

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

FOR PLANS AND UTILITIES SYMBOLS SEE MN/DOT TECHNICAL MANUAL.

-GOVERNING SPECIFICATIONS-

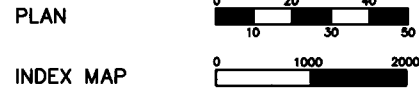
THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, SEE [HTTP://WWW.DOT.STATE.MN.US/TRAFFICENG/](http://www.dot.state.mn.us/trafficing/)

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



SCALES IN FEET



GROSS LENGTH 5390 FEET 1.02 MILES
 BRIDGE LENGTH -----
 EXCEPTIONS -----
 NET LENGTH 5390 FEET 1.02 MILES



RAMSEY COUNTY
 DEPARTMENT OF PUBLIC WORKS

PLAN FOR THE BITUMINOUS MILL & OVERLAY OF

MCKNIGHT ROAD
 S.A.P. No. 062-668-050

BETWEEN: 250' N OF LOWER AFTON RD TO BURNS AVE.

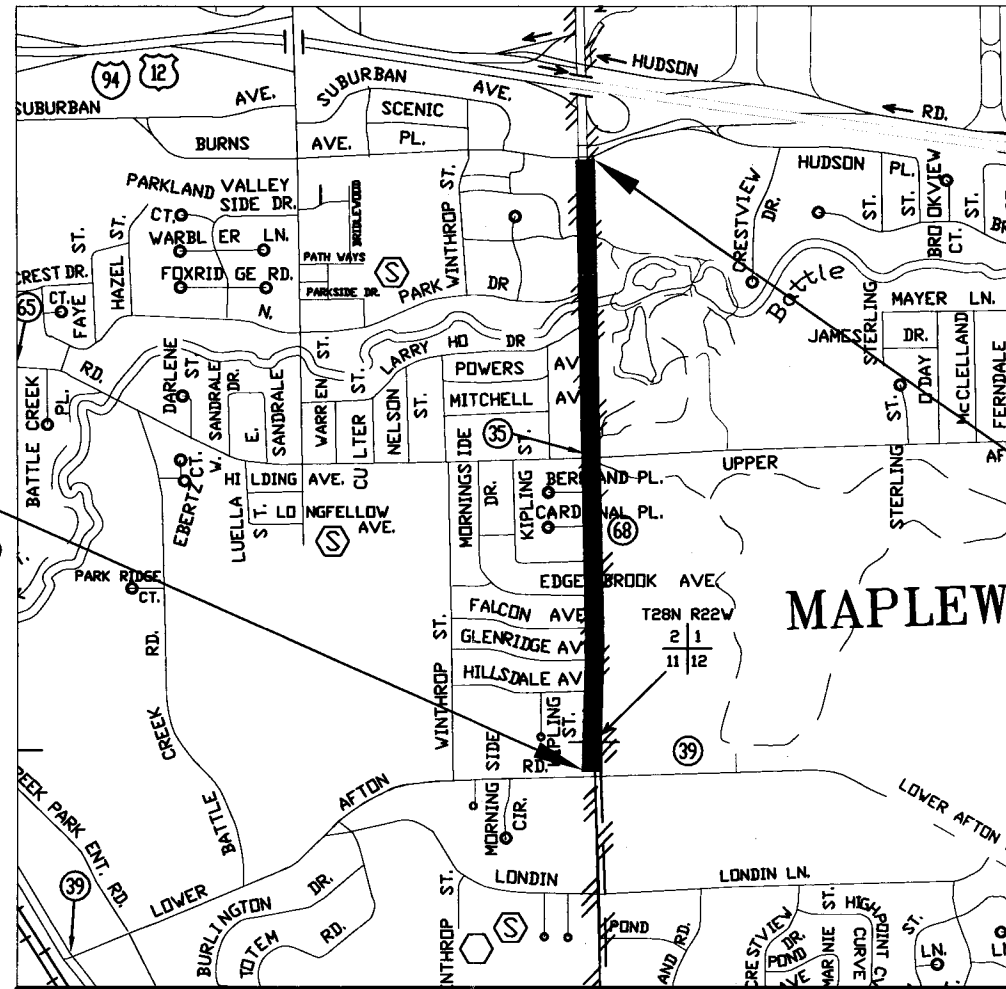
INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4-8	PLAN SHEETS
9-11	STRIPING PLAN

THIS PLAN CONTAINS 11 SHEETS

BEGIN S.A.P.
 062-668-050
 MCKNIGHT ROAD
 STA. 0+00.00

END S.A.P. 062-668-050
 MCKNIGHT ROAD
 STA. 53+90



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.

Signature: _____ REG. NO. 26511 DATE 5/3/2013

RECOMMENDED FOR APPROVAL Signature: _____ DATE 5/7/13
 RAMSEY COUNTY ENGINEER

APPROVED Signature: _____ DATE 5/15/13
 CITY OF MAPLEWOOD ENGINEER

APPROVED Signature: _____ DATE 5/22/13
 CITY OF ST. PAUL ENGINEER

DRAWN BY R. BUSSIERE DATE 2-10-2013
 CHECKED BY L. LORTIE DATE 4-29-2013

MINNESOTA DEPARTMENT OF TRANSPORTATION

Signature: Julie Drael DATE 5/30/13
 DISTRICT STATE AID ENGINEER
 REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/POLICY
 Signature: Julie Drael DATE 5/30/13
 APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER

PLAN REVISIONS		
DATE	SHEET NO. & DESCRIPTION	BY

DESIGN DESIGNATION

	LOWER AFTON RD TO UPPER AFTON RD	UPPER AFTON RD TO NORTH PARK DR.	NORTH PARK DRIVE TO BURNS AVE.
PRESENT ADT (2013)	9900	10950	12000
PROJECTED ADT (2033)	11880	13140	14400
FUNCTIONAL CLASS	A MINOR AUGMENTOR	A MINOR AUGMENTOR	A MINOR AUGMENTOR
TRAFFIC LANES	4	4	4
PARKING LANES	0	0	0
SOILS R-VALUE	50	50	50

