

# MINNESOTA DEPARTMENT OF TRANSPORTATION



# RAMSEY COUNTY

CONSTRUCTION PLAN BITUMINOUS MILL AND OVERLAY:

**COUNTY ROAD J**  
S.A.P. No. 062-601-014  
S.A.P. No. 002-632-016

COUNTY ROAD J  
FROM HODGSON ROAD TO 1543' EAST OF MONARCH WAY

**HODGSON ROAD**  
S.A.P. No. 062-649-039

HODGSON ROAD  
FROM ELAINE AVENUE TO COUNTY ROAD J

LOCATED IN THE CITIES OF SHOREVIEW,  
NORTH OAKS, LINO LAKES AND  
WHITE BEAR TOWNSHIP

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	CONSTRUCTION NOTE AND STANDARD PLATES
4	SWPPP
5-8	TYPICAL SECTIONS
9-11	DETAILS
12-21	CONSTRUCTION PLAN
22-31	PAVEMENT MARKING PLAN

THIS PLAN CONTAINS 31 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Jerry Augé, Jr.*  
JERRY AUGÉ, JR., PE REG. NO. 26511

- APPROVED *[Signature]* DATE 5/10/17  
RAMSEY COUNTY ENGINEER
- APPROVED *[Signature]* DATE 5/10/17  
ANOKA COUNTY ENGINEER
- APPROVED *[Signature]* DATE 5/10/17  
CITY OF LINO LAKES
- APPROVED *[Signature]* DATE 5/11/17  
CITY OF SHOREVIEW
- APPROVED *[Signature]* DATE 5/11/17  
CITY OF NORTH OAKS
- APPROVED *[Signature]* DATE 5/10/17  
WHITE BEAR TOWNSHIP

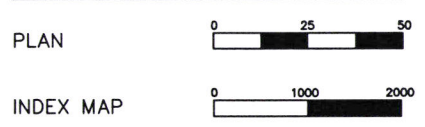
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL IS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

DRAWN BY AM, IU, CG, JK DATE 03/29/17  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

PLAN REVISIONS		
DATE	SHEET NO. & DESCRIPTION	BY

MINNESOTA DEPARTMENT OF TRANSPORTATION  
RECOMMENDED FOR APPROVAL *[Signature]* DATE 5/11/17  
DISTRICT STATE AID ENGINEER  
REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY  
APPROVED *[Signature]* DATE 5/11/17  
STATE AID ENGINEER APPROVED FOR STATE AID FUNDING

### SCALES IN FEET



### COUNTY ROAD J

GROSS LENGTH	14774 FEET	2.798 MILES
BRIDGE LENGTH	----	----
EXCEPTIONS	2487 FEET	0.471 MILES
NET LENGTH	12287 FEET	2.327 MILES

### HODGSON ROAD

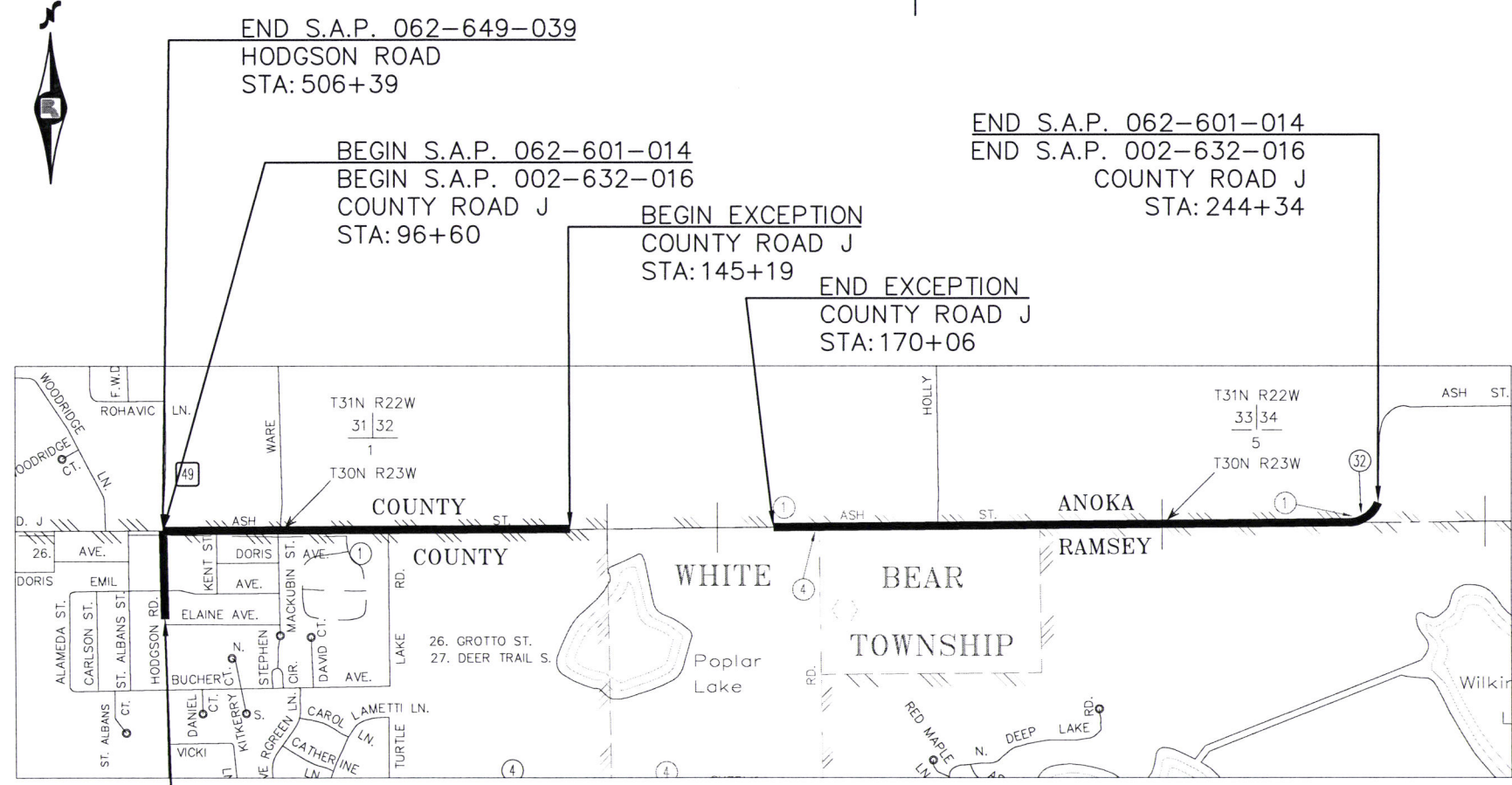
GROSS LENGTH	806 FEET	0.153 MILES
BRIDGE LENGTH	----	----
EXCEPTIONS	----	----
NET LENGTH	806 FEET	0.153 MILES

### PLAN SYMBOLS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RAILROAD
- RAILROAD RIGHT-OF-WAY
- RIVER OF CREEK
- CULVERT
- GUARDRAIL
- WOOD FENCE
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- TIMBER WALL
- STONE WALL
- HEDGE
- RAILROAD CROSSING SIGN
- CROSSING GATE
- MEANDER CORNER
- SLOPE EASEMENT (CONST. LIMITS)
- MARSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH OR SHRUB
- WOODS
- CATCH BASIN
- BRIDGE
- IRON PIPE OR ROD MONUMENT (STONE, CONCRETE OR METAL)
- WOODEN HUB

### UTILITY SYMBOLS

- UTILITY POLE
- GUY OR ANCHOR
- STREET LIGHT
- TELEPHONE PEDESTAL
- GAS MAIN
- WATER MAIN
- TELEPHONE VAULT
- ELECTRIC VAULT
- TELEPHONE CABLE
- ELECTRIC CABLE
- STORM SEWER
- SANITARY SEWER
- SEWER MANHOLE
- GATE VALVE
- CONTROLLER CABINET
- EXISTING HYDRANT
- CABLE TELEVISION-BURIED
- FIBER OPTIC CABLE
- TRAFFIC SIGNAL LINE
- TRAFFIC SIGNAL HAND HOLE



END S.A.P. 062-649-039  
HODGSON ROAD  
STA: 506+39

BEGIN S.A.P. 062-601-014  
BEGIN S.A.P. 002-632-016  
COUNTY ROAD J  
STA: 96+60

BEGIN EXCEPTION  
COUNTY ROAD J  
STA: 145+19

END EXCEPTION  
COUNTY ROAD J  
STA: 170+06

END S.A.P. 062-601-014  
END S.A.P. 002-632-016  
COUNTY ROAD J  
STA: 244+34

BEGIN S.A.P. 062-649-039  
HODGSON ROAD  
STA: 498+33

### DESIGN DESIGNATION

	COUNTY ROAD J	HODGSON ROAD
PRESENT ADT (2017)	6700	9700
PROJECTED ADT (2037)	6700	9700
FUNCTIONAL CLASS	A MINOR EXPANDER	A MINOR EXPANDER
TRAFFIC LANES	2	2
PARKING LANES	0	0
DESIGN SPEED (MPH)	50	45
TON DESIGN	10	10

BASED ON STOPPING DISTANCE  
HEIGHT OF EYE: 3.50 FEET  
HEIGHT OF OBJECT: 2.0 FEET

### -GOVERNING SPECIFICATIONS-

THE 2016 EDITION OF MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MMUTCD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, SEE HTTP://WWW.DOT.STATE.MN.US/TRAFFICENG/

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.



**STATEMENT OF ESTIMATED QUANTITIES**

BITUMINOUS RESURFACING 2017 COUNTY ROAD J					PARTICIPATING		
					COUNTY ROAD J HODGSON ROAD TO 2170' EAST OF TURTLE LAKE ROAD S.A.P. 062-601-014 S.A.P. 002-632-016 50% RAMSEY COUNTY 50% ANOKA COUNTY	COUNTY ROAD J 544' WEST OF SHERWOOD ROAD TO 1534' EAST OF MONARCH WAY S.A.P. 062-601-014 S.A.P. 002-632-016 50% RAMSEY COUNTY 50% ANOKA COUNTY	HODGSON ROAD ELAINE AVENUE TO COUNTY ROAD J S.A.P. 062-649-039 100% RAMSEY COUNTY
NOTES	ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	ESTIMATED QUANTITY	ESTIMATED QUANTITY	ESTIMATED QUANTITY
	2021.501	MOBILIZATION	LUMP SUM	1	0.39	0.56	0.05
1	2104.501	REMOVE PIPE CULVERT	LIN FT	160	50	110	
1	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	84	28	56	
1	2104.513	SAWING BIT PAVEMNET (FULL DEPTH)	LIN FT	192	64	128	
	2123.610	STREET SWEEPER (WITH VACUUM PICKUP)	hour	10	4	5	1
1	2211.503	AGGREGATE BASE (CV) CLASS 6	CU YD	15	5	10	
	2232.501	MILL BITUMINOUS SURFACE (2")	SQ YD	3536			3536
	2232.501	MILL BITUMINOUS SURFACE (3")	SQ YD	44382	18187	26195	
	2232.603	MILLED SINUSOIDAL RUMBLE STRIPS	LIN FT	17656	4236	13420	
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	7385	2910	4192	283
	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (4,C)	TON	10615	4183	6025	407
1	2501.501	CULVERT EXCAVATION CLASS U	CU YD	142	39	103	
1	2501.511	15" CP PIPE CULVERT (SMOOTH)(HDPE)	LIN FT	160	50	110	
	2506.602	CONSTRUCT SURVEY CONTROL STRUCTURE	EACH	2	1	1	
	2563.601	TRAFFIC CONTROL	LUMP SUM	1	0.39	0.56	0.05
	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UDAY	42	14	14	14
	2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	1	0.39	0.56	0.05
	2582.501	PAVT MSSG EPOXY	SQ FT	135	45	60	30
	2582.502	4" SOLID LINE EPOXY	LIN FT	24752	8796	14249	1707
	2582.502	4" DOUBLE SOLID LINE EPOXY	LIN FT	14823	5033	8558	1232
	2582.502	24" SOLID LINE EPOXY	LIN FT	606	52	428	126
	2582.503	CROSSWALK MARKING EPOXY	SQ FT	895	895		


**QUANTITY NOTES**

1 ITEMS USED IN CULVERT REPLACEMENT

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NO.	REV-DATE	BY:	DESCRIPTION

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 SIGNED: \_\_\_\_\_  
 REG NO: 26511 DATE: 04/17/2017

<b>BITUMINOUS RESURFACING</b>	S.A.P. 062-601-014 S.A.P. 062-649-039 S.A.P. 002-632-016		<b>STATEMENT OF ESTIMATED QUANTITIES</b>
AT VARIOUS LOCATIONS			<b>SHEET 2 OF 31 SHEETS</b>

**CONSTRUCTION NOTES**

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.

PROVIDE FOR REMOVAL AND DISPOSAL (OUTSIDE THE CONSTRUCTION ZONE) OF ALL INPLACE STRUCTURES THAT WILL INTERFERE WITH CONSTRUCTION. DISPOSAL OF ITEMS REMOVED UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2104.3C3 AND 2105.3D.

COMPACTION OF BITIUMINOUS SURFACE ITEMS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SPEC 2360.3D.2 "ORDINARY COMPACTION METHOD".

WHEN CONNECTION TO EXISTING BITUMINOUS IS REQUIRED, THE EDGE OF THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE PRIOR TO CONSTRUCTING ASPHALT SURFACING, THIS SHALL BE INCIDENTAL TO WEARING COURSE MIXTURE 2360.501.

ALL USES OF THE WORD "INCIDENTAL" IN THESE CONSTRUCTION DOCUMENTS SHALL BE CONSIDERED TO MEAN WORK FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MMUTCD) AND "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

**BASIS FOR ESTIMATED QUANTITIES**

2357.502	- BITUMINOUS MATERIAL FOR TACK COAT ESTIMATED AT 0.08 GAL PER SQ YD PER APPLICATION
2360 MIXES	- BITUMINOUS MIXTURES- 115 LBS PER 1" THICKNESS PER SQ YD

**STANDARD PLATES**

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

PLATE NO.	DESCRIPTION
8000J	CHANNELIZERS

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\FINAL PLAN\IN HOUSE\03-CONSTRUCTION NOTES.DWG April 27, 2017 10:47 AM

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 REG NO: 26511      DATE: 04/27/2017

**BITUMINOUS RESURFACING**  
 AT VARIOUS LOCATIONS

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016

COUNTY PROJECT  
 P-8014



**CONSTRUCTION NOTES**  
**SHEET 3 OF 31 SHEETS**

**Storm Water Pollution Prevention Plan Narrative**

PROJECT DESCRIPTION/LOCATION

The maintenance of various County roads will include mill and overlays, full depth reclamation, and replacement and upgrading of pedestrian curb ramps to meet ADA standards.

CHAIN OF COMMAND

This project is will not disturb >1 acre of soil thus no NPDES permit is required. However, it is RCPW policy to treat all road maintenance projects in accordance of NPDES regulations. Appropriate rules and regulations must be followed accordingly.

PROJECT CONTACTS

The project engineer and contractor are responsible for implementation of the SWPPP and installation, inspection and maintenance of the erosion prevention and sediment control BMPs before and during construction. Ramsey County Public Works staff is also available for assistance.

Project Engineer	Erosion Control Inspector
Luke Lortie	Al Rupnow
Ramsey County Public Works	Ramsey County Public Works
1425 Paul Kirkwold Drive	1425 Paul Kirkwold Drive
Arden Hills, MN 55112	Arden Hills, MN 55112
651-266-7123	651-266-7162 / 651-755-4151

EROSION PREVENTION PRACTICES

Appropriate construction practices will be used to minimize erosion. Areas of non-disturbance will be delineated (e.g. with flags, stakes, signs, or silt fence) on the development site before work begins.

All exposed soil areas including stormwater pond side slopes or exposed soils with a positive slope to a stormwater conveyance with a continuous positive slope within 200 lineal feet of a **surface water** will have **temporary erosion protection** or **permanent cover** for the exposed soil areas year round, and within 14 days of last being worked.

The normal wetted perimeter of temporary or permanent drainage ditches will be **stabilized** within 200 feet of the property edge, or point of discharge. Stabilization will be completed within 24 hours of connection.

Pipe outlets must be provided with temporary or permanent **energy dissipation** within 24 hours of connection to a surface water.

SEDIMENT CONTROL PRACTICES

Sediment control practices will be established on all down gradient perimeter before any upgradient land disturbing activities begin.

3:1 or steeper slopes with a length of greater then 75 feet for slopes require slope breaks.

All storm drain inlets will be protected by appropriate **BMPs** during construction until all sources with potential for discharging to the inlet have been stabilized. Concrete slurry, dust, and washout will not be allowed to discharge into the storm sewer system. Standard filtration BMPs are not adequate to contain concrete run-off; catch basins downstream of concrete run-off **activities must be blocked** until the roadway is free of debris.

Temporary soil stockpiles will have **sediment controls**, and will not be placed in **stormwater** conveyances or **surface waters**.

Vehicle tracking of sediment from the construction site will be minimized using the appropriate **BMPs**. Street sweeping will be used if such **BMPs** are not adequate to prevent sediment from being tracked onto the road.

POLLUTION PREVENTION MANAGEMENT MEASURES

**Solid Waste:** Collected sediment, asphalt, concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA regulations.

**Hazardous Waste:** Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal must be in compliance with MPCA regulations.

**External Washing of Trucks:** Must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing allowed on site.

INSPECTIONS AND MAINTENANCE

Inspections will be conducted once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

Inspections and maintenance records will be retained on site with the **SWPPP**.

**Stabilized** areas will be inspected once per month. Where work has been suspended due to frozen ground conditions, inspections and maintenance will take place as soon as runoff occurs at the site or 24 hours prior to resuming construction, whichever comes first.

All silt fence must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.

Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all off-site paved surfaces, within 24 hours of discovery.

CONCRETE MANAGEMENT

The contractor will develop a concrete management and quality control program for all potential pollutants generated from sawing, cutting, grinding, blasting, finishing, rehabilitation, demolition, crushing, construction and any other operation that generates slurry and dusts from cementitious materials. Operations that generate concrete slurry and dusts will require concurrent monitoring as part of the quality assurance and control program, and documentation of performance of control measures. The erosion control supervisor must have the authority to immediately curtail illicit operations and amend the SWPPP until acceptable containment is achieved, using a minimum control performance measures of zero liquid waste discharge, pH abatement to near 7, turbidity reduction to visibly clear water, and opacity measurements less than 20 percent of natural background.

INLET MANAGEMENT

The contractor shall develop an inlet staging plan that temporarily takes off line affected inlets from receiving slurry runoff.

