

MINNESOTA DEPARTMENT OF TRANSPORTATION CITY OF COLUMBIA HEIGHTS ANOKA COUNTY, MINNESOTA

MINN. PROJ. NO. _____ STATE FUNDS _____

--- GOVERNING SPECIFICATIONS ---
THE 2025 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATION FOR CONSTRUCTION" SHALL GOVERN.
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN
ACCORDANCE WITH THE LATEST "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"
(MN MUTCD), INCLUDING THE LATEST "FIELD MANUAL" FOR TEMPORARY TRAFFIC CONTROL ZONE
LAYOUTS.

CONSTRUCTION PLAN FOR: PLANT MIXED BITUMINOUS PAVEMENT, CONCRETE CURB AND GUTTER, ADA IMPROVEMENTS, AND RELATED APPURTENANCES

SAP 113-030-005 LOCATED ON	<u>JOHNSON STREET NE</u>	FROM	<u>37TH AVENUE NE</u>	TO	<u>40TH AVENUE NE</u>	(GEOGRAPHICAL DESCRIPTION)
SAP 113-030-005 LOCATED ON	<u>RESERVOIR BOULEVARD NE</u>	FROM	<u>39TH AVENUE NE</u>	TO	<u>40TH AVENUE NE</u>	
SAP 113-030-005 LOCATED ON	<u>40TH AVENUE NE</u>	FROM	<u>TYLER STREET</u>	TO	<u>ARTHUR STREET</u>	
SAP 113-030-005 LOCATED ON	<u>WEST UPLAND CREST</u>	FROM	<u>FAIRWAY DRIVE</u>	TO	<u>PENNINE PASS</u>	
SAP 113-030-005 LOCATED ON	<u>FILLMORE STREET NE</u>	FROM	<u>47TH AVENUE</u>	TO	<u>49TH AVENUE</u>	
SAP 113-030-005 LOCATED ON	<u>RESERVOIR BOULEVARD NE (CSAH 2)</u>	FROM	<u>JOHNSON STREET</u>	TO	<u>45TH AVENUE</u>	
SAP 113-030-005 LOCATED ON	<u>ARTHUR STREET</u>	FROM	<u>40TH AVENUE NE</u>	TO	<u>44TH AVENUE</u>	

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	LEGEND
3	STATE AID ROADWAY TABLES
4	STATEMENT OF ESTIMATED QUANTITIES
5	LOCATION PLAN
	CIVIL
6-7	TYPICAL SECTIONS & STANDARD DETAIL PLATES
8-12	STREET IMPROVEMENTS
13-17	SIGNAGE AND STRIPING PLAN

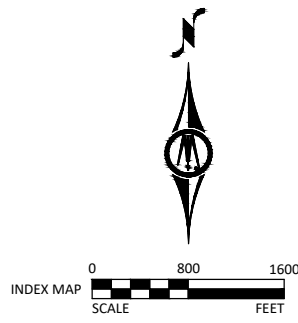
THIS PLAN SET CONTAINS 17 SHEETS.

SAP 113-030-005

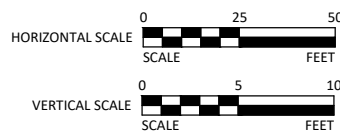
GROSS LENGTH	<u>10,978.07</u> FEET	<u>2.07900</u> MILES
BRIDGE LENGTH	<u>0.00000</u> FEET	<u>0.00000</u> MILES
EXCEPTION LENGTH	<u>0.00000</u> FEET	<u>0.00000</u> MILES
NET LENGTH	<u>10,978.07</u> FEET	<u>2.07900</u> MILES

LENGTH AND DESCRIPTION BASED UPON
PROPOSED CENTERLINE

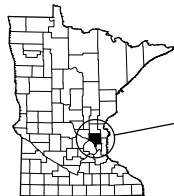
VICINITY MAP



TYPICAL PLAN SCALE UNLESS OTHERWISE NOTED:



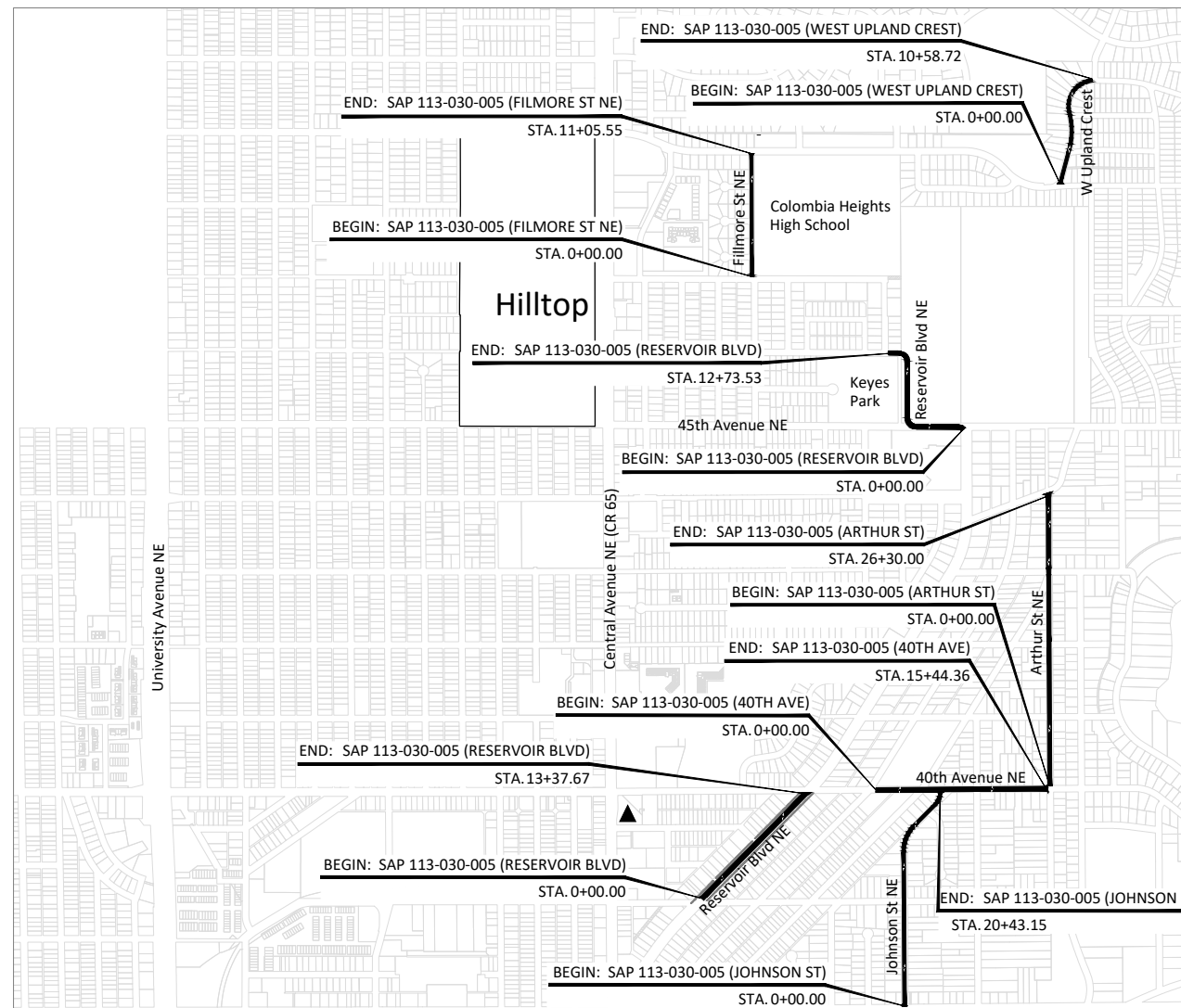
PROJECT LOCATION



CITY: COLUMBIA HEIGHTS
COUNTY: ANOKA
DISTRICT: METRO

MAP LEGEND

- PROJECT LIMITS
- COLUMBIA HEIGHTS CITY HALL



MAP OF THE
CITY OF COLUMBIA HEIGHTS
ANOKA COUNTY, MN

Engineer, P.E.
Design Engineer: 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.

Date 05/14/2026 License Number 56344

Lucas Lortie
Approved: City of Columbia Heights Director of Engineering and Facilities
Date 05/14/2026

Lucas Lortie
Digitally signed by Lucas Lortie
Date: 2026.05.18 11:06:56 -05'00'

District State Aid Engineer:
Reviewed for compliance with State Aid Rules/Policy

Lucas Lortie
Digitally signed by Lucas Lortie
Date: 2026.05.18 11:07:08 -05'00'

Approved for State Aid Funding: State Aid Engineer

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL "D". THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

Lucas Lortie
SIGNER'S NAME
LIC. NO. 56344 DATE 05/14/2026



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RAMSEY, MN 55303
Phone: (763) 433-2851
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CLIENT PROJ. NO.	26X.142822.000		

CITY OF COLUMBIA HEIGHTS, MINNESOTA		SHEET 1 OF 17
2026 MSAS MILL AND OVERLAY - SAP 113-030-005		
STATE AID PROJECT NO.	<u>113-030-005</u>	

EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGNAL CONTROL CABINET
	BARRICADE PERMANENT		SOIL BORING
	BASKETBALL POST		SIREN
	BENCH		TELEPHONE BOOTH
	BIRD FEEDER		TILE INLET
	BOLLARD		TILE OUTLET
	BUSH		TILE RISER
	CATCH BASIN RECTANGULAR CASTING		TRANSFORMER-ELECTRIC
	CATCH BASIN CIRCULAR CASTING		TREE-CONIFEROUS
	CURB STOP		TREE-DEAD
	CLEAN OUT		TREE-DECIDUOUS
	CULVERT END		TREE STUMP
	DRINKING FOUNTAIN		TRAFFIC ARM BARRIER
	DOWN SPOUT		TRAFFIC SIGNAL
	ELECTRIC CAR CHARGE STATION		TRASH CAN
	FILL PIPE		UTILITY MARKER
	FIRE HYDRANT		VALVE
	FLAG POLE		VALVE POST INDICATOR
	FLARED END / APRON		VALVE VAULT
	FUEL PUMP		VAULT
	GRILL		VENT PIPE
	GUY WIRE ANCHOR		WATER SPIGOT
	HANDHOLE		WELL
	HANDICAP SPACE		WETLAND DELINEATED MARKER
	IRRIGATION SPRINKLER HEAD		WETLAND
	IRRIGATION VALVE BOX		WET WELL
	LIFT STATION CONTROL PANEL		YARD HYDRANT
	LIFT STATION		
	LIGHT POLE		
	MAILBOX		
	MANHOLE-COMMUNICATION		
	MANHOLE-ELECTRIC		
	MANHOLE-GAS		
	MANHOLE-HEAT		
	MANHOLE-RECLAIMED WATER		
	MANHOLE-SANITARY SEWER		
	MANHOLE-STORM SEWER		
	MANHOLE-UTILITY		
	MANHOLE-WATER		
	METER		
	DRIVE-THRU MICROPHONE		
	PARKING METER		
	PAVEMENT MARKING		
	PEDESTAL-COMMUNICATION		
	PEDESTAL-ELECTRIC		
	PEDESTRIAN PUSH BUTTON		
	PICNIC TABLE		
	POLE-UTILITY		
	POST		
	RAILROAD SIGNAL POLE		

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCHMARK LOCATION		CAST IRON MONUMENT
	CONTROL POINT		STONE MONUMENT
	MONUMENT FOUND		

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

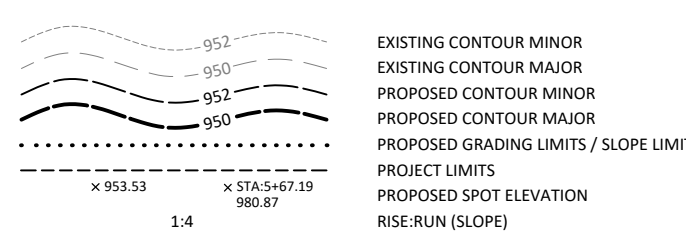
EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	RECLAIMED WATER

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING
	TRENCHLESS PIPE (PLAN VIEW)
	TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION



HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL:

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

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SIGNER'S NAME: *Ramsey J. Menk*
LIC. NO.: 56344 DATE: 05/11/2026



