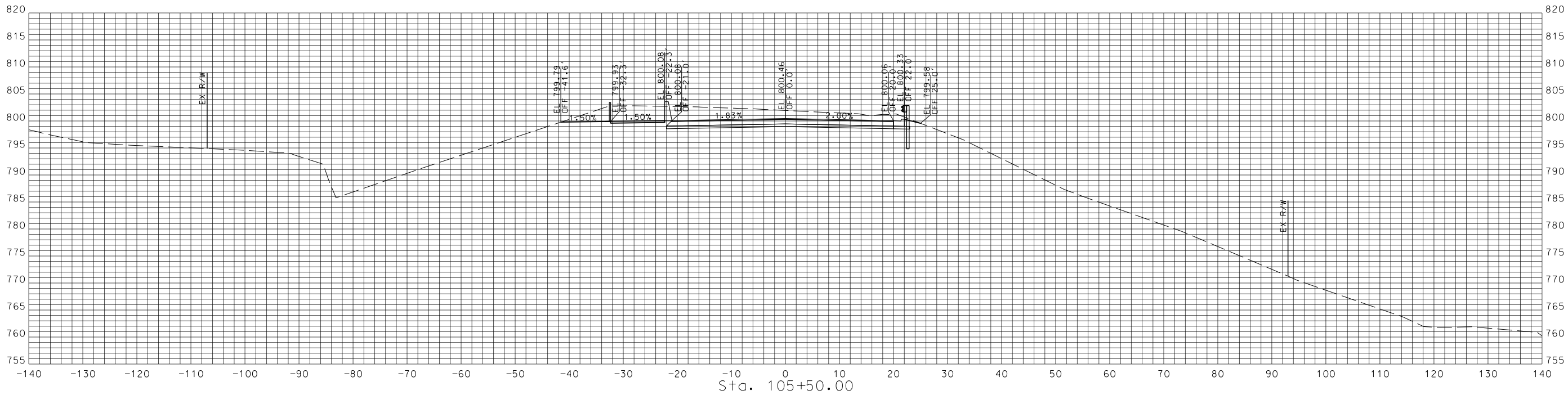
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

MO St. Cert. of Authority: 2002010300
PROJ. NO.: 89008573
SCALE:
DRAWN BY: WRH
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
86 OF 101



STA. 105+00.00 TO STA. 105+50.00



DATE PREPARED
10/23/2018

REVISIONS				
NO.	APPD. BY	DATE		

NO.	APPD. BY	DATE

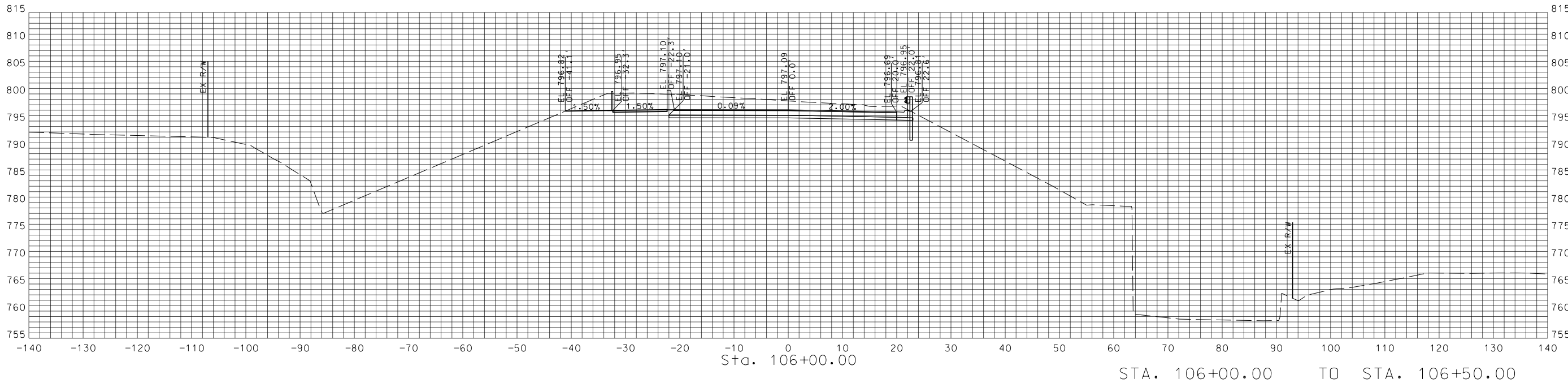
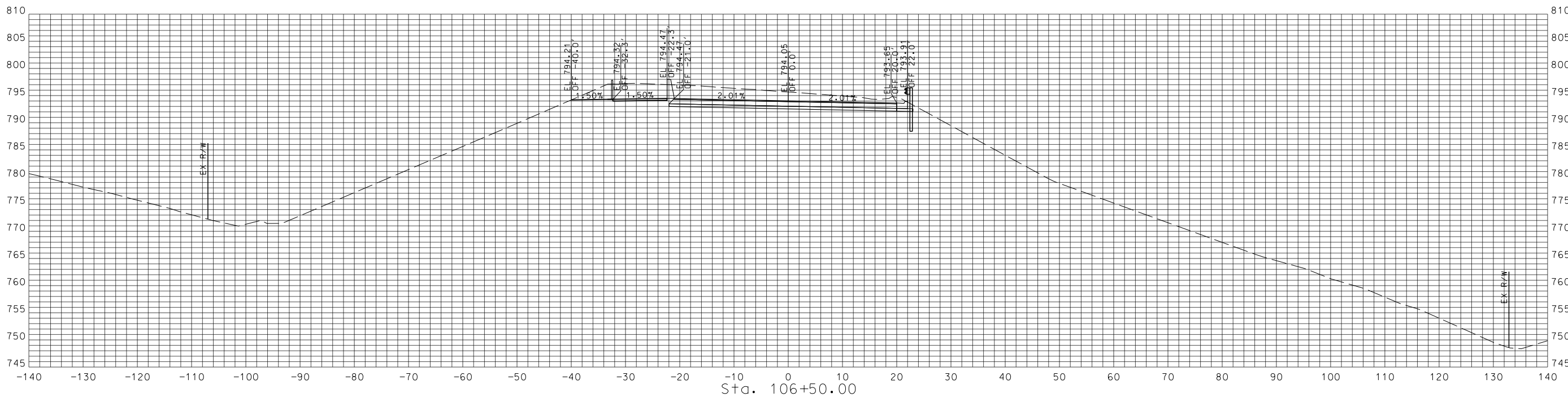
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
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MO St. Cert. of Authority: 2002010300
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
88 OF 101



