

BERRIEN COUNTY ROAD DEPARTMENT

LAKESIDE ROAD, PIER ROAD, AND W EAST ROAD IMPROVEMENTS

MELANIE K. STANAGE
6201065450

PROJECT NAME:
LAKESIDE ROAD, PIER ROAD, AND W EAST ROAD IMPROVEMENTS

BERRIEN COUNTY ROAD DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022

NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE PLACING OF PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS AMENDED.

IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, ALL CONTRACTORS SHALL CALL MISS DIG @ 811 OR 800-482-7171 FOR PROTECTION OF UNDERGROUND UTILITIES A MINIMUM OF THREE FULL WORKING DAYS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO BEGINNING EACH EXCAVATION IN ANY AREA. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

TRAFFIC DATA LAKESIDE ROAD

DESIGN SPEED	=	25 MPH
POSTED SPEED	=	25 MPH
ADT (2024)	=	N/A
ADT (2044)	=	N/A
DHV (2044)	=	N/A
% TRUCKS (2024 & 2044)	=	N/A

TRAFFIC DATA PIER ROAD

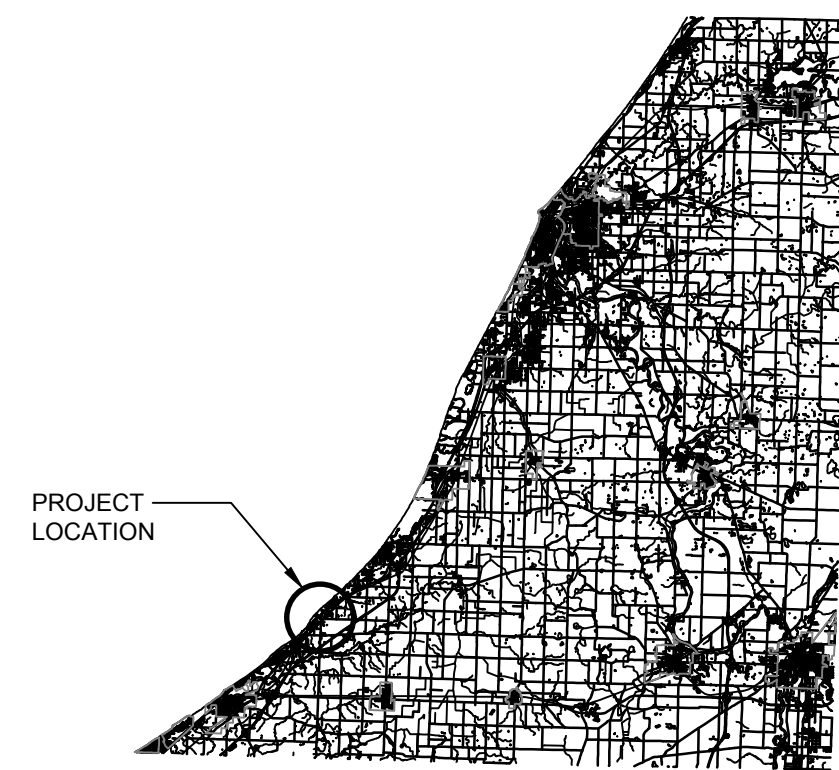
DESIGN SPEED	=	25 MPH
POSTED SPEED	=	25 MPH
ADT (2024)	=	N/A
ADT (2039)	=	N/A
DHV (2039)	=	N/A
% TRUCKS (2024 & 2039)	=	N/A

TRAFFIC DATA W EAST ROAD

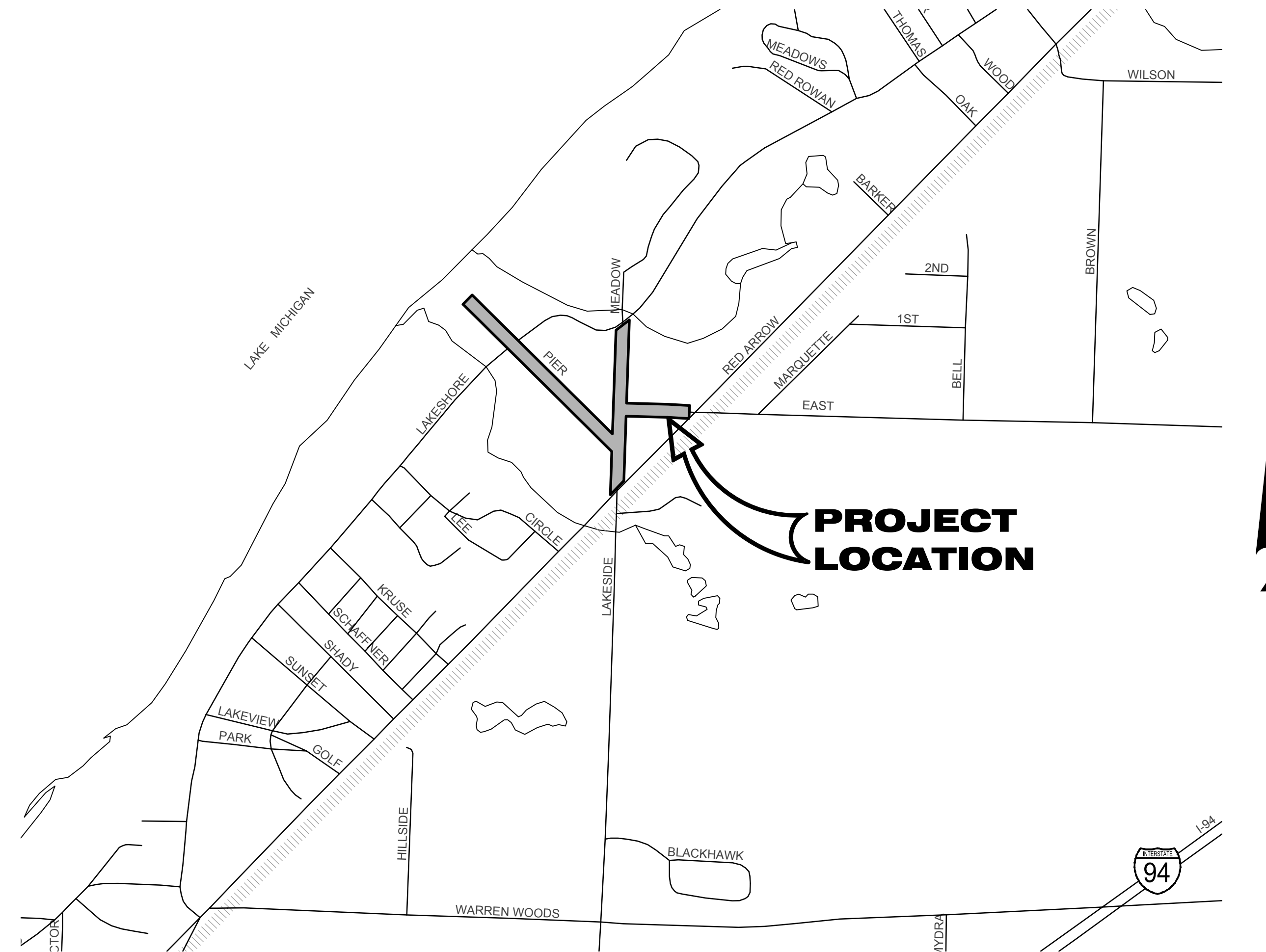
DESIGN SPEED	=	25 MPH
POSTED SPEED	=	25 MPH
ADT (2024)	=	N/A
ADT (2039)	=	N/A
DHV (2039)	=	N/A
% TRUCKS (2024 & 2039)	=	N/A

INDEX OF PLANS

01	COVER SHEET
02	NOTES, LEGEND, & MISC DETAILS
03	TYPICAL SECTIONS
04	PLAN AND PROFILE - LAKESIDE ROAD - STA. 10+50 (P.O.B.) TO STA. 17+00
05	PLAN AND PROFILE - LAKESIDE ROAD - STA. 17+00 TO STA. 23+00 (P.O.E.)
06	PLAN AND PROFILE - PIER ROAD - STA. 30+25 (P.O.B.) TO STA. 37+00
07	PLAN AND PROFILE - PIER ROAD - STA. 37+00 TO STA. 44+00
08	PLAN AND PROFILE - PIER ROAD - STA. 44+00 TO STA. 46+00 (P.O.E.)
09	PLAN AND PROFILE - W EAST ROAD - STA. 50+75 (P.O.B.) TO STA. 55+00 (P.O.E.)
10	PLAN AND PROFILE - PIER ROAD - WATERMAIN REPLACEMENT
11	WATERMAIN DETAILS
12	PAVEMENT MARKING AND PERMANENT SIGNAGE - LAKESIDE ROAD AND W EAST ROAD
13	PAVEMENT MARKING AND PERMANENT SIGNAGE - PIER ROAD
14	ELECTRICAL PLANS
15	ELECTRICAL DETAILS
16	GRADING DETAILS
17	CROSS SECTIONS - LAKESIDE ROAD - STA. 11+50 TO STA. 17+50
18	CROSS SECTIONS - LAKESIDE ROAD - STA. 19+00 TO STA. 22+50
19	CROSS SECTIONS - PIER ROAD - STA. 30+50 TO STA. 35+00
20	CROSS SECTIONS - PIER ROAD - STA. 36+50 TO STA. 42+00
21	CROSS SECTIONS - PIER ROAD - STA. 42+50 TO STA. 46+00
22	CROSS SECTIONS - W EAST ROAD - STA. 51+00 TO STA. 55+00



BERRIEN COUNTY
VICINITY MAP
SCALE: NONE



PORTION OF LAKESIDE, MI
PROJECT LOCATION MAP
SCALE: NONE

UTILITIES

GAS	SEMCO ENERGY GAS CO 1000 BELL ROAD NILES, MI 49120 269.683.6810 x5689 ROB STAFFORD
ELECTRIC	INDIANA MICHIGAN POWER 52807 US 131 N THREE RIVERS, MI 49093 269.208.0057 BRANDON THOMAS
TELEPHONE	AT&T 1435 MILTON BENTON HARBOR, MI 49022 269.926.0232 CHRIS O'BRIEN
CABLE TELEVISION	COMCAST 1820 E MCKINLEY MISHAWAKA, IN 46545 847.789.1039 x71039 JAY CASTELLO
WATER	CHIKAMING TOWNSHIP 13535 RED ARROW HWY HARBERT, MI 9115 269.469.1676 JULIE SCHROEDER
SEWER	GRSD SEWER AUTHORITY 18031 KRUGER ROAD NEW BUFFALO, MI 49117 269.469.3434 JOSH TEETER
STORM SEWER	BERRIEN COUNTY DRAIN COMMISSION 701 MAIN STREET SAINT JOSEPH, MI 49085 269.983.7111 x8261 CHRISTOPHER QUATTRIN
"MISS DIG"	811

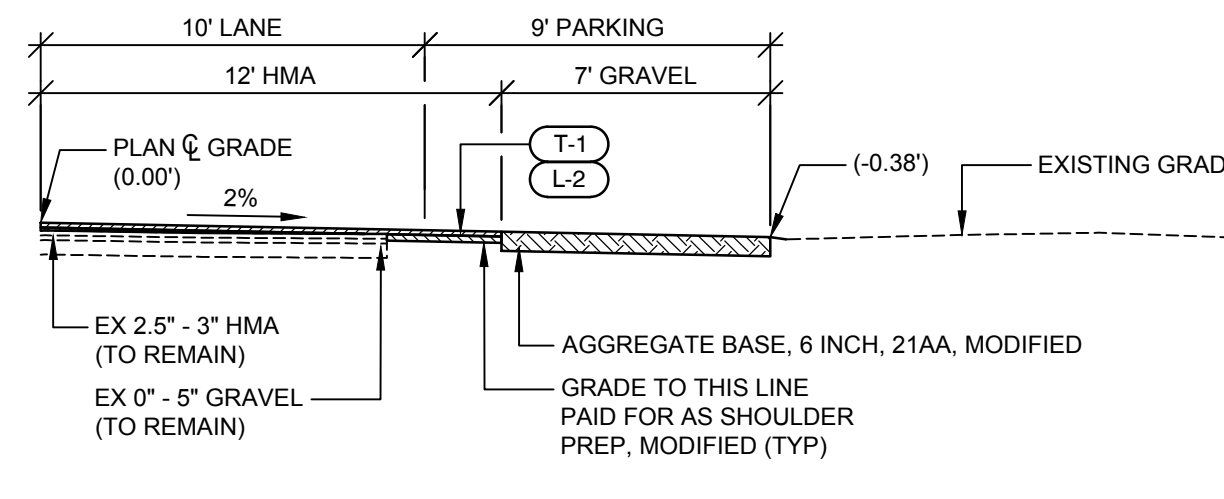
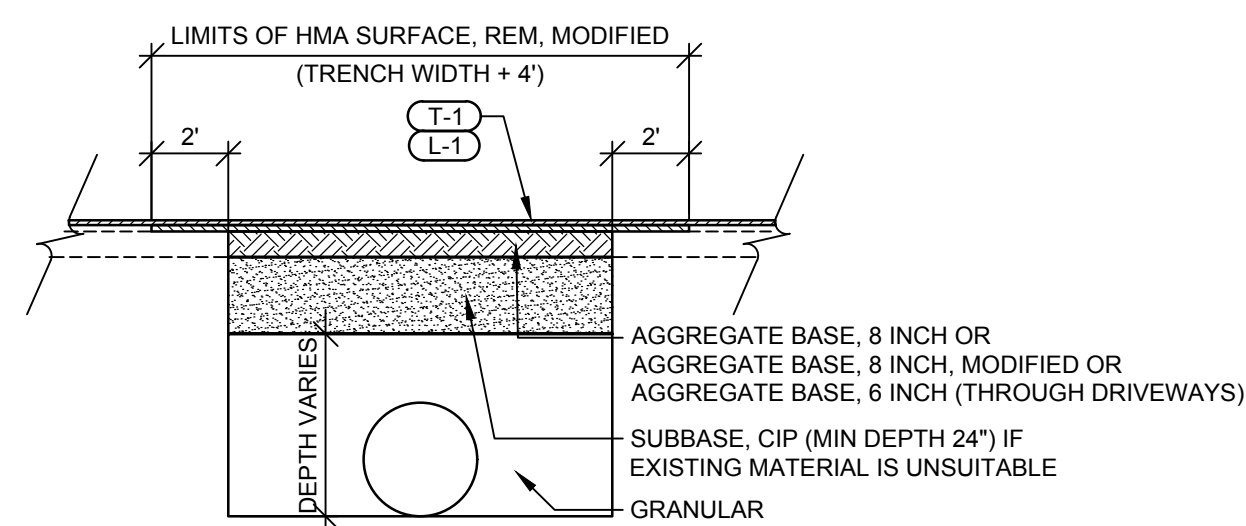
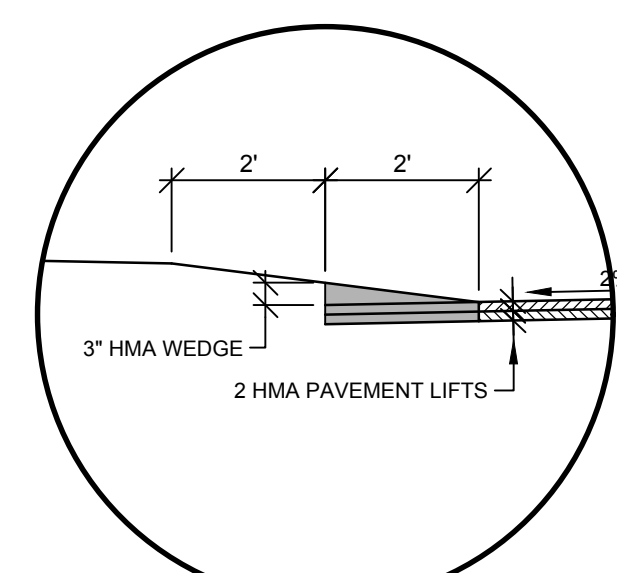
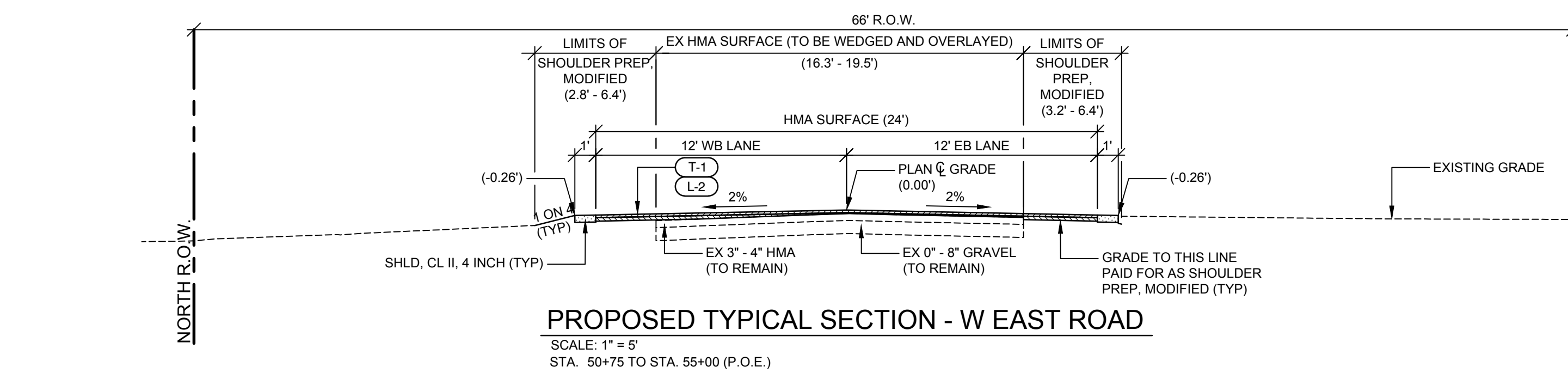
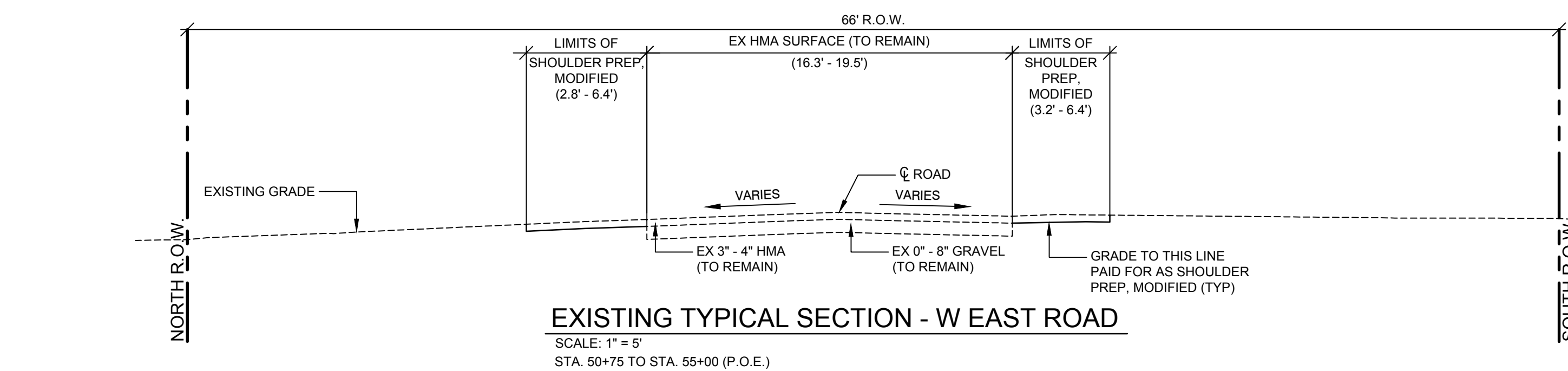
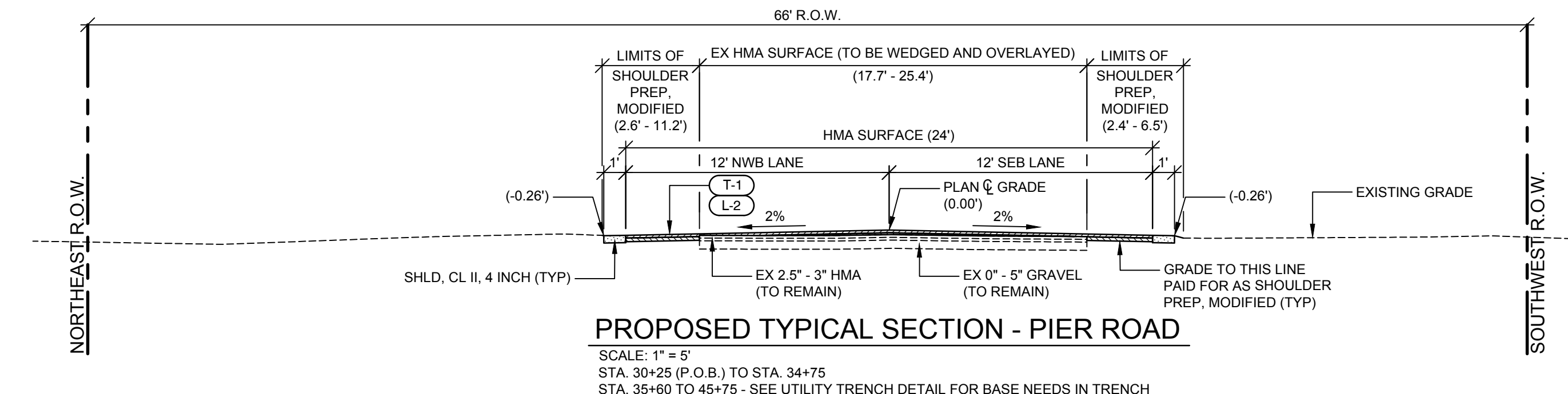
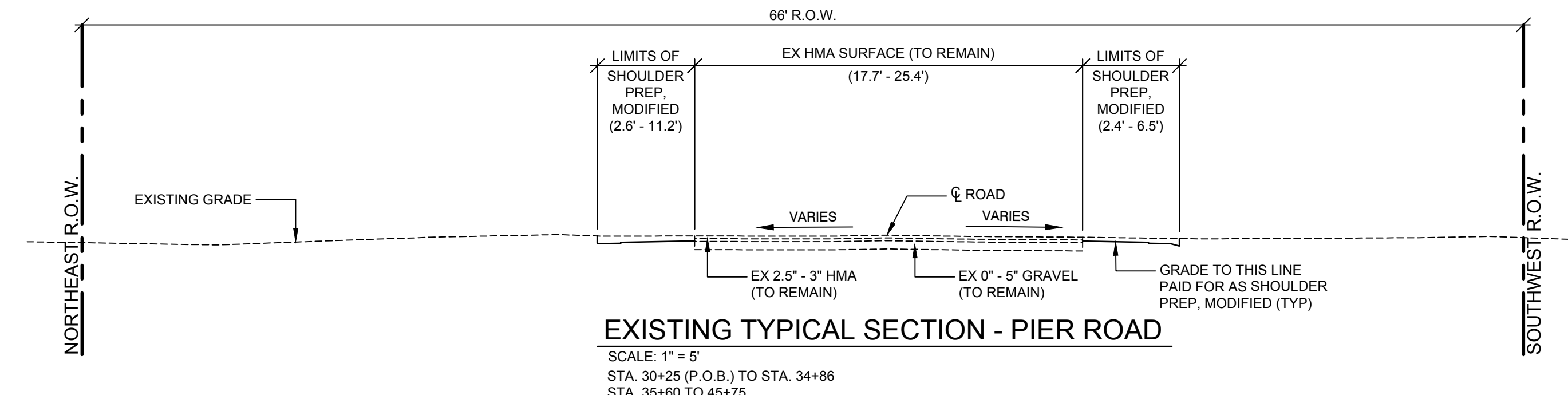
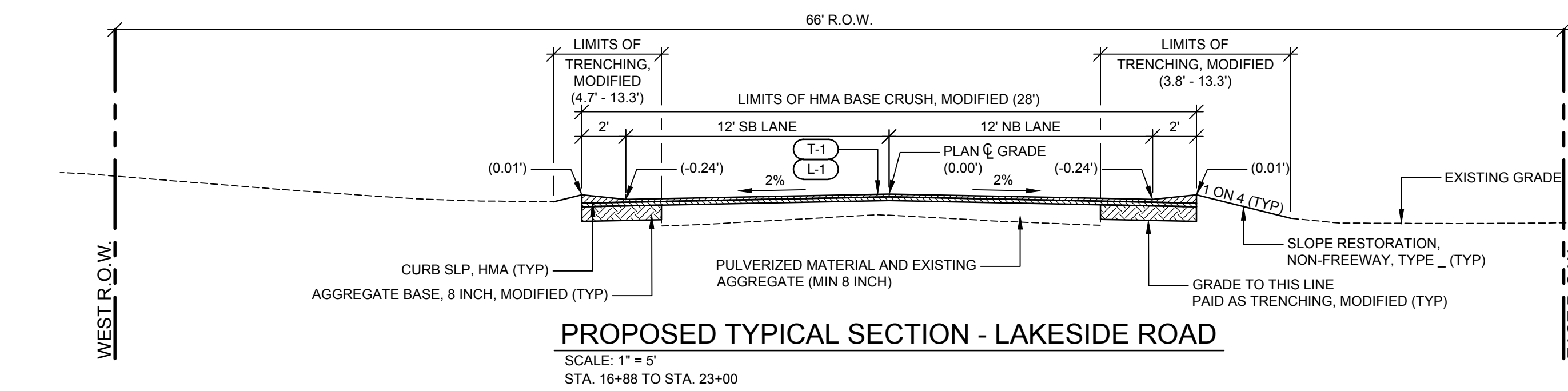
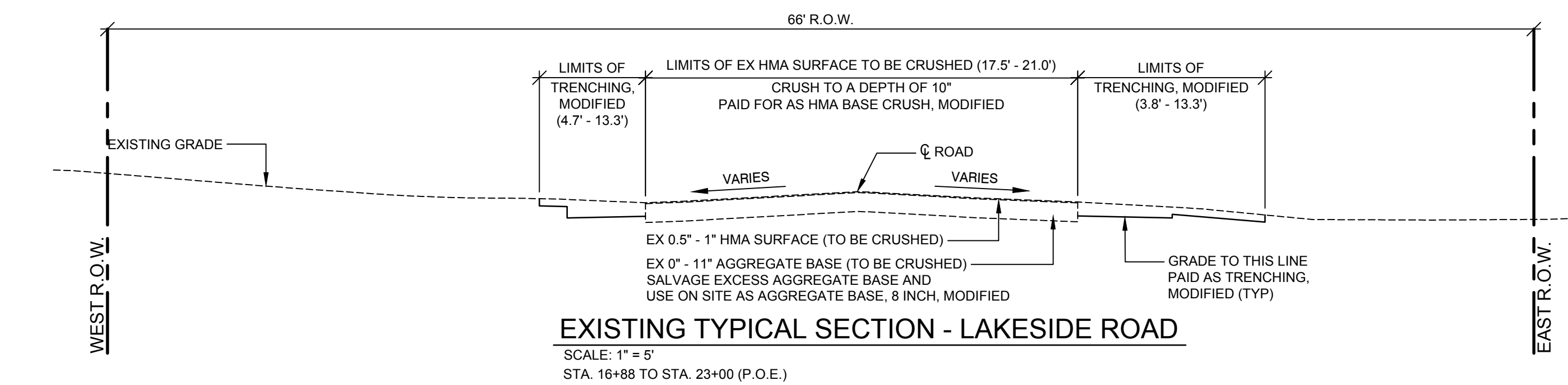
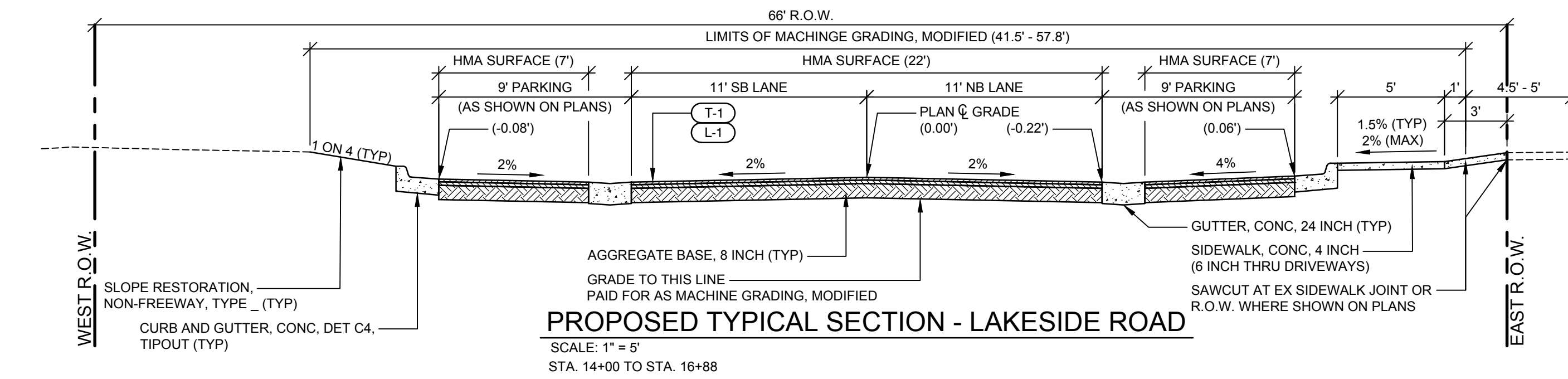
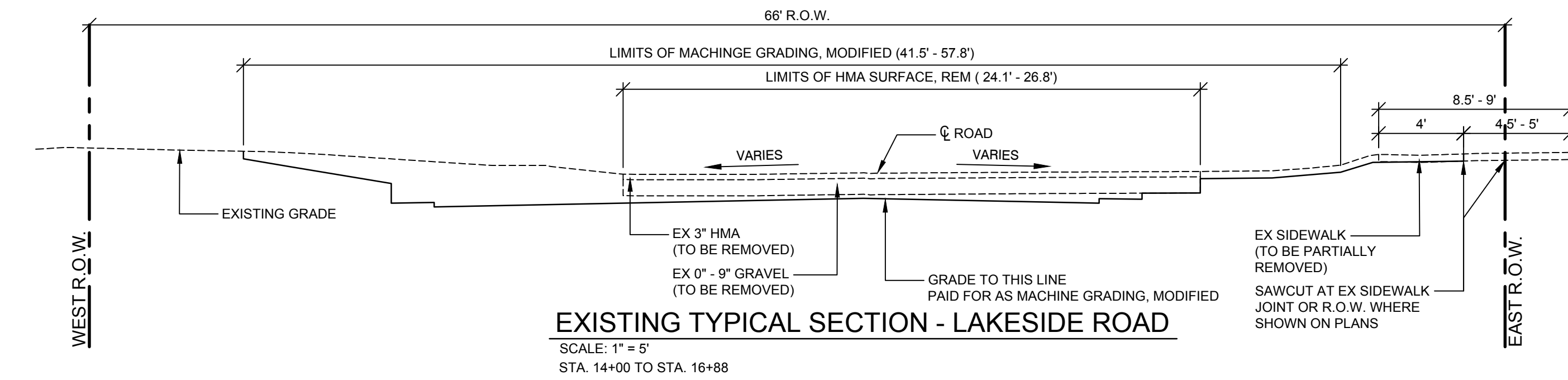
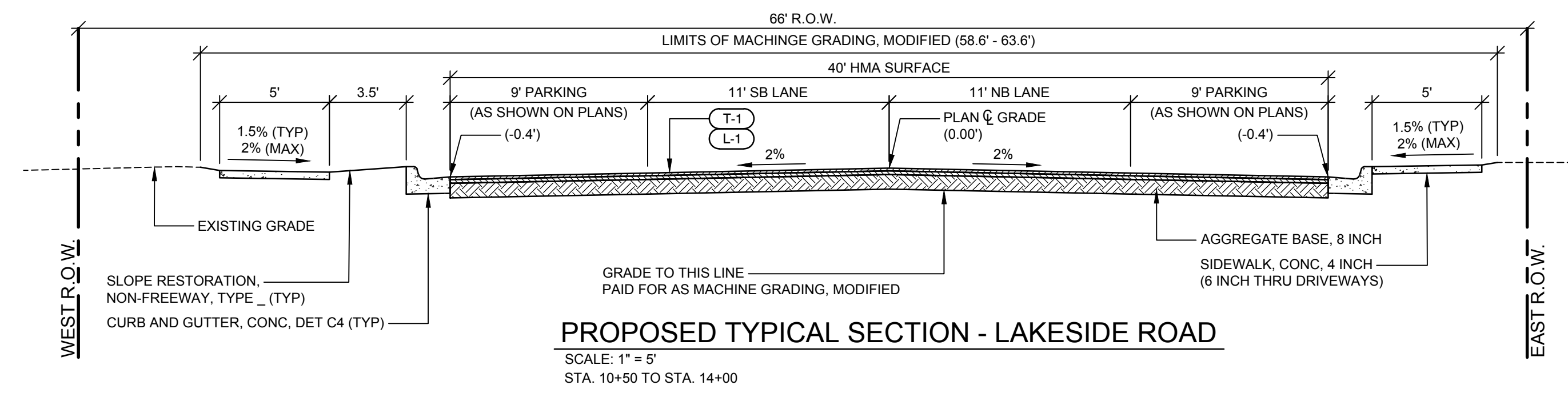
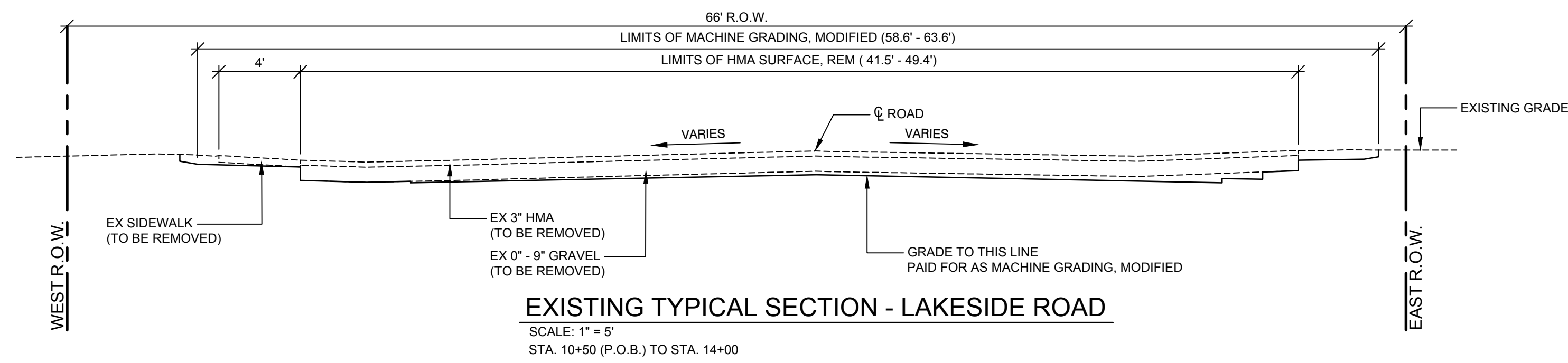
00 03/20/2024 AMV
ISSUED FOR BIDS