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26X.142822.000			

CITY OF COLUMBIA HEIGHTS, MINNESOTA
2026 MSAS MILL AND OVERLAY - SAP 113-030-005

LEGEND

DESIGN DESIGNATION	WEST UPLAND CREST
STA. 0+00.00 TO STA. 10+58.72	
FUNTIONAL CLASSIFICATION	LOCAL
R-VALUE	20
ΣN-18	48,000
NO. & WIDTH OF TRAFFIC LANES	2 & 15 ft
NO. & WIDTH OF PARKING LANES	N/A
ADT (PRESENT YEAR) 2026	420
ADT (PROJECTED YEAR) 2046	462
HCADT (PROJECTED YEAR) 2046	3.85%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	FILLMORE STREET
STA. 0+00.00 TO STA. 11+05.55	
FUNTIONAL CLASSIFICATION	MINOR COLLECTOR
R-VALUE	20
ΣN-18	169,000
NO. & WIDTH OF TRAFFIC LANES	2 & 14 ft
NO. & WIDTH OF PARKING LANES	N/A
ADT (PRESENT YEAR) 2026	1450
ADT (PROJECTED YEAR) 2046	1595
HCADT (PROJECTED YEAR) 2046	3.89%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	RESERVOIR BOULEVARD
STA. 0+00.00 TO STA. 12+73.53	
FUNTIONAL CLASSIFICATION	MINOR COLLECTOR
R-VALUE	20
ΣN-18	253,000
NO. & WIDTH OF TRAFFIC LANES	2 & 12 ft
NO. & WIDTH OF PARKING LANES	2 & 9 ft
ADT (PRESENT YEAR) 2026	2000
ADT (PROJECTED YEAR) 2046	2510
HCADT (PROJECTED YEAR) 2046	3.92%
DESIGN SPEED	20 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	ARTHUR STREET
STA. 0+00.00 TO STA. 26+30.00	
FUNTIONAL CLASSIFICATION	MAJOR COLLECTOR
R-VALUE	20
ΣN-18	323,000
NO. & WIDTH OF TRAFFIC LANES	2 & 10 ft
NO. & WIDTH OF PARKING LANES	2 & 8 ft
ADT (PRESENT YEAR) 2026	2710
ADT (PROJECTED YEAR) 2046	2980
HCADT (PROJECTED YEAR) 2046	3.96%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	40TH AVE
STA. 0+00.00 TO STA. 15+44.36	
FUNTIONAL CLASSIFICATION	MAJOR COLLECTOR
R-VALUE	20
ΣN-18	546,000
NO. & WIDTH OF TRAFFIC LANES	2 & 12 ft
NO. & WIDTH OF PARKING LANES	2 & 6 ft
ADT (PRESENT YEAR) 2026	4230
ADT (PROJECTED YEAR) 2046	5170
HCADT (PROJECTED YEAR) 2046	4.03%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	JOHNSON STREET
STA. 0+00.00 TO STA. 20+43.15	
FUNTIONAL CLASSIFICATION	LOCAL
R-VALUE	20
ΣN-18	401,000
NO. & WIDTH OF TRAFFIC LANES	2 & 15 ft
NO. & WIDTH OF PARKING LANES	N/A
ADT (PRESENT YEAR) 2026	2680
ADT (PROJECTED YEAR) 2046	4410
HCADT (PROJECTED YEAR) 2046	3.95%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

DESIGN DESIGNATION	RESERVOIR BOULEVARD
STA. 0+00.00 TO STA. 13+37.67	
FUNTIONAL CLASSIFICATION	MINOR COLLECTOR
R-VALUE	20
ΣN-18	253,000
NO. & WIDTH OF TRAFFIC LANES	2 & 10 ft
NO. & WIDTH OF PARKING LANES	2 & 8.5 ft
ADT (PRESENT YEAR) 2026	2000
ADT (PROJECTED YEAR) 2046	2510
HCADT (PROJECTED YEAR) 2046	3.92%
DESIGN SPEED	30 mph
DESIGN LOAD	9 ton
DESIGN SPEED FOR ROADWAY BASED ON ON <u>STOPPING SIGHT</u> DISTANCE:	
HEIGHT OF EYE = 3.5 FT	
HEIGHT OF OBJECT = 2.0 FT	

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SIGNER'S NAME: *Alex Rynda*
 LIC. NO.: 56344 DATE: 05/11/2026



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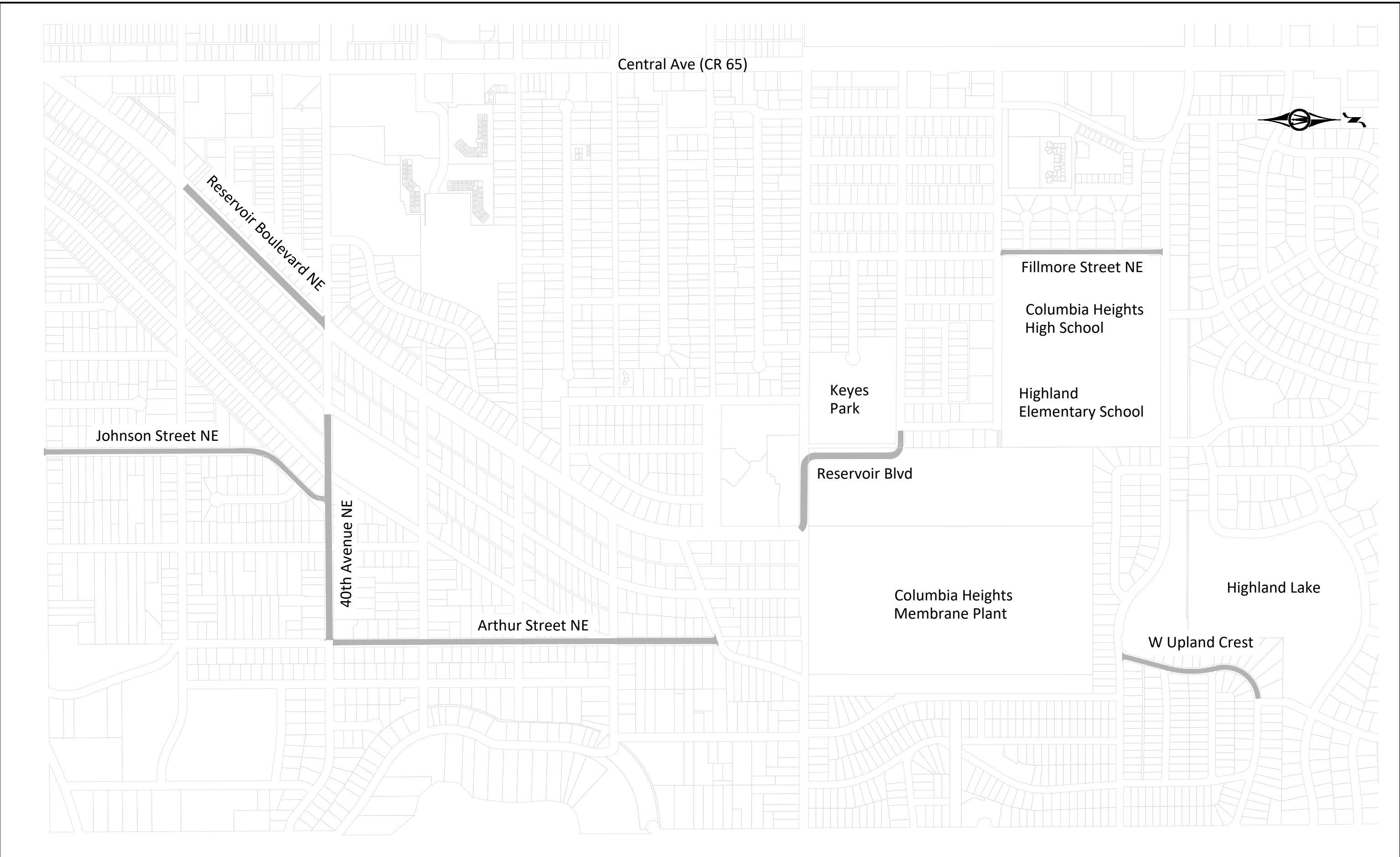


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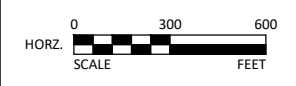
CITY OF COLUMBIA HEIGHTS, MINNESOTA
 2026 MSAS MILL AND OVERLAY - SAP 113-030-005

LEGEND

SHEET 3 OF 17



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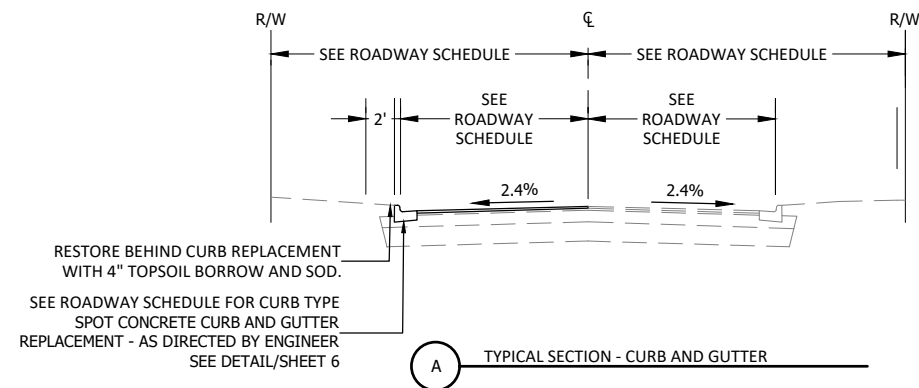


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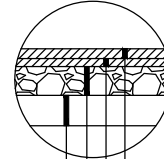
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 2026 MSAS MILL AND OVERLAY - SAP 113-030-005

LOCATION PLAN

SHEET 5 OF 17

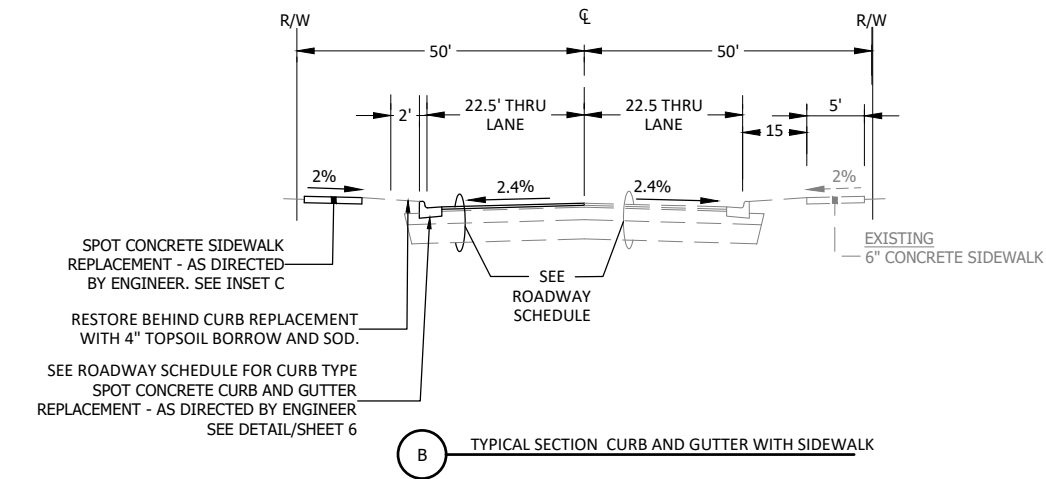


INSET A - FULL DEPTH BITUMINOUS PATCH

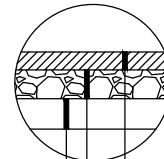


2" TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)
 2"-6" TYPE 12.5 NON-WEARING COURSE MIXTURE (SPNWB330C) (MATCH EXISTING)
 AGGREGATE BASE (SUPPLEMENT AS DIRECTED TO MATCH EXISTING)
 EXISTING SUBGRADE

CORE NUMBER	BITUMINOUS PAVEMENT THICKNESS (IN)	AGGREGATE BASE THICKNESS (IN)
C-1	8	0
C-2	6.75	10
C-3	9.25	13.25
C-4	5.5	10
C-5	6	10
C-6	12.5	12.5
C-7	10.5	10.5
C-8	4.5	14
C-9	8.5	18
C-10	8.25	8.25
C-11	10.5	10.5
C-12	10.25	10.25
C-13	7.25	12
C-14	11.25	12.25
C-15	3	13
C-16	3.5	8
AVERAGE	7.84	10.78



INSET B - BITUMINOUS DRIVEWAY



3" TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA240B)
 6" CLASS 5 AGGREGATE BASE
 EXISTING SUBGRADE

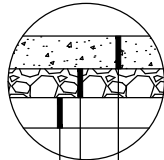
TYPICAL CONSTRUCTION NOTES:

1. PROVIDE CONSTRUCTION SIGNAGE AT ENTRANCES TO SITE: " CONSTRUCTION ZONE" (INCIDENTAL TO TRAFFIC CONTROL BID ITEM).
2. REMOVE AND REPLACE CONCRETE CURB AS DIRECTED BY ENGINEER.
3. RESTORE DISTURBED AREAS WITH SODDING, TYPE LAWN.
4. MILL 2 INCHES EXISTING BITUMINOUS PAVEMENT. PROTECT EXISTING CURB FROM DAMAGE (INCIDENTAL).
5. MILL AROUND AND PROTECT EXISTING STRUCTURES LOCATED WITHIN PAVEMENT AREAS.
6. REMOVE AND REPLACE DAMAGED BITUMINOUS LOWER WEARING COURSE AS DIRECTED BY ENGINEER.