WASHOUT OF PUMPER, MIXER, READY MIX MACHINES, EQUIPMENT MAINTENANCE, WASHOFF OR PUMPER, MIXER, PAVER, SLIP FORMER AND READY MIX MACHINES, TOOLS, AND EQUIPMENT

The contractor shall use common sense to prevent liquid cementitious wastes from contacting surface waters and soils to be ultimately vegetated. This can be accomplished following Mn/DOT guidance. Additional support and technical advice can be obtained from Alan Rupnow at 651-266-7162.

EROSION AND SEDIMENT CONTROL SEQUENCING

**Grading and Utility:** Silt fence, construction entrances, and/or other perimeter control or erosion control measures will be installed prior to the start of any grading and land disturbing activity. Topsoil stockpiles will be stored and protected on site. Temporary stabilization will be established by seed and mulch, and erosion control blanket as specified in plan sheets.

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NO.	REV-DATE	BY:	DESCRIPTION

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 SIGNED: \_\_\_\_\_  
 REG NO: 26511 DATE: 04/27/2017

**BITUMINOUS RESURFACING**  
 AT VARIOUS LOCATIONS

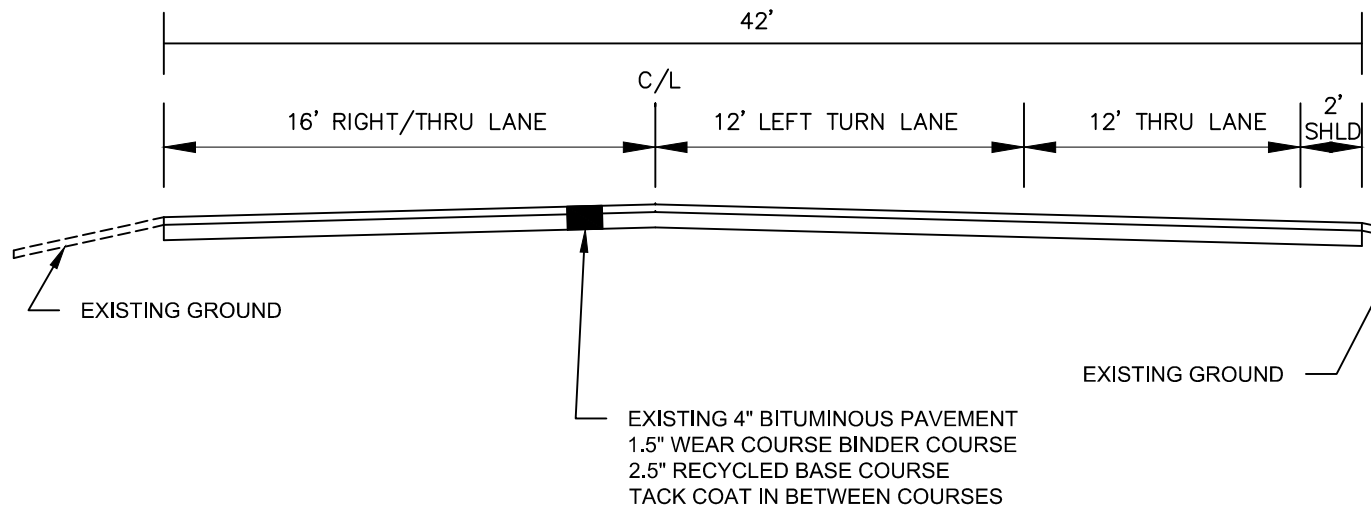
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016

COUNTY PROJECT  
 P-8614

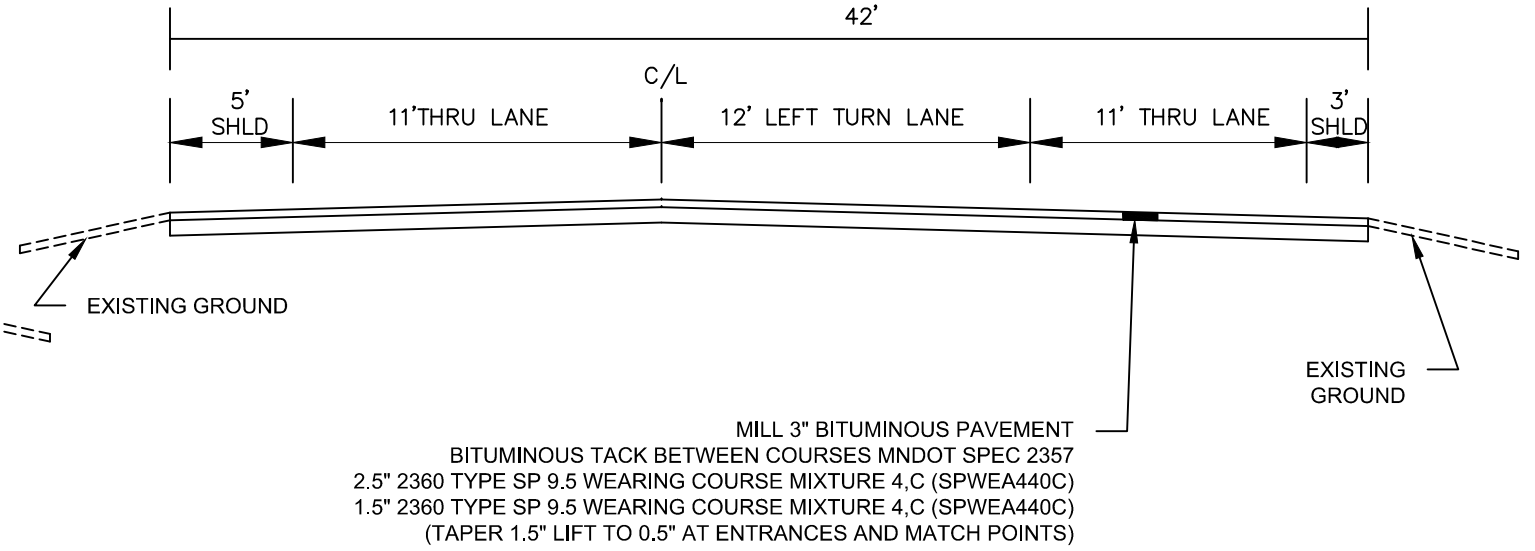


**SWPPP**  
**SHEET 4 OF 31 SHEETS**

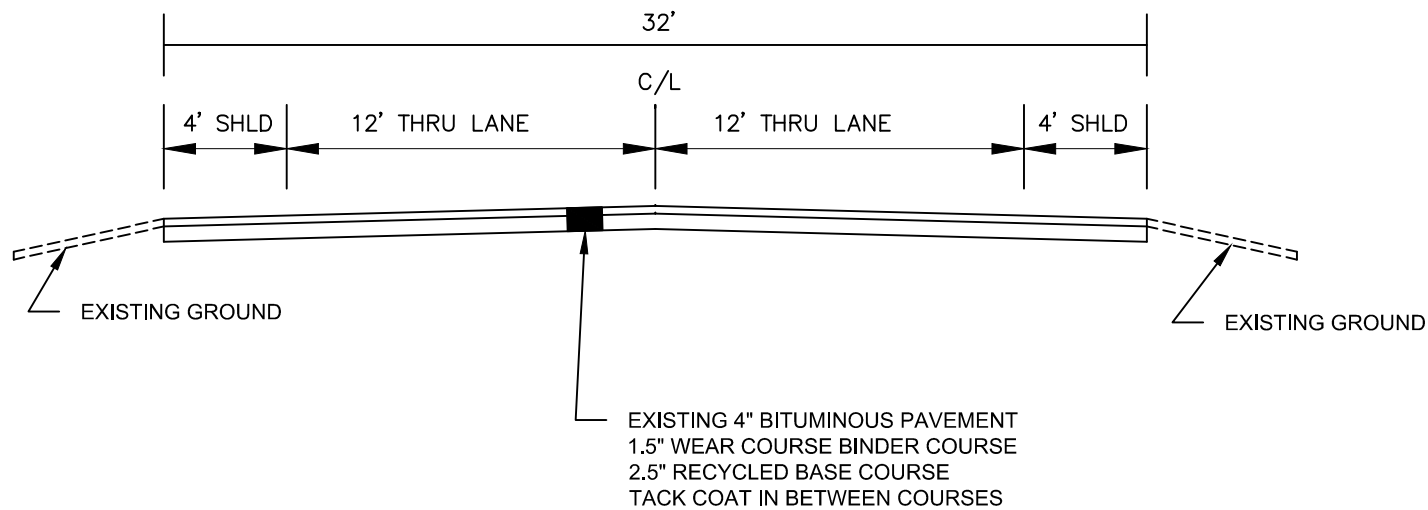
COUNTY RD. J (CSAH 1)  
 (ANOKA COUNTY CSAH 32)  
 EXISTING TYPICAL SECTION  
 STA. 96+60 TO STA. 102+50  
 HODGSON ROAD TO KENT STREET



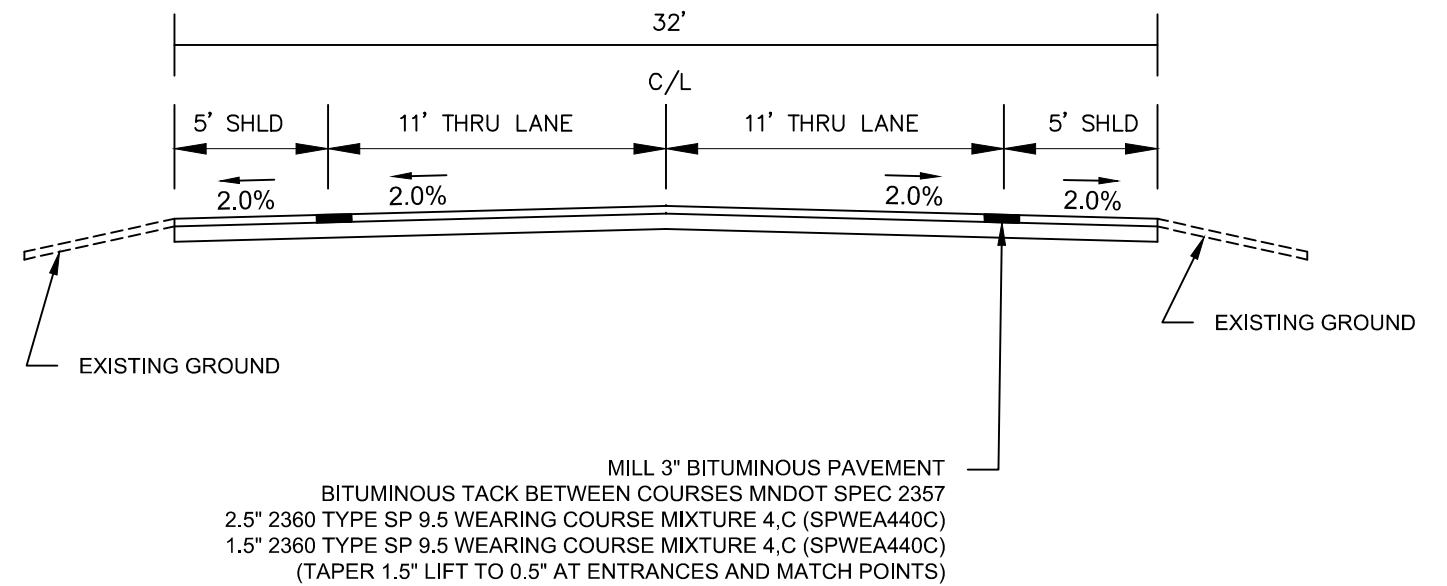
COUNTY RD. J (CSAH 1)  
 (ANOKA COUNTY CSAH 32)  
 PROPOSED TYPICAL SECTION  
 STA. 96+60 TO STA. 102+50  
 HODGSON ROAD TO KENT STREET



COUNTY RD. J (CSAH 1)  
 (ANOKA COUNTY CSAH 32)  
 EXISTING TYPICAL SECTION  
 STA. 102+50 TO STA. 145+90  
 KENT STREET TO 2170' EAST OF TURTLE LAKE ROAD



COUNTY RD. J (CSAH 1)  
 (ANOKA COUNTY CSAH 32)  
 PROPOSED TYPICAL SECTION  
 STA. 102+50 TO STA. 145+90  
 KENT STREET TO 2170' EAST OF TURTLE LAKE ROAD



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**BITUMINOUS RESURFACING**  
 COUNTY ROAD J

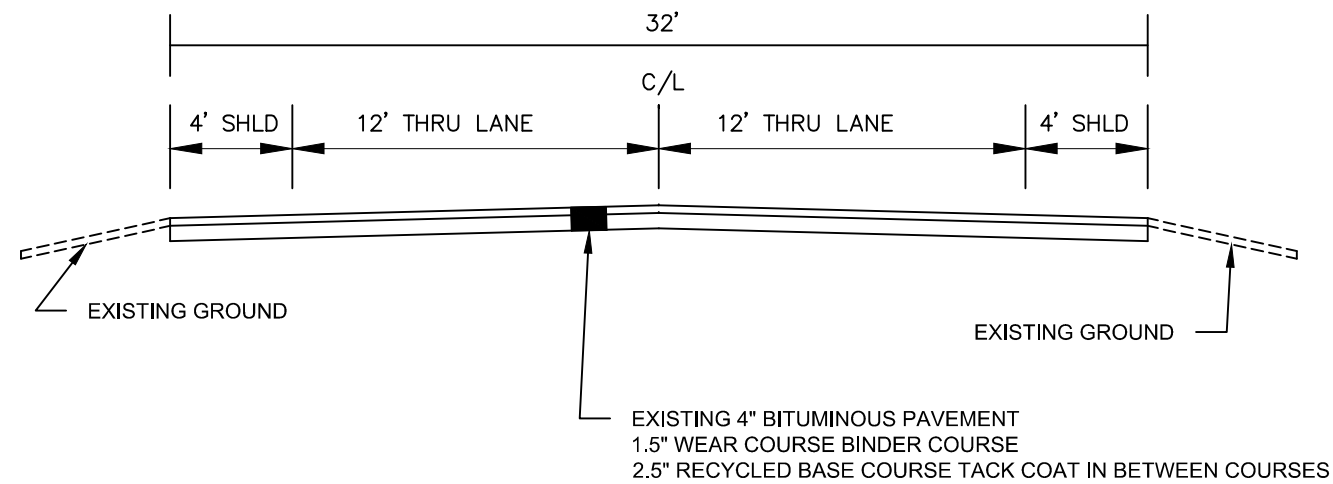
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**TYPICAL SECTION**  
**SHEET 5 OF 31 SHEETS**

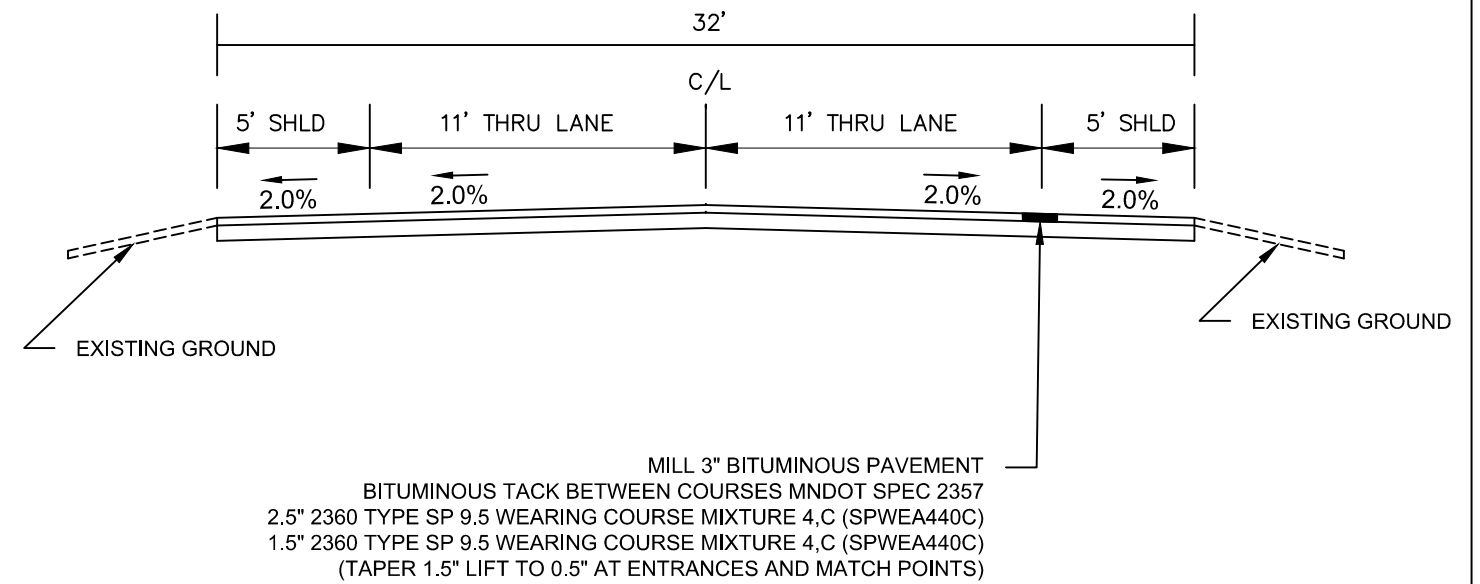
COUNTY RD. J (CSAH 1)  
(ANOKA COUNTY CSAH 32)

EXISTING TYPICAL SECTION  
 STA. 170+06 TO STA. 202+00  
 544' WEST OF SHERWOOD RD TO 793' WEST OF RAPP FARM BLVD  
 STA.221+00 TO STA. 239+56  
 978' EAST OF RAPP FARM BLVD TO 1534' EAST OF MONARCH WAY



COUNTY RD. J (CSAH 1)  
(ANOKA COUNTY CSAH 32)

PROPOSED TYPICAL SECTION  
 STA. 170+06 TO STA. 202+00  
 544' WEST OF SHERWOOD RD TO 793' WEST OF RAPP FARM BLVD  
 STA.221+00 TO STA. 239+56  
 978' EAST OF RAPP FARM BLVD TO 1534' EAST OF MONARCH WAY



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 COUNTY ROAD J

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COUNTY PROJECT  
 P-8014

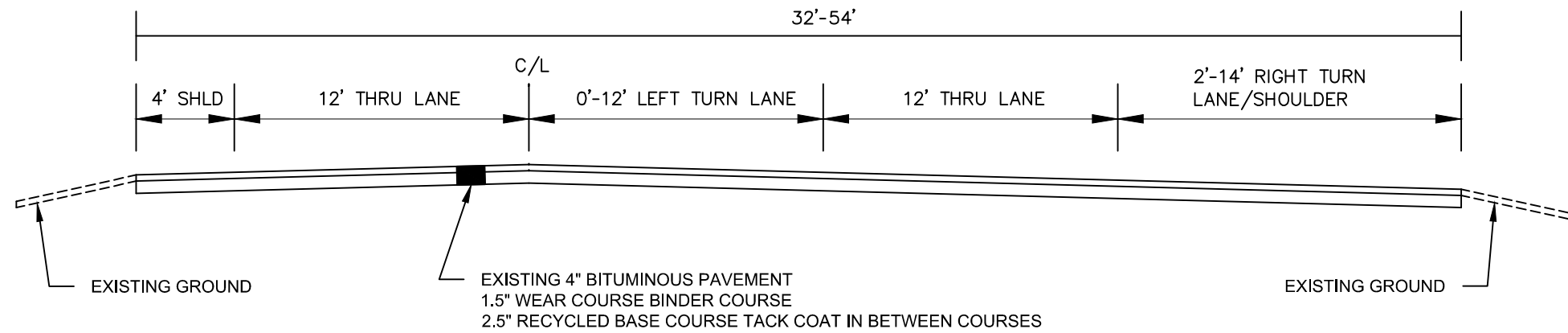


**TYPICAL SECTION**  
**SHEET 6 OF 31 SHEETS**

COUNTY RD. J (CSAH 1)  
(ANOKA COUNTY CSAH 32)