BASED ON STOPPING DISTANCE
 HEIGHT OF EYE: 3.50 FEET
 HEIGHT OF OBJECT: 2.00 FEET

ESTIMATED QUANTITIES

Item Number	Item	Notes	Unit	Estimated Quantity 100% S.A.P. 62-668-050
2021.501	Mobilization		L.S.	1
2104.501	Remove Bituminous Curb		L.F.	9,240
2105.501	Common Excavation	1,2	C.Y.	1,020
2105.525	Topsoil Borrow (LV)	1,3	C.Y.	1,020
2232.501	Mill Bituminous Surface (2")		S.Y.	30,290
2357.502	Bituminous Material for Tack Coat	4	Gal.	1,515
2360.501	Type SPWEB340E (2") Wearing Course Mixture	5	Ton	3,332
2360.505	Bituminous Mixture for Patching	6	Ton	100
2535.501	Bituminous Curb		L.F.	9,240
2563.601	Traffic Control		L.S.	1
2565.602	NMC Loop Detector 6' X 6'		L.F.	192
2573.530	Storm Drain Inlet Protection		Each	22
2575.571	Rapid Stabilization Method 3	1,7	M Gal.	3.8
2582.502	4" Solid Line White - Epoxy		L.F.	100
2582.502	12" Solid Line White - Epoxy		L.F.	48
2582.502	4" Broken Line White - Epoxy		L.F.	2,550
2582.502	4" Solid Line Yellow - Epoxy		L.F.	600
2582.502	24" Solid Line Yellow - Epoxy		L.F.	60
2582.502	4" Double Line Yellow - Epoxy		L.F.	4,850
2582.503	Crosswalk Marking - Epoxy		S.F.	1,050
2582.501	Pavement Message Lt Arrow - Epoxy		Each	1
2583.501	Pavement Message Rt Arrow - Epoxy		Each	1

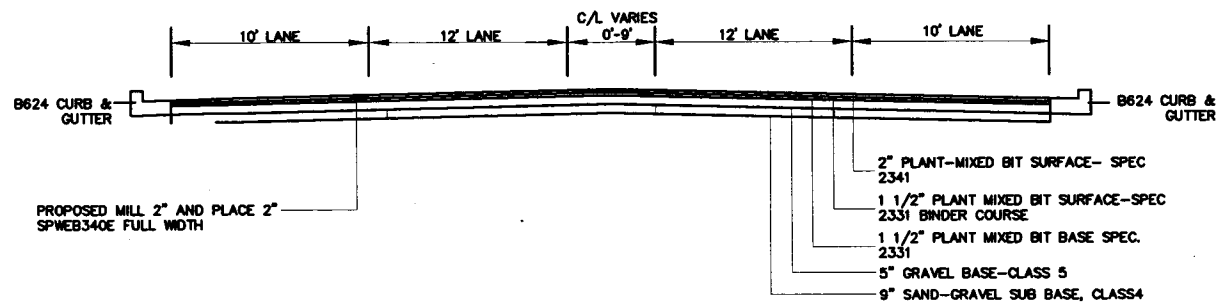
QUANTITY NOTES

1. To be used for restoration of curb removal areas.
2. Common excavation is measured 3 feet from the back of curb at a depth of 6 inches.
3. Topsoil is measured 3 feet from back of curb at a depth of 6 inches.
4. Tack coat is estimated at 0.05 gallons / square yard bituminous / lift
5. Bituminous is estimated at 110 lbs / square yard / inch of bituminous
6. Bituminous patching mix is SPWE340B
7. Rapid stabilization method 3 is estimated at 6,000 gallons / acre

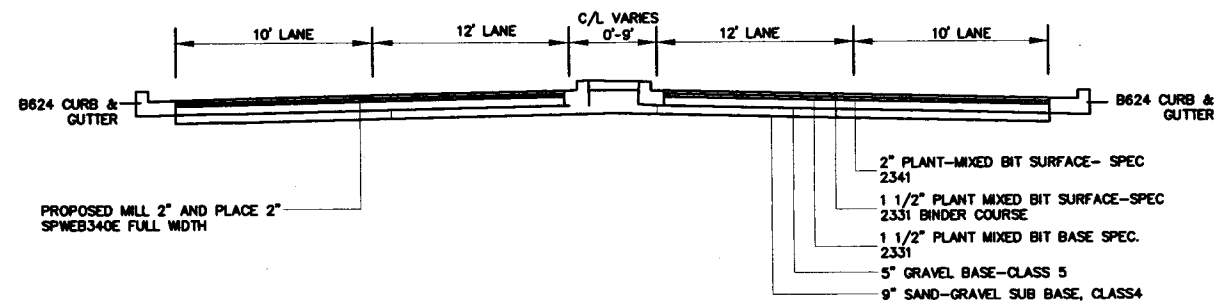
H:\PROJECTS\2013 OVERLAYS\3331 MCKNIGHT ROAD\MCKNIGHT_MO.DWG April 25, 2013 7:06 AM

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: <i>[Signature]</i> REG NO: 76511 DATE: 5/3/2013	MCKNIGHT ROAD LOWER AFTON ROAD TO BURNS AVENUE	S.A.P. 062-668-050 COUNTY PROJ. P-3331	 RAMSEY COUNTY	ESTIMATED QUANTITIES
								SHEET 2 OF 11 SHEETS