ROADWAY SCHEDULE								
STREET	FROM	TO	ROW WIDTH (FEET)	CURB TYPE	EXISTING AND PROPOSED STREET WIDTH	EXISTING BITUMINOUS DEPTH RANGE (INCHES)	EXISTING GRAVEL BASE DEPTH RANGE (INCHES)	SPWEA340C* MILL & OVERLAY DEPTH (INCHES)
WEST UPLAND CREST	0+00	10+58.72	50	B618	30' F-F	3 - 3.5	8 - 13	2
FILLMORE STREET	0+00	11+05.55	50	B618	28' F-F	7.25 - 11.25	12 - 12.25	2
RESERVOIR BOULEVARD (1)	0+00	12+73.53	N/A	B618	32' - 42' F-F	10.25 - 10.5	10.25 - 10.5	2
ARTHUR STREET	0+00	26+30.00	60	D412	36' F-F	4.5 - 8.5	8.25 - 18	2
40TH AVENUE	0+00	15+44.36	60	B618	42' F-F	10.5 - 12.5	10.5 - 12.5	2
JOHNSON STREET	0+00	20+43.15	60	B618	32' F-F	6.75 - 8.25	0 - 13.25	2
RESERVOIR BOULEVARD (2)	0+00	13+22.76	100	D412	45' F-F	5.5 - 6	10 - 10	2

*TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)

INSET C - 6" CONCRETE SIDEWALK



6" CONCRETE
 6" CLASS 5 AGGREGATE BASE
 EXISTING SUBGRADE

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Alex Rynda
 SIGNER'S NAME
 LIC. NO. 56344 DATE 05/11/2026



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 Email: Ramsey@bolton-menk.com
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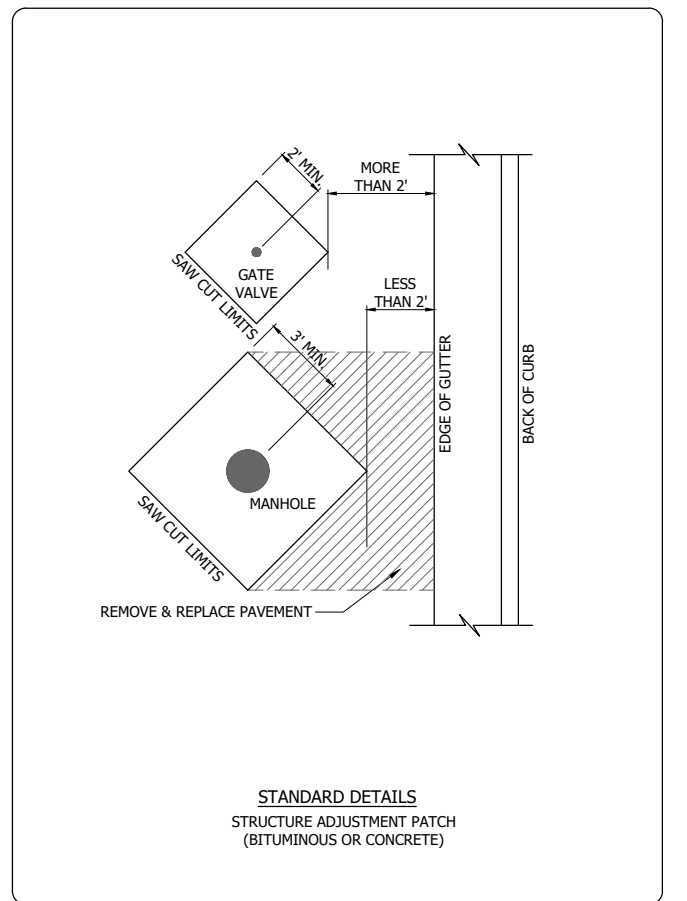
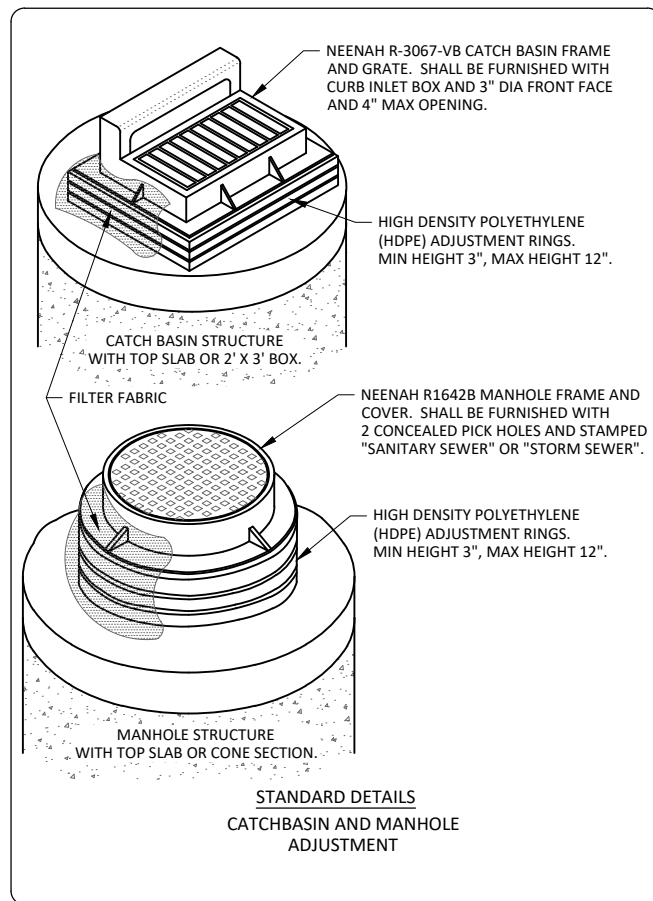
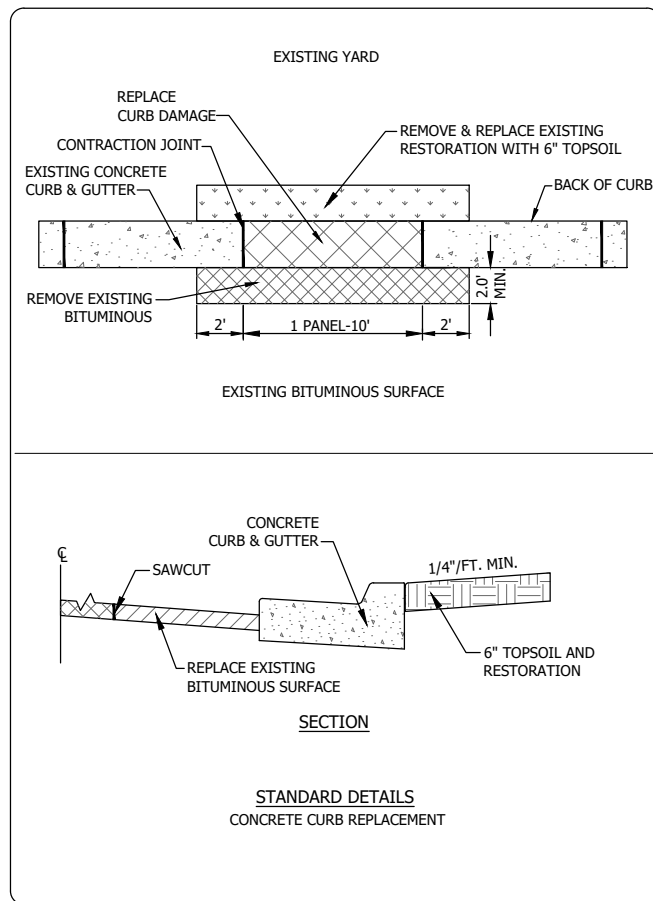
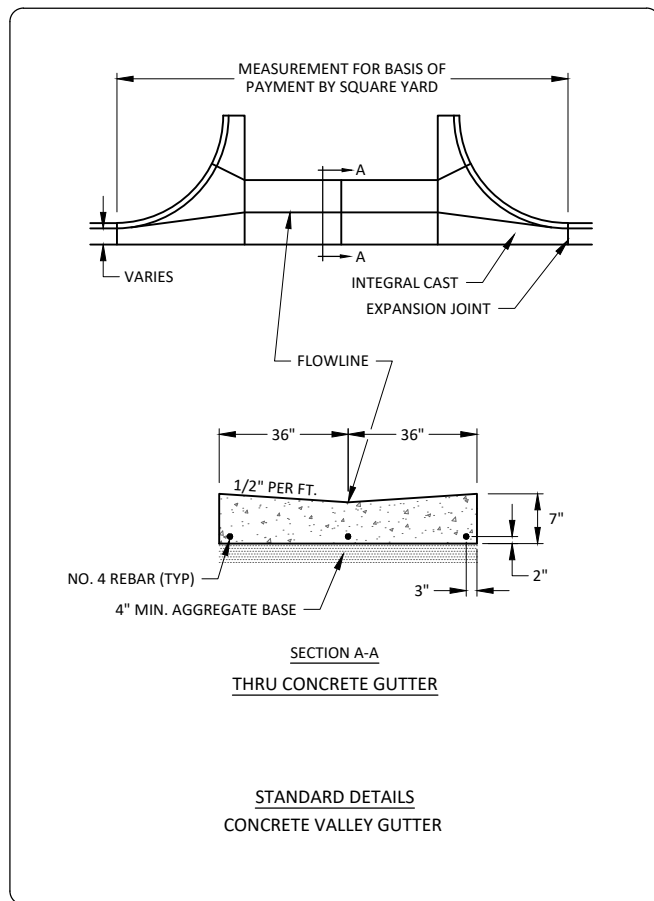
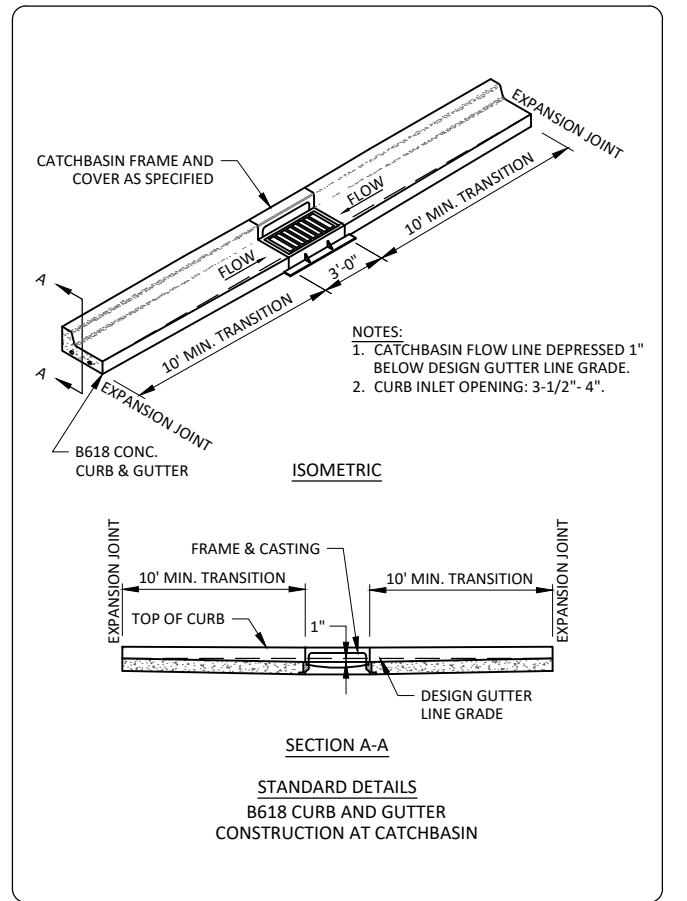
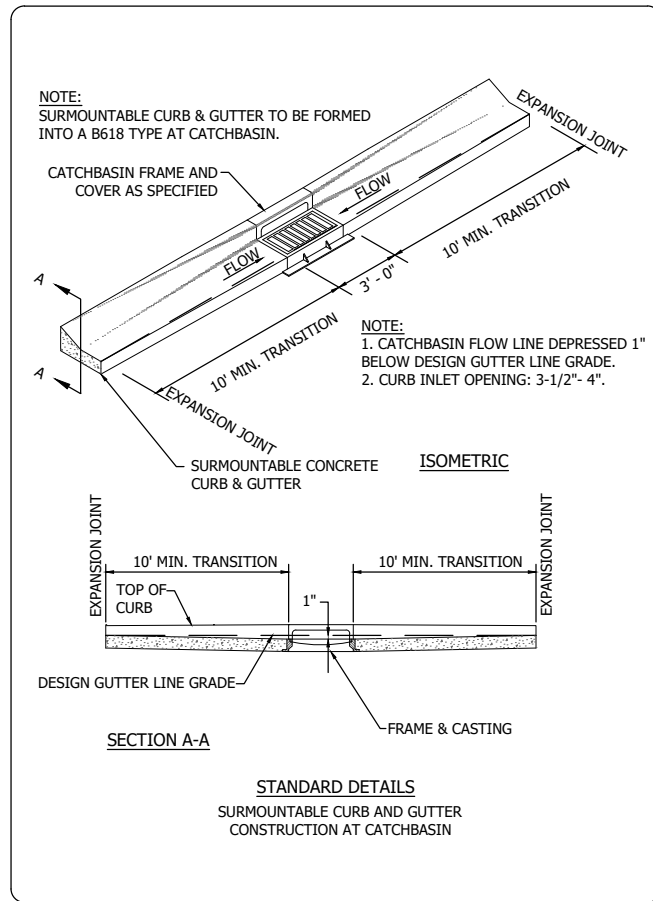
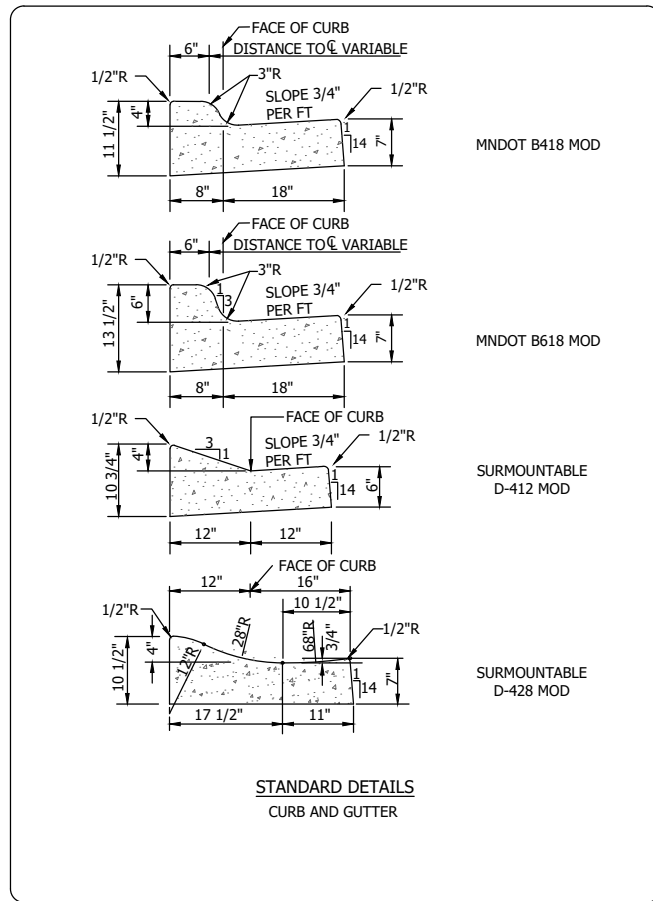
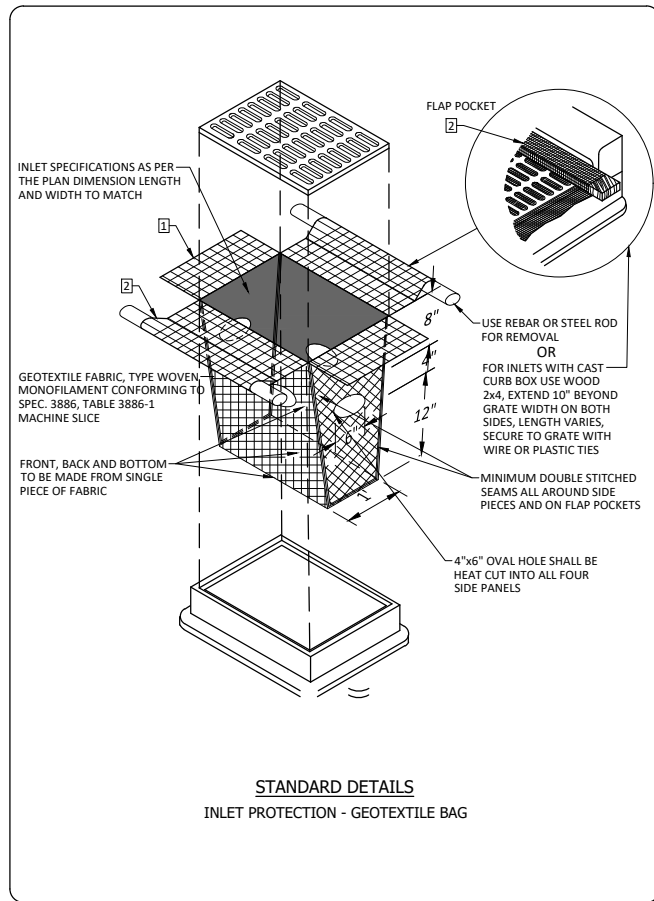