REVISIONS

THE REPRODUCTION, COPYING OR OTHER USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.

DATE: MARCH, 2024
SCALE: NONE

COVER SHEET



ID	ITEM	AWI	YIELD	PERFORMANCE GRADE	NOTES
T-1	HMA, 5EL (TOP)	220	165#/SYD	P.G. 64-28	ALL MAINLINE AND INTERSECTIONS
L-1	HMA, 4EL (LEVELING)		220#/SYD	P.G. 64-28	LAKESIDE MAINLINE AND INTERSECTIONS
L-2	HMA, 5EL (WEDGING)		0 - 220#/SYD	P.G. 64-28	PIER AND EAST MAINLINE WEDGING/WIDENING
	HMA APPROACH (HMA, 5EL; TOP)		165#/SYD	P.G. 64-28	DRIVEWAYS
	HMA APPROACH (HMA, 4EL; LEVELING)		165#/SYD	P.G. 64-28	DRIVEWAYS
	HAND PATCHING (HMA, 5EL)		165-440#/SYD (LIFT THICKNESS 165-220#/SYD)	P.G. 64-28	AS NEEDED
	HMA BOND COAT (NOT A PAY ITEM)		0.05 TO 0.15 GAL/SYD	SS - 1h	

CURB SLP, HMA DETAIL
SCALE: NONE

UTILITY TRENCH DETAIL
SCALE: NONE

PIER ROAD PARKING - HALF SECTION
SCALE: 1" = 5'
IN LOCATIONS SHOWN ON PLANS

HMA APPLICATION TABLE

QUANTITIES THIS SHEET

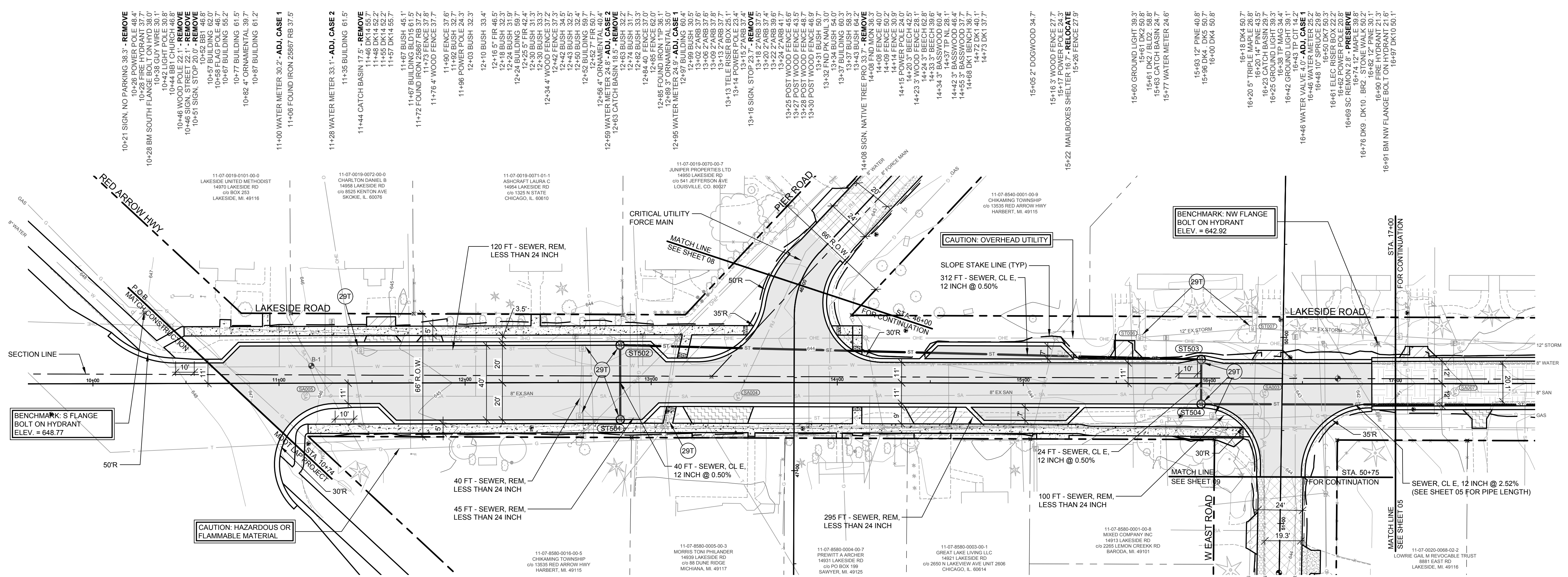
ITEM	QTY.
Dr Structure, Rem	5 Ea
Sewer, Rem, Less than 24 inch	600 Ft
Masonry and Conc Structure, Rem	10 Cyd
Sidewalk, Rem	280 Syd
Machine Grading, Modified	6 Sta
Erosion Control, Inlet Protection, Fabric Drop	11 Ea
Aggregate Base, 6 inch	105 Syd
Aggregate Base, 8 inch	2,400 Syd
Aggregate Base, 8 inch, Modified	10 Syd
HMA Base Crush, Modified	40 Syd
Sewer, Cl E, 12 inch, Tr Det B	495 Ft
Dr Structure Cover, Type K	4 Ea
Dr Structure, 48 inch dia	4 Ea
HMA Surface, Rem	2,960 Syd
HMA Approach	25 Ton
HMA, 4EL	275 Ton
HMA, SEL	205 Ton
Curb, Conc, Det E2	30 Ft
Curb and Gutter, Conc, Det B2	50 Ft
Curb and Gutter, Conc, Det C4	1,040 Ft
Curb and Gutter, Conc, Det C4, Tipout	170 Ft
Gutter, Conc, 24 inch	150 Ft
Detectable Warning Surface, Modified	35 Ft
Curb Ramp Opening, Conc	75 Ft
Sidewalk, Conc, 4 inch	3,525 Sft
Sidewalk, Conc, 6 inch	600 Sft
Curb Ramp, Conc, 6 inch	600 Sft
Curb Slp, HMA	25 Ft
Post, Mailbox	1 Ea
Wood Pole, Rem	1 Ea
Water Shutoff, Adj, Case 1	3 Ea
Water Shutoff, Adj, Case 2	2 Ea
Gate Box, Adj, Case 1	4 Ea
Sanitary Structure Cover, Type Q	3 Ea
Sanitary Structure Cover, Adj, Case 1	3 Ea
WATER CONTRACT	
HMA Surface, Rem	75 Syd

WIGHTMAN
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100
www.wightman.com

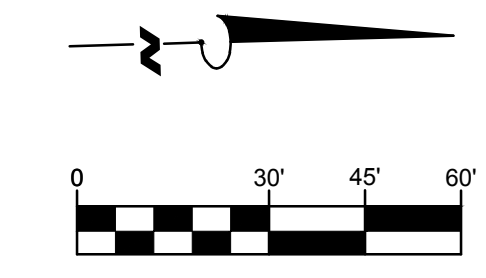
MELANIE K. STANAGE
6201065450

PROJECT NAME:
LAKESIDE ROAD, PIER ROAD, AND W EAST ROAD IMPROVEMENTS

BERRIEN COUNTY DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



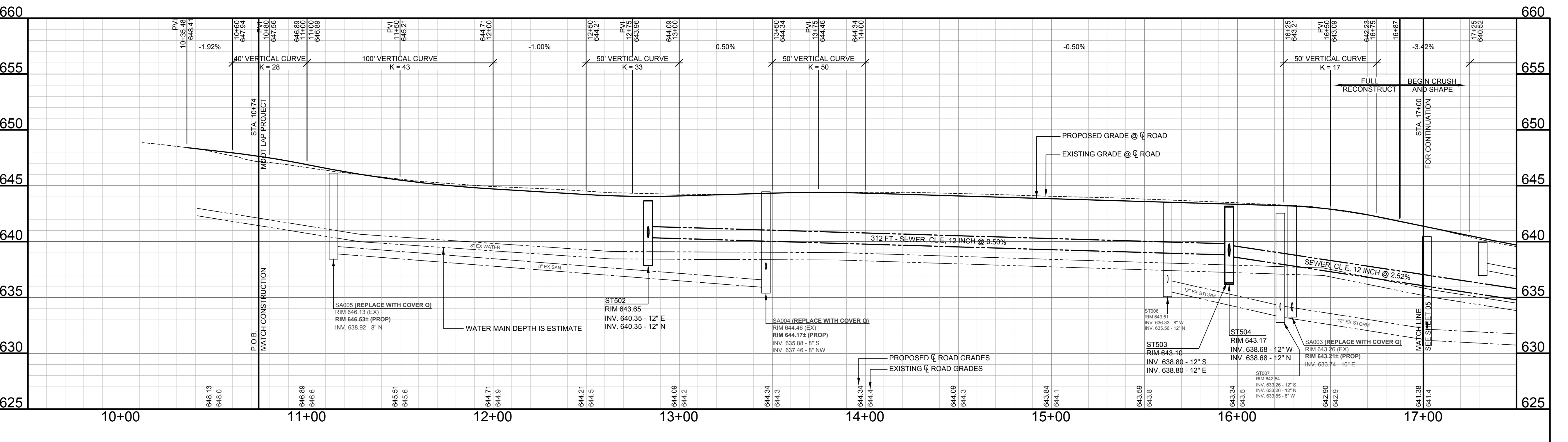
STORM STRUCTURES	STORM STRUCTURES	STRUCTURE, ADJ
ST501 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP RIM 643.65 INV. 640.55 - 12" W	ST504 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP RIM 643.17 INV. 638.88 - 12" W INV. 638.68 - 12" N	SA003 EXISTING SAN STRUCTURE (REPLACE WITH COVER Q) RIM 643.26 (EX) RIM 643.21a (PROP) INV. 633.76 - 8" S INV. 633.74 - 10" E
ST502 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP RIM 643.65 INV. 640.35 - 12" E INV. 640.35 - 12" N		SA004 EXISTING SAN STRUCTURE (REPLACE WITH COVER Q) RIM 644.46 (EX) RIM 644.17a (PROP) INV. 635.88 - 8" S INV. 635.88 - 8" N INV. 637.46 - 8" NW
ST503 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP RIM 643.10 INV. 638.80 - 12" S INV. 638.80 - 12" E		SA005 EXISTING SAN STRUCTURE (REPLACE WITH COVER Q) RIM 646.13 (EX) RIM 646.53a (PROP) INV. 638.92 - 8" N



NOTE:
SEE SHEETS 11 & 12 FOR WATERMAIN REPLACEMENT WORK, DRIVEWAY REPLACEMENT, RESTORATION, AND AGGREGATE BASE NEEDED WITHIN THE UTILITY TRENCH SHALL BE TRACKED SEPARATE FROM OTHER ROAD ITEMS.

LEGEND

- 291 DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
- SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK. REM. REGRADE AS REQUIRED AND SURFACE WITH SIDEWALK, CONC. 4 INCH. SIDEWALK, CONC. 6 INCH THRU DRIVEWAYS, OR CURB RAMP, CONC. 6 INCH AT INTERSECTIONS. MATCH EXISTING GRADE AT SAWCUT LINE.
- PROVIDE DETECTABLE WARNING SURFACE AT ALL SIDEWALK/CURB INTERFACES.
- SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT, REM. MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH. 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE, REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH. 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH. 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- HMA BASE CRUSH, MODIFIED. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.
- REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS TRENCHING, MODIFIED. SURFACE WITH AGGREGATE BASE, 8 INCH, MODIFIED; HMA, 4EL (220#/SYD, LEVELING); HMA, SEL (165#/SYD, TOP)
- ROAD RECONSTRUCT. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.