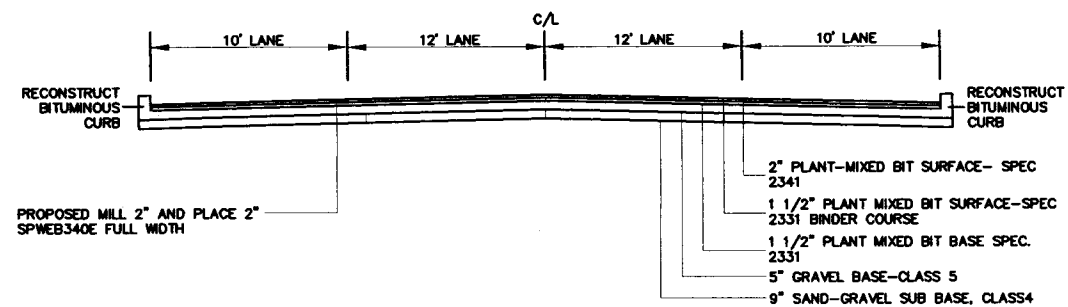
TYPICAL SECTION - MCKNIGHT ROAD
STA. 0+00 TO STA. 3+00



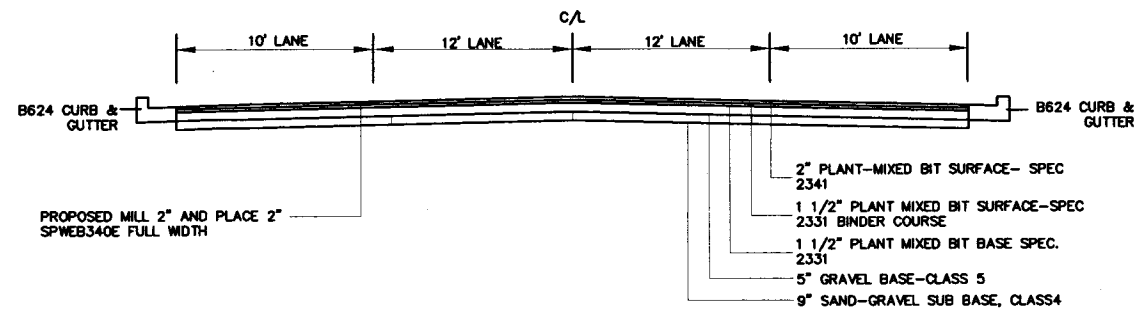
TYPICAL SECTION - MCKNIGHT ROAD
STA. 44+68 TO STA. 53+90



TYPICAL SECTION - MCKNIGHT ROAD
STA. 3+00 TO STA. 44+68




TYPICAL SECTION - MCKNIGHT ROAD
STA. 44+68 TO STA. 49+36



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SIGNED: 

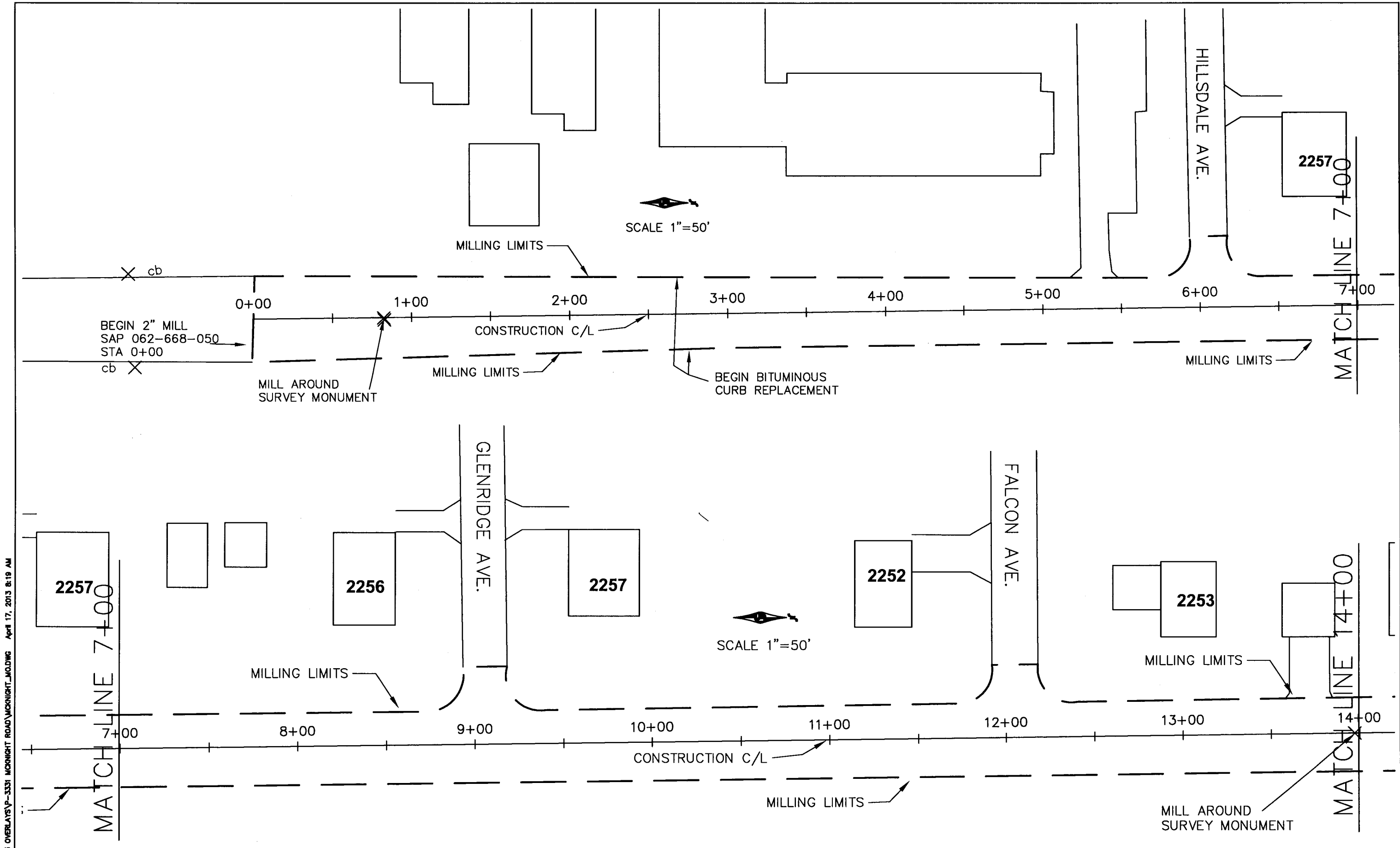
REG NO: 26561 DATE: 5/3/2013

MCKNIGHT ROAD
LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
COUNTY PROJ. P-3331