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CITY OF COLUMBIA HEIGHTS, MINNESOTA
 2026 MSAS MILL AND OVERLAY - SAP 113-030-005

TYPICAL SECTIONS

SHEET
 6
 OF
 17



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SIGNER'S NAME: *Alec Rynda*
LIC. NO.: 56344 DATE: 05/11/2026



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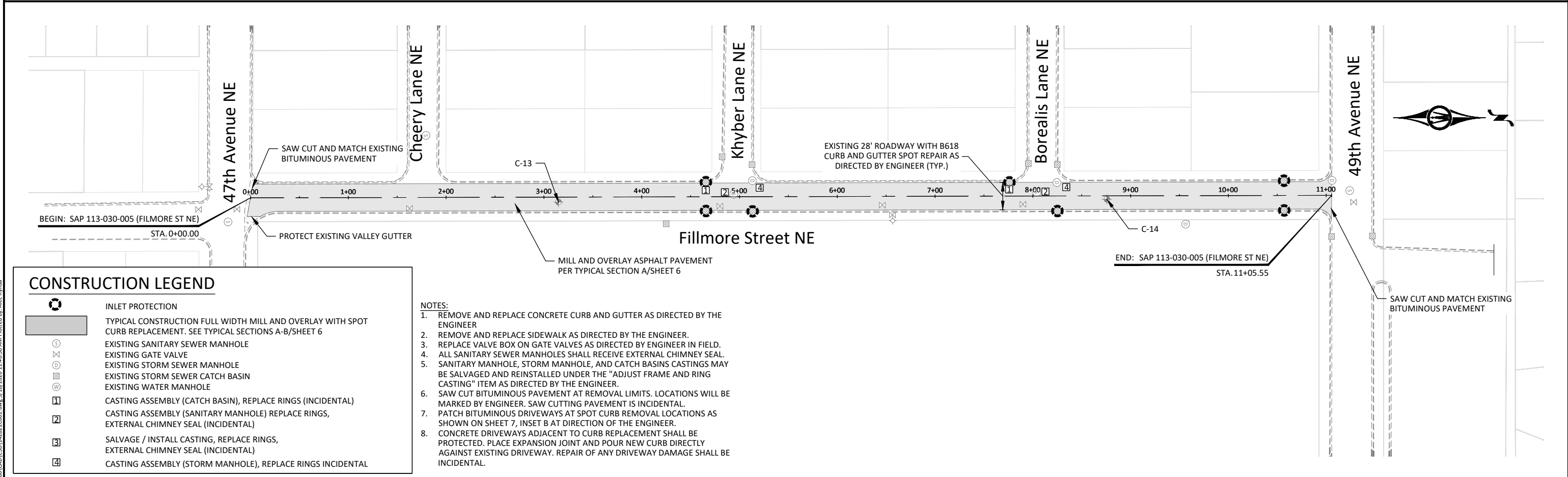
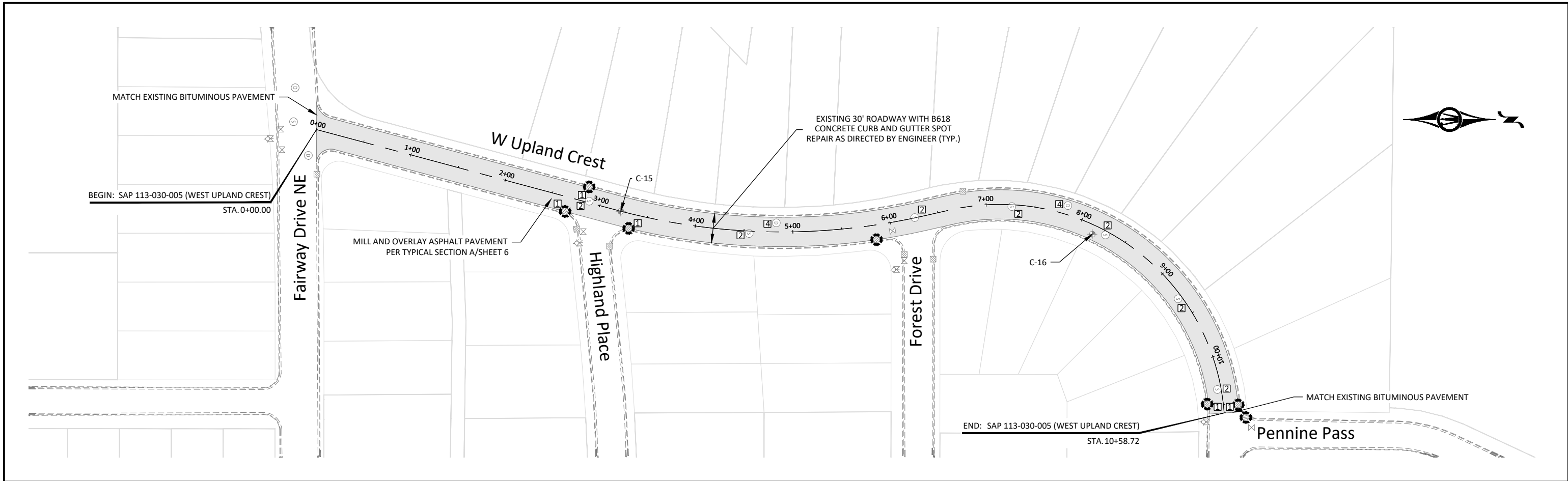
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CITY OF COLUMBIA HEIGHTS, MINNESOTA

2026 MSAS MILL AND OVERLAY - SAP 113-030-005

STANDARD DETAIL PLATES

SHEET
7
OF
17



CONSTRUCTION LEGEND

- INLET PROTECTION
- TYPICAL CONSTRUCTION FULL WIDTH MILL AND OVERLAY WITH SPOT CURB REPLACEMENT. SEE TYPICAL SECTIONS A-B/SHEET 6
- EXISTING SANITARY SEWER MANHOLE
- EXISTING GATE VALVE
- EXISTING STORM SEWER MANHOLE
- EXISTING STORM SEWER CATCH BASIN
- EXISTING WATER MANHOLE
- CASTING ASSEMBLY (CATCH BASIN), REPLACE RINGS (INCIDENTAL)
- CASTING ASSEMBLY (SANITARY MANHOLE) REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
- SALVAGE / INSTALL CASTING, REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
- CASTING ASSEMBLY (STORM MANHOLE), REPLACE RINGS INCIDENTAL

- NOTES:**
1. REMOVE AND REPLACE CONCRETE CURB AND GUTTER AS DIRECTED BY THE ENGINEER
 2. REMOVE AND REPLACE SIDEWALK AS DIRECTED BY THE ENGINEER.
 3. REPLACE VALVE BOX ON GATE VALVES AS DIRECTED BY ENGINEER IN FIELD.
 4. ALL SANITARY SEWER MANHOLES SHALL RECEIVE EXTERNAL CHIMNEY SEAL.
 5. SANITARY MANHOLE, STORM MANHOLE, AND CATCH BASINS CASTINGS MAY BE SALVAGED AND REINSTALLED UNDER THE "ADJUST FRAME AND RING CASTING" ITEM AS DIRECTED BY THE ENGINEER.
 6. SAW CUT BITUMINOUS PAVEMENT AT REMOVAL LIMITS. LOCATIONS WILL BE MARKED BY ENGINEER. SAW CUTTING PAVEMENT IS INCIDENTAL.
 7. PATCH BITUMINOUS DRIVEWAYS AT SPOT CURB REMOVAL LOCATIONS AS SHOWN ON SHEET 7, INSET B AT DIRECTION OF THE ENGINEER.
 8. CONCRETE DRIVEWAYS ADJACENT TO CURB REPLACEMENT SHALL BE PROTECTED. PLACE EXPANSION JOINT AND POUR NEW CURB DIRECTLY AGAINST EXISTING DRIVEWAY. REPAIR OF ANY DRIVEWAY DAMAGE SHALL BE INCIDENTAL.



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

SIGNER'S NAME: *Ramsey J. Menk*
 LIC. NO.: 56344 DATE: 05/11/2026



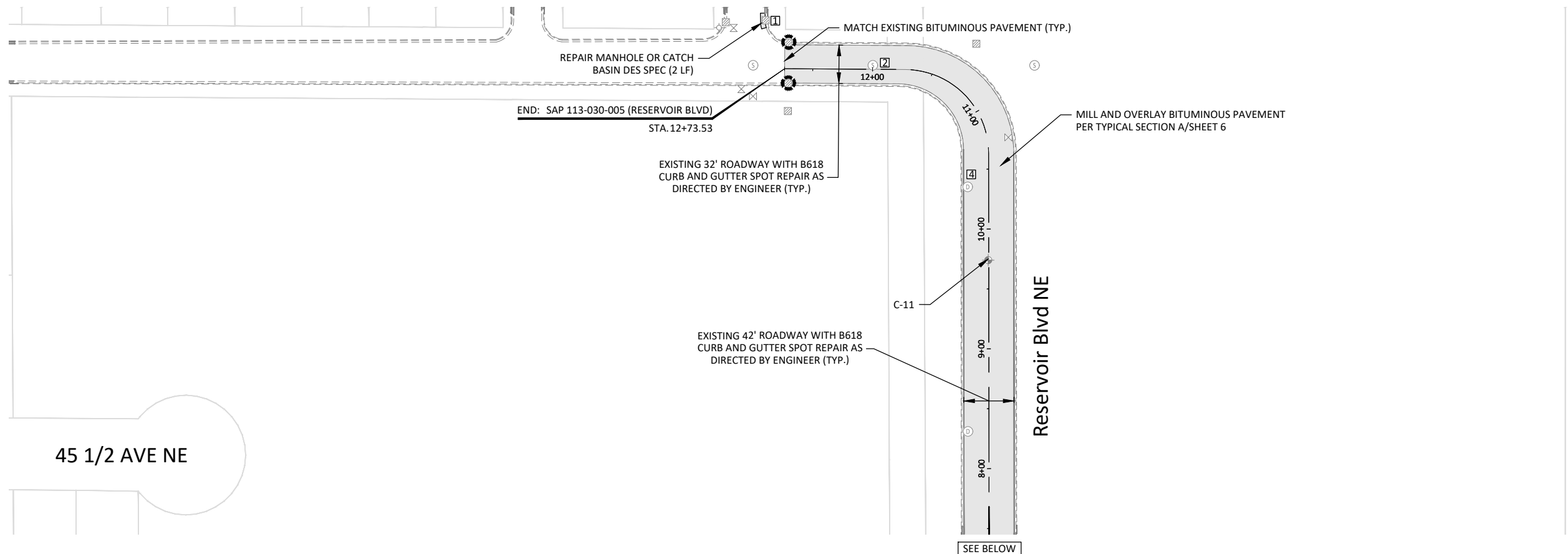
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CITY OF COLUMBIA HEIGHTS, MINNESOTA
 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 STREET IMPROVEMENTS