EXISTING TYPICAL SECTION  
STA. 202+00+ TO STA. 221+00

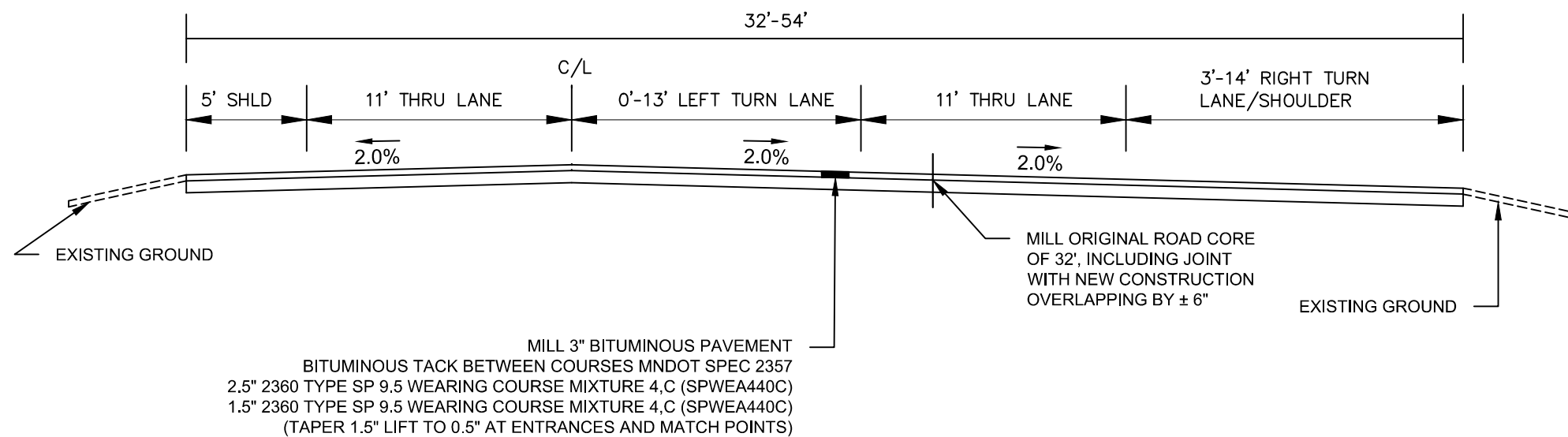
793' WEST OF RAPP FARM BLVD TO 978' EAST OF RAPP FARM BLVD



COUNTY RD. J (CSAH 1)  
(ANOKA COUNTY CSAH 32)

PROPOSED TYPICAL SECTION  
STA. 202+00+ TO STA. 221+00

793' WEST OF RAPP FARM BLVD TO 978' EAST OF RAPP FARM BLVD



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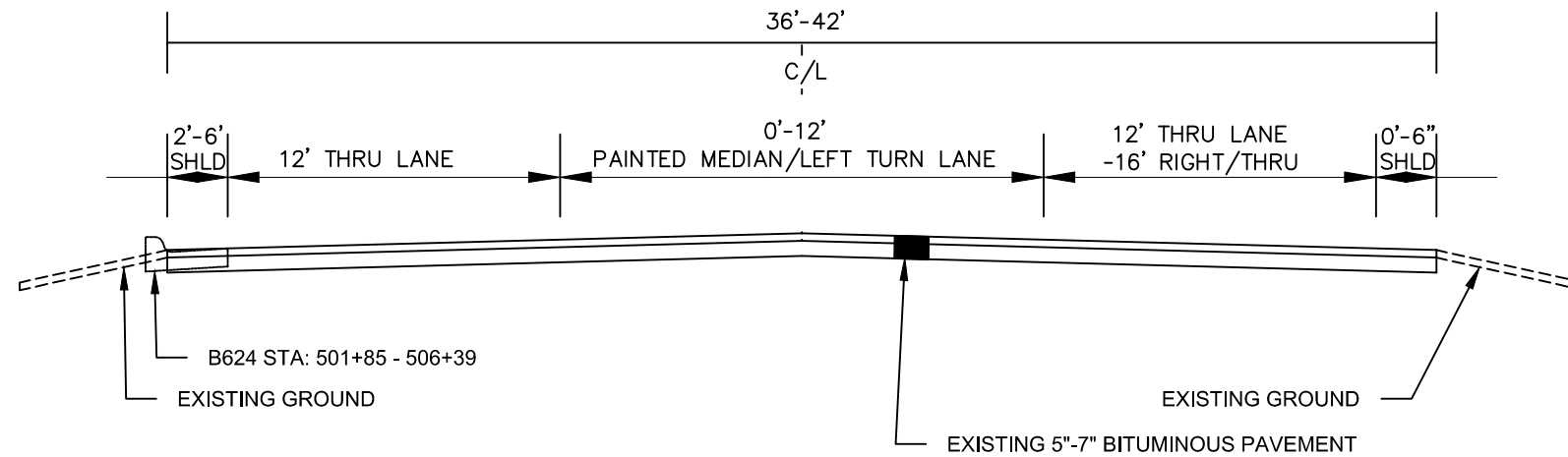
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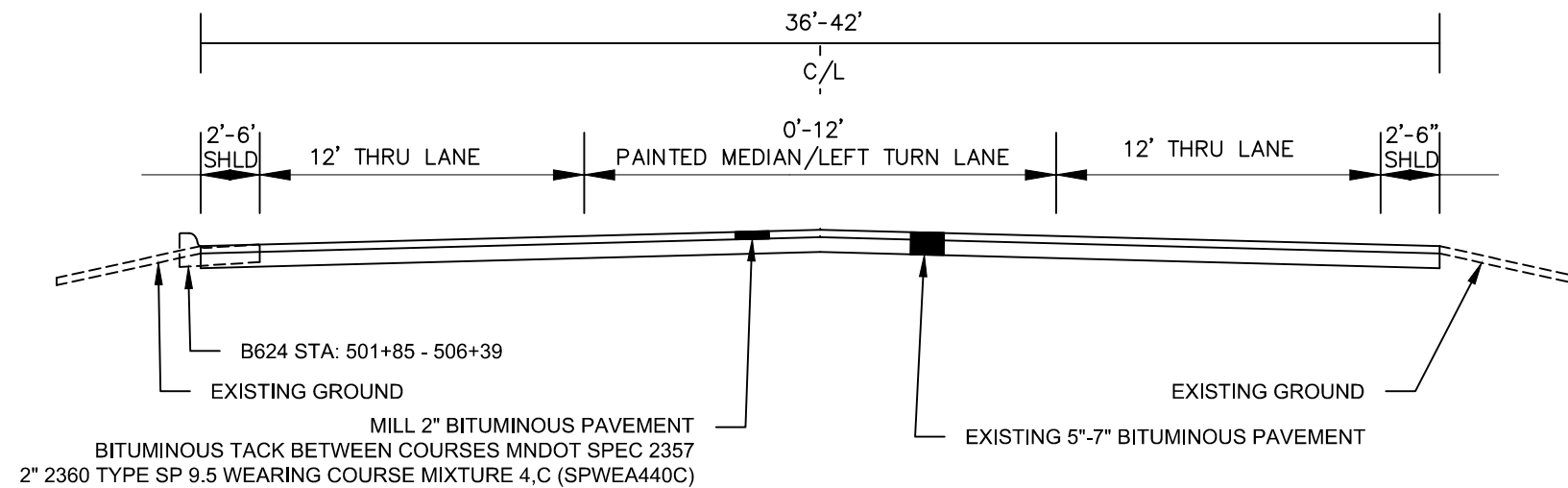


**TYPICAL SECTION**  
**SHEET 7 OF 31 SHEETS**

HODGSON ROAD (CSAH 49)  
 EXISTING TYPICAL SECTION  
 STA. 498+33 TO STA. 506+39  
 ELIANE AVENUE TO COUNTY ROAD J



HODGSON ROAD (CSAH 49)  
 PROPOSED TYPICAL SECTION  
 STA. 498+33 TO STA. 506+39  
 ELIANE AVENUE TO COUNTY ROAD J



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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNED: \_\_\_\_\_  
 REG NO: 26511 DATE: 04/27/2017

**BITUMINOUS RESURFACING**  
 HODGSON ROAD

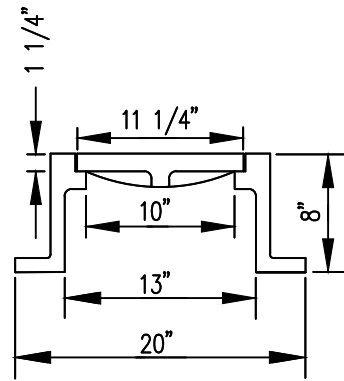
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



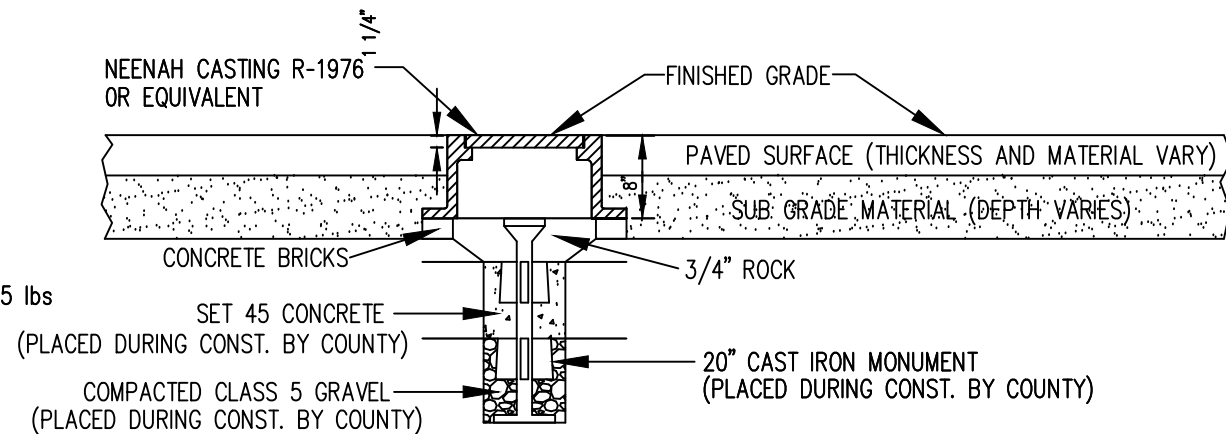
**TYPICAL SECTION**  
**SHEET 8 OF 31 SHEETS**



### CONTROL STRUCTURE SURVEY MONUMENT MANHOLE

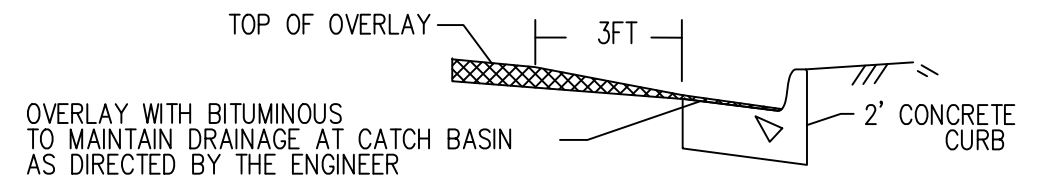


NEENAH CASTING R-1976 OR EQUIVALENT WEIGHT = 95 lbs



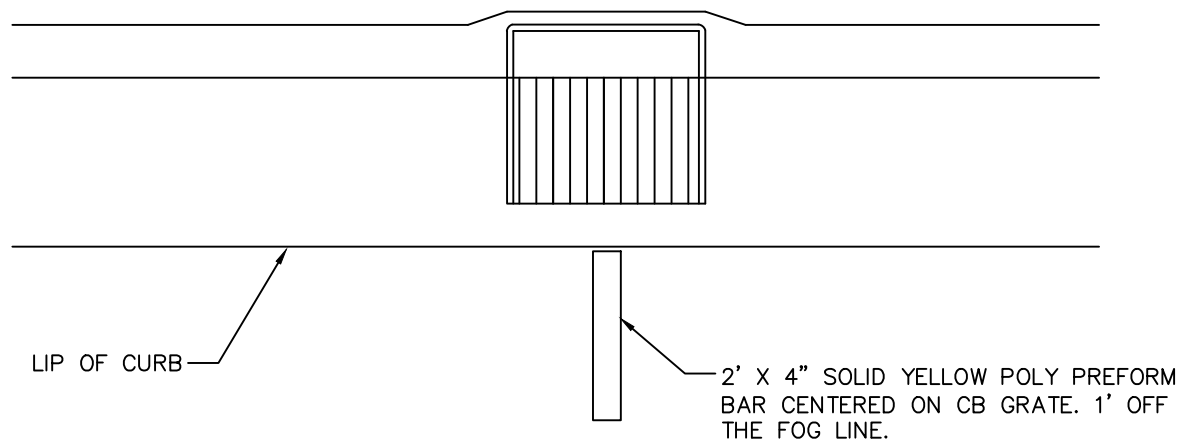
PAID FOR AS 2506.602 CONSTRUCT SURVEY CONTROL STRUCTURE

### DETAIL FOR CATCH BASIN TAPER TREATMENT

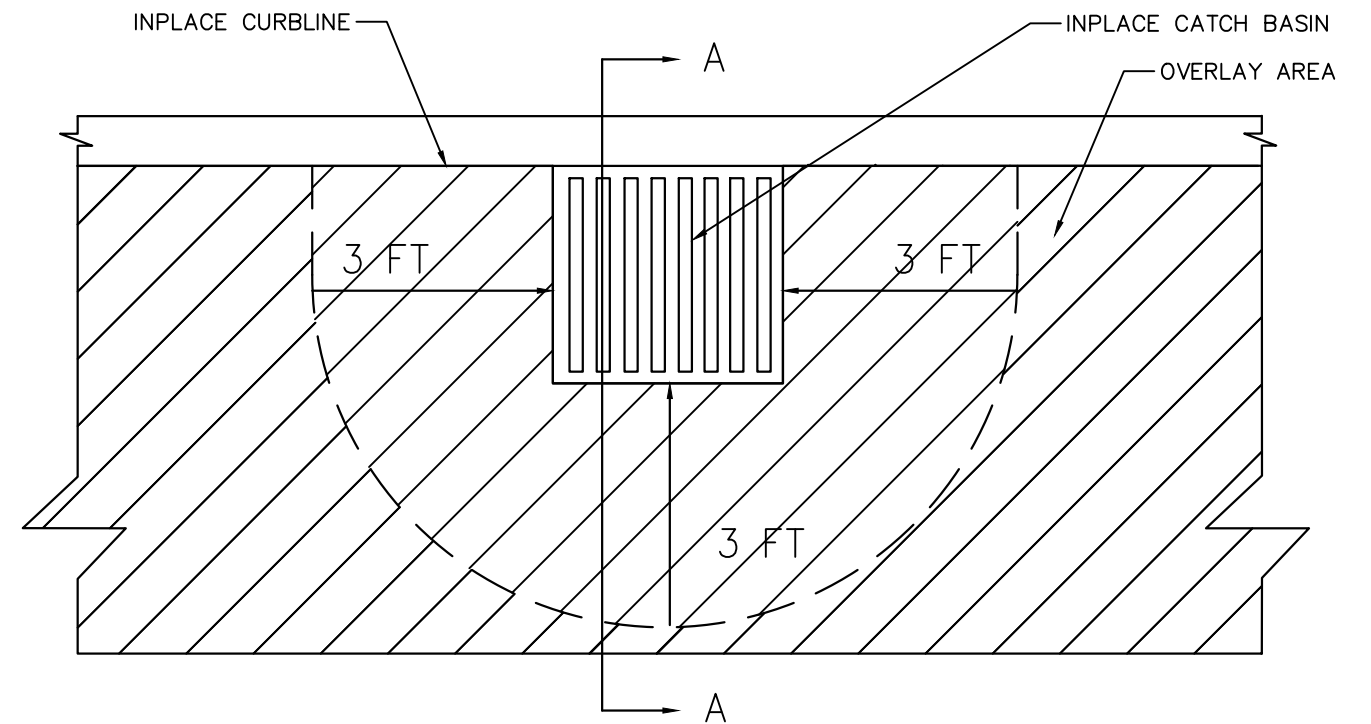


### SECTION A-A

### CATCH BASIN MARKING DETAIL



### CATCH BASIN TAPER TREATMENT



TAPER 2 INCHES TO 1/2 INCH

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\FINAL PLAN\HOUSE\06A-DETAILS.DWG April 27, 2017 10:58 AM

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 REG NO: 26511 DATE: 04/27/2017

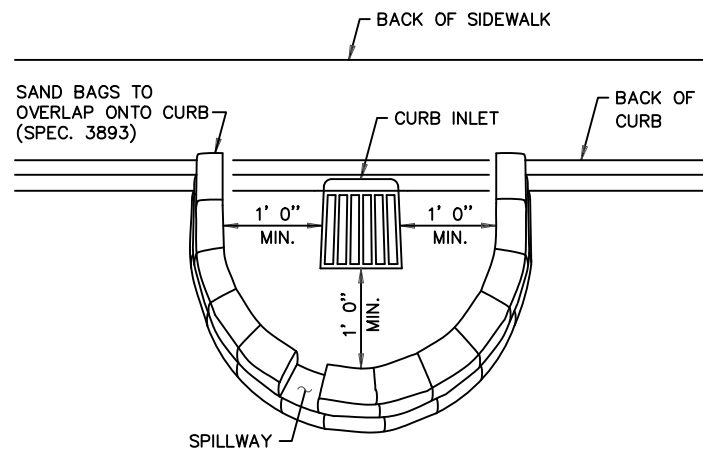
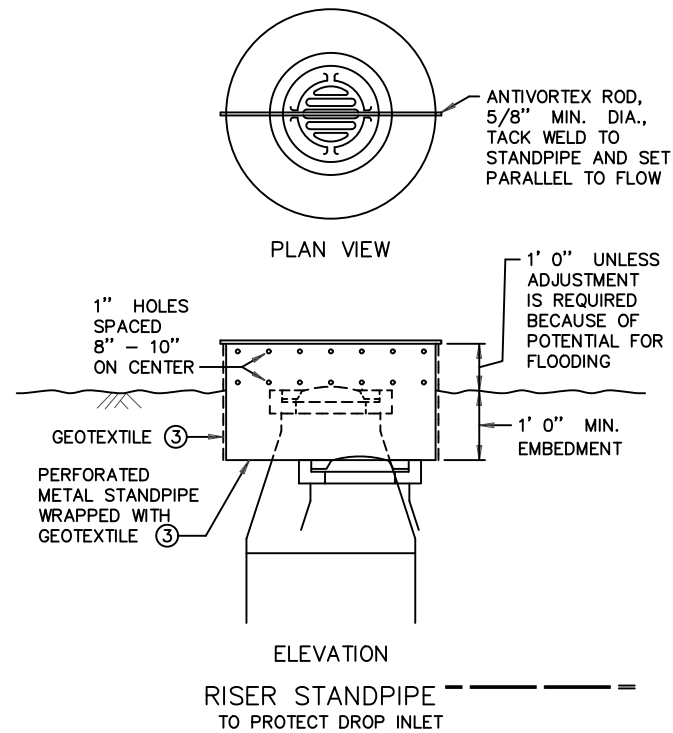
**BITUMINOUS RESURFACING**  
AT VARIOUS LOCATIONS