TYPICAL SECTION
SHEET 3 OF 11 SHEETS

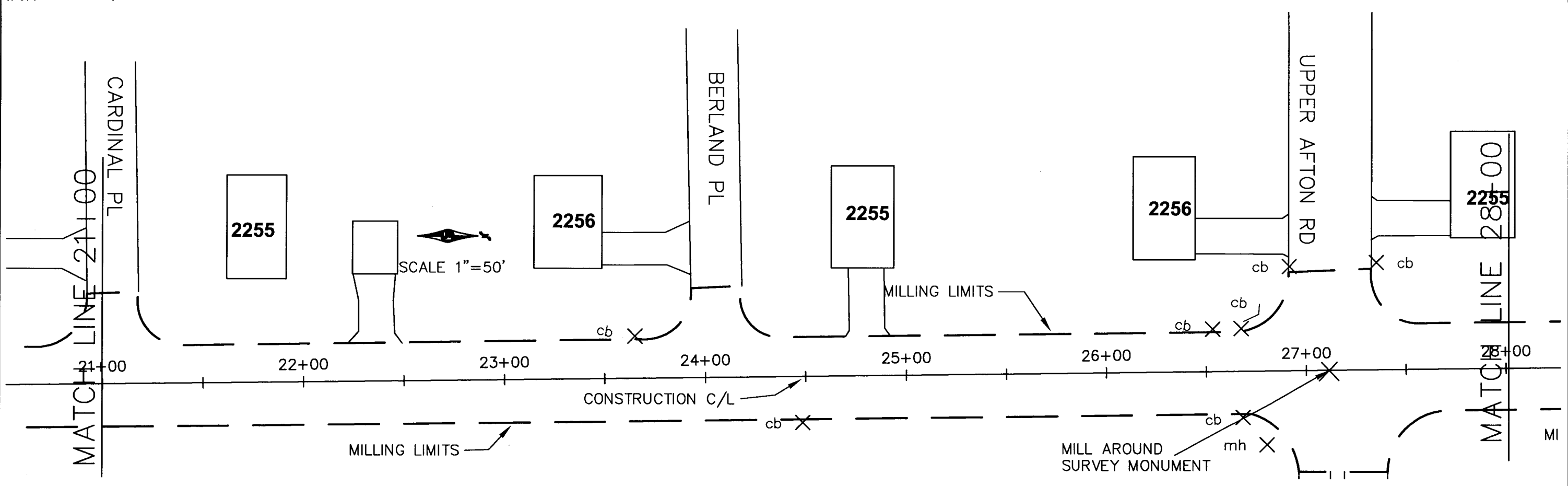
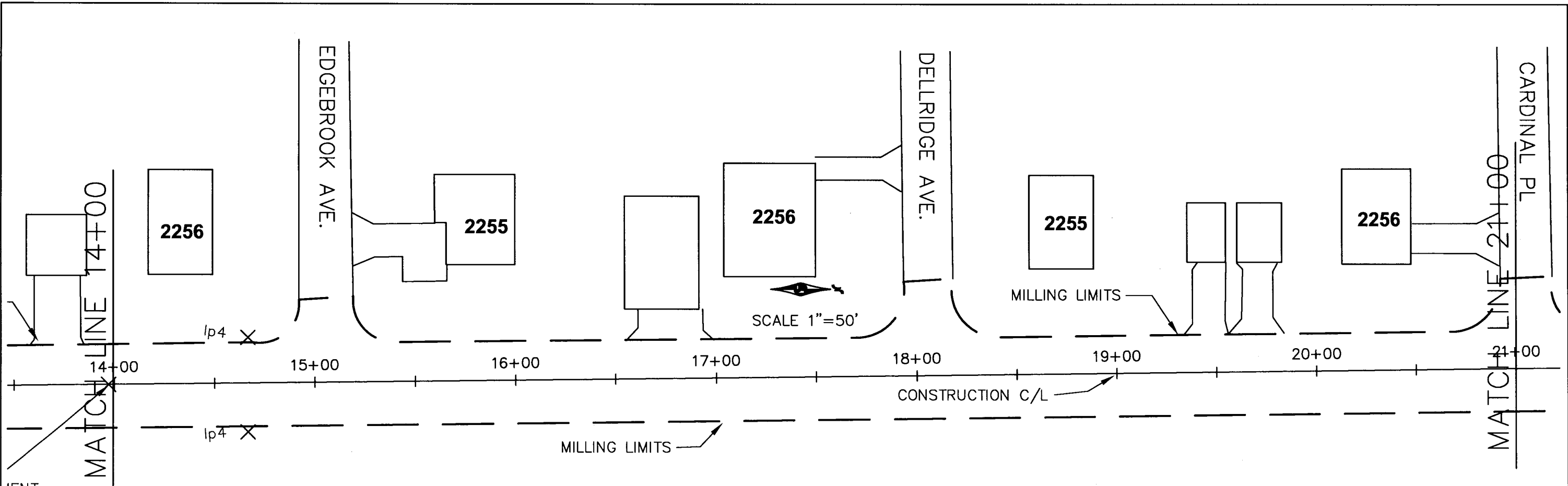


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NO.	REV.	DATE	BY:	DESCRIPTION

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 SIGNED: *[Signature]*
 REG NO: 2654 DATE: 5/2/2013