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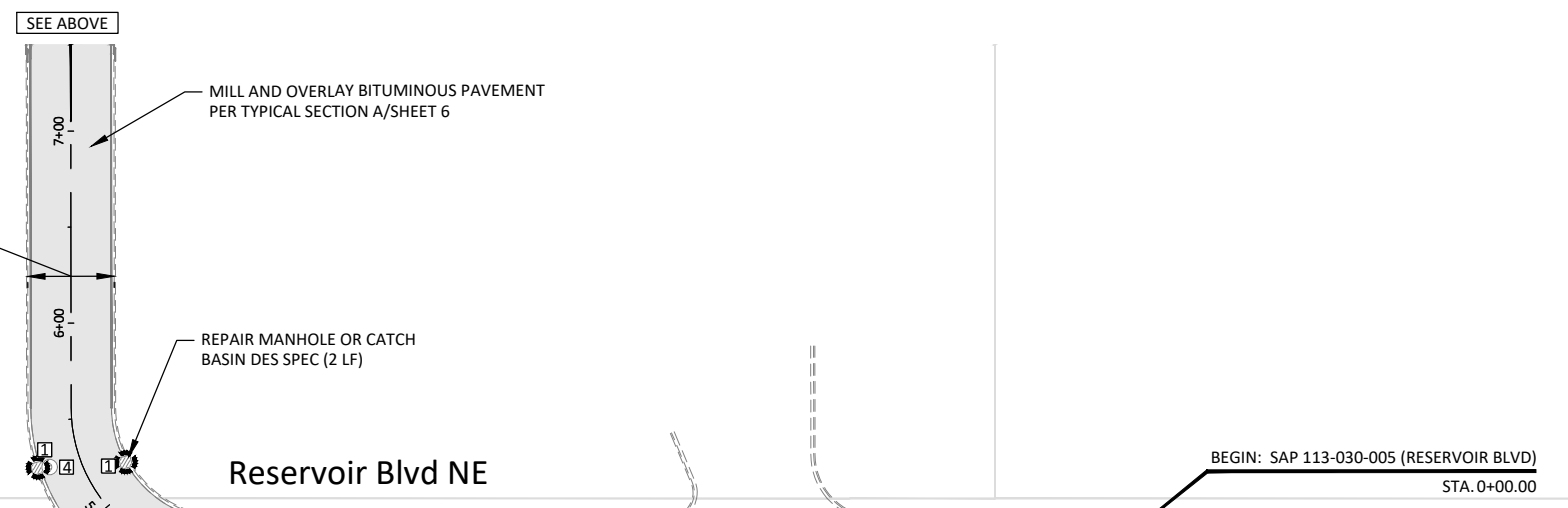


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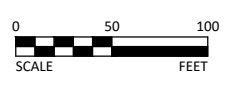
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EXISTING 45' ROADWAY WITH B618 CURB AND GUTTER SPOT REPAIR AS DIRECTED BY ENGINEER (TYP.)



CONSTRUCTION LEGEND

- INLET PROTECTION
- TYPICAL CONSTRUCTION FULL WIDTH MILL AND OVERLAY WITH SPOT CURB REPLACEMENT. SEE TYPICAL SECTIONS A-B/SHEET 6
- EXISTING SANITARY SEWER MANHOLE
- EXISTING GATE VALVE
- EXISTING STORM SEWER MANHOLE
- EXISTING STORM SEWER CATCH BASIN
- EXISTING WATER MANHOLE
- CASTING ASSEMBLY (CATCH BASIN), REPLACE RINGS (INCIDENTAL)
- CASTING ASSEMBLY (SANITARY MANHOLE) REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
- SALVAGE / INSTALL CASTING, REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
- CASTING ASSEMBLY (STORM MANHOLE), REPLACE RINGS INCIDENTAL



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SIGNER'S NAME: *Ramsey J. ZFL*
 LIC. NO.: 56344 DATE: 05/11/2026



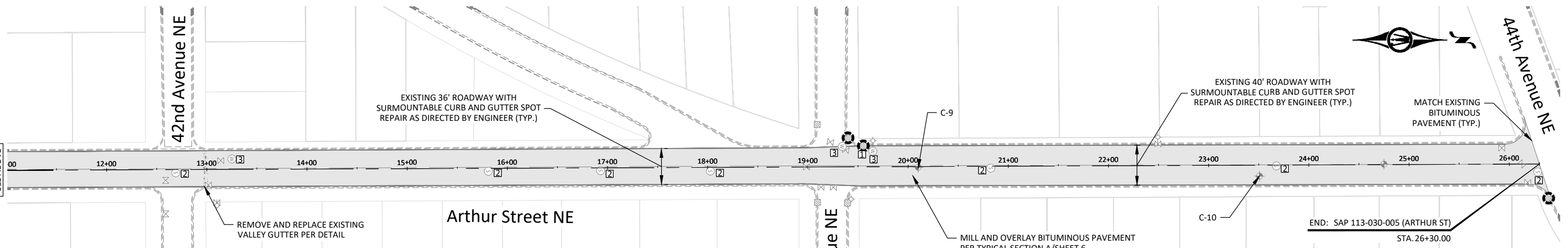
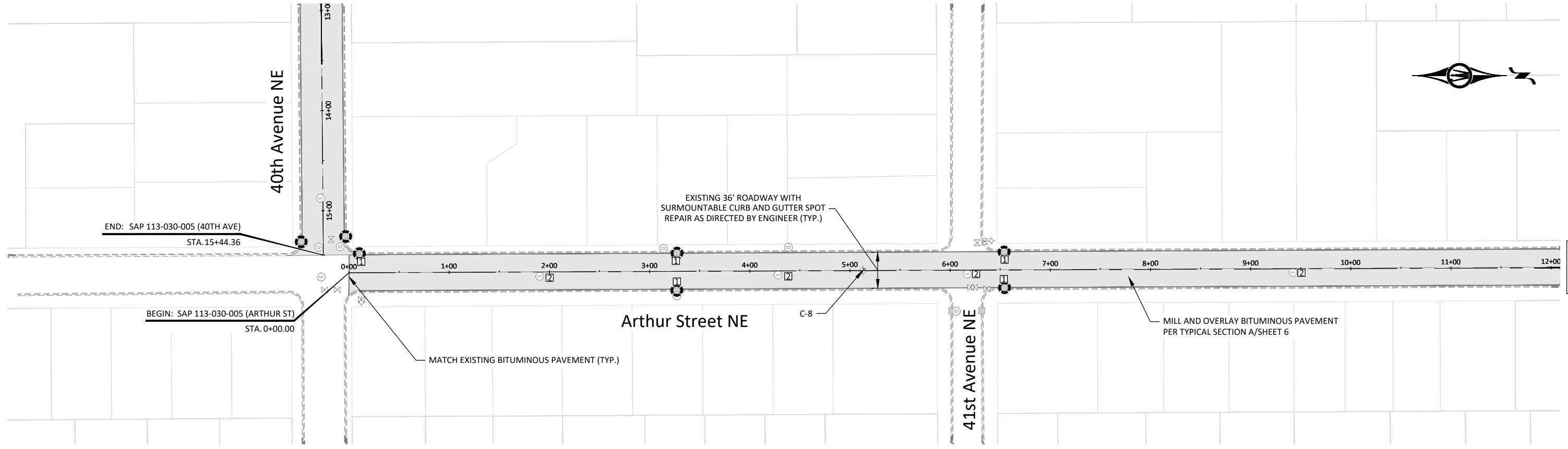
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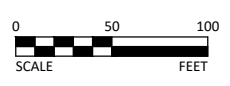
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CONSTRUCTION LEGEND

	INLET PROTECTION
	TYPICAL CONSTRUCTION FULL WIDTH MILL AND OVERLAY WITH SPOT CURB REPLACEMENT. SEE TYPICAL SECTIONS A-B/SHEET 6
	EXISTING SANITARY SEWER MANHOLE
	EXISTING GATE VALVE
	EXISTING STORM SEWER MANHOLE
	EXISTING STORM SEWER CATCH BASIN
	EXISTING WATER MANHOLE
	CASTING ASSEMBLY (CATCH BASIN), REPLACE RINGS (INCIDENTAL)
	CASTING ASSEMBLY (SANITARY MANHOLE) REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
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	CASTING ASSEMBLY (STORM MANHOLE), REPLACE RINGS INCIDENTAL

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SIGNER'S NAME: *Robert J. J...*
 LIC. NO. 56344 DATE 05/11/2026



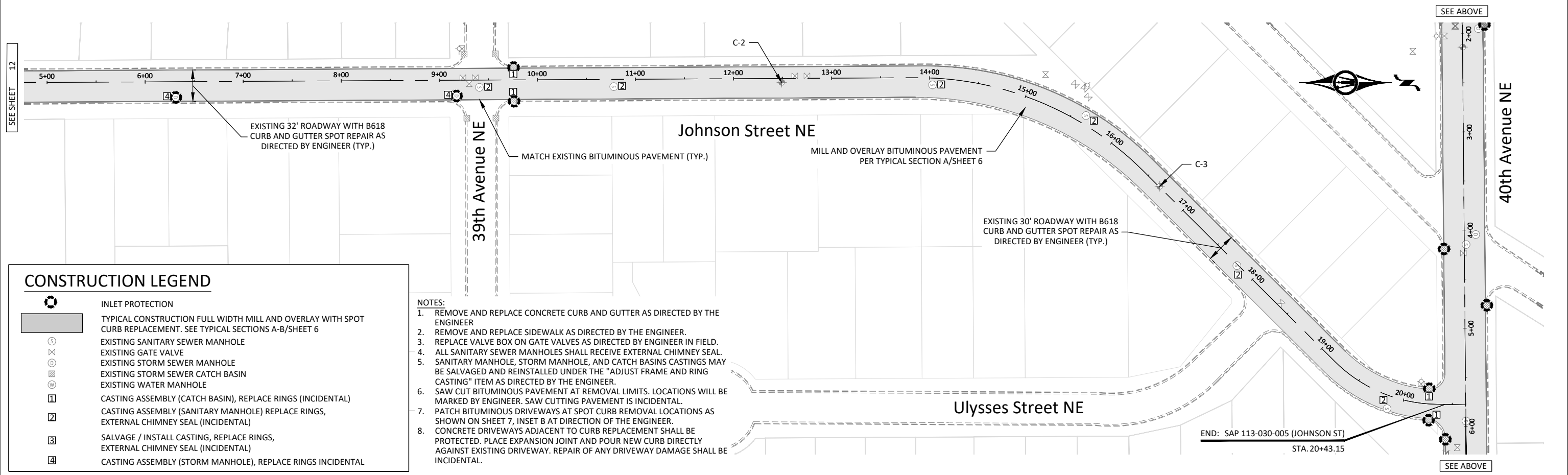
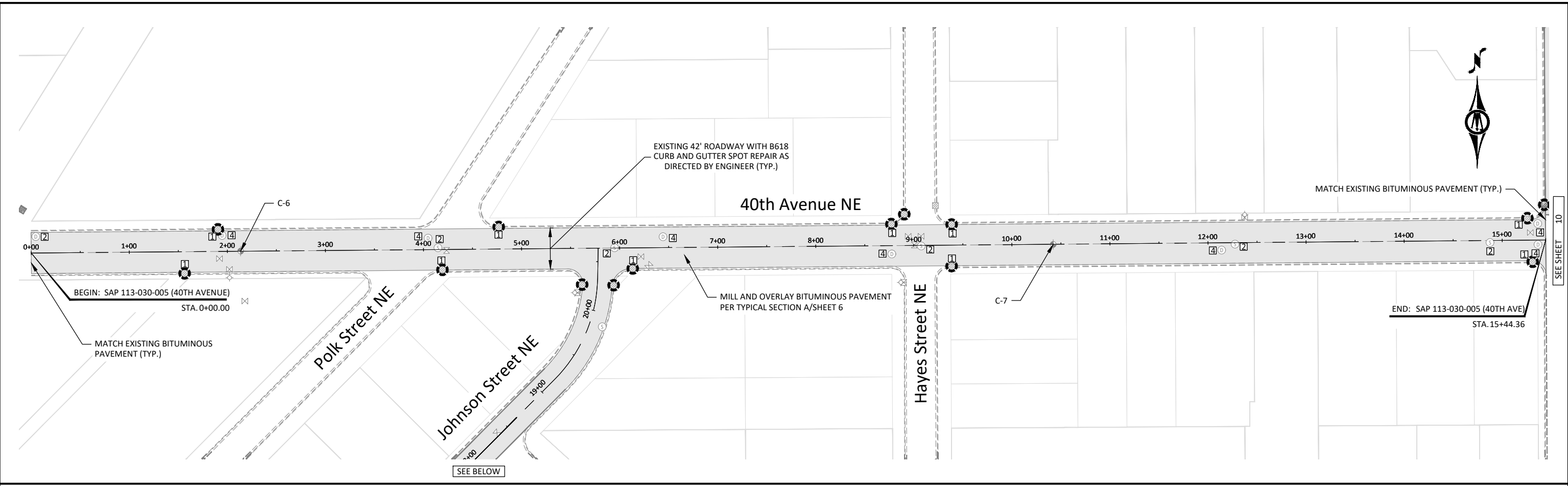
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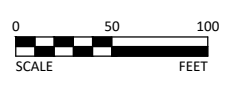
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CONSTRUCTION LEGEND