00 03/20/2024
ISSUED FOR BIDS AMV

REVISIONS

DATE: MARCH, 2024
SCALE: 1" = 30'H, 5'V

PLAN AND PROFILE LAKESIDE ROAD
STA. 10+50 (P.O.B.) TO STA. 17+00

JOB No. 230387
04
OF 22

QUANTITIES THIS SHEET

ITEM	QTY.	
Tree, Rem, 19 inch to 36 inch	1 Ea	
Culv, Rem, Less than 24 inch	4 Ea	
Dr Structure, Rem	1 Ea	
Sewer, Rem, Less than 24 inch	55 Ft	
Pavt, Rem, Modified	170 Syd	
Trenching, Modified	13 Sta	
Erosion Control, Inlet Protection, Fabric Drop	10 Ea	
Aggregate Base	20 Ton	
Aggregate Base, 6 inch	315 Syd	
Aggregate Base, 8 inch, Modified	905 Syd	
HMA Base Crush, Modified	2,000 Syd	
Shld, Cl II, 4 inch	5 Syd	
Sewer, Cl E, 12 inch, Tr Det B	535 Ft	
Sewer, Cl E, 18 inch, Tr Det B	270 Ft	
Dr Structure Cover, Adj, Case 1	1 Ea	
Dr Structure Cover, Adj, Case 2	1 Ea	
Dr Structure Cover, Type B	1 Ea	
Dr Structure Cover, Type D	5 Ea	
Dr Structure Cover, Type E	1 Ea	
Dr Structure, 48 inch dia	5 Ea	
Dr Structure, Tap, 12 inch	2 Ea	
Dr Structure, 72 inch dia, Modified	1 Ea	
HMA Surface, Rem	110 Syd	
HMA Approach	60 Ton	
HMA, 4EL	235 Ton	
HMA, 5EL	200 Ton	
Spillway, HMA, Modified	5 Syd	
Curb Slp, HMA	1,225 Ft	
Post, Mailbox	10 Ea	
Water Shutoff, Adj, Case 1	1 Ea	
Water Shutoff, Adj, Case 2	1 Ea	
Sanitary Structure Cover, Type Q	1 Ea	
Sanitary Structure Cover, Adj, Case 1	1 Ea	

W+
WIGHTMAN

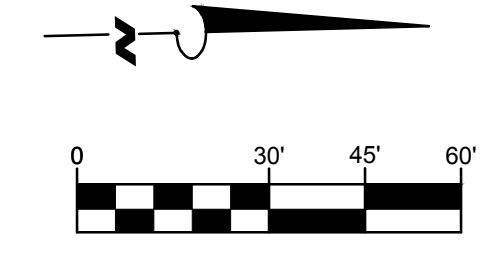
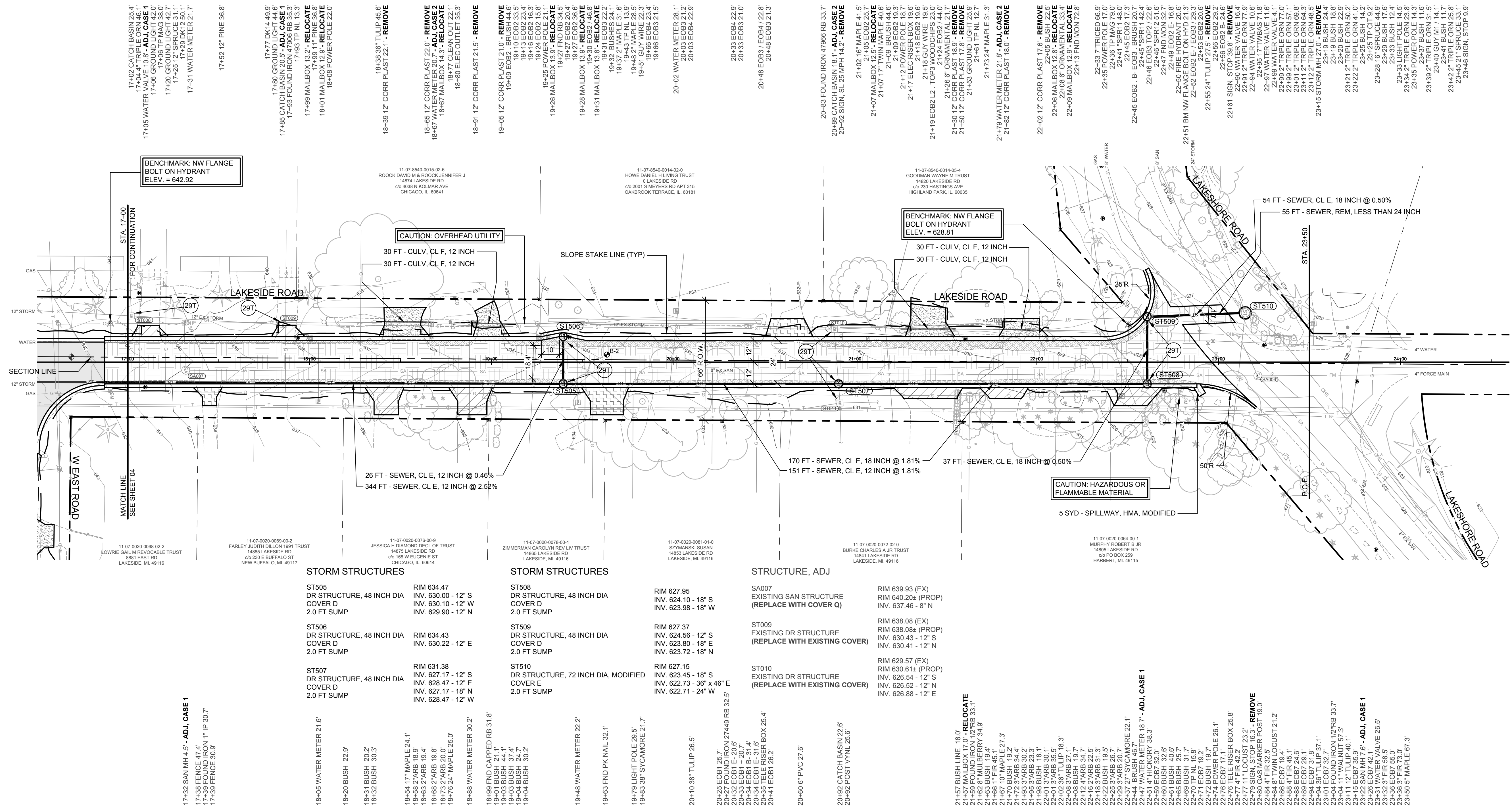
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
LAKESIDE ROAD, PIER ROAD, AND WEST ROAD IMPROVEMENTS

BERRIEN COUNTY ROAD DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



STORM STRUCTURES

ST505	RIM 634.47
DR STRUCTURE, 48 INCH DIA	INV. 630.00 - 12' S
COVER D	INV. 630.10 - 12' W
2.0 FT SUMP	INV. 629.90 - 12' N

STORM STRUCTURES

ST506	RIM 634.43
DR STRUCTURE, 48 INCH DIA	INV. 630.22 - 12' E
COVER D	INV. 630.22 - 12' E
2.0 FT SUMP	

STRUCTURE, ADJ

SA007	RIM 639.93 (EX)
EXISTING SAN STRUCTURE	INV. 624.20 (PROP)
(REPLACE WITH COVER Q)	INV. 637.46 - 8' N

STRUCTURE, ADJ

ST009	RIM 638.08 (EX)
EXISTING DR STRUCTURE	INV. 630.43 - 12' S
(REPLACE WITH EXISTING COVER)	INV. 630.41 - 12' N

STRUCTURE, ADJ

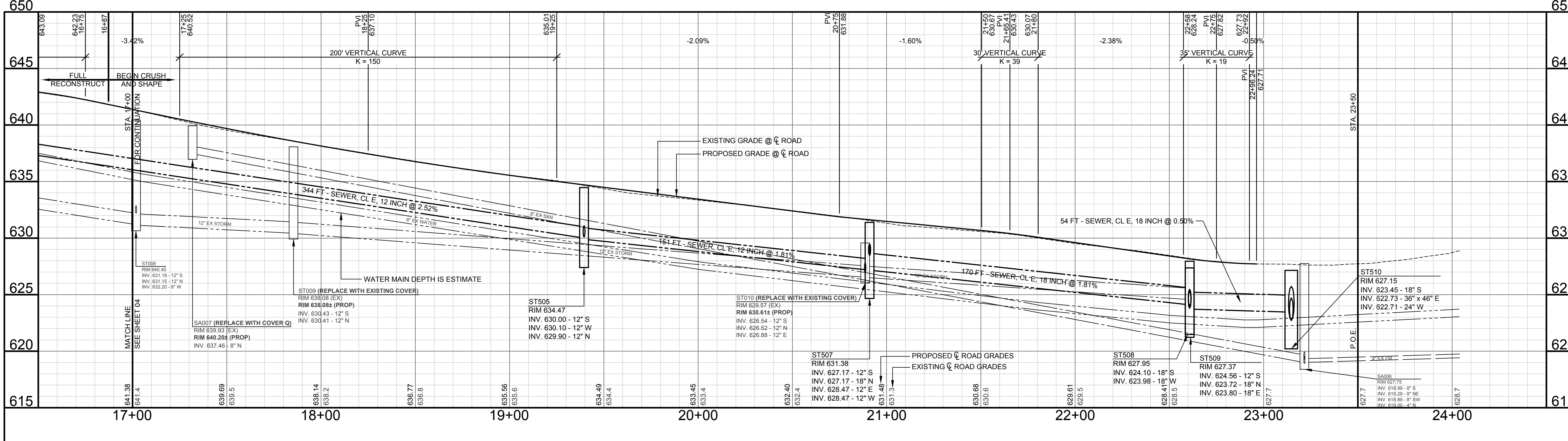
ST010	RIM 629.57 (EX)
EXISTING DR STRUCTURE	INV. 628.47 - 12' E
(REPLACE WITH EXISTING COVER)	INV. 626.52 - 12' N

UTILITY LOCATIONS

- 17-32 SAN MH 4.5' - ADJ, CASE 1
- 17-38 FENCE 47.4'
- 17-39 FOUND IRON 1" IP 30.7'
- 17-39 FENCE 30.9'
- 18-05 WATER METER 21.6'
- 18-20 BUSH 22.9'
- 18-21 BUSH 29.2'
- 18-32 BUSH 30.3'
- 18-54 1" MAPLE 24.1'
- 18-58 2" ARB 18.9'
- 18-63 2" ARB 19.4'
- 18-68 2" ARB 19.8'
- 18-73 2" ARB 20.0'
- 18-76 2" MAPLE 25.0'
- 18-88 WATER METER 30.2'
- 18-89 RND CARRED RB 31.8'
- 19-01 BUSH 21.1'
- 19-03 BUSH 44.1'
- 19-04 BUSH 24.7'
- 19-04 BUSH 30.2'
- 19-48 WATER METER 22.2'
- 19-63 RND PK NAIL 32.1'
- 19-70 LIGHT POLE 28.5'
- 19-83 38" SYCAMORE 21.7'
- 20-10 38" TULIP 26.5'
- 20-25 EOB1 25.7'
- 20-32 EOB1 29.6'
- 20-33 EOB1 29.7'
- 20-34 EOB1 31.6'
- 20-35 TELE RISER BOX 25.4'
- 20-41 EOB1 26.2'
- 20-80 6" PVC 27.6'
- 20-82 CATCH BASIN 23.6'
- 20-82 POST VYAL 25.6'
- 21-59 FOUND IRON 1/2" RB 33.1'
- 21-63 BUSH 15.4'
- 21-67 10" MAPLE 27.3'
- 21-70 BUSH 19.2'
- 21-85 2" ARB 23.3'
- 21-89 BUSH 18.1'
- 22-01 2" ARB 35.5'
- 22-02 38" TULIP 18.3'
- 22-08 BUSH 19.7'
- 22-12 4" ARB 34.7'
- 22-18 2" ARB 22.5'
- 22-22 BUSH 19.5'
- 22-25 2" ARB 26.7'
- 22-37 2" SYCAMORE 22.1'
- 22-44 BRUSH 46.7'
- 22-45 1" VICKIWOOD 28.6'
- 22-59 EOB7 32.0'
- 22-60 BUSH 32.6'
- 22-65 BUSH 25.7'
- 22-71 EOB7 19.9'
- 22-72 BUSH 19.7'
- 22-74 POWER POLE 26.1'
- 22-77 4" FIR 42.2'
- 22-78 TELE RISER BOX 26.8'
- 22-80 SIGN STOP 18.5' - ADJ, CASE 1
- 22-84 4" FIR 32.6' CUST 21.2'
- 22-86 EOB7 19.0'
- 22-88 4" FIR 45.1'
- 22-89 EOB7 28.1'
- 22-94 38" TULIP 37.1'
- 23-04 FOUND IRON 1/2" RB 33.7'
- 23-04 11" WALNUT 57.3'
- 23-15 EOB7 25.4'
- 23-22 SAN MH 7.6' - ADJ, CASE 1
- 23-26 EOB7 42.7'
- 23-36 EOB7 55.0'
- 23-50 2" MAPLE 67.3'

LEGEND

- (29T) DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
- SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK, REM. REGRADE AS REQUIRED AND SURFACE WITH SIDEWALK CONC. 4 INCH; SIDEWALK CONC. 6 INCH THRU DRIVEWAYS; OR CURB RAMP, CONC. 6 INCH AT INTERSECTIONS; MATCH EXISTING GRADE AT SAWCUT LINE.
- PROVIDE DETECTABLE WARNING SURFACE AT ALL SIDEWALK/CURB INTERFACES.
- SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT, REM. MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH; 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE, REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- HMA BASE CRUSH, MODIFIED. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.
- REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS TRENCHING, MODIFIED. SURFACE WITH AGGREGATE BASE, 8 INCH, MODIFIED; HMA, 4EL (220#/SYD, LEVELING); HMA, 5EL (165#/SYD, TOP)
- ROAD RECONSTRUCT. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.



00 03/20/2024 AMV
ISSUED FOR BIDS

REVISIONS

DATE: MARCH, 2024
SCALE: 1" = 30'H, 5'V

PLAN AND PROFILE
LAKESIDE ROAD
STA. 17+00 TO STA. 23+00
(P.O.E.)

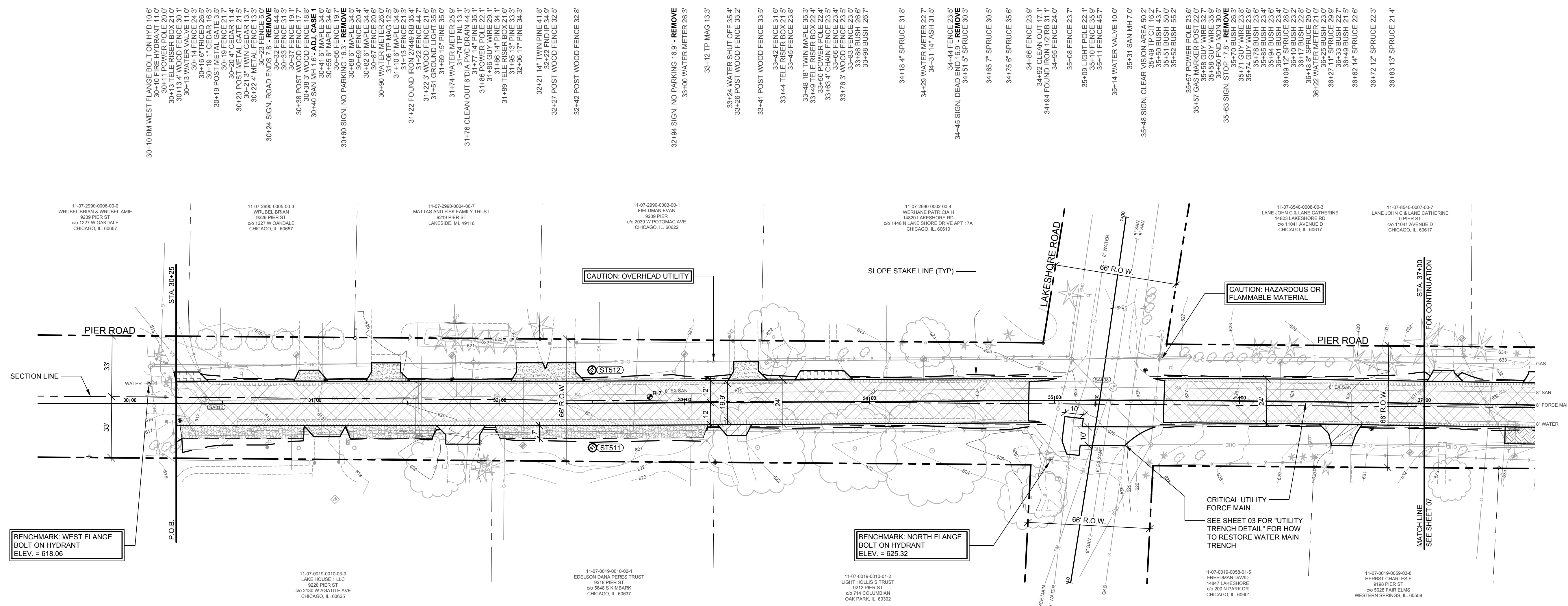
JOB No. 230387
05
OF 22

QUANTITIES THIS SHEET	
ITEM	QTY.
Tree, Rem, 19 inch to 36 inch	2 Ea
Pavt, Rem, Modified	120 Syd
Shoulder Prep, Modified	13 Sta
Erosion Control, Inlet Protection, Fabric Drop	2 Ea
Aggregate Base, 6 inch	125 Syd
Aggregate Base, 6 inch, 21AA, Modified	185 Syd
Shld, CI II, 4 inch	130 Syd
Dr Structure Cover, Type G	2 Ea
Leaching Basin, 48 inch dia	2 Ea
HMA Surface, Rem	35 Syd
Pavt for Butt Joints, Rem	75 Syd
HMA Approach	30 Ton
HMA, SEL	245 Ton
Post, Mailbox	1 Ea
Water Shutoff, Adj, Case 1	2 Ea
Sanitary Structure Cover, Type Q	1 Ea
Sanitary Structure Cover, Adj, Case 1	1 Ea
WATER CONTRACT	
Aggregate Base, 6 inch	25 Syd
Aggregate Base, 8 inch	60 Syd
HMA Surface, Rem	60 Syd
HMA Approach	5 Ton

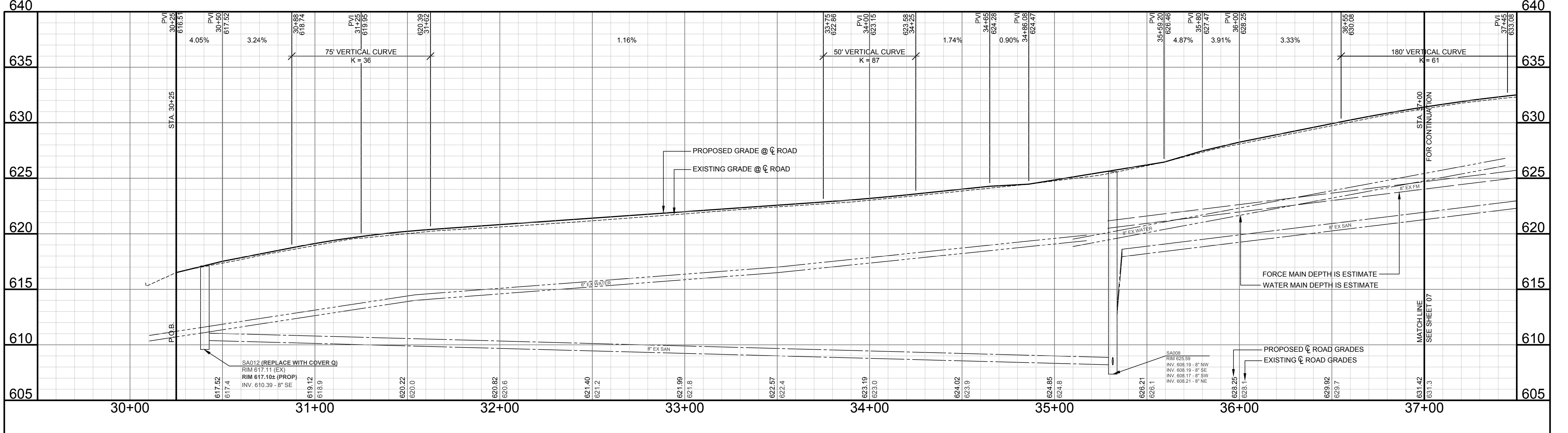
PROJECT NAME:
LAKESIDE ROAD, PIER ROAD, AND W EAST ROAD IMPROVEMENTS

BERRIEN COUNTY ROAD DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022

MELANIE K. STANAGE
6201065450



- STORM STRUCTURES**
- ST511 LEACHING BASIN, 48 INCH DIA COVER G 2.0 FT SUMP RIM 619.99
 - ST512 LEACHING BASIN, 48 INCH DIA COVER G 2.0 FT SUMP RIM 620.36
- STRUCTURE, ADJ**
- SA012 EXISTING SAN STRUCTURE (REPLACE WITH COVER Q) RIM 617.11 (EX) INV. 610.39 - 8" SE'
 - RIM 617.10x (PROP) INV. 610.39 - 8" SE'
- REMOVE**
- 30+09.5' WOOD FENCE 28.2'
 - 30+13 BUSH 22.4'
 - 30+15 FENCE 27.7'
 - 30+19 FENCE 26.3'
 - 30+20 BUSH 23.3'
 - 30+23 POST METAL GATE 9.7'
 - 30+24 BUSH 24.3'
 - 30+24 FENCE 21.5'
 - 30+27 TP CIT 9.3'
 - 30+67 SIGN, PARALLEL PARKING 15.8' - REMOVE
 - 30+74 CLEAN OUT 6" PVC SMALL DRAIN 23.6'
 - 30+81 1" ORNAMENTAL 24.1'
 - 30+84 SIGN, NO PARKING 15.9' - REMOVE
 - 30+89 POST METAL 32.1'
 - 31+11 CATCH BASIN 51.8'
 - 31+13 POST METAL 31'
 - 31+15 SIGN, PARALLEL PARKING 15.9' - REMOVE
 - 31+21 1" ORNAMENTAL 24.0'
 - 31+48 SIGN, PARALLEL PARKING 16.0' - REMOVE
 - 31+55 WATER METER 15.2' - ADJ. CASE 1
 - 31+56 1" MAPLE 17.9' - ADJ. CASE 1
 - 31+65 1" MAPLE 34.7'
 - 31+91.12' SPRUCE 36.3'
 - 31+92.6' SPRUCE 30.4'
 - 31+94.11' SPRUCE 39.5'
 - 32+13 WATER METER 22.8'
 - 32+26 SIGN, PARALLEL PARKING 15.2' - REMOVE
 - 32+69 SIGN, PARALLEL PARKING 17.9' - REMOVE
 - 33+08 FENCE 23.4'
 - 33+16 FOUND IRON 28x48 RB 32.4'
 - 33+15.3' WOOD FENCE 16.6'
 - 33+17 FOUND IRON TYP 32.3'
 - 33+34 FENCE 15.8'
 - 33+39.27' MAPLE 24.4'
 - 33+60 FENCE 16.7'
 - 33+92.24' MAPLE 25.3'
 - 34+34 3" 31" MAPLE 26.8'
 - 34+46.20 FENCE 16.2'
 - 34+80 GUY M21 / 30.0' - REMOVE
 - 34+85 SIGN, STOP 14.7' - REMOVE
 - 34+87 1" MAPLE 52.4'
 - 34+89 FENCE 24.8'
 - 34+93 1" OAK 51.4'
 - 34+96 POWER POLE 28.2'
 - 34+96.3' WOOD FENCE 33.2'
 - 34+96 FIRE HYDRANT 39.1' BOLT ON HYD 31.9'
 - 35+02 SIGN, CLEAR VISION AREA 42.5'
 - 35+14 WATER VALVE 14.3'
 - 35+22 FND MAG NAIL 2.2'
 - 35+50.4' SPRUCE 40.5'
 - 35+51.4' SPRUCE 33.6'
 - 35+52 FENCE 40.4'
 - 35+53 FENCE 46.4'
 - 35+54 FENCE 35.7'
 - 35+56 BUSH 30.9 29.7'
 - 35+73 FENCE 34.5'
 - 35+79 BUSH 29.3'
 - 35+80.4' SPRUCE 40.1'
 - 35+84 ARG 29.8'
 - 35+85 SIGN, SL 25 MPH 20.0' - REMOVE
 - 35+86 POWER POLE 23.2 4'
 - 35+86.3' WOOD FENCE 43.9'
 - 35+90.4' ARG 29.9 5'
 - 35+91 FOUND IRON TYP 35.3'
 - 35+93 FENCE 28.3'
 - 35+97 8" SPRUCE 35.4'
 - 35+97.2' TP MAG 14.2'
 - 36+93 WATER METER 26.7'
 - 36+29.4' ARG 30.1'
 - 36+35.4' ARG 29.8'
 - 36+38 SIGN, SL 25 MPH 20.0' - REMOVE
 - 36+39 POWER POLE 23.2 4'
 - 36+40.3' WOOD FENCE 43.9'
 - 36+40.4' ARG 29.9 5'
 - 36+41 FOUND IRON TYP 35.3'
 - 36+43 FENCE 28.3'
 - 36+47 8" SPRUCE 35.4'
 - 36+46.1' EG20 FENCE 28.2'
 - 36+72 TP MAG 14.2'



BORINGS

B-7	0 - 1.5'	ASPHALT
	1.5 - 12'	BROWN FINE SAND
	12 - 30'	DARK BROWN FINE SAND WITH GRAVEL AND TRACE ASPHALT
	30'	END OF BORING

NOTE:
SEE SHEETS 11 & 12 FOR WATER MAIN REPLACEMENT WORK. DRIVEWAY REPLACEMENT, RESTORATION, AND AGGREGATE BASE NEEDED WITHIN THE UTILITY TRENCH SHALL BE TRACKED SEPARATE FROM OTHER ROAD ITEMS.