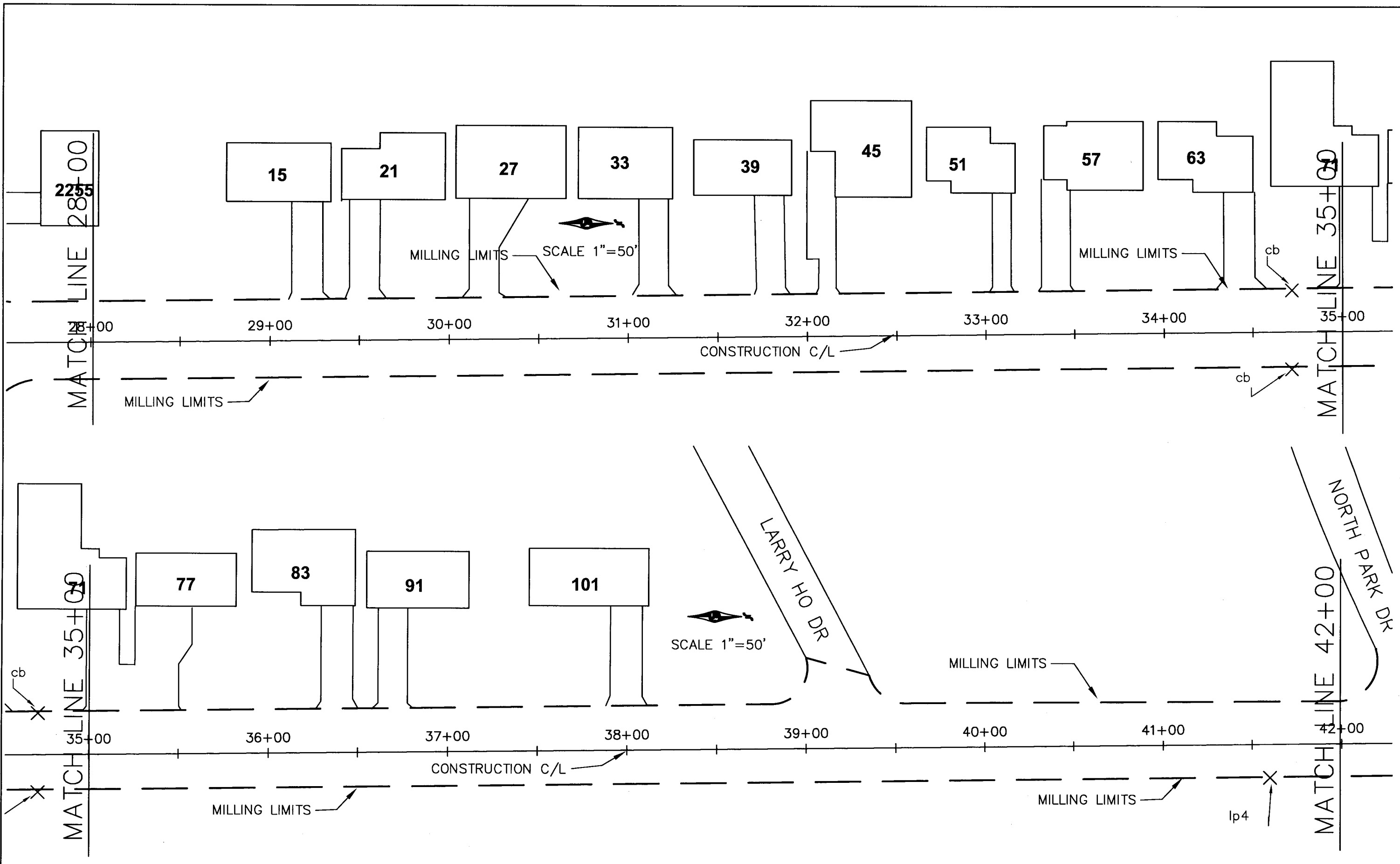
MCKNIGHT ROAD
 LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
 COUNTY PROJ. P-3331



ROADWAY PLAN
 SHEET 5 OF 11 SHEETS

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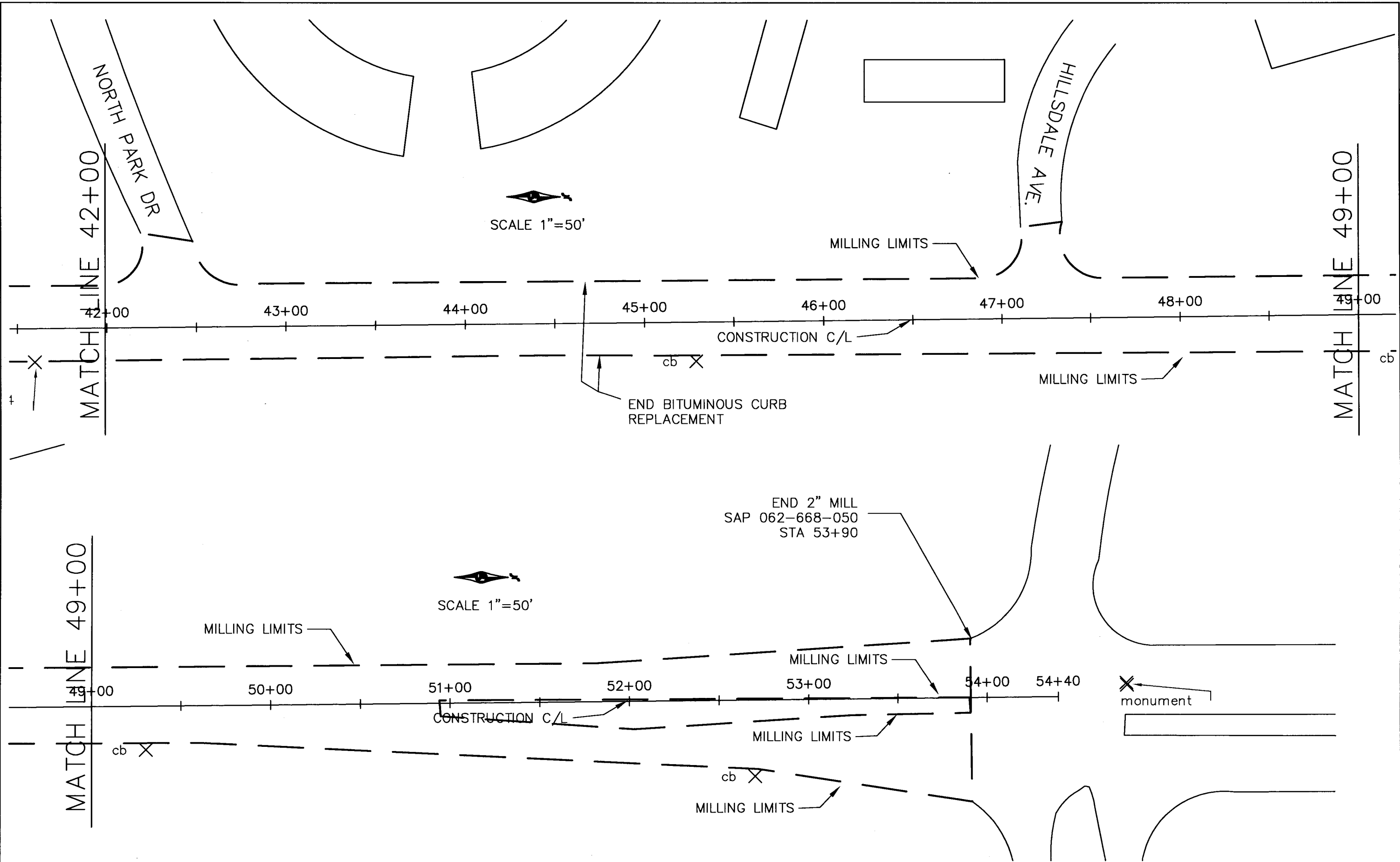
MCKNIGHT ROAD
 LOWER AFTON ROAD TO BURNS AVENUE