STA. 106+00.00 TO STA. 106+50.00

STATE OF MISSOURI

A TOWN

NUGENT

NUMBER

E-2002024022

REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
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DATE PREPARED
10/23/2018

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DESIGN GROUP, LLC

1411 E 104th St
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Tel (816) 874-4655
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MO St. Cert. of Authority: 2002010300

PROJ. NO.: 89008573

SCALE:

DRAWN BY: WRH

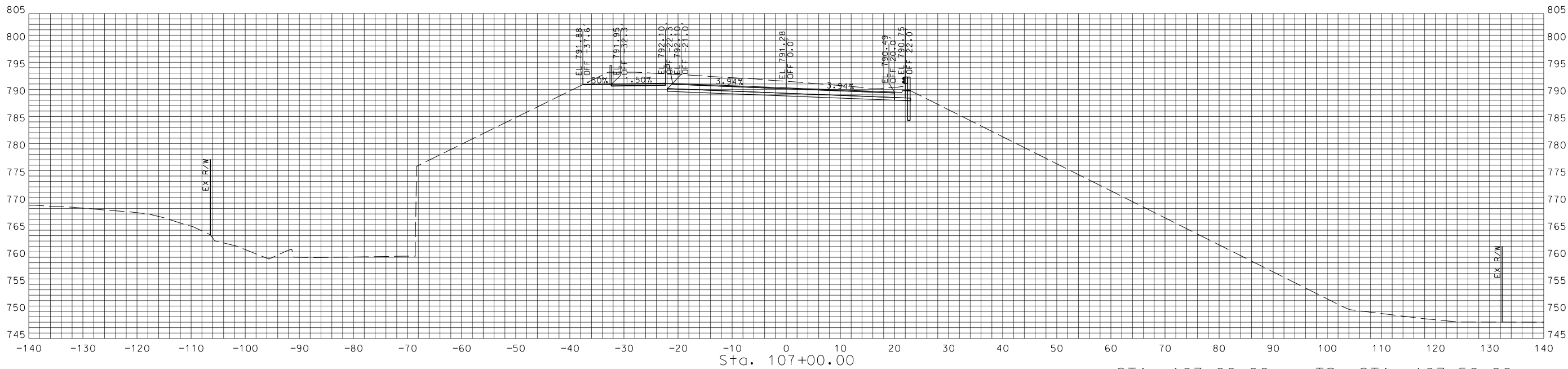
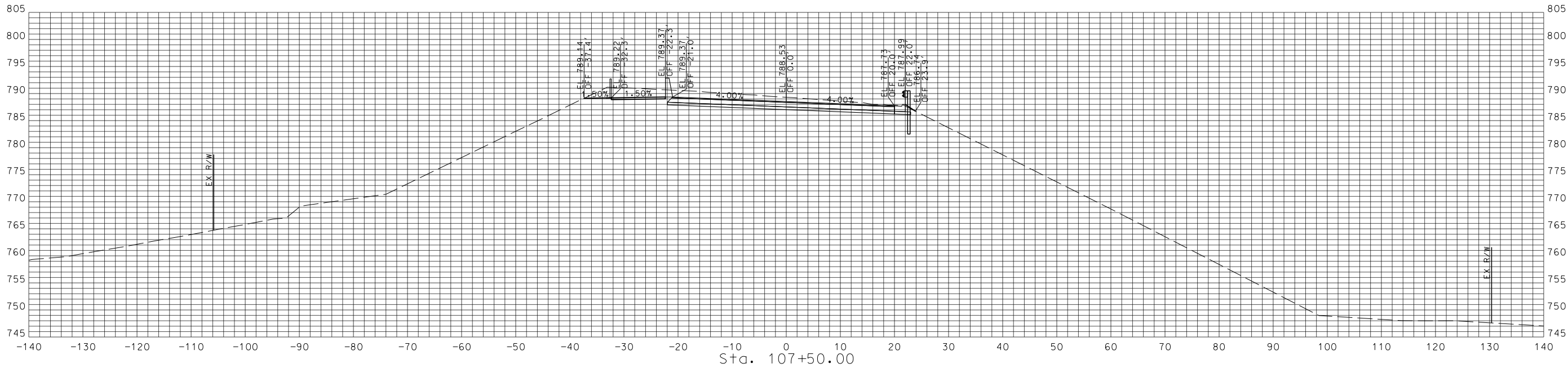
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

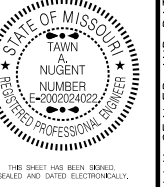
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
89 OF 101

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STA. 107+00.00 TO STA. 107+50.00



DATE PREPARED
10/23/2018

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DESIGN GROUP, LLC
1411 E 104th St
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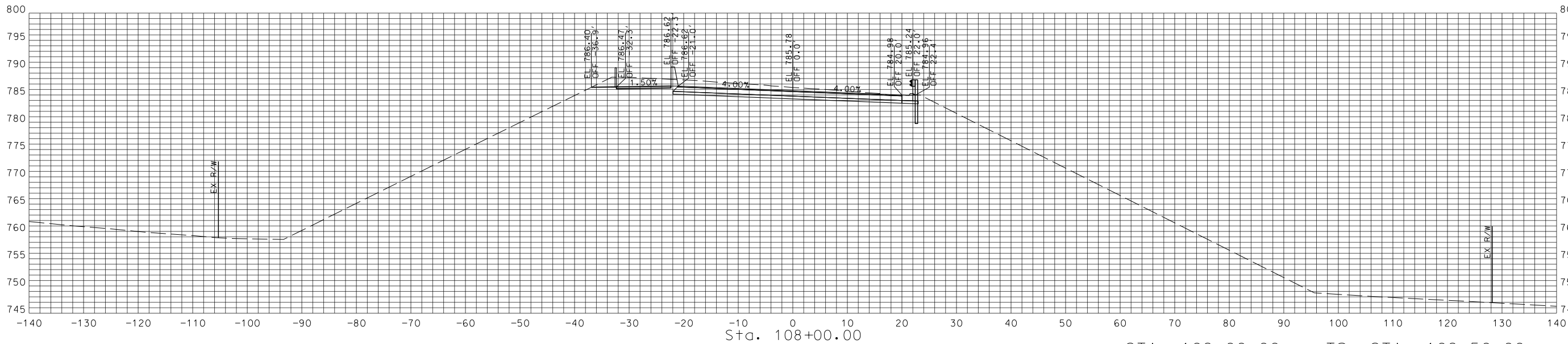
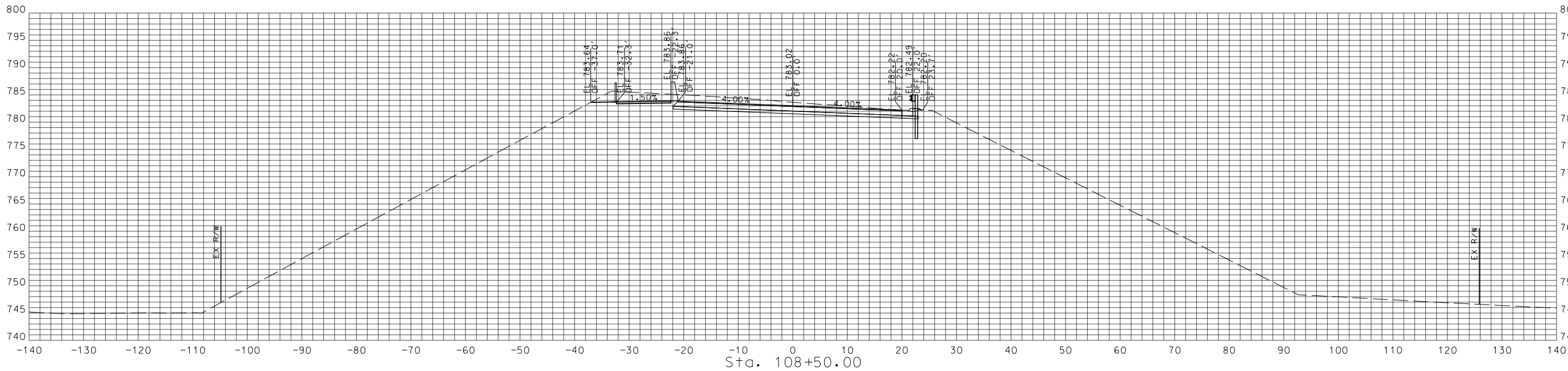
MO St. Cert. of Authority: 2002010300
PROJ. NO: 89008573
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