- LEGEND**
- (291) DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
 - SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT, REM, MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH, 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
 - SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE, REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
 - REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT TIE IN LOCATION.
 - REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH APPROACH, CL II, 6 INCH. MATCH EXISTING GRADE AT TIE IN LOCATION.
 - HMA OVERLAY, SURFACE WITH HMA, SEL (0-220#/SYD, WEDGING); HMA, SEL (165#/SYD, TOP)
 - REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS SHOULDER PREP, MODIFIED. SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, SEL (165#/SYD, TOP)
 - REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS SHOULDER PREP, MODIFIED. SURFACE WITH AGGREGATE BASE, 6 INCH, 21AA, MODIFIED

00 03/20/2024 AMV
ISSUED FOR BIDS

REVISIONS
DATE: MARCH, 2024
SCALE: 1" = 30H, 5V

PLAN AND PROFILE PIER ROAD
STA. 30+25 (P.O.B.) TO STA. 37+00



2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.wightman.com

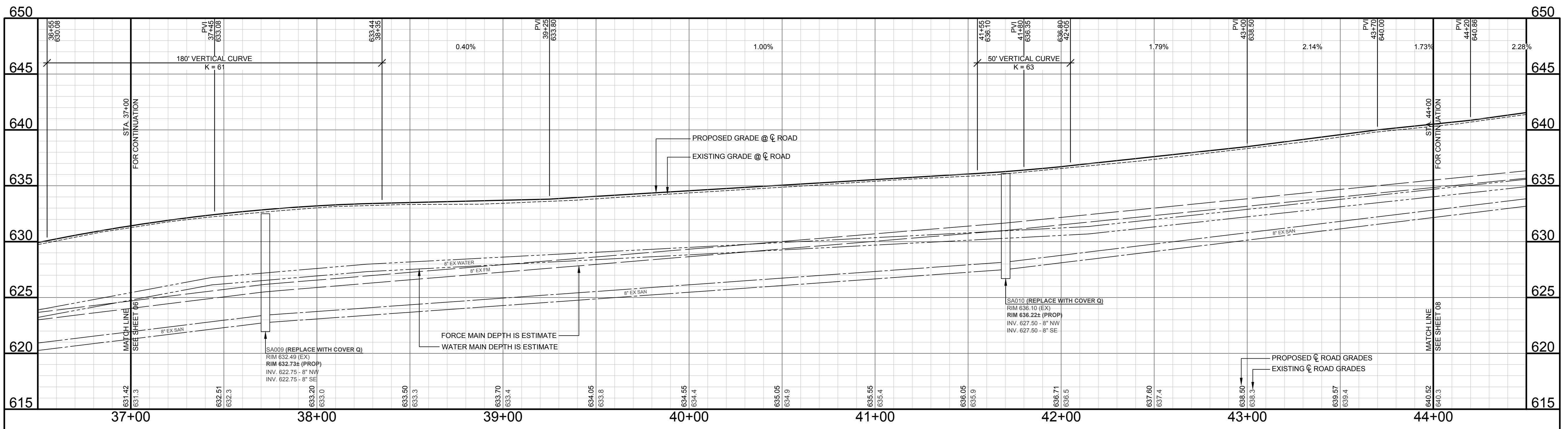
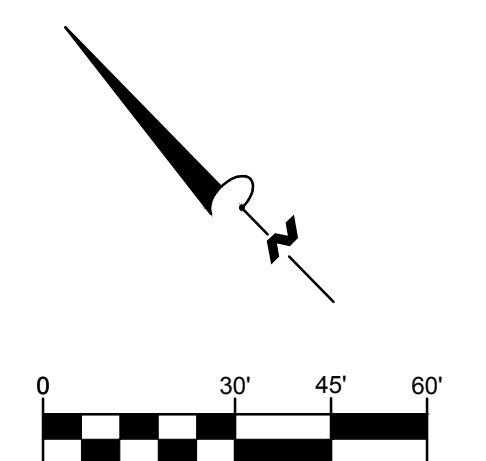
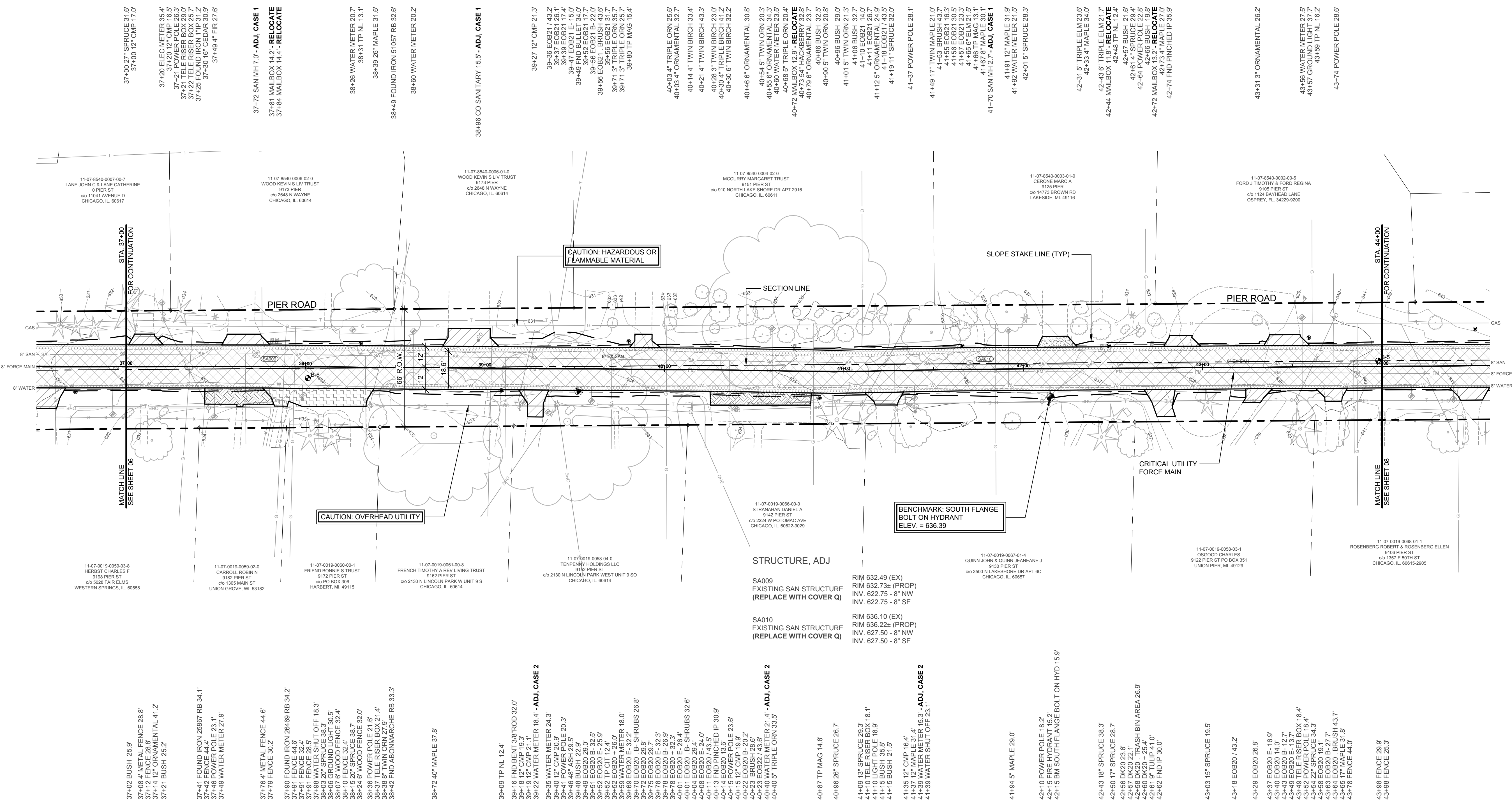
MELANIE K. STANAGE
6201065450

PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022

QUANTITIES THIS SHEET

ITEM	QTY.
Pavt, Rem, Modified	15 Syd
Shoulder Prep, Modified	14 Sta
Aggregate Base, 6 inch	40 Syd
Shld, CI II, 4 inch	195 Syd
HMA Approach	20 Ton
HMA, 5EL	270 Ton
Post, Mailbox	5 Ea
Water Shutoff, Adj, Case 1	1 Ea
Water Shutoff, Adj, Case 2	3 Ea
Sanitary Structure Cover, Type Q	2 Ea
Sanitary Structure Cover, Adj, Case 1	2 Ea
WATER CONTRACT	
Pavt, Rem, Modified	5 Syd
Aggregate Base, 6 inch	140 Syd
Aggregate Base, 8 inch	150 Syd
Approach, CI II, 6 inch	90 Syd
HMA Surface, Rem	75 Syd
HMA Approach	25 Ton



NOTE:
SEE SHEETS 11 & 12 FOR WATERMAIN REPLACEMENT WORK. DRIVEWAY REPLACEMENT, RESTORATION, AND AGGREGATE BASE NEEDED WITHIN THE UTILITY TRENCH SHALL BE TRACKED SEPARATE FROM OTHER ROAD ITEMS.

LEGEND

- (29T) DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
- SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT, REM, MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH, 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE, REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH APPROACH, CL II, 6 INCH. MATCH EXISTING GRADE AT TIE IN LOCATION.
- REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH APPROACH, CL II, 6 INCH. MATCH EXISTING GRADE AT TIE IN LOCATION.
- HMA OVERLAY, SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)
- REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS SHOULDER PREP, MODIFIED, SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)

00 03/20/2024 AMV
ISSUED FOR BIDS

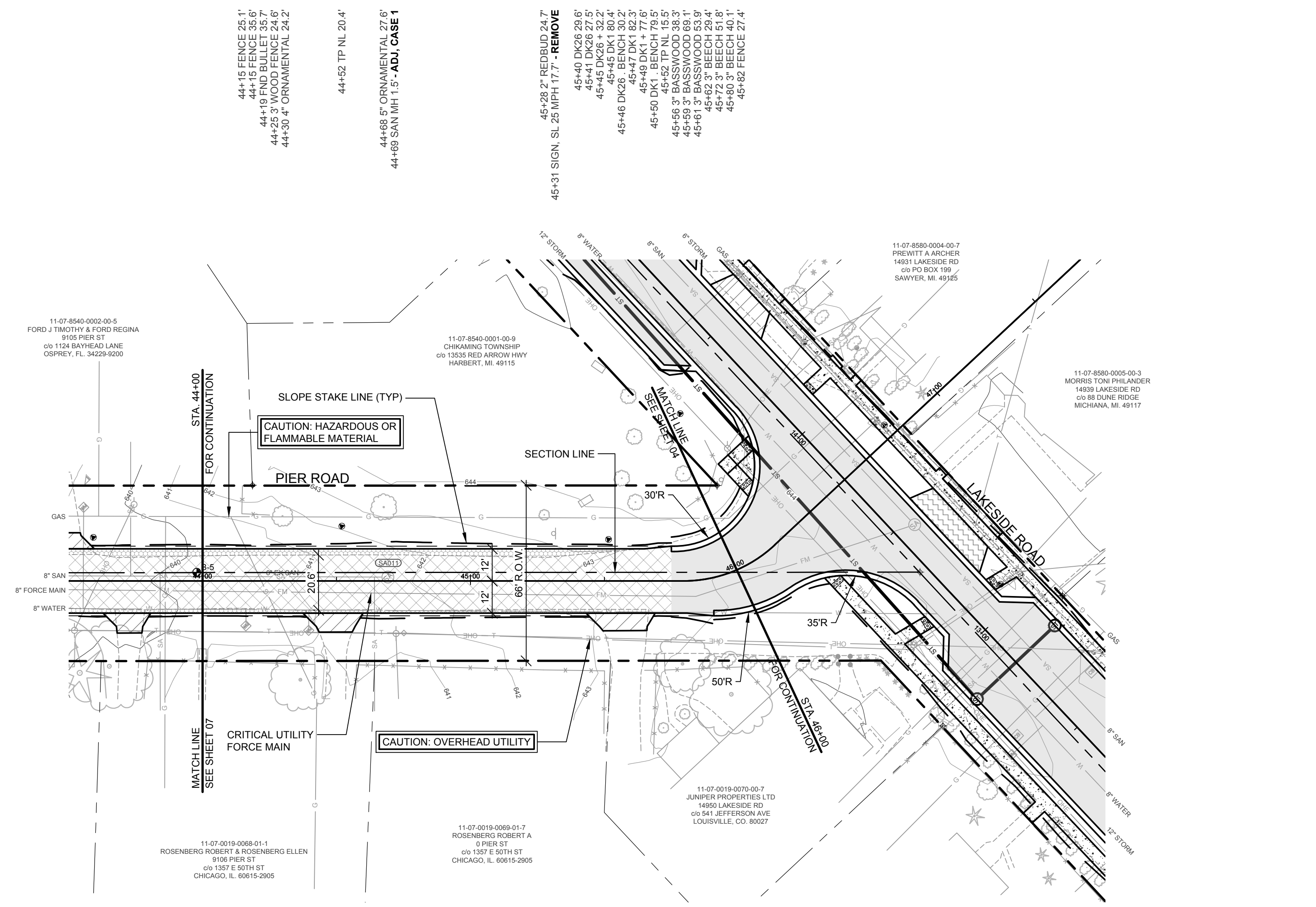
REVISIONS

DATE: MARCH, 2024
SCALE: 1" = 30H, 5V

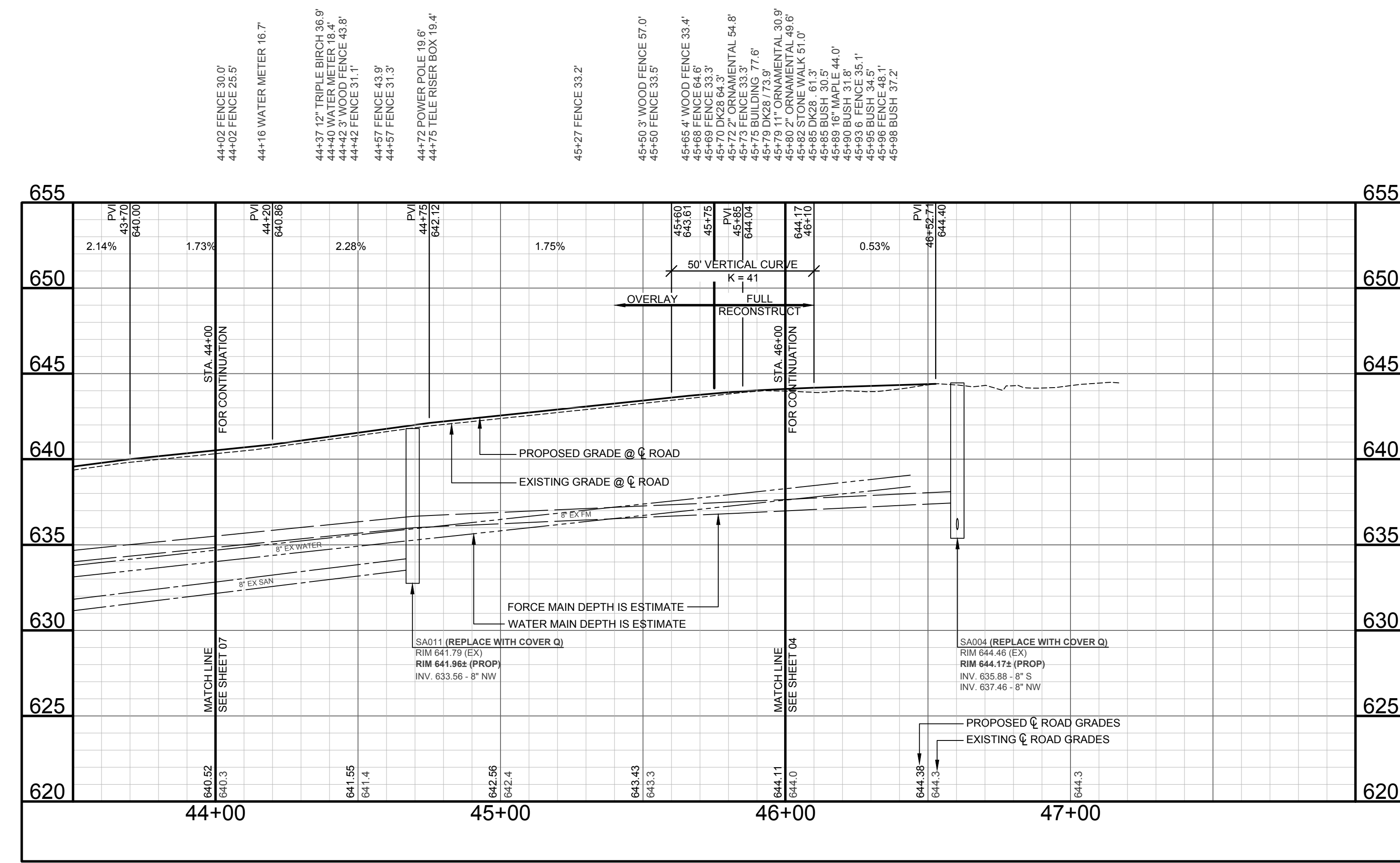
**PLAN AND PROFILE
PIER ROAD**

STA. 37+00 TO STA. 44+00

JOB No. 230387
07
OF 22



STRUCTURE, ADJ
SA011
EXISTING SAN STRUCTURE
(REPLACE WITH COVER Q)
RIM 641.79 (EX)
RIM 641.96± (PROP)
INV. 633.56 - 8" NW

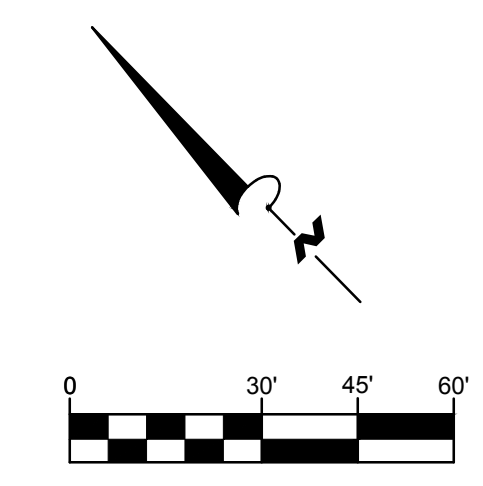


QUANTITIES THIS SHEET	
ITEM	QTY.
Shoulder Prep, Modified	4 Sta
Shield, CI II, 4 inch	50 Syd
HMA Surface, Rem	115 Syd
HMA, 5EL	85 Ton
Curb and Gutter, Conc, Det C4	40 Ft
Sanitary Structure Cover, Type Q	1 Ea
Sanitary Structure Cover, Adj, Case 1	1 Ea
WATER CONTRACT	
Aggregate Base, 6 inch	30 Syd
Aggregate Base, 8 inch	100 Syd
HMA Surface, Rem	50 Syd
HMA Approach	5 Ton

WIGHTMAN
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100
www.gowightman.com

MELANIE K. STANAGE
6201065450
PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



NOTE:
SEE SHEETS 11 & 12 FOR WATERMAIN REPLACEMENT WORK, DRIVEWAY REPLACEMENT, RESTORATION, AND AGGREGATE BASE NEEDED WITHIN THE UTILITY TRENCH SHALL BE TRACKED SEPARATE FROM OTHER ROAD ITEMS.

- LEGEND**
- 201 DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
 - SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK. REM. REGRADE AS REQUIRED AND SURFACE WITH SIDEWALK, CONC. 4 INCH; SIDEWALK CONC. 6 INCH THRU DRIVEWAYS; OR CURB RAMP, CONC. 6 INCH AT INTERSECTIONS. MATCH EXISTING GRADE AT SAWCUT LINE.
 - PROVIDE DETECTABLE WARNING SURFACE AT ALL SIDEWALK/CURB INTERFACES.
 - SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT. REM. MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH; 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
 - SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE. REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
 - REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT TIE IN LOCATION.
 - HMA OVERLAY: SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)
 - REMOVE EXISTING GROUND WHERE WIDENING ROADWAY: PAID FOR AS SHOULDER PREP, MODIFIED. SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)
 - ROAD RECONSTRUCT. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.