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 COUNTY PROJ. P-3331



ROADWAY PLAN
 SHEET 6 OF 11 SHEETS

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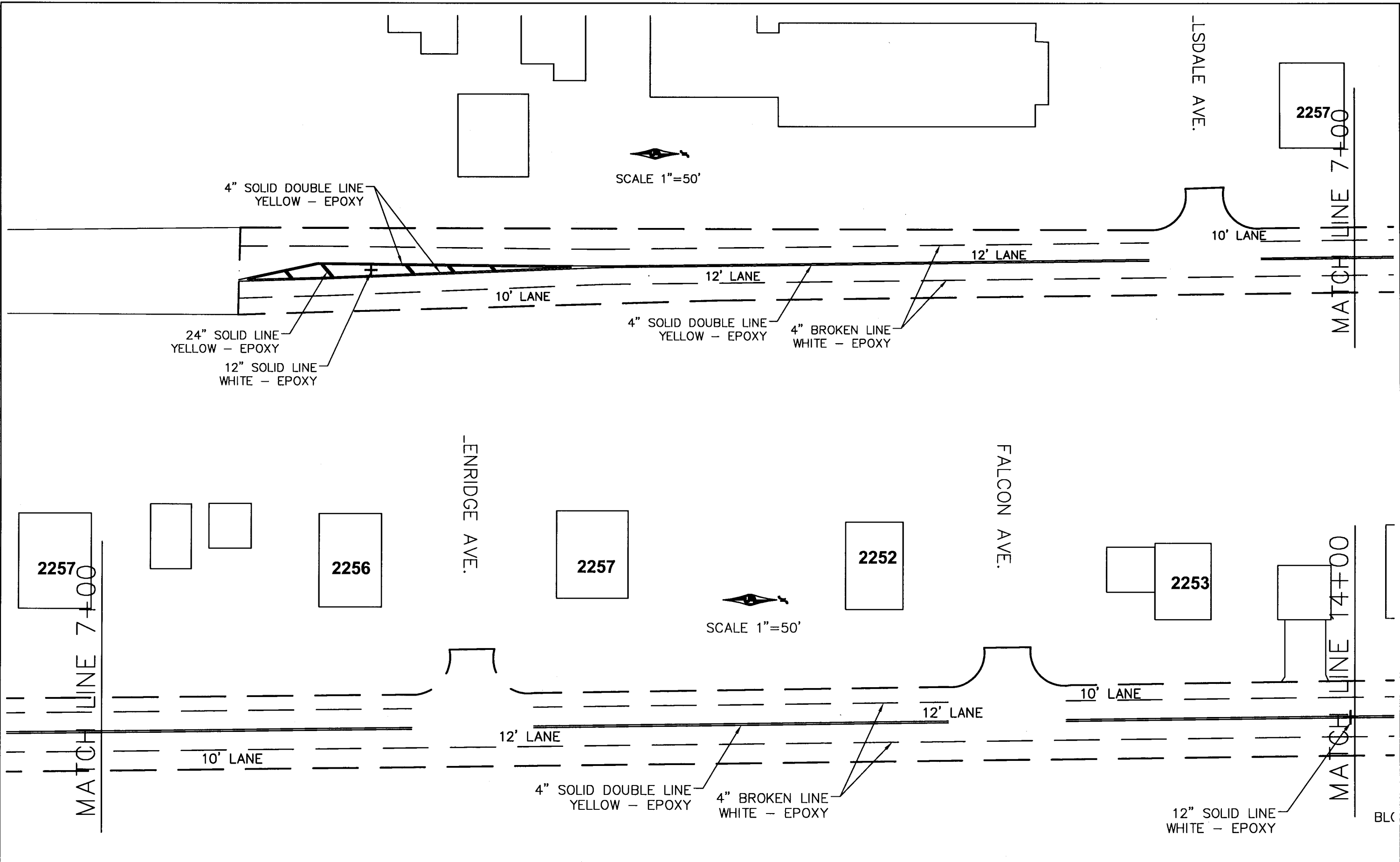
MCKNIGHT ROAD
 LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
 COUNTY PROJ. P-3331



ROADWAY PLAN
 SHEET 7 OF 11 SHEETS

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REG NO: 26511 DATE: 5/3/2013