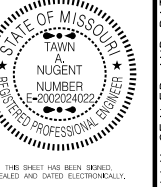
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

90 OF 101



STA. 108+00.00 TO STA. 108+50.00



DATE PREPARED
10/23/2018

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Tel (816) 874-4655
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MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

DRAWN BY: WRH

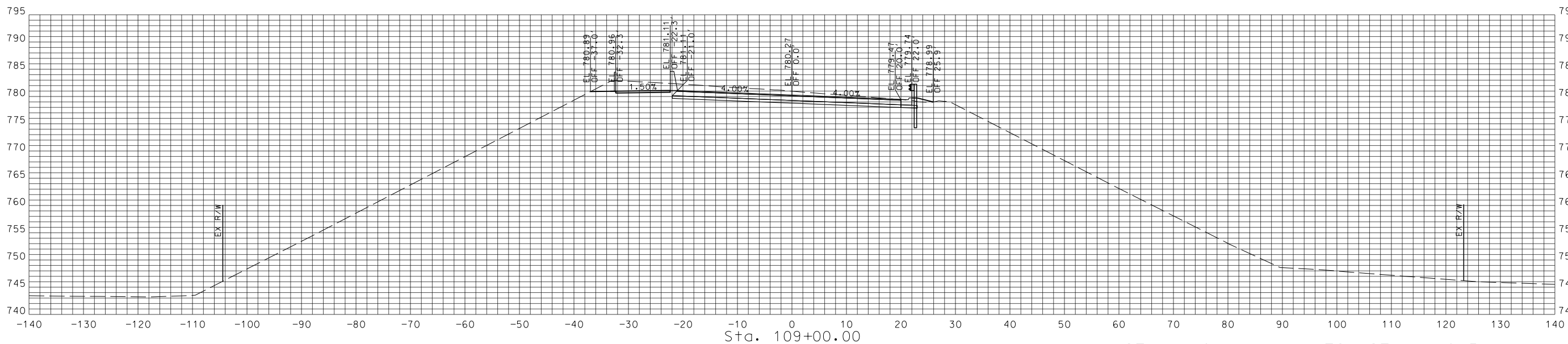
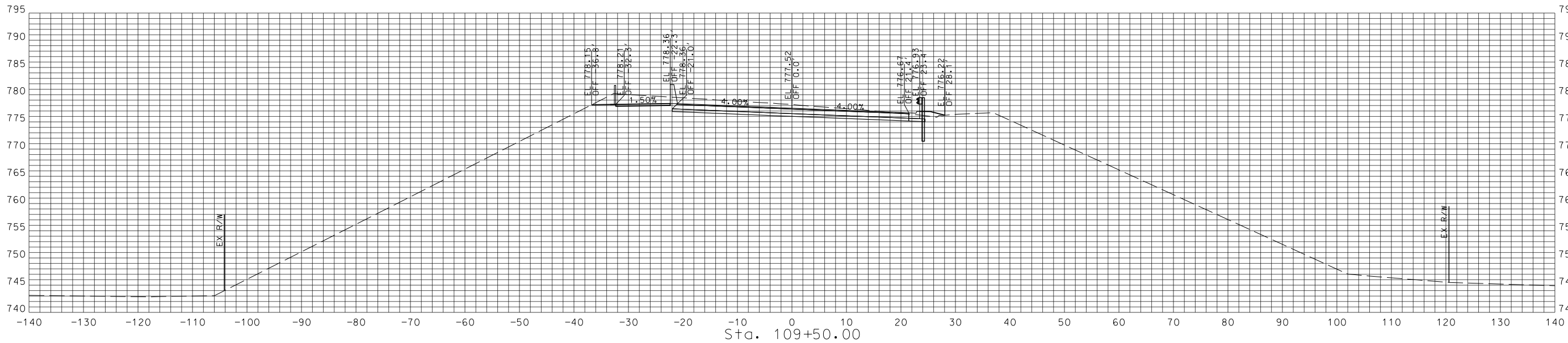
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

91 OF 101



STA. 109+00.00 TO STA. 109+50.00



DATE PREPARED
10/23/2018

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MO St. Cert. of Authority: 2002010300

PROJ. NO: 89008573

SCALE:

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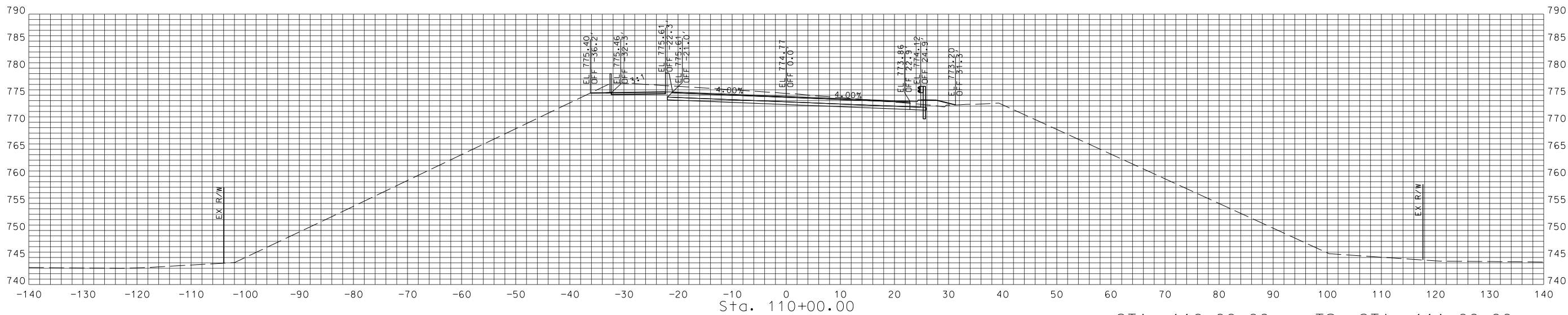
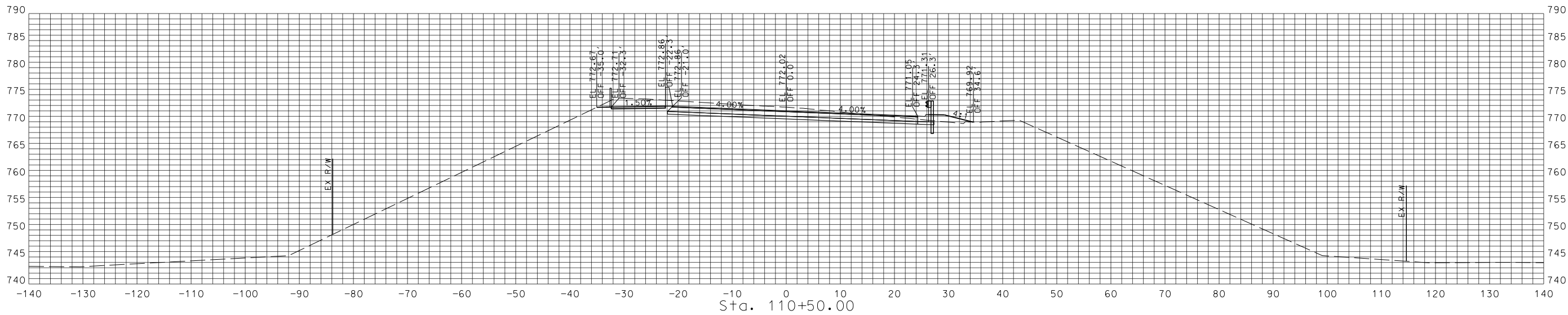
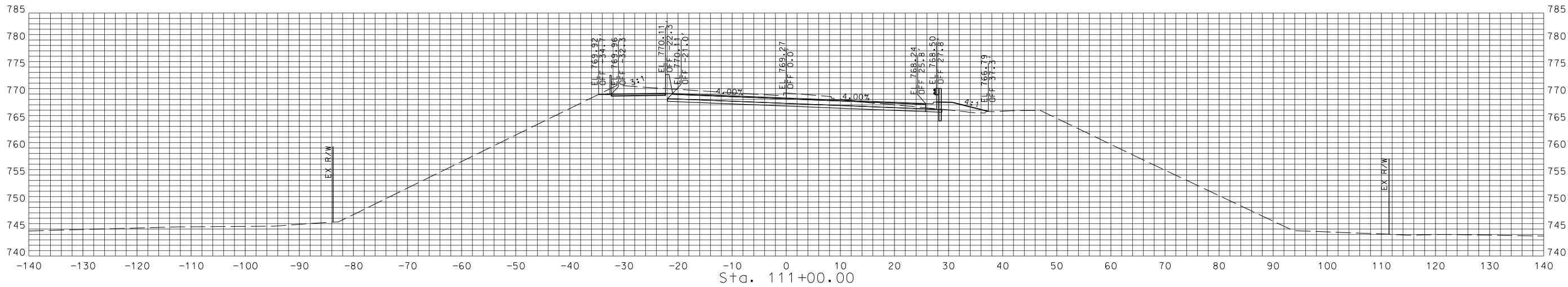
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NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

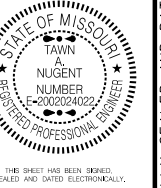
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

92 OF 101



STA. 110+00.00 TO STA. 111+00.00



DATE PREPARED
10/23/2018

REVISIONS

DATE

BY

NO.

APPD.