00 03/20/2024
ISSUED FOR BIDS AMV
REVISIONS
DATE: MARCH, 2024
SCALE: 1" = 30H, 5V

**PLAN AND PROFILE
PIER ROAD**
STA. 44+00 TO STA. 46+00
(P.O.E.)
JOB No. 230387
08
OF 22

QUANTITIES THIS SHEET	
ITEM	QTY.
Pavt, Rem, Modified	45 Syd
Shoulder Prep, Modified	9 Sta
Erosion Control, Inlet Protection, Fabric Drop	1 Ea
Aggregate Base, 6 inch	85 Syd
Shld, CI II, 4 inch	115 Syd
HMA Surface, Rem	25 Syd
Pavt for Butt Joints, Rem	25 Syd
HMA Approach	25 Ton
HMA, 5EL	170 Ton
Gate Box, Adj, Case 1	1 Ea
Sanitary Structure Cover, Type Q	1 Ea
Sanitary Structure Cover, Adj, Case 1	1 Ea

WIGHTMAN

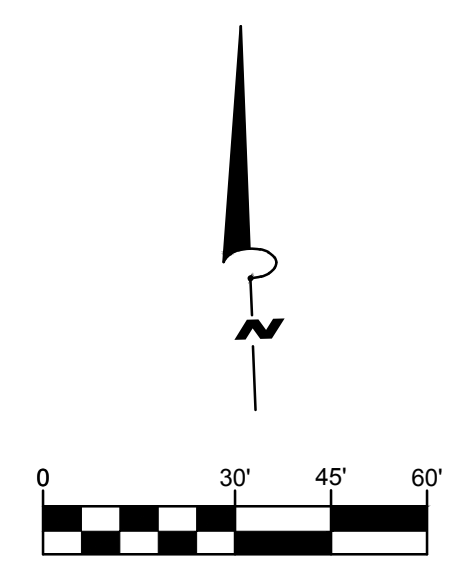
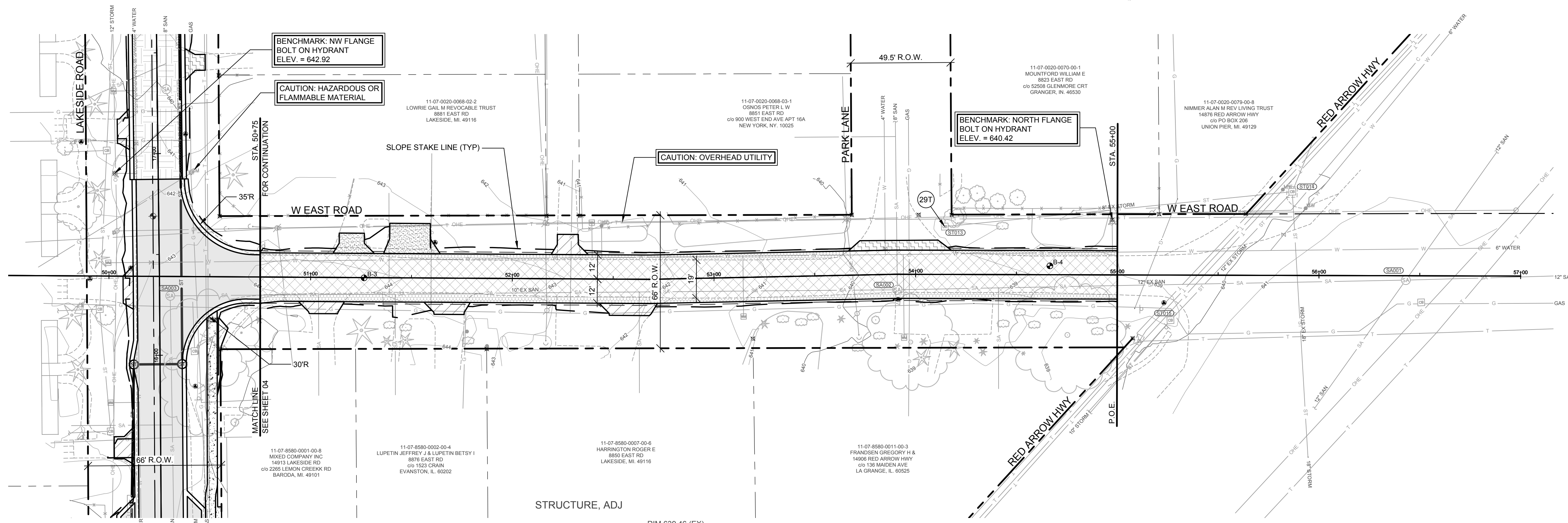
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.wightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
LAKESIDE ROAD, PIER ROAD, AND W EAST ROAD IMPROVEMENTS

BERRIEN COUNTY ROAD DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



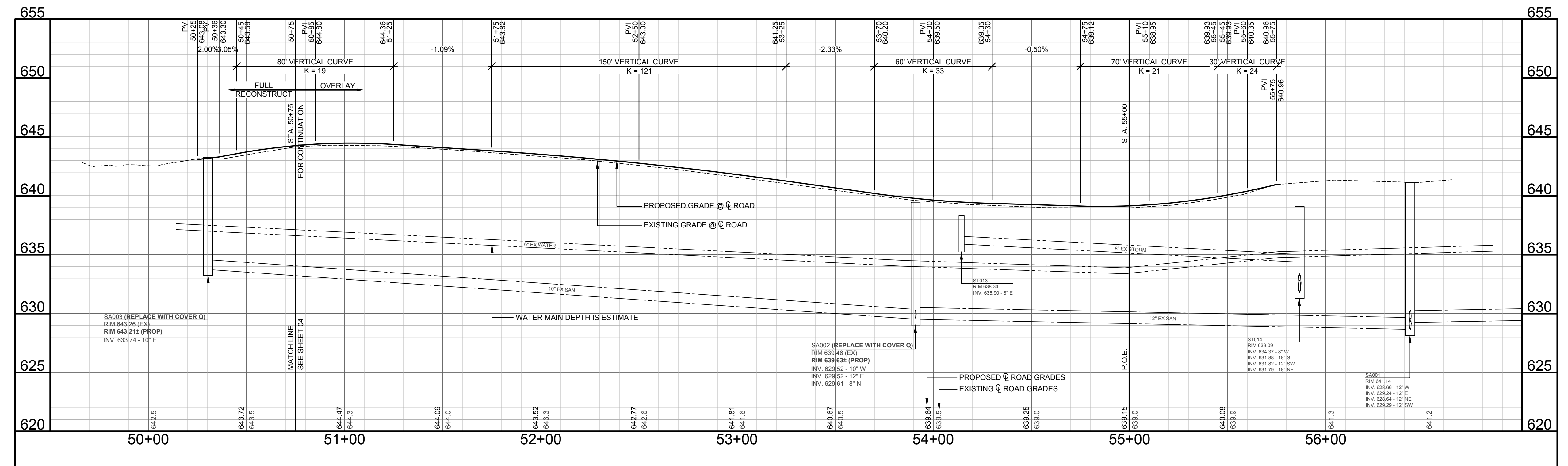
STRUCTURE, ADJ
SA002
EXISTING SAN STRUCTURE
(REPLACE WITH COVER Q)

RIM 639.46 (EX)
RIM 639.63A (PROP)
INV. 629.52 - 10' W
INV. 629.52 - 12' E
INV. 629.61 - 8' N

BORINGS

B-3	0 - 3"	ASPHALT
	3 - 12"	MACADAM
	12 - 48"	BROWN VERY FINE SAND
	48 - 60"	GRAY SILTY CLAY
	60"	END OF BORING
B-4	0 - 4.75"	ASPHALT
	4.75 - 11"	MACADAM
	11 - 30"	BROWN FINE SAND
	30 - 60"	TAN FINE SAND
	60"	END OF BORING

- 51+25 16" SPRUCE 26.2'
- 51+38 6" SPRUCE 31.3'
- 51+42 8" SPRUCE 30.8'
- 51+47 BUSH 24.6'
- 51+78 POST WYL 26.4'
- 51+88 END BENT 11'19" 26.0'
- 51+88 POST WOOD FENCE 33.6'
- 52+17 GUY M. 1.30.7'
- 52+17 POWER POLE 15.8'
- 52+25 16" SPRUCE 26.2'
- 52+38 6" SPRUCE 31.3'
- 52+42 8" SPRUCE 30.8'
- 52+47 BUSH 24.6'
- 52+78 POST WYL 26.4'
- 52+88 END BENT 11'19" 26.0'
- 52+88 POST WOOD FENCE 33.6'
- 53+17 GUY M. 1.30.7'
- 53+17 POWER POLE 15.8'
- 53+25 16" SPRUCE 26.2'
- 53+38 6" SPRUCE 31.3'
- 53+42 8" SPRUCE 30.8'
- 53+47 BUSH 24.6'
- 53+78 POST WYL 26.4'
- 53+88 END BENT 11'19" 26.0'
- 53+88 POST WOOD FENCE 33.6'
- 54+17 GUY M. 1.30.7'
- 54+17 POWER POLE 15.8'
- 54+25 16" SPRUCE 26.2'
- 54+38 6" SPRUCE 31.3'
- 54+42 8" SPRUCE 30.8'
- 54+47 BUSH 24.6'
- 54+78 POST WYL 26.4'
- 54+88 END BENT 11'19" 26.0'
- 54+88 POST WOOD FENCE 33.6'
- 55+17 GUY M. 1.30.7'
- 55+17 POWER POLE 15.8'
- 55+25 16" SPRUCE 26.2'
- 55+38 6" SPRUCE 31.3'
- 55+42 8" SPRUCE 30.8'
- 55+47 BUSH 24.6'
- 55+78 POST WYL 26.4'
- 55+88 END BENT 11'19" 26.0'
- 55+88 POST WOOD FENCE 33.6'



LEGEND

- (291) DENOTES INLET PROTECTION FABRIC DROP. SEE DETAIL ON SHEET 02 FOR INLET PROTECTION DETAIL.
- SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK. REM. REGRADE AS REQUIRED AND SURFACE WITH SIDEWALK CONC. 4 INCH; SIDEWALK CONC. 6 INCH TRU DRIVEWAYS; OR CURB RAMP, CONC. 6 INCH AT INTERSECTIONS. MATCH EXISTING GRADE AT SAWCUT LINE.
- PROVIDE DETECTABLE WARNING SURFACE AT ALL SIDEWALK/CURB INTERFACES.
- SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT: PAID FOR AS PAVT, REM, MODIFIED. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH, 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- SAWCUT AND REMOVE EXISTING HMA PAVEMENT: PAID FOR AS HMA SURFACE, REM. REGRADE EXISTING DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT SAWCUT LINE.
- REGRADE EXISTING GRAVEL DRIVEWAY AS REQUIRED AND SURFACE WITH AGGREGATE BASE, 6 INCH (AS DIRECTED BY THE ENGINEER IN THE FIELD); 330#/SYD HMA APPROACH (165#/SYD PER LIFT). MATCH EXISTING GRADE AT THE TIE IN LOCATION.
- HMA OVERLAY: SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)
- REMOVE EXISTING SHOULDER WHERE WIDENING ROADWAY: PAID FOR AS GROUNDWER PREP, MODIFIED. SURFACE WITH HMA, 5EL (0-220#/SYD, WEDGING); HMA, 5EL (165#/SYD, TOP)
- ROAD RECONSTRUCT. SEE TYPICAL SECTIONS ON SHEET 02 & 03 FOR DETAILS.

00 03/20/2024 AMV
ISSUED FOR BIDS

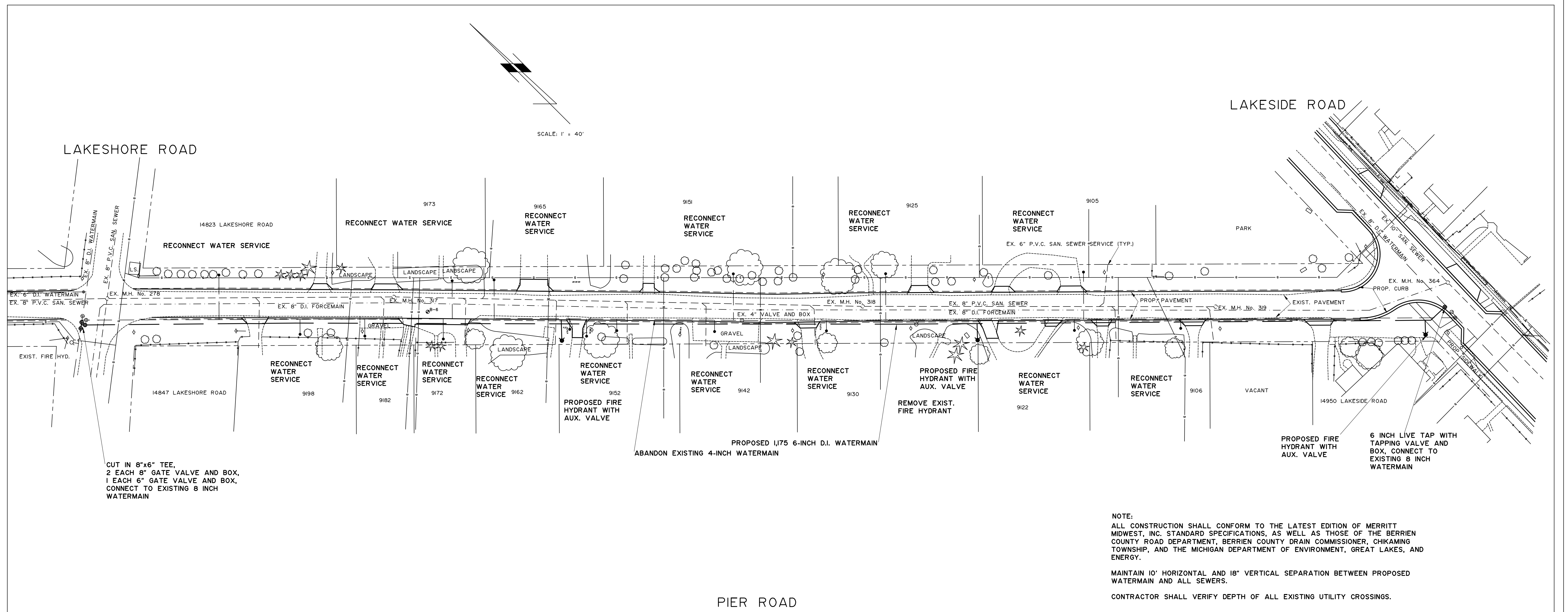
REVISIONS

THE REPRODUCTION, COPYING OR OTHER USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.

DATE: MARCH, 2024
SCALE: 1" = 30H, 5V

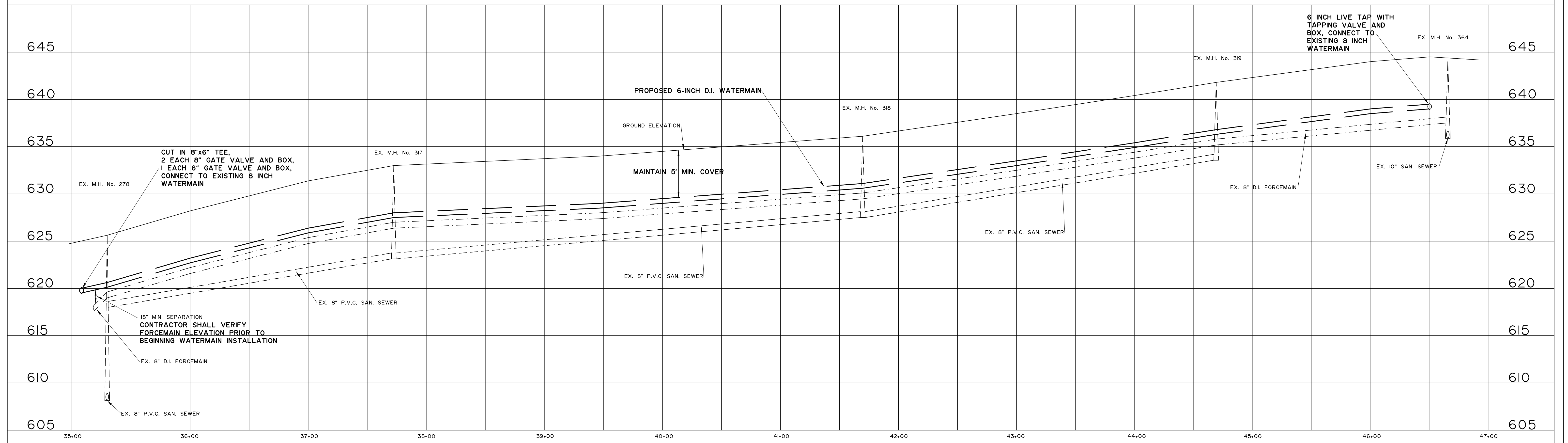
**PLAN AND PROFILE
W EAST ROAD**
STA. 50+75 (P.O.B.) TO STA.
55+00 (P.O.E.)

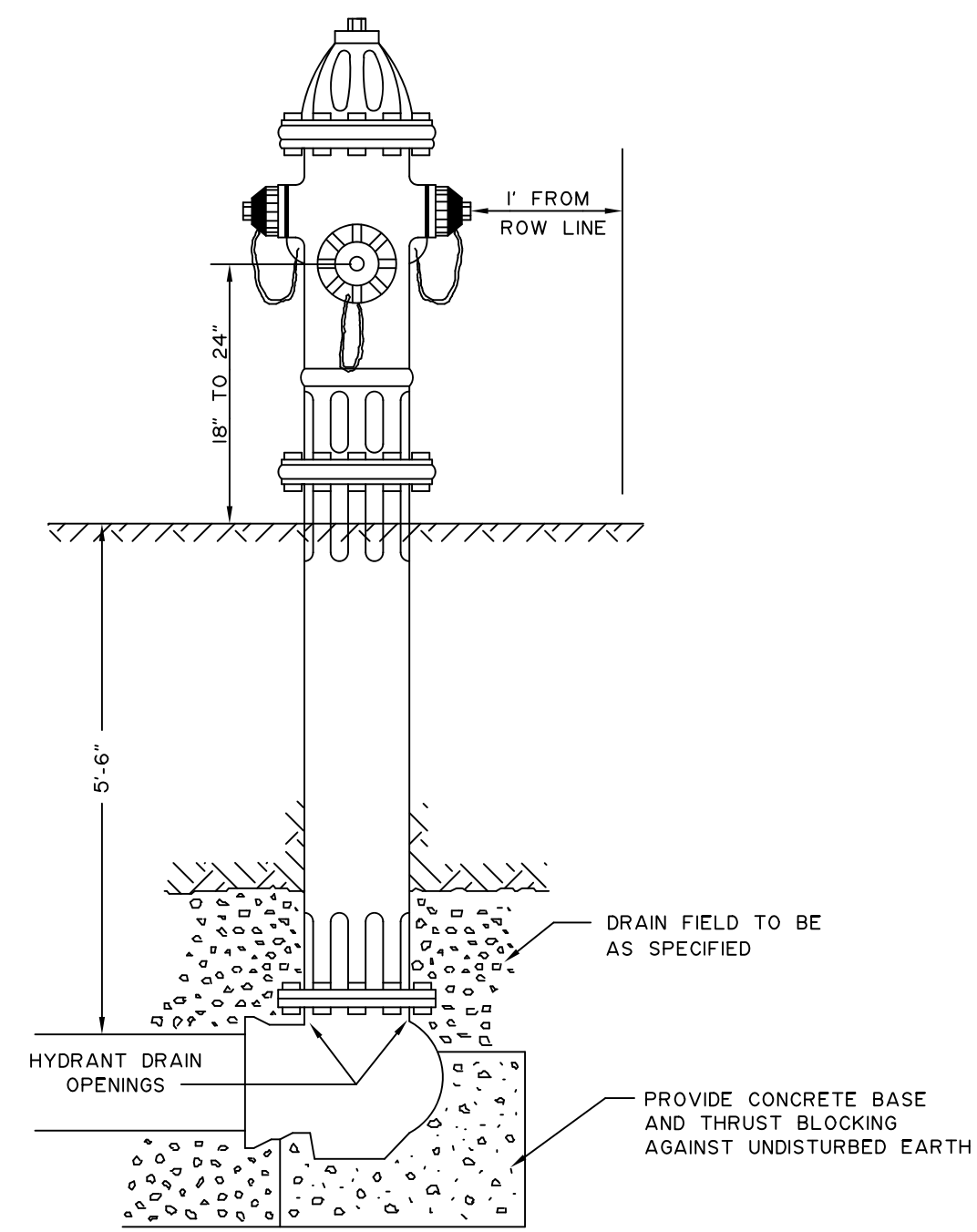
JOB No. 230387
09
OF 22



SCALE: 1" = 40'

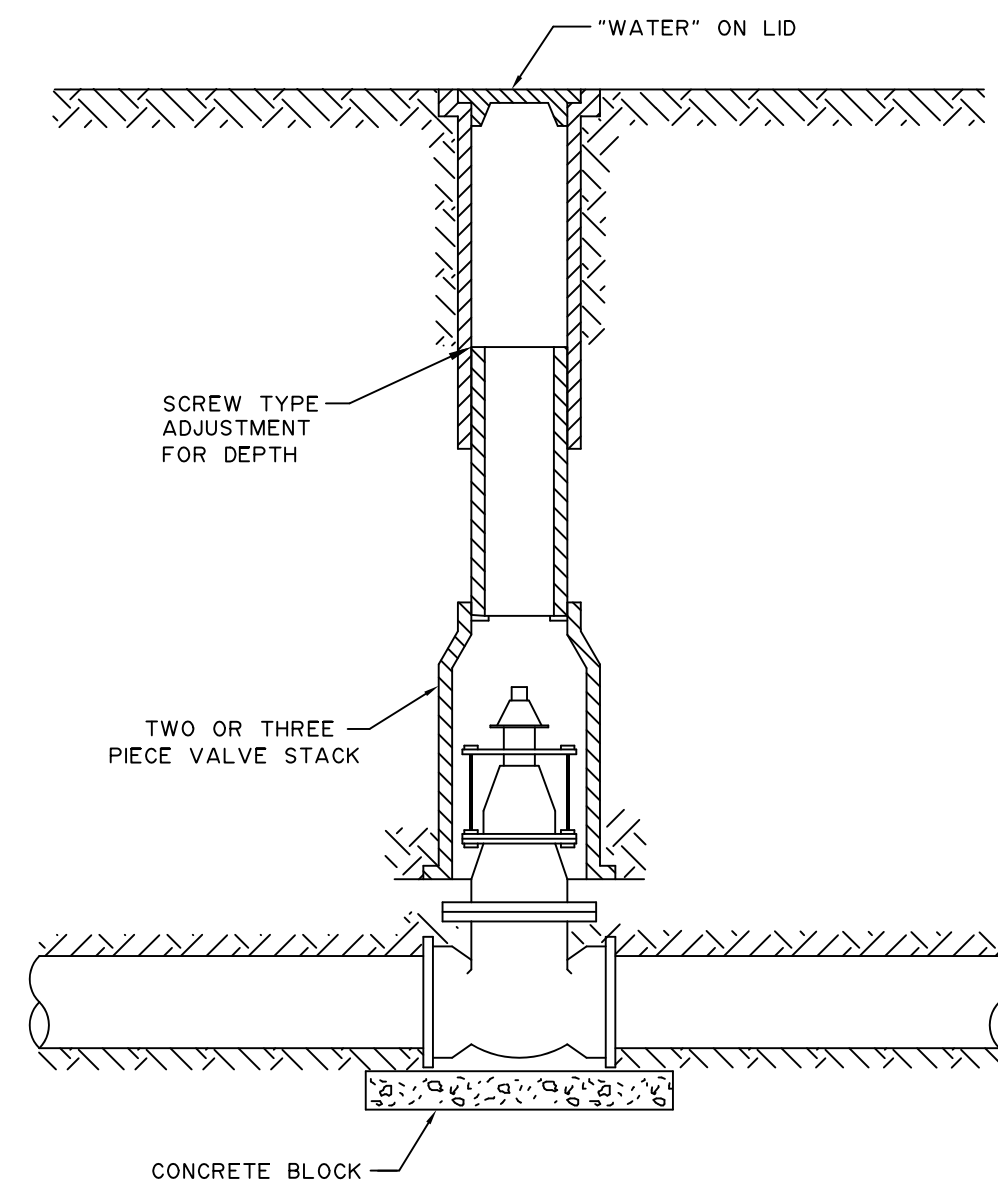
NOTE:
 ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF MERRITT MIDWEST, INC. STANDARD SPECIFICATIONS, AS WELL AS THOSE OF THE BERRIEN COUNTY ROAD DEPARTMENT, BERRIEN COUNTY DRAIN COMMISSIONER, CHIKAMING TOWNSHIP, AND THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY.
 MAINTAIN 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN PROPOSED WATERMAIN AND ALL SEWERS.
 CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING UTILITY CROSSINGS.