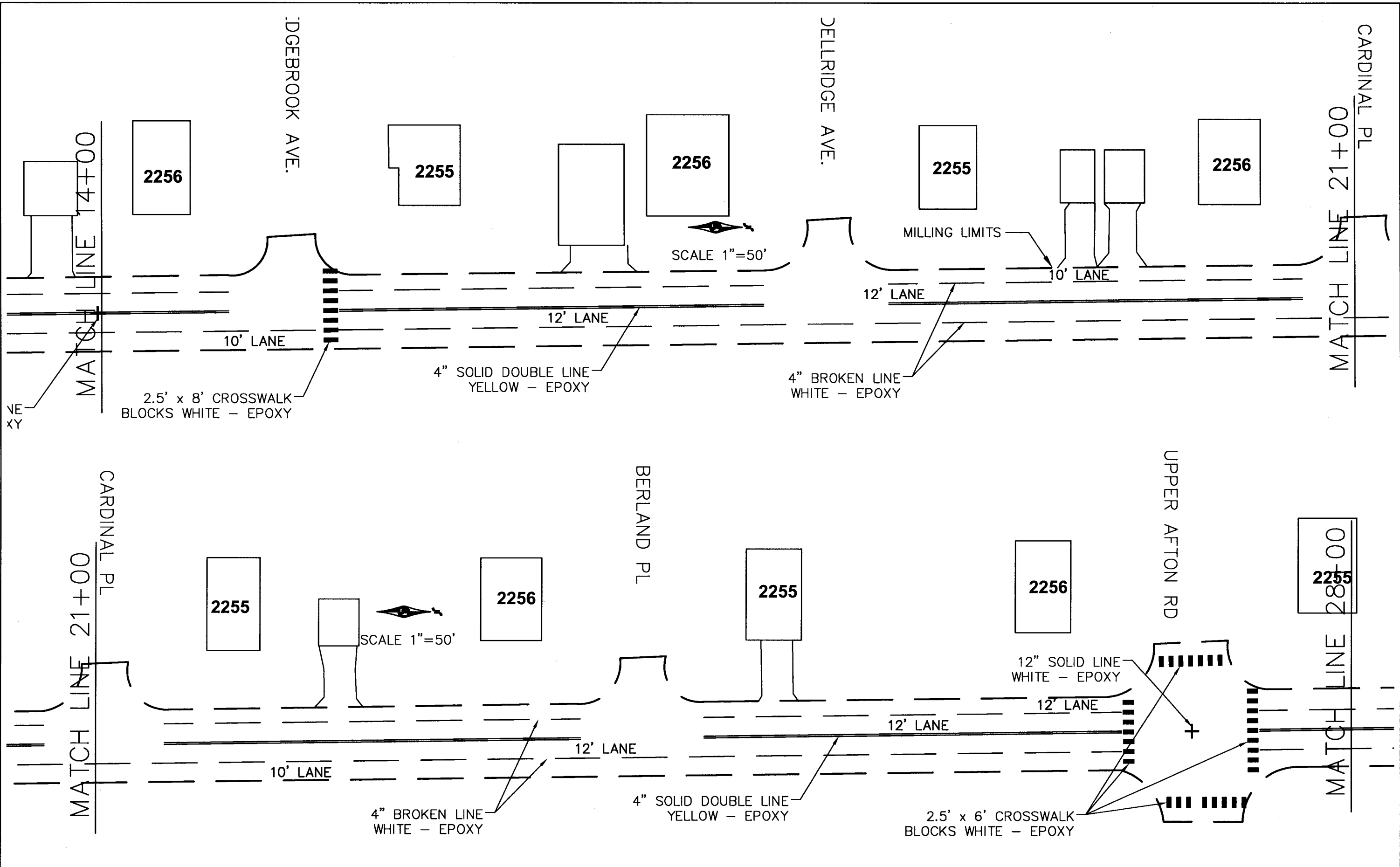
MCKNIGHT ROAD
LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
COUNTY PROJ. P-3331



PAVEMENT MARKING PLAN
SHEET 8 OF 11 SHEETS

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NO.	REV-DATE	BY:	DESCRIPTION

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REG NO: 26511 DATE: 5/3/2013

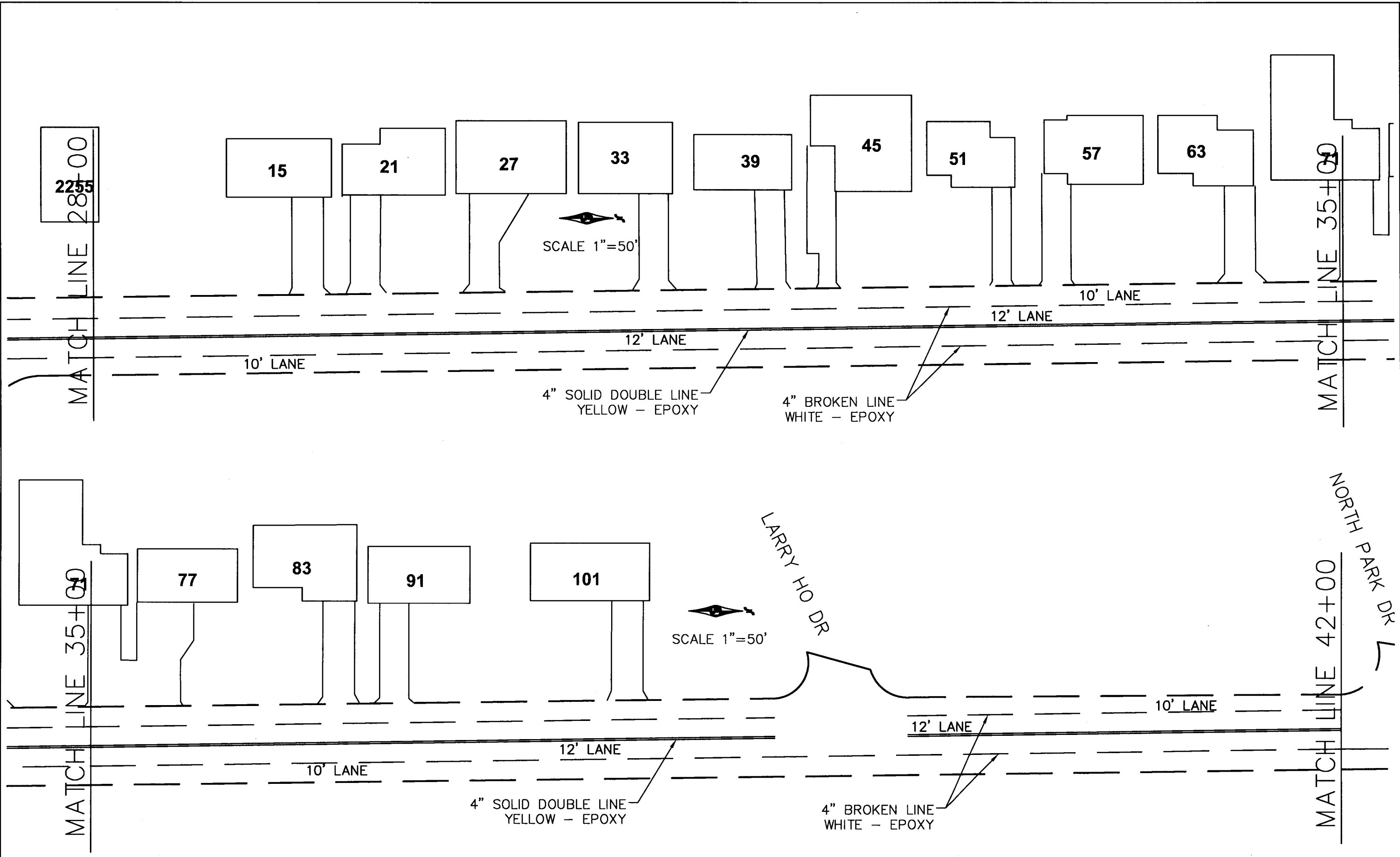
MCKNIGHT ROAD
LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
COUNTY PROJ. P-3331