- INLET PROTECTION
- TYPICAL CONSTRUCTION FULL WIDTH MILL AND OVERLAY WITH SPOT CURB REPLACEMENT. SEE TYPICAL SECTIONS A-B/SHEET 6
- EXISTING SANITARY SEWER MANHOLE
- EXISTING GATE VALVE
- EXISTING STORM SEWER MANHOLE
- EXISTING STORM SEWER CATCH BASIN
- EXISTING WATER MANHOLE
- CASTING ASSEMBLY (CATCH BASIN), REPLACE RINGS (INCIDENTAL)
- CASTING ASSEMBLY (SANITARY MANHOLE) REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
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SIGNER'S NAME: *Ramsey*
 LIC. NO.: 56344 DATE: 05/11/2026



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






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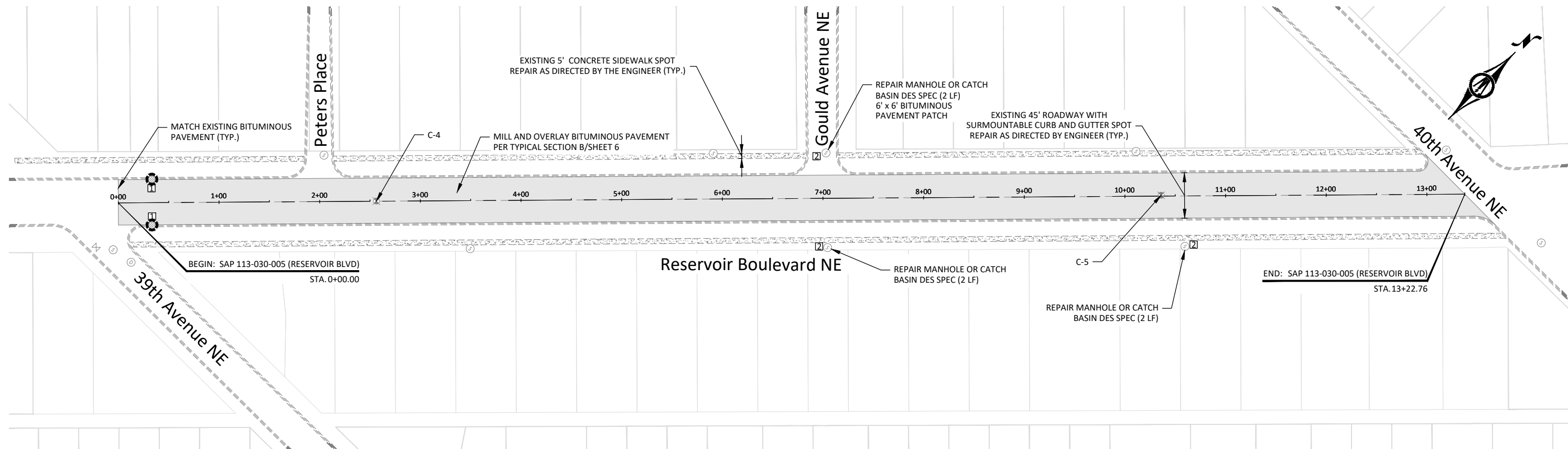
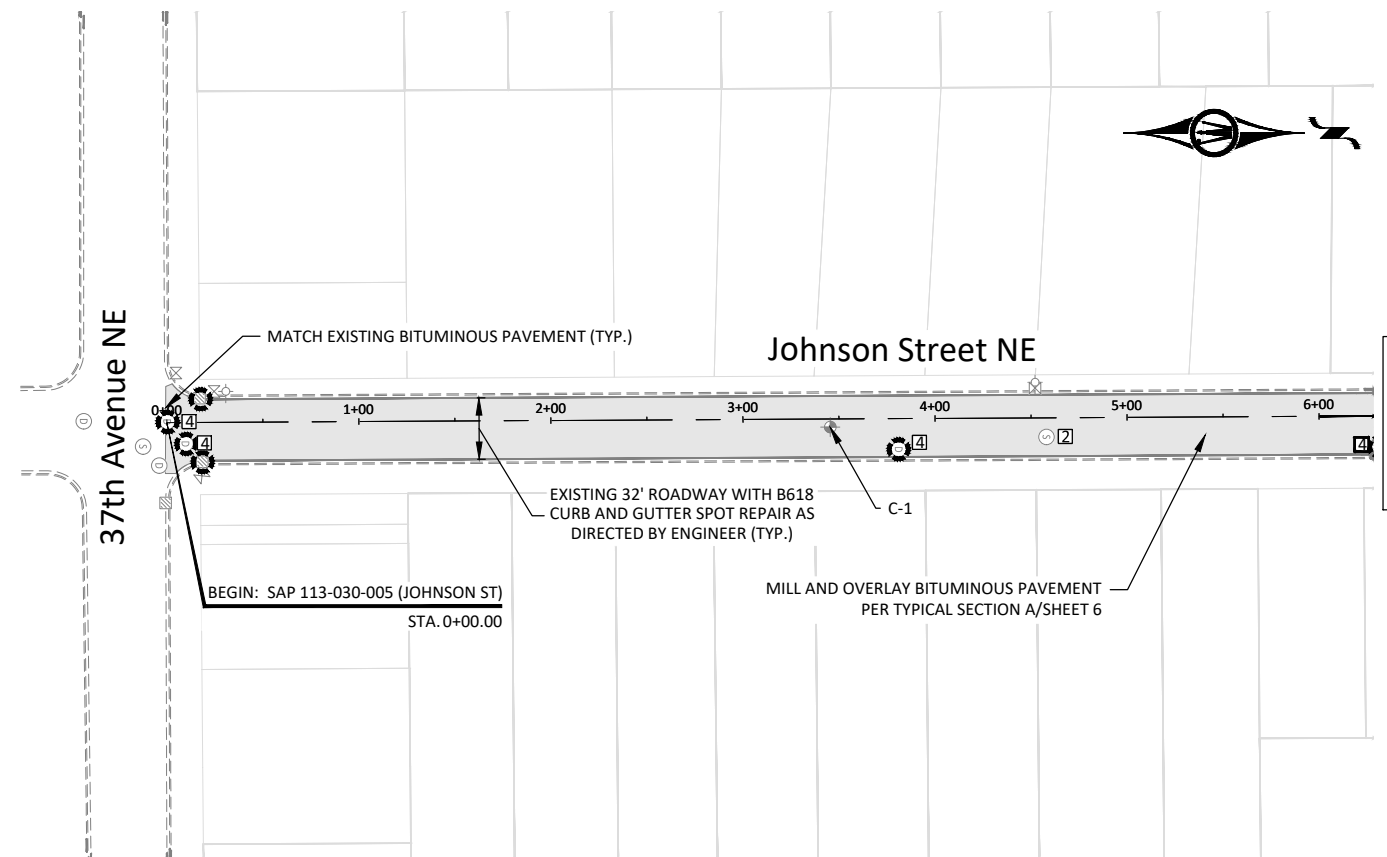
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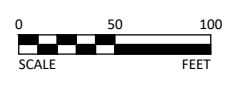
CONSTRUCTION LEGEND

-  INLET PROTECTION
-  TYPICAL CONSTRUCTION FULL WIDTH MILL AND OVERLAY WITH SPOT CURB REPLACEMENT. SEE TYPICAL SECTIONS A-B/SHEET 6
-  EXISTING SANITARY SEWER MANHOLE
-  EXISTING GATE VALVE
-  EXISTING STORM SEWER MANHOLE
-  EXISTING STORM SEWER CATCH BASIN
-  EXISTING WATER MANHOLE
-  CASTING ASSEMBLY (CATCH BASIN), REPLACE RINGS (INCIDENTAL)
-  CASTING ASSEMBLY (SANITARY MANHOLE) REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
-  SALVAGE / INSTALL CASTING, REPLACE RINGS, EXTERNAL CHIMNEY SEAL (INCIDENTAL)
-  CASTING ASSEMBLY (STORM MANHOLE), REPLACE RINGS INCIDENTAL

- NOTES:
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 4. ALL SANITARY SEWER MANHOLES SHALL RECEIVE EXTERNAL CHIMNEY SEAL.
 5. SANITARY MANHOLE, STORM MANHOLE, AND CATCH BASINS CASTINGS MAY BE SALVAGED AND REINSTALLED UNDER THE "ADJUST FRAME AND RING CASTING" ITEM AS DIRECTED BY THE ENGINEER.
 6. SAW CUT BITUMINOUS PAVEMENT AT REMOVAL LIMITS. LOCATIONS WILL BE MARKED BY ENGINEER. SAW CUTTING PAVEMENT IS INCIDENTAL.
 7. PATCH BITUMINOUS DRIVEWAYS AT SPOT CURB REMOVAL LOCATIONS AS SHOWN ON SHEET 7, INSET B AT DIRECTION OF THE ENGINEER.
 8. CONCRETE DRIVEWAYS ADJACENT TO CURB REPLACEMENT SHALL BE PROTECTED. PLACE EXPANSION JOINT AND POUR NEW CURB DIRECTLY AGAINST EXISTING DRIVEWAY. REPAIR OF ANY DRIVEWAY DAMAGE SHALL BE INCIDENTAL.



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SIGNER'S NAME: *Alex Rynda*
 LIC. NO.: 56344 DATE: 05/11/2026



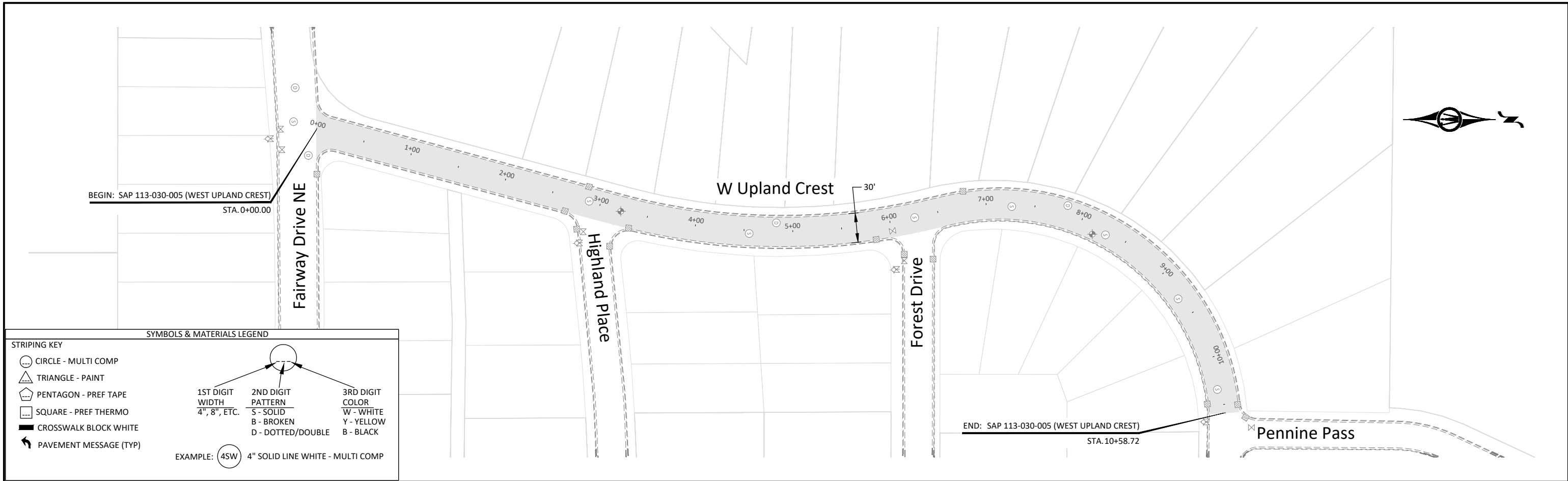
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 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 STREET IMPROVEMENTS

SHEET 12 OF 17

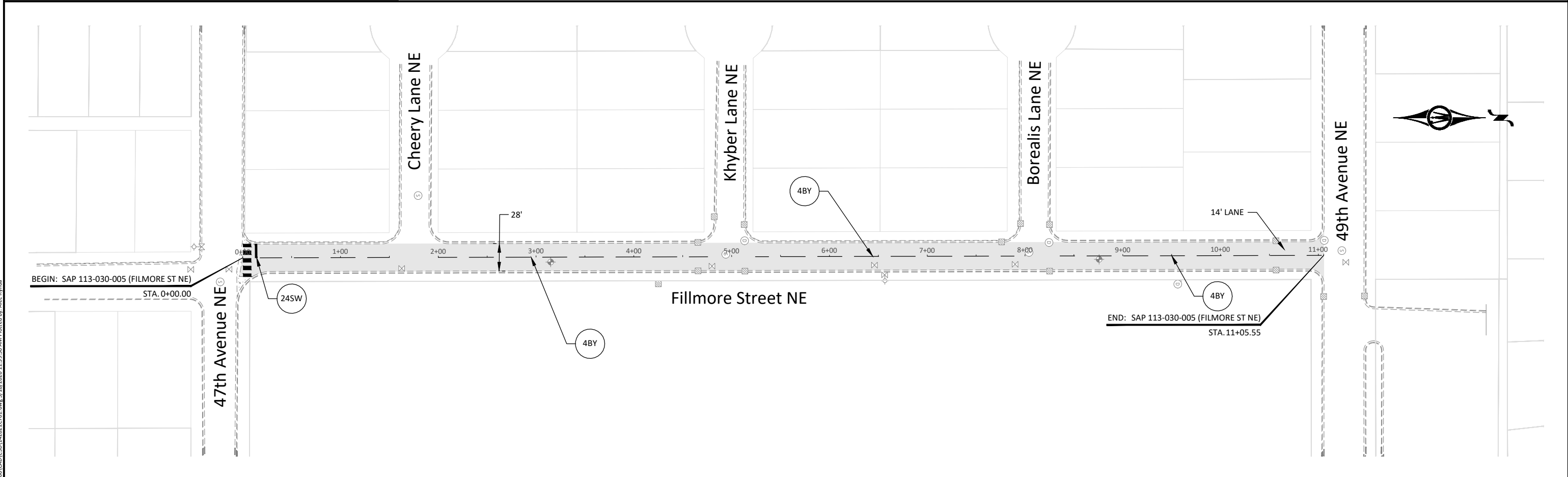


SYMBOLS & MATERIALS LEGEND

STRIPING KEY

- CIRCLE - MULTI COMP
- TRIANGLE - PAINT
- PENTAGON - PREF TAPE
- SQUARE - PREF THERMO
- CROSSWALK BLOCK WHITE
- PAVEMENT MESSAGE (TYP)