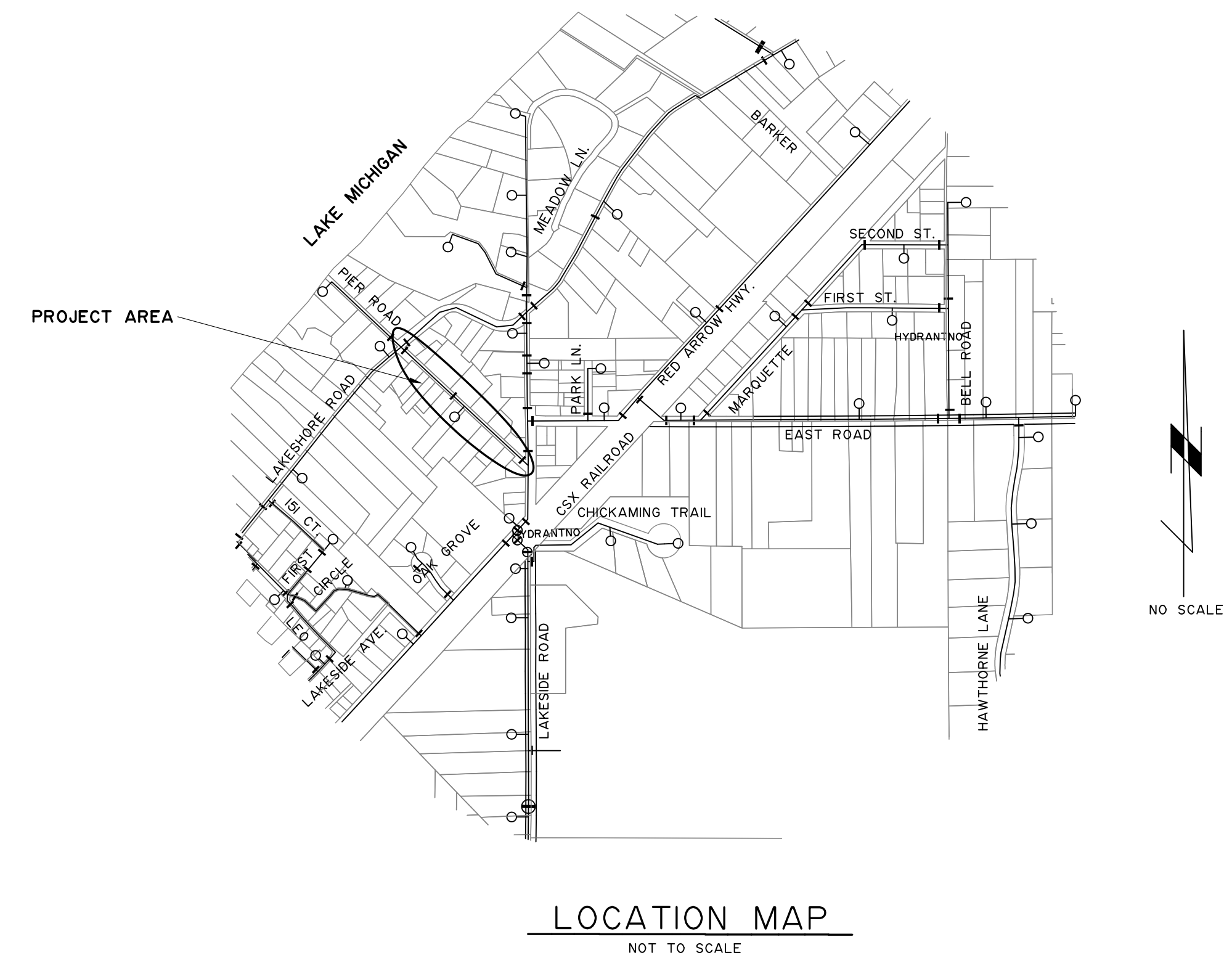


NOTE:
CONCRETE BASE AND BLOCKING MATERIAL SHALL
NOT BLOCK NOR OBSTRUCT HYDRANT DRAIN

FIRE HYDRANT



GATE VALVE AND BOX



LOCATION MAP
NOT TO SCALE

NOMINAL PIPE SIZE	END PLUG	FITTING TYPE							
		90° BEND	45° BEND	22° BEND	11° BEND	Dx6" TEE	Dx8" TEE	Dx12" TEE	Dx16" TEE
6"	25'	10'/25"	4'/10"	2'/5"	1'/2"	10'
8"	33'	13'/33"	5'/14"	3'/7"	1'/3"	5'	18'
12"	47'	19'/47"	8'/19"	4'/9"	2'/5"	0'	10'	32'
16"	61'	24'/61"	10'/25"	5'/12"	2'/6"	0'	2'	26'	45'

BENDS LISTED AS INSTALLED
HORIZONTALLY / VERTICALLY

ANY JOINTS WITHIN DISTANCE SHOWN FROM FITTING MUST USE JOINT RESTRAINT.

JOINT RESTRAINT USAGE

NOTE:
ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF MERRITT MIDWEST, INC. STANDARD SPECIFICATIONS, AS WELL AS THOSE OF THE BERRIEN COUNTY ROAD DEPARTMENT, BERRIEN COUNTY DRAIN COMMISSIONER, CHIKAMING TOWNSHIP, AND THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY.

MAINTAIN 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN PROPOSED WATERMAIN AND ALL SEWERS.

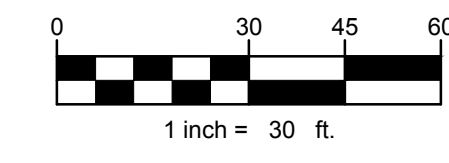
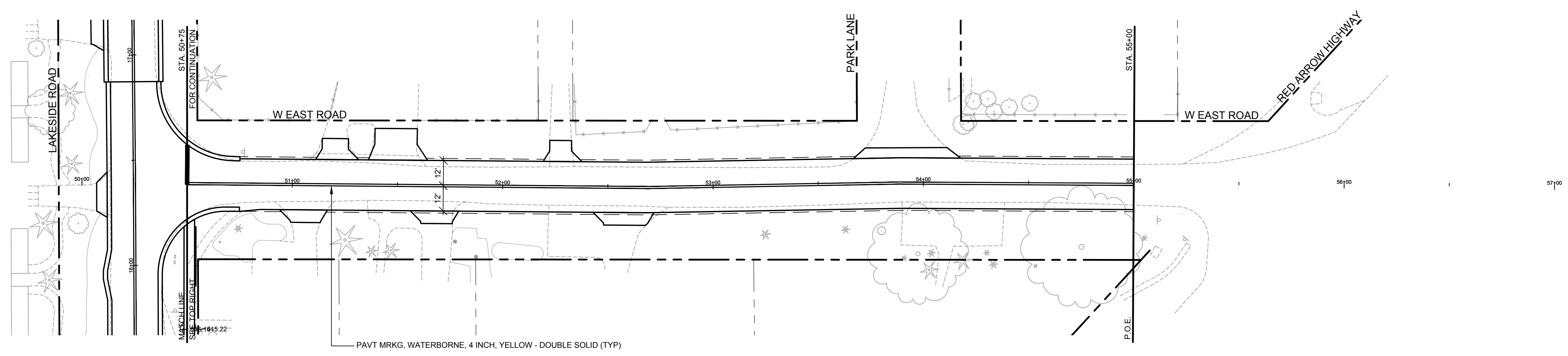
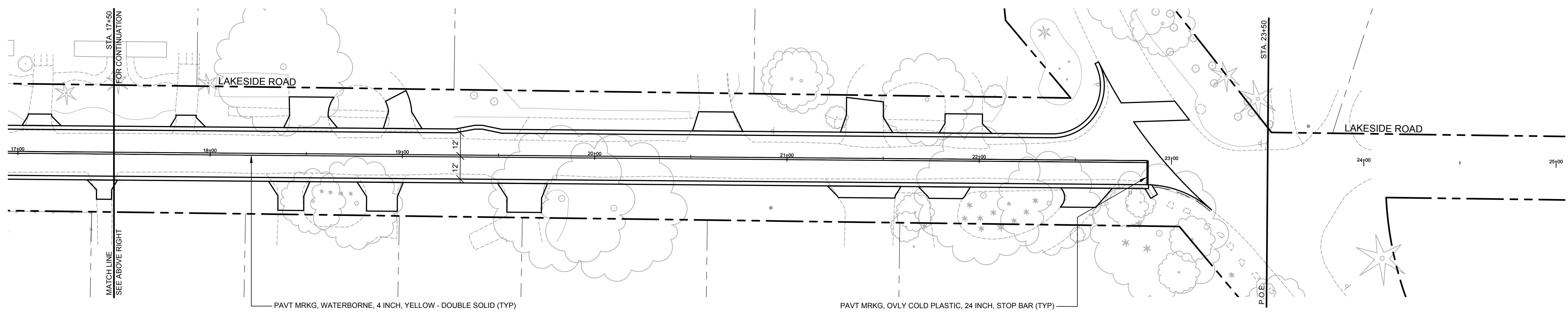
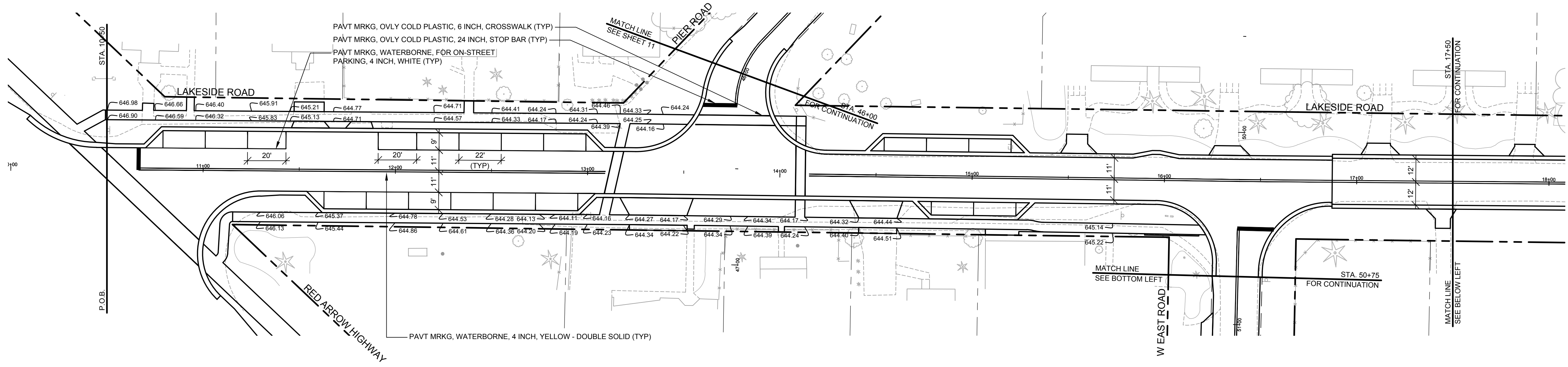
CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING UTILITY CROSSINGS.

QUANTITIES THIS SHEET	
ITEM	QTY.
Sign, Type I, Rem	7 Ea
Sign, Type III, Rem	13 Ea
Pavt Mrkg, Ovly Cold Plastic, 6 inch, Crosswalk	130 Ft
Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	55 Ft
Pavt Mrkg, Waterborne, 4 inch, Yellow	3,150 Ft
Pavt Mrkg, Waterborne, For On-Street Parking, 4 inch, White	570 Ft

W+
WIGHTMAN
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100
www.gowightman.com

MELANIE K. STANAGE
6201065450
PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



NOTE:
BERRIEN COUNTY ROAD DEPARTMENT WILL INSTALL
ALL NECESSARY PERMANENT SIGNS BEFORE OPENING
THE ROAD TO TRAFFIC. THE CONTRACTOR SHALL NOTIFY
THE ROAD DEPARTMENT WHEN PERMANENT SIGNS CAN
BE PLACED.

00 03/20/2024 AMV
ISSUED FOR BIDS
REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 30'

**PAVEMENT MARKING
AND PERMANENT
SIGNAGE
LAKESIDE ROAD AND
W EAST ROAD**

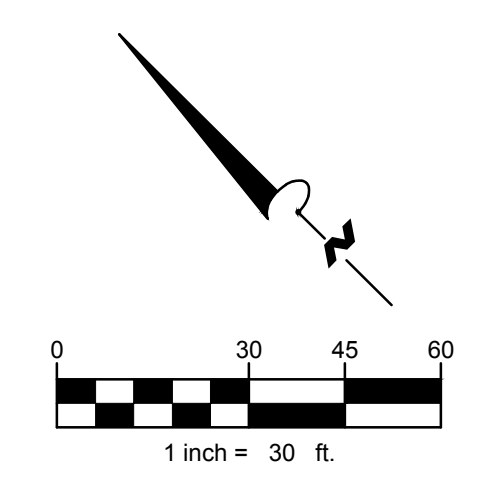
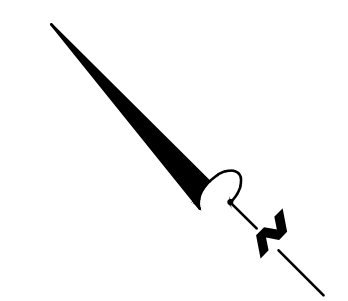
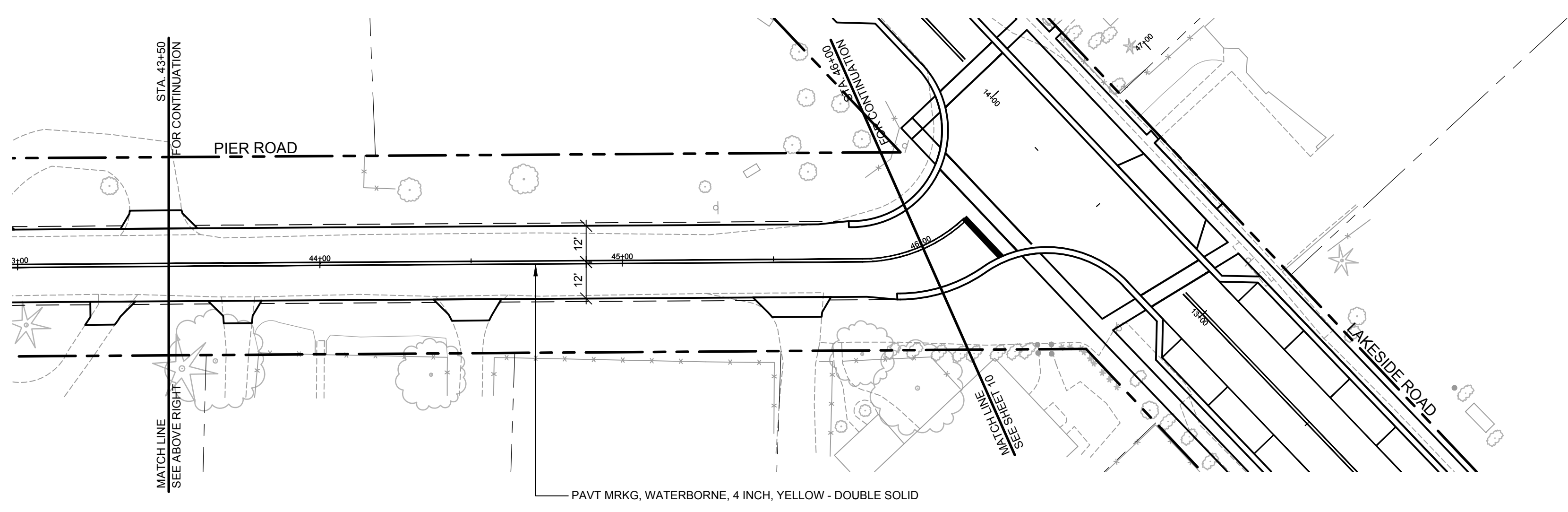
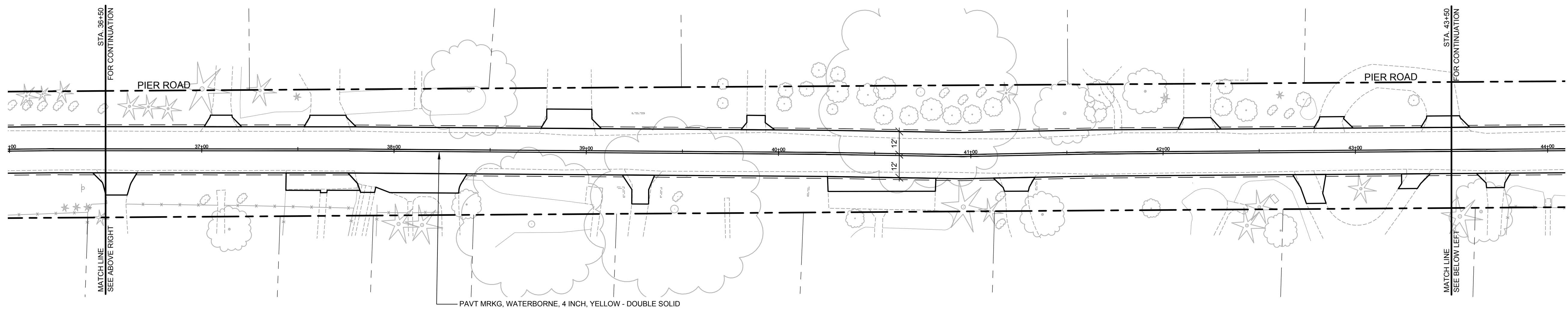
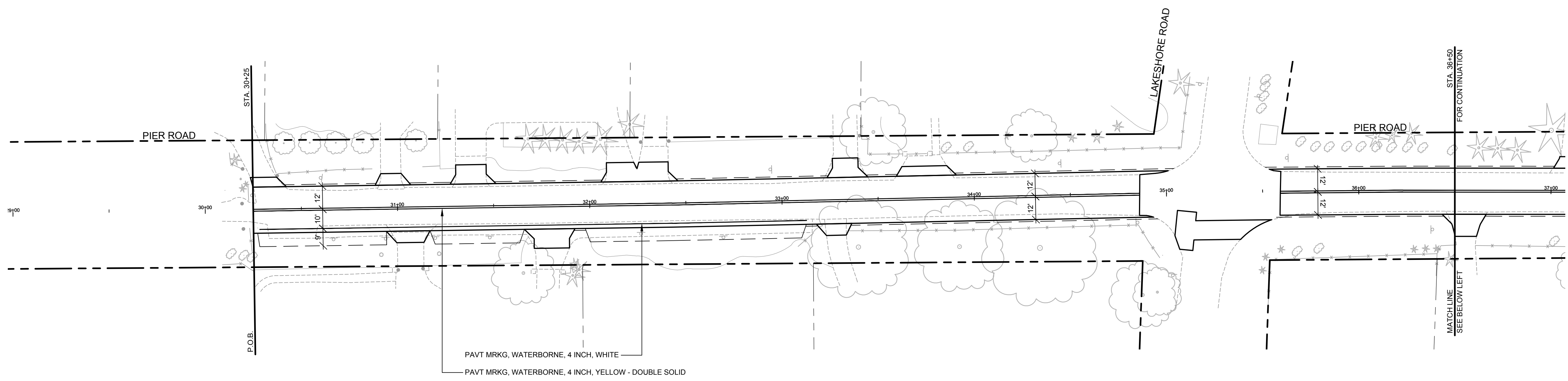
QUANTITIES THIS SHEET

ITEM	QTY.
Sign, Type I, Rem	2 Ea
Sign, Type III, Rem	20 Ea
Pavt Mrkg, Waterborne, 4 inch, White	300 Ft
Pavt Mrkg, Waterborne, 4 inch, Yellow	3,050 Ft

W+
WIGHTMAN
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100
www.gowightman.com

MELANIE K. STANAGE
6201065450
PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



NOTE:
BERRIEN COUNTY ROAD DEPARTMENT WILL INSTALL ALL NECESSARY PERMANENT SIGNS BEFORE OPENING THE ROAD TO TRAFFIC. THE CONTRACTOR SHALL NOTIFY THE ROAD DEPARTMENT WHEN PERMANENT SIGNS CAN BE PLACED.