PAVEMENT MARKING PLAN
SHEET 9 OF 11 SHEETS

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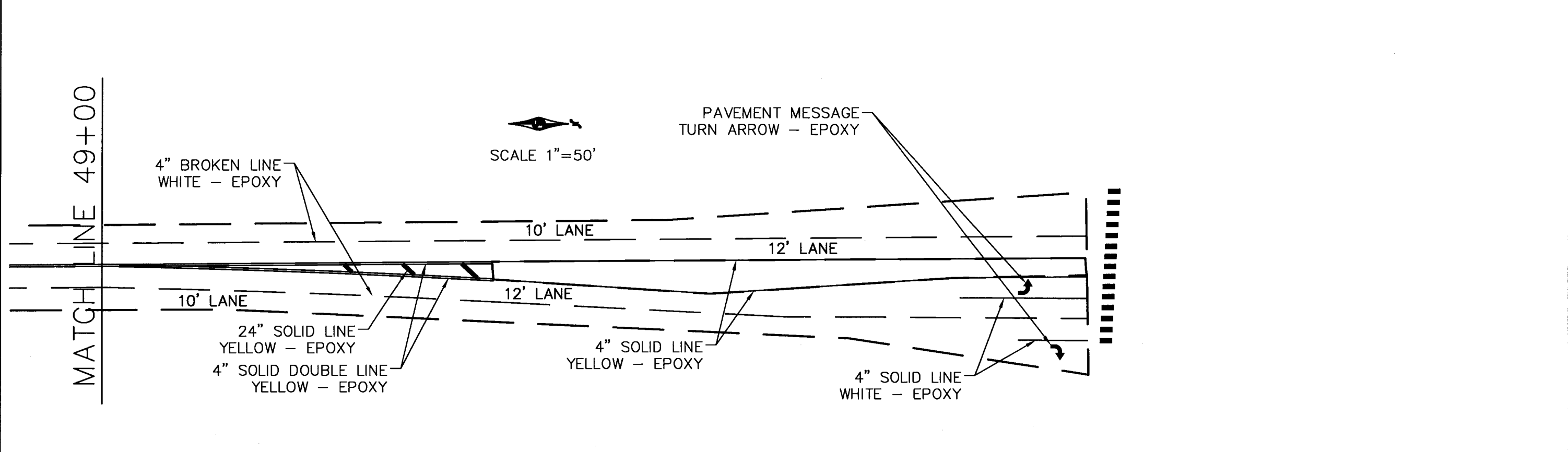
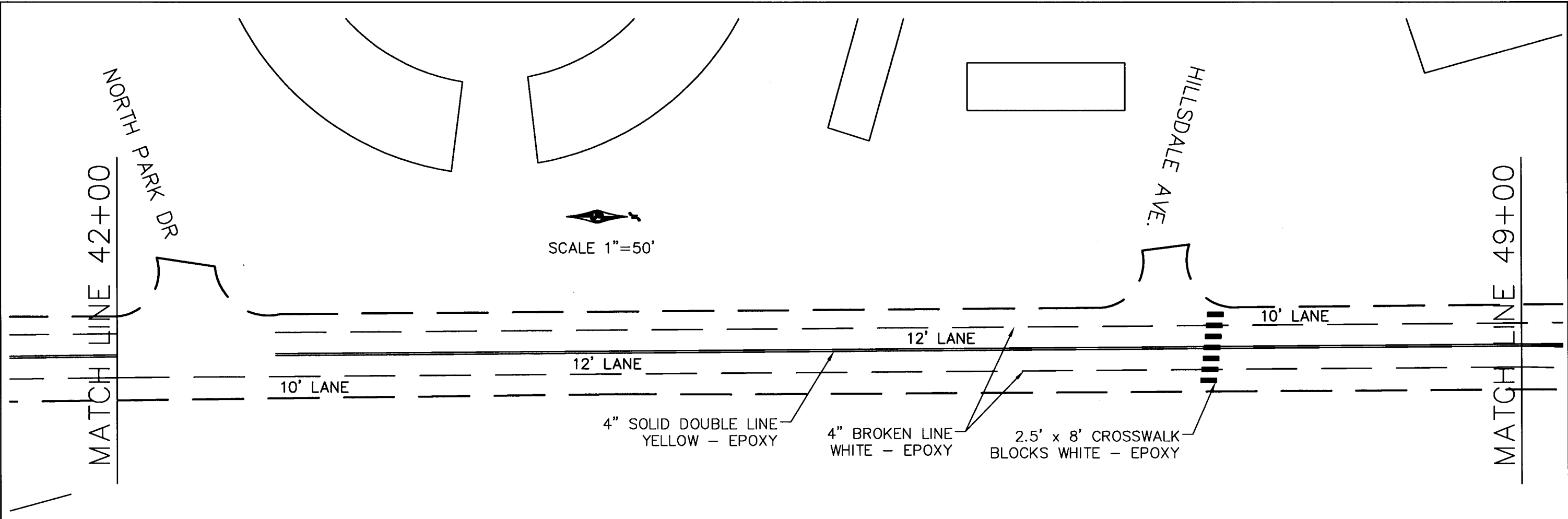
MCKNIGHT ROAD
LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
COUNTY PROJ. P-3331



PAVEMENT MARKING PLAN
SHEET 10 OF 11 SHEETS

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 REG NO: 26511 DATE: 5/3/2013

MCKNIGHT ROAD
 LOWER AFTON ROAD TO BURNS AVENUE

S.A.P. 062-668-050
 COUNTY PROJ. P-3331



PAVEMENT MARKING PLAN
 SHEET 11 OF 11 SHEETS