1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN S - SOLID B - BROKEN D - DOTTED/DOUBLE	3RD DIGIT COLOR W - WHITE Y - YELLOW B - BLACK
EXAMPLE: 4SW	4" SOLID LINE WHITE	- MULTI COMP



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SIGNER'S NAME: *Ramsey J. Menk*
 LIC. NO.: 56344 DATE: 05/11/2026



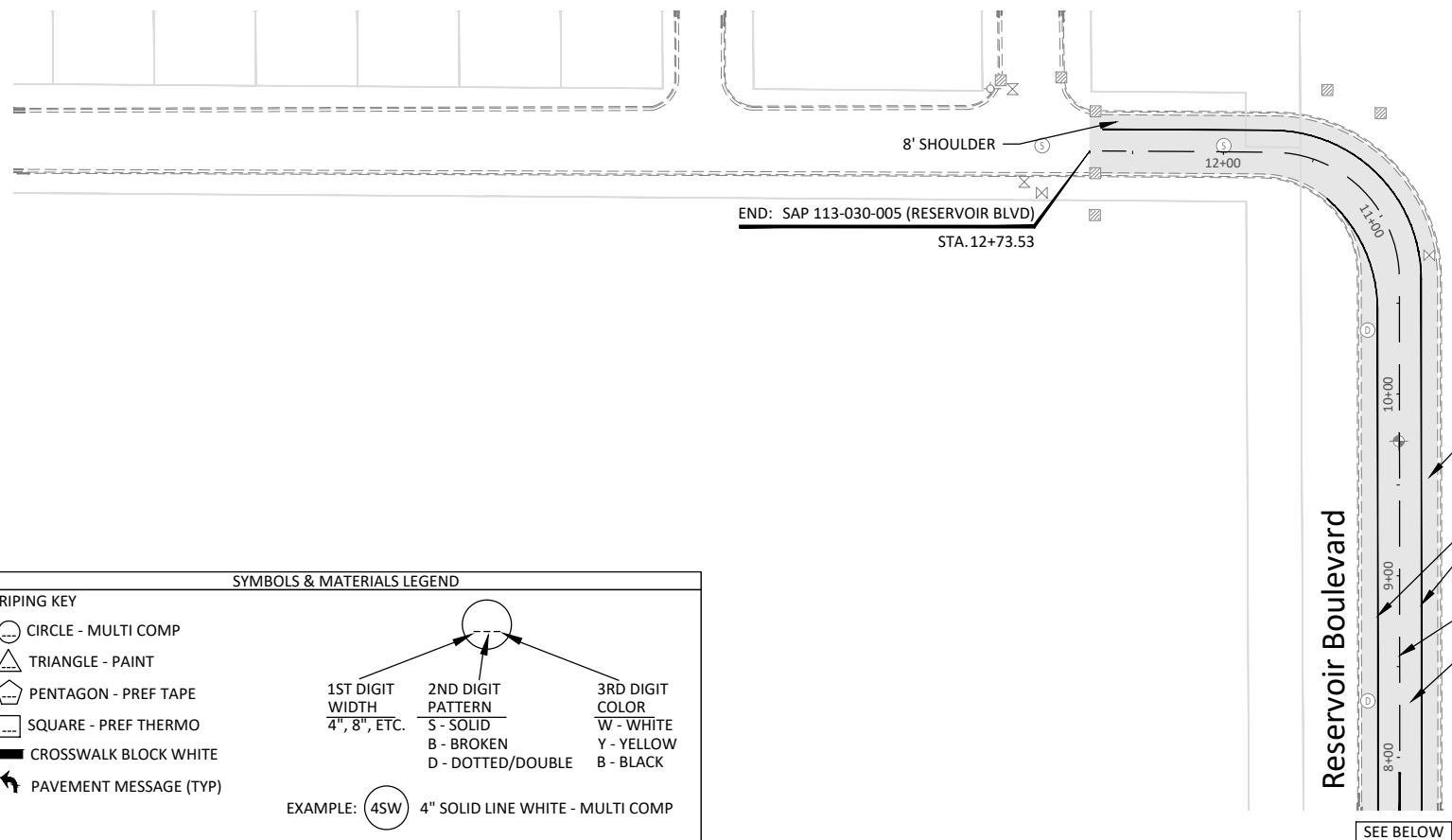
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CITY OF COLUMBIA HEIGHTS, MINNESOTA
 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 SIGNAGE AND STRIPING PLAN

SHEET 13 OF 17



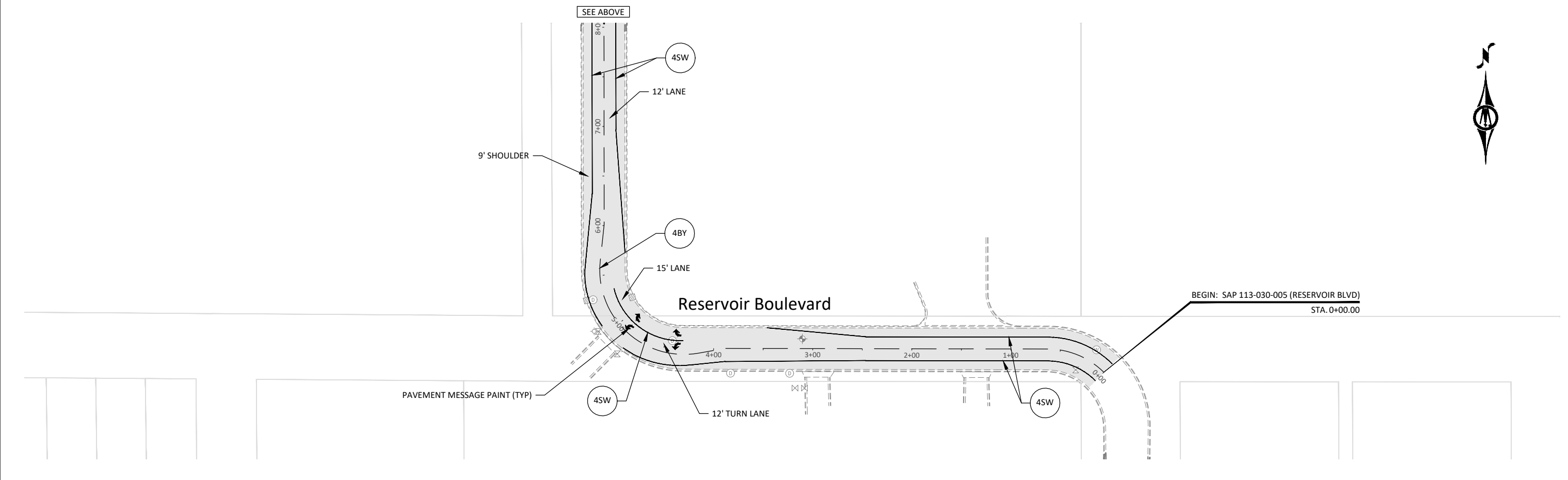
SYMBOLS & MATERIALS LEGEND

STRIPING KEY

- CIRCLE - MULTI COMP
- TRIANGLE - PAINT
- PENTAGON - PREF TAPE
- SQUARE - PREF THERMO
- CROSSWALK BLOCK WHITE
- PAVEMENT MESSAGE (TYP)

1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN S - SOLID B - BROKEN D - DOTTED/DOUBLE	3RD DIGIT COLOR W - WHITE Y - YELLOW B - BLACK
4	S	W

EXAMPLE: (4SW) 4" SOLID LINE WHITE - MULTI COMP



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SIGNER'S NAME: *Ramsey J. ZFL*
 LIC. NO.: 56344 DATE: 05/11/2026



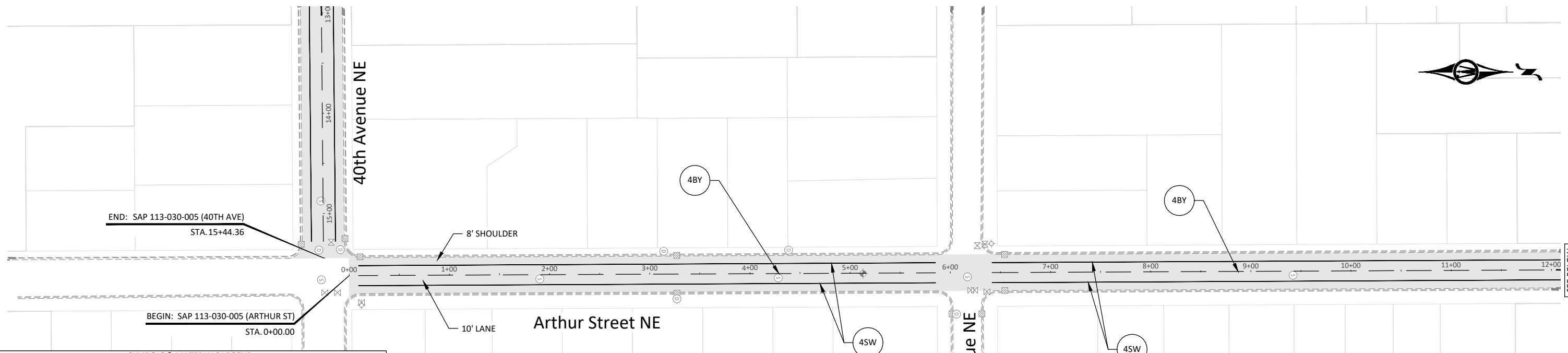
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 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 SIGNAGE AND STRIPING PLAN

SHEET 14 OF 17



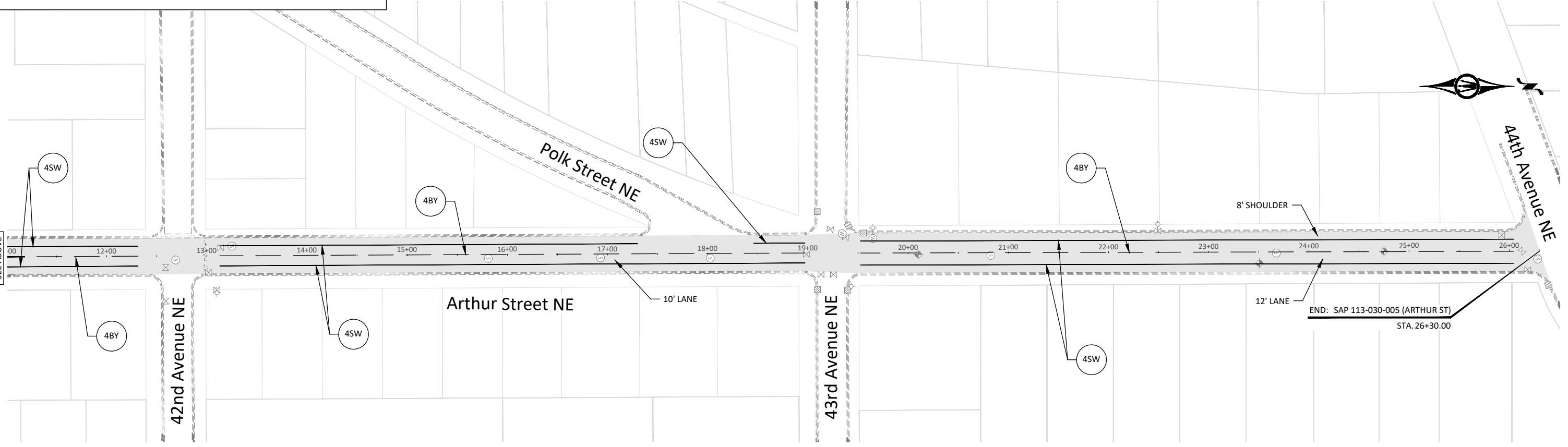
SEE BELOW

SYMBOLS & MATERIALS LEGEND

STRIPING KEY

- CIRCLE - MULTI COMP
- TRIANGLE - PAINT
- PENTAGON - PREF TAPE
- SQUARE - PREF THERMO
- CROSSWALK BLOCK WHITE
- PAVEMENT MESSAGE (TYP)

1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN S - SOLID B - BROKEN D - DOTTED/DOUBLE	3RD DIGIT COLOR W - WHITE Y - YELLOW B - BLACK
EXAMPLE: 4SW	4" SOLID LINE WHITE	- MULTI COMP