00 03/20/2024 AMV
ISSUED FOR BIDS

REVISIONS
THE REPRODUCTION, COPYING OR OTHER USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED.
DATE: MARCH, 2024
SCALE: 1" = 30'

PAVEMENT MARKING AND PERMANENT SIGNAGE
PIER ROAD



WIGHTMAN

1670 LINCOLN RD.
ALLEGAN, MI. 49010
269.673.8465

www.gowightman.com



STEELHEAD ENGINEERING
259 E. Michigan Avenue, Suite 407
Kalamazoo, Michigan 49007
(269)585-2255
www.steelheadengineeringco.com

BRADEN S. COX
3/14/2024

PROJECT NAME:
LAKESIDE ROAD, PIER ROAD,
AND W EAST ROAD
IMPROVEMENTS

BERRIAN COUNTY ROAD
DEPARTMENT
2860 E NAPIER AVENUE
BENTON HARBOR, MI

00 03/20/2024
ISSUED FOR BIDS

REVISIONS

1. 2024 03/20/2024 Update Permittals and P&ID
2. 2024 03/20/2024 Update Permittals and P&ID

DATE: MARCH, 2024
SCALE: 1" = 30'

ELECTICAL PLANS

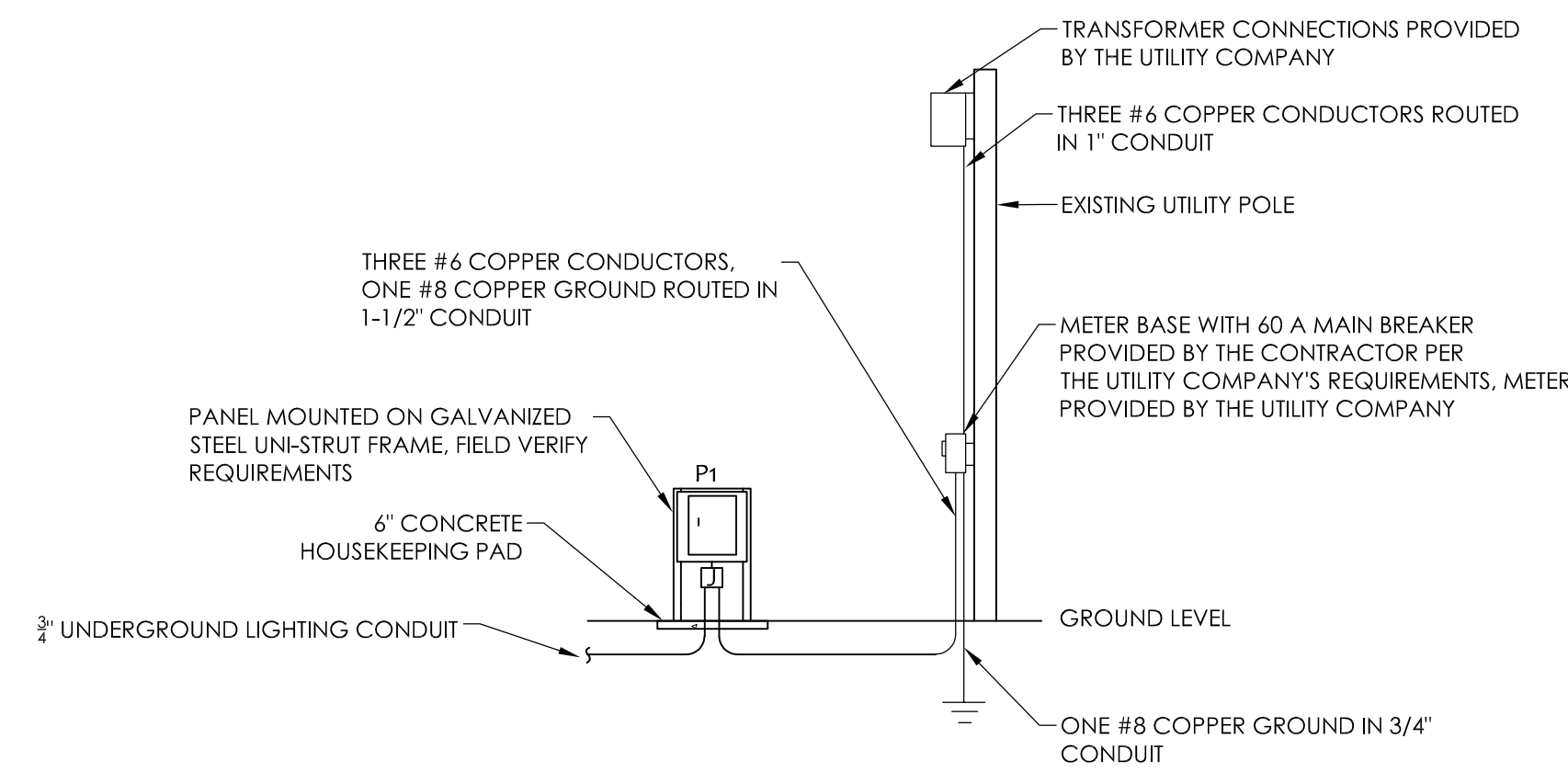
JOB No. 230387

ELECTRICAL GENERAL NOTES

- A. WORK SHALL COMPLY WITH THE N.E.C. AND ALL LOCAL, STATE AND NATIONAL CODES.
- B. COORDINATE WORK WITH THE WORK OF ALL TRADES ON THE PROJECT.
- C. FIELD VERIFY THE EXISTING CONDITIONS PRIOR TO BIDDING.
- D. LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.
- E. SINGLE PHASE BRANCH CIRCUITS SHALL NOT SHARE NEUTRALS.
- F. ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
- G. PROVIDE COPPER CONDUCTORS WITH THWN OR XHHW INSULATION. #10 AND SMALLER CONDUCTORS SHALL BE SOLID CONDUCTORS WITH CONTINUOUS COLOR INSULATION. #8 AND LARGER SHALL BE STRANDED CONDUCTORS WITH THE ENDS TAPED WITH COLOR PER THE NEC.
- H. EXTERIOR BELOW GRADE CONDUIT: PROVIDE SCHEDULE 40 PVC CONDUIT. NO PVC SHALL BE INSTALLED ABOVE GRADE. EXTERIOR ABOVE GRADE CONDUIT: PROVIDE RIGID STEEL CONDUIT ABOVE GRADE. TRANSITIONS FROM PVC SHALL OCCUR BELOW GRADE. CONDUIT SHALL BE BRACED FOR VERTICAL INSULATION.

KEY NOTES

- ① LIGHT FIXTURE AND POLE SELECTION BY OWNER.
- ② LOAD CENTER, INSTALLED ON UNI-STRUT FRAME, METER AND METER BASE PROVIDED BY THE UTILITY COMPANY, INSTALLED ON EXISTING UTILITY POLE. FIELD VERIFY LOCATION AND CONNECTION REQUIREMENTS.

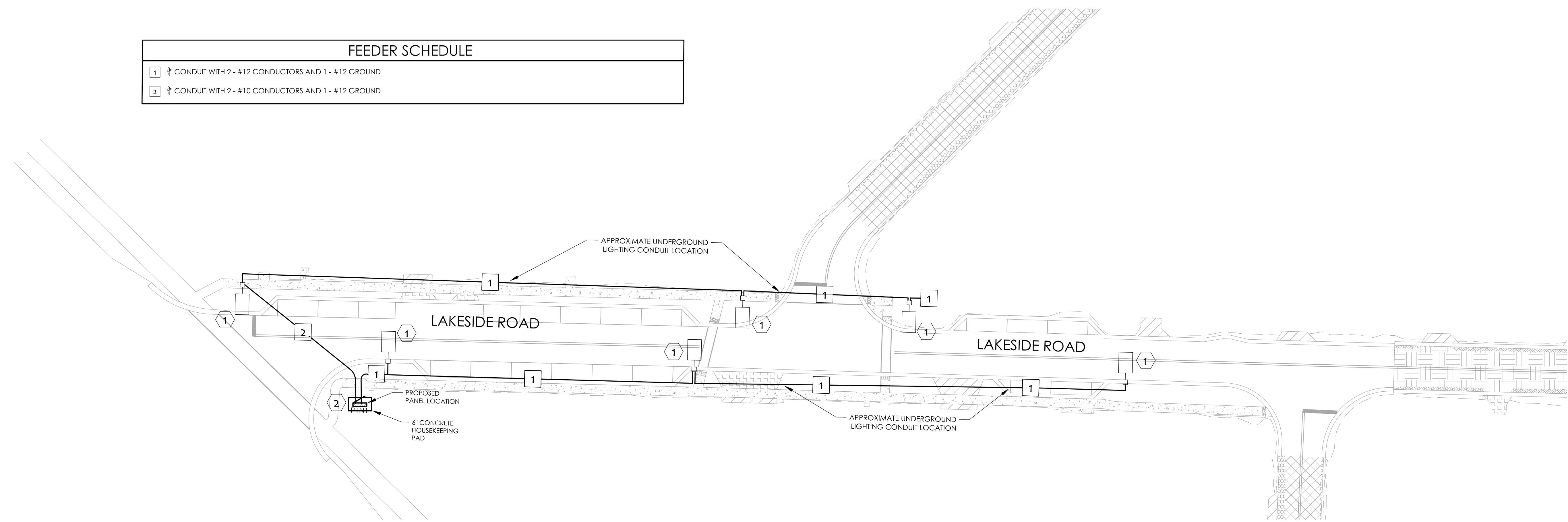


ELECTRICAL RISER DIAGRAM

NTS

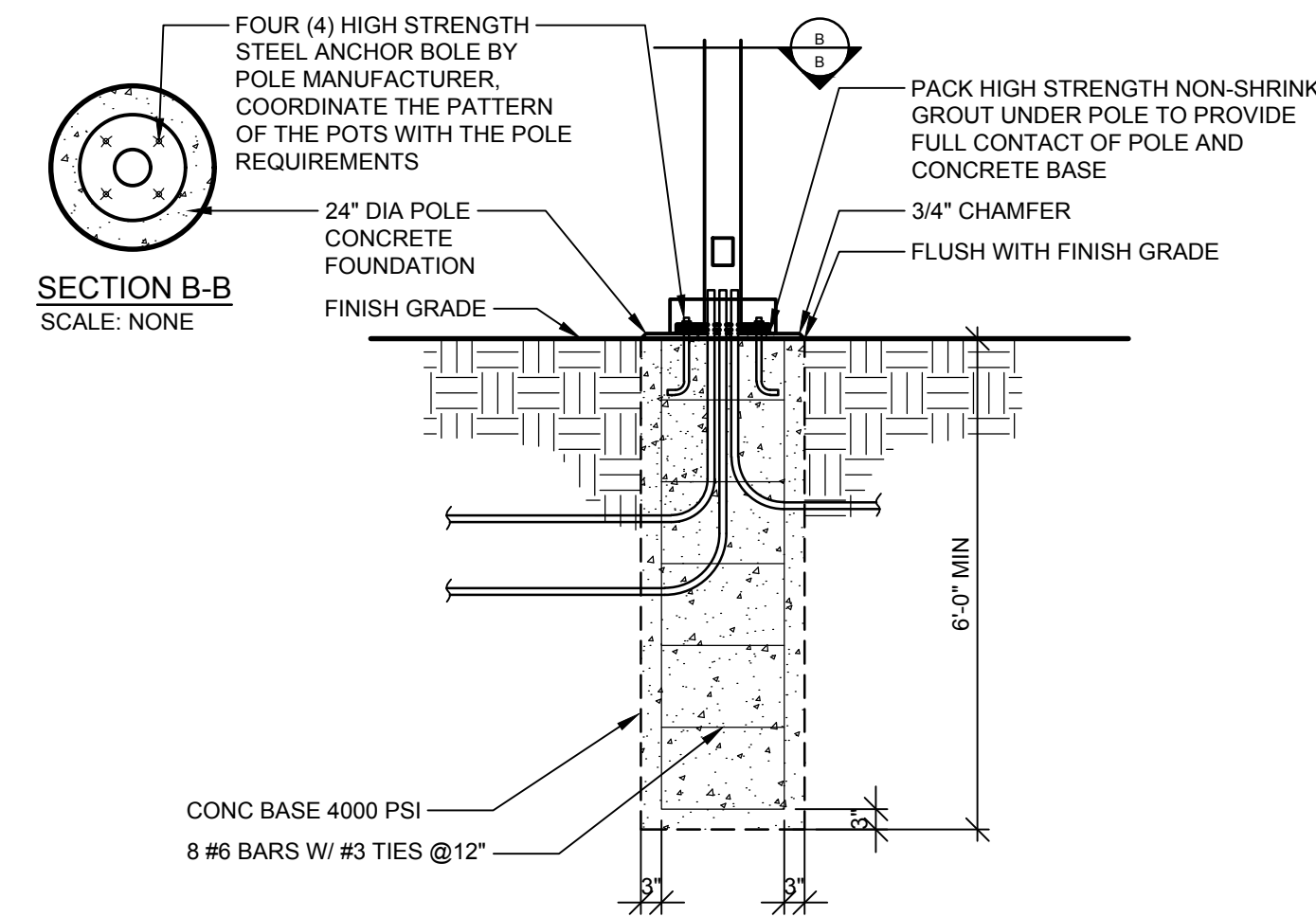
FEEDER SCHEDULE

1	3/4" CONDUIT WITH 2 - #12 CONDUCTORS AND 1 - #12 GROUND
2	3/4" CONDUIT WITH 2 - #10 CONDUCTORS AND 1 - #12 GROUND



LIGHTING PLAN

1

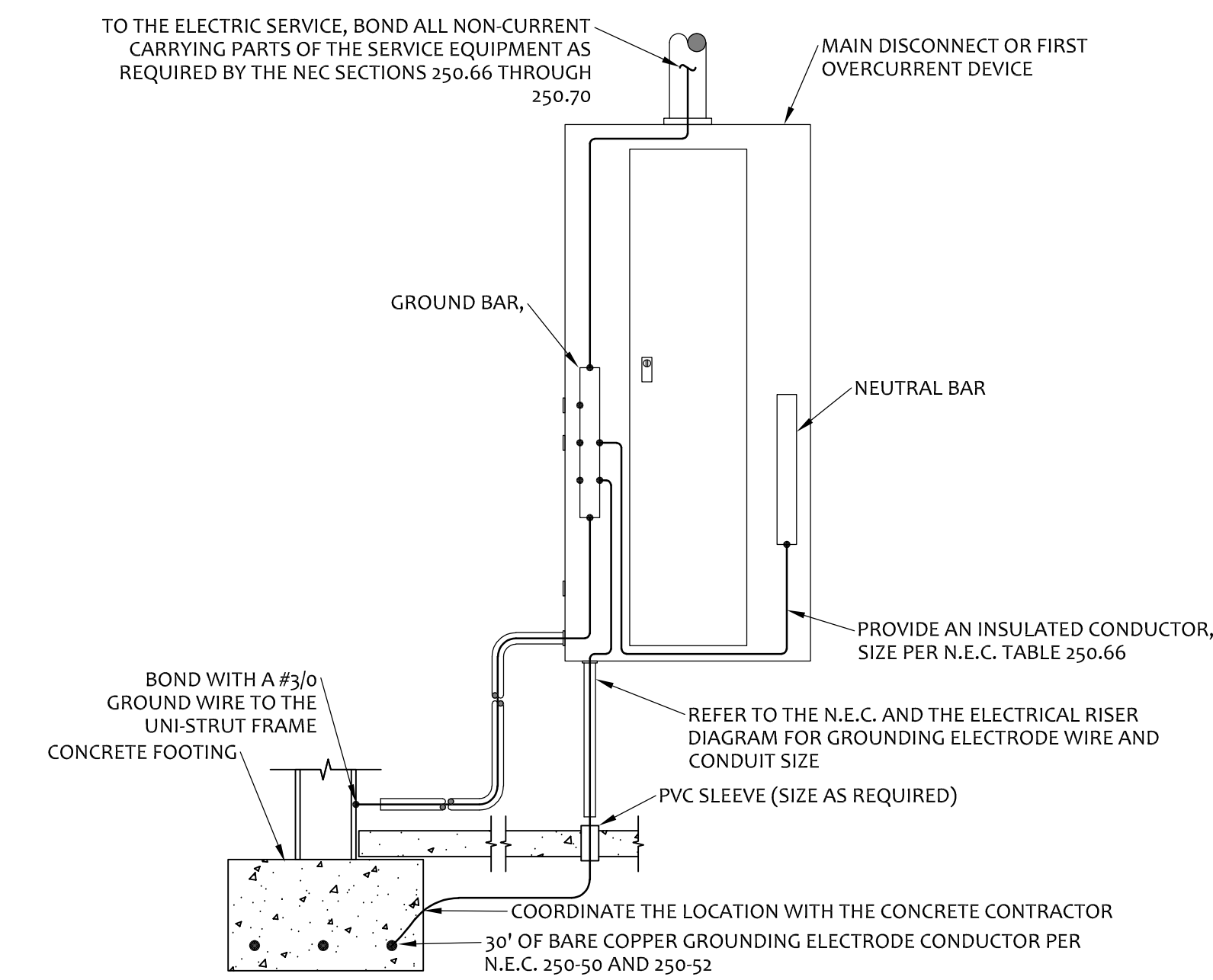

LIGHT POLE FOUNDATION DETAIL

SCALE: NONE

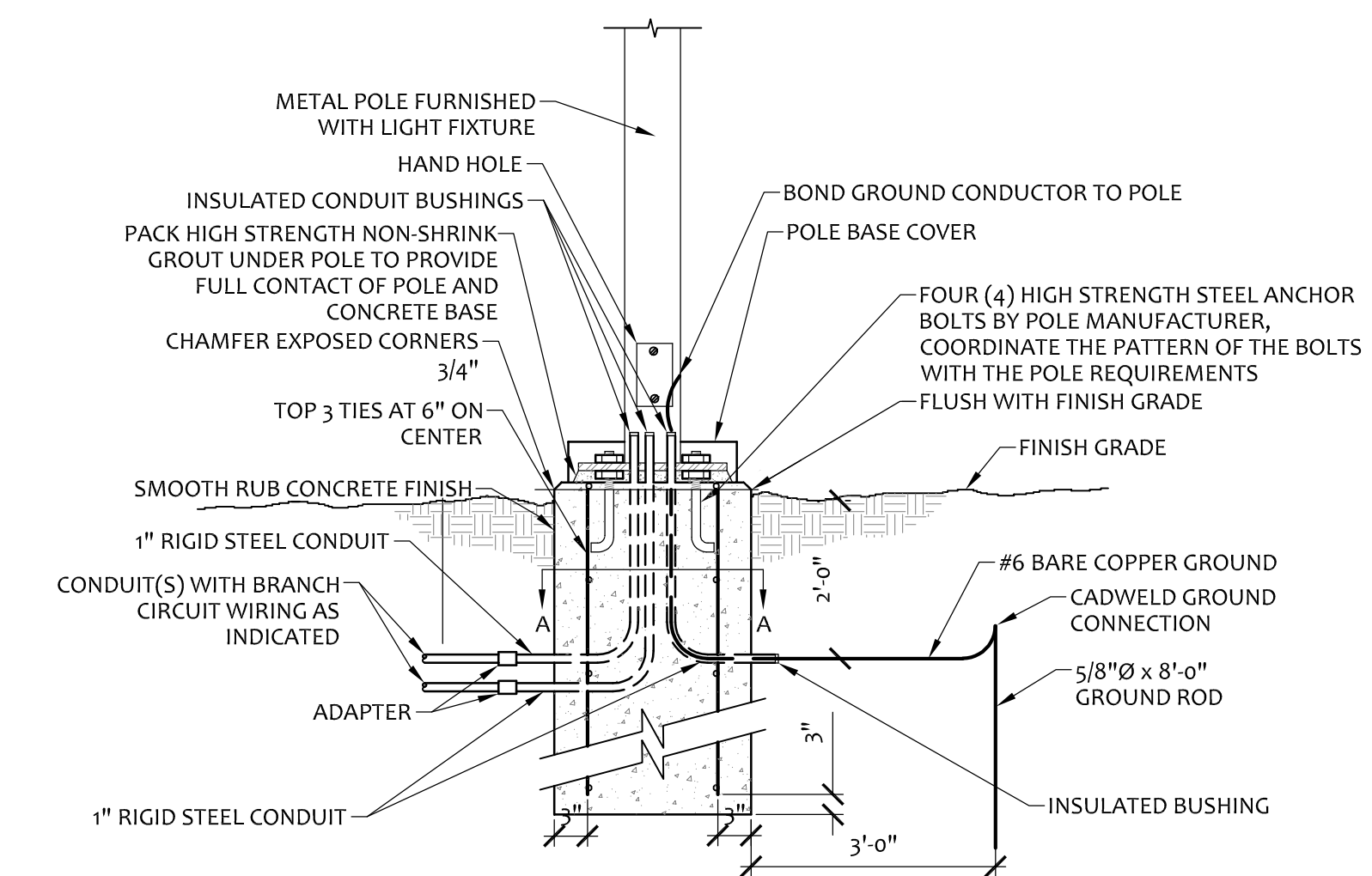
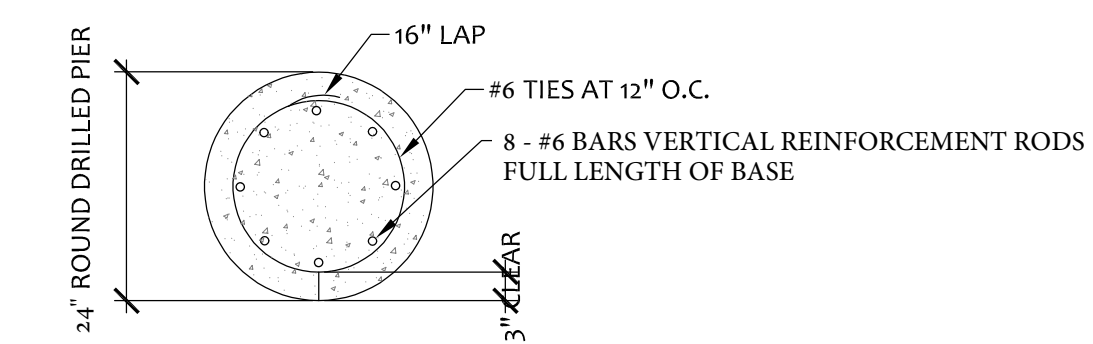
SEE "ELEVATED POLE BASE FOR UNDERGROUND CONDUIT DETAIL" FOR ELECTRICAL WORK

 PANEL: P1N1 ; 16 CIRCUIT ; SECTION(S) ; ALUM. BUS
100 AMP RATING ; 100 A MAIN LUGS ONLY ; 120/240 V VOLTS ; 1 PHASE
3 WIRE W/GRD BAR ; SURFACE MOUNTED ; 10K MIN. AMP INT. CAPACITY

SERVES	LOAD IN AMPERES	WIRE G & N	POLES TRIP	CIR	A	B	CIR	POLES TRIP	WIRE G & N	LOAD IN AMPERES	SERVES
STREET LIGHTING	4.3		20 A	1	●		2	20 A			SPARE
SPACE			20 A	3		●	4	20 A			SPARE
SPACE			20 A	5		●	6	20 A			SPACE
SPACE			20 A	7		●	8	20 A			SPACE
SPACE			20 A	9		●	10	20 A			SPACE
SPACE			20 A	11		●	12	20 A			SPACE
SPACE			20 A	13		●	14	20 A			SPACE
SPACE			20 A	15		●	16	20 A			SPACE

 TOTAL: PHASE A = 4.3 A PHASE B = 0 A
 TOTAL CONNECTED LOAD: 516 VA DEMAND LINE AMPS: 4.3 A ESTIMATED DEMAND LOAD: 645 VA

GROUNDING DETAIL

NOT TO SCALE


ELEVATION

SECTION A-A
ELEVATED POLE BASE FOR UNDERGROUND CONDUIT DETAIL

NOT TO SCALE

SEE "LIGHT POLE FOUNDATION DETAIL" FOR CONCRETE, STEEL REINFORCEMENT, AND POLE CONNECTION WORK

 00 03/20/2024
 ISSUED FOR BIDS

REVISIONS

 THE REPRODUCTION, COPYING OR OTHER USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED.
 © 2024 WIGHTMAN & ASSOCIATES, INC.