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016

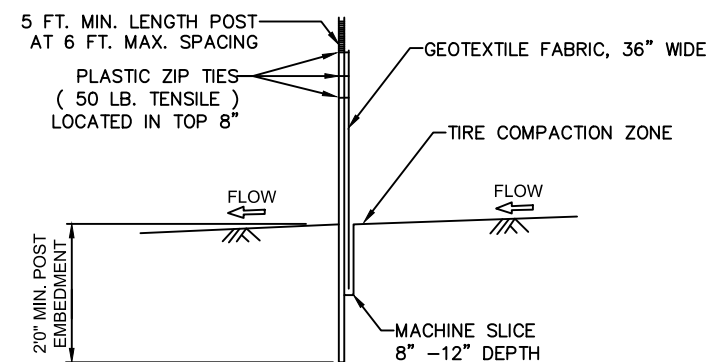
COUNTY PROJECT  
P-8014



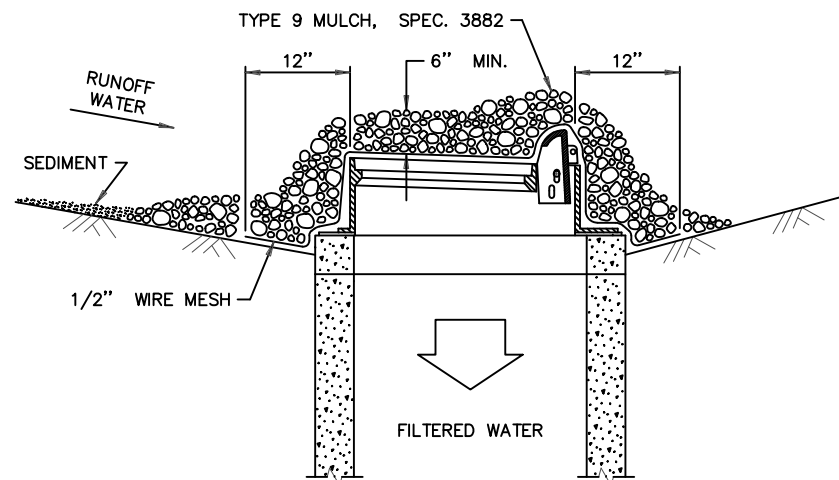
**DETAILS**  
**SHEET 9 OF 31 SHEETS**



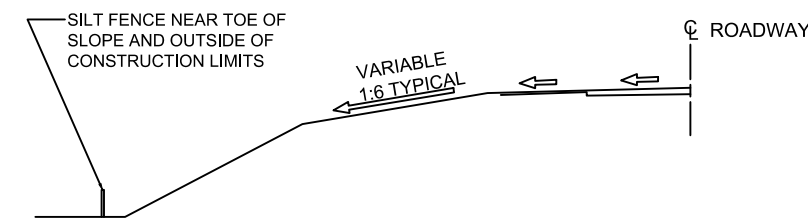
**SANDBAG BARRIER AT STREET INLET**  
 THIS INLET PROTECTION IS USED DURING ROUGH GRADING ONLY. USE BEFORE ROAD IS OPEN TO TRAFFIC OR IS PAVED. ( SPEC. 3893 )



**SILT FENCE, MACHINE SLICED**  
 DESIGN GUIDELINES:  
 TO PROTECT AREAS FROM SHEET FLOW.  
 MAXIMUM CONTRIBUTING AREA: 1 ACRE.



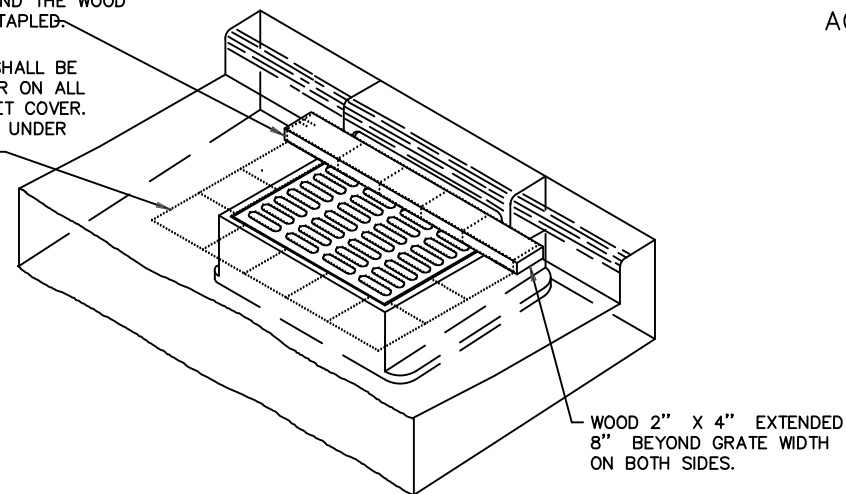
**AGGREGATE FILTER AT CURB INLET**  
 ( TYPE B WITHOUT CURB SPEC. 3891 )  
 ( TYPE C WITH CURB SPEC. 3891 )



**LOCATION OF SILT FENCE AT TOE OF ROADWAY EMBANKMENT**

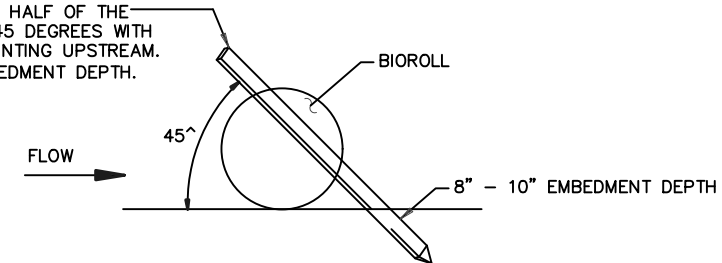
AN ADDITIONAL 18" OF GEOTEXTILE IS WRAPPED AROUND THE WOOD 2" X 4" AND STAPLED.

GEOTEXTILE SIZE SHALL BE 8" MIN. GREATER ON ALL SIDES OF THE INLET COVER. PLACE GEOTEXTILE UNDER INLET COVER. ③



**GEOTEXTILE FILTER AT STREET INLET WITH CURB BOX**  
 TYPE C SPEC. 3891

1" X 2" X 18" LONG WOODEN STAKES AT 1' 0" SPACING MAXIMUM. STAKES SHALL BE DRIVEN THROUGH THE BACK HALF OF THE BIOROLL AT AN ANGLE OF 45 DEGREES WITH THE TOP OF THE STAKE POINTING UPSTREAM. PROVIDE 8" TO 10" OF EMBEDMENT DEPTH.



**BIOROLL STAKING DETAIL**

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\2017 OVERLAYS\FINAL PLAN\HOUSE\06A-DETAILS.DWG April 27, 2017 10:58 AM

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**BITUMINOUS RESURFACING**  
 AT VARIOUS LOCATIONS

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 S.A.P. 062-649-039  
 S.A.P. 002-632-016

COUNTY PROJECT  
 P-9014



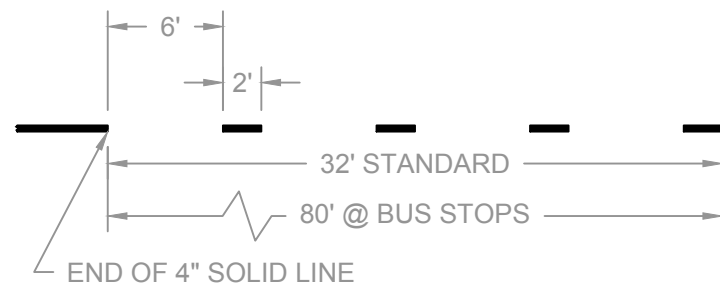
**DETAILS**  
 SHEET 10 OF 31 SHEETS

**4" SKIP CYCLES**

CENTERLINE AND CENTER TURN LANE  
10' SKIP WITH 40' SPACE (50' OVERALL CYCLE)

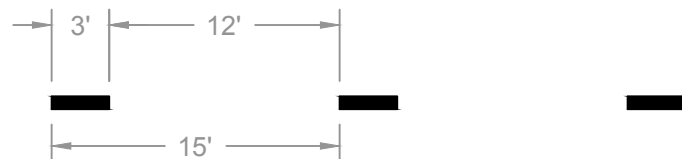


BIKE LANES APPROACHING INTERSECTIONS AND BUS STOPS  
6' SPACE AND 2' SKIP (8' OVERALL CYCLE)  
32' STANDARD LENGTH WHEN APPROACHING INTERSECTION  
80' WHEN BUS STOP PRESENT



**8" SKIP CYCLE**

LANE ENDS  
3 SPACE AND 12' SKIP (15' OVERALL CYCLE)

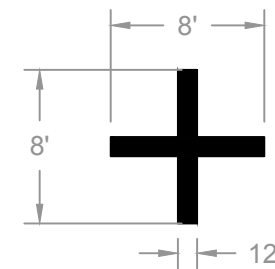


**TYPICAL CENTER LEFT TURN ARROWS**

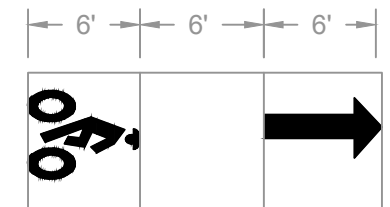


**SURVEY MARKER**

16' OF 12" SOLID WHITE

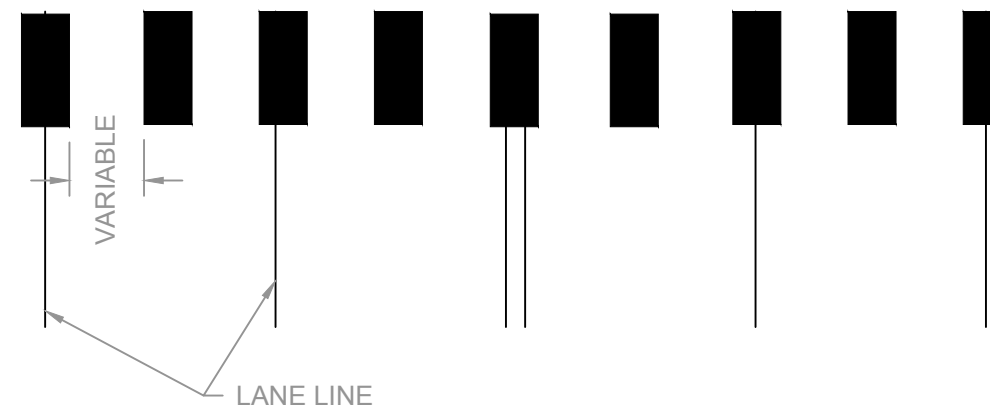


**BIKE SYMBOLS**



**CROSSWALK BLOCKS**

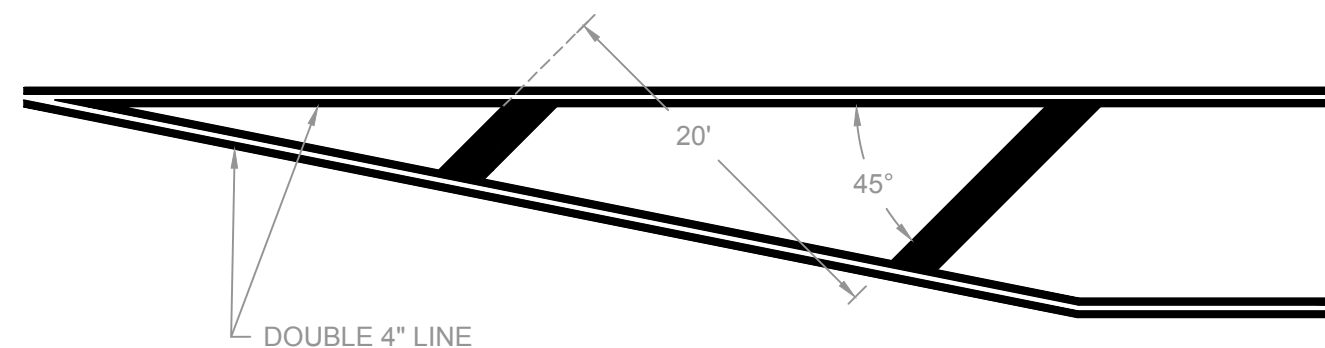
CROSSWALK BLOCKS SHALL BE CENTERED ON AND IN BETWEEN LANE LINES



CROSSWALK BLOCKS ARE 2.5' WIDE  
6' LONG AT CONTROLLED INTERSECTIONS  
8' LONG AT MID BLOCK CROSSINGS  
8' LONG AT UN-CONTROLLED INTERSECTIONS

**PAINTED MEDIAN**

24" SOLID LINE AT 45° ANGLE  
SPACE 20' FROM FRONT EDGE OF LINES



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NO.	REV-DATE	BY:	DESCRIPTION

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REG NO: 26511 DATE: 04/27/2017

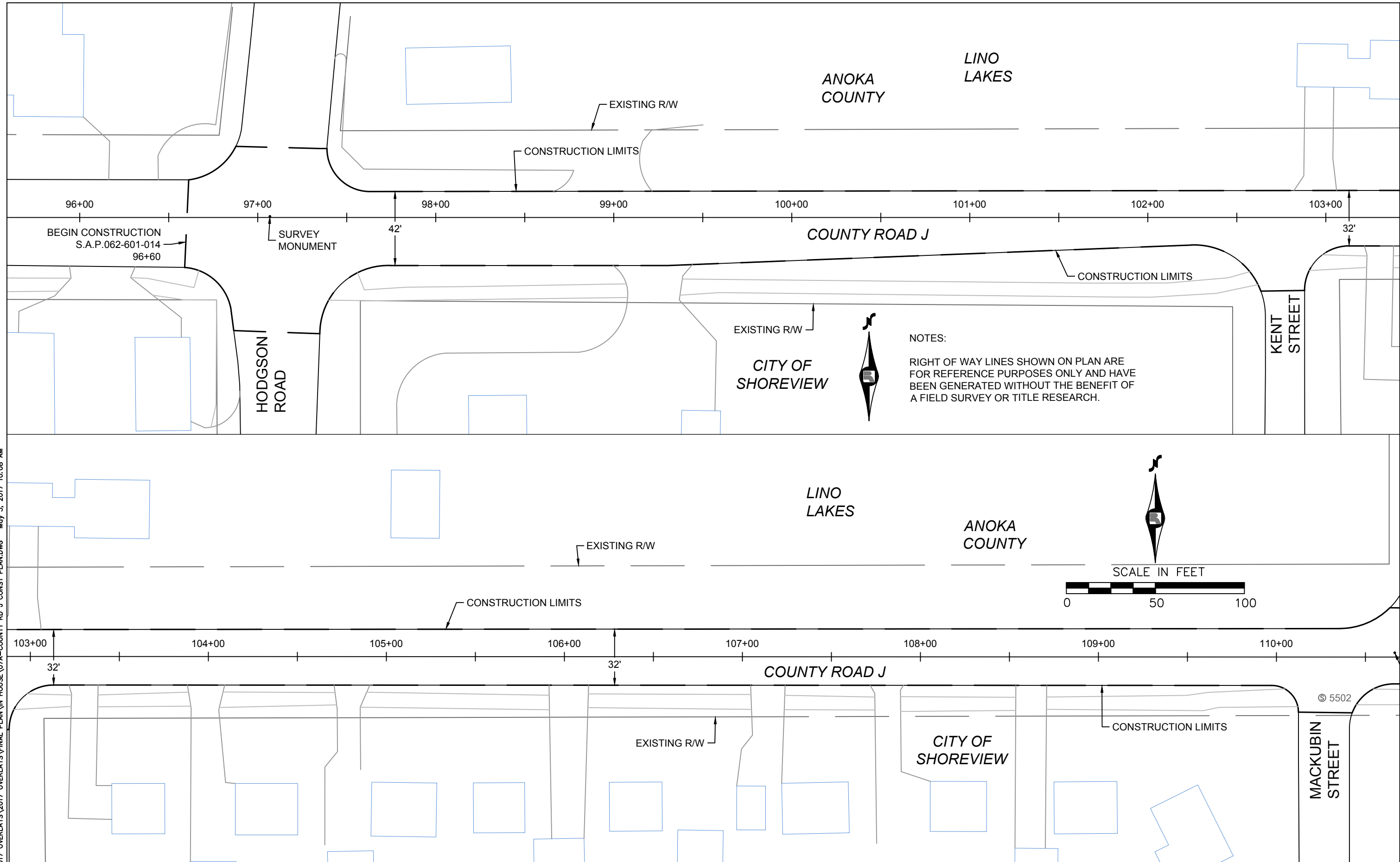
**BITUMINOUS RESURFACING**  
AT VARIOUS LOCATIONS

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



**PAVEMENT MARKING DETAILS**  
SHEET 11 OF 31 SHEETS

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\FINAL PLAN\IN HOUSE\07A-COUNTY RD J CONST PLAN.DWG May 3, 2017 10:08 AM