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1411 E 104th St
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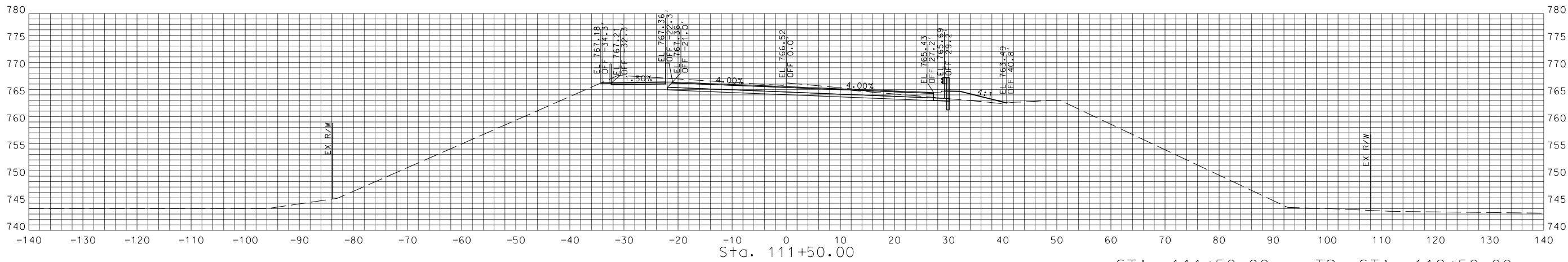
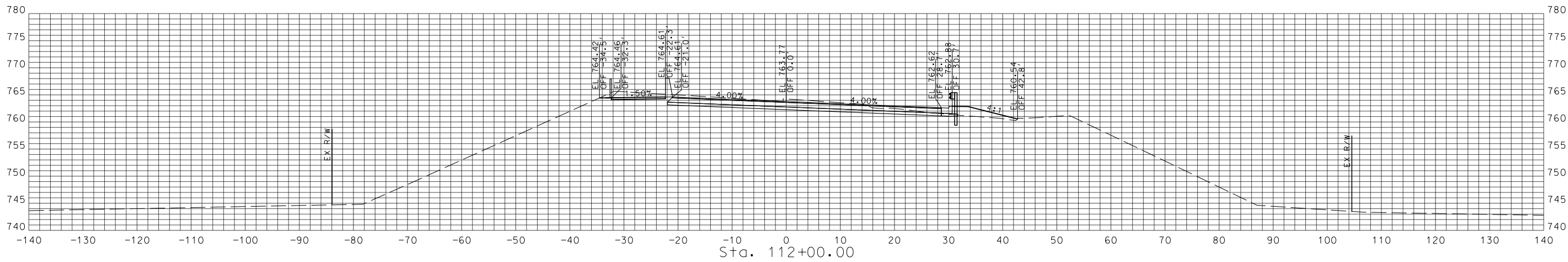
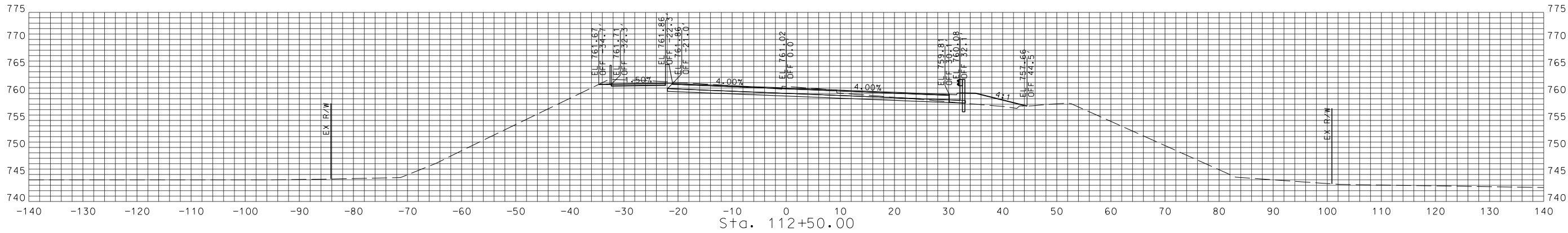
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

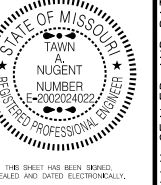
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

93 OF 101



STA. 111+50.00 TO STA. 112+50.00



DATE PREPARED
10/23/2018

REVISIONS

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DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
Fax (816) 874-4675

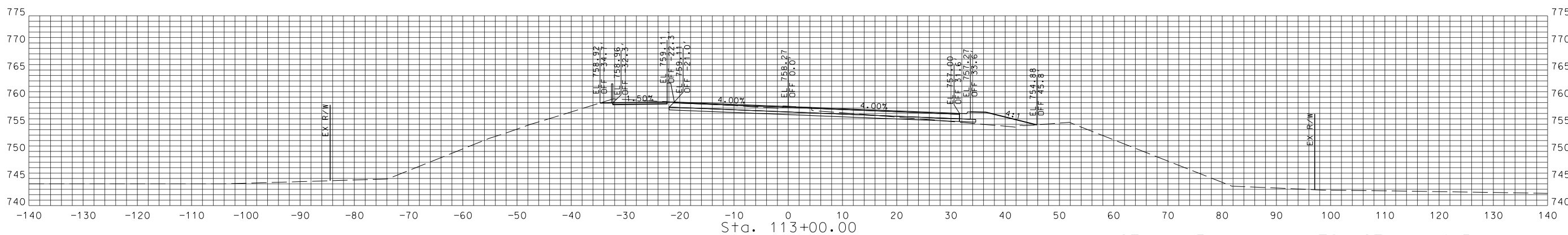
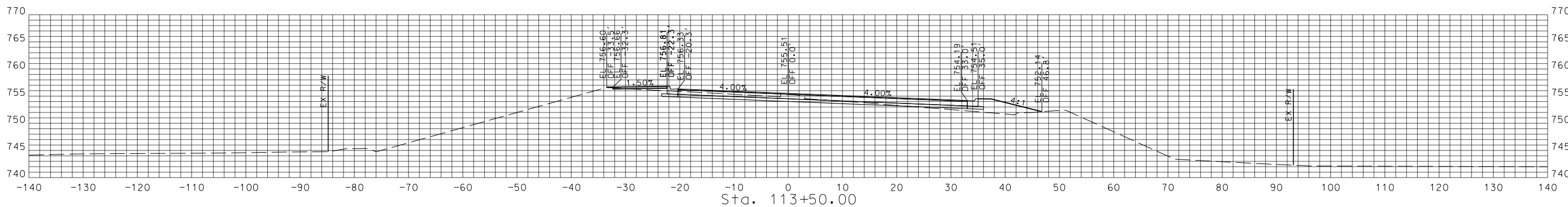
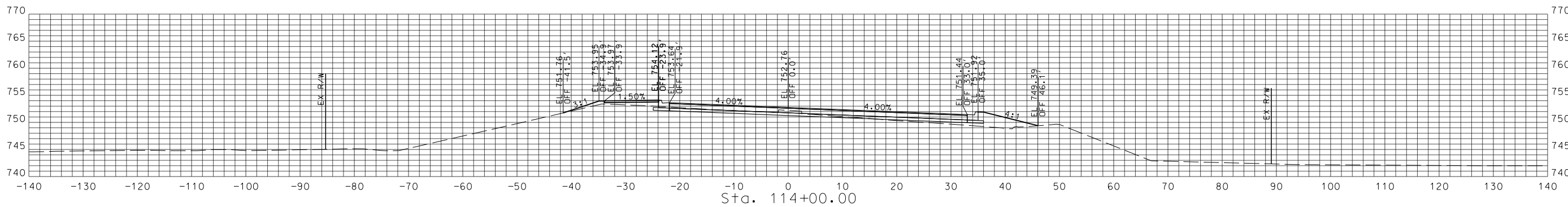
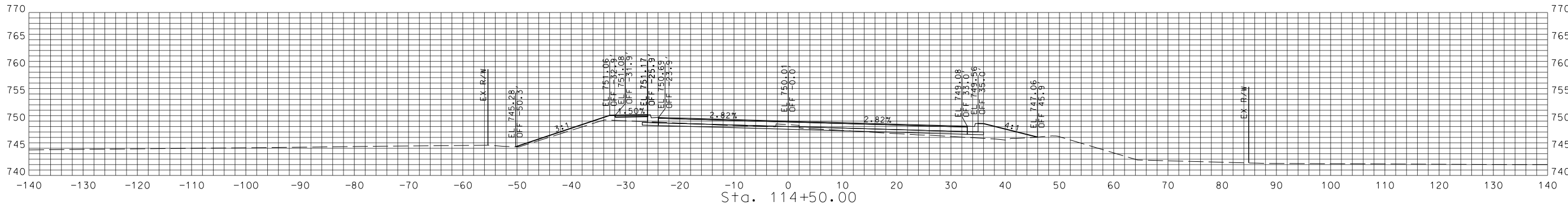
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PROJ NO: 89008573
SCALE:
DRAWN BY: WRH
CHECKED BY: TAN

NORTH OAK TRAFFICWAY -
NE INDIANOLA DR. TO E 32ND AVE.
DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

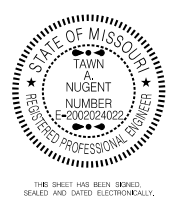
NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.