 DATE: MARCH, 2024
 SCALE: NONE

ELECTRICAL DETAILS



WIGHTMAN

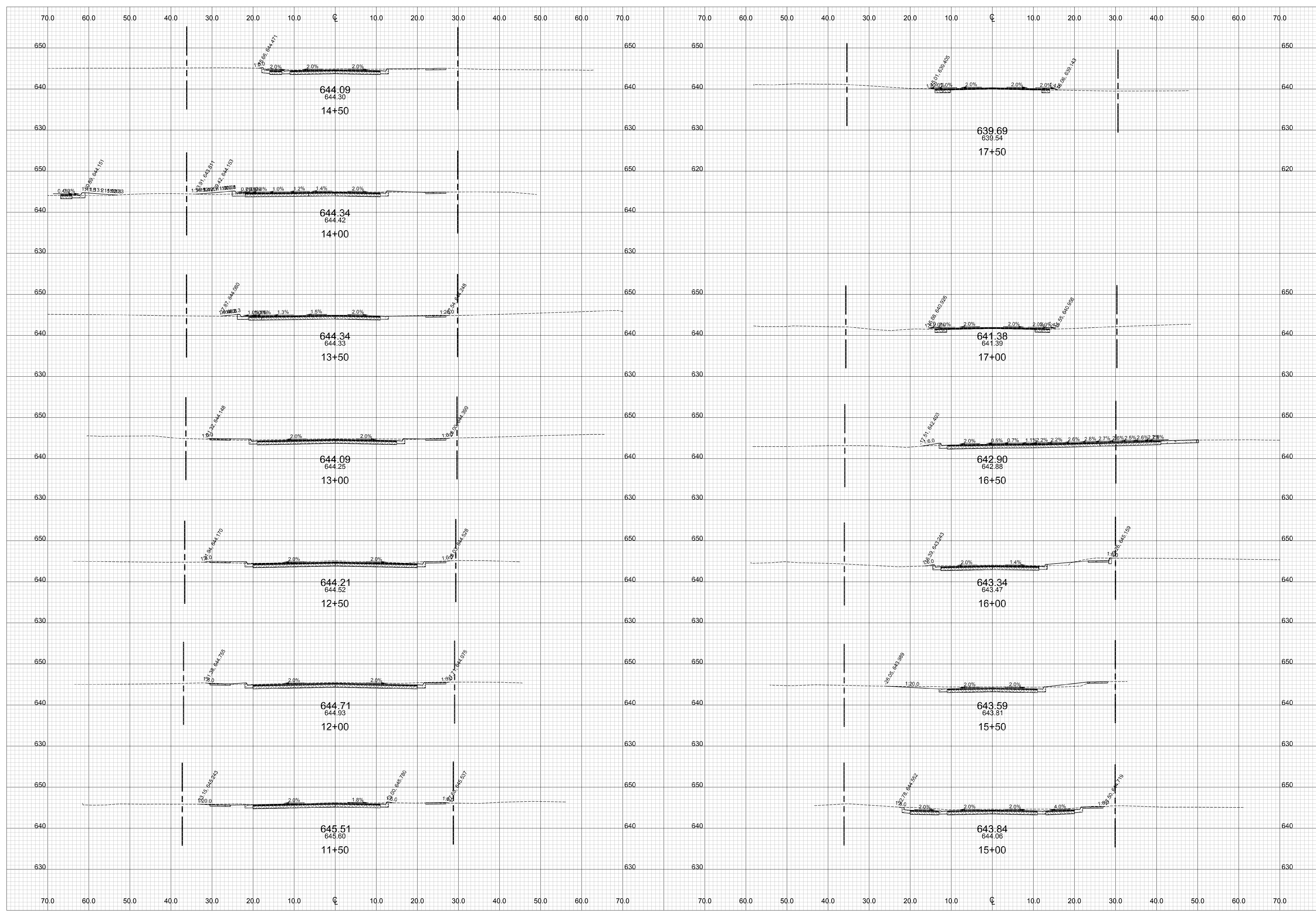
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



00 03/20/2024
ISSUED FOR BIDS AMV

REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 10'

**CROSS SECTIONS
LAKESIDE ROAD
STA. 11+50 TO STA. 17+50**



WIGHTMAN

2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

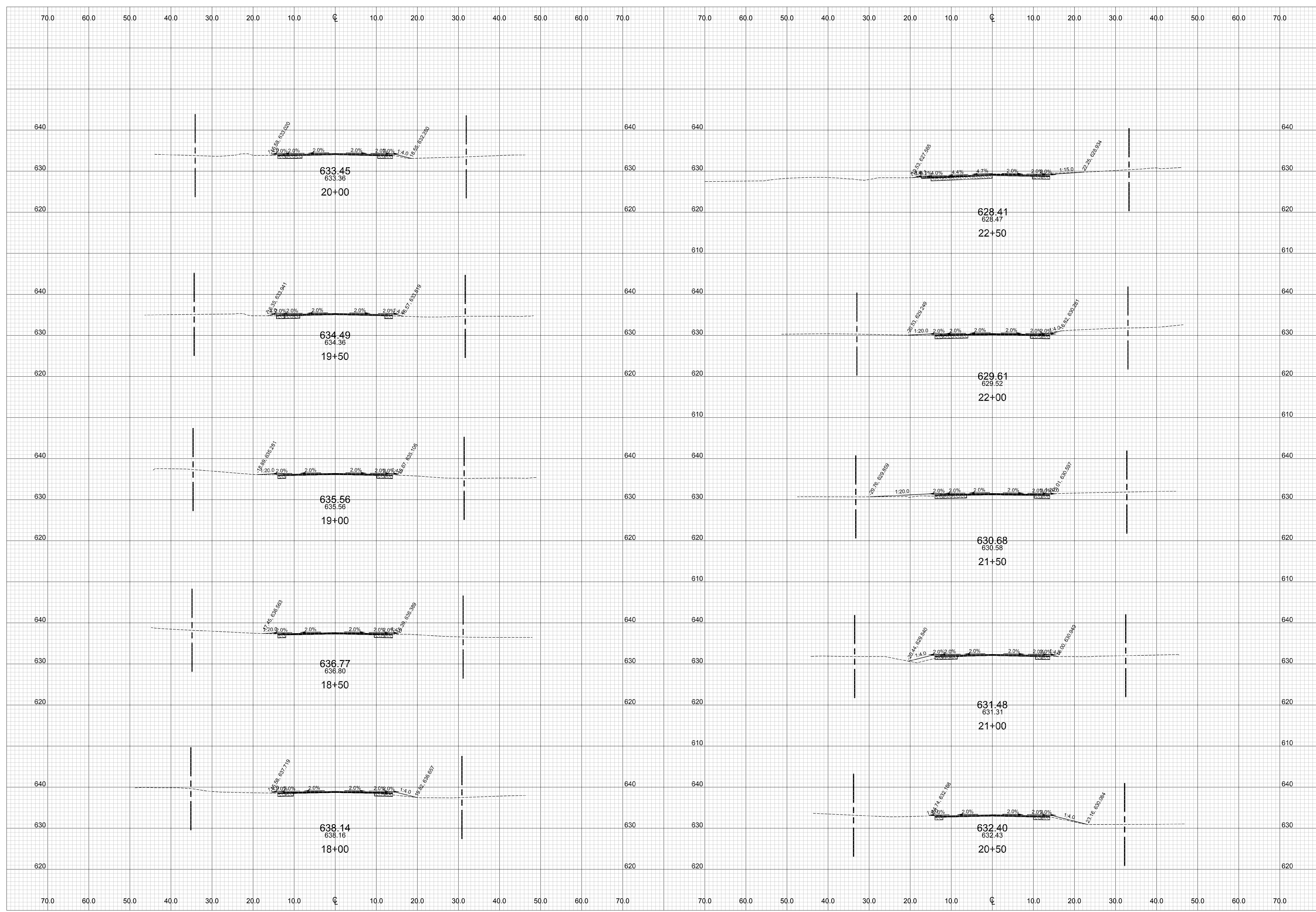
PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

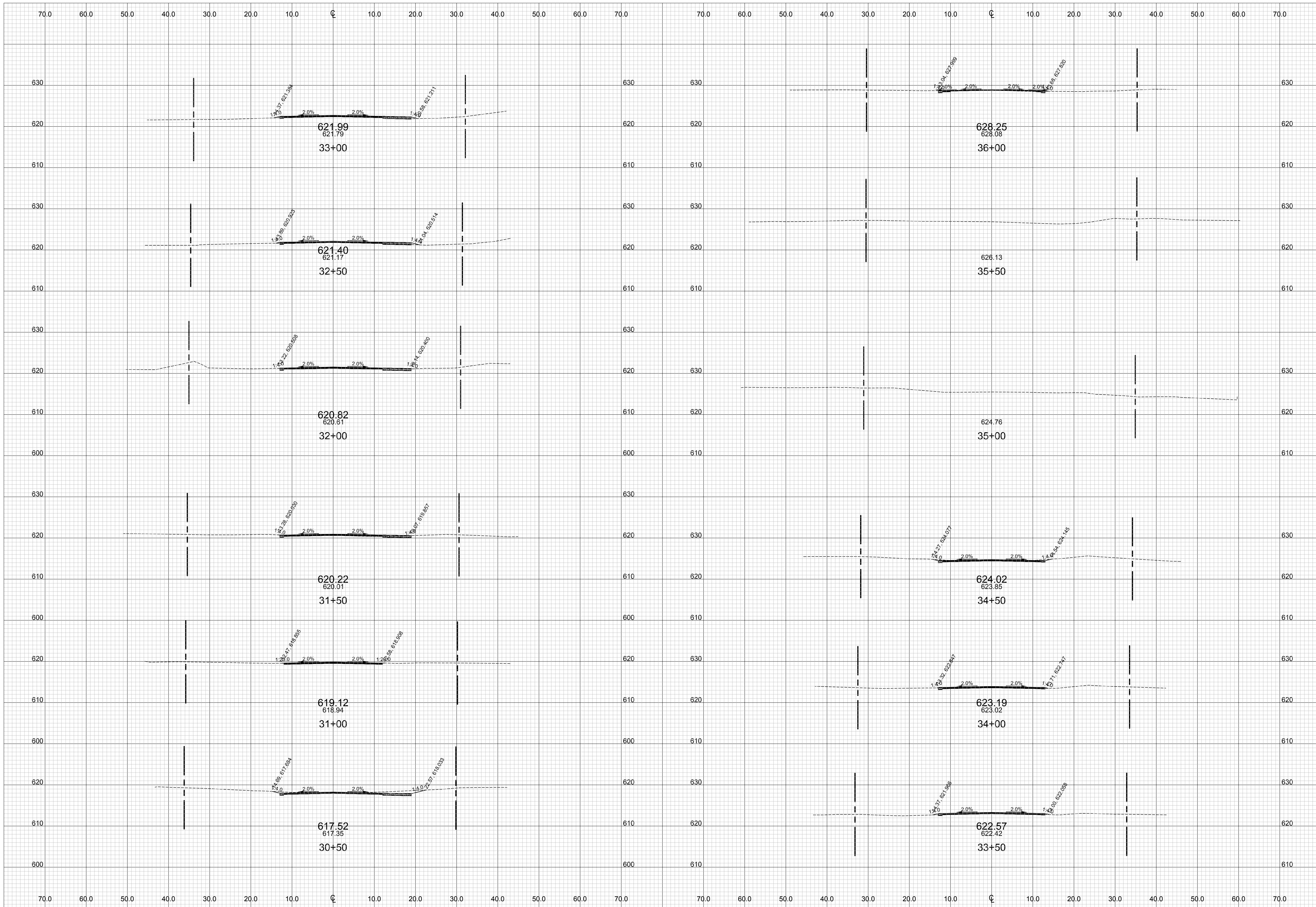
**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022

00 03/20/2024
ISSUED FOR BIDS AMV

REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 10'

**CROSS SECTIONS
LAKESIDE ROAD
STA. 18+00 TO STA. 22+50**





MELANIE K. STANAGE
 6201065450
 PROJECT NAME:
**LAKESIDE ROAD,
 PIER ROAD, AND W
 EAST ROAD
 IMPROVEMENTS**

**BERRIEN COUNTY
 ROAD
 DEPARTMENT**
 2860 E NAPIER AVENUE
 BENTON HARBOR, MI 49022

00 03/20/2024 AMV
 ISSUED FOR BIDS
REVISIONS
 THE REPRODUCTION, COPYING OR OTHER
 USE OF THIS DRAWING WITHOUT WRITTEN
 CONSENT IS PROHIBITED.
 © 2024 WIGHTMAN & ASSOCIATES, INC.
 DATE: MARCH, 2024
 SCALE: 1" = 10'

**CROSS SECTIONS
 PIER ROAD
 STA. 30+50 TO STA. 36+00**



WIGHTMAN

2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

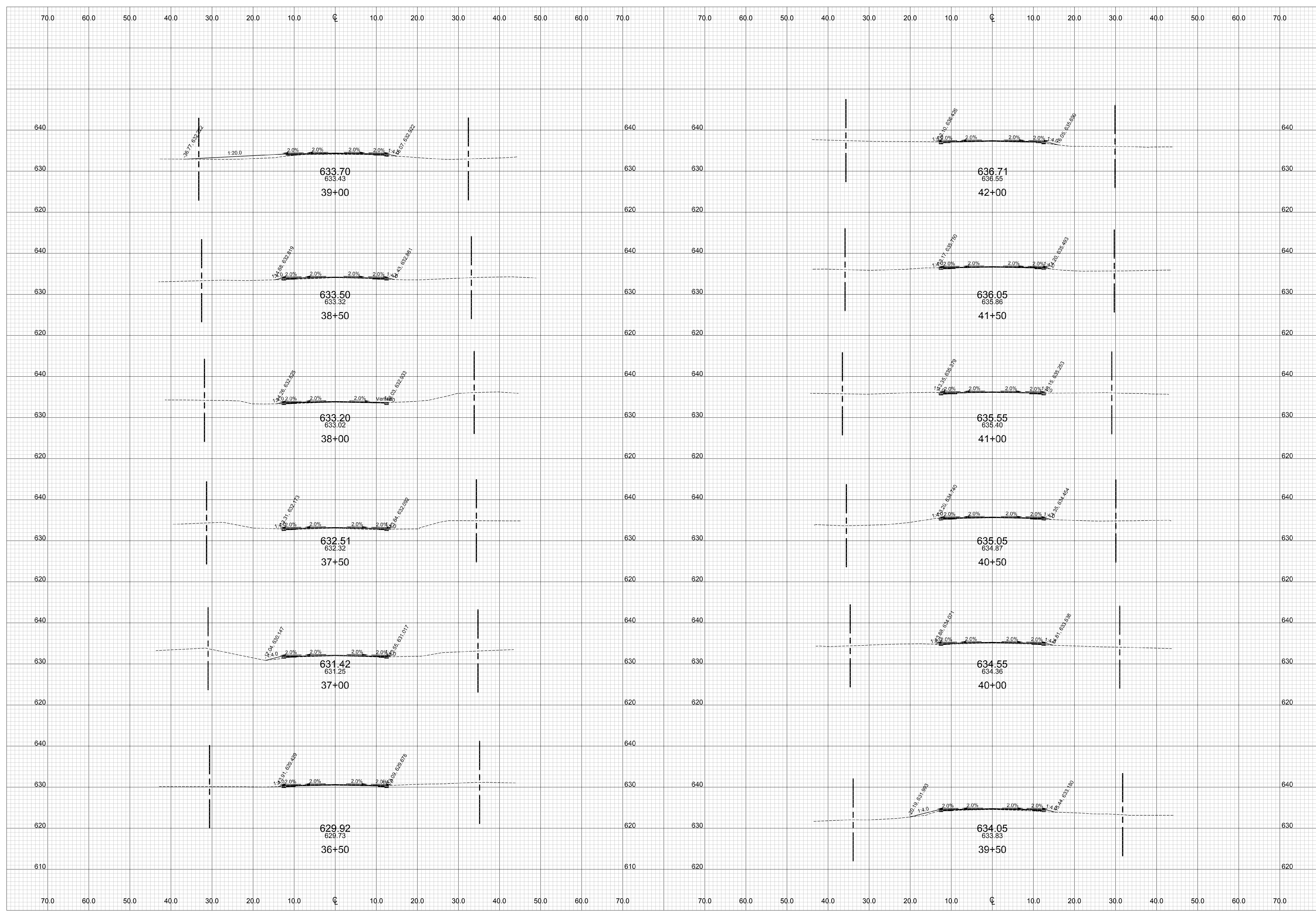
**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022

00 03/20/2024 AMV
ISSUED FOR BIDS

REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 10'

**CROSS SECTIONS
PIER ROAD
STA. 36+50 TO STA. 42+00**

JOB No. 230387
20
OF 22





WIGHTMAN

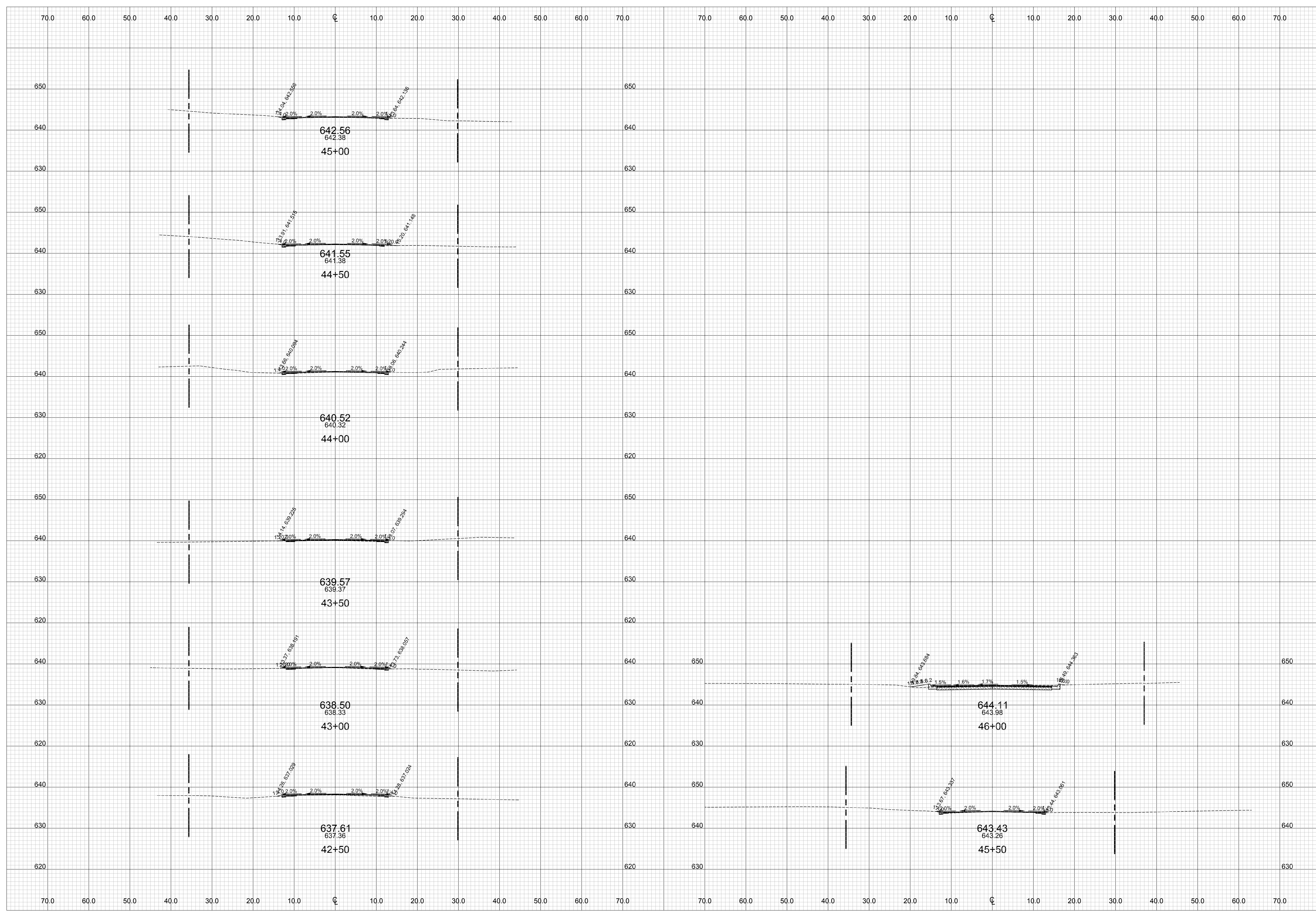
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



00 03/20/2024
ISSUED FOR BIDS AMV

REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 10'

**CROSS SECTIONS
PIER ROAD
STA. 42+50 TO STA. 46+00**



WIGHTMAN

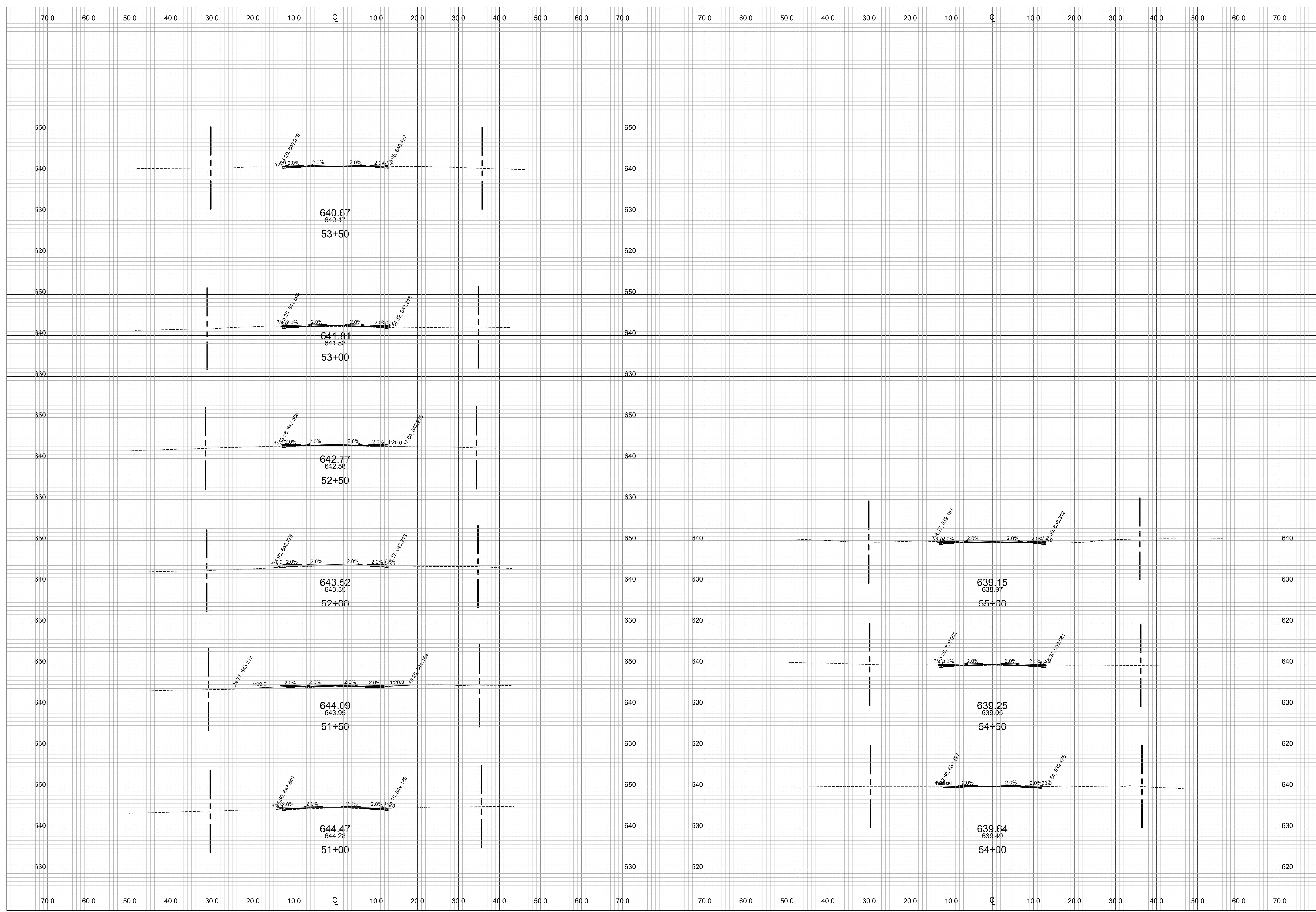
2303 PIPESTONE RD.
BENTON HARBOR, MI. 49022
269.927.0100

www.gowightman.com

MELANIE K. STANAGE
6201065450

PROJECT NAME:
**LAKESIDE ROAD,
PIER ROAD, AND W
EAST ROAD
IMPROVEMENTS**

**BERRIEN COUNTY
ROAD
DEPARTMENT**
2860 E NAPIER AVENUE
BENTON HARBOR, MI 49022



00 03/20/2024
ISSUED FOR BIDS AMV

REVISIONS
THE REPRODUCTION, COPYING OR OTHER
USE OF THIS DRAWING WITHOUT WRITTEN
CONSENT IS PROHIBITED.
© 2024 WIGHTMAN & ASSOCIATES, INC.
DATE: MARCH, 2024
SCALE: 1" = 10'

**CROSS SECTIONS
W EAST ROAD**
STA. 51+00 TO STA. 55+00