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SIGNED: \_\_\_\_\_

REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**

HODGSON ROAD TO 1534' EAST OF MONARCH WAY

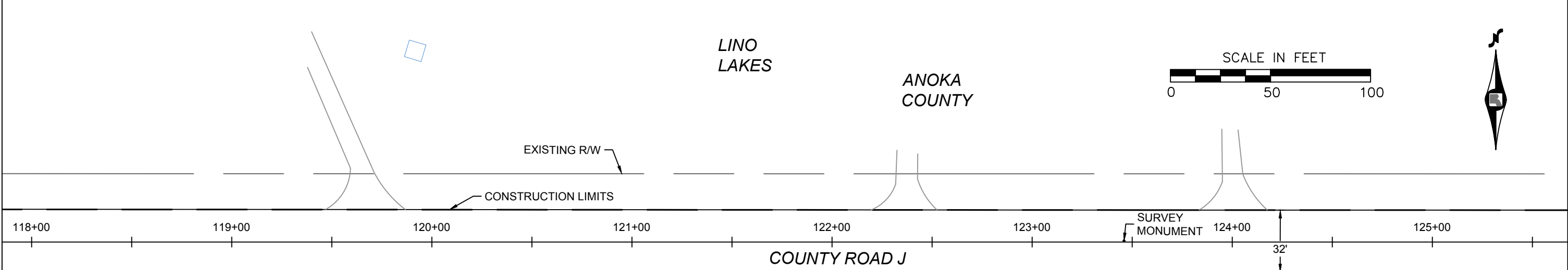
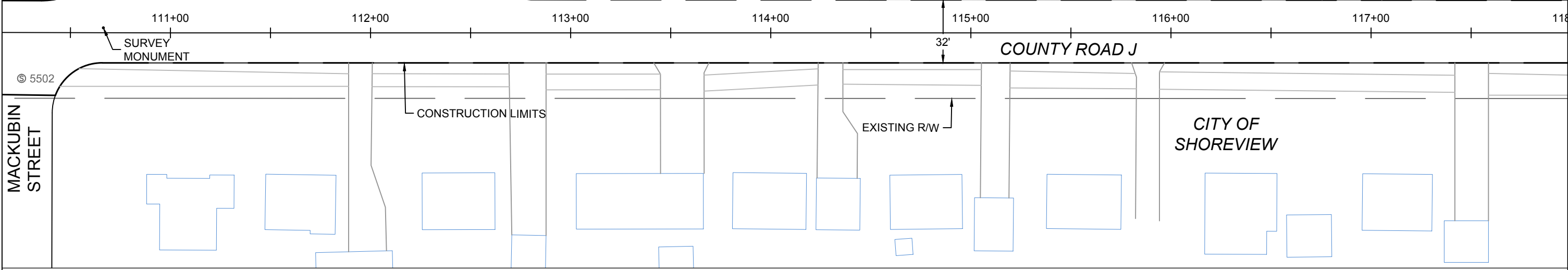
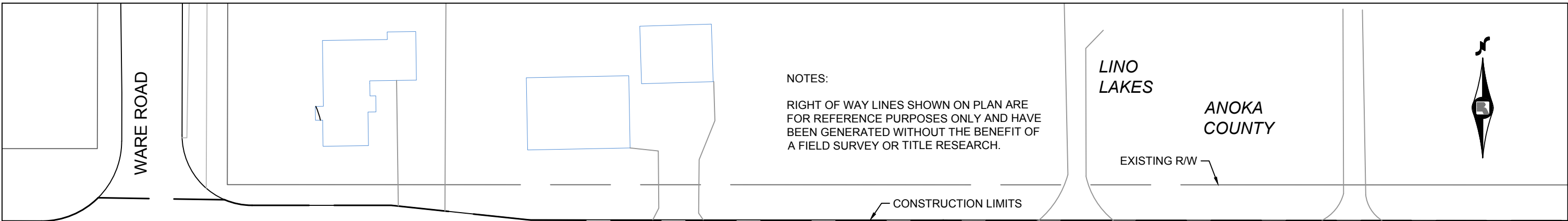
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**CONSTRUCTION PLAN**

**SHEET 12 OF 31 SHEETS**

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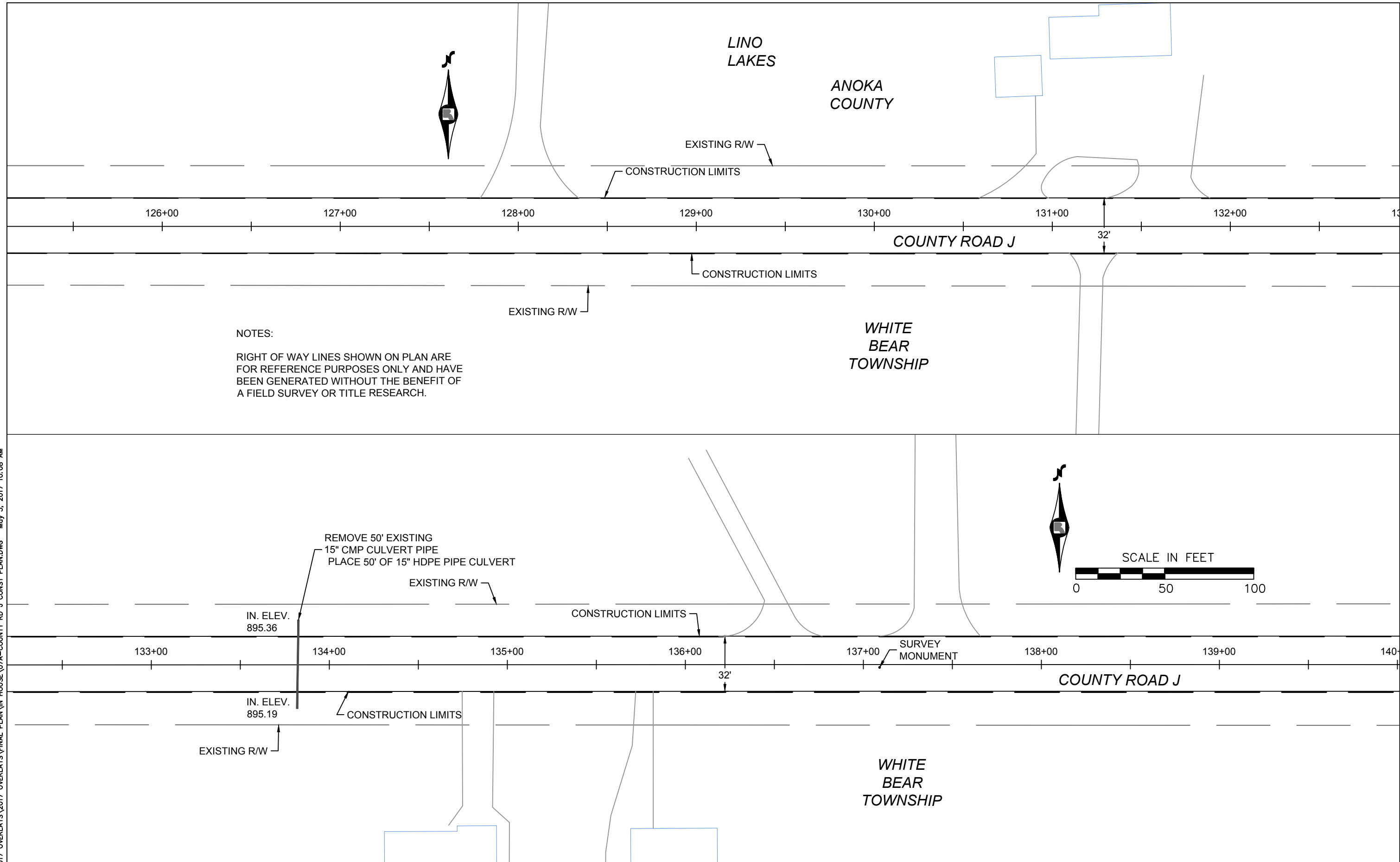
**COUNTY ROAD J**  
HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 13 OF 31 SHEETS**

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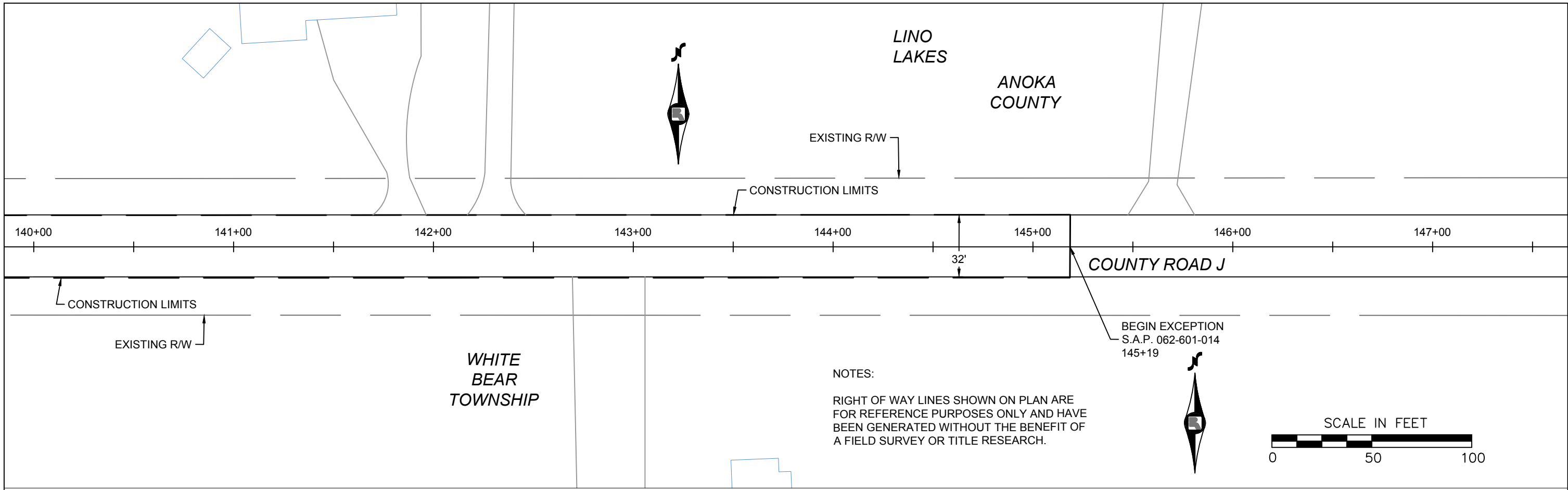
SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 14 OF 31 SHEETS**



NOTES:  
 RIGHT OF WAY LINES SHOWN ON PLAN ARE FOR REFERENCE PURPOSES ONLY AND HAVE BEEN GENERATED WITHOUT THE BENEFIT OF A FIELD SURVEY OR TITLE RESEARCH.

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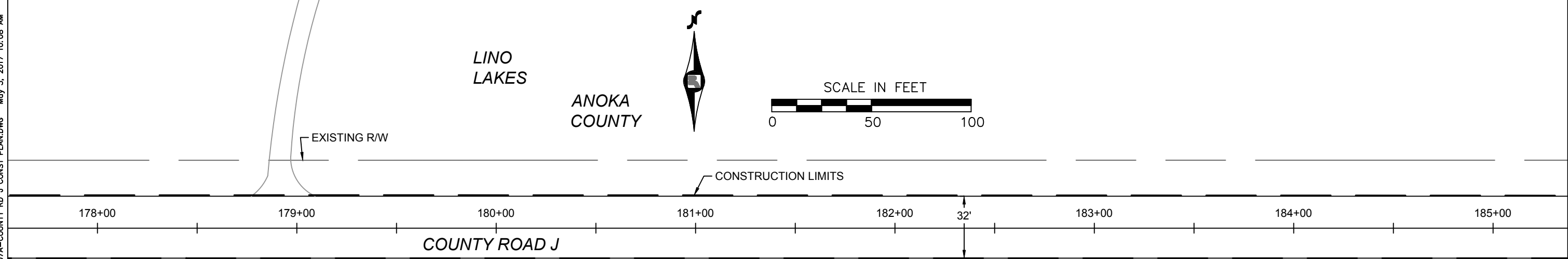
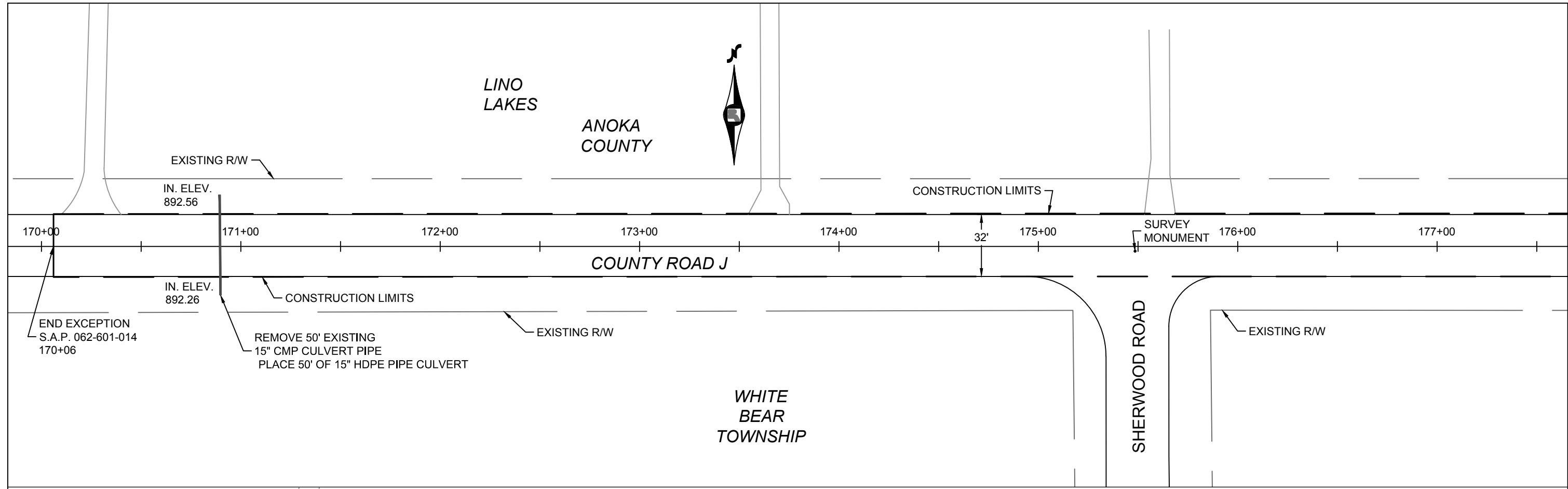
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 15 OF 31 SHEETS**

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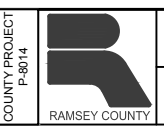
NOTES:  
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**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

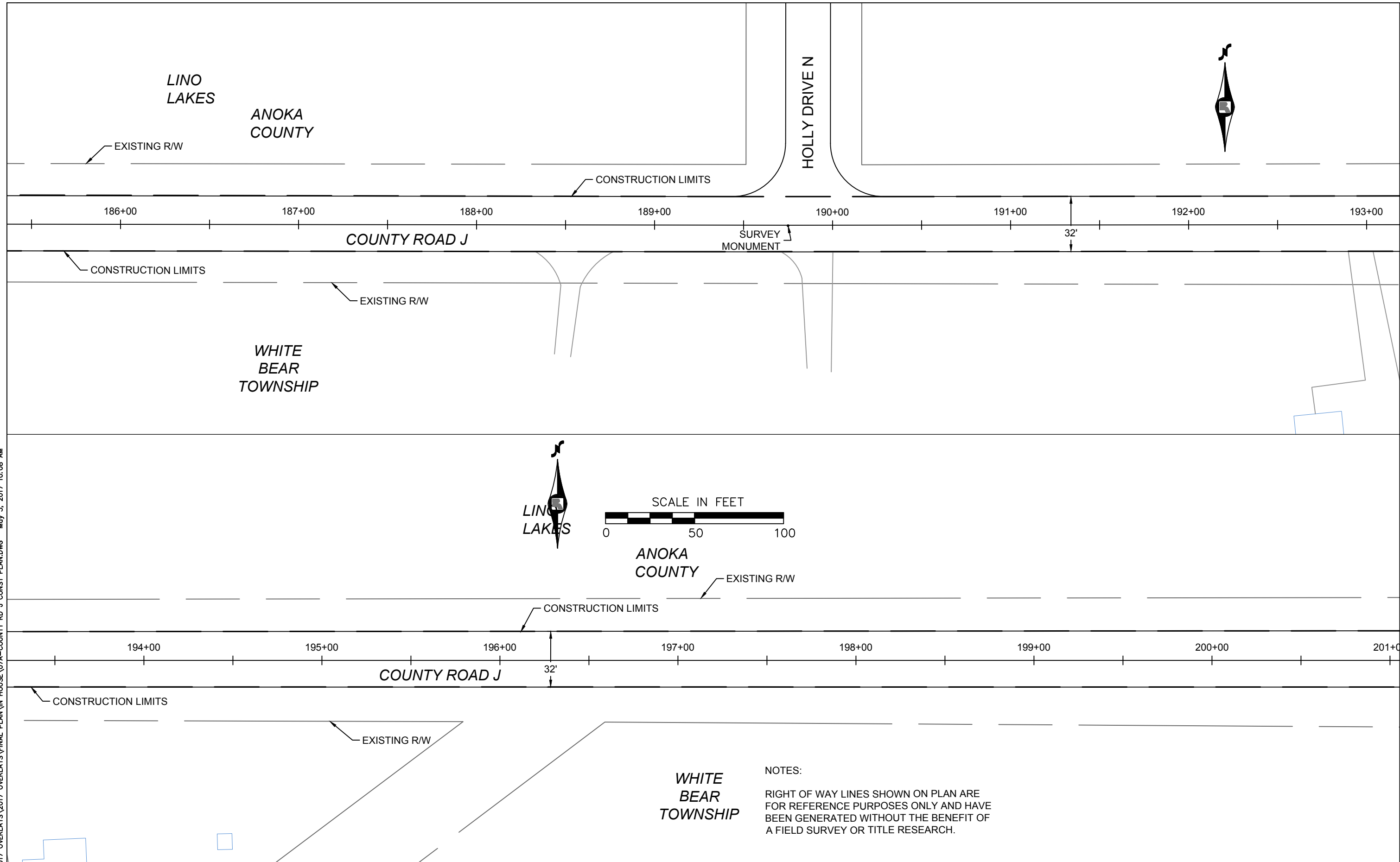
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 16 OF 31 SHEETS**



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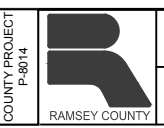


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 REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