94 OF 101



STA. 113+00.00 TO STA. 114+50.00



DATE PREPARED
10/23/2018

NO.	APPD. BY	DATE

NO.	APPD. BY	DATE

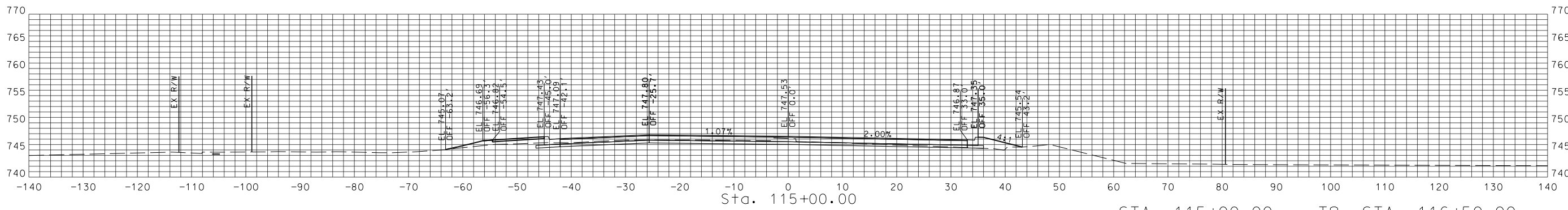
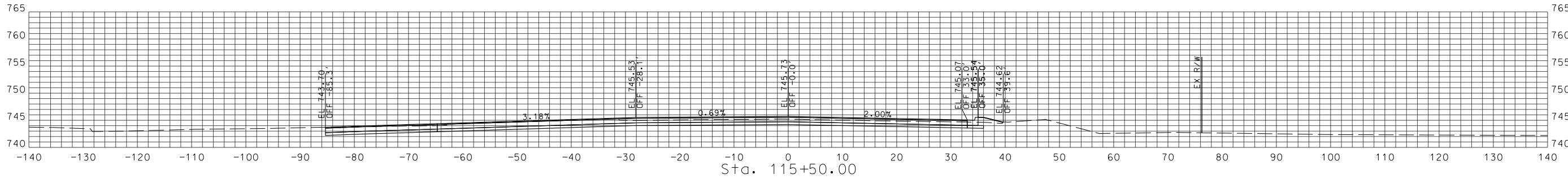
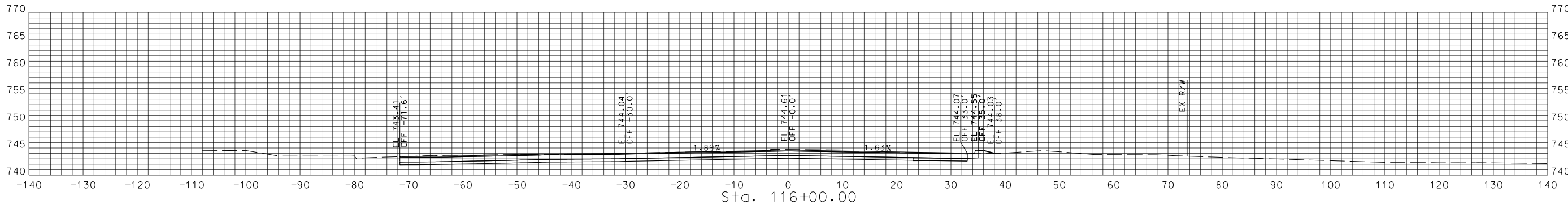
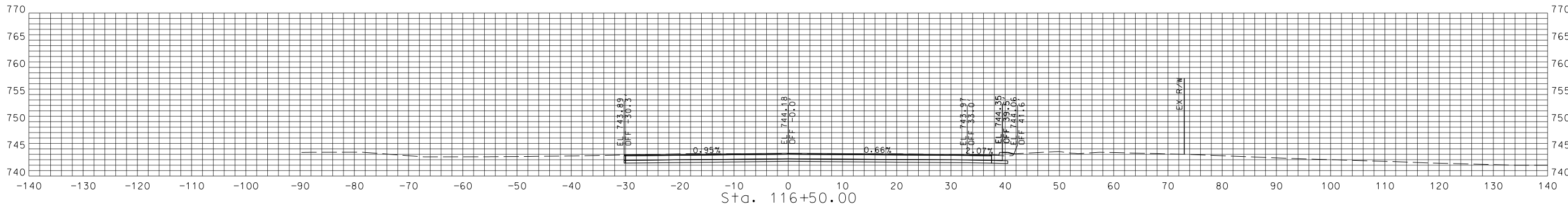
TREKK
DESIGN GROUP, LLC
1411 E 104th St
Kansas City, MO 64131
Tel (816) 874-4655
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MO St. Cert. of Authority: 2002010300
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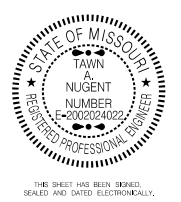
NORTH OAK TRAFFICWAY -
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
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NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
95 OF 101