SEE ABOVE



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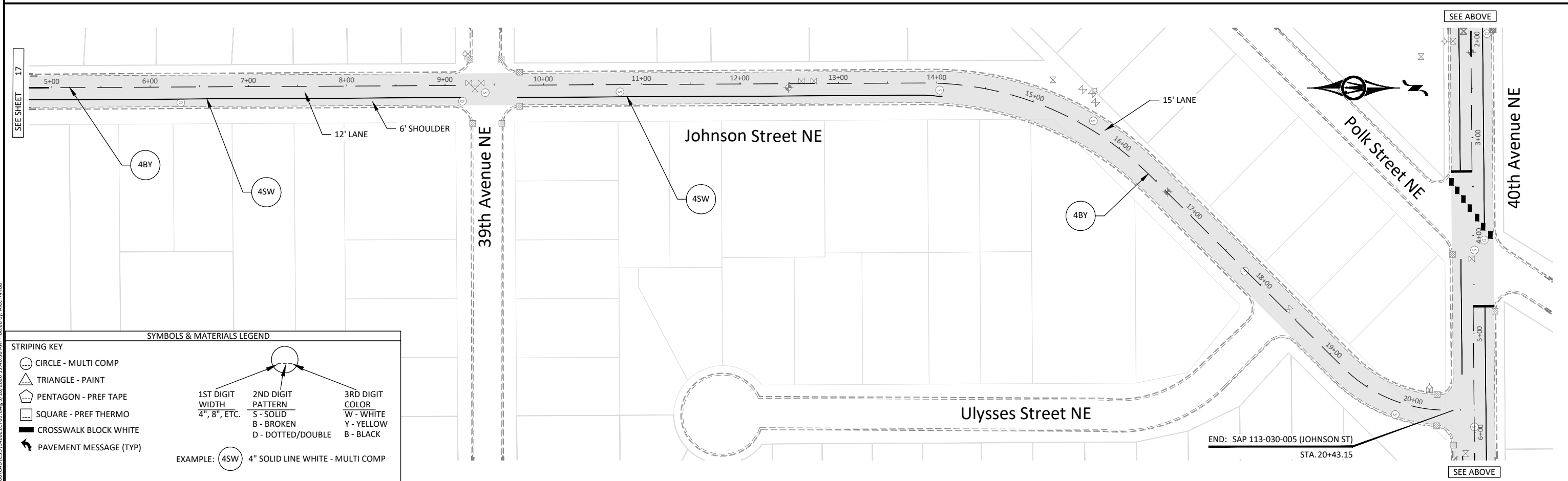
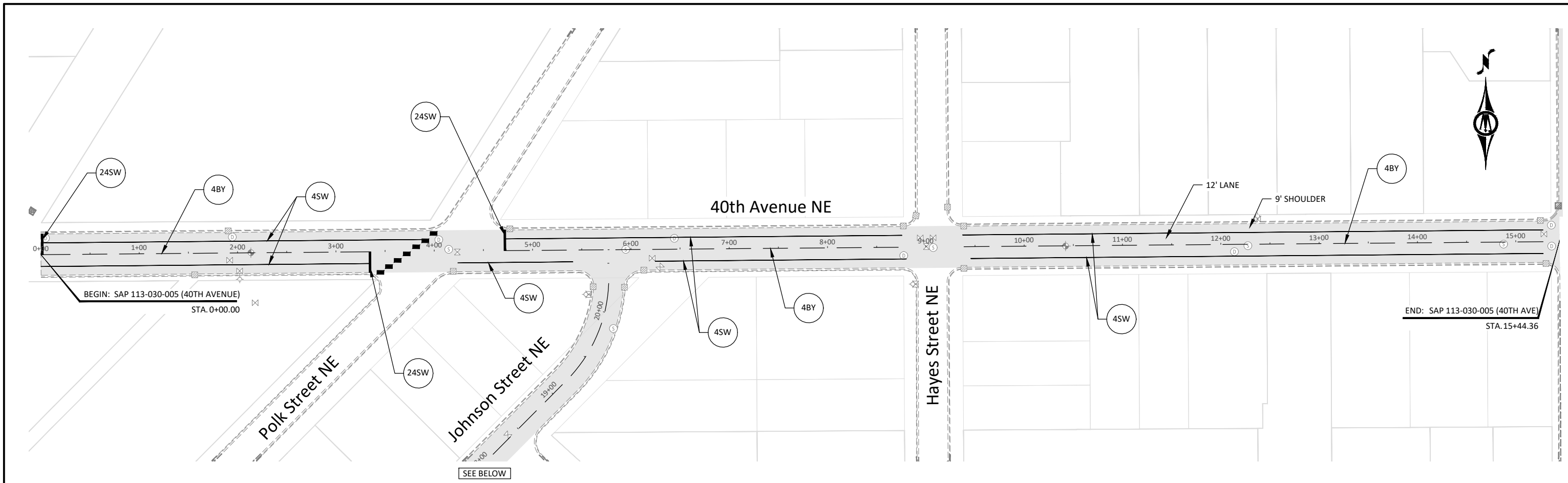
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CITY OF COLUMBIA HEIGHTS, MINNESOTA
2026 MSAS MILL AND OVERLAY - SAP 113-030-005
SIGNAGE AND STRIPING PLAN

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STRIPING KEY

- CIRCLE - MULTI COMP
- TRIANGLE - PAINT
- PENTAGON - PREF TAPE
- SQUARE - PREF THERMO
- CROSSWALK BLOCK WHITE
- PAVEMENT MESSAGE (TYP)

SYMBOLS & MATERIALS LEGEND

1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN S - SOLID B - BROKEN D - DOTTED/DOUBLE	3RD DIGIT COLOR W - WHITE Y - YELLOW B - BLACK
4	S	W

EXAMPLE: 4" SOLID LINE WHITE - MULTI COMP



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[Signature]
 SIGNER'S NAME: *[Signature]*
 LIC. NO.: 56344 DATE: 05/11/2026



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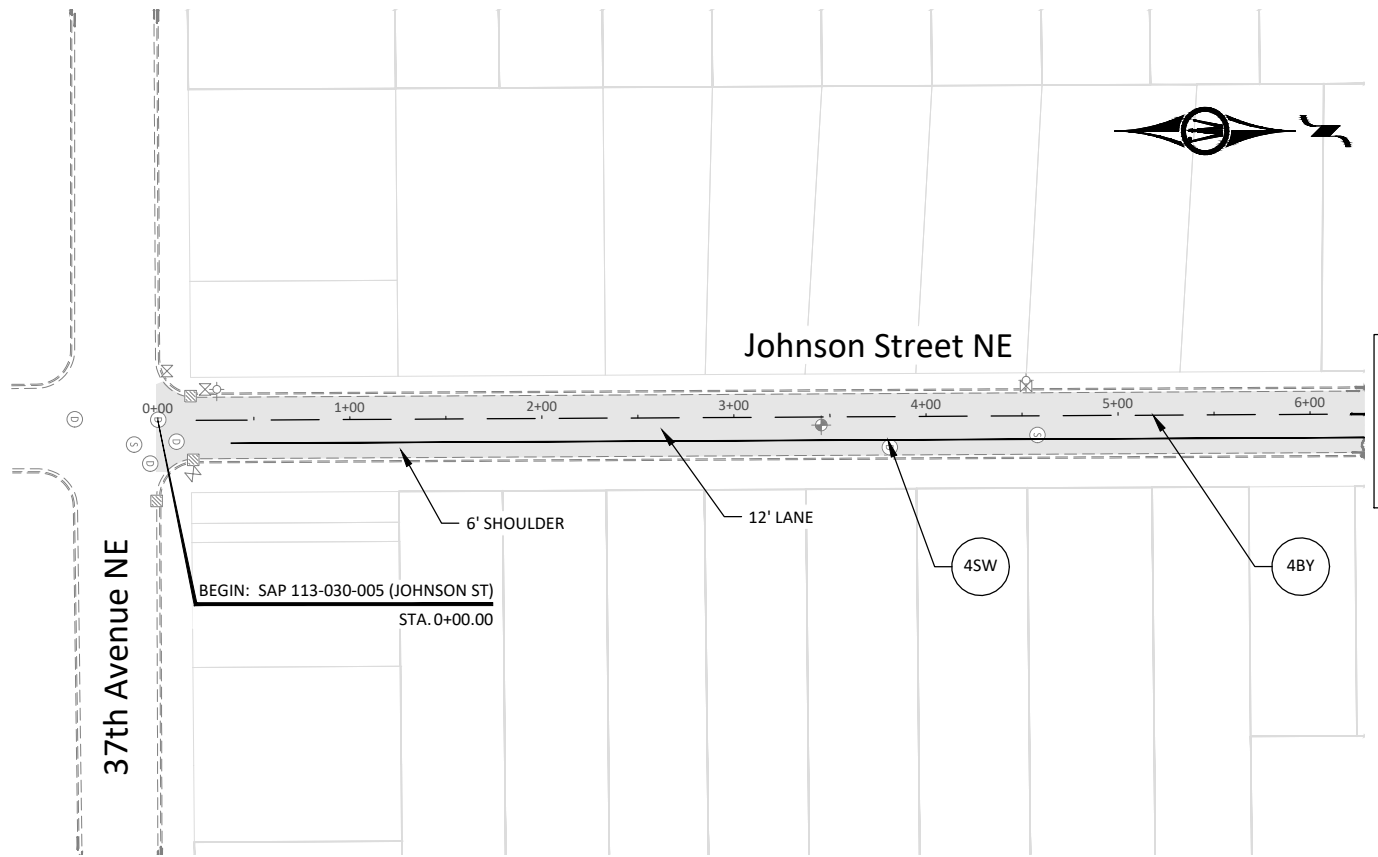


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 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 SIGNAGE AND STRIPING PLAN

SHEET 16 OF 17

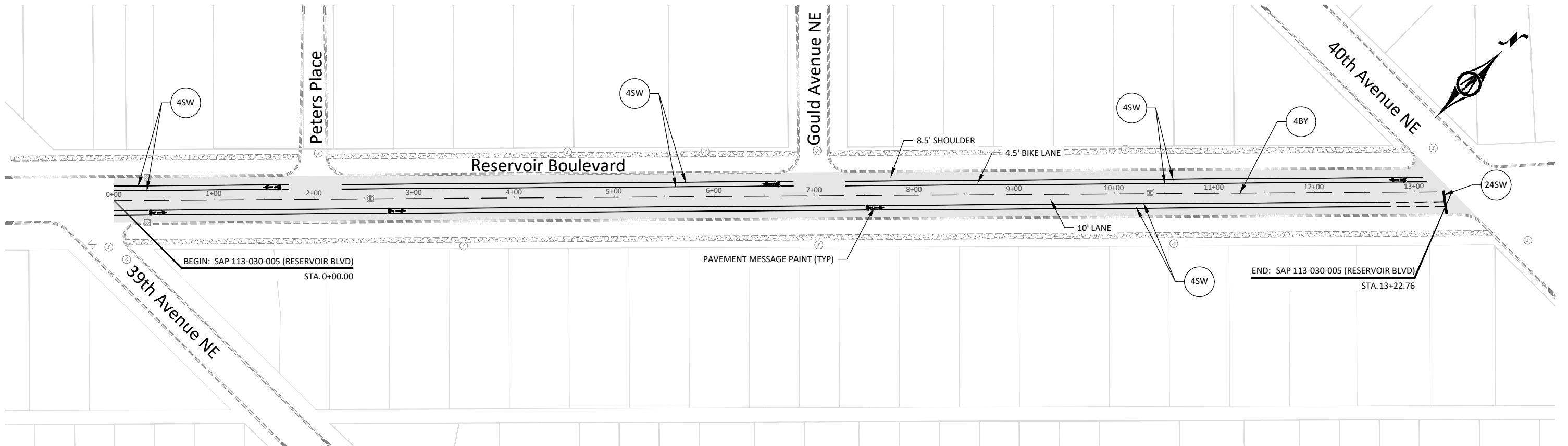
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SYMBOLS & MATERIALS LEGEND

STRIPING KEY		SYMBOLS & MATERIALS LEGEND												
	CIRCLE - MULTI COMP	<table border="1"> <tr> <td>1ST DIGIT WIDTH 4", 8", ETC.</td> <td>2ND DIGIT PATTERN</td> <td>3RD DIGIT COLOR</td> </tr> <tr> <td></td> <td>S - SOLID</td> <td>W - WHITE</td> </tr> <tr> <td></td> <td>B - BROKEN</td> <td>Y - YELLOW</td> </tr> <tr> <td></td> <td>D - DOTTED/DOUBLE</td> <td>B - BLACK</td> </tr> </table>	1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN	3RD DIGIT COLOR		S - SOLID	W - WHITE		B - BROKEN	Y - YELLOW		D - DOTTED/DOUBLE	B - BLACK
1ST DIGIT WIDTH 4", 8", ETC.	2ND DIGIT PATTERN		3RD DIGIT COLOR											
	S - SOLID		W - WHITE											
	B - BROKEN		Y - YELLOW											
	D - DOTTED/DOUBLE	B - BLACK												
	TRIANGLE - PAINT													
	PENTAGON - PREF TAPE													
	SQUARE - PREF THERMO													
	CROSSWALK BLOCK WHITE													
	PAVEMENT MESSAGE (TYP)													

EXAMPLE: 4" SOLID LINE WHITE - MULTI COMP



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 2026 MSAS MILL AND OVERLAY - SAP 113-030-005
 SIGNAGE AND STRIPING PLAN

SHEET 17 OF 17