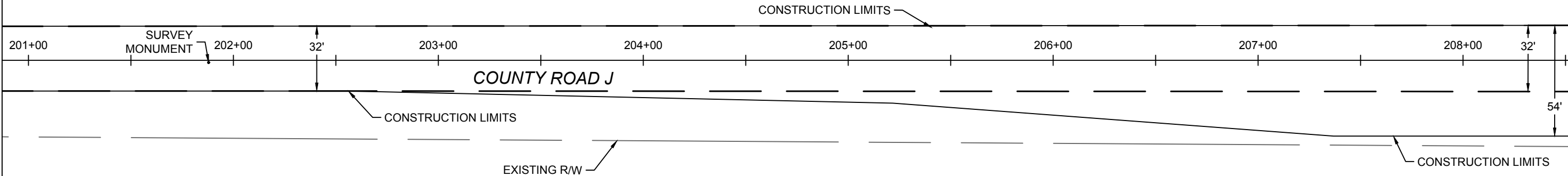
**CONSTRUCTION PLAN**  
**SHEET 17 OF 31 SHEETS**

NOTES:  
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LINO LAKES

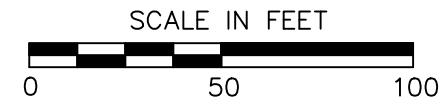
ANOKA COUNTY



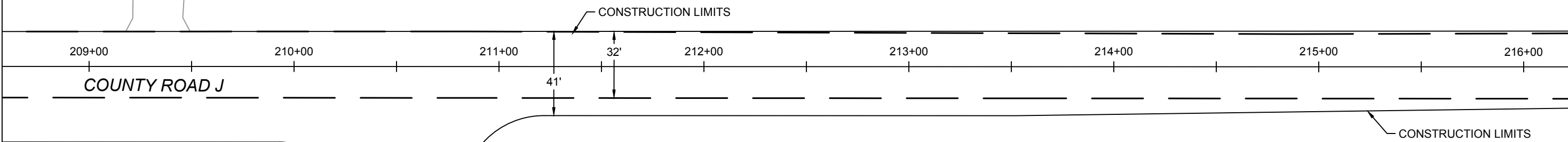
CITY OF NORTH OAKS

LINO LAKES

ANOKA COUNTY



EXISTING R/W



CITY OF NORTH OAKS

RAPP FARM BOULEVARD

NOTES:

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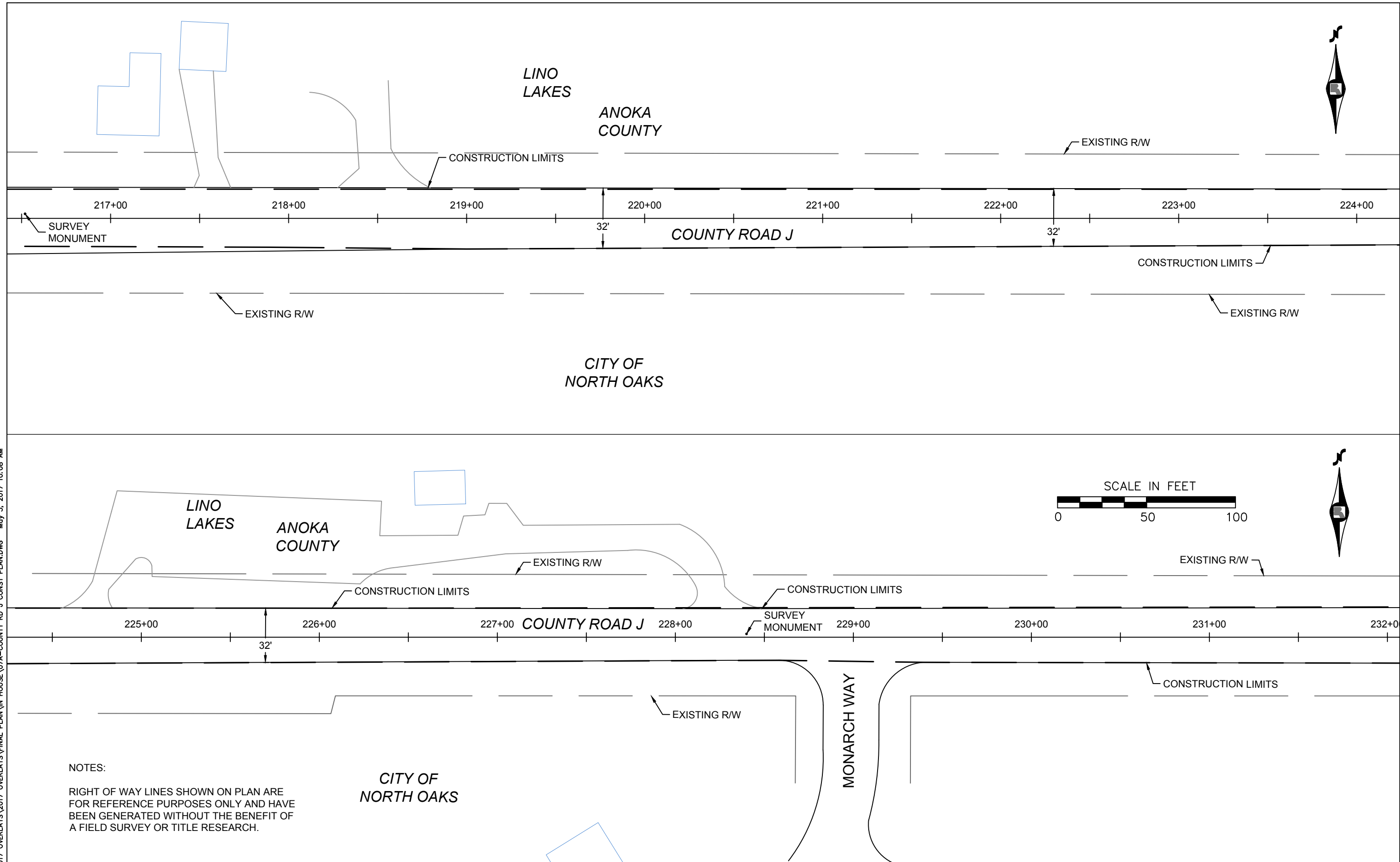
**COUNTY ROAD J**  
HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 18 OF 31 SHEETS**

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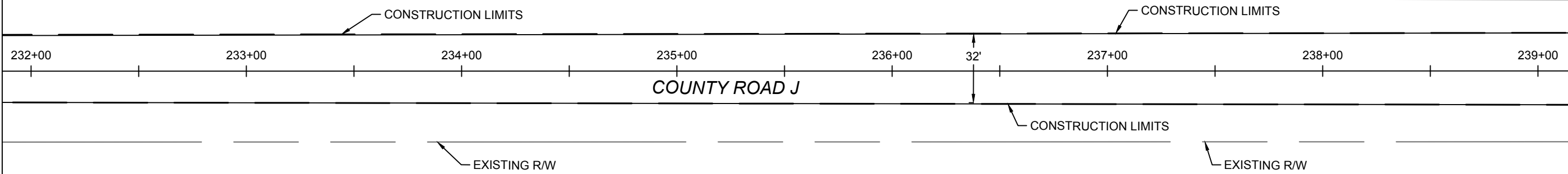
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



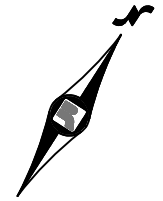
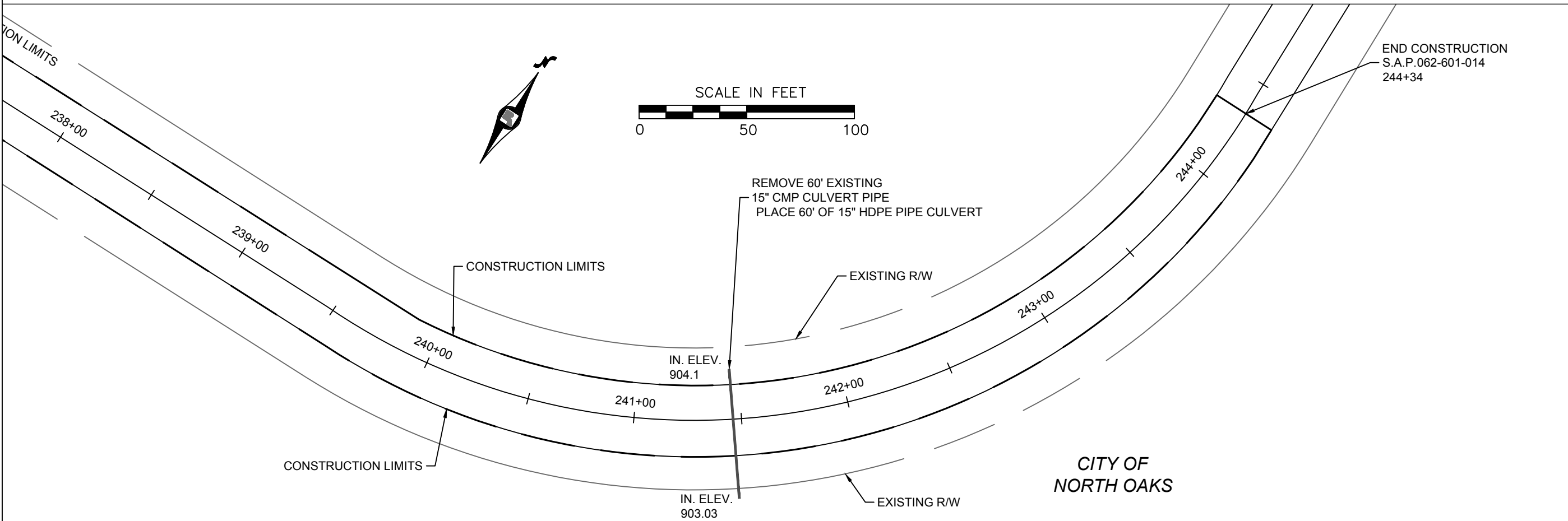
**CONSTRUCTION PLAN**  
**SHEET 19 OF 31 SHEETS**

LINO LAKES  
ANOKA COUNTY



CITY OF NORTH OAKS

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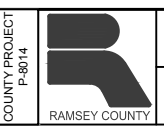
END CONSTRUCTION  
S.A.P. 062-601-014  
244+34

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REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



**CONSTRUCTION PLAN**  
**SHEET 20 OF 31 SHEETS**



EXISTING RW

CONSTRUCTION LIMITS

497+00 498+00 499+00 500+00 501+00 502+00 503+00

HODGSON ROAD

BEGIN CONSTRUCTION  
S.A.P. 062-649-039  
498+33

CONSTRUCTION LIMITS

EXISTING RW

ELAINE AVENUE

EMIL AVENUE

CITY OF SHOREVIEW

NOTES:  
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EXISTING RW

CONSTRUCTION LIMITS

501+00 502+00 503+00 504+00 505+00 506+00 507+00 508+00

HODGSON ROAD

END CONSTRUCTION  
S.A.P. 062-649-039  
506+39

CONSTRUCTION LIMITS

EXISTING RW

COUNTY ROAD J

CITY OF SHOREVIEW

ANOKA COUNTY

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\HOUSE\07B-HODGSON ROAD CONST PLAN.DWG April 27, 2017 11:04 AM

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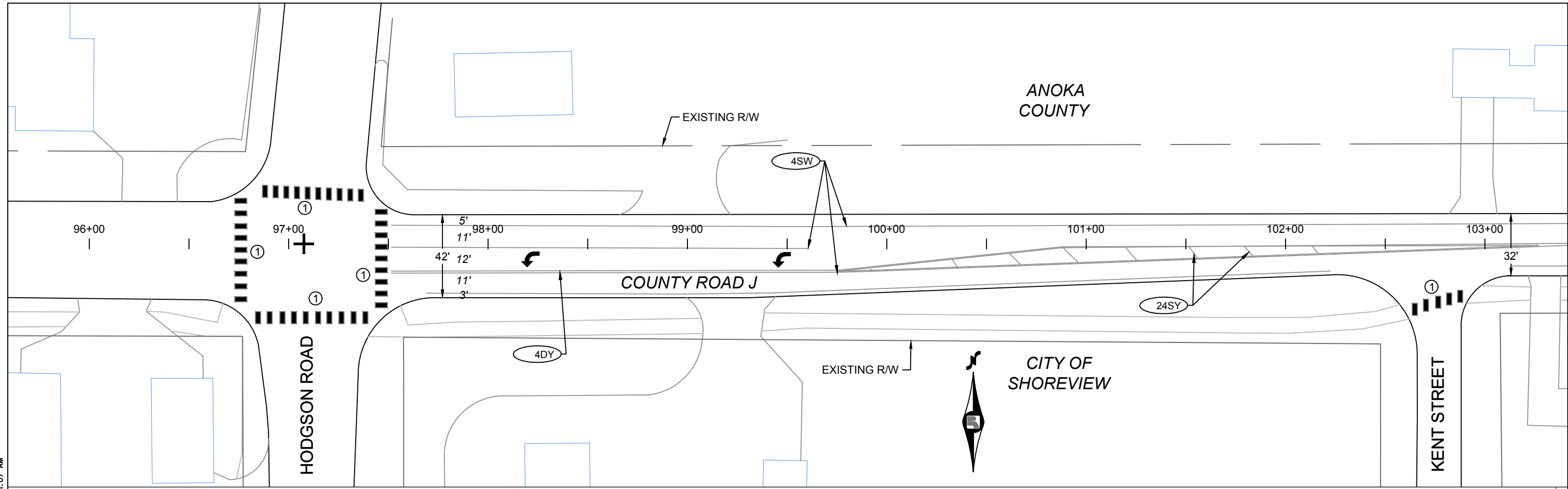
**HODGSON ROAD**  
ELAINE AVENUE TO COUNTY ROAD J

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016

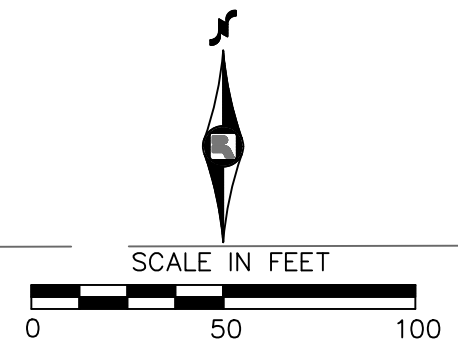
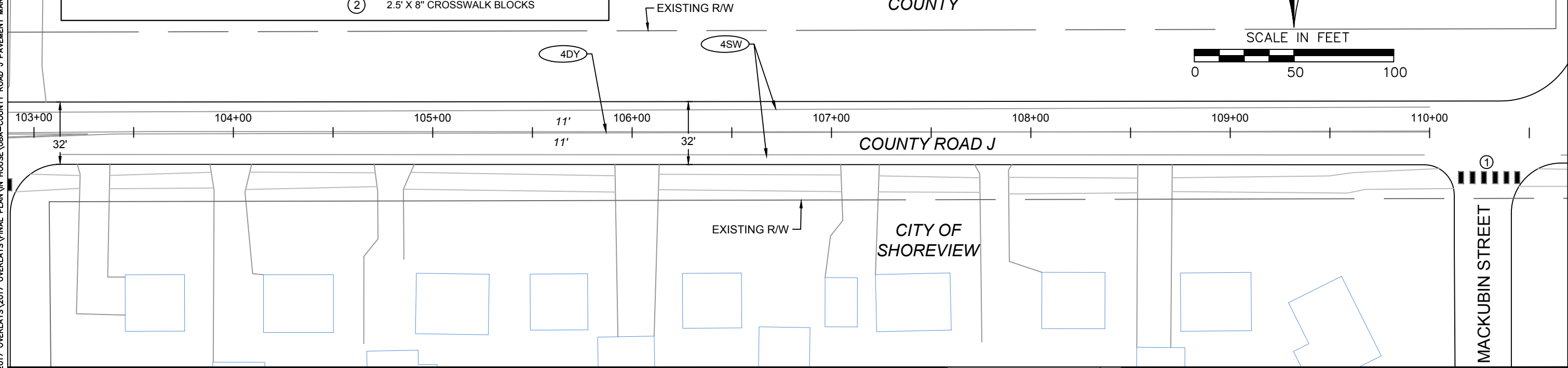


**CONSTRUCTION PLAN**  
**SHEET 21 OF 31 SHEETS**

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\08A-COUNTY ROAD J PAVEMENT MARKING.DWG April 27, 2017 11:07 AM



PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS

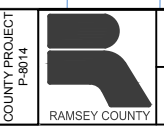


NO.	REV-DATE	BY:	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017

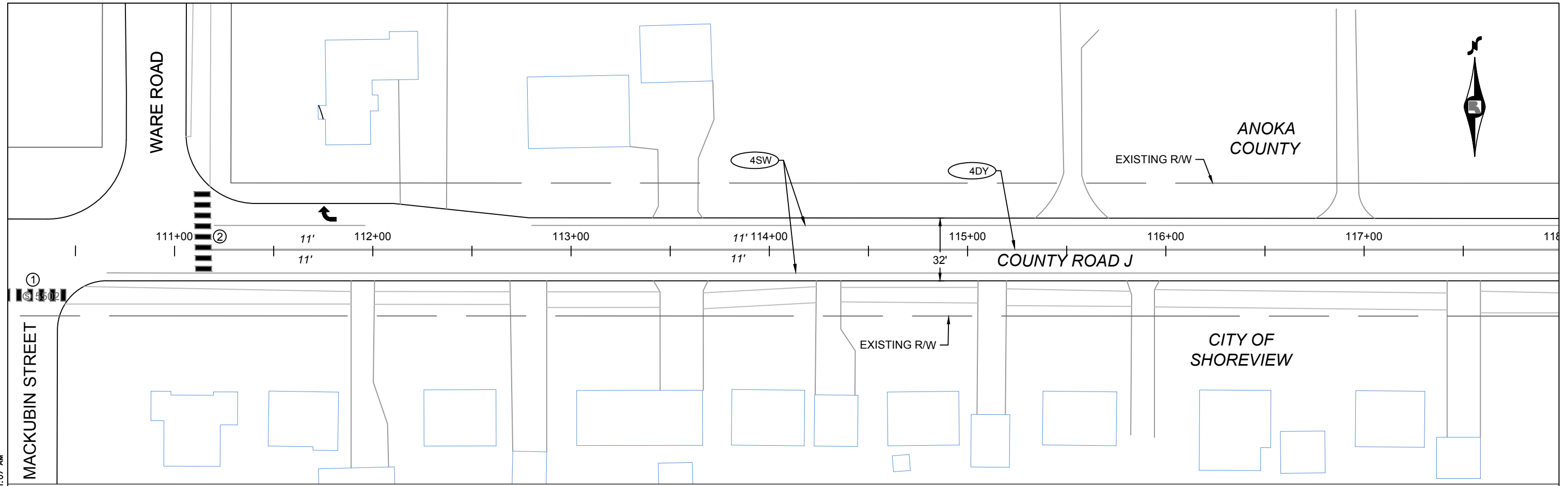
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016