STA. 115+00.00 TO STA. 116+50.00



DATE PREPARED
10/23/2018

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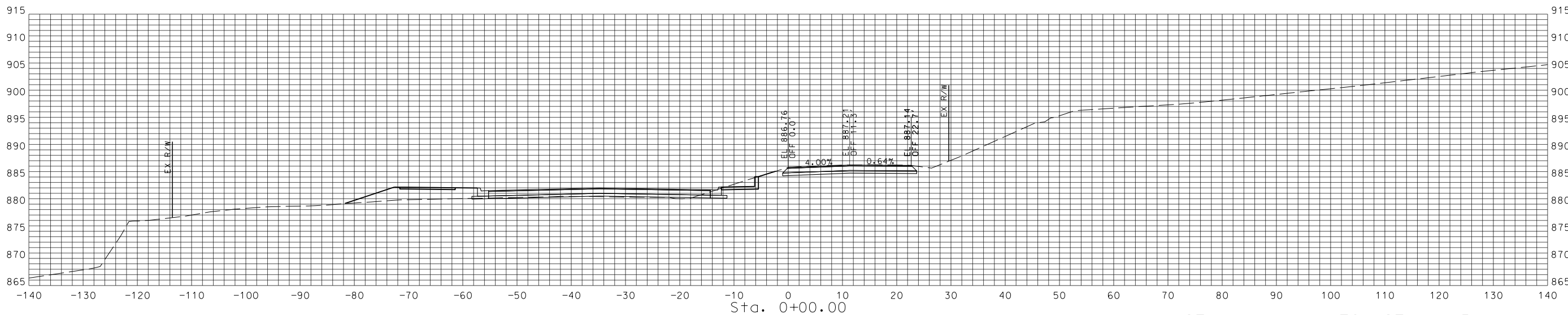
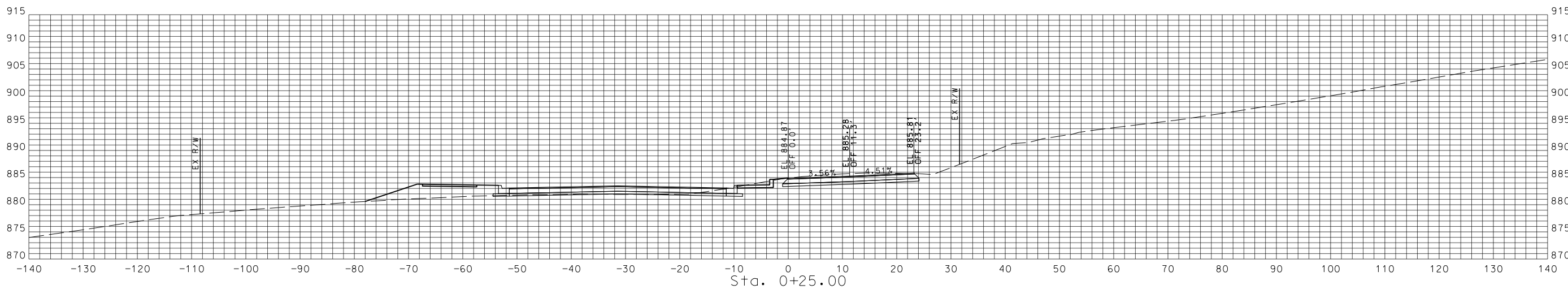
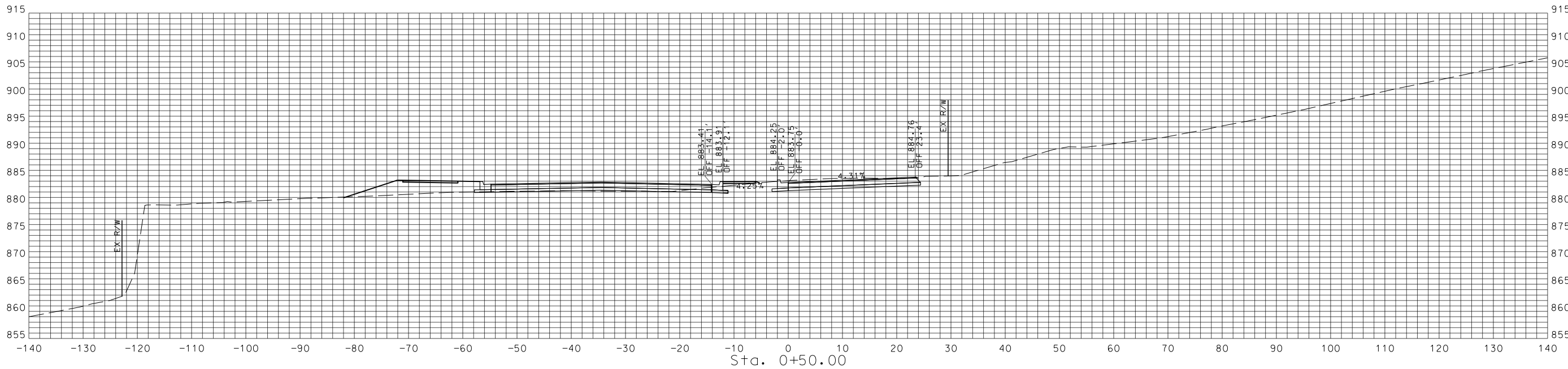
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MO St. Cert. of Authority: 2002010300
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NORTH OAK TRAFFICWAY
CROSS SECTIONS

SHEET NO.
96 OF 101



STA. 0+00.00 TO STA. 0+50.00



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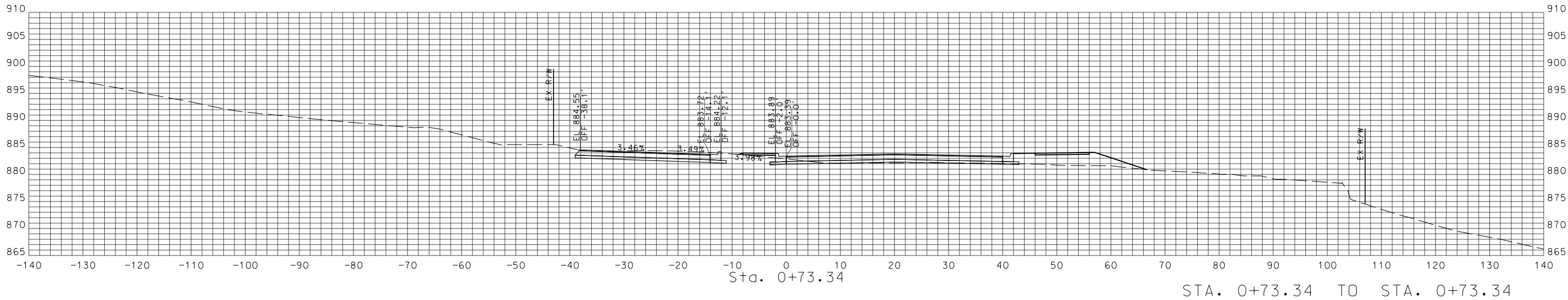
MO St. Cert. of Authority: 2002010300
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NE HILL STREET
CROSS SECTIONS

SHEET NO.

98 OF 101



DATE PREPARED
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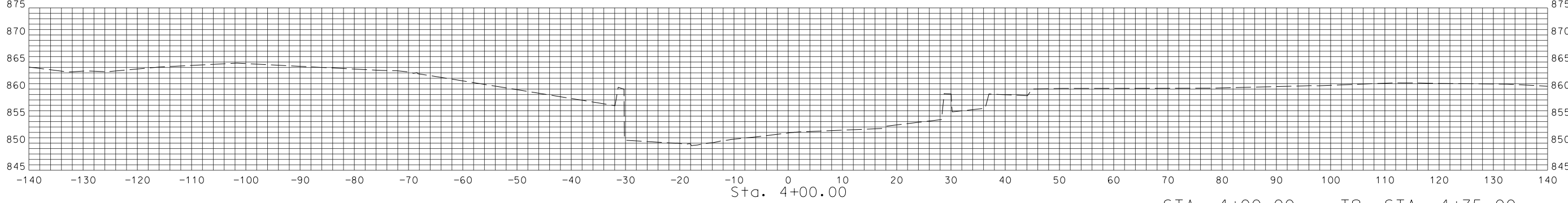
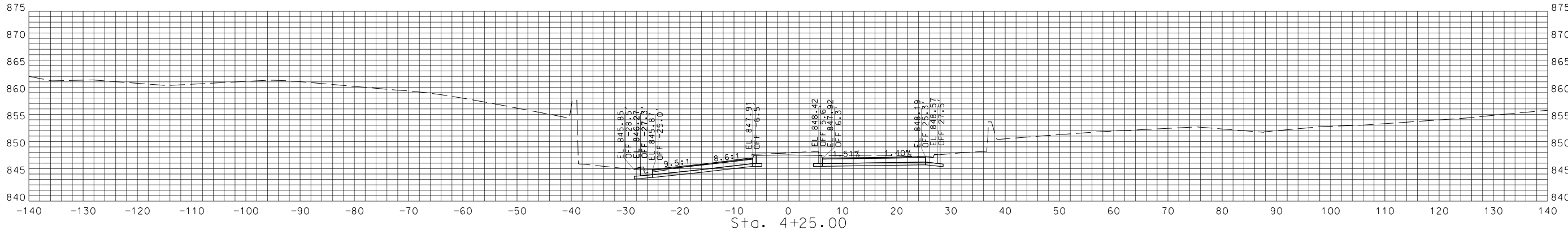
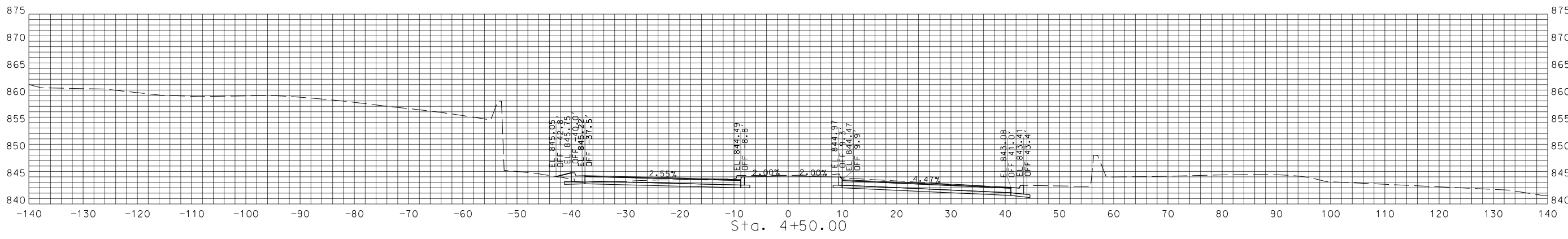
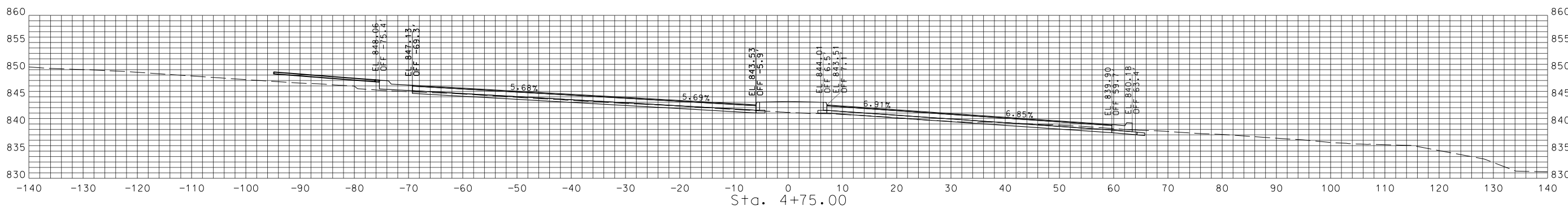
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DESIGN BUILD PACKAGE
ROAD RECONSTRUCTION
PROJECT NO. 89008573
For the City of Kansas City,
Clay County, Missouri

NE HILL STREET
CROSS SECTIONS

SHEET NO.
99 OF 101



STA. 4+00.00 TO STA. 4+75.00

STATE OF MISSOURI
A
TOWN
NUGENT
NUMBER
E-2002024022
REGISTERED PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/23/2018

REVISIONS

NO. APPD. BY DATE

TRKK
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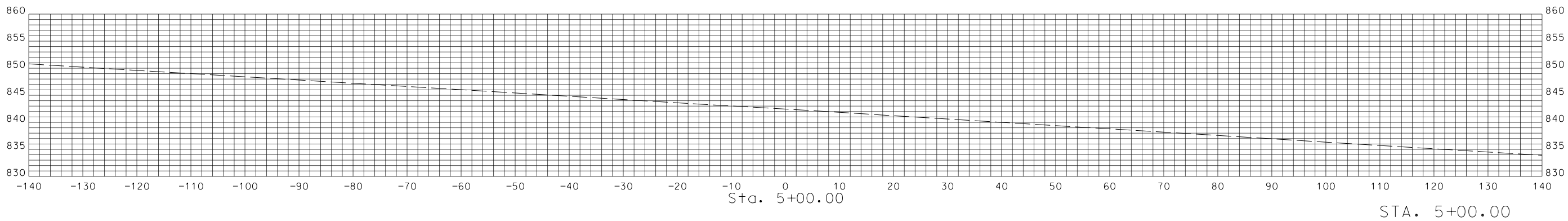
NORTH OAK TRAFFICWAY -
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Clay County, Missouri

WATERWORKS PARK DRIVE
CROSS SECTIONS

SHEET NO.
100 OF 101

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

18-104_XS_WWPark.dgn 8:03:20 AM 10/23/2018



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WATERWORKS PARK DRIVE
CROSS SECTIONS

SHEET NO.
101 OF 101