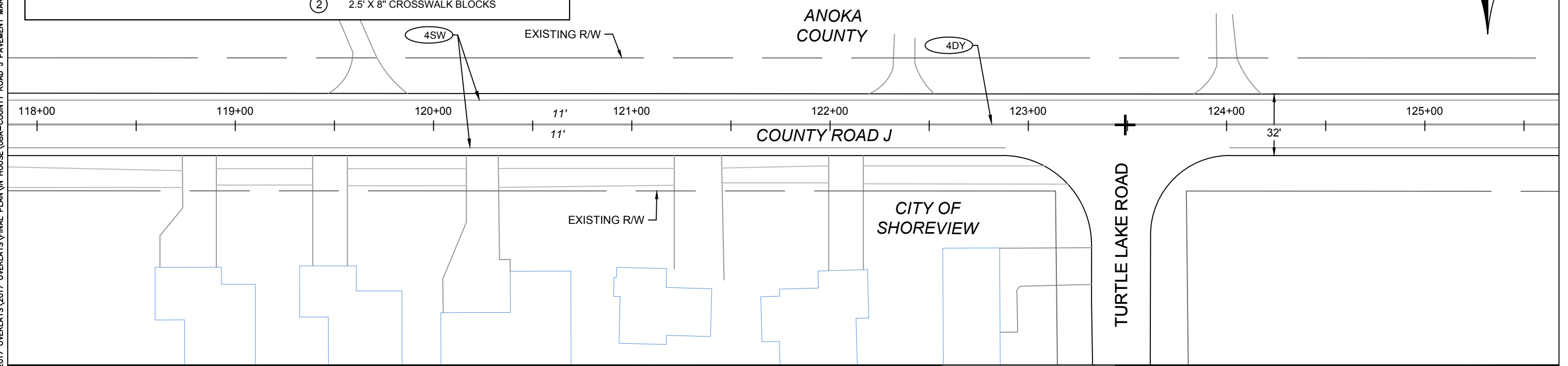
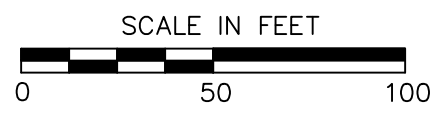


**STRIPING PLAN**  
**SHEET 22 OF 31 SHEETS**

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\FINAL PLAN\IN HOUSE\08A-COUNTY ROAD J PAVEMENT MARKING.DWG April 27, 2017 11:07 AM



PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS

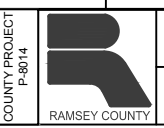


NO.	REV-DATE	BY:	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017

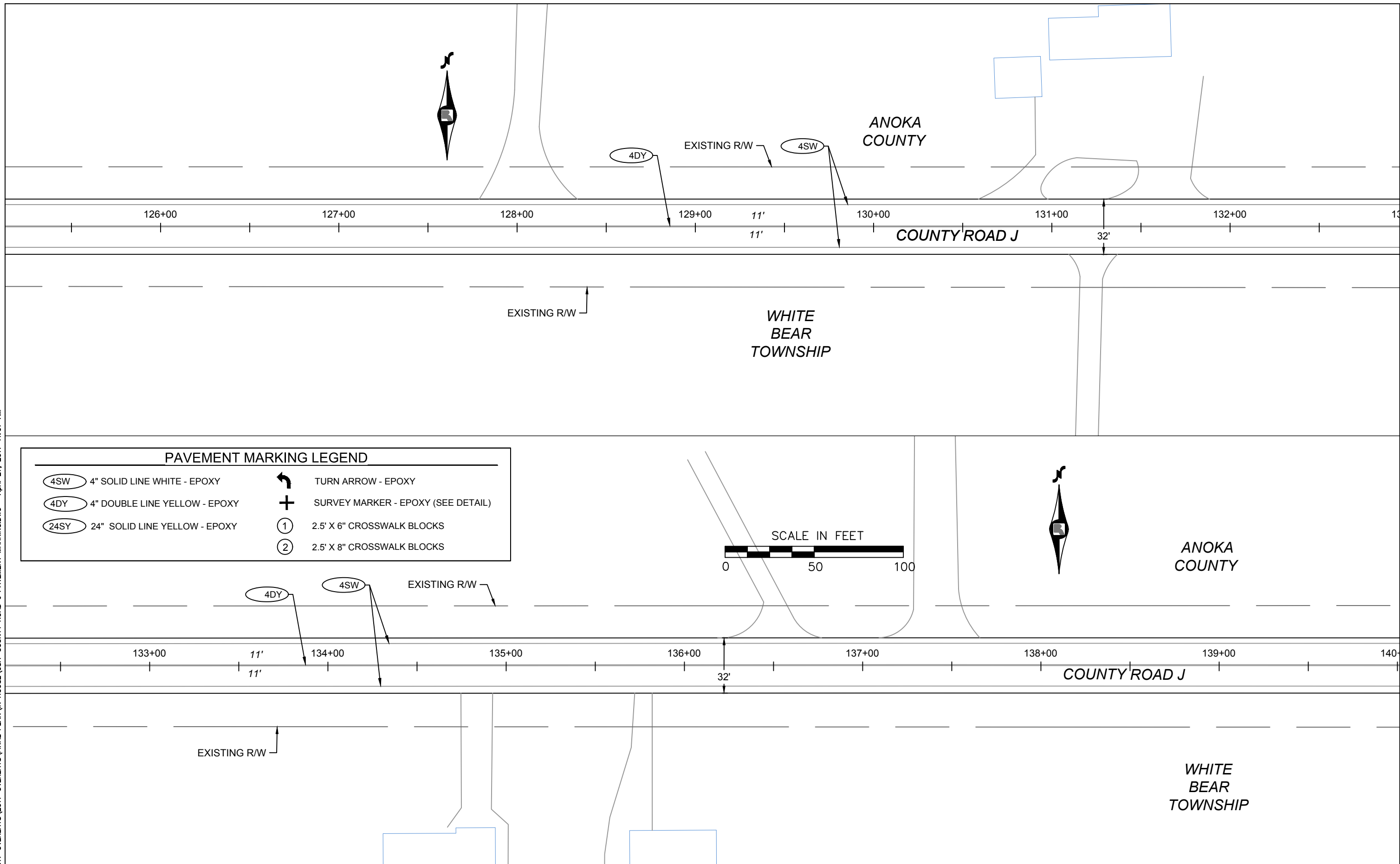
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**STRIPING PLAN**  
**SHEET 23 OF 31 SHEETS**

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PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS

NO.	REV-DATE	BY:	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNED:   
 REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

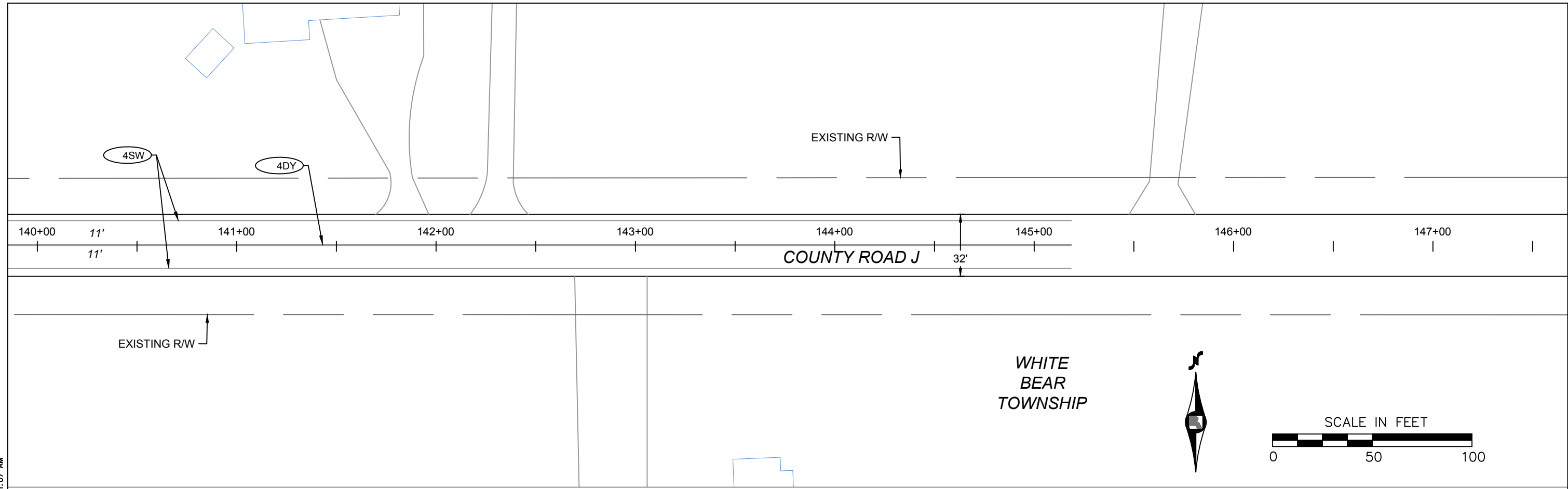
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**STRIPING PLAN**  
**SHEET 24 OF 31 SHEETS**



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**PAVEMENT MARKING LEGEND**

4SW	4" SOLID LINE WHITE - EPOXY	↩	TURN ARROW - EPOXY
4DY	4" DOUBLE LINE YELLOW - EPOXY	+	SURVEY MARKER - EPOXY (SEE DETAIL)
24SY	24" SOLID LINE YELLOW - EPOXY	①	2.5' X 6" CROSSWALK BLOCKS
		②	2.5' X 8" CROSSWALK BLOCKS

NO.	REV-DATE	BY:	DESCRIPTION

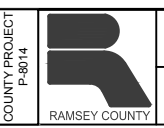
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNED: \_\_\_\_\_








REG NO: 26511 DATE: 04/27/2017

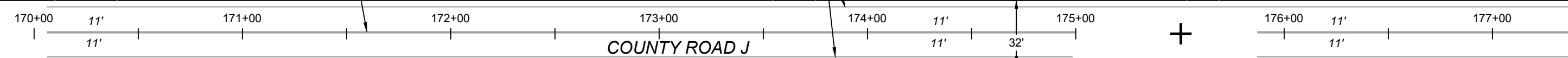
**COUNTY ROAD J**  
HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



**STRIPING PLAN**  
SHEET 25 OF 31 SHEETS

PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS

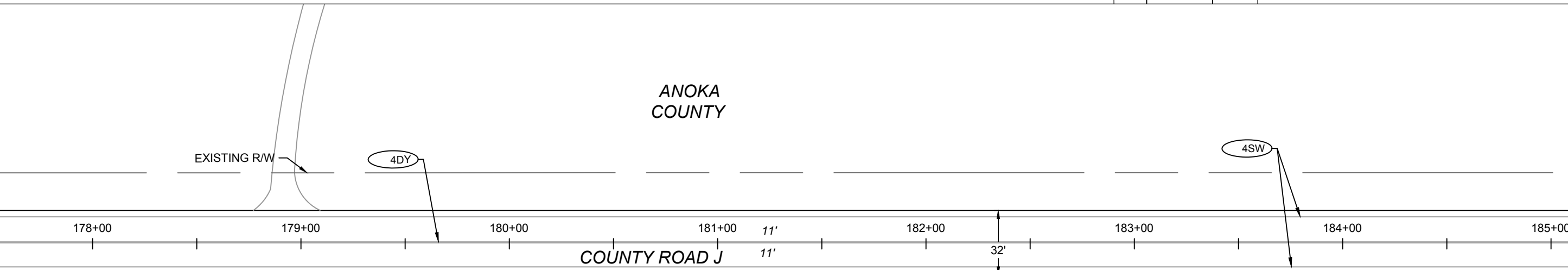


**NOTES:**

RIGHT OF WAY LINES SHOWN ON PLAN ARE FOR REFERENCE PURPOSES ONLY AND HAVE BEEN GENERATED WITHOUT THE BENEFIT OF A FIELD SURVEY OR TITLE RESEARCH.

**WHITE  
BEAR  
TOWNSHIP**

**SHERWOOD ROAD**



**ANOKA  
COUNTY**

**WHITE  
BEAR  
TOWNSHIP**



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NO.	REV-DATE	BY:	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017

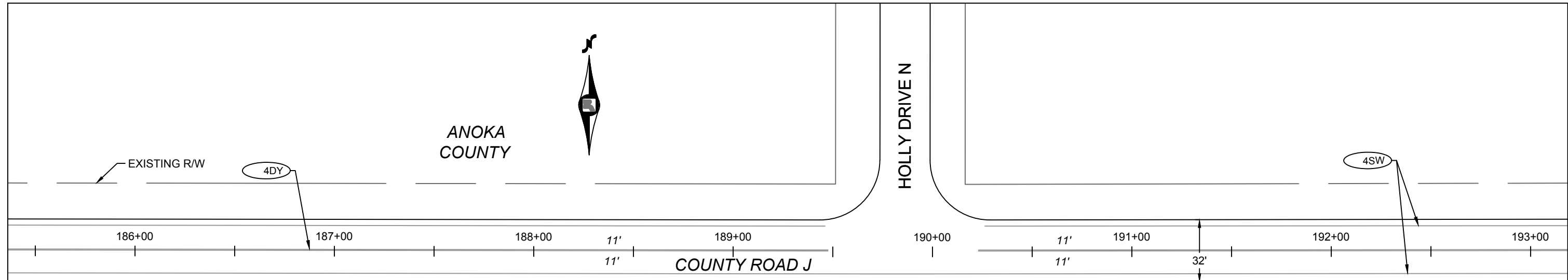
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016

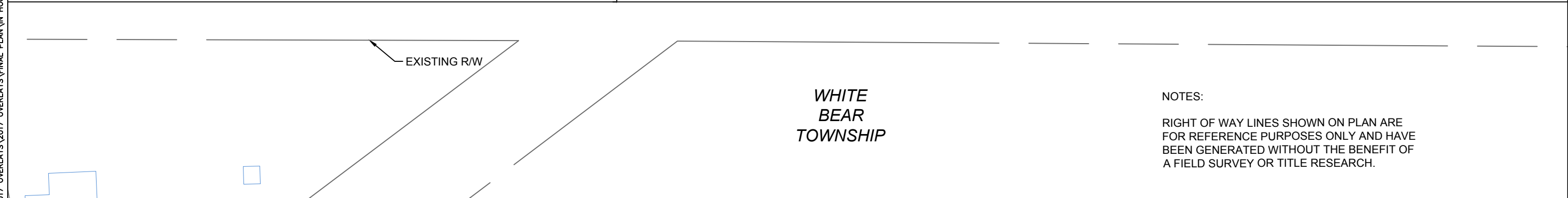
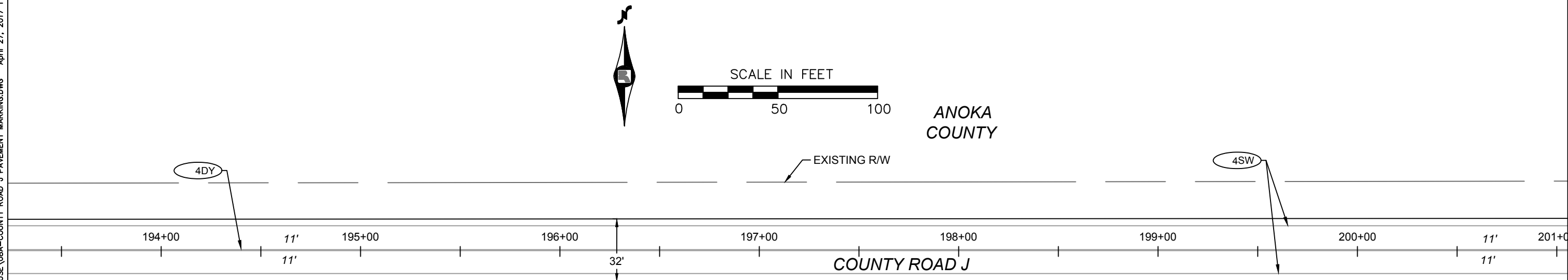
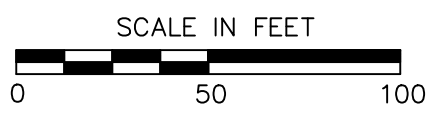
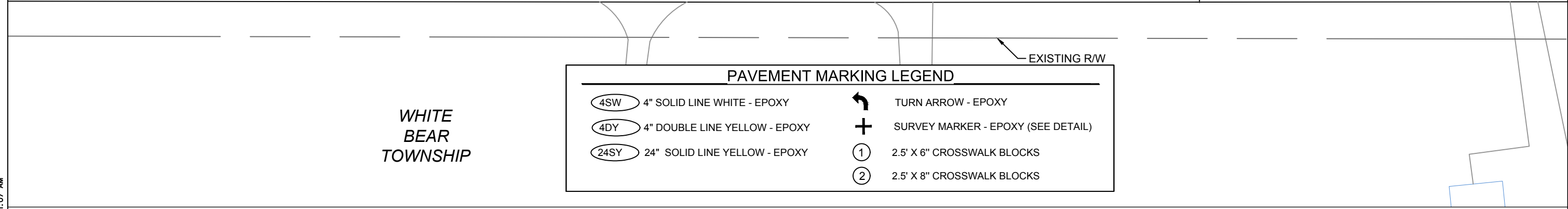


**STRIPING PLAN**  
**SHEET 26 OF 31 SHEETS**

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PAVEMENT MARKING LEGEND			
	4\"/>		TURN ARROW - EPOXY
	4\"/>		SURVEY MARKER - EPOXY (SEE DETAIL)
	24\"/>		2.5' X 6\"/>
			2.5' X 8\"/>



NOTES:  
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NO.	REV-DATE	BY:	DESCRIPTION

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 SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017








**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

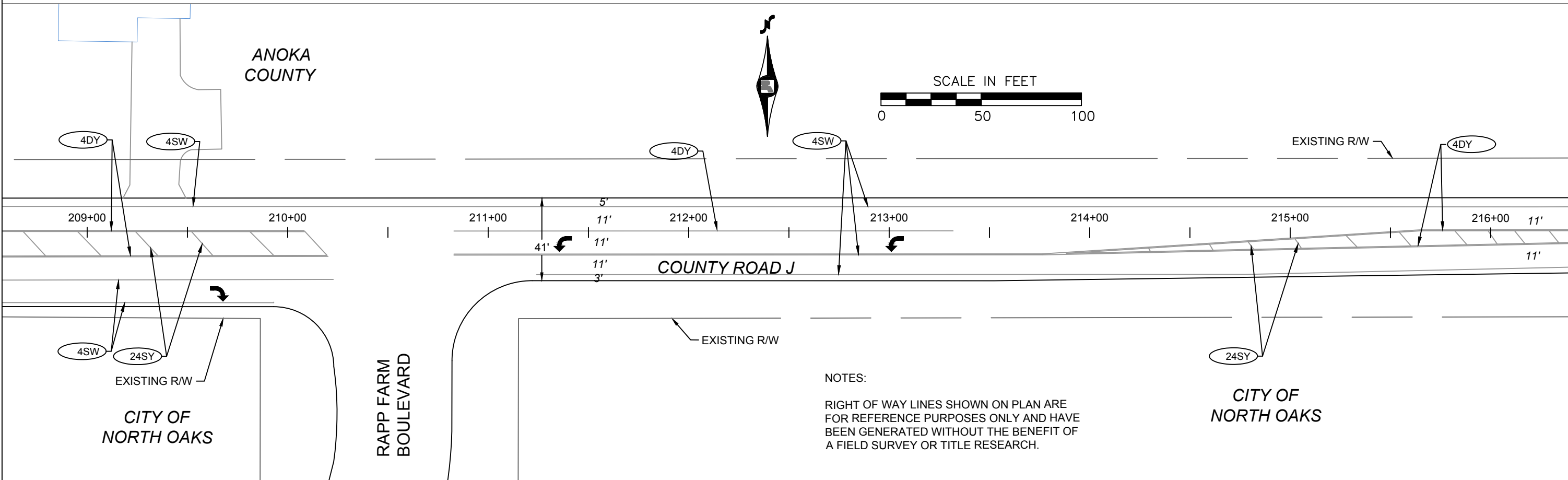
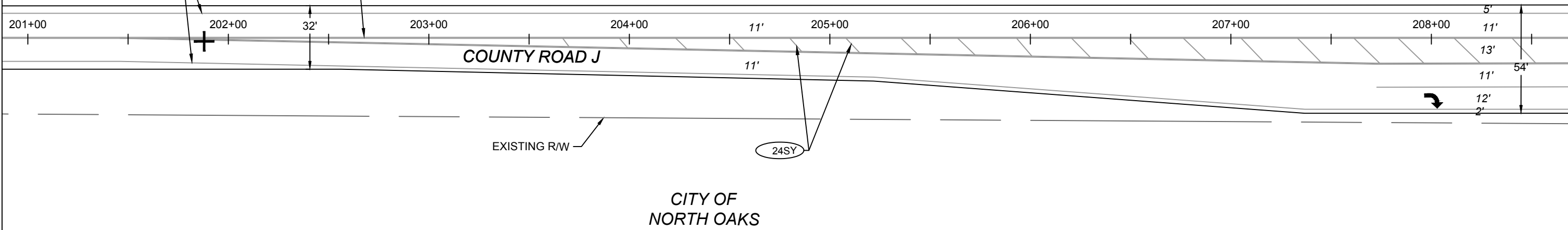
S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**STRIPING PLAN**  
**SHEET 27 OF 31 SHEETS**

P:\PROJECTS\2017 OVERLAYS\2017 OVERLAYS\08A-COUNTY ROAD J PAVEMENT MARKING.DWG April 27, 2017 11:07 AM

PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS



NOTES:  
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NO.	REV-DATE	BY:	DESCRIPTION

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 SIGNED: \_\_\_\_\_  
 REG NO: 26511 DATE: 04/27/2017

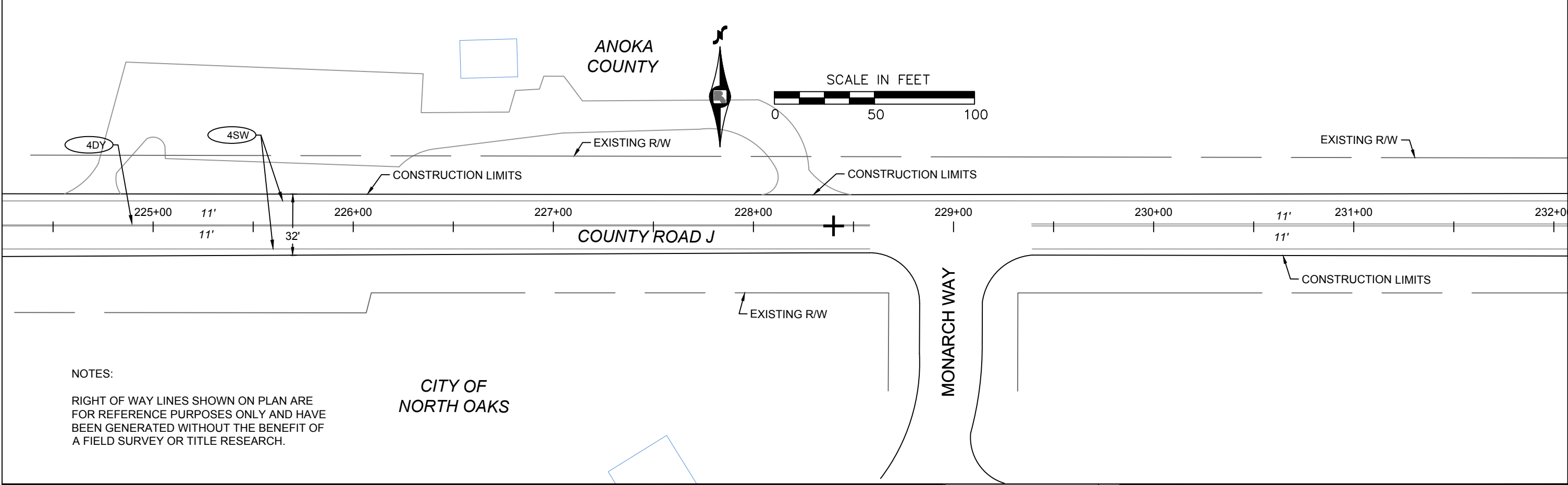
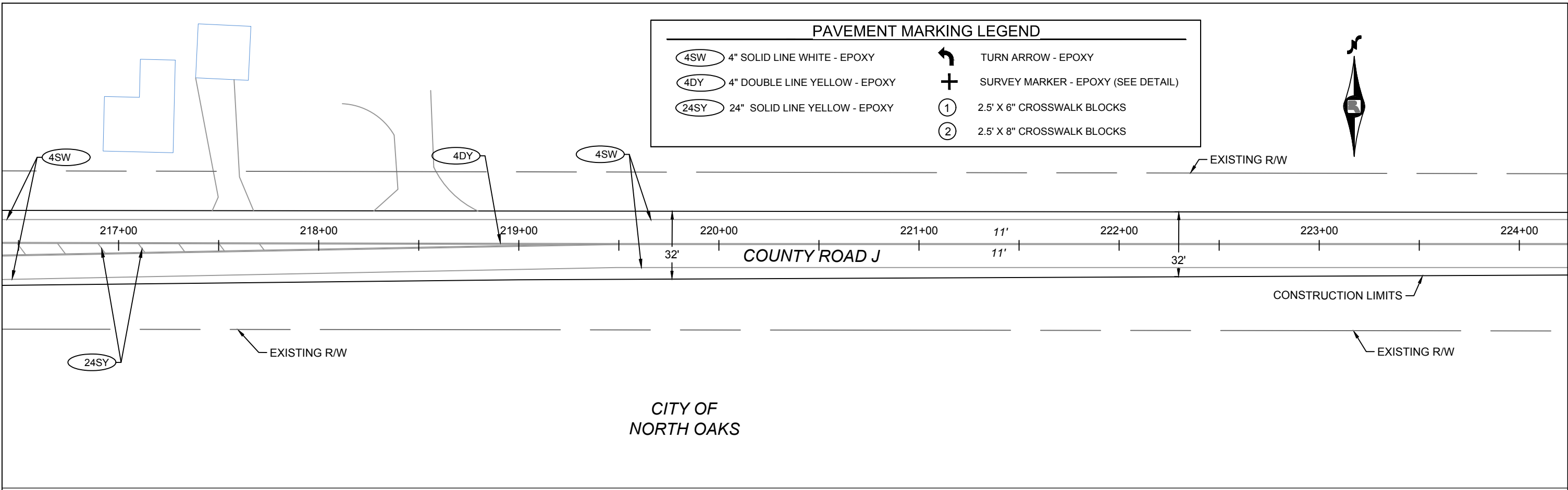
**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016



**STRIPING PLAN**  
**SHEET 28 OF 31 SHEETS**

PAVEMENT MARKING LEGEND			
(4SW)	4" SOLID LINE WHITE - EPOXY	↩	TURN ARROW - EPOXY
(4DY)	4" DOUBLE LINE YELLOW - EPOXY	+	SURVEY MARKER - EPOXY (SEE DETAIL)
(24SY)	24" SOLID LINE YELLOW - EPOXY	①	2.5' X 6" CROSSWALK BLOCKS
		②	2.5' X 8" CROSSWALK BLOCKS



**NOTES:**

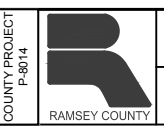
RIGHT OF WAY LINES SHOWN ON PLAN ARE FOR REFERENCE PURPOSES ONLY AND HAVE BEEN GENERATED WITHOUT THE BENEFIT OF A FIELD SURVEY OR TITLE RESEARCH.

NO.	REV-DATE	BY:	DESCRIPTION

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 SIGNED: \_\_\_\_\_  
 REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
 HODGSON ROAD TO 1534' EAST OF MONARCH WAY

S.A.P. 062-601-014  
 S.A.P. 062-649-039  
 S.A.P. 002-632-016

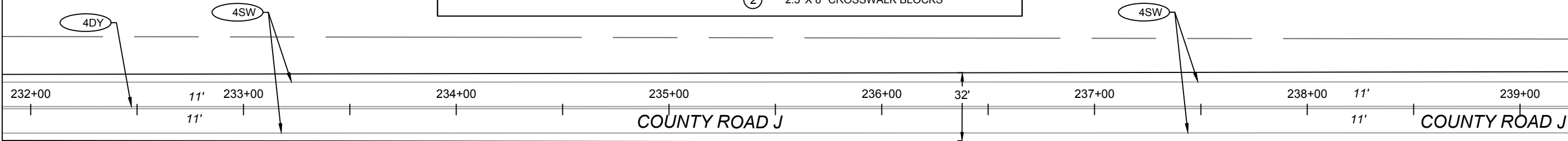


**STRIPING PLAN**  
**SHEET 29 OF 31 SHEETS**

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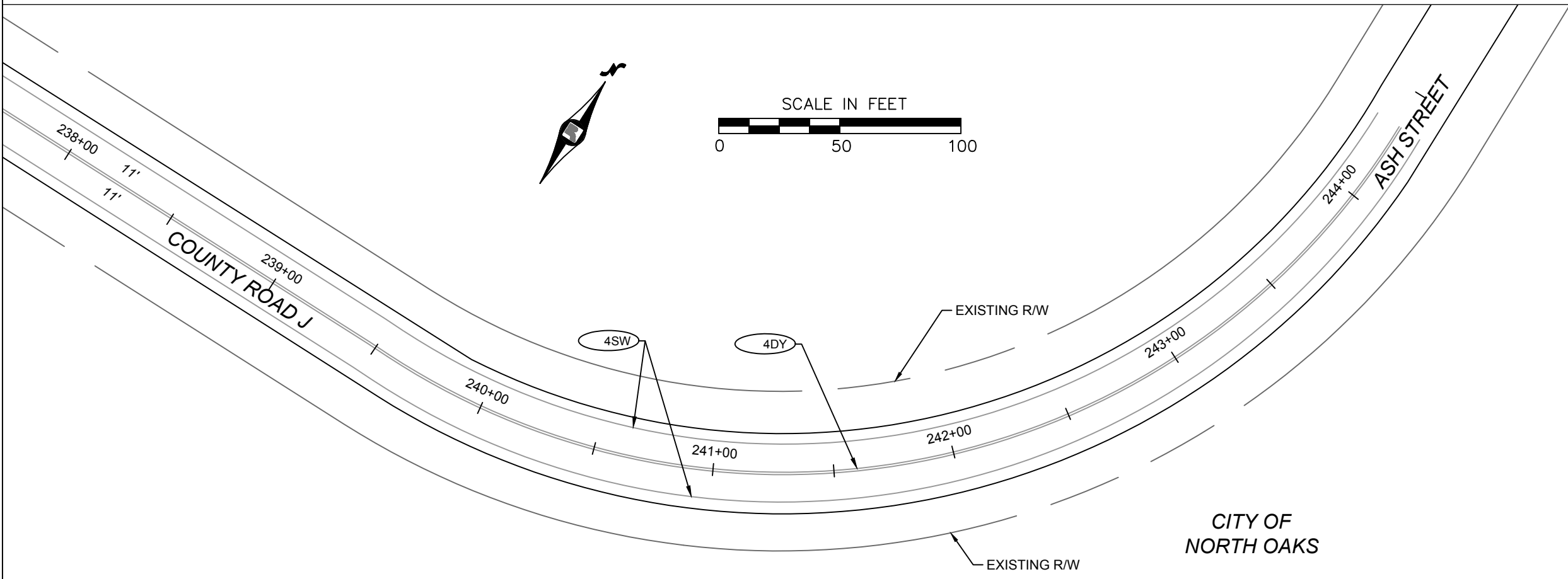
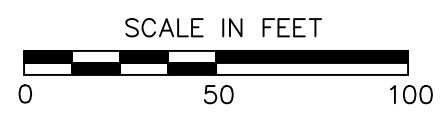
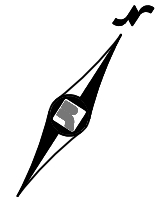


PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		SURVEY MARKER - EPOXY (SEE DETAIL)
	24" SOLID LINE YELLOW - EPOXY		2.5' X 6" CROSSWALK BLOCKS
			2.5' X 8" CROSSWALK BLOCKS



CITY OF NORTH OAKS

NOTES:  
RIGHT OF WAY LINES SHOWN ON PLAN ARE FOR REFERENCE PURPOSES ONLY AND HAVE BEEN GENERATED WITHOUT THE BENEFIT OF A FIELD SURVEY OR TITLE RESEARCH.



CITY OF NORTH OAKS

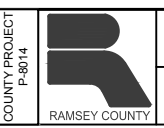
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NO.	REV-DATE	BY:	DESCRIPTION

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SIGNED: \_\_\_\_\_  
REG NO: 26511      DATE: 04/27/2017

**COUNTY ROAD J**  
HODGSON ROAD TO 1534' EAST OF MONARCH WAY

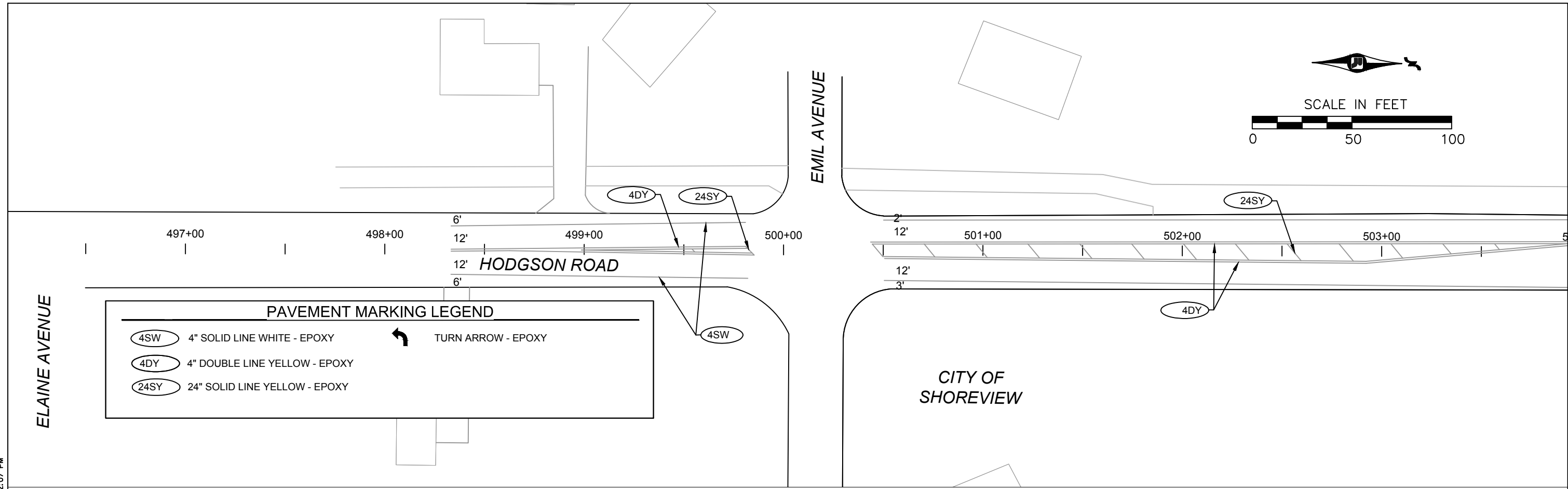
S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016



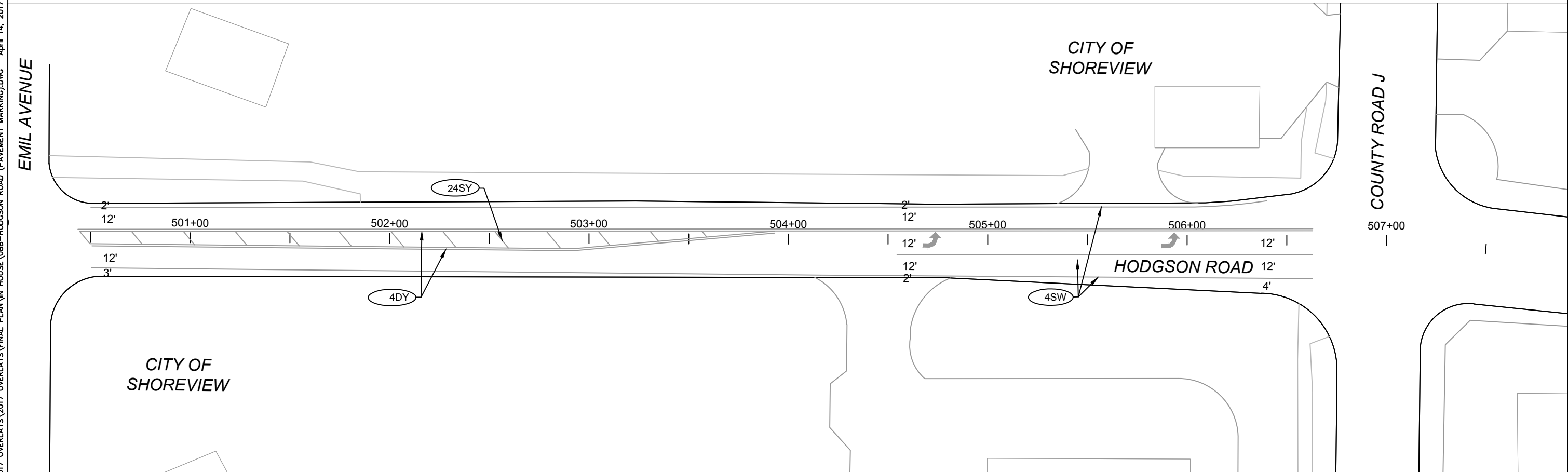
**STRIPING PLAN**  
**SHEET 30 OF 31 SHEETS**



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PAVEMENT MARKING LEGEND			
	4" SOLID LINE WHITE - EPOXY		TURN ARROW - EPOXY
	4" DOUBLE LINE YELLOW - EPOXY		
	24" SOLID LINE YELLOW - EPOXY		



NO.	REV-DATE	BY:	DESCRIPTION

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SIGNED: \_\_\_\_\_

REG NO: 26511      DATE: 04/27/2017

**HODGSON ROAD**  
ELAINE AVENUE TO COUNTY ROAD J

S.A.P. 062-601-014  
S.A.P. 062-649-039  
S.A.P. 002-